UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

August 21, 1963

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME, Washington, D. C.

From: Robert A. Laurence

Subject: OME-6077 (Zinc-Copper)
Little Bob Mining Company, Inc.
Little Bob Prospect
Paulding County, Georgia
Contract 2111

Although this contract was rescinded with no payment of OME funds, some recent developments there may be of interest.

Yesterday L. W. Grant, a consulting geologist of Chattanooga, came in to inquire if any material relating to the Little Bob mine is available to the public. He has been retained by the Southern Railway in connection with a condemnation case, involving three acres of Little Bob Mining Company's land needed by the Southern to relocate their tracks. This is about one-half mile from the shaft, and apparently contains none of the known ore deposits. A commission appointed by the local court awarded Little Bob Mining Company $5000 per acre for the three acres of land. Apparently this was based on assays of cores taken by the Company during its activity there in 1960. The Southern is not appealing the case, but apparently is now trying to establish a lower value for the land to protect itself from similar decisions in the future. Sort of like locking the barn door after the horse was stolen.

Mr. Grant was told that we could not release any of the OME data, and he was advised to contact either New Jersey Zinc Company or Little Bob Mining Company; however, neither seems a likely source of information in this case. Mr. Grant said that L. M. Harris, President of Little Bob Mining Company, died recently.

Robert A. Laurence

RAL/mg
cc - Geo. C. Selfridge
Thor H. Kiilsgaard
Harold Kirkemo
Files

OME 6077

See also DMEA 5018 and
OME 6030

(same property)

6077

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.
March 8, 1960

EXTRA COPY
O. M. E
RECEIVED MAR 11 1960

DATE	INITIALS	CODE

See [illegible]

Memorandum

To: Operating Committee, OME - Washington

From: OME Field Team, Region V-Knoxville, Tennessee

Subject: Application from Little Bob Mining Company, Inc.

Enclosed are the original and two copies of an application from the Little Bob Mining Company, Inc., of Marietta, Georgia. As this was received via air mail, special delivery, we are forwarding it to you immediately, and will send along our comments on the application as soon as we have reviewed our copy.

It should be noted that this is essentially the same as DMEA-5018 (Roland F. Beers, Inc.) which was filed too late to be completely processed before June 30, 1958. The Beers group has given up its interest and has sold its geological and geophysical data to the new company. Robert S. Young, vice president of the Little Bob Mining Co., is a former Beers geologist.

Five signed copies of the Lien and Subordination Agreement, [illegible]-52, for the Green tract are also enclosed. No forms [illegible] Tibbetts lease were received.

Robert A. Laurence
EXECUTIVE OFFICER
OME FIELD TEAM
REGION V

V. J. Lynch, Member
MINING ENGINEER
U. S. BUREAU OF MINES

Robert S. Young
Geologist
114 West Park Drive
Charlottesville, Virginia

March 5, 1960

Mr. Robert A. Laurence, Executive Officer
OME Field Team - Reegion V
Post Office Building
Knoxville 2, Tennessee

Dear Mr. Laurence:

I am forwarding, in behalf of the officers and directors of the Little Bob Mining Company, Inc., an application for financial assistance in mineral exploration on the Little Bob Prospect, Paulding County, Georgia. As required, the application is made in quadruplicate; five copies of MME Form 52 (Green Property) are presented, four accompany the reports, the fifth is attached hereto.

Under the letter of permission from V. J. Lynch, 2/2/60, the current application contains some references to an application previously submitted to cover this prospect, DMEA-5018, but a map depicting the revised drilling program forms a part of the current report. I trust that this meets with your approval.

We would greatly appreciate any efforts on the part of your team, and that in Washington, to process this application in time that, if an affirmative answer is forthcoming, we might start actual drilling during the first week in June, 1960.

Anticipating the Government's approval and a successful program, I remain

Sincerely yours,

Robert S. Young

Robert S. Young, for the
Little Bob Mining Co, Inc.

cc: L. M. Harris, Pres.
Little Bob Mining Co., Inc.

RECEIVED
MAR 8 - 1960
U. S. Geological Survey

MME Form 40
Dec. 1958

Budget Bureau No. 42-R1368
Approval expires Dec. 31, 1963

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

RECEIVED
MAR 8 - 1960
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85-701 (72 Stat. 700; 30 U.S.C. 641)

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

Little Bob Mining Company, Inc.
2706 Roswell Road
Marietta, Georgia

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6077

DATE RECEIVED: 3-11-60

REGION: V

DIVISION CODE: 500

BUSINESS ORGANIZATION *(Check one)*

- INDIVIDUAL [ ]
- CORPORATION [X]
- PARTNERSHIP [ ]
- OTHER *(Specify)* [ ]

STATE IN WHICH FIRM IS ORGANIZED: Ga.

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
L. M. Harris	2706 Roswell Rd. Marietta, Ga.	Pres.
R. S. Young	114 W. Park Drive Charlottesville, Va.	Vice-Pres.
O. S. Ragsdale, Jr.	2740 Roswell Rd. Marietta, Ga.	Secty-Treas.

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Zinc-Copper

ESTIMATED COST OF PROJECT: $ 18,436.00

PROPERTY NAME	LOCATION COUNTY	STATE
Little Bob	Paulding	Ga.

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). 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 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. 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 3(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 Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME 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, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

March 7 1960
DATED

L M Harris
BY *(Signature)*

Pres., Little Bob Mining Company, Inc.
TITLE

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. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the exploration [redacted] cost.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) 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 adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. 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 land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if 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, giving quantities and grades and sampling methods used. Support 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 have, indicating whether you require their return.

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show 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 *land boundaries* or to the closest identifiable corner.

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

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or 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. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. 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 equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *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 in the exploration work.

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

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(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*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

INT.-DUP. SEC., WASH., D.C. 48740

ATTACHMENT A

LITTLE BOB MINING CO., INC.
Marietta, Ga.

1. Financial Eligibility:

   (a) See attached letters.

   (b) None.

   (c) The Little Bob Mining Co., Inc. proposes to furnish its share of the exploration cost through cash payments.

ATTACHMENT B

LITTLE BOB MINING CO., INC.
Marietta, Ga.

2. Applicant's Right in Land:

(a) Owner; lessee. See attached copies of L. E. Green and L. M. Tibbetts Leases.

There are no liens, mortgages or other encumbrances.

(b) The lands described below are under the control of the applicant:

Fee simple: Second District, Third Section of Paulding County, Ga.: all of land lot 625 with the exception of three (3) acres in the southeast corner and being thirty-seven (37) acres more or less.

Mineral rights, ownership: Second District, Third Section of Paulding County, Ga.: land lots 598; 599; 626; 627; 628; 670; 671; 672; 673, except three (3) acres off the south-east corner; 698; 742; 743; 770; 771; the east one-half (½) of lots 741 and 772.

Mineral rights, lease: Lucy E. and Moses W. Green, New Bern, N. C.: Second District, Third Section of Paulding County, Ga.: land lot 600 and west one-half (½) of 624.

L. M. Tibbetts, Dallas, Ga.: Second District, Third Section of Paulding County, Ga.: land lots 552; 553; west one-half (½) of 551.

* * *

Lands covered by the L. M. Tibbetts lease should not be subject to Government royalty and liens.

* * *

The property is known as the Little Bob Prospect or Mine.

(c) See attached copies, MME Form 52, "Lien and Subordination Agreement", signed by Lucy E. and Moses W. Green.

ATTACHMENT C

LITTLE BOB MINING CO., INC.
Marietta, Ga.

3. Physical Description:

(a) The Little Bob Prospect was discovered some time prior to the Civil War. The first development of note took place in 1860, at which time a vertical shaft and 300-400 feet of tunneling were completed. In 1885, a shaft was put down in the ore-body and approximately 1,000 tons of ore were shipped. Prospecting work by the American Minerals Company began in 1916, and the mine was operated in 1917. During the World War I Period the mine was operated by the Georgia Mining Company under a lease agreement with American Minerals. It is reported that mining operations ceased in 1919.

The only work of significance accomplished since 1919 was done by the New Jersey Zinc Company in 1951-52. At this time, New Jersey Zinc completed at least twenty (20) diamond drill holes (see maps of previous application). Part of the data derived from this drilling program is available, and drill logs were reproduced verbatim in a previous DMEA application (R. F. Beers, Inc., 5/12/58).

Early in 1957, a geophysical survey was completed on the prospect and its extensions. The survey included application of self-potential, magnetic and electromagnetic techniques. Survey data are shown on geophysical-culture maps previously submitted (R. F. Beers, Inc., 5/12/58). Results were positive and encouraging. The expected results included a small self-potential high around the outcrop area of the mineralized zone and a magnetic "halo" extending northeastward from this same outcrop area. The ground electromagnetic survey, although hampered greatly by nearby power lines, indicated a 1000-foot conducting zone.

LITTLE BOB MINING CO., INC.
Marietta, Ga.

The rocks in the immediate mine vicinity consist principally of amphibolite schists, quartz-hornblende schists, chlorite-hornblende-garnet schists, and quartz-sericite schists. Garnetization is widespread, and in several local areas the individual garnets may be measured in inches (see "garnet pit" on grid map). In general, the schistosity of the rocks strikes N 40° E and dips range between 35° and 45° SE.

Faulting is reported from many places in the old workings; however, displacements of more than a few feet are rare. As is to be expected, within such a metamorphic series, local folding is common.

The primary sulfide minerals, in order of relative abundance, are pyrite, pyrrhotite, sphalerite, chalcopyrite, and galena. Principal gangue minerals are quartz, calcite, hornblende, magnetite, and garnet. The sulfides are present both as massive concentrations (lump ore) and as light to heavy disseminations (concentrating ore). Sphalerite and chalcopyrite are distributed erratically throughout the mineralized zone, and are most abundant in areas of massive pyrite-pyrrhotite. Both ore minerals are known to occur in lens-like pods within the elongate, rolling, plunging ore body.

A mineralized zone extending 1,250 feet northeast of the main incline has been proved by New Jersey Zinc drilling. Whether or not ore-grade mineralization is present over this length has not been demonstrated. Although the known parts of the zone are generally concordant with the foliation, rolling and plunging (and faulting ?) will make lateral definition of the ore zone difficult. A northeast plunge of 25°-35° NE is indicated by present drill data.

LITTLE BOB MINING CO., INC.
Marietta, Ga.

In addition to the "expected" geophysical correlation, several anomalous zones were discovered on the south end of the grid, similar in all respects to the anomaly produced by known sulfides. This proposal covers the exploration of these new anomalies as well as extensions of the known mineralized zone.

Ten years ago the mine was pumped out, down to the fourth level. The north ("hill") shaft is open and apparently the mine workings have not caved and would be accessible for inspection after dewatering. There are no production facilities present on the property.

(b) The exploration work completed during 1957, which supplied the data upon which this application is based, was directed by Robert S. Young, an officer of the applicant corporation. The geophysical data were purchased from Roland F. Beers, Inc., by L. M. Harris, president of the Little Bob Mining Co., Inc.

(c) 1885: approximately 1,000 tons of crude ore shipped.
August 15, 1918 - September 6, 1919: 14,666.87 long tons shipped.

(d) Tonnage and grade of reserves not known.

(e) The Little Bob Prospect is in a belt of predominantly basic rocks (amphibolite) trending generally N 30°-45° E. The basic rock series has been intruded by granitic rocks or has undergone large-scale granitization. Granitic rocks in general, surround the basic belt. The amphibolites enclose large areas of high alteration (chloritization, sericitization, feldspathization). The known mineral deposits of this restricted area occur in the altered amphibolites. The spatial relations of these three general rock types are shown on an accompanying geologic map.

LITTLE BOB MINING CO., INC.
Marietta, Ga.

The drilling by New Jersey Zinc was apparently based on a general N 40°-45° E strike of the ore zone. Shearer and Hull [1] state that "the general strike is N 30°-45° E, with the dip southeast, but in the northeast end of the workings the vein is twisted so that it strikes nearly north, with the dip to the east". This point is graphically illustrated by the trend of the north end of the 4th working level (see attached mine plan).

Great variations in the thickness of the massive ore are recorded within the old workings. At the northeast end of the 100-foot level (350 feet from the shaft) the vein is 2.5 feet. About 200 feet northeast of the shaft on both the 100 and 150 foot levels, faces of 30 feet of lump and high-grade concentrating ore were worked.

(f) In 1951-52, the New Jersey Zinc Company completed a drilling program of 9,889 linear feet (20 drill holes) on the Little Bob Prospect. Results of this program were made available by the American Minerals Company and Mrs. L. E. Green. Copies of the drill logs and assay reports have been previously submitted (DMEA-5018)

The previous drilling established the following facts:

1. A zone of sulfide mineralization extends northeastward 1,300 feet from the main incline of the old mine.
2. Within this zone, drill intersections of up to 60 feet of 5% Zn were encountered.
3. The zone deepens northeastward from the shaft collar at 25°-35°.
4. Ore-grade zones are associated with sericitic alteration.

[1] Shearer and Hull (1918): Pyrite Deposits of Georgia, Bull. 33, Georgia Geological Survey.

LITTLE BOB MINING CO., INC.
Marietta, Ga.

5. Two mineralized zones exist, the lower consisting of concentrating ore and being inadequately tested.
6. No data are available south of the old workings.
7. Ore-bodies discovered in this area are likely to consist principally of sphalerite, with minor values of copper, lead, gold, silver, iron, and sulfur.

In addition to the possibility of locating extensions of the two known zones, geophysical anomalies are present which are identical with those occurring over known sulfide bodies. There is every expectation that the untested areas will contain sulfide minerals.

(g) Refer to DMEA-Docket 5018, Roland F. Beers, Inc., 5/12/58.

ATTACHMENT D

LITTLE BOB MINING CO., INC.
Marietta, Ga.

4. Accessibility of Property:

(a) OME representatives desiring to inspect the property will be met at Marietta, Dallas, or at the prospect by:

L. M. Harris
2706 Roswell Road
Marietta, Ga.

O. S. Ragsdale, Jr.
2740 Roswell Road
Marietta, Ga.

Robert S. Young
114 West Park Drive
Charlottesville, Va.

The property is easily accessible and directions for reaching it and location maps are included in a previous application (DMEA-5018).

(b) The property is transected by the Seaboard Airline and Southern Railways. Stations and loading areas exist in Dallas, Hiram, Marietta, and Atlanta. These towns and cities will adequately serve as supply and residence points.

Distances from the Little Bob Prospect:

Hiram - 3 miles
Dallas - 4 miles
Marietta - 19 miles
Atlanta - 28 miles

ATTACHMENT E

LITTLE BOB MINING CO., INC.
Marietta, Ga.

5. Exploration Work:

(a) The proposed work program consists, fundamentally, of exploratory drilling and will be accomplished in two stages. Stage I will consist of specifically located, committed drilling. Stage II will consist of reserve drilling, the location and physical characteristics of the holes being dependent upon data obtained from Stage I drilling. As much of the drilling as possible will be done AX (or equivalent) size, BX or NX sizes being reserved for collaring.

The specific location of each proposed drill hole is shown on the attached map; depth and inclination are shown in the following table. The attached map shows the relationship of the proposed drilling to geophysical anomalies, land lot boundaries, existing mine workings, and other cultural features.

DH-1: 4.55 S / 1.20 E; -45° to NW; 350'.
DH-2: 4.40 S / 3.42 E; -45° to NW; 600'.
DH-3: 7.20 N / 1.15 E; -90°; 500'.
DH-4: 12 S / 0; -90°; 300'.
DH-5: 20 S / 2.50 E; -45° to NW; 300'.
DH-6: 20S / 0.50 E; -45° to NW; 300'.
DH-7: 2.0 N / 4.0 E; -90°; 550'.

Drill holes 1, 2, 3 and 7 are designed to extend the ore-zone, previously mined, to the southwest and southeast. Drill holes 4, 5 and 6 will test new areas (geophysical anomalies).

In addition to the above recommended program of 2,900 feet, 2,100 feet should be reserved to further delineate or extend mineralized zones encountered in Stage I.

A breakdown of the total footage requested in this application is as follows:

STAGE I :	7 drill holes	2,900'
STAGE II:	uncommitted	2,100'
	TOTAL DRILLING	5,000'

LITTLE BOB MINING CO., INC.
Marietta, Ga.

(b) Access roads to the prospect exist; however, a certain amount of bulldozing will be necessary to prepare drill sites. Local access roads, up to several hundred feet long, will be required. An allowance of 35 hours bulldozer work whould be included in both stages.

(c) With the execution of an OME contract, work will begin within forty-five (45) days, and the final report will be tendered within six (6) months of the starting date. The time schedule is based on an anticipated drilling rate of 25 feet per shift, 2 shifts per day, 6 work days per week, total drilling 5,000 feet.

ATTACHMENT F

LITTLE BOB MINING CO., INC.
Marietta, Ga.

6. Experience: The exploratory drilling program outlined in this application is based on geophysical data obtained by the staff of Roland F. Beers, Inc., under the supervision of Robert S. Young. Geological-geophysical interpretations were a function of the staff of Roland F. Beers, Inc. The proposed drilling plan, as detailed herein, was laid out by R. S. Young.

L. M. Harris and O. S. Ragsdale, Jr. have long and varied experience in heavy equipment operation and construction. Both are eminently well qualified to supervise the engineering aspects of the program.

Geological duties will be performed by or supervised by R. S. Young, who, for the past six years, has been actively engaged in geological, geophysical and geochemical prospecting in the eastern United States. This program included the supervision of several Government participation drilling contracts.

If required, qualified geological assistants will be provided to insure efficient operation of the proposed program.

LITTLE BOB MINING CO., INC.
Marietta, Ga.

7. Estimate of Costs:

(a) Independent contracts: An independent contract will be let for the entirety of the proposed drilling. Bids were solicited and received from the E. J. Longyear Co., Sprague & Henwood, and Joy Manufacturing. True copies of these bids are attached hereto. Following is a comparison of the costs, based on the individual bids.

Joy Manufacturing:

BX wireline or AX standard drilling, 0 - 600', @$3.60:	
STAGE I drilling 2,900'.....	$10,440.00
Reaming, est. 100', @$2.00.....	200.00
Down time, est. 10 hrs., @$8.00.....	80.00
	$10,720.00
STAGE II drilling, 2,100'.....	$ 7,560.00
Reaming, est. 100', @$2.00.....	200.00
Down time, est. 10 hrs, @$8.00.....	80.00
	$ 7,840.00
TOTAL.....	$18,560.00

Sprague & Henwood:

Mobilization.....	$ 300.00
STAGE I drilling, 2,900', @$3.25, AX standard.....	9,475.00
Allowance for drilling below 400', @$.25, 450'.....	112.50
Reaming, est. 100', @$2.00.....	200.00
Down time, est. 10 hrs., @$10.00.....	100.00
Additional crew.....	100.00
	$10,287.50

LITTLE BOB MINING CO., INC.
Marietta, Ga.

STAGE II drilling, 2,100' @ $3.25	$ 6,825.00
Allowance for drilling below 400', est. 500' @ $.25	125.00
Reaming, est. 100', @$2.00	200.00
Down time, est. 10 hrs. @$10.00	100.00
	$ 7,250.00
TOTAL	$17,527.50

E. J. Longyear Co.:

Mobilization, lump sum	$ 350.00
STAGE I drilling 2,800' @$2.75, overburden plus AX std. or BXWL	7,700.00
BX and NX std. as required to collar 100' @$3.10	310.00
Down time, est. 10 hrs. @$6.50	65.00
	$ 8,425.00
STAGE II drilling, 2,000' @$2.75	$ 5,500.00
BX and NX std. as required to collar, est. 100' @$3.10	310.00
Down time, est. 10 hrs. @$6.50	65.00
	$ 5,875.00
TOTAL	$14,300.00

Comparison:

Joy:	$18,560.00
S & H:	$17,527.50
Longyear:	$14,300.00

The bid by Longyear, some $3,000.00 lower than the nearest competitor, reflects the advantage held by this company in having performed the drilling for New Jersey Zinc in 1951-52.

LITTLE BOB MINING CO., INC.
Marietta, Ga.

(b) Personal services:

STAGE I:

Technical services:

1 geologist, service drilling and prepare reports, $400/month 2½ months.....$1,000.00

Stenographic services:

1 stenographer, report preparation..... 100.00

Labor:

1 laborer, core transportation and site prep.; 50 hrs. @$2.00..... 100.00

Total.....$1,200.00

STAGE II:

Technical services:

1 geologist, service drilling and prepare reports, $400/mo., 2 months.....$ 800.00

Stenographic services:

1 stenographer, report preparation..... 100.00

Labor:

1 laborer, core transportation and site prep.; 50 hrs. @$2.00..... 100.00

Total.....$1,000.00

TOTAL PROGRAM.....$2,200.00

(c) Operating materials and supplies:

STAGE I

Core boxes, 36' cap., 81 @ $3.00 'Longyear).....$243.00

STAGE II

Core boxes, 36' cap., 59 @ $3.00 (Longyear)..... 177.00

TOTAL.....$420.00

LITTLE BOB MINING CO., INC.
Marietta, Ga.

(d) Operating equipment: one bulldozer of suitable capacity and size to prepare drill roads and sites, to be furnished by L. M. Harris at a cost of $10.00 per operating hour.

STAGE I: 35 hrs. @$10	$350.00
STAGE II: 35 hrs. @$10	350.00
TOTAL	$700.00

(e) Initial rehabilitation and repairs: None

(f) New buildings, fixtures, installations, rental of core storage facilities.....$40.00

(g) Miscellaneous:

i. office and drafting supplies for maintaining records, prep. of maps and reports, map reproduction	$ 75.00
ii. Payroll taxes and insurance @5.5% of payroll (both stages)	111.00
iii. communications with OME, telephone and telegraph	50.00
iv. Assays, copper-lead-zinc-iron-sulfur; 50 @ $10.00	500.00
TOTAL	$776.00

No repairs or maintenance anticipated on the equipment of 7 (d).

Recapitulation:

(a) Independent contract	$14,300.00
(b) Personal services	2,200.00
(c) Core boxes	420.00
(d) Bulldozer	700.00
(f) Core storage	40.00
(g) Miscellaneous	776.00
TOTAL	$18,436.00

JUL 8 1960
O.M.E.

EXTRA COPY
O. M. E
RECEIVED July 8 1960
DATE

INTERIM REPORT

OME-6077, 14-23-090-211 (Zinc-lead-copper)

Operator: Little Bob Mining Company, 2706 Roswell Road, Marietta, Georgia

Location: Little Bob area, Paulding County, Georgia

The exploration project in the area contiguous to the Little Bob mine was inspected by R. A. Laurence and Helmuth Wedow (USGS) on Tuesday, June 28, 1960. They were accompanied on the inspection trip by Messrs. L. M. Harris and V. S. Griffin, President and Resident Geologist, respectively, of the Little Bob Mining Company. Drilling under this contract had been started on June 10, 1960. At the time of inspection three holes had been completed for a total of 1,004 feet, and a fourth hole was in progress. The available data on the three completed holes are summarized below:

Hole 1 (DH-3 on figure 2 of contract): Located approximately at coordinates 20,000-S; 250-E. Collar elevation not yet available. Bearing: N. 40° W. Inclination: Minus 45° NW. Total depth: 302 feet. Summary log: 0-74 overburden; 74-302(Bottom of hole). Alternating zones of impure quartzite and chlorite-garnet-hornblende-sericite-quartz schist or gneiss with different zones varying considerably in composition. Mineralization: Scattered local traces of sphalerite, chalcopyrite, pyrite, and pyrrhotite throughout except as follows: 2-3 percent disseminated ZnS @ 247-259 and 1-2 percent ZnS @ 289-302.

Hole 2 (DH-2 on figure 2 of contract): Located approximately at coordinates 20,000-S; 50-E. Bearing: N. 40° W. Inclination: Minus 45° NW. Collar elevation not yet available. Total depth: 301½ (302). Summary log: 0-72 overburden (limonite-cemented saprolite @ 22-26); 72-302 (bottom of hole). Chiefly chlorite-quartz-garnet-hornblende-sericite schist with local zones of impure quartzite (that is, generally similar to Hole 1 but probably with somewhat less quartzite).

Mineralization: Scattered local traces of sphalerite, chalcopyrite, bornite, pyrite, and pyrrhotite @ 72-245 except as follows: Strong shines (minor disseminated amounts---plus or minus ½ percent) of ZnS @ 72-110, 113½-124, and 206½-245.

Hole 3 (DH-1 on figure 2 of contract): Located approximately at coordinates 12,000-S; zero-E. Hole vertical. Collar elevation not yet available. Total depth: 400 feet (additional 100 feet over depth indicated in contract authorized by field examiners by phone on verbal report that hole was still in mineralized ground at the 300-foot depth. Summary log: 0-39 overburden; 39-400. Similar to Holes 1 and 2 except for the occurrence of brown biotite in local zones from 242 to 400 (bottom). Mineralization: Scattered local traces of chalcopyrite, bornite, and pyrrhotite @ 39-370; disseminated pyrite throughout; sphalerite as follows: 39-56, scattered shines; 56-64 (8'), 3-5%; 64-66 (2'), 2-3 %; 66-73½ (7½), 3-5 %; 84½-121 (36½), 5-7 % (equivalent to 3½-4½ % Zn); local zones of shines and traces 121-370.

All foregoing percentages are estimated sphalerite in core. The estimates were made by V. S. Griffin of the Operator's geological staff; several spot-check estimates by the examiners were of the same order of magnitude. The mineralized zones have yet to be split and sent for assay. Data on the breakdown of the drilling footage into drillers "overburden", oversize drilling to collar hole, and standard rock drilling are not yet available but will be submitted with the June voucher. No EX-size drilling was necessary to complete any of the three holes.

Hole 4 was in progress at the time of inspection. This hole is located approximately at coordinates 715-N; 115-E and is vertical and is not a hole authorized by the contract. It is in the main Little Bob orebody as outlined on figure 2 of the Field Examination Report for DMEA-5018. The site of Hole 4 is essentially the same as APH-3 (figure 2 of FE Report---DMEA-5018) and lies on the ore trend suggested by the results of the New Jersey Zinc Company's drilling in the early 1950's. This site lies aboutmmidway between two ore holes (J-13 and -18) that are approximately 300 feet apart. At the time of the field inspection Hole 4 had reached a depth of 177 feet with only traces of sulfides scattered through the core. In a phone conversation between Messrs. Laurence and Harris on June 30, 1960, Mr. Harris reported that Hole 4 was then at a depth of 317 feet and that from 217 (approximately)-317 was a run of ore estimated at 15-25 percent sphalerite (10-15 percent zinc) including a 5-foot run estimated at 95 percent sphalerite (60 percent zinc). Although this run is an excellent ore penetration, it does not add materially to the quantity of the ore reserves at the Little Bob. If the estimated values hold true on assaying, it will raise the grade of the reserves and also improve slightly the rank of the reserves. In a sense this hole should be considered more as the first stage of development drilling, and therefore is not warranted under an exploration contract.

On the completion of Hole 4 the drilling contractor (Longyear) has indicated the desire to move the rig off the Little Bob job--- reportedly to Missouri. The Operator has presumably agreed to this move and has indicated his wish for a short recess at this time in order to: (1) review the data gained from the first four holes, complete the needed assays, and plan future drilling sites; and (2) give consideration to a possible financial arrangement with other private interests before continuing with further exploration. It is recommended by the field examiners that a 60- to 90-day recess be granted. Such a recess will allow for the completion of the assays and a more thorough review of the data gained by the holes drilled under the contract, by the Operator's exploration staff as well as by the Government, in order to plan for additional hole sites agreeable to both principals of the contract.

R. A. Laurence and Helmuth Wedow, Jr.
Geologists, U. S. Geological Survey

Inspected: June 28, 1960

g

INTERIM REPORT

OME-6077, 14-23-090-211 (Zinc-lead-copper)

Operator: Little Bob Mining Company, 2706 Roswell Road, Marietta, Georgia

Location: Little Bob area, Paulding County, Georgia

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Mineralization: Scattered local traces of sphalerite, chalcopyrite, bornite, pyrite, and pyrrhotite @ 72-245 except as follows: Strong shines (minor disseminated amounts---plus or minus ½ percent) of ZnS @ 72-110, 113½-124, and 206½-245.

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R. A. Lawrence and Helmuth Wedow, Jr.
Geologists, U. S. Geological Survey

Inspected: June 28, 1960

MMI[redacted]M 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Harold Kirkemo		
2.		
3.		
4.		
5.		
FROM: George C. Selfridge	4/5	GCS

FOR: Check items for action desired

____ Action	____ Reply for signature of _____	
____ Approval	____ Investigate	____ Surname
____ Comment	____ Recommendations	____ Signature
____ Conference	____ Rewrite	____ File
____ Instructions	____ Your information	

REMARKS:

FIELD TEAM'S recommendations on OME-6077
(Note that recommendation based on FT's
report on OME-6030. OME-6030 was withdrawn.)

NOTE: We are clearing attached report today (4/5/60).

HB

EXTRA COPY O. M. E RECEIVED APR 4 1960		
DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

March 31, 1960

Memorandum

To: Operating Committee, OME - Washington, D. C.

From: OME Field Team, Region V - Knoxville, Tennessee

Subject: OME-6077 (Zinc-Copper) Little Bob Mining Co., Marietta, Georgia.
Little Bob Mine, Paulding County, Georgia

Enclosed are the original and two copies of the Applicant's reply to Mr. Johnson's letter of March 17, and three copies of each of the documents submitted with that letter. The fourth copy of each document is being kept for our files.

Upon review of the subject application, we find no reason to change the recommendations of Mr. Wedow and Mr. Shirley in their November 7, 1958 examination report for DMEA-5018. We do not consider the area north of the Little Bob Mine as a good exploration target, but we do think the southern end, possibly as far north as the Applicant's proposed holes 1 and 2, in the southwest part of Land Lot 625, provides a good target. We recommend approval of a contract as outlined in that report, with sufficient flexibility to shift drill hole sites as new information develops.

The Applicant hopes to begin drilling early in June. This is especially advisable because Mr. Young will be free from teaching duties at the University of Virginia, and will be better able to devote the required time to the drilling program.

Robert A. Laurence, Executive Officer
OME-Region V

Reviewed by
OME OPERATING COMMITTEE

V. J. Lynch, Member
Bureau of Mines

(date)

RAL/mm

Harold Kirkemo, USGS

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

MAR 17 1960

Mr. L. M. Harris
President
Little Bob Mining Company, Inc.
2706 Roswell Road
Marietta, Georgia

Re: Docket No. MMA-6877 (Zinc-Copper)
Little Bob Mining Company, Inc.
Little Bob Prospect
Paulding County, Georgia

Dear Mr. Harris:

We have your application covering a proposed exploration program on the cited project. In order to expedite processing of your application, certain matters need clarification.

1. We should be provided with a recent financial statement, showing assets and liabilities of your company.

2. You have inadequately covered Item 2 of the application, "Applicant's Rights in Land." Disregarding the Tibbett's lease, which you say should not be included, you have listed three parcels, i.e., Fee Simple, Mineral Rights, ownership and Mineral Rights, lease. You have provided adequate documentation covering the last parcel but nothing pertaining to the first two. A study of the previous application indicates there may have been a conflict of interest in two or more lots between yourself and the American Minerals Company. Would you kindly provide us with copies of the conveyances (or chain of conveyances) through which the Little Bob Mining Company acquired ownership of the cited fee and mineral rights.

3. You submit extracts from drill bids received, but we should have actual copies of such bids.

4. Part of your proposed first-stage drilling is in the area of the Little Bob ore body previously explored. It is highly unlikely that we could consider such work as coming under the GMK regulations covering the exploration "for new or unexplored mineral deposits." However, we could

give serious consideration to a project covering the area showing anomalous geophysical conditions 600 to 2,000 feet southwest of the main mine shaft. Hence, if you desire, you should submit an amended pattern of drill holes for such area (you already have three holes delineated). Please refer to our letter to you of April 13, 1959 (Docket No. [illegible]), first two paragraphs, second page.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Director

cc: Mr. Robert S. Young
Vice President
Little Bob Mining Company, Inc.
11A West Park Drive
Charlottesville, Virginia

WHBrinsfield/gla
3-17-60
cc to: Director's Reading File
Mr. Selfridge
E. J. Schroeder, USBM
Harold Kirkham, USGS
OME Field Team, Region V (2)
Docket
Chron

March 25, 1960
Re: OME 6077 (Zinc-Copper)
Little Bob Prospect
Little Bob Mining Co., Inc.
Paulding County, Georgia

Memorandum

To: W. R. Grimwold, Office of Minerals Exploration

From: Harold Kirkham, U. S. Geological Survey

Subject: Review of application for exploration assistance

The Applicant proposes a two-stage exploration program consisting of 3,000 feet of diamond drilling to test extensions of two known mineralized zones and several geophysical anomalies. Total cost of the project is estimated to be $18,436.

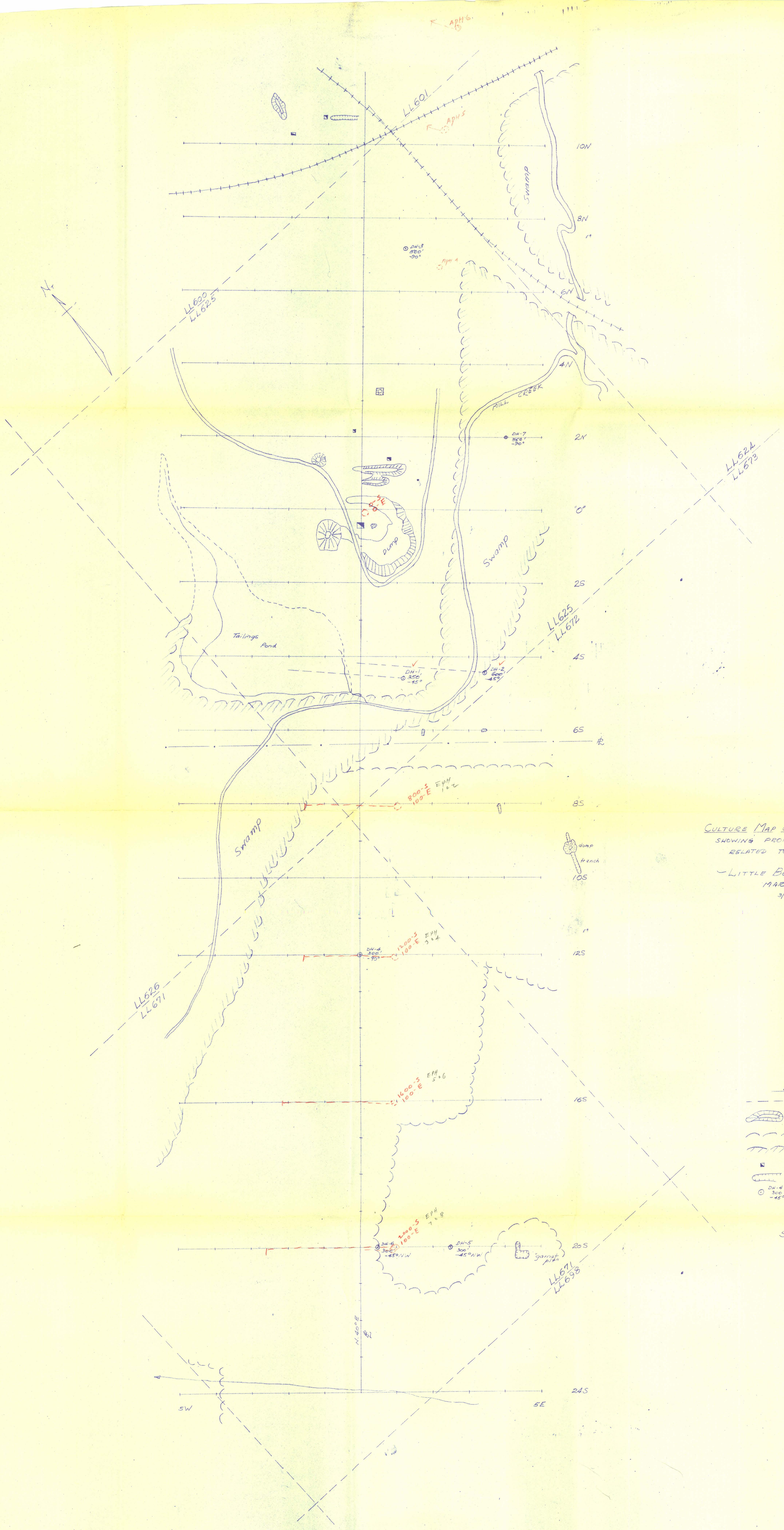
An on-site examination of this prospect was made June 1958 following submittal of an application for DMEA assistance (DMEA docket No. 5018). The field examiners suggested an alternate program but no contract was written because the Applicant (Roland F. Beers, Inc.) relinquished his interests in the prospect to the Little Bob Mining Company, Inc.

The pattern of drilling proposed by the Applicant does not agree with that proposed in the DMEA application nor with the field examiners' alternate proposal.

I recommend that the application be referred to the Field Team for consideration.

Harold Kirkham

cc: OME (3)
H. M. Calloway, 3600
Director's reading
Branch reading
Chron. file
Docket file ✓
HKirkham/mm
G-MD-3-25-60



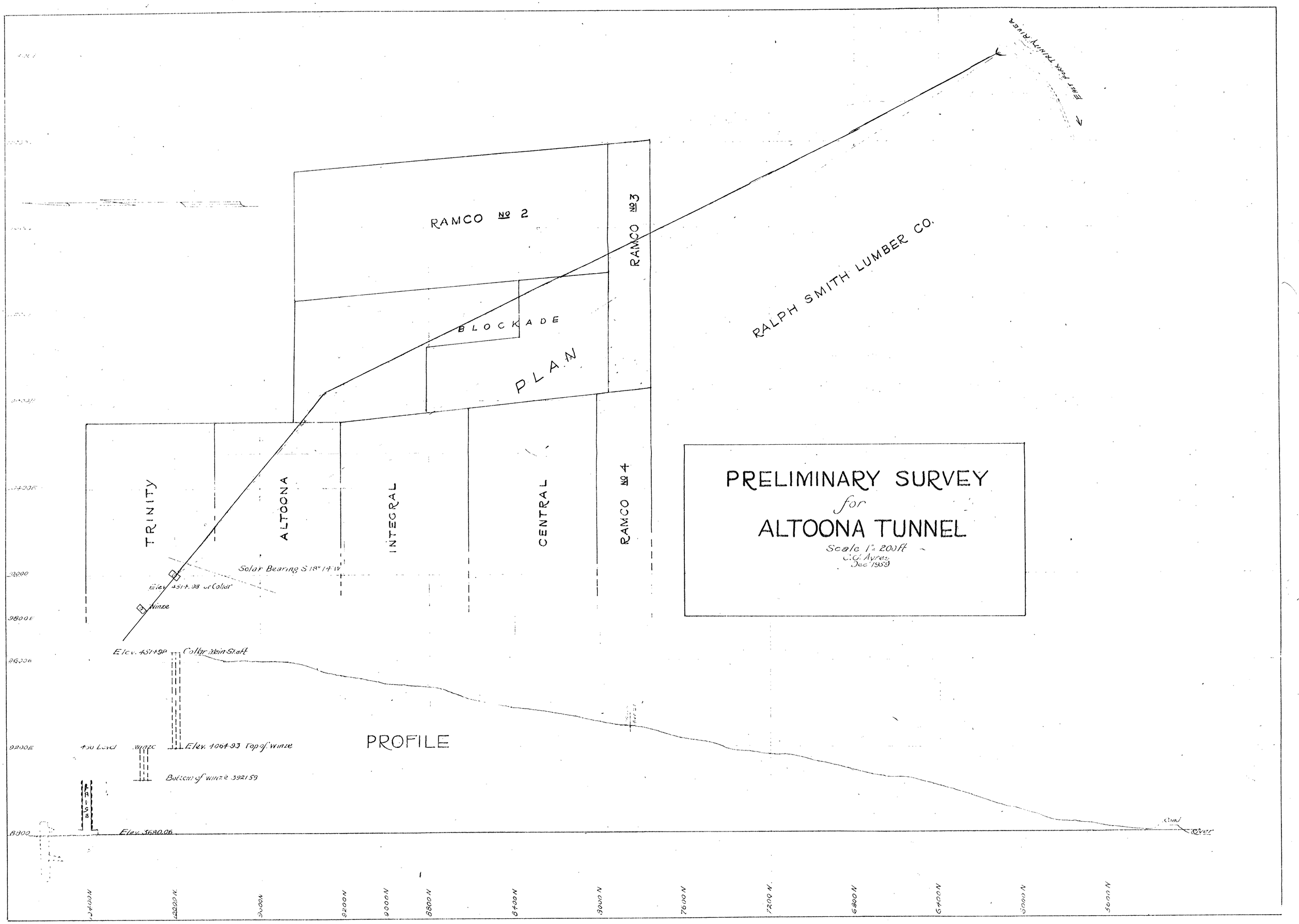
CULTURE MAP OF THE LITTLE BOB PROSPECT
SHOWING PROPOSED DRILL HOLES (7) AS
RELATED TO PROPERTY LINES

— LITTLE BOB MINING CO., INC. —
MARIETTA, GA.
3/3/60

LEGEND

- Land Lot boundaries
- Rock dump
- Tree line
- Swamp limit
- Shaft
- Trench
- DH-4 300' -45° Drill hole location with #, depth & ∠.

SCALE: 1" = 100'


PRELIMINARY SURVEY
for
ALTOONA TUNNEL
Scale 1" = 200 ft
C.C. Ayres
Dec 1959
RAMCO № 2
RAMCO № 3
RAMCO № 4
BLOCKADE
PLAN
RALPH SMITH LUMBER CO.
TRINITY
ALTOONA
INTEGRAL
CENTRAL
Solar Bearing S 18° 14' W
Elev 4514.98 at Collar
Winze
Elev. 4514.98
Collar Main Shaft
PROFILE
450 Level
Winze
Elev. 4064.93 Top of Winze
Bottom of winze 3921.59
Elev. 3680.06
Creek
River
East Fork Trinity River
12400 N
12000 N
10000 N
9200 N
9000 N
8800 N
8400 N
8000 N
7600 N
7200 N
6800 N
6400 N
6000 N
5600 N

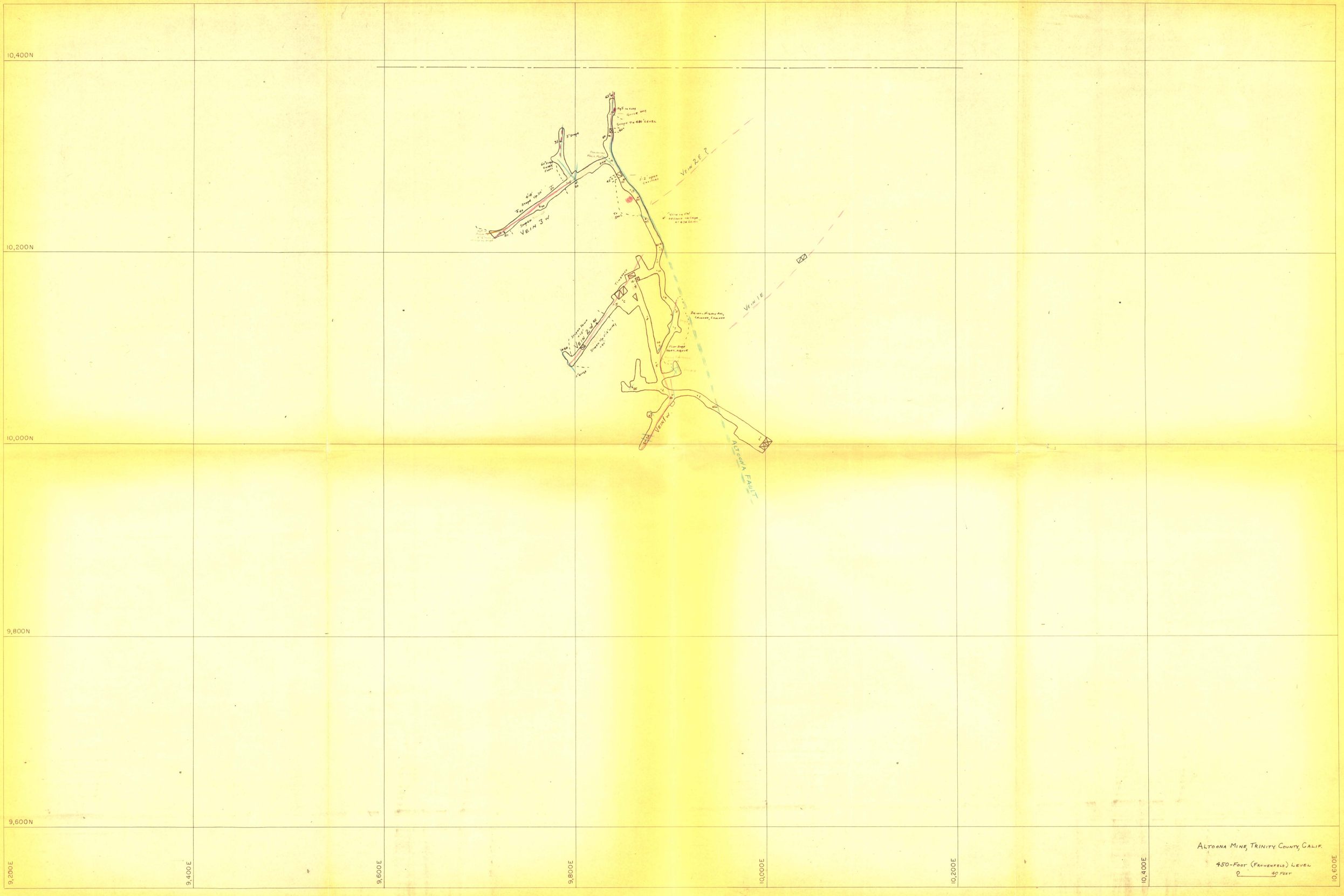

10,400N
10,200N
10,000N
9,800N
9,600N
9,200E
9,400E
9,600E
9,800E
10,000E
10,200E
10,400E
10,600E
VEIN 3 W
VEIN 2 E ?
VEIN 1 E
VEIN 1 W
VEIN 2 W
ALTOONA FAULT
ALTOONA MINE, TRINITY COUNTY, CALIF.
450-FOOT (FROWENFELD) LEVEL
0 40 FEET

FIGURE 4

ALTOONA MINE, TRINITY COUNTY, CALIF.

500-FOOT (PORTER) LEVEL

0 40 FEET

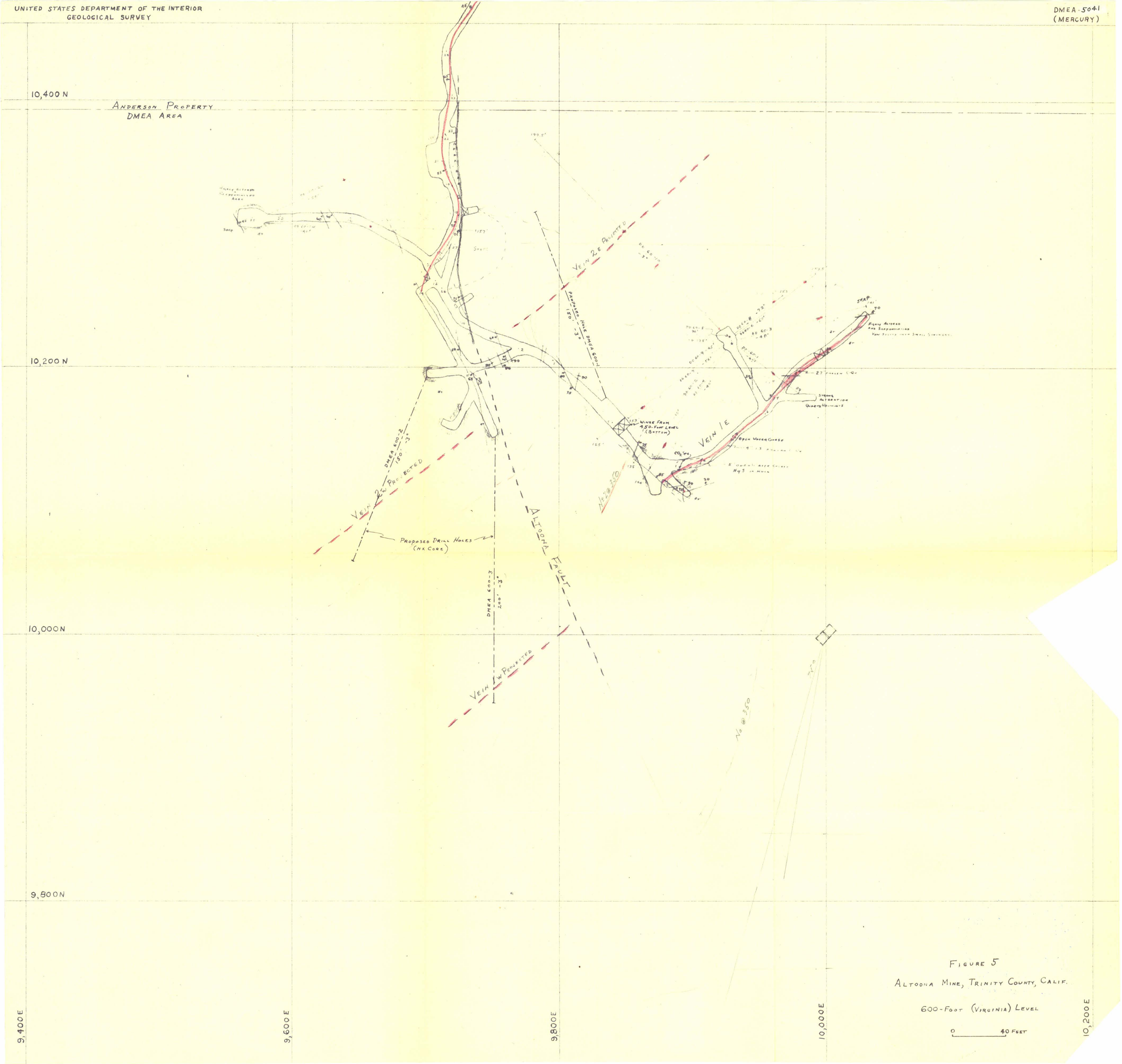


FIGURE 5

ALTOONA MINE, TRINITY COUNTY, CALIF.

600-FOOT (VIRGINIA) LEVEL

0 40 FEET

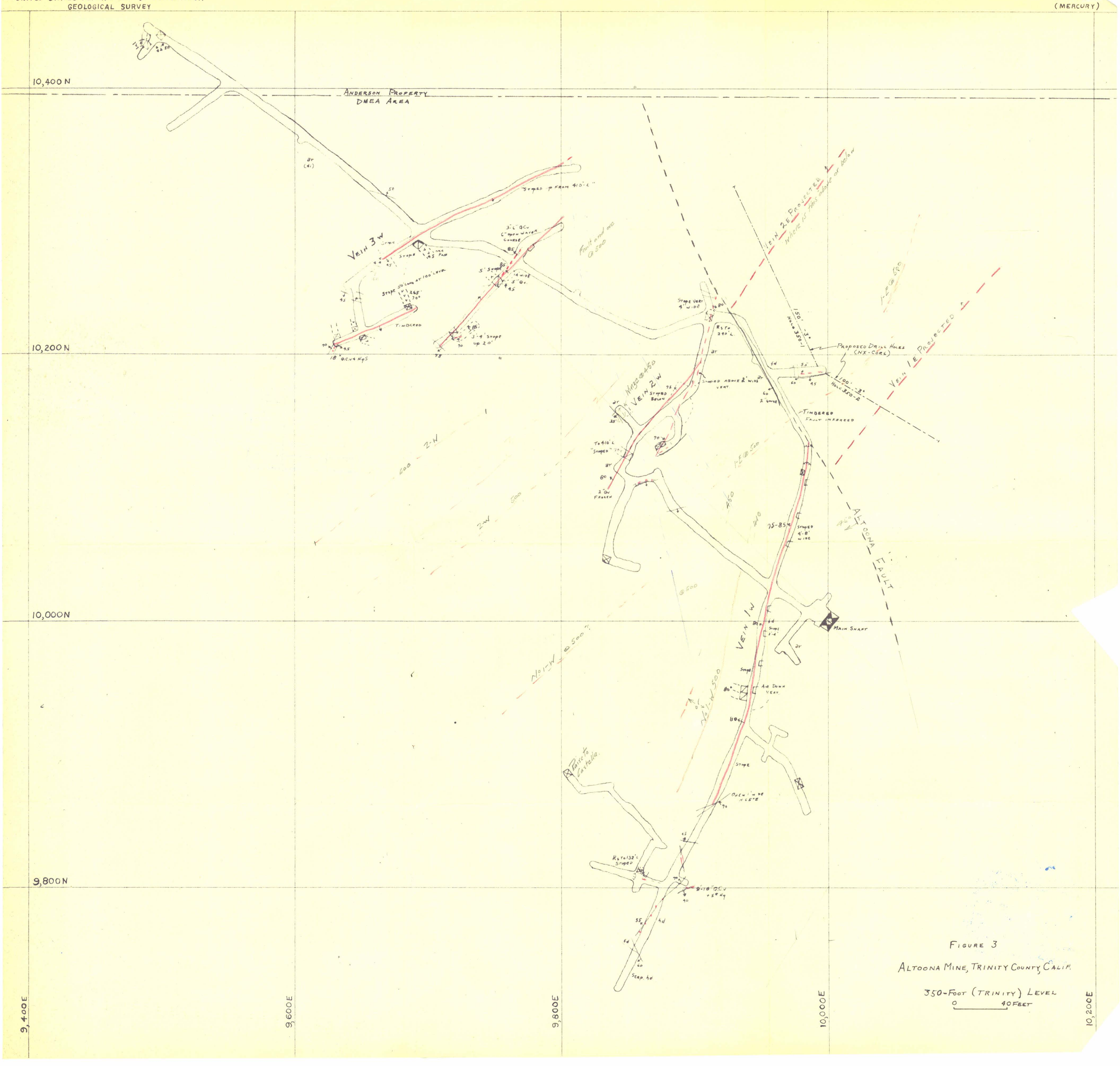
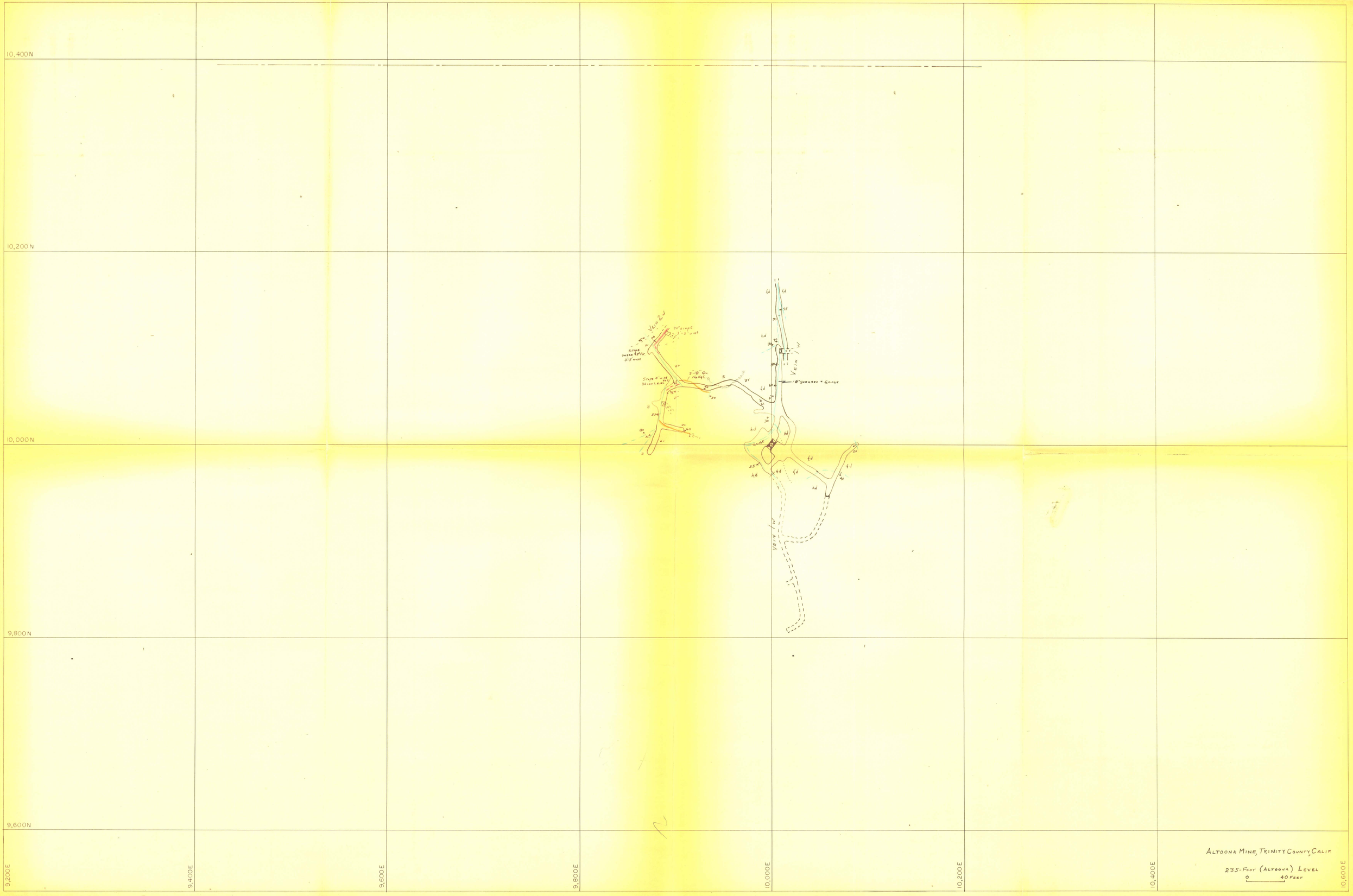


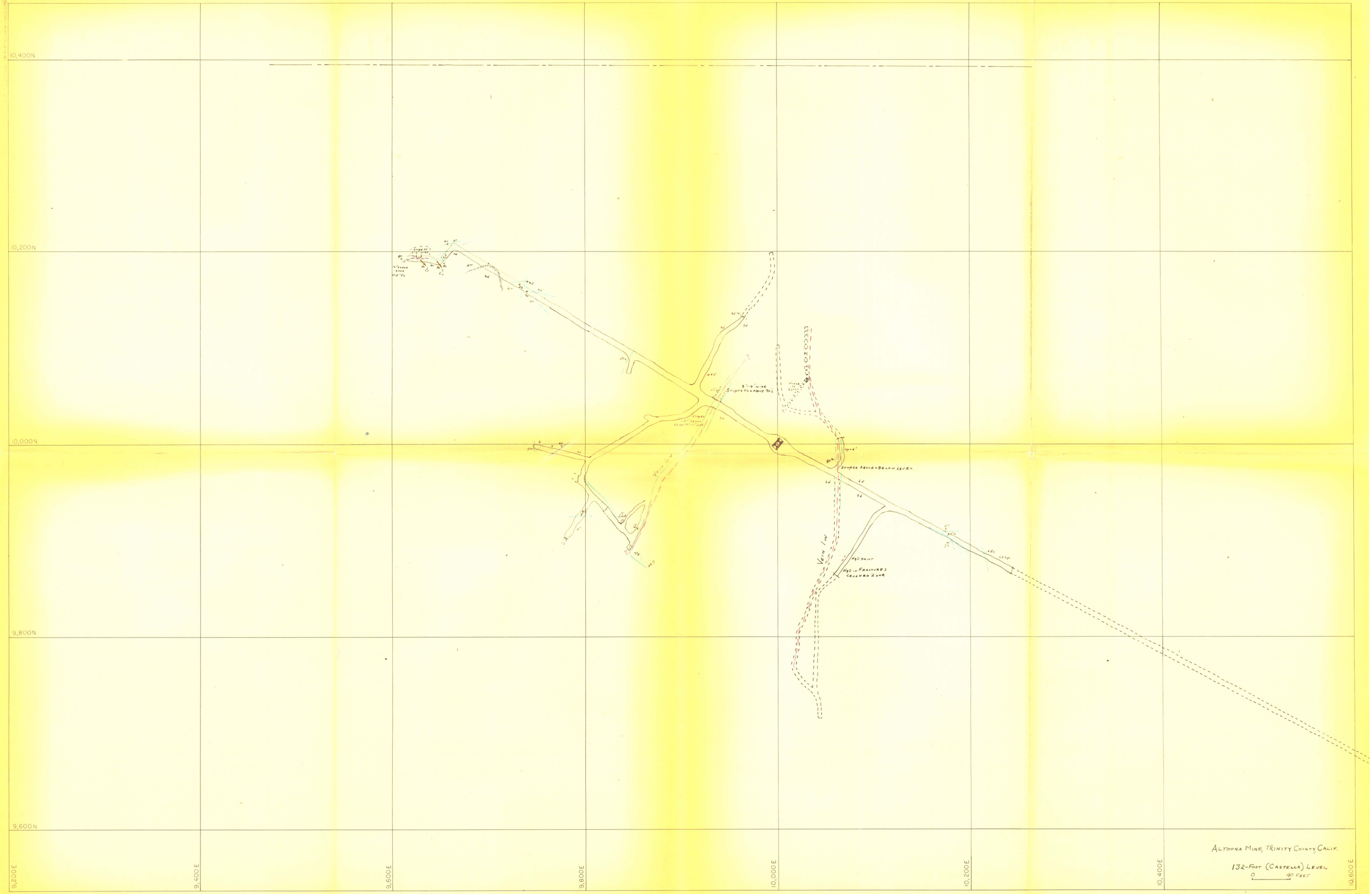
FIGURE 3

ALTOONA MINE, TRINITY COUNTY, CALIF.

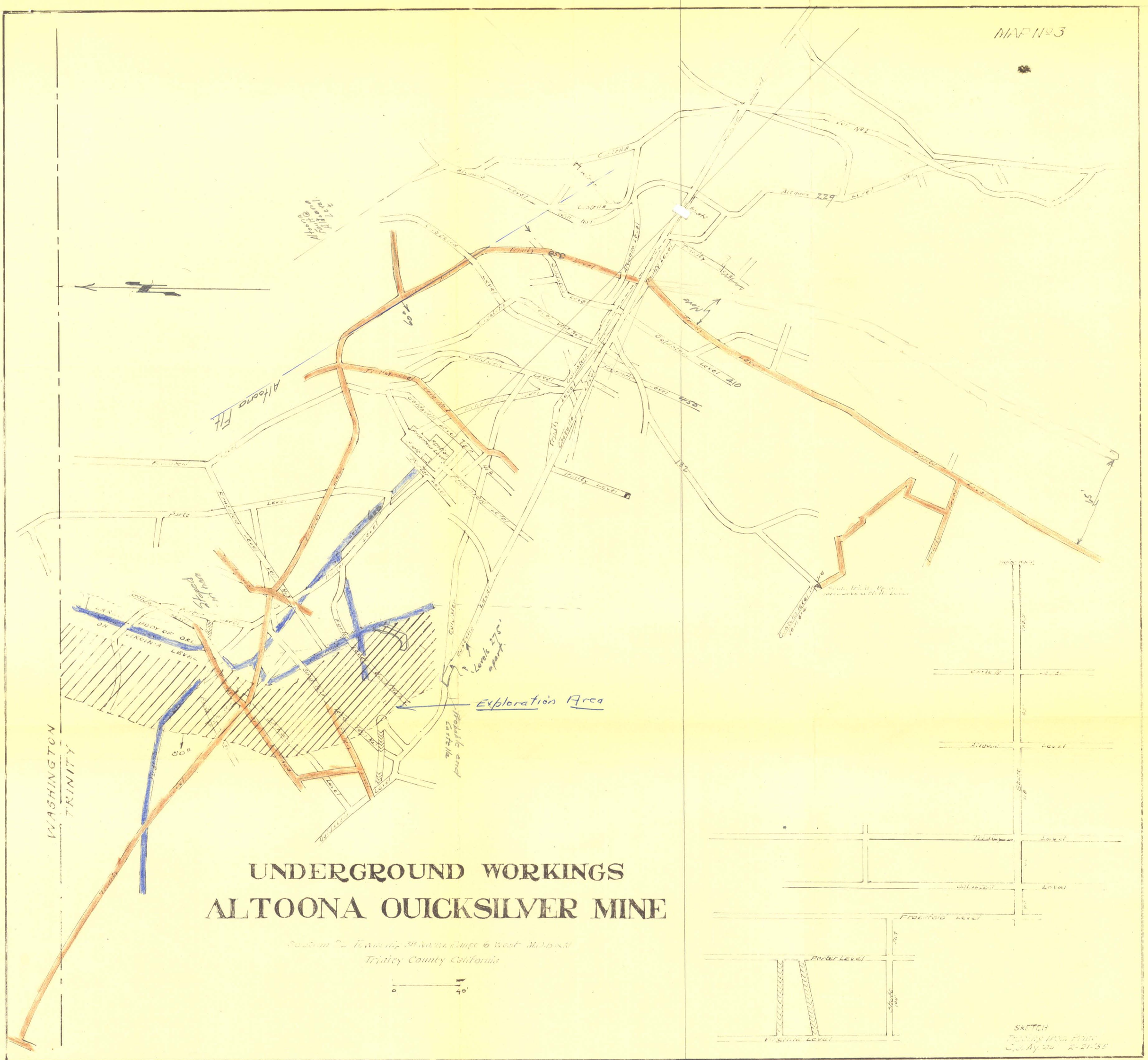
350-FOOT (TRINITY) LEVEL

0 40 FEET


10,400 N
10,200 N
10,000 N
9,800 N
9,600 N
9,200 E
9,400 E
9,600 E
9,800 E
10,000 E
10,200 E
10,400 E
10,600 E
Vein 2nd
70° slope
Stope under 8th Lev.
2-5' wide
5-18" Qz.
Stope 4' wide
Second Lev.
VEIN
18" Sheared & Gouge
VEIN
Altoona Mine, Trinity County, Calif.
235-Foot (Altoona) Level
0
40 Feet


10,400N
10,200N
10,000N
9,800N
9,600N
9,200E
9,400E
9,600E
9,800E
10,000E
10,200E
10,400E
10,600E
2'-4' WIDE
STOPED TO & ABOVE 90'L
STOPED ABOVE & BELOW LEVEL
VEIN 1W
HgS PAINT
HgS IN FRACTURES
CRUSHED ZONE
180' CRIP.
ALTOONA MINE, TRINITY COUNTY CALIF.
132-FOOT (CASTELLA) LEVEL
0
40 FEET

MAP No 3

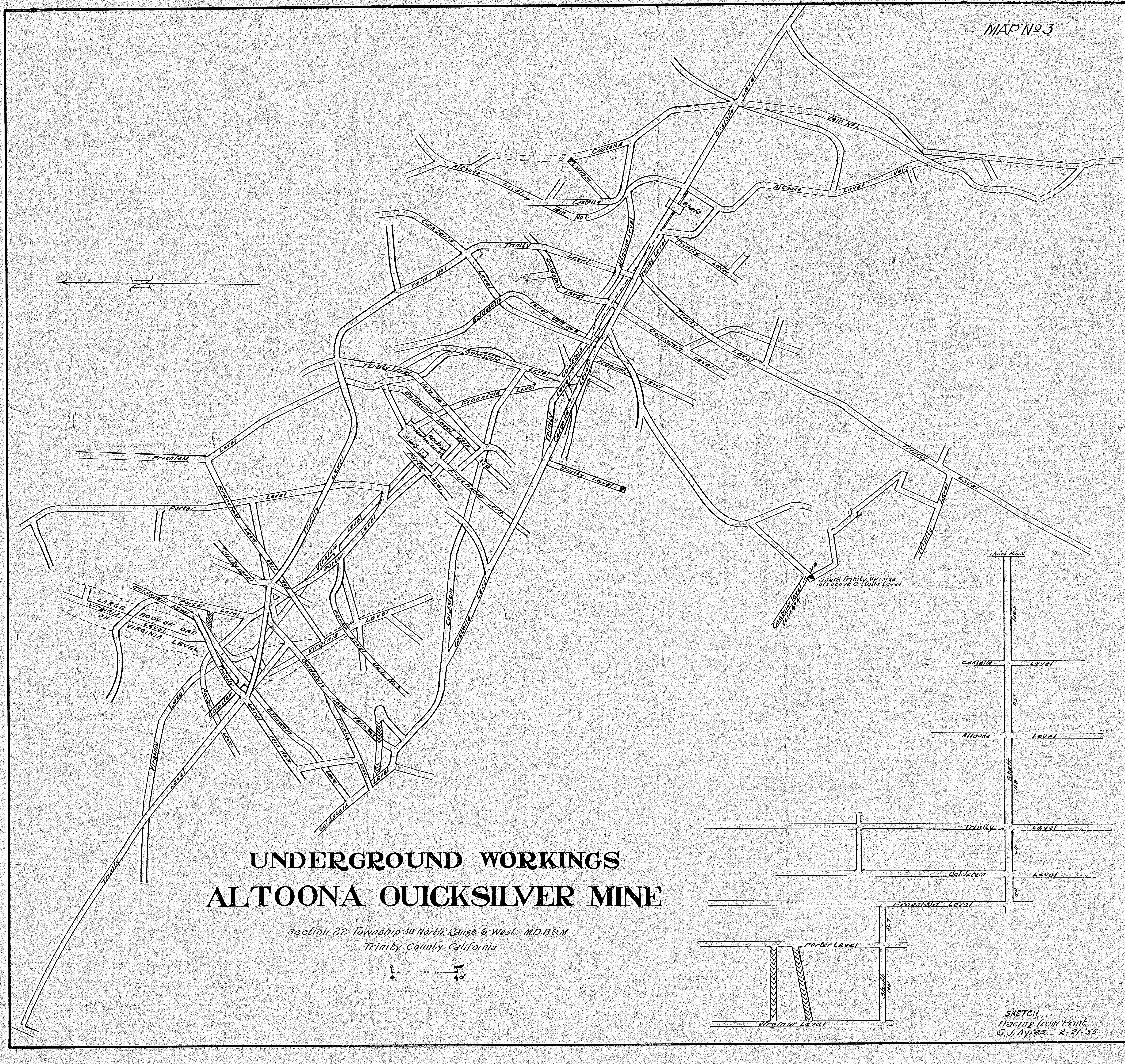


UNDERGROUND WORKINGS
ALTOONA QUICKSILVER MINE

Section 2 Township 34 North Range 6 West M.D.B.&M.
Trinity County California

0 — 40'

BLOCK 2
Albana Pit
Z Vein
600 D.H.E.P.
500 D.H.S.P.
SCALE: 20'=1"
N
BLOCK 1
1" SERP.

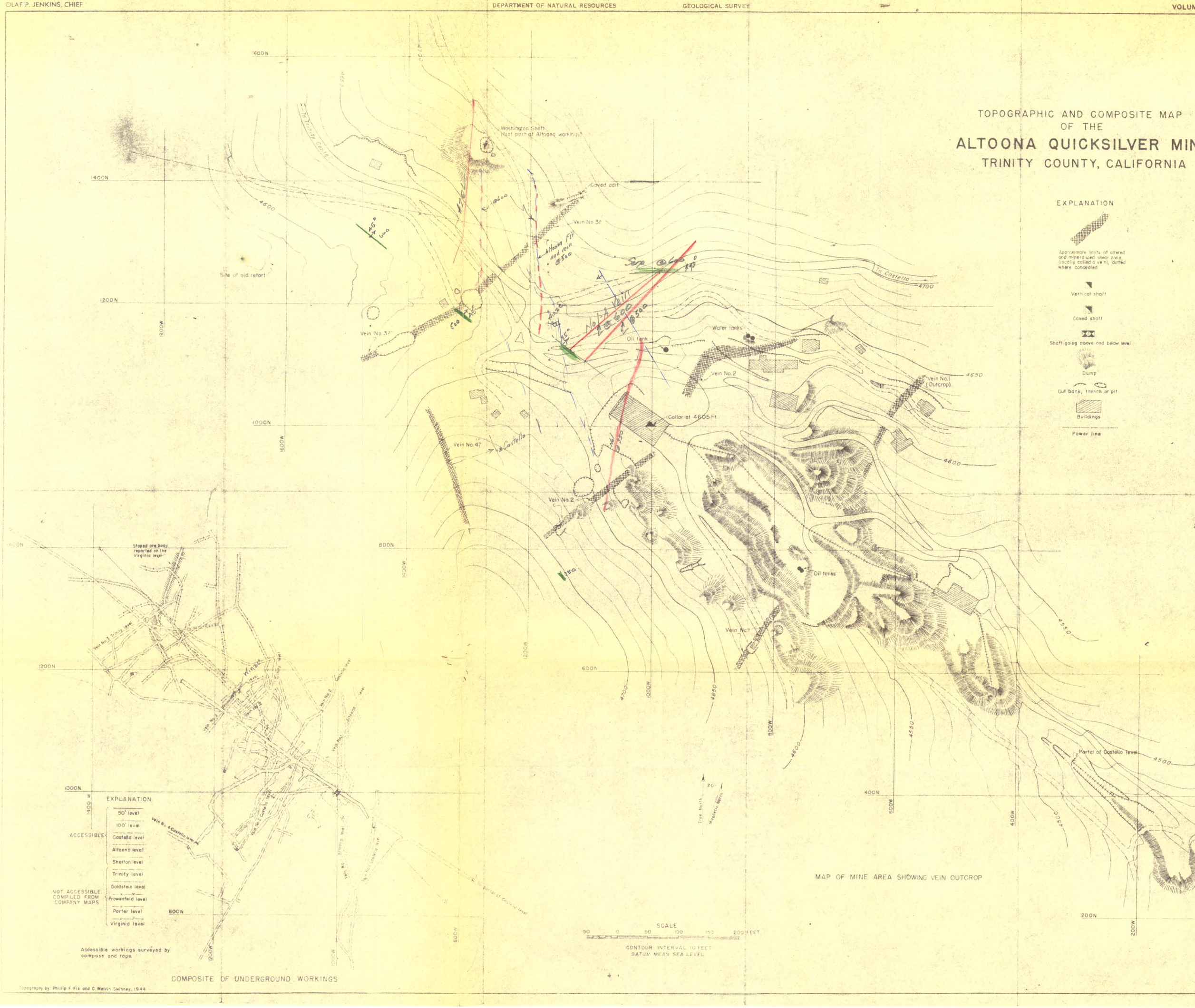


UNDERGROUND WORKINGS
ALTOONA QUICKSILVER MINE

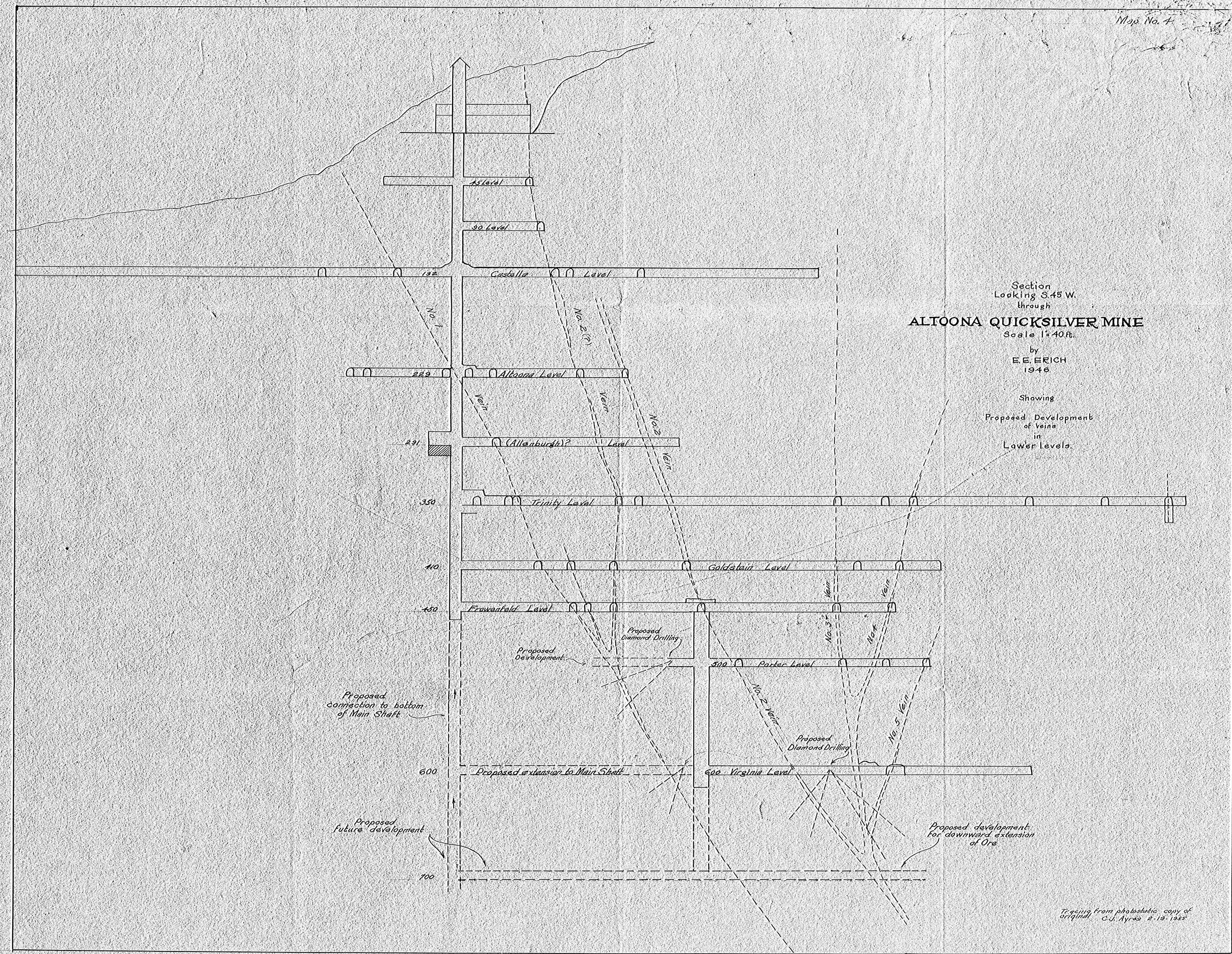
Section 22 Township 38 North Range 6 West M.D.B&M
Trinity County California

TOPOGRAPHIC AND COMPOSITE MAP OF THE ALTOONA QUICKSILVER MIN

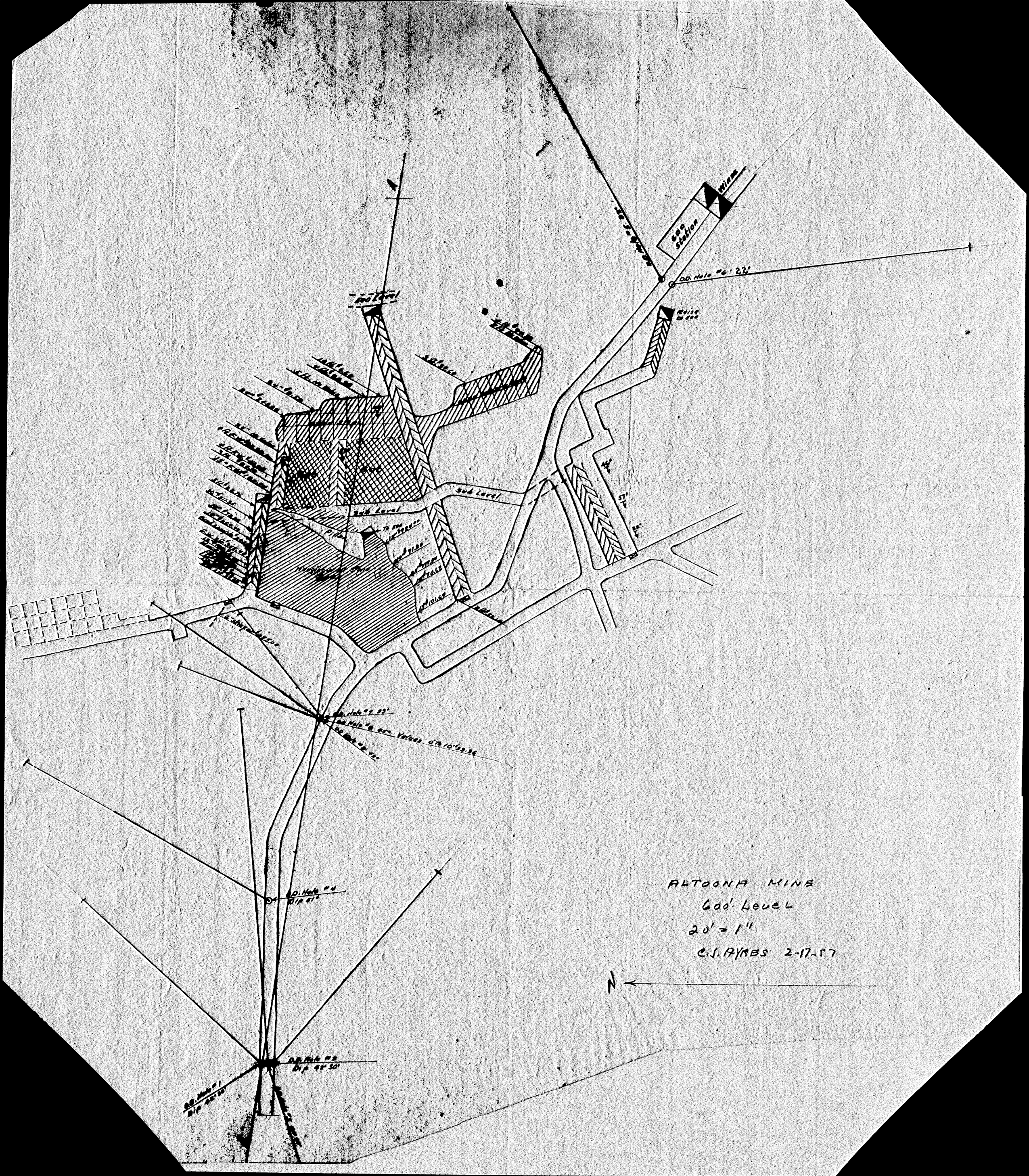
TRINITY COUNTY, CALIFORNIA



Map No. 4



Tracing from photostatic copy of original C.J. Ayres 2-19-1955



ALTOONA MINE
600' LEVEL
20' = 1"
C.S. AYRES 2-17-57