DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4819

Application
- [x] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [✓] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

17963

Form MR-103
Revised Feb. 1957

RECEIVED AUG 29 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1035.3
Approval expires June 30, 1958

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

Mr. A. D. Drumm, Jr.
Fallon, Nevada

APPLICANT NOT TO USE THIS BLOCK

Docket Number: 7819
Date Received: 8/29/57
Government Participation %:
Region: II
Division Code: 400

BUSINESS ORGANIZATION (Check one)

- Individual [X]
- Corporation [ ]
- Partnership [ ]
- Other (Specify) [ ]

State in which firm is organized: Nevada

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title

Mineral(s) for which you wish to explore: Cinnabar (Mercury)

Estimated Cost of Project: $ 27,650.00

LOCATION OF PROPERTY

Name	County	State
Van Ness	Nye	Nevada

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order-I, Amended, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

August 19, 1957
Dated

Keith N. Meador
BY *(Signature)*

Consulting Mining Geologist
Title

P O Box 982, Reno, Nevada

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the lands, including existing mine workings. Describe all production facilities.

(b) State your interest, if any, in operations stated in 2*(a)*.

(c) State, as far as you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves on the property giving quantities and grades and sampling methods used, supporting your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you may have, indicating on each whether you require its return to you.

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

(a) Describe fully the proposed exploration project giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and longitudinal and cross sections as necessary. Show the location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *property boundaries* or to the closest identifiable corner.

(b) If an access road to the project must be built, show the location on the property map and state the length, type, and construction methods proposed.

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State your anticipated average daily or monthly rate of progress for each type of work.

5. *Experience:*

State your operating experience and background with relation to your ability to carry out this exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of Costs:*

Furnish detailed estimates of the costs *for each item of the work proposed in 4(a)* under the headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in detail under categories *(b)* through *(g)*.

(a) Independent contracts. State the cost of any proposed independent contract for the performance of all or any part of the work, expressed in units of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. *(Note* – If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available.

(c) Operating materials and supplies. List items of material and supplies with their cost. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of necessary *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant, which will be used on the exploration project.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration project stating specifications and cost including labor, materials and supervision.

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

Note – No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. *(a)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Amended.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

INT.-DUP. SEC., WASH., D.C. 15539

DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
11605 Evans Avenue
Reno, Nevada

August 27, 1957

Memorandum

To: Operating Committee, DMEA, Interior Building
Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application (Mercury)
A. D. Drum, Jr.
Van Ness Mine
Nye County, Nevada

Enclosed are three sets of MF-103, Application for Aid forms relative to above subject. The fourth set has been retained in our files.

Only one folder of substantiative data is enclosed but the Applicant has stated that three extra folders will be presented within a week. A breakdown of his estimated costs will also be submitted.

S. Ricker

Attachments

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 29 1957

DATE	INITIALS	CODE

P. O. BOX 982 - RENO, NEVADA

TELEPHONE FAIRVIEW 3-8549

KEITH N. MEADOR
CONSULTING
MINING GEOLOGIST AND GEOPHYSICIST
REGISTERED LAND SURVEYOR

ORIGINAL TYPE COPY
DMEA
RECEIVED AUG 29 1957

DATE	INITIALS	CODE

PRELIMINARY VALUATION

of the

VAN NESS MERCURY PROPERTY

Spanish Belt District

NYE COUNTY, NEVADA

for

Mr. A. D. Drumm, Jr.

Keith N. Meador

November, 1956

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MAP 2 - Development map of the Van Ness Mercury Mine	(envelope)

LOCATION

The Van Ness Mercury Property is located 53 road-miles northeasterly of Tonopah, Nevada, in the Toquima Mountain Range. From Tonopah, this property is accessible to automobile travel over 19 miles of oiled U S Highway 6 and State Route 8-A, and 34 miles of State, County and Mine roads which are graded or unimproved. The final three and one-half miles of this road are rough with several steep grades and sharp switchbacks. Much of the final ten miles is subject to damage by rapid runoff during any season.

Elevations at this property range between 8400 and 9000 feet above sea level. All of the claims lie on a southeast slope below the Toquima Crestline and near Bald Mountain. Drainage is southeasterly into Silver Creek and Monitor Valley. Excessive snowfall and sub-freezing temperatures could handicap surface operations and transportation during the months of November through March.

Water suitable for domestic use is available from several nearby perennial springs. Cabin number one (see map), the mill and several water tanks have had water piped in at one time or another. Water for mine use is currently discharging from the 150 level tunnel at the rate of about five+ gallons per minute. Temperature of this water at discharge point is roughly 50° Fahrenheit.

Suitable accommodations for a working crew of eight or ten men could be provided through some reconditioning and furnishing cabins one, two and three (see map). Cabins four and five are deteriorated beyond rehabilitation.

Some mine labor is available from Tonopah, Manhattan, Austin and other nearby communities at the rate of $2.25 per hour on a

40-hour-week basis. Production and furnacing operations would require employment of at least one foreman who is experienced in mercury production. Such a man, capable and experienced, would require a salary of about $ 600.00 per month.

Timber suitable for mine use does not grow in this vicinity. Some mine timber and a fair supply of lumber is available from Tonopah where the cost is approximately $ 120.00 per thousand board feet. Large quantities of timber and lumber, if needed, could be imported from California at a substantial saving over the above figure.

Powder, hand tools and small items of equipment are sold and serviced at Tonopah. Some used mine machinery is also available from towns and mine camps within a reasonable distance. Complete lines of mine machinery and equipment are sold at Reno, Salt Lake City and California Coast Cities.

HISTORY

Mercury minerals were discovered here and located by Mr. J. Humphrey in 1928. The claims were sold to Mr. Raymond Van Ness in that year. A 30 foot by 30 inch Cottrell Furnace was installed and about 38,000 pounds of mercury metal produced in 1930 and 31. Mr. Homer Williams and John Connolly of Tonopah acquired the property under judgment late in 1931. The price of mercury had fallen from $ 100.00 per flask in 1927 to about $ 50.00 per flask in 1932.

The Sentinel Group of claims, six in number, were surveyed for patent application (survey number 4696- U S Mineral Monument number 318) in 1929 and 1930 by Edward L. Haff, U S Mineral Surveyor. Subsequently, the patent application on Sentinel and Sentinel Number One was approved and issued to Williams and Connolly. One additional location (The Lucky Strike) was made contiguous to the Sentinel Group,

bringing the total acreage held under patent and location to about 140. Various ownership adjustments have been made over the years and the title is presently held by Mr. John Connolly (5/8), Tonopah, Nevada and Mrs. Eugene T. Laugenour (3/8), Woodland, California. Mrs. Laugenour is the widow of Mr. Williams, former partner to Connolly.

This property has been leased and operated by a number of Companies and individuals over the years. Goldfield Consolidated Mining Company operated under lease and partial ownership during 1940-41 and 42. Paul Martin leased and produced some mercury during several years before and after the time of Goldfield Consolidated. Basal Prescott, a mining engineer, has conducted exploration under lease agreement.

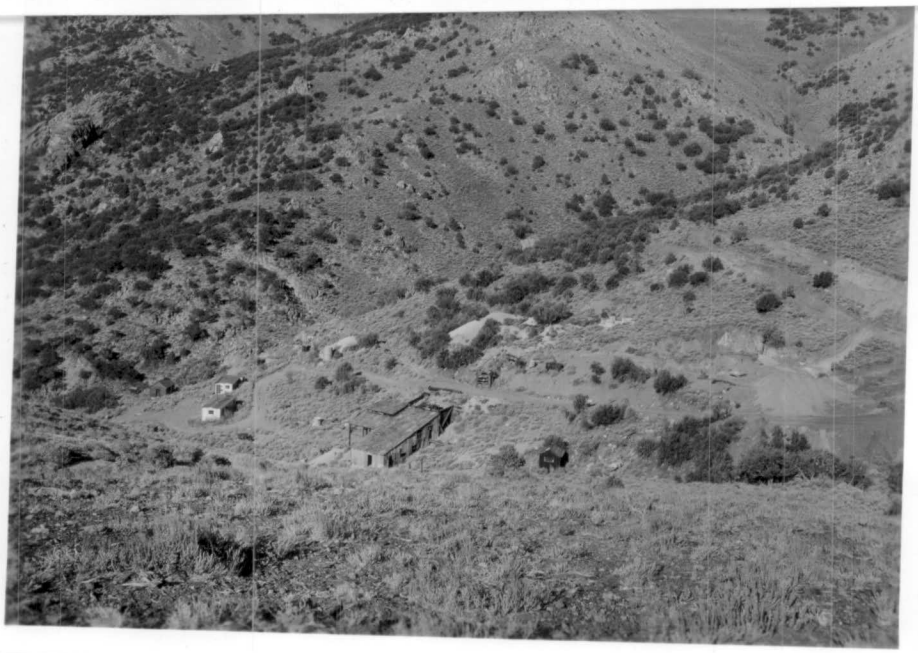
Complete production records were not kept by the owners. One Government publication, "Quicksilver Deposits in Nevada", credits this property with a production history of 728 76-pound flasks to the end of 1943. Some mercury has been produced here since 1943 and it is reasonable to think that much of the early production and that of small operations has escaped the records. Mr. Connolly is of the opinion that total production to date is in the neighborhood of 1,500 flasks or about 115,000 pounds of metal.

DEVELOPMENT AND MINERALIZATION

One map compiled by W. D. Michell from records of Goldfield Consolidated and E. S. Giles, shows approximately 2,700 feet of underground development. This work was done on four main levels, the deepest of which was 150 feet. Shown also are numerous raises, inclines, stopes and intermediate levels. Assay results shown are spotty and very incomplete. Highest grade of ore shown is near the Ott Shaft on and near the 150 level. Two feet of 300 pound ore and three feet of 200 pound ore are indicated in an incline from the 150

Looking northward toward Van Ness vicinity from Nevada State Route #82

Looking down from East Ridge over the Mahogany Stope, Ott Shaft and Furnace building



Looking down from East Ridge over the area in above photo and living quarters

PLATE 2

which corresponds roughly to a 20 foot offset in the Ott Shaft. Numerous other high grade and good grade ore samples are shown and Mr. Cirac reports that much of the best ore was mined from the Mahogany Stope Area which is now caved (see map).

Veins are mentioned on the development map but their geology is neither shown nor described. It appears, from correlating surface geology with this development map, that all the ore zones or veins strike a few degrees north of east, dip roughly 65 degrees southward and rake downward to the southeast. Consequently, the most favorable location for discovery of new ore is indicated to be southeasterly and possibly below the present workings.

All of the underground workings are inaccessible at present. The ground is known to be heavy and dangerous.

Surface and near surface examination has shown the cinnabar deposition was controlled by at least three geologic conditions:

1. A host rock environment of highly fractured and broken sedimentaries, preferably cherty lime members.
2. Concentrations of kaolin and other clay minerals resulting from a combination of pre-mineral fracturing and hydrothermal alteration and percolating ground waters.
3. Silicification in the form of breccia cementing and quartz veins.

At locations where all three conditions are met, cinnabar mineralization is usually present. All these conditions are satisfied at the caved Mahogany Stope; 250 feet east in a dozer cut; 400 feet east in a cleared area and again on the east ridge in at least two prospect pits. Silicification alone does not necessarily indicate the presence of cinnabar on this property. Several quartz veins on the east ridge appear to be barren. Likewise, there are several kaolinized areas having no quartz which were found to contain no cinnabar on panning.

PLATE 3

J. BENJ. PARKER

NEVADA MINERAL LABORATORIES

336 MORRILL PHONE RENO 21001

RENO, NEVADA

ASSAY CERTIFICATE

M. Keith N. Meador 11-8-56

WE HAVE ASSAYED YOUR ..... SAMPLES AND FIND ..... CONTAINS: (PER TON OF 2000 LBS.)

NO.	MARK	GOLD Ozs. per Ton	VALUE GOLD	SILVER Ozs. per Ton	LEAD Per Cent Wet	COPPER Per Cent	MERCURY Lbs. Per Ton	ZINC Per Cent	WO, Per Cent	LIME CaO	Per Cent
1	#1						3.8				
2	#2						6.6				
3	#3						3.4				

Remarks:

Charges: Paid

J. Benj. Parker

PLATE 3

PRICE LIST OF ORE ASSAYS

Gold only - - - - - - - - - - - - -	$2.00
Silver only - - - - - - - - - - - -	1.50
Gold and Silver - same sample -	3.00
Copper - - - - - - - - - - - - - - -	3.00
Lead - - - - - - - - - - - - - - -	3.00
Iron - - - - - - - - - - - - - - -	3.00
Zinc - - - - - - - - - - - - - - -	3.00
Mercury - - - - - - - - - - - - -	3.00
Uranium - - - - - - - - - - - - -	10.00
Tungsten - - - - - - - - - - - - -	7.50

Free Gold by Amalgamation - - -	3.00
Bullion Assay - Gold ----------	3.00
Bullion Assay - Silver --------	3.00

Chemical Determinations

Alumina, Calcium, Carbon (Graphite), Iron, Magnesium, Silica and Sulphur, each - - - - - - - - - - - - - - -	3.00
Antimony, Arsenic, Barium, Chromium, Nickel, Phosphorus, Tin, Manganese, each - - - - - - - - - - - - - - -	6.00
Bismuth, Cadmium, Potassium, Cobalt, Sodium, Titanium, Vanadium, Molybdenum, Boric Acid, Palladium, Platinum, each - - - - - - - - - - - - - - -	10.00
Qualitative Spectrographic Analysis	7.00

All Assays Run in Duplicate

Where clients have not already established credit in this office it is expected that charges will be prepaid.

Remittance should be sent by separate letter and in each case instructions should be enclosed with the samples.

Many samples are received at this office without proper instructions. We cannot assume the responsibility of assaying samples where the marks and instructions are not complete and definite. Shipper's name and address should be placed inside of the package, as outside labels are often mutilated in transit

Three samples were cut for assay to compare with some of the panning results.

#1. From a shallow shaft located on the east edge of the caved Mahogany Stope. This material pans some better than the assays indicate.

#2. From one wall of the caved stope area. This material panned less cinnabar than sample one. The inconsistency may be due to the fact that slightly coarser material was panned for sample two.

#3. From one prospect pit on the east ridge. Pannings were roughly equal to those on sample one and some better than the assays indicate.

Many pannings were made during this preliminary examination. At locations where geologic conditions favor mineralization, cinnabar would usually show in the concentrate. As is normally expected in surface panning, the amount of cinnabar was highly inconsistent throughout the property.

Mineralization of questionable importance was observed on the Sentinel Number Five claim. A shallow shaft near the road has exposed scheelite in altered limestone. Any ambitious development program here would do well to conduct some further examination of this showing.

GENERAL GEOLOGY

The general geology is characterized by a narrow belt of Paleozoic sediments, several miles long, trending northeasterly through a massive, granitic type intrusion. Gradational metamorphism has produced phyllite, hornfels and schistose rocks from interbedded limestones, shales and sandy shales. None of these sedimentaries have escaped metamorphism but a few have retained their original identity.

The surrounding granitic rocks exhibit a variety of textures ranging from fine equigranular through coarsely crystalline,

porphyritic, pegmatitic, and gneissic. This variety of texture shown by what is fundamentally a homogeneous rock mass indicates the cooling magma was solidified under variable pressure conditions. The gneissic texture indicates further that considerable tectonic pressures were being applied in this vicinity subsequent to the magmas solidification.

Evidence of fault structure within the sedimentaries is widespread. Repetitious bedding, changing strike direction and opposing dips all indicate a complex fault and fracture pattern. As much of the area is covered by soil and talus, a precise study of fault structure is difficult; however, all of the quartz veins are believed to follow lines of dilation fractures.

A complex system of minor fractures was observed at the caved Mahogany Stope. It is altogether probable that fault structure has controlled ore deposition in a very general way. One major break is shown (W. D. Michell Map) to coincide roughly with the 150 level development and ore zone. Detailed study of the underground workings would undoubtedly disclose that all of the ore bearing zones roughly parallel lines of major faults.

Joint sets in igneous rocks were observed but not mapped as they appear to have no bearing on the cinnabar mineralization.

PROSPECTS FOR DEVELOPING NEW ORE

No ore reserves are known to be blocked out by underground development and extensive near-surface mineralization is only indicated by old and recent surface work.

Possibilities for developing new ore appear good and further testing of these possibilities would be justified under favorable conditions of lease and option.

Geologic conditions which are known to have a direct connection

with cinnabar deposition were observed at intervals over a distance of at least 900 feet. Records of underground development indicate that high grade mercury ore does exist on this property at a depth which could conceivably be mined through open pit methods. In this connection it was interesting to observe that much, if not all, of the metasedimentaries could be moved by modern heavy machinery. Except for a few highly silicified areas, very little drilling and blasting would be required.

Caving of all access routes to the underground workings has left much to be desired. Detailed mapping and systematic sampling of these extensive workings could lead to more ore finding than many hundred dollars worth of new work. The ore indicated directly below grid station 810 N- 1440 E (see Michell map) may have been mined out. A new vertical shaft at this location would be too costly a venture without additional justification. Reopening and reconditioning of 380 feet of tunnel is required to reach this point through the 150 level. For mining purposes, this is the most desirable access route; however, this tunnel could be in a condition which would require a greater expenditure than a new vertical shaft. One other possibility is presented in the Ott incline shaft. Reconditioning of this shaft and possibly 20 feet of crosscut would render access to the most desirable area on the 150 level, and probably much more of the entire mine.

Near-surface mineralization on the east ridge will justify further testing. The Stovepipe Tunnel heading easterly is closed at the portal and little is known of this work; however, it appears to be south of the mineralized zone about 25 feet. There is some suggestion of continuity between the mineralization on this east ridge and that in the Mahogany stope area. It is the east ridge

that should be prospected with heavy equipment. First, to determine the extent of mineralization and secondly, to test the economic application of open pit mining methods in this area. This ridge holds the greatest potential for a large tonnage operation if any appreciable width can be developed.

COSTS

Many factors are known to have a direct bearing on mining and furnacing costs and also upon operating efficiency at the Van Ness Property.

1. Cinnabar mineralization occurs in highly kaolinized, porous ground. This material has a very high capacity to hold water and the newly mined ore will be wet even after long periods of dryness. The amount of fuel required to drive off the moisture would probably equal or exceed that required to vaporize the mercury.

2. According to Mr. Connolly, the 30 foot Cottrell Furnace will operate efficiently on a maximum of 18 tons of ore per day. An operation limited to 18 tons per day would be profitable only on very high grade ore. Generally speaking, it is necessary to slow down furnace intake as the grade of ore increases. Evidently the furnacing facilities will need to be increased prior to any ambitious development program.

3. Cinnabar mineralization has been exposed and mined at many surface locations having more or less continuity in an east-west trend over 900 feet. Cinnabar ore, both high and low grades, have been developed and mined through a down-dip extension of 150 feet, and over an east-west trend of 300 feet.

4. The mineralized zone is not known to be of any certain or regular width and further, it is not known to contain cinnabar throughout.

5. Climate and weather conditions could seriously handicap mining and furnacing operations during December through March of any year.

SUMMARY

The Van Ness Mercury Property is located 53 road miles northeasterly of Tonopah, Nevada near Bald Mountain in the Toquima Mountain Range. This property, at an elevation of nearly 9000 feet, is subject to extreme cold and heavy snowfall during the months of December through March of any year. Water suitable for domestic use is available on the property, and three existing cabins, in need of some repair, will accommodate a crew of eight or ten men. This property is poorly situated with respect to supplies and equipment.

Mercury minerals were discovered on this ground in 1928 and production of the metal since that time is estimated at about 115,000 pounds. The property consists of two patented lodes and five lode locations. Current ownership is in the hands of Mr. John Connolly (5/8), Tonopah, Nevada and Mrs. Eugene T. Laugenour (3/8), Woodland, California.

Development work to date includes about 2,700 feet of shaft, tunnel and crosscut with accessory stopes, winzes and raises. Several large dozer cuts and numerous small shafts and pits testify for much time spent in prospecting this area.

Certain geologic and structural conditions are believed to govern cinnabar deposition to a great extent. Pre-mineral fracturing, kaolinization and silicification appear to have had a direct influence on ore deposition.

Paleozoic sedimentary rocks are exposed in a narrow east-west trending band and are surrounded on all sides by igneous rocks of granite composition and texture. Heat and tectonic forces have

metamorphosed portions of both the sedimentaries and intrusives. No volcanic rocks outcrop in this area.

No ore reserves are known to be blocked out, but the possibilities for developing new ore appear to be very good. Host rock conditions are favorable to application of open pit mining methods if a suitable grade and thickness of ore can be developed. Most of the important underground development is inaccessible at present and moderate expenditures to gain partial access appear to be justified. Reconditioning of the Ott incline shaft (150 feet) presents the most economical approach.

Furnacing facilities on the property include the original 30 foot by 30 inch Cottrell Rotary Furnace, gun type feeder and eleven condensing tubes. All of this equipment is in poor condition and in need of repair. As this furnace has a maximum capacity of 18 tons per day, new or additional facilities are required to support any ambitious development program.

Many factors are known to have a direct bearing on mining and furnacing costs at this property. Volume and grade of ore available, method of extraction and furnacing capacity are all of paramount importance. Too few data are at hand to accurately calculate profit or loss estimates on any operation here.

Visible cinnabar mineralization and mercury production history justify further examination of this property to determine whether a profitable operation can be expected under present mercury metal quotations.

RECOMMENDATIONS

The following plan of precedure is recommended in connection with the Van Ness Mercury Property.

1. Enter into a signed agreement with the property owners under the following basic terms:

   A. Lease to be for a period of ten years renewable for ten years at Lessees option.

   B. Lease to cover two patented lodes; namely the Sentinel and Sentinel No. One, and five lode locations; namely Sentinel numbers 2 through 5 and Lucky Strike.

   C. Owners agree to permit Lessee to enter in and upon the property at his own discretion and to conduct exploration and testing as he may deem necessary at any time from the date of signing until such time asssurface examination is complete or until July 1, 1957. At this time Lessee must declare his intentions, and in the event they are to exercise his option to lease, a nominal cash payment may be reasonably expected by the owners from Lessee. In the event Lessee, by his own decision, elects to conduct further exploration in the form of reopening the existing underground workings, owners should agree to provide a 90-day, payment free, extension of time.

   D. Any and all advanced payments, minimum and production royalty payments are to apply against the final purchase price.

   E. Nominal minimum monthly royalties to be paid to the owners by Lessee should start on August 1, 1957 or on October 1, 1957 in the event Lessee elects to reopen the underground workings.

   F. Production royalties to be paid to owners by Lessee are to be computed at the rate of 10% of the sales value of all mercury metal produced from this property after deducting the actual cost of furnacing operations. Production royalties are to be computed and paid each quarter annum.

   G. Minimum monthly advanced royalties should be waivered during the months December through March.

   H. Lessee should have the option to purchase all right and title to this property from the owners for a clearly stipulated amount. Lessee should also have the unqualified right to exercise this option at any time he so chooses.

   I. Certain protective clauses should be incorporated into the lease to benefit both parties against damage suits,

liens, losses, indebtedness and uncontrollable inconveniences imposed by others.

J. All advance and production royalty payments should be made directly to a bank of the owners choice for distribution.

2. Move one D-8 engine with plow and dozer blade to the Van Ness Property in the spring of 1957 whenever convenient and when snow conditions permit. Conduct the following surface examination:

   A. Supervised surface cuts and trenches normal to the mineralized zone trending easterly through the east ridge.

   B. Expose and cut bedrock in an area approximately 50 feet east of the caved Mahogany Stope.

   C. Expose and cut bedrock at two or three additional locations easterly and on the same trend developed by "B".

   D. Conduct careful and systematic panning, mapping and sampling in all the above cuts and trenches.

   Correlation of the information gained through this work should point up the possibility of developing a large low-grade or smaller high-grade ore body. Knowledge should also be available at this time regarding the profitable application of open pit mining methods.

3. Determine upon completion of the surface exploration, whether reopening of the underground workings is justified. Mercury metal quotations at this time, coupled with the information gained through surface work should govern in this decision.

4. The decision to install crushing facilities and rehabilitate furnacing facilities, with possible additions thereto, must necessarily be delayed until such time as exposed mineralization will justify these actions.

Respectfully Submitted
Keith W. Meador

MINING LEASE AND OPTION

THIS LEASE AND OPTION, made and entered into this 1st day of January, 1957, by and between JOHN CONNOLLY of Tonopah, Nevada, and MRS. HOMER L. WILLIAMS of 328 California Avenue, Reno, Nevada, hereinafter referred to as the LESSORS, and A. D. DRUMM. JR., of P. O. Box 191, Fallon, Nevada, hereinafter referred to as the LESSEE,

W I T N E S S E T H:

That the Lessors, for and in consideration of the rents, royalties, covenants and agreements hereinafter reserved and set forth, and by the Lessee to be kept and performed, have leased, let and demised unto the said Lessee for the purpose of mining, all that certain piece or parcel of mining ground, together with the improvements, buildings, and other appurtenances situated, lying and being in the County of Nye, State of Nevada, to-wit:

> The SENTINEL, SENTINEL #1, SENTINEL #2, SENTINEL #3, SENTINEL #4, SENTINEL #5 and LUCKY STRIKE mining claims located in that area commonly known as VAN NESS, in the Barcelona Mining District of Nye County, Nevada.

TO HAVE AND TO HOLD unto said Lessee said demised premises for the purposes of mining, beginning January 1st, 1957, and ending on the 31st day of December, 1966, at midnight.

IN CONSIDERATION THEREOF, the said Lessee does hereby covenant and agree with the said Lessors, as follows, to-wit:

1. To enter upon said leased premises forthwith, weather conditions permitting, to begin working on said premises and to work the same in proper, skillful and minerlike fashion, and in manner necessary to good and economical mining so as to take out the greatest amount of ore possible with due regard to the safety, preservation and development of said premises as a workable mine.

The Lessee shall well and sufficiently timber the mine at all

points where proper, in accordance with good mining custom and procedure. The Lessee shall at all times keep the drifts, tunnels and other workings being actively mined by Lessee thoroughly drained and clear of waste, rock and rubbish.

The Lessee shall occupy and hold all cross and parallel lodes, spurs, or mineral deposits of any kind which may be discovered by the Lessee, or any person under them in any manner, by working within or from the leased premises as the property of the Lessors with priviledge to Lessee of working the same as a parcel of the leased premises, and subject to all of the terms and conditions herein contained.

2. To immediately post and keep posted on the property due and proper notices relieving Lessors from any and all liability or responsibility for work done on said premises or from any injuries to persons or damage to property occurring or committed on said premises.

3. To promptly pay all wages for work done and to comply with all laws, federal, state and local, pertaining to mining and mining operations, including the carrying and maintaining of Industrial Accident Insurance on employees.

4. To permit Lessors, their agents or representatives, to have access to said demised premises at any reasonable time for the purpose of inspecting the same.

5. To pay to the Lessors royalties on the gross sales of products on each and every ton of ore, mineral or other product taken, milled or extracted from said property as follows:

> TEN PERCENT (10%) of all ore values taken by Lessee from said mine or premises during the term of this Lease, less freight from Tonopah to buyer, however, commencing September 1, 1957, and thereafter, Lessee covenants to pay the royalty hereinabove specified, or the sum of FIVE HUNDRED DOLLARS ($500.00) monthly, whichever is the greater.

6. To promptly pay all costs of operation and maintenance of said premises, including taxes of any kind whatsoever after January 1st,

1957, assessed thereon, and at all times to keep said property free and clear of any and all liens or encumbrances of any nature or kind whatsoever.

7. At the termination of this lease by lapse of time, forfeiture, or otherwise, to deliver up to said Lessors the said premises in as good condition as when received, allowing for the mining and development thereon by the Lessee. In the event of the forfeiture or termination of this agreement as hereinafter set forth, it is understood and agreed that all improvements, including rail in place, made in or about said property by the Lessee and affixed to the realty and constituting a part thereof, together with operational maps, assays,and reports, shall remain the property of the Lessors, but all property of a personal nature, including machinery, tools or equipment, subject to removal without damage to the realty or improvements, may be removed therefrom by the Lessee within sixty (60) days from the date of the said forfeiture or cancellation of this agreement, Failing which, the same shall revert to the Lessors. It is understood and agreed that the foregoing provision shall apply to any water applications, rights or privileges acquired by the Lessee on the property or used in connection therewith, that is to say, that the same shall also revert to the Lessors in the event of the forfeiture, termination or cancellation of this agreement and the Lessee agrees to forthwith convey the same.

It is further understood and agreed that no machinery, building or equipment owned by the Lessors and presently situated on the premises shall be removed by the Lessee without the written consent therefor being first had and obtained from the Lessors.

8. To do and perform any necessary annual assessment work that may be required on the property during the life of this agreement. A

timely notice of the completion of said assessment work and the filing of a notice of the same shall be made by the Lessee as required by law.

9. Time is of the essence of this agreement, and in the event that Lessee shall fail to make any payment or payments as herein provided or shall fail to perform each and every covenant, term and condition as herein provided, the Lessors may, after ten (10) days' notice in writing given to Lessee within which to cure said default or violation, and provided said default or violation has not been cured during said TEN (10) day period, declare said lease forfeited, cancelled and terminated, and enter and repossess all of the property herein demised, with or without process of law, and in such event, all payments made hereunder may be retained by the Lessors as liquidated damages.

IN CONSIDERATION OF THE FOREGOING PREMISES, and the payment of ONE DOLLAR ($1.00), paid by the Lessee to the Lessors, the receipt whereof is hereby acknowledged, the said Lessors do hereby give and grant to the Lessee the exclusive right and option to purchase from said Lessors the whole of those certain mining claims, premises and appurtenances, as in the foregoing Lease set forth, for the full purchase price of SIXTY THOUSAND DOLLARS ($60,000.00), payable to the Lessors at Tonopah, Nevada, in cash or the equivalent thereof, on or before the termination of the within and foregoing Lease agreement, or any extension thereof.

It is understood and agreed that any royalties paid under the foregoing Lease shall be applied to and be credited upon the FIVE HUNDRED DOLLAR ($500.00) payment due on the first day of the month following the date on which said royalty is received by the Lessors, it being understood that the $500.00 payment shall constitute a minimum monthly royalty, as well as constituting an installment pay-

ment under the Option agreement herein.

In the event that the Lessee shall exercise the option to purchase said property, it is understood and agreed that any and all royalties from production which may be paid by the Lessee to the Lessors as in this Lease provided, or any extension or extensions thereof, shall apply upon the purchase price in the Option to Purchase set forth, and be credited thereon.

Any and all payments made to the Lessors by the Lessee, either under the Lease or the Option to Purchase contained herein, shall immediately become the property of the Lessors. And in the event that this Lease is terminated or forfeited, all payments of royalties made prior to said forfeiture and termination shall be retained by the Lessors as reasonable rental of the property.

The Lessors hereby represent that title to each and all of the premises and properties hereinabove referred to is good and merchantable, subject only to the paramount interest of the United States, and free from all encumbrances or liens by them suffered or committed. However, it is acknowledged by the parties hereto that some of the above-described claims may be the subject of a patent issued by the United States of America, and that a diligent search will be conducted to determine the exact status of the title to said claims, it being the intention of the parties hereto that the description of the above-described properties may be amended to reflect the true status of title when proper records are produced and recorded by the Lessors.

All written notices provided for in the foregoing Lease and Option agreement to be served upon the respective parties shall be sent by registered mail, return receipt requested, through a United States Post Office, postage prepaid, and addressed to the said parties at their respective addresses, and such notices shall be effective on

the day of delivery, the addresses of the parties being as hereinbefore set forth in this Lease agreement, unless and until the respective parties give written notice of the change of addresses.

It is expressly understood and agreed that the within and foregoing Lease hereby granted and the Option to Purchase herein contained shall be construed as a single instrument, and the failure of the Lessee to perform the terms of the Lease agreement or the Option agreement as herein set forth shall immediately cancel both the Lease agreement and the Option to Purchase as hereinbefore set forth, and the same thereupon shall be of no further force or effect, all payments having been made under this agreement remaining the property of the Lessors as liquidated damages. Notice of default of the terms or conditions of the Option shall be given in the same manner as set forth and provided for in the Lease agreement.

Time is of the essence of each and every item, covenant, and condition of the foregoing Lease and Option to Purchase agreement, and the same shall be binding upon all of the heirs, executors, administrators, successors and assigns of all the parties hereto, and shall not be altered or amended in any respect except by an instrument in writing signed by the respective parties.

It is further understood and agreed that the Lessee shall not assign or transfer this Lease and Option agreement in whole or in part, without the written consent of the Lessors being first had and obtained.

It is further acknowledged by the parties hereto that the Lessee may apply for DMEA assistance, and in this regard, the Lessors covenant to execute such instruments as are necessary by the owners of such properties approved by the proper government agency for such exploration and development assistance.

All payments of royalty and/or purchase price made under the terms of this Lease and Option, during the term hereof, shall be made payable to the Lessors, through the First National Bank of Nevada, Tonopah, Nevada, Branch. Upon payment of the initial five thousand dollars ($5,000.00) the Lessors shall deposit a good and sufficient deed of conveyance, conveying the said property to the Lessee, with the said First National Bank of Nevada, Tonopah, Nevada, Branch, as escrow, with instructions to said escrow to deliver said deed of conveyance to the Lessee upon payment of the balance of the purchase price. All fees and expenses of escrow shall be borne equally by the Lessors and Lessee.

Lessors do hereby waive any required work provisions or the payment of the minimum monthly royalty guaranteed hereinabove when the work, either mining, milling or development, is prevented by extreme adverse weather conditions, however the Lessee shall have the final and sole authority to determine whether the weather conditions are such as would prevent work being accomplished.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

Original lease signed by all lessors K.M.M.

John Connolly

Mrs. Homer L. Williams

LESSORS

A. D. Drumm, Jr.

ADDENDUM TO MINING LEASE AND OPTION

THIS ADDENDUM, made and entered into this 19th day of March, 1957, by and between JOHN CONNOLLY, of Tonopah, Nevada, and MRS. HOMER L. WILLIAMS, of 328 California Avenue, Reno, Nevada, hereinafter referred to as the LESSORS, and A. D. DRUMM, JR., of P. O. Box 191, Fallon, Nevada, hereinafter referred to as the LESSEE,

W I T N E S S E T H:

THAT, WHEREAS, the parties hereto entered into a written Mining Lease and Option agreement, dated January 1st, 1957, relating to the SENTINEL, SENTINEL #1, SENTINEL #2, SENTINEL #3, SENTINEL #4, SENTINEL #5 and LUCKY STRIKE mining claims, located in that area commonly known as VAN NESS, in the Barcelona Mining District of Nye County, Nevada, said Mining Lease and Option being incorporated by reference herein; and

WHEREAS, it is the desire and intention of the parties hereto to amend and clarify said mining Lease and Option in certain respects for the mutual benefit of the parties hereto,

NOW, THEREFORE, in consideration of the mutual covenants herein contained, it is agreed as follows:

1. With reference to Paragraph 5, page 2, of said Mining Lease and Option, the Lessee shall pay over to the Lessors the royalty provided therein on or before the expiration of ten (10) days from the date of receipt by the Lessee of the proceeds of any sales of any ore, mineral or other product taken or extracted from said property.

2. Paragraph 3, page 6, lines 18 to 21, inclusive, is hereby deleted in its entirety, and in place thereof the following is inserted:

It is further understood and agreed that the Lessee may assign or transfer this Lease and Option agreement, in whole or in part, without the written consent of the Lessors being first had and obtained;

however, in the event that the Lessee shall assign or transfer this Lease and Option agreement, in whole or in part, the Lessee covenants to pay over to the Lessors TWENTY-FIVE PERCENT (25%) of any consideration received by said Lessee for the assignment or transfer of this Mining Lease and Option, and such amount paid over to Lessors shall be applied against the total purchase price as hereinabove stated.

3. Paragraph 5, page 6, lines 27 to 32, inclusive, and lines 1 to 5, inclusive, page 7, is hereby deleted in its entirety, and the following substituted therefor:

All payments of royalty and/or purchase price made under the terms of this Lease and Option during the term hereof, shall be made payable to the Lessors through the First National Bank of Nevada, Tonopah, Nevada, Branch, Within THIRTY (30) days after receipt of written demand from the Lessee, the Lessors shall deposit a good and sufficient deed of conveyance, conveying the said property to the Lessee, with the said First National Bank of Nevada, Tonopah, Nevada, Branch, as escrow, with instructions to said escrow to deliver said deed of conveyance to the Lessee upon payment of the balance of the purchase price. All fees and expenses of escrow shall be borne equally by the Lessors and Lessee.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

Original signed by
Al Jenkins
R.M.M.

JOHN CONNOLLY

MRS. HOMER L. WILLIAMS

LESSORS.

A. D. DRUMM, JR.

LESSEE.

P. O. BOX 982 - RENO, NEVADA TELEPHONE FAIRVIEW 3-8549

KEITH N. MEADOR
CONSULTING
MINING GEOLOGIST AND GEOPHYSICIST
REGISTERED LAND SURVEYOR

Progress Report

VAN NESS MERCURY

Nye County, Nevada

In May of 1957, heavy machinery was moved on the Van Ness Property and surface work was performed in the areas of strongest mineralization. On the east ridge a narrow vein structure was exposed over a strike length of about 300 feet. Pannings, from any point along this vein would yield cinnabar in appreciable quantity and the decision was made to further inspect this mineral condition through some underground work. All of the necessary equipment and tools were moved in and three men were engaged to sink a 4 X 7 vertical shaft. At a depth of 21 feet the vein had widened to three feet and cinnabar was found locally across 16 inches. Strongest mineralization was observed to be accompanied by granular quartz and on a southerly dip.

At this depth, a small drift tunnel was run easterly along the hanging wall. This work further pointed up the easterly rake and the necessity of quartz mineralization.

Two adjoining samples, each across eight inches, were assayed for mercury and it was calculated the 16 inch vein contained about 9.5 pounds of mercury per ton.

It has now become apparent that this narrow vein was salting a broad zone of surface soil. Pannings in this vicinity during the preliminary examination (November, 1956) indicated a 10-foot zone which would average nearly four pounds of mercury per ton.

Obviously open pit methods will have no application here and

Telephone EMpire 3-3302

Lead Sample Serial 19391-2

Mine Keith N. Meador

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J .V. SADLER, President
A. C. SELBY, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary

RESULTS PER TON OF 2000 POUNDS

July 23, 1957

Salt Lake City 10, Utah

NO.	GOLD Ozs. per Ton	SILVER Ozs. per ton	LEAD Per Cent Wet	COPPER Per Cent	~~XXXXX~~ Per Cent	~~XXXXX~~	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent	VALUE GOLD
					Hg%	Hg lbs per ton						
VN #1					0.205	4.10 — #1						
VN #2					0.730	14.60 — #2						

Remarks

Charges $ 6.00

A. C. Selby

future development will have to be underground.

Past development and production has illustrated clearly that the ore zones here strengthen with depth to at least 150 feet below the surface. Mining in the old stovepipe tunnel has exposed cinnabar mineralization and recent work has proven the vein to be continuous through the east ridge. The vein here has shown a marked improvement at a 21 foot depth.

Under present market conditions surrounding mercury, an energetic development program here is justified.

Recommendations are to recondition the stovepipe tunnel and continue driving easterly (approximately 500 feet) to a point below the old 40-foot vertical shaft. This work will develop 150 feet of depth at that point and will also explore several hundred feet of the vein structure. Crosscutting 30 feet in either direction from this tunnel should be conducted on 100 foot intervals at three stations as indicated. Raising from the tunnel's end to connect with the existing shaft will require an additional 110 feet of work.

Much of this ground is heavy and will require some timber. The estimated contract cost of this work is $35.00 per foot or a total of $27,650.00.

Keith N. Meador

Keith N. Meador

COST BREAKDOWN

	Cost per Foot of New Work
Labor - Four men working 8 hours per day 6 days per week $2.25 per hour	$ 12.00
Air - Drill - Steel - Bits - Mine Cars - Etc. includes fuel, repair, blacksmithing, etc.	5.50
Mine timber (all dimensions)	3.60
Rail, Ties, Plates, Spikes, etc.	1.50
Explosives (all inclusive)	3.10
Air and Water hose and pipe, couplings, etc.	.85
Recondition old Stovepipe tunnel	1.95
Engineering (includes Fee, transportation, telephone and miscellaneous)	2.25
Assaying	.75
Camp improvement and Maintenance	.90
Access Road Improvement and Maintenance	1.85
SUB TOTAL	$ 34.55
Allowable Error	.45
TOTAL	$ 35.00

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Use other side first

U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1/46)

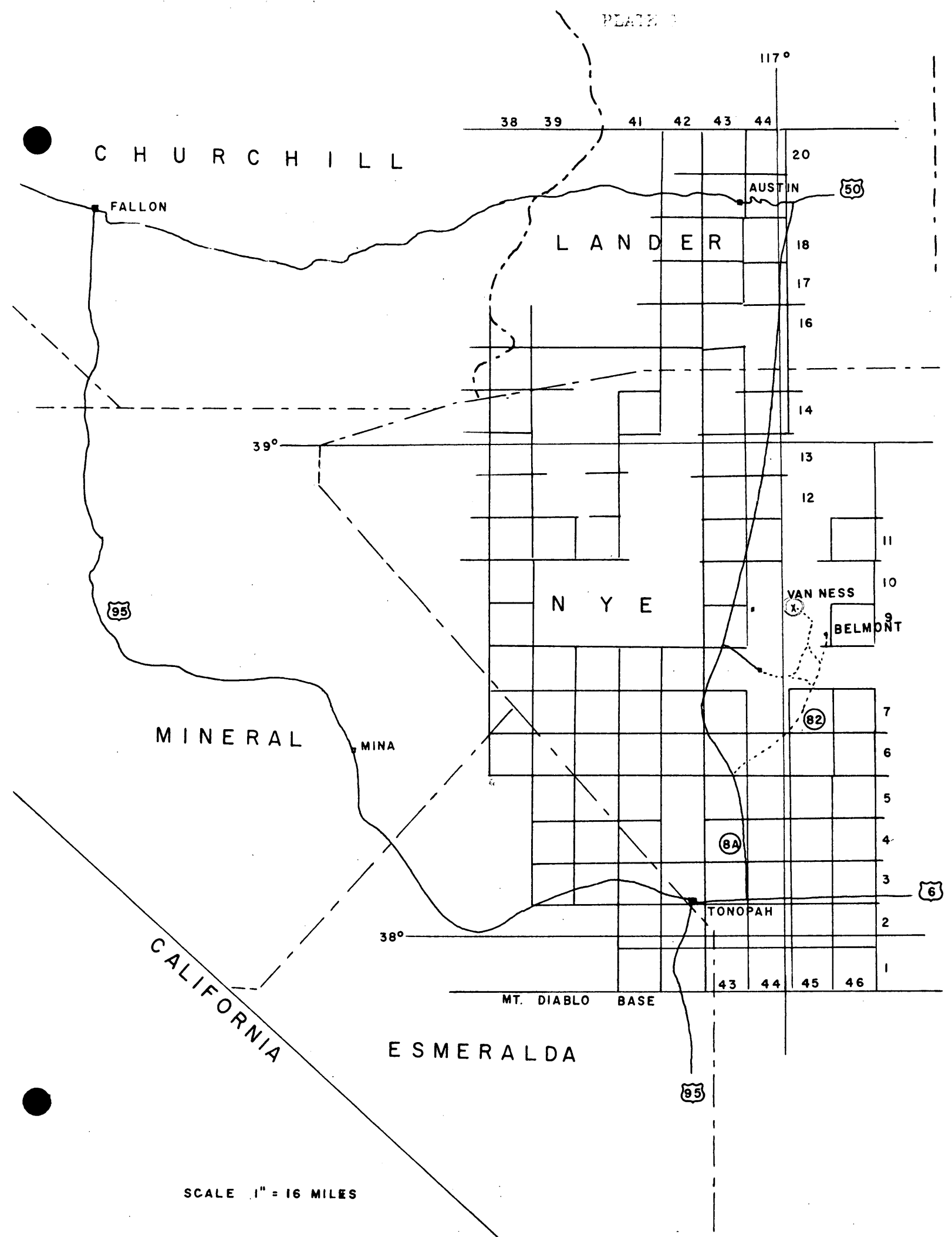
1. Use blocks consecutively.
2. Void previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS,
Personnel Rm 63 Customs	RUN STOP	
Mrs Lewis Reserve Mobilization Room 5456	RUN STOP	
~~Mr Rothrock~~ ~~Room 305~~	RUN STOP	
~~Defense Minerals Room 4459~~	RUN STOP	
~~Mr Fitzgerald~~	RUN STOP	
Mail & Files DMEA 4450	RUN STOP	
	RUN STOP	
	RUN STOP	
	RUN STOP	

Send surplus envelopes to supply room for reissue.

Use other side

Use RUN and STOP only when messenger service between Government buildings in Washington is required. Your mail room has RUN and STOP information.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TONOPAH
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CALIFORNIA
MT. DIABLO BASE
ESMERALDA
95
SCALE 1" = 16 MILES

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
11-25	Holt	400
11-25	Martin	400
11-25	Jeffrey	430
11/25	Lasut	130
11/25	Kilsgaard	130
"	Johnson	110
"	Mittendorf	100
"	GF	220
		2BB

NOV 25 1957

Mr. A. D. Drumm, Jr.
Box 191
Fallon, Nevada

Re: Docket No. DMEA 4819 - Mercury
Van Ness Mine
Nye County, Nevada

Dear Mr. Drumm:

Your application for aid for an exploration project and other data available to us in Washington concerning the referenced property have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position of the National Defense Program.

Careful study of all our information although noting the occurrence of mercury mineralization on your property indicates to us that the probability of disclosing significant ore reserves by your proposed program is not sufficiently promising to justify Government participation. Under these circumstances we regret to advise you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing this property to our attention.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

JHOPKINS/dlm 11-25-57
cc to: Code 400
Admr. R. File
Oper. Comm
FT. REG. II
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

November 20, 1957

OFFICIAL FILE COPY

Date	Surname	Code
11-20	[illegible]	406
11-20	Martin	400
		110

MEMORANDUM

To: Administrator, DMEA

From: Division of Iron and Ferro-Alloys

Subject: Denial of the subject application for exploration assistance in the amount of $27,650.00
Docket No. DMEA 4819 - Mercury
A. D. Drumm, Jr.
Van Ness Mine
Nye County, Nevada

Denial of the subject application is recommended by this Division based on the following information.

The Applicant, A. D. Drumm, Jr., on August 19,1957, applied for exploration assistance on the above-cited property at an estimated cost of $27,650.00. It proposed to rehabilitate an old (Stovepipe) tunnel and drift 500 feet to a point below a 40-foot prospect shaft, crosscutting 30 feet on both sides at 100-foot intervals, and raising from end of adit to connect with shallow surface prospects.

Applicant: Mr. A. D. Drumm, Jr
Box 191
Fallon, Nevada

Property Ownership: The property consists of the following mining claims, under a lease agreement to Applicant and located in sec. 12, T. 9N. R. 44 E., and sections 6 and 7, T. 9 N., R. 45 E., M.D. B. & M., Nye County, Nevada. Location certificates are recorded at County Courthouse, Tonopah, Nevada.

Claims:

Sentinel	Mineral	Survey	No.	4696,	Patent No.	1111778
Sentinel No.1	"	"	"	4696,	" "	"
Sentinel No.2	"	"	"	4696,	Unpatented	
Sentinel No.3	"	"	"	4696,	"	
Sentinel No.4	"	"	"	4696	"	
Sentinel No.5	"	"	"	4696	"	
Lucky Strike	Not surveyed.					

Geology: The rocks of the area consist of folded slightly metamorphosed and locally highly fractured metasediments of probable Ordovician

age in a roof pendant within a large batholith or stock of granite rock. A few granite dikes intrude the metasediments.

The medtsediments are cut by prominent bedding faults which in places become strike faults where they cut across the bedding at right angles. Alteration to white clay (Kaolin?) is common along the faults and discontinuous quartz veins occupy some of the faults.

The ore bodies are concentrations of cinnabar along a steep zone of bedding faults. The mineralized zone is about 1,400 feet long, 2 to 30 feet wide, and has been mined to a depth of about 180 feet near its western end. The eastern part is only sparsely mineralized.

Past History
and
Production:

The claims were located in 1928. Production during 1930-1931 was about 500 flasks. The property was operated intermittently to 1943 when it was visited by Geologists of the U.S.G.S. Recorded production at that time was 749 flasks. All production has come from the western part of the mineralized zone - a total of 757 flasks.

Development:

The productive workings in the western part of the area are inaccessible. Maps compiled by U.S.G. S. and Goldfield Consolidated Mining Company show that the mine was developed to a depth of about 180 feet. There are approximately 2,700 feet of underground workings which include the Ott shaft, 40 foot level adit and 150-foot level adit.

Workings in the eastern section where the Applicant proposes exploration work consist of several shallow workings, 21-foot prospect shaft and the Stovepipe tunnel. These extensive surface exposures have allowed the eastern area to be thoroughly prospected.

Sampling and
Ore Reserves:

Thirteen horizontal channel samples were taken of exposures in the eastern area and represent the grade of the best exposures on the Sentinel claim as indicated by panning and visible HgS.

On the basis of this sampling in the area eastward from the collar of the 21-foot prospect shaft, as much as 100 tons of material averaging 2 pounds of mercury per ton is indicated and

an additional 100 tons of the same grade ore inferred.

A few tons may be inferred occurring in small pods along the vein structure to the east.

There are no measured reserves in the Van Ness Mine area. The ore indicated on the Company map of the old workings may be as much as 1,500 tons and inferred reserves may be 5,000 tons; all have a grade of 10.2 pounds of mercury per ton.

Proposed Work: The Applicant wishes to explore the eastward continuation of the mineralized zone by rehabilitating the Stovepipe tunnel and extending it for an additional 500 feet. Then to crosscut 30 feet on both sides of the drift at 100-foot intervals, and by raising at the end of the drift, to connect with shallow workings on the surface.

Conclusions:

The Field Team concludes that the eastern part of the mineralized zone offers no significant target for an exploration target, and in the absence of a good target, they have suggested an alternative program for the western area.

As the Applicant is unwilling to consider an alternative project, the Field Team finds no other recourse than to recommend that the application be denied.

The Commodity Divisions of the Geological Survey and Bureau of Mines concur in the Field Team recommendation.

W S Martin

W. S. Martin, Director
Division of Iron and Ferro-Alloys

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

November 18, 1957

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of Field Examination Report, DMEA 4819 (mercury), A. D. Drumm, Jr., Van Ness Mine, Nye County, Nevada

The examining team report that they could find no geologic evidence on the applicant's property that indicated the presence of an important mercury ore deposit. One part of the property, the site of some old underground openings, might be favorable for ore; but the applicant is unwilling to explore in that area.

The rock on the property is low grade. The best of 13 samples taken ran 3.3 pounds of mercury per ton. Most of the samples showed less than 0.1 pounds per ton.

The applicant appears to be unwilling to undertake a revised, moderate exploration project at the site of a shallow shaft.

Under the conditions, it seems advisable to deny the application, and that course is recommended.

W. P. Williams

W. P. Williams

DMEA
RECEIVED NOV 19 1957

DATE	INITIALS	CODE
11/19	C	220
11/19	WSM	400

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

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DMEA
RECEIVED NOV 18 1957
DATE | INITIALS | CODE
11/14 | glb | 220
| WSM | 400

November 12, 1957

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: Assistant Chief, Branch of Base Metals

Subject: Review of Field Team examination report, Docket No. DMEA-4819 (mercury), A. D. Drumm, Jr., Van Ness Mine, Nye County, Nevada $27,650

The applicant proposed to explore the eastern part of the mineralized zone by a 500-foot adit, 300 feet of crosscutting, and 150 feet of raising at an estimated total cost of $27,650.

Indicated and inferred reserves for the eastern part of the zone are 200 tons of material averaging about 2 pounds of mercury per ton. The examiners found no geologic evidence to indicate higher grade and/or larger tonnage at depth. Although a significant target is indicated in the western area by old company maps, the applicant is unwilling to explore the western area.

I concur with the recommendation of the Field Team that the application for DMEA assistance be denied.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U. S. G. S.
F. D. Lamb
F i l e s

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
1605 Evans Avenue

Reno, Nevada
October 31, 1957

DMEA
RECEIVED NOV 4 1957

DATE		COST
11/4	C	220
11/8	JB	130
11-12	C	220
11/12	WSM	400

Memorandum

To: Operating Committee, DMEA, Interior Building
Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4819 (Mercury)
A. D. Drumm, Jr.
Van Ness Mine
Nye County, Nevada
(Your letter, September 19, 1957)

Enclosed are three copies of a report on subject property by R. H. Campbell, Geological Survey, and B. H. Sheahan, Bureau of Mines.

ON SITE EXAM

Roscoe Smith and I concur in the recommendation that the application for Government exploration aid be denied.

S. Ricker

Attachments

Reviewed by
DMEA OPERATING COMMITTEE
11-8-57
(date)

REGISTRATION		
DATE	NUMBER	PAGES
11/8	2B	130
		220

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA-4819 (Mercury)
Mr. A. D. Drumm, Jr.
Van Ness mine
Nye County, Nevada

by

B. H. Sheahan
U. S. Bureau of Mines

R. H. Campbell
U. S. Geological Survey

October 28, 1957

Reviewed by
DMEA OPERATING COMMITTEE
11-8-57
(date)

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3 . . . . . Stovepipe tunnel and recent prospects

4 . . . . . Assay map

5 . . . . . Longitudinal section

INTRODUCTION

Mr. A. D. Drumm, Jr., P. O. Box 191, Fallon, Nevada, applied to the Defense Minerals Exploration Administration, docket DMEA-4819, for Government assistance in a $27,650 program to explore for mercury on the Sentinel claim at the Van Ness mine, Nye County, Nevada.

A field examination was requested by the Operating Committee and was made by B. H. Sheahan, U. S. Bureau of Mines, and R. H. Campbell, U. S. Geological Survey, on September 26, 1957, accompanied by the applicant's representative, Mr. Keith N. Meador, consulting mining geologist, P. O. Box 449, Fallon, Nevada.

The examiners mapped and sampled a new 21-foot shaft, several surface trenches, and the Stovepipe tunnel. The history of the property was briefly discussed with Mr. John Connolly, one of the owners, at Tonopah, Nevada. Information concerning the main workings was obtained principally from published reports and records of the U. S. Geological Survey and U. S. Bureau of Mines, and from geologic and assay maps supplied by the applicant.

CONCLUSIONS AND RECOMMENDATIONS

The ore deposits consist of cinnabar in metamorphosed chert and recemented fault breccia between and along steep easterly-trending bedding faults. All recorded production (757 flasks) has come from the western part of the mineralized zone. Indicated and inferred reserves for the western part of the zone are approximately 6,000 tons of ore containing an average of 10.2 pounds of mercury per ton. Indicated and inferred reserves for the eastern part of the zone are 200 tons of material averaging about 2 pounds of mercury per ton.

The applicant proposed exploring only the eastern part of the zone by a 500-foot adit with 300 feet of crosscutting and 150 feet of raising, but the reserves there are too small and low grade to warrant such an ambitious program.

There is no geologic evidence to indicate higher grade and/or larger tonnage at the depth of the applicant's proposed program in this area, and the applicant is unwilling to explore the western area where a significant exploration target is indicated by old company maps. We have no recourse but to recommend that the application be denied.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The mine is 54.5 miles by road northeast of Tonopah, Nevada at an altitude of 8,600 feet near the crest of the Toquima Range and in sec. 12, T. 9 N., R. 44 E., and secs. 6 and 7, T. 9 N., R. 45 E., M.D.B.&M. (projected), Spanish Belt mining district, Nye County, Nevada (fig. 1).

To reach the property from Tonopah travel 5.8 miles easterly on U. S. Highway 6, turn left on paved State Highway 8-A 14.2 miles northerly, turn right on dirt road (State Route 82) and follow 23.6 miles northeasterly, turn left at Silver Creek road and follow 8.0 miles northwesterly, turn left below the Barcelonia mine and follow a steep unimproved road 2.9 miles westerly to the mine. A pick-up truck or jeep is required for travel over the last 2.9 miles of road. The property is usually inaccessible in winter months because of road conditions resulting from snow storms.

Tonopah is the nearest source of labor and supplies. Water for domestic and mining requirements is available at the property. A camp at the mine consists of five cabins, most of which are in poor condition.

HISTORY AND PRODUCTION

Mr. J. Humphrey located the Sentinel group of claims in 1928 and the same year sold the property to Mr. Raymond Van Ness. A small amount of quicksilver was produced in 1928-1929, and after the installation of a 30-ton rotary furnace he recovered about 500 flasks of quicksilver in 1930-1931. In the latter part of 1931 the mine was sold under judgement to Homer Williams and John Connolly. Since 1931 the property has been operated intermittently by several leasers who have produced a small amount of quicksilver ore which was treated in wood-fired retorts. From 1940-1942 the property was optioned by Goldfield Consolidated Mining Co. A 900-foot adit was driven to explore the ore zone at a depth of about 145 feet. Results were evidently unsuccessful because very little additional production was made.

The property was idle in 1943 when visited by geologists of the U. S. Geological Survey and recorded production at that time amounted to 749 flasks of mercury.

Recently the applicant excavated several shallow surface trenches and sunk a 21-foot prospect shaft.

PROPERTY AND OWNERSHIP

The property consists of two patented and five unpatented lode mining claims which are owned by Mr. John Connolly (five-eighths interest) of Tonopah, Nevada, and Mrs. Eugene T. Laugenour (three-eighths interest) of Woodlands, California.

The mine is now leased by Mr. A. D. Drumm, Jr. and copies of the mining lease and option agreement, dated January 1, 1957, are included in the application. The owners have agreed to sign a Consent-to-Lien.

Location certificates are recorded at the County Courthouse, Tonopah, Nevada. A list of the claims follows:

Sentinel	Mineral	Survey	No.	4696,	Patent	No. 1111778
Sentinel No. 1	"	"	"	4696,	"	" 1111778
Sentinel No. 2	"	"	"	4696,	Unpatented	
Sentinel No. 3	"	"	"	4696,	"	
Sentinel No. 4	"	"	"	4696,	"	
Sentinel No. 5	"	"	"	4696,	"	
Lucky Strike	Not surveyed.					

DEVELOPMENT

The productive workings all lie on the western end of the mineralized zone on the Sentinel No. 1 claim. These workings are inaccessible but maps compiled by the U. S. Geological Survey and by Goldfield Consolidated Mining Company show that the mine was developed to a depth of about

180 feet. There are approximately 2,700 feet of underground workings.

The portals and collars of all the main workings in this section of the property are caved. These workings include the Ott shaft, 40-foot level adit, and 150-foot level adit as indicated on the attached maps. The condition of the workings underground is unknown as all surface openings are caved, but they are probably not badly caved. Approximately five gallons of water per minute is flowing from the caved portal of the 150-foot level.

Workings in the eastern section of the property where the applicant proposes exploration work consist of several shallow surface trenches, a 21-foot prospect shaft and the Stovepipe tunnel. These extensive surface exposures have allowed this eastern area to be thoroughly prospected.

The only equipment on the property is:

1 Cottrell rotary furnace---	Capacity: 18-30 tons per day Size: 30 inches by 30 feet Condition: poor
300 feet of mine rail-------	Size: 12 and 16 lb./yd. Condition: fair
2 Retorts ----------	Capacity: 2-3 tons per day Condition: poor

GEOLOGIC SETTING

The rocks of the area are chiefly mudstone and argillite with interbedded quartzite, phyllite, locally silicified limestone, and recrystallized chert of probable Ordovician age, in an easterly-trending roof pendant several miles long and about 1,000 feet wide within a batholith or large stock of granitic rock. A few small dikes of granite, similar to that surrounding the roof pendant, have intruded the metasediments. The dikes are commonly nearly parallel with the bedding but locally break across. The sedimentary rocks have been tilted, folded, slightly metamorphosed, and are locally highly fractured. Although outcrops of the surrounding granite are moderately abundant, the metasedimentary rocks are commonly well covered by colluvium and residual soil to depths ranging from a few inches to a few feet.

The predominant strike of the bedding is easterly and dips are commonly from 50° to 80° S. but locally the beds are steeper or overturned. The geologic map of the 150 level workings indicates a small southeast-plunging syncline, outlined by a bed of recrystallized chert, near the western end of the roof pendant. In and adjacent to faults the beds are intensely fractured in blocks having divergent strikes and dips.

The most prominent faults of the mine area are bedding faults which in places become strike faults where they break across the bedding at acute angles. These faults are found in all the layered rocks. Northeast-trending cross faults have been mapped by Bailey and Phoenix in the old mine workings but most of them have small displacements. Through-going joint sets are not common in these alternately soft and brittle metasedimentary rocks, but locally the more brittle beds are intensely fractured.

Alteration to white clay (kaolin ?) is common along many of the bedding faults and zones of brecciated metasedimentary rock, and discontinuous quartz veins as much as 6 inches wide occupy some of the faults. Cinnabar is reported to be most abundant where kaolin (?) and vein quartz occur together.

ORE DEPOSITS

The ore bodies are concentrations of cinnabar accompanied by kaolin (?) and minor amounts of vein quartz along a steep zone of bedding faults in the recrystallized chert and brecciated, locally recemented argillite and phyllite. The mineralized zone is about 1,400 feet long, 2 to 30 feet wide, and has been mined to a depth of about 180 feet near its western end. The eastern part is only sparsely mineralized.

According to Bailey and Phoenix all of the ore exposed by the old mine workings is in a 15-foot thick bed of mildly metamorphosed chert. Individual ore bodies are tabular and contain irregular veinlets of cinnabar, locally as much as a quarter of an inch thick. The ore bodies occur adjacent to dike-like bodies of granite and also in the more broken parts of the chert. In the chert the ore bodies are narrow and elongate parallel to the bedding which strikes N. 70° W. and dips about 45 degrees southward. A map of the old workings, dated December 1941 and supplied by the applicant, shows analyses which indicate an ore body approximately 140 feet long and 4-1/2 feet wide (fig. 4). This ore is exposed in drifts on the 150-foot level along the chert bed from the trough of the syncline on the west, continuing along the strike approximately 130 feet to the east, and about 10 feet to the south (fig. 2). Disregarding two samples showing very high-grade material (10 percent and 15 percent mercury respectively) in a winze near the trough of the syncline, the weighted average of the assays is 10.2 pounds of mercury per ton. Bailey, however, is of the opinion that the assay values shown are erroneous.

The Stovepipe tunnel (fig. 2) explores a zone 2 to 5 feet thick of brecciated metasedimentary rocks which have locally been recemented.

Along this and another parallel fault approximately 30 feet north of it there is locally prominent alteration to white clay. These mineralized fault zones appear to represent the eastern continuation of the ore-bearing horizon exposed in the old workings.

To the east of the old workings the applicant has cleared most of the surface cover for approximately 600 feet along the strike of bedding faults which appear to be eastward continuations of the ore-bearing zone of the old workings. Although the applicant reports that panning indicated the soil contained approximately 10 pounds of mercury per ton in a zone approximately 10 feet wide and continuous from the portal of the Stovepipe tunnel on the west to the vicinity of the old 40-foot vertical shaft on the east, the bedrock contains very little visible cinnabar. Some cinnabar may be panned from bedrock in a few mineralized areas but there has been no streaking of cinnabar by the bulldozer blade. This suggests that the width, grade, and continuity indicated by the soil samples was the result of eluvial placer enrichment or errors in sampling.

Except for three localities in the Stovepipe tunnel in which a few small scattered crystals of cinnabar were observed in white clay gouge, the only occurrences of visible cinnabar are in the vicinity of the 21-foot prospect shaft. Specimens of ore which the applicant reported were

taken from a small pod probably less than 10 feet in diameter and 1 foot thick at the collar of the 21-foot shaft, in an area now obscured by timber, contain up to 5 percent mercury by visual estimate. On the mineralized breccia zone exposed in the lower part of the prospect shaft and in the drift, crystals of cinnabar are visible in a 2-inch thick seam of kaolinite and vein quartz along the hanging-wall fault of the breccia zone. The applicant reported, however, that a composite sample of vein material from the drift at the bottom of the shaft (fig. 3) gave a weighted average of 9.5 pounds of mercury per ton across a width of 16 inches. The grade of this ore is evidently extremely variable as there was no visible cinnabar in the area where his samples were taken and samples taken from the same area by the examiners showed 0.1 pound or less mercury per ton. As the high-grade pod reportedly occurred in a part of the breccia zone in which the dip is reversed, and the grade decreases downward into the area where the dip is again to the south, it is possible that small ore shoots occur on the steeper parts of the zones. This conforms with the theoretical probability of increased open spaces on steep segments of normal faults.

In this eastern part of the mineralized zone the surface trace of the vein is exposed on the hillside slope approximately 600 feet horizontally and 160 feet vertically. Material containing more than

0.1 pound of mercury per ton is exposed in a breccia zone about 3 feet wide for a maximum distance of 80 feet eastward from the collar of the 21-foot shaft. Within this 80-foot length the grade appears to be highly variable; as much as 75 percent of the material appears to be barren and the remainder is marginal or sub-ore grade.

SAMPLING

Thirteen horizontal channel samples were taken at locations indicated on attached maps (figs. 2 and 3). The samples represent the grade of the best exposures on the Sentinel claim as indicated by panning and visible HgS.

Sample No.	Width, feet	Lbs. Hg/ton	Description
S-609	1.0	0.1	Kaolinized vein material and shale from 21-ft. shaft.
S-610	1.9	<0.1	Kaolinized vein material and shale from 21-ft. shaft.
S-611	1.5	<0.1	Kaolinized vein material and shale from 21-ft. shaft.
S-612	3.0	<0.1	Kaolinized vein material and shale from 21-ft. shaft.
S-613	1.5	<0.1	Kaolinized vein material and shale from 21-ft. shaft.
S-614	3.0	<0.1	Kaolinized vein material and shale from Stovepipe tunnel.
S-615	1.5	0.1	Kaolinized vein material and shale from Stovepipe tunnel.
S-616	1.0	<0.1	Kaolinized vein material and shale from surface trenches where cinnabar was indicated by panning.
S-617	3.0	<0.1	Kaolinized vein material and shale from surface trenches where cinnabar was indicated by panning.
S-618	1.5	1.2	Kaolinized vein material and shale from surface trenches where cinnabar was indicated by panning.
S-619	0.8	3.3	Kaolinized vein material and shale from surface trenches where cinnabar was indicated by panning.
S-620	0.8	1.9	Kaolinized vein material and shale from surface trenches where cinnabar was indicated by panning.
S-621	1.0	0.4	Kaolinized vein material and shale from surface trenches where cinnabar was indicated by panning.

ORE RESERVES

There are no measured reserves in the Van Ness mine area. The ore indicated on the company map of the old workings may be expected to continue down dip 30 feet and approximately 1,500 tons of ore is indicated. Assuming that the ore body continues an additional 100 feet down dip, an additional 5,000 tons of ore may be inferred. Production records indicate that since the map was compiled the mine has been idle much of the time and only 410 tons of ore have been produced which yielded 108 flasks of quicksilver or an average of 20 pounds mercury per ton. These figures reveal that some of the high-grade material in the indicated block was removed in small operations by leasers, but 1,090 tons should be remaining. There is a reasonable probability that the additional 5,000 tons of inferred reserves have not been exploited. Most of this production from 1941 through 1957 is suspected to have come from small pockets of very high-grade ore, which were excluded from computations of the weighted average of the reported assays (fig. 4). This weighted average of 10.2 pounds of mercury per ton seems a reasonable grade for the indicated and inferred reserves.

On the eastward continuation of the mineralized structure the best mineralized area is eastward from the collar of the 21-foot prospect shaft where as much as 100 tons of material averaging about 2 pounds mercury per ton is indicated, and an additional 100 tons at the same grade is inferred. Although specimens from the reported pod near the collar of the shaft are high grade, the material now exposed by these workings generally appears to be below ore grade. A few tons of additional reserves may be inferred occurring in small pods, similar to that reported at the collar of the 21-foot shaft, along the vein structure to the east, and west perhaps as far as the portal of the old Stovepipe tunnel.

EXPLORATION

The applicant wishes to explore eastward continuations of the mineralized zone from the vicinity of the portal of the old Stovepipe tunnel to the area of the old 40-foot prospect shaft by an adit. He proposed rehabilitating the old Stovepipe tunnel and drifting easterly on the vein structure approximately 500 feet to a point below the old 40-foot prospect shaft, crosscutting 30 feet on both sides at 100-foot intervals to explore for parallel mineralized structures, and raising from the end of the proposed adit to connect with the shallow surface

prospects. During the field examination Mr. Meador entered the Stovepipe tunnel for the first time and discovered that it is too crooked and narrow to use. He then indicated a desire to drive the proposed adit from a new portal a few feet to the north of the old portal on a parallel vein structure. This would add approximately 100 feet to the proposed length. During the examination Mr. Meador also indicated to the examiners that the proposed crosscuts could be replaced by long-hole drilling.

The absence of significant inferred reserves in the area to be explored and the absence of geologic evidence suggesting that concealed ore bodies might be encountered by such a drift led the examiners to suggest alternatives to the applicant's program. Mr. Meador seemed unwilling, however, to consider a more conservative program such as extending the 21-foot prospect shaft an additional 20 to 50 feet to determine the vertical extent of the small deposit exposed in that vicinity. He was also unwilling to consider rehabilitating parts of the old workings to examine the reserve block indicated by the old company maps. Mr. Meador is of the opinion that the old workings are so badly caved that the cost of rehabilitation would be prohibitive. The examiners, however, judging from the amount of caving to the surface and considering rock types shown on the maps and descriptions by Bailey and Phoenix of the rock

types underground and the condition of the workings at the time of their examination in 1943, are of the opinion that caving is not extensive underground but is probably restricted largely to collar and portal areas near the surface, and that caving is chiefly in areas of alluvium and talus, but probably negligible in the bedrock.

The vertical and horizontal extent of the mineralized zone explored by the applicant's surface work is considerable (fig. 5), and offers no geologic evidence that concealed ore bodies of significant size and grade may be found in the area which would be explored by ~~his~~ its proposed program.

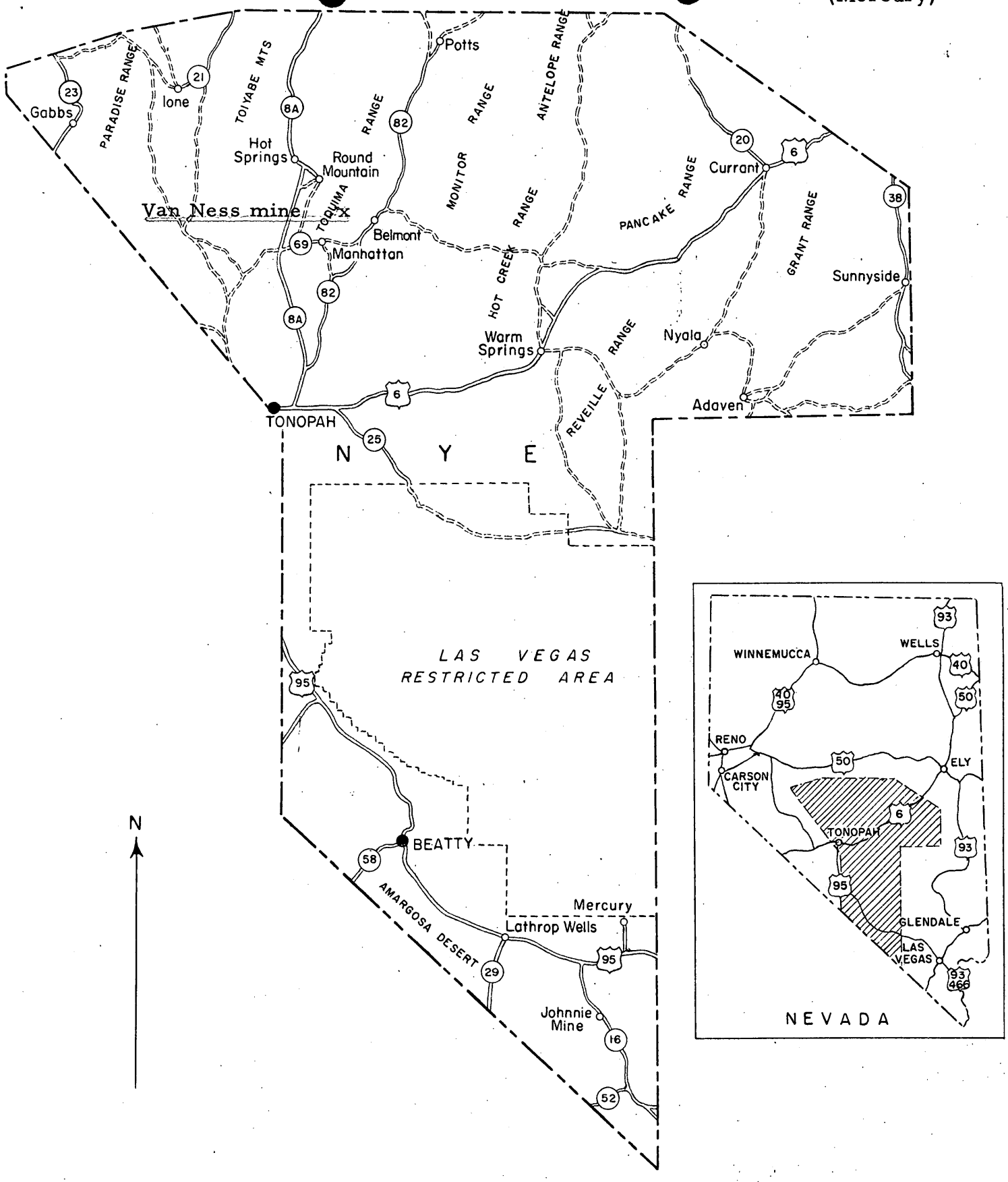
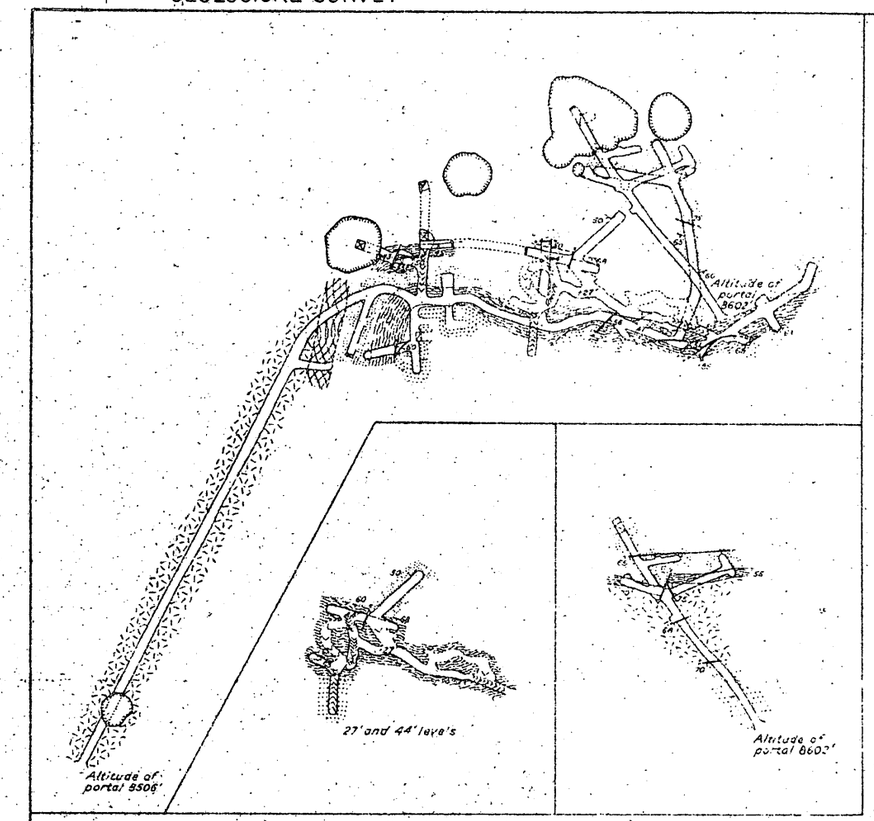


Figure 1. INDEX MAP OF NYE COUNTY, NEVADA

0 25 50 75 Miles

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 4819
(MERCURY)

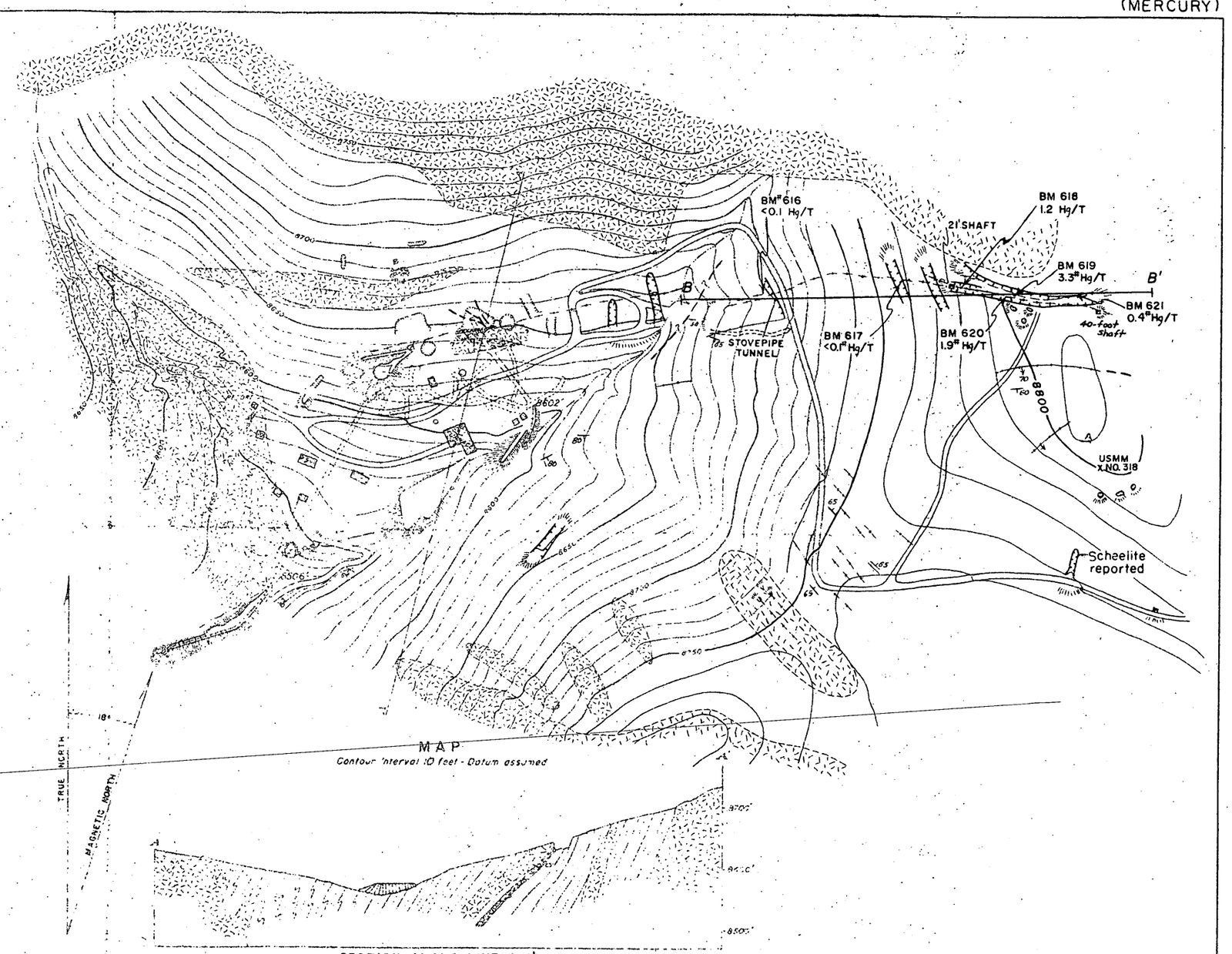


UNDERGROUND WORKINGS

Scale
50 0 50 100 150 Feet

EXPLANATION

JURASSIC (?)
Granite
Quartzite and interbedded phyllite
ORDOVICIAN (?)
Recrystallized chert
Phyllite
Metamorphic rocks (Undifferentiated)
Fault zone
Dip and strike of fault
Dip and strike of bedding
Shaft
Head of raise or winze
Foot of raise or winze
Chevrons point down incline, 3 foot vertical intervals
Dump
Glory hole or surface cut
Buildings
Underground workings
Kaolinized bedding faults



MAP
Contour interval 10 feet - Datum assumed

SECTION ALONG LINE A-A'

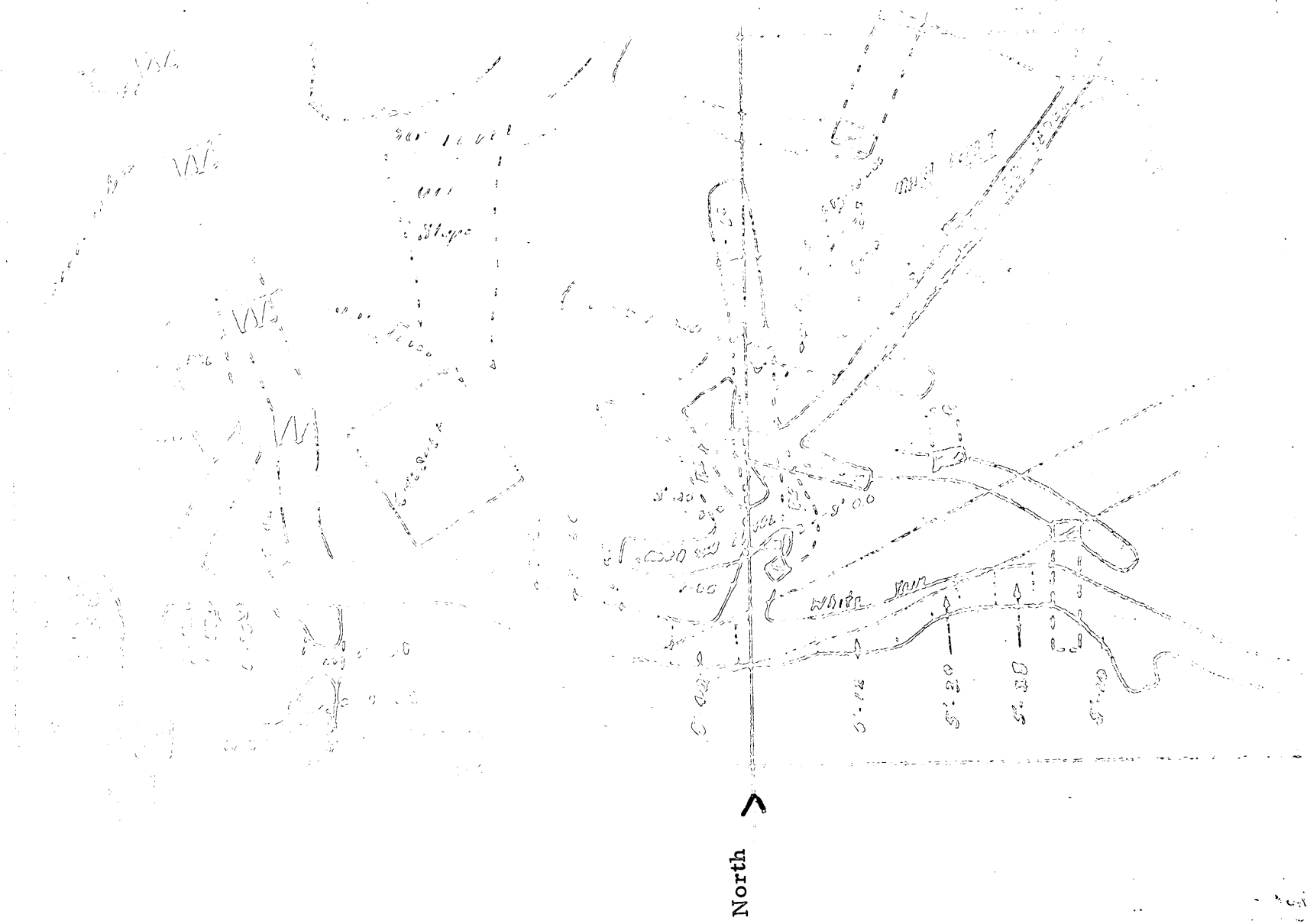
Scale
100 0 100 200 300 Feet

Figure 2.
VAN NESS QUICKSILVER MINE AND VICINITY
NYE COUNTY, NEVADA

Geology and Topography by Edgar H. Bailey and David A. Phoenix
Department of the Interior U.S. Geological Survey

September, 1943

Additions adapted from Company maps



DMEA-4819 (Mercury)
Van Ness mine

Nye County, Nevada

Scale: 1" = 20'

Fig. 4 Part of assay map submitted by applicant.

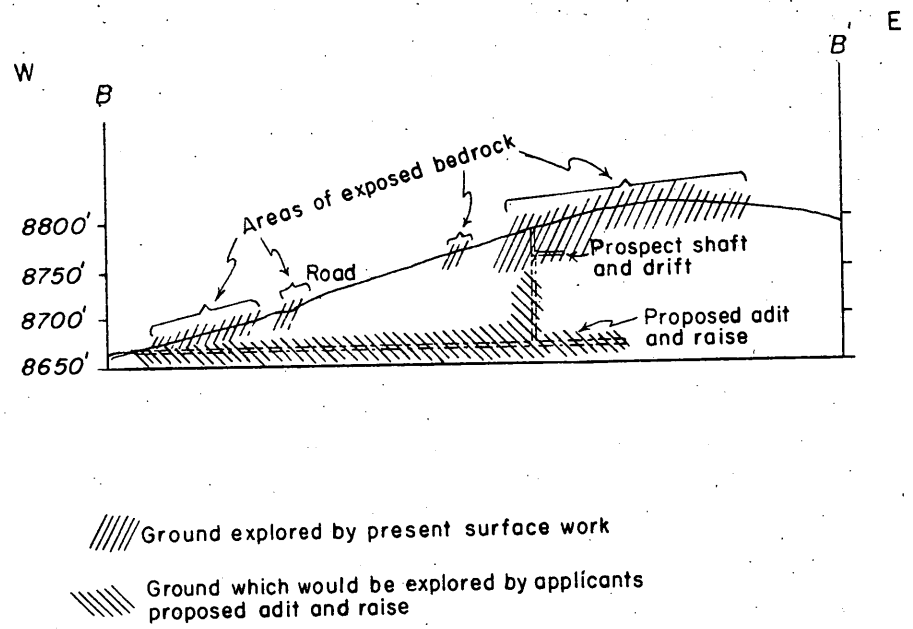


Figure 5. LONGITUDINAL SECTION SHOWING RELATION OF PROPOSED EXPLORATION TO GROUND ALREADY EXPLORED, VAN NESS QUICKSILVER MINE, NYE COUNTY, NEVADA

0 200 400 600 Feet

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-17	Hyn.	400
9-17	Martin	400
9/18	GCS	130
9/18	Jones	130
9/18	Olson	130
		~~110~~
9/19	C	220
		400

SEP 18 1957

Mr. A. D. Drumm, Jr.
Fallon, Nevada

Re: Docket No. DMEA 4819 - Mercury
Van Ness mine
Nye County, Nevada

Dear Mr. Drumm:

The above-docketed application for exploration assistance for mercury ores has been reviewed by the Washington office of the Defense Minerals Exploration Administration and referred to Mr. Spangler Ricker, Executive Officer, DMEA Field Team, Region II, 1605 Evans Avenue, Reno, Nevada, for a field examination of the property.

Any assistance that you can give the members of the Field Team will be appreciated.

Sincerely yours,

Frank E. Johnson (Ry ls)
ACTING Administrator

JHOPKINS:foc
9-17-57
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. II
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-17	Hop	400
9-17	Martin	400
9/18	GCS	136
"	Johnson	110
		220
		400

SEP 18 1957

Mr. Spangler Ricker, Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA 4819 - Mercury
A. D. Drumm, Jr.
Van Ness mine
Nye County, Nevada

Dear Mr. Ricker:

The above-docketed application for exploration assistance is being referred to your office for a field examination of the property.

Copies of memoranda dated September 9 and 12, 1957, by J. W. Pennington, Bureau of Mines, and N. E. Nelson, Geological Survey, respectively, relating to the project are enclosed. A copy of the application is also enclosed for use by the Field Team.

If a project is recommended, please inform the applicant that a Consent to Lien and Subordination Agreement executed by the lessors will be required.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

P. F. Yopes

Member, Bureau of Mines

N. E. Nelson

Member, Geological Survey

JHOPKINS:foc 9-17-57
cc to: Docket
Code 400
Admr. R. File
Oper. Comm.
FT. REG. II
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

Enclosure

8623

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

September 12, 1957
Re: DMEA 4819
A. D. Drum, Jr.
Van Ness Mine
Nye County, Nevada
$27,650.00 - Mercury

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

The applicant requests assistance in exploring by 500 feet of drifting a mercury bearing vein which occurs in a roof pendant of complexly folded metamorphosed sedimentary rocks. The pendant mass, caught up in granitic rocks, in the vicinity of the old workings is 750 feet wide and is said to be at least 900 feet long.

Estimates of past production range from 728 flasks (to the end of 1943) to 1,500 flasks to the present time. The larger figure is the estimate of one of the present owners.

Bulldozing has recently been done on the vein to be explored and two 8-inch samples of the 16-inch vein suggest it carries about 9.5 pounds of mercury per ton.

Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 13 1957

DATE	INITIALS	CODE
9/13	C	220
9/13	WSM	400

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

September 9, 1957

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: Assistant Chief, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4819 (mercury), A. D. Drumm, Jr., Van Ness Mine, Nye County, Nevada. $27,650

The applicant proposes to explore a mercury mineralized zone at depth by rehabilitating the old Stovepipe Tunnel, extending the tunnel easterly approximately 500 feet, crosscutting 30 feet in either direction from the tunnel on 100 foot intervals at three stations and raising 110 feet from the tunnel's end to connect with an existing shaft at an estimated total cost of $27,650.00.

Data furnished in the consulting engineer's report on the property indicates that an exploration project may be warranted. However, a drilling program may provide sufficient information and should be considered prior to the more costly underground exploration.

Referral of the application to the Field Team is recommended.

The application is returned herewith.

J. W. Pennington

Attachment
Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
F. D. Lamb
F i l e s

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 9 1957

DATE	INITIALS	CODE
9/9	Q	220
9/9	WSM	400

DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
1605 Evans Avenue
Reno, Nevada

September 3, 1957

Memorandum

To: Operating Committee, DMEA, Interior Building
Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application (Mercury)
A. D. Drum, Jr.
Van Ness Mine
Nye County, Nevada

Enclosed are two folders of data that should be attached to the MF-103, Application for Aid forms, forwarded to you under cover of our memorancum of August 27, 1957. We have retained our copy for our files.

S. Ricker

Attachments

FOC
Please send one to BM and one to GS after having a copy made of Breakdown on last page WSM
[redacted] Sent
9-5-57
fac

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 5 1957

DATE	INITIALS	CODE
9-5	C	220
9/5	WSM	400

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

August 29, 1957

Mr. A. D. Drumm, Jr.
Fallon, Nevada

Subject: DMEA 4819

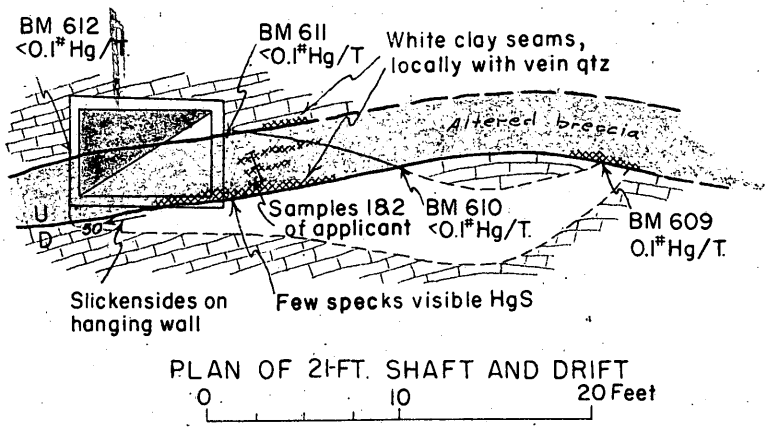
Dear Mr. Drumm,

Your application for exploration assistance, dated August 19, 1957 submitted to our office at Reno, Nevada has been assigned Docket Number 4819 and referred to the Divison of Iron & Ferro-Alloys Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

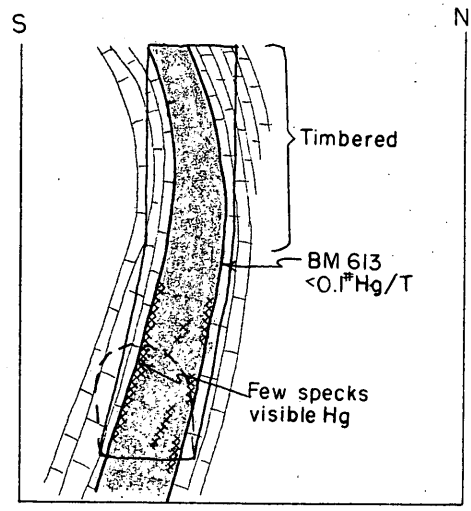
Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:
Region II

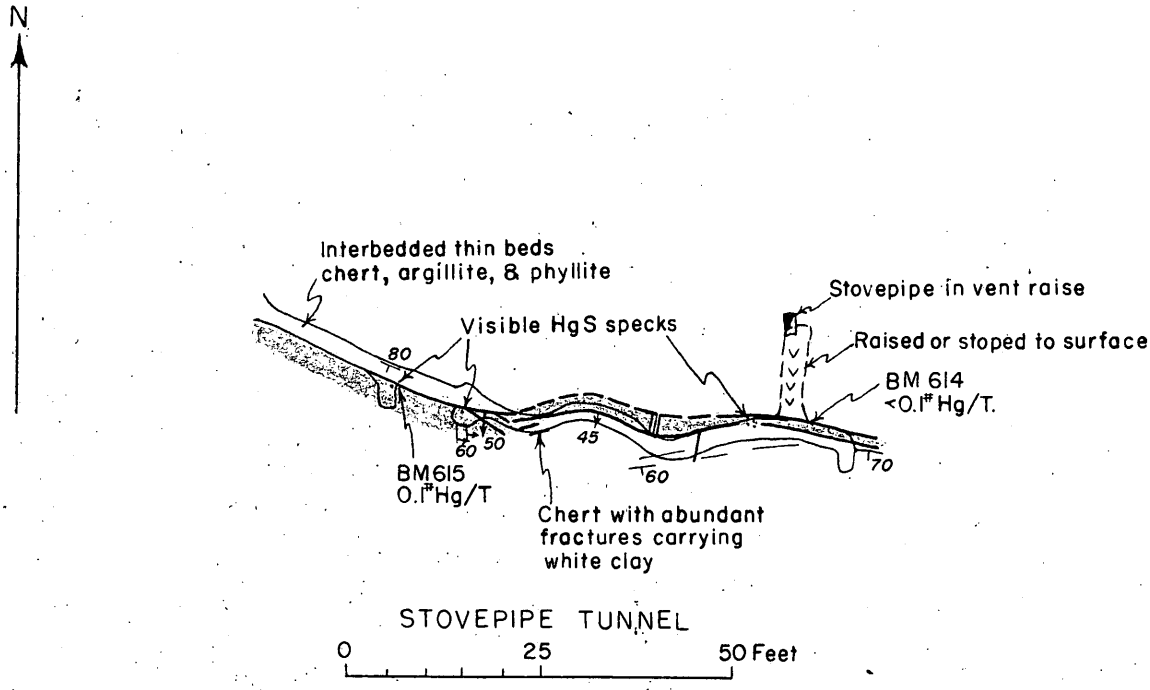


PLAN OF 21-FT. SHAFT AND DRIFT

Adapted from Company maps



SECTION WEST WALL 21-FT. SHAFT

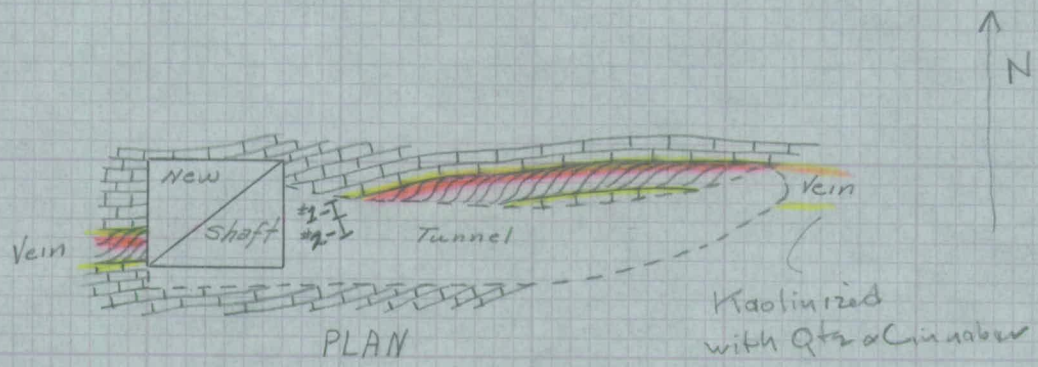


STOVEPIPE TUNNEL

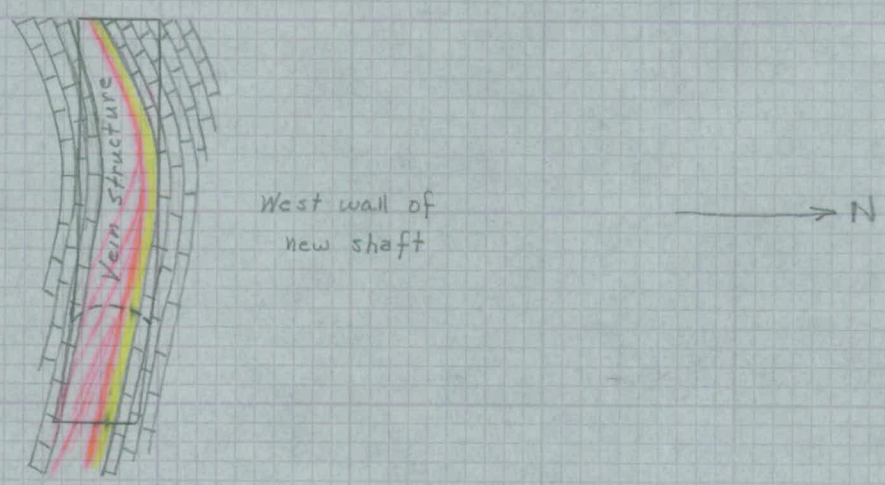
Geology by R.H. Campbell, Sept 1957

Figure 3. VAN NESS QUICKSILVER MINE, NYE COUNTY, NEVADA

KEITH N. MEADOR
POST OFFICE BOX 982 - PHONE 3-8547
RENO, NEVADA



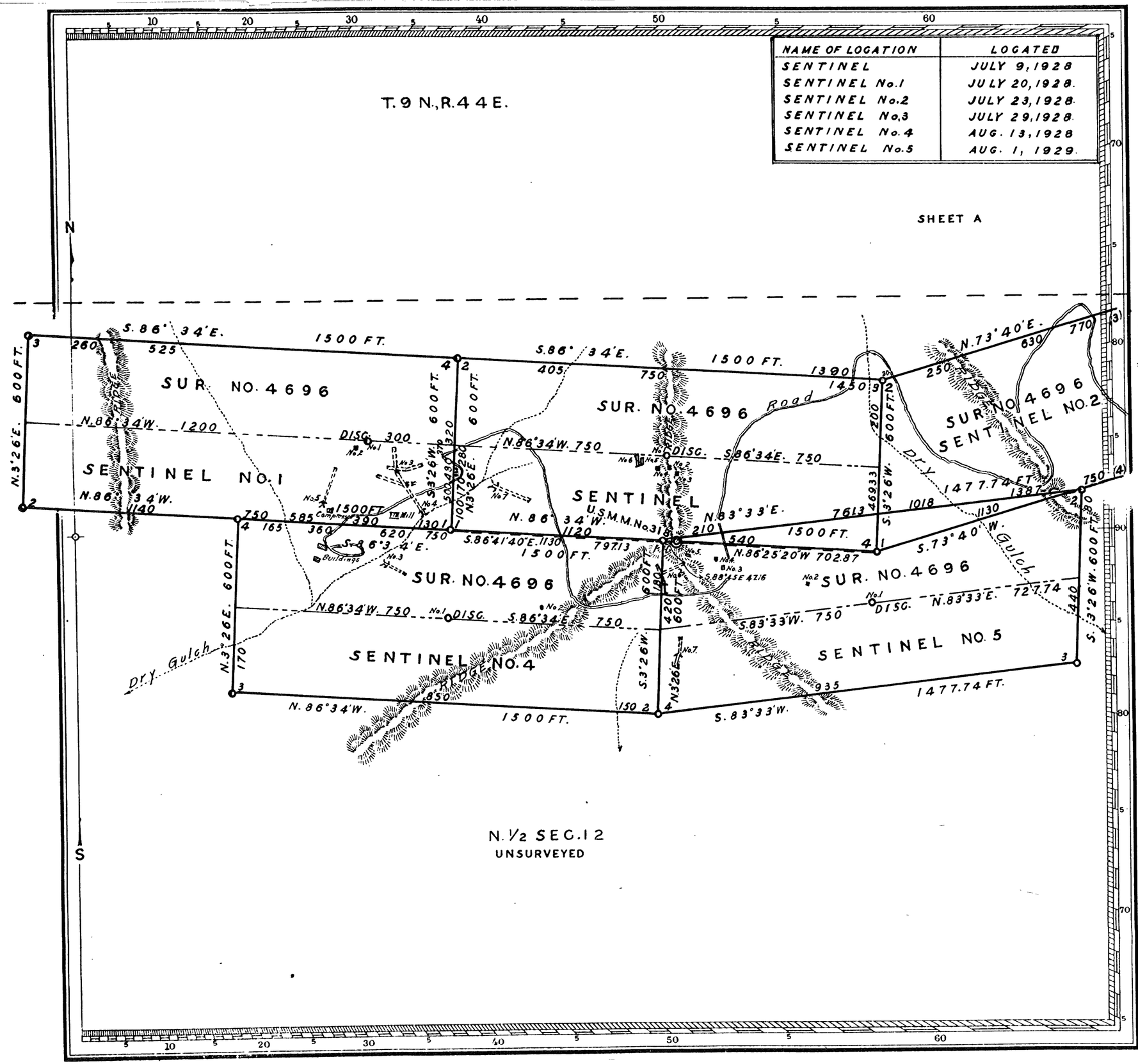
PLAN



SECTION

SCALE 1" = 10'

July 18, 1957 Van Ness Mercury Nye County, Nevada



NAME OF LOCATION	LOCATED
SENTINEL	JULY 9, 1928
SENTINEL No. 1	JULY 20, 1928.
SENTINEL No. 2	JULY 23, 1928.
SENTINEL No. 3	JULY 29, 1928.
SENTINEL No. 4	AUG. 13, 1928
SENTINEL No. 5	AUG. 1, 1929.

A.H.S. A.G.H.

Mineral Survey No. 4696

CLAIM LOCATED SEE TABLE

CARSON CITY Land District.

PLAT

OF THE CLAIM OF

THE RAYMOND VAN NESS MINING COMPANY KNOWN AS THE

SENTINEL, SENTINEL NO. 1, SENTINEL NO. 4, SENTINEL NO. 5 AND OTHER LODES

IN SPANISH BELT MINING DISTRICT, NYE COUNTY, NEVADA

Containing an Area of _____ *Acres.*

Scale of 300 *Feet to the inch.*

Variation 16°30' EAST.

SURVEYED NOV. 5, 1929-JUNE 2, 1930 *BY*

EDWARD L. HAFF, *U.S. Mineral Surveyor;*

The Original Field Notes of the Survey of the Mining Claim from which this plat has been made under my direction, have been examined and approved, and are on file in this Office; and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.

I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon, or for the benefit of, each location embraced in said mining claim by claimant _____ *or* _____ ITS *grantors and that said improvements consist of* 12 SHAFTS, 6 CUTS, 6 CUTS AND TUNNELS, 2 CUTS, TUNNELS & DRIFTS, AND 2 INCLINE SHAFTS; TOTAL VALUE: $175.85.00

that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

Public Survey Office

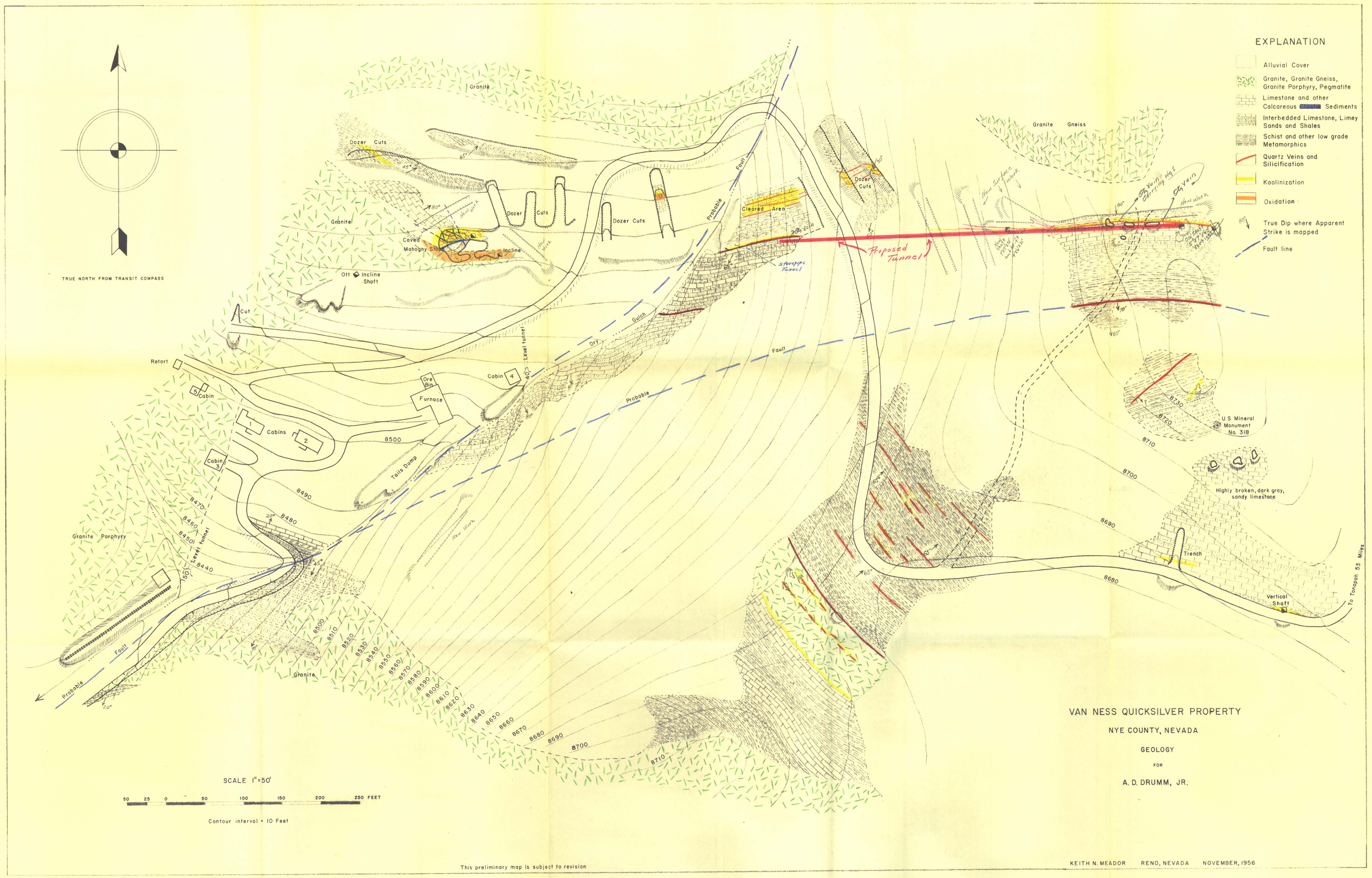
RENO, NEVADA.

OCTOBER 1, 1930

Ralph W. Nelson

Office Cadastral Engineer

AMOUNT DEPOSITED, $180.00; COST OF OFFICE WORK, $112.80; REFUND, $67.20


TRUE NORTH FROM TRANSIT COMPASS
EXPLANATION
Alluvial Cover
Granite, Granite Gneiss, Granite Porphyry, Pegmatite
Limestone and other Calcareous Clastic Sediments
Interbedded Limestone, Limey Sands and Shales
Schist and other low grade Metamorphics
Quartz Veins and Silicification
Kaolinization
Oxidation
True Dip where Apparent Strike is mapped
Fault line
Granite
Dozer Cuts
Dozer Cuts
Dozer Cuts
Dozer Cuts
Granite
Caved Mahogny Stope
Incline
New Work
Ott Incline Shaft
Cut
Retort
Cabin 5
Cabin 3
Cabins 1 2
Ore Bin
Furnace
Cabin 4
Level Tunnel
Dry Gulch
Tails Dump
Probable Fault
Fault
Probable
Cleared Area
20' Vein
Stoppe Tunnel
Proposed Tunnel
Granite Gneiss
New Surface Work
Old Vein Carrying Hgs
Old Vein
New Work
Old Stoping Vein
U S Mineral Monument No. 318
Highly broken, dark gray, sandy limestone
Trench
Vertical Shaft
To Tonopah 53 Miles
Granite Porphyry
Level Tunnel
Fault
Probable
Granite
8500
8490
8480
8470
8460
8450
8440
8430
8500
8510
8520
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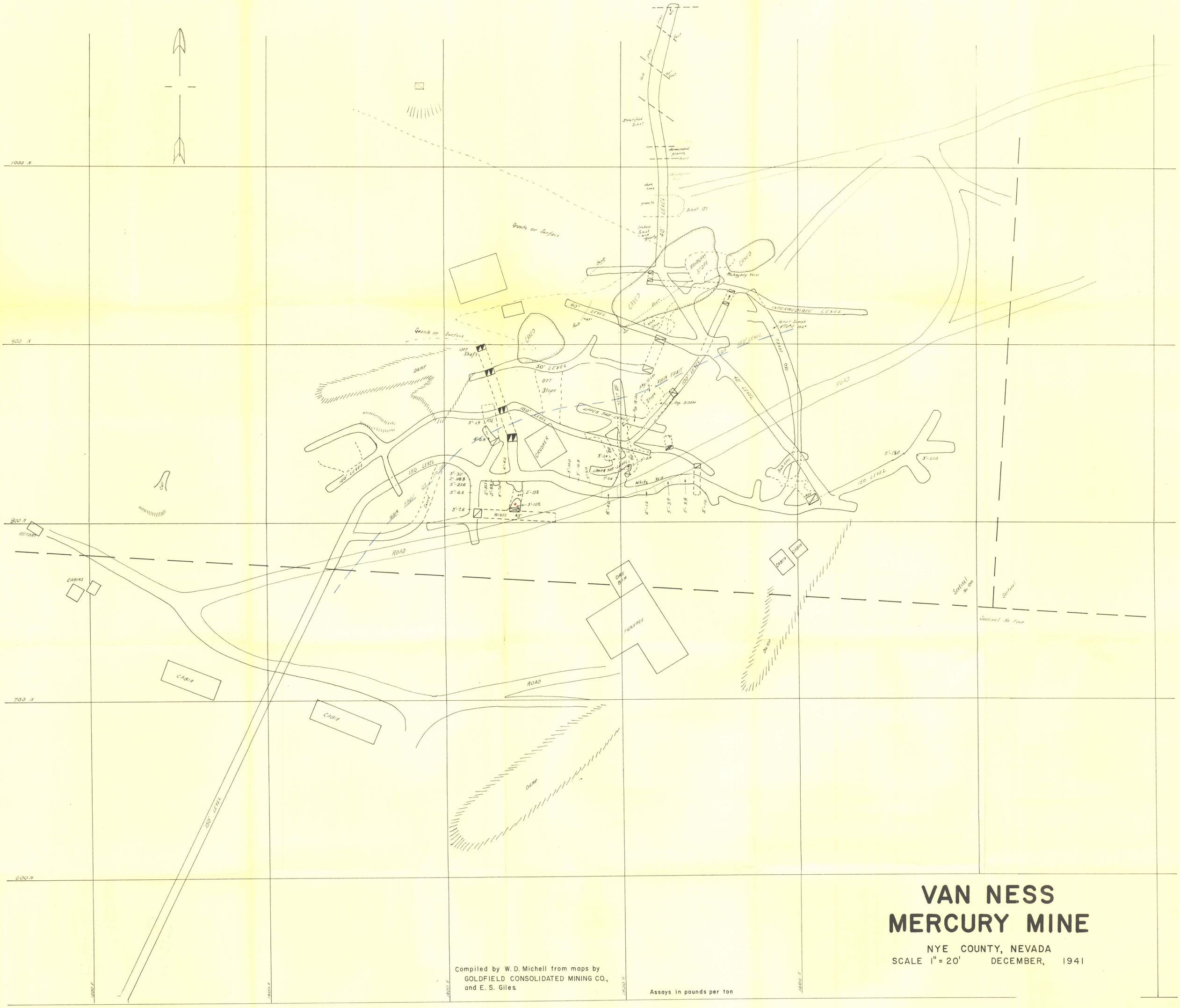
8680
8690
8700
8710
8720
8730
8700
8690
8680
8710
SCALE 1"=50'
50 25 0 50 100 150 200 250 FEET
Contour interval = 10 Feet
VAN NESS QUICKSILVER PROPERTY
NYE COUNTY, NEVADA
GEOLOGY
FOR
A. D. DRUMM, JR.
This preliminary map is subject to revision
KEITH N. MEADOR RENO, NEVADA NOVEMBER, 1956



VAN NESS MERCURY MINE

NYE COUNTY, NEVADA

SCALE 1" = 20' DECEMBER, 1941

Compiled by W. D. Michell from maps by GOLDFIELD CONSOLIDATED MINING CO., and E. S. Giles.

Assays in pounds per ton