IMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4570

Application (Denied
(Withdrawn
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

Left Side

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
Certificate of Audit (Final)
Interim Audit(s)
Report of Review
Termination Notice or Agreement
Recision Notice
Assignment of Contract
Contract Amendments (latest on top)
Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
✓ Leases and assignments of leases
✓ Application and attachments
(3) Envelope for maps

Right Side

Project summary
Work completed analysis
All other material is filed in chronological order with correspondence including the following reports as checked:

Final Field Team Report (Tab)
Operator's Final Report
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
✓ On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

Left Side

Folder No. 2: (In chron. order) Interim Summary Reports by W. O. Engineers

Right Side

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

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

0775

(1)

This assumes perhaps lines and workings superimposed Hierarchy

Title workings should show where exploration drilling is planned also where P.D is planned at least approximately.

(2)

Dip should normally be estimated.

Give cross "section" + "Long Sec" 65°E 80°W

Drill hole intersection within zone 16-6 feet.

What size core for drilling? Make clear what is best for drilling

Unit costs of Exploration should include everything estimates of all items

(3)

should be cost/ft. Costs must include exploration, access, pipe, hose etc. etc.

Assaying should be given as assays for what elements and from ground samples and core. Cost analysis, equipment costs, small programs.

DMEA data, unit costs, operation, land cost development model

Costs of equipment, supplies, personnel, etc. should be included in cost/foot of

(4)

Drilling, etc;

Insurance, Payroll taxes, etc and contingencies? Are they absorbed? were not added into Totals.

Lease is for 10 years with option of 10 year renewal.

Property in Lease

Two Claims
West Alta Extension No. 1. & 2.

Property known as "The Alta, California, Opposite" or Lot 38 in Sec 35 T18N, Range 1E, H.M. 74.36 acres

150'	@	22.00	3,300.00
300'	"	"	6,600.00
200'	"	"	4,400.00
200'	"	"	4,400.00
850'			18,700.00
350'			8,400.00
1,200'			27,100.00

200'	@	24.00	4,800.00
70'	"	"	1,680.00
80'	"	"	1,920.00
350'			8,400.00

D.D.

1,400'	@	5.00	7,000.00

(5)

Owner's Consent to Lien & Subordination Agreement.

1,200'	@	$22.58	27,100.00

Materials

Miscell.	678.00
Explosives	1,560.00
Fuel.	1,460.00
Pipe	825.00
Hose	500.00
Cars	375.00
Track	1,250.00
Drills etc	1,600.00

1,200'	@	$29.45	35,348.00

D.D.

1,400'	@	5.00	7,000.00
		Drill etc	2,300.00
1,400'	@	$6.64	9,300.00

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

RECEIVED
DEC 13 1956
D.M.E.A.

1605 Evans Avenue
Reno, Nevada

December 11, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Loan Application - Copper
Hamilton Bros. Lumber Company
The Alta, Calif. Copper Mine
Del Norte County, California

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

S. Ricker

Attach.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4570
Metal or Mineral Copper
Date Received DEC 13 1956
Estimated Cost $57,048
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Hamilton Bros. Lumber Company; P.O. Box 627 Crescent City, Calif. Incorporated, State of California April 1951. H. L. Hamilton, Pres. Box 627 Crescent City, Calif.; E. P. Hamilton, Vice President and General Manager. Box 351, Gasquet, California.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized. K. B. Hamilton, Sec. & Tres. Box 627

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. Crescent City, Calif.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract See attached lease for description of property.

(*b*) State any mine name by which the property is known. "The Alta, Calif. Copper Mine."

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. Lease Attached.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

See attached report.

RECEIVED DEC 13 1956 D.M.E.A.

16—66551-1

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Copper

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. See report.

(*c*) The work will start within 60 days and be completed within 8 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

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*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

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.

Dated December 6th, 1956

Hamilton Bros. Lumber Company
(Applicant)

By E. P. Hamilton
E. P. Hamilton, Vice Pres. & Gen. Mgr.

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

5. THE EXPLORATION PROJECT

(d) Hamilton Bros. Lumber Company, a Corporation owned and operated by three brothers, E.P., H. L., and K. B. Hamilton. Our Company has operated since 1934 in the logging and lumber industry, operating first as a partnership.

The Company started its first mining in September 1955 on chrome by open pit stripping and short drifts. We have several chrome claims under lease, have filed on two chrome claims from which we have mined about 60 tons of chromite to date. We recently purchased Mineral Lots 40, 41 and 42 known as "Mountain View Mine" and Mineral Lot 39, known as "Copper Creek Mine."

Copper properties under lease other than the Alta, are 10 mining claims located in Section 4 & 9 T16N R1E. To date we have produced about 25 tons of high grade copper ore, with assays as high as 57.14% copper.

The persons who will supervise the operation on the proposed exploration project will be Mr. Jean W. Presslin and E. P. Hamilton.

6. ESTIMATE OF COSTS

(a) Proposed work we would take on unit lost contract.

A.	Drive Adit Level North - 150' @ $22 --	$3300.00
B.	Drive 2nd Level North - 200' @ $24 --	4800.00
C.	Drive Crosscut from 2nd Level to "East" Vein, on North end, 70' @ $24 ---	1680.00
D.	Drive exploratory Crosscut from (C) above from intersection of "East" vein towards magnetic anamaly -80' @$24 --	1920.00
E.	4th Level North - 100' @ $22--	2200.00
F.	450 Level South - 100' @ $22 --	2200.00
G.	500 Level South - 100' @ $22 --	2200.00
H.	Exploratory Drift, ½-way between Adit Level North and 2nd Level North- along top of ore - 200' @ $22 --	4400.00
I.	Expl. Drift, ½-way between 2nd Level North and 3rd Level North -200' @ $22--	4400.00
J.	Diamond Drilling -	
	1. From 2nd Level North, 800' @$5 --	4000.00
	2. From 5th Level South -600' @ $5--	3000.00
		$34,100.00

(b) Labor, supervision, and consultants.

(1) Class	No. Req.	Hourly Wage
Miner	7	$2.25
Muckers & Trammers	3	2.00
Hoistman	1	2.25
Cager	1	2.125
Dia. Driller	1	2.50
Foreman	1	2.50
Assayer & Engineer	1	2.75 ($480/mo)
Supt. & Consult. ½-time	1	1.85 ($650/mo)

(c) Operating Material and Supplies

	For 8 Mos. Period
(1) Carbide	225.00
Carbide Lights, 30	90.00
Working Tools--24 picks, 24 shovels, 6 sledgehammers, 10 rock hammers	192.00
24 pipe wrenches	75.00
	96.00
Powder, 72 boxes @$12.50	900.00
Caps, #6--1800 @2½ cents	45.00
Elect. #--1800 @ 20¢	360.00
Fuse--9000 ft @1½¢	135.00
Exploders, 4 @ $60	240.00
Fuel--	
Compressor, Diesel, $4.50 x 160	720.00
Oil, 0.50 x 160	80.00
Hoist, Gas, $3.00 x 160	480.00
Oil, 0.50 x 160	80.00

Grease	40.00
Pipe Fittings for Air and Water	60.00
(d) Operating Equipment	

(1) To be purchased--

a. Sump Pump for shaft, max capacity 150 GPM @ 200#, Air Operated.	800.00
b. Assay Laboratory	500.00
c. Air Pipe lines, 800'-1", 400'-3", 300'-1½"	500.00
d. Water Pipe Lines, 750'-1", 750'-3/4"	325.00
e. Air Receiver-- 2000 Gal. Used.	1000.00
f. Air & Water Hose, 350' ea 3/4 &½"	500.00
g. Mine Cars, Bench 3/4T, Side Dump @ $125	375.00
h. 1 Crummy, GMC Carryall Truck, 12 pass.	4000.00
i. Hoist Rope, 2000' Used @ 50¢	1250.00
j. 2 Jackhammer Outfits: Swede Hammer w/jackleg & set of alloy drill steel	1[illegible].00
k. 1 Diamond Drill, air operated, w/rod puller & 300'-3' drill rod, 3' core barrel, 2 diamond blasthole bits, 1 diamond core bit, and 3 carbide bits.	2500.00

FURNISHED BY OPERATOR

a. 1 Jackhammer outfit --	$700.00
b. 1 Hoist	2000.00
c. 1 Ranger Compressor, Diesel--	6000.00
	8700.00
Depreciation or Use-Allowance for 8 mos-	1[illegible]0.00

(e) Rehabilitation and Repairs

(1) Rehabilitate 2nd Level North- About 200 Feet of ½-caved drift with at least 100' of timbering. 200' @ $10/ft --	2000.00
(2) Repair & Install Change Room, 18 men	1800.00
(3) Repair 5 cabins for living, 1 roof, 1 [illegible], stove & gas set-up--	800.00

(f) New Buildings, Improvements, Installations

(1) Install and set up Assay Lab.	300.00
(2) Install Office	300.00

(g) Miscellaneous

(1) Repairs & Replacement: Drill steel, 15 pieces	300.00

Jackhammer repair (8 mos w/3 outfits-	150.00	
Hose Repairs	50.00	
Analytical work	200.00	
(2) Accounting @ $150 per month	1800.00	1,800.00
(3) Compensation Insurance @ 10% payroll	5000.00	
(4) Payroll taxes @ 5% payroll	1500.00	
(h) Contingencies	1000.00	
Grand total------		$57,045.00

Note-

(1) Drifting (4x6) with over 150' tram----------	$24 per foot
(2) Drifting (4x6) with less than 150' tram------	22 per foot
(3) Add for Drifting requiring timbering---------	5 per foot
(4) Diamond Drilling (up to 200' holes)----------	$5 per foot
(5) Diamond Drilling (200'-400')----------	7 per foot

1019 S. E. Fern Street
Grants Pass, Oregon
November 16, 1956

RECEIVED
DEC 13 1956
D.M.E.A.

Hamilton Bros. Lumber Co.
P. O. Box 627
Crescent City, Calif.

Att: Mr. E. P. Hamilton

Gentlemen:

I am submitting the following report on the Alta Copper property, based on my examination of the underground workings on October 16 and 17, 1956. In addition, a geophysical survey of the immediate surface area was made on October 11 and November 6, 1956, using a Ruska "Scout" model magnetometer.

LOCATION AND ACCESSIBILITY

The Alta Copper property consists of a group of patented mining claims known as Mineral Lot No. 38 of 74.36 acres in the southwest corner of Section 35, T.18N., R.1E., H.M. in the Low Divide Mining District, northwestern Del Norte County, Calif., and about 8½ miles miles east of the town of Smith River, Calif., and near the headwaters of Hardscrabble creek at an elevation of 1650 feet. Mineral Lot No. 38 covers 2700 feet in a north-south direction parallel to the strike of the outcrop of the main Alta "West" vein and with a width of 1200 feet.

From Crescent City, Calif., the property is reached by 11 miles of U. S. Highway 101 to the town of Smith River, Calif., and thence by good gravel road easterly up Rowdy creek 8½ miles to Low Divide. If fact, the patented Alta property includes Low Divide flat and camp. Moderate freight rates by truck and railroad or by ocean barge to the Tacoma smelter can be secured for copper ore or concentrates. Rail transportation is available at Grants Pass, Oregon, which is a station on the Southern Pacific Railway. Grants Pass is approximately 97 miles from the Alta property and freight can be handled by truck over good roads and Highway 101 and 199 for the total distance. Deep sea transportation to the Tacoma smelter is also available at Crescent City, California.

There is ample water supply for all mining operations on the property. There is only a scattered amount of timber in the vicinity and it probably will be cheaper to purchase mine timber locally. Peeler cores and piling trim are cheap and are admirably suited for such a purpose. The climate is marine temperate with warm summers and cool winters with moderate heavy precipitation, maximum in the winter. Annual precipitation is about 60 inches, with a maximum-

minimum temperature range of 10-100° F. Snow may remain on the higher elevations (above 2000') until later in the spring, but the lower lands seldom have snow for more than a few days.

HISTORY

The Alta copper property was discovered in 1853, ranking it as one of the first discovered and worked in California. It was originally opened in 1860 and operated by a Boston, Mass. company during the Civil War. High grade ore was barrelled and shipped to Swansea, Wales during the war, and operations continued until the drop in the price of copper forced them to discontinue late in 1867. During this period, around 2000 tons of high grade ore was produced from the property. The workings and shaft gradually filled with water, the buildings and headframe were burnt down, and the timbered shaft burnt and caved to the Adit level. In 1907 the Union Copper Company made a brief attempt to reopen the mine, but the price of copper did not stay high long enough to justify this venture.

Patented by its original owners during President Grant's administration, it was purchased in May, 1951 by John I. Noce of Gasquet, Calif. from its Boston owners, and, in August of 1951, a partnership including John Noce, Joe Reinarz, and R. E. Yoder retimbered and rehabilitated the shaft, installed loading pockets, and reopened most of the levels. A single drum hoist in a wooden frame building and a new timber headframe were built. The mine was brought to the point of production, but financial troubles, arguments, and lack of experience plagued the company so that they remained dormant until 1956. In September, 1956, Hamilton Bros. Lumber Co., Crescent City, Calif. leased the property and are presently engaged in investigating it to determine the economic feasibility of producing copper ore for direct shipment as well as the concentration of the lower grade ores available.

GEOLOGY AND ORE DEPOSITS

The rock formation in this portion of Del Norte County in the vicinity of Low Divide consists of ultrabasic Mesozoic intrusive rocks, chiefly peridotite, but variably altered to serpentine. Rock outcrops are usually saxonite. Alteration to serpentine is present in all jointing, faults, and shear zones. The Alta copper deposit appears to be in a fissure which pinches and swells to form lenses along the strike and dip and is enclosed in serpentine. Vein material is a light colored gouge of soft serpentine enclosing the copper mineralization. In the absence of any copper minerals, the appearance of a black, flaky, high-iron serpentine was noted. This likewise was enclosed in the light colored soft serpentine. Hypogene mineralization consists of a very intimate mixture of pyrite and chalcopyrite, with small amounts of gold (0.1 oz) and silver (0.5 oz). The ore tends to be unstable after mining and slacks very readily when exposed to the air and moisture. It is non-magnetic in character, thereby ruling out the presence of pyrrhotite and/or cubanite. Supergene copper minerals are evident to the 2nd Level South (180' vertical from surface), on the intersection of the "East" vein with the 2nd Level South drift. Much chalcanthite, limonite, and hematite can be seen here. Earlier reports claim that the upper 100' of vein material was considerably enriched by supergene copper minerals, such as chalcocite, tenorite, cuprite, malachite, azurite, and native copper. This was very much in evidence in my inspection of these upper workings.

A spectrographic examination of the ore disclosed the presence of copper and iron in major quantities with small to trace amounts of nickel and cobalt. Results of this analysis indicates that the only commercially valuable mineral is copper.

THE MINE

During the initial production period of the Civil War, the Alta-California Copper Mining Co. sank a two-compartment shaft 455 feet deep and inclined 65° in a N.48°E. direction. The Adit Level, driven westward from the creek level, intersected the shaft at a depth of 100 feet. Levels were driven north and south from the shaft at 100, 180, 247, 310, and 410 feet below the shaft collar level. Ore was steped from drifts on all levels except the bottom level. They had just started development of the vein on the bottom level when the property was shut down in 1867.

In 1951-1952 the present owners rehabilitated the shaft and workings and did some development work. They installed a 250 cubic foot Diesel compressor, hoist, drill equipment, etc., and built a three room house for office, lab. and change room and two extra cabins. The property today is in a condition where development work can be started with a minimum of delay. Operating conditions are good. The mine makes very little water. After dewatering, a 3" boiler pump operating a short time each day is sufficient to keep the mine unwatered. The walls of the fissures are good and the country rock stand well. After almost 100 years, the workings are still open and in good shape. The only timber used was in the stopes. Drilling is very rapid and powder consumption is low.

There are two known and well-defined ore shoots on the property. The "Alta" or "West" vein strikes in a north-south direction and dips 65° to the east. Most of the original development and production from the Alta mine came from this "West" vein. Approximately 300 feet north and 100 feet east of the shaft collar is a very promising ore shoot, also striking north-south, and on which the original company did some shallow mining. On the 2nd Level the present owners started development of this "East" fissure and picked up ore some 300 feet south of the "East" vein outcrop. On the "East" vein outcrop the dip seems to be about 80° to the west. This is corroborated by the intersection on the 2nd Level south. Examination of a plan of the workings indicate the possibility of an intersection of these two ore shoots near the extensions of the 4th Level. (Please refer to Alta Mine Map enclosed.)

Previous reports of the Alta Copper property by O. A. Tibbetts in 1902 and an anonymous engineer on Aug. 22, 1905 indicated that considerable development work would have to be done before a profitable operation could be secured. However, they thought that the mine was promising and would probably justify the initial expenditure to get into operation as wellas the expenditure for the development of additional orebodies.

An anonymous engineer in 1952 as well as two engineering reports in 1952 and 1954 are very optimistic and indicate as much as 8000 tons of reserves with a 7% copper grade above the 455 Level on the North side of the shaft. In addition, they believe that as much as 25,000 tons of equal grade ore could come from the "East" vein. This latter conclusion is unjustified and with no indication or proof, geologically or otherwise. However, the "East" vein is an attractive outcrop, and it should be invest-

igated with depth, especially from the 2nd Level North. Surface magnetic anomalies also establish this possibility.

It is my opinion that the old stope areas, as marked on a map made in 1903 from an old map made in 1867, contain considerable remaining ore. By a clean-up operation in these old stopes, as much as 50% of the volume could be salvaged economically. This should amount to an additional 1100 tons of 3% copper reserves.

Additional ore as blocked out on the same map to the extent of 8000 tons is possible. However, the grade would be closer to 3% copper than 7%. The average copper vein in these blocked out areas is probably less than 10" of 10% ore, and, if the small stopes were mined to a 3 foot minimum operating width, would break to approximately a 3% copper ore.

MINING

The "East" and "West" vein fissures are generally from 1 Foot to as much as 6 feet wide. However, in these two fissures, the actual copper mineralization varies from a few inches to as much as 3 feet of solid sulfide primary ore. Previously, various samplings on the different levels indicated grades of from 9 to 17 percent copper, with no apparent change in grade or character of the ore with depth. These figures refer to the solid primary sulfide which usually occurs with a foot to several feet of soft serpentine gouge. Due to the nature of this occurrence, hand sorting at the heading seems to be impractical. It is therefore necessary to break to the minimum drift width, with higher tonnage output per man shift with a proportionately lower copper ore grade. Only in a few cases where the ore occurs without much gouge will it be necessary to sort direct shipping ore underground. This is only possible when the ores occur in a good width that permit of selective mining. Analysis of sample assays as reported on the enclosed assay sheet indicate (1) that some direct shipping ore can be mined selectively, (2) that most of the mine production will consist of approximately 3% copper ore as broken from the vein in a minimum drift width of 3 feet, and (3) that close assay control of the headings will be necessary.

MILLING

It is evident that the only solution for a successful operation of this mine is the installation of an upgrading plant to concentrate the ore to a clean shipping product. Previous work performed by Denver Equipment Co. in 1952 indicated that a 14% copper ore can not be beneficiated by any mineral dressing technique at their disposal. Nevertheless, this still leaves the possibility of upgrading a lower grade ore to a 12-14% maximum concentrate. A coarse grind, followed by jigging, tabling, and a unit flotation cell is recommended. This type of mill should give satisfactory results with a minimum capital investment. Preliminary testwork along these lines is recommended.

MINING DEVELOPMENT

Development at the present time should progress with two objectives: (1) to block out ore inferred or possible at the present time on the North side of the shaft and on all levels with the intention of working towards a production of at least 30-50 tons per day of 3% copper ore with some additional production of direct shipping highgrade ore, (2) to find and

develop additional blocks of ore on extensions, at depth, or from other nearby orebodies.

The following is a brief outline of some of the possible development procedures:

1. Rehabilitation of the 2nd Level North.
2. Driving of the 2nd Level North Drift ahead. The face looks good at the present time, with a 16" cut of 3.28% copper assay.
3. Extension of the Adit Level North about 150 feet so that sub-level mining can be set up between the Adit and 2nd Levels.
4. Driving a crosscut east from about the 230' station on the 2nd Level North. It should be approximately 70' to intersect the downward projection of the "East" vein from the surface outcrop. From this point, additional exploration and diamond drilling should be conducted to investigate the positive and negative magnetic anomaly, as indicated on the enclosed Alta Mine Map.
5. The driving of sub-drifts half-way between each level on the North side to facilitate stoping by sub-level and underhand methods.
6. The extension of the 4th Level North. A 14" cut at the face assays 13.80% copper.
7. Extension of the 450 Level South, as well as the 500 Level South from under the shaft. They have 12" cuts of 4.75% and 3.25% copper, respectively. At this depth, the "West" vein appears to be steepening and cutting underneath the shaft.
8. Installation of a shaft sump pump which will dewater the shaft sump so that inspection of the bottom of the shaft may be made.
9. Diamond drilling from stations on the 500 Level South Drift to investigate the downward extensions of the "West" vein as shown on the 500 Level North and directly behind the shaft.
10. Diamond drilling from stations on the 2nd Level North to tap the "East" vein would be cheaper than drifting into it blind. However, the crosscut would probably be driven, regardless of the size of the vein, unless it was non-existent at that level.

GEOPHYSICAL PROSPECTING

A preliminary magnetometer survey was made of the immediate property of the Alta mine. The surface seems to be of a fairly uniform magnetic characteristics with the exception of the following:

1. A negative magnetic anomaly above the outcrop of the "West" vein between the hoist house and headframe indicates the presence of a fairly large fault and/or fissure zone.

2. A series of magnetic highs and lows run in a northwesterly-southeasterly direction just to the north of the "East" vein outcrop and surface workings. These should be investigated further by diamond drilling from the 2nd Level North as noted in (4) above under 'Mining Development'. The negative magnetic anomaly, and especially in combination with a positive anomaly on each side, indicates the presence of another fault or fissure zone similar to the "East" vein. The approximate depth of the negative pole causing the disturbance is 73 feet.

The magnetometer used during this examination was a Ruska "Scout" model having an accuracy of 25 gammas per scale division and equipped with compensating magnets to give a maximum range of ±15,000 gammas.

CONCLUSIONS

In summing up the points discussed in this report, the following conclusions are apparent:

1. If the mine is operated on a 3% copper ore basis as per the previous statements discussed under 'The Mine' and 'Mining', it will be marginal. Ore grade and concentrate grade will have to be held to the maximum, and operating costs will have to be watched very closely, if a reasonable profit is to be realized from the venture.

2. Diamond drilling should be carried on in the recommended places to develop as much direct shipping ore as possible. This campaign should also include the development of lowgrade ore for concentration. The extent of this campaign would be dependent upon the results obtained. If the results are negative, it should be continued only to a limited degree.

3. In a mine the size of the Alta, further sampling to try to accurately delineate the ore bodies would be unjustified. The copper ore vein can be plainly seen in the various headings. Close assay control of each mine heading will be necessary. Daily checks are recommended.

4. Concentration testwork on the representative ore should be instituted and carried out immediately to determine the maximum recovery commensurate with highest concentrate grade possible, as well as a recommended flowsheet for efficient treatment of the ore.

5. If the ore will respond to concentration, the mine should be put into a limited production with as small a capital investment as possible. Of course, the amount of this investment is dependent not only upon the present indicated reserves, but upon the amount of ore that might be developed by a limited diamond drilling campaign followed by crosscutting to block out the ore.

In conclusion, I believe that the Alta Copper property is a marginal property even with the present favorable economic conditions for the production of copper. It can be considered a fair gamble, especially if more or richer orebodies were found by a limited diamond drilling and/or development campaign, as specified above. Good management in conjunction with a modicum of luck should show a reasonable return on your investment.

Respectfully submitted,

Jean W. Pressler

Jean W. Pressler
CONSULTING MINERAL ENGINEER

JWP/as

Appendix No. 1

RECEIVED DEC 13 1956 D.M.R.

ASSAY RETURNS

Alta Copper Property
Low Divide District
Del Norte County, Calif.

Sample No.	Percent Analysis Copper*	Description & Remarks
56-71	8.70	Adit Level South, 2nd Raise right, 12" cut right and 24" cut left, partially oxidized with secondary minerals.
56-72	11.45	2nd Level North, 2nd Raise left, 18' above drift bottom, 12" cut left side, primary.
56-73	7.52	2nd Level North, 3rd Raise left, 13' above drift bottom, 14" cut left side, primary.
56-74	6.04	2nd Level North, 2nd Raise left, 40' above drift bottom, subdrift 15' right, 24" cut at face.
56-75	3.28	2nd Level North, Face, 16" cut left side, Primary.
56-76	10.50 ?	2nd Level South, Crosscut intersection, East vein, oxidized with chalcanthite, 2 - 12" cuts. 120' from shaft station.
56-77	8.65 ?	2nd Level South, East Vein, 110' from face, 8' left above drift, 12" cut. Primary.
56-78	0.24	3rd Level North, face, 12" cut. Primary.
56-79	2.05	3rd Level North, 3rd Raise left, 10' above drift bottom, 16" cut. Primary.
56-80	13.80	4th Level North, face, 14" cut. Primary.
56-81	1.68	450 Level North, face, 24" cut. Primary.
56-82	9.75	450 Level North, Drift floor right, 30' from shaft station, 16" cut. Primary.
56-83	4.75	450 Level South, face, 12" cut. Primary.
56-84	3.25	5th Level, back of station, south extension of vein from shaft, 12" cut. Primary.
56-85	2.30	5th Level North, face, 12" cut. Primary.
56-86	2.88	5th Level North, bottom of drift right, 6' past ore pocket, 12" cut. Primary.
56-87	1.18	5th Level South, east vein intersection, 6' from face, 10" cut. Primary.
56-88	9.20	Higrade stockpile on surface, mined in 1952. Slacked and partially leached.

* Assays performed by: Mr. Peter Mack, P. O. Box 608, Wallace, Idaho, Registered Assayer and Chemist. Date Performed: October 30, 1956.

Copy

Recd DEC 18 1956 DMEA

L E A S E

THIS LEASE, made and executed in duplicate as of the 11th day of Sept. , 1956, by and between OLEN LOGHRY and DELORES LOGHRY, husband and wife, LESTER D. HOBSON and PHYLLIS H. HOBSON, husband and wife, ALBERT WARMUS, and ALVIN W. HEGEWALD and CLAIRE E. HEGEWALD, husband and wife, hereinafter referred to as LESSOR, and HAMILTON BROS. LUMBER COMPANY, a corporation, hereinafter referred to as LESSEE.

W I T N E S S E T H:

NOW, THEREFORE, in consideration of the mutual agreements hereinafter set forth and of the performance of the Terms, Covenants and Conditions hereof, the Lessor does hereby lease and demise unto the Lessee the following described mining property situated in the County of Del Norte, State of California, to wit:

> Those two mining claims known as the West Alta Extension No. 1 and West Alta Extension No. 2, adjacent to Lot 38, Township 18 North, Range 1 East, H.M.;
>
> That certain property known as "The Alta, California, Copper Mine", as the same appears of record in the office of the County Recorder of said County, and more particularly described as:
>
> Lot 38 in Section 35, Township 18 North, Range 1 East, H.M., Containing 74.36 acres, more or less, and being the same property as is described in that certain United States Patent issued to The Alta, California, Copper Mining Co, recorded in Book 2B at Page 732, in the Deed Records of said County and State.

TO HAVE AND TO HOLD the demised premises for the purposes of mining, removing and selling any and all minerals and/or ores thereon or therein for the term hereinafter set forth, unless sooner forfeited or terminated in accordance with the terms hereof.

TERMS, COVENANTS AND CONDITIONS

This Agreement is subject to the following Terms, Covenants and Conditions:

1. RENTAL: Lessee agrees to pay Lessor as rental for the above described premises a royalty equal to 10% of the gross sales

receipts from the sale of minerals or ore from subject premises after deducting therefrom all charges for transportation and freight to the smelter; and all charges for refining and smelting, which said royalty shall be payable not later than the 15th day of the month following receipt of sales price from the smelter. Charges for transportation of minerals or ore, if transported by Lessee's own trucks, shall not exceed the rate of any other reliable trucking operator.

Provided that when the Lessee has earned from the operation of the mine a net profit, after provision for income taxes, a sum equal to the total amount of capital invested or expended by Lessee on improvements to the demised premises and/or purchase of equipment and machinery, such sum not to exceed $150,000.00, the percentage of royalty above set forth shall increase to 15% for the next and remaining calendar years in which this Lease is in effect.

2. MINING OPERATION: Lessee agrees to invest such sums in the operation of said mining property as may be required to develop the property and permit production of ore on a commercial basis and that the failure of the Lessee to obtain production of ore on a regular one-shift basis prior to three years from the date hereof shall operate as a forfeiture and cancellation of this Lease pursuant and subject to the terms of Paragraph 14 hereinafter set forth.

Lessee agrees that mining will be conducted in a manner consistent with sound and economical mining practices so as to take out the greatest amount of ore or minerals possible consistent with safety, preservation of the property as a workable mine, and its efficient operation.

Lessee agrees to keep the timbering of the workings at all times in good, safe, and serviceable condition, all in accordance with sound mining practices.

Lessee agrees to keep at all times all drifts, tunnels, shafts, winzes, and other workings in the premises in a reasonably safe and secure condition, unless prevented by extraordinary mining casualty.

After the expiration of three years from the date hereof, lessee shall mine the property leased hereby on a regular one-shift basis for not less than six months of each succeeding year of this Lease, except during such years as market and general economic conditions make it possible for Lessee to operate the mine for a full six-month period without sustaining a net operating loss as determined by sound accounting principles.

Lessee shall have the right to discontinue mining operations at any time in its discretion; however, in the event of discontinuance of operations for more than six months in any one year following the expiration of three years from the date hereof when Lessee could have operated for the full six-month period without a net operating loss, the Lessee shall pay minimum royalties for such year of $3,000.00.

3. BOOKS, RECORDS AND REPORTS: Lessee agrees to keep appropriate written records of the mining operations conducted hereunder in accordance with sound accounting practices as a separate division of Lessee's business and to make such books and records available for inspection by Lessor or its authorized representative at reasonable times and places upon request. Lessee further agrees to furnish Lessor regular monthly reports showing the total amount of minerals or ores mined and shipped or transported from the leased premises and regular monthly reports of all smelter receipts.

4. TERM OF LEASE AND RENEWAL: This lease shall be for a term of ten years commencing with the date hereof and Lessee shall have an option to renew for a period of ten years on the same Terms, Covenants and Conditions, which said option shall be exercised by giving written notice of election to exercise option of renewal to

Lessor not later than six months prior to the expiration hereof.

5. TITLE: Lessor represents and covenants that they have a good and sufficient title to the leased premises free and clear of all liens and encumbrances and agrees to warrant and defend such title against the claims of all persons or parties whomsoever.

6. TAXES: Lessee agrees to pay all taxes which may be assessed against the property or the minerals or ores produced therefrom during the term hereof.

7. LIENS: Lessee agrees to keep the premises and every part thereof at all times free and clear of all mechanics' or miners' liens or other liens, encumbrances, or liabilities; to settle, pay, and discharge on or before the 15th day of each calendar month, all indebtedness and liabilities incurred by the Lessee prior to the expiration of the preceding calendar month for work done, services rendered, or material furnished in respect of the premises, and to forthwith post, and at all times keep posted, in some conspicuous place on the premises hereby leased a notice that said premises are leased to the Lessee and that the interest of the Lessor therein shall not be subject to any lien for services, labor or material furnished on or used in connection with this lease, or said leased premises, the notice to be on behalf and in the name of the Lessor with the signature of the Lessee also attached.

8. COMPLIANCE WITH STATE AND FEDERAL LAW: Lessee agrees to comply with all state and federal laws applicable to the mining operations conducted on subject demised premises.

9. INSURANCE: Lessee agrees to keep the improvements, machinery and equipment on subject premises insured against loss by fire in a reasonable amount and form satisfactory to Lessor.

10. MACHINERY AND EQUIPMENT: Lessor agrees that all machinery and equipment now on or in the demised premises shall be leased hereby subject to the terms hereof without additional rental and Lessee agrees to surrender up such machinery and equipment at the

expiration hereof in as good condition as it now is, reasonable wear and tear, depreciation and acts of God excepted.

Provided that at the termination hereof, Lessee is not in default in any of the Terms, Covenants or Conditions hereof, Lessee shall have a right within 90 days following the date of expiration to enter the demised premises and remove any machinery and equipment and improvements placed by it on the demised premises.

11. DISCOVERY OF ADITIONAL ORE: Lessee furthermore agrees that if he shall discover, in working the premises, any side veins, cross veins, spurs, or feeders he shall at once notify the Lessor and said side veins, cross veins, spurs, or feeders shall be and remain the property of the Lessor, but they shall be included in this Lease.

12. INDEMNITY: Lessee agrees to indemnify and save harmless Lessor from all loss, liability or damage arising or accruing to Lessor as a result of the operation of the Lessee hereunder.

13. ASSIGNMENT: This Lease is assignable by either party hereto, provided, however, that any assignment shall not relieve the assigning party from liability for performance on his or its part of the Terms, Covenants and Conditions required of him or it hereunder.

14. DEFAULT: Lessee does hereby covenant and agree that in the event of its failure to perform any of the Terms, Covenants or Conditions hereof, and of its failure to correct such default within 30 days from the date of receipt of written notice from Lessor of such default, this Lease shall cease and terminate and it shall be lawful for the Lessor or its duly authorized representatives to declare this Lease void and of no effect and with or without process of law, and without notice to the Lessee to enter on and take possession of the premises and dispossess all persons occupying it.

Provided, however, that any default resulting from strikes, acts of God or other conditions beyond the reasonable control of

Lessee shall not be the basis for a forfeiture hereunder so long as such strike, act of God or condition shall continue rendering performance by the Lessee reasonably impossible.

15. GOVERNMENT BENEFITS OR SUBSIDIES: It is understood that Lessee may apply for Federal and/or State Benefits and subsidies for development and exploration work to be conducted on the demised premises and that the Lessor hereby consents to such application and receipt of any of such benefits and will negotiate any reasonable modifications of the Terms, Covenants and Conditions hereof as may be determined by the appropriate governmental body having jurisdiction in the premises to be necessary in order to qualify for such benefits or subsidies, excepting only the Terms, Covenants and Conditions with respect to the royalty to be paid Lessor and the term herefor.

It is further understood and agreed that the lien of the Government for such benefits as may be granted the parties hereto shall be prior to any other lien which may exist against the demised premises at the time hereof or attach to said premises hereafter.

Time is of the essence of this Lease in all particulars.

IN WITNESS WHEREOF, the parties have caused these premises to be executed in duplicate as of the day and year first above written.

Owen Loghry
OWEN LOGHRY

Dolores Loghry
DELORES LOGHRY

Lesters D. Hobson
LESTER D. HOBSON

Phyllis H. Hobson
PHYLLIS H. HOBSON

Albert Warmus
ALBERT WARMUS

Alvin W. Hegewald
ALVIN W. HEGEWALD

Claire E. Hegewald
CLAIRE E. HEGEWALD

Lessors

HAMILTON BROS. LUMBER COMPANY

By E.P. Hamilton
Vice Pres.
Lessee

STATE OF CALIFORNIA)
) ss
County of Del Norte)

On this 9th day of October, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared OWEN LOGHRY and DELORES LOGHRY, husband and wife, known to me to be the individuals described in and who executed the foregoing instrument, and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal this, the day and year in this instrument first written.

John Hoffelner
Notary Public for California

My Commission Expires: May 28, 1960

STATE OF CALIFORNIA)
) ss
County of Del Norte)

On this 18th day of September, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared LESTER D. HOBSON and PHYLLIS M. HOBSON, husband and wife, known to me to be the individuals described in and who executed the foregoing instrument, and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal this, the day and year in this instrument first written.

John Hoffelner
Notary Public for California

My Commission Expires: May 28, 1960

STATE OF CALIFORNIA)
) ss
County of Del Norte)

On this 18th day of September, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared ALBERT WARMUS, known to me to be the individual described in and who executed the foregoing instrument, and acknowledged to me that he executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal this, the day and year in this instrument first written.

John Hoffelner
Notary Public for California

My Commission Expires: May 28, 1960

STATE OF CALIFORNIA)
) ss
County of Del Norte)

On this 17th day of September, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared ALVIN W. REGENALD, known to me to be the individual described in and who executed the foregoing instrument, and acknowledged to me that he executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal this, the day and year in this instrument first written.

JOHN HOFFELNER
Notary Public for California
My Commission Expires: 5/28/1960

STATE OF WASHINGTON)
) ss
County of Pierce)

On this 11th day of September, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared CLAIRE E. REGENALD, known to me to be the individual described in and who executed the foregoing instrument, and acknowledged to me that she executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal this, the day and year in this instrument first written.

Shennified M. Brecht
Notary Public for Washington
My Commission Expires: August 13,1958

STATE OF CALIFORNIA)
) ss
County of Del Norte)

On this 18th day of September, 1956, before me, the undersigned, appeared E. P. Hamilton, to me personally known, who being duly sworn did say that he, the said E. P. Hamilton is the Vice President of HAMILTON BROS. LUMBER COMPANY, the within name Corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that the said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors, and said E. P. Hamilton acknowledged said instrument to be the free act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal this, the day and year in this, my certificate, written.

John Hoffelner
Notary Public for California
My Commission Expires: May 28, 1960

Recorded at Request of
John Hoffelner
Oct 15 1956
At 10:31 AM
Vol. O. R. 24 Page 49
Del Norte County, California
Jacqueline Childs, Recorder
By Thelma Blair
Fee 7.60 Deputy Recorder

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
4/16	Klugescheid	500
	[illegible]	500
4/17	Selfridge	130
"	[illegible]	110
"	Mittendorf	104
		225

Kilsgaard
Lamb

APR 17 1957

Mr. E. P. Hamilton, Vice President
and General Manager
Hamilton Bros. Lumber Company
Post Office Box 351
Gasquet, California

Re: Docket No. DMEA-4570 (Copper)
Hamilton Bros. Lumber Company
The Alta Calif. Copper Mine
Del Norte County, California

Dear Mr. Hamilton:

Your application for aid for an exploration project and other data available to us in Washington concerning the above-named 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 for the National Defense Program.

Careful study of all our information, although noting a small amount of ore on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Mineral Program and for bringing your property to our attention.

Sincerely yours,

C. O. Hittendorf (for)

Administrator

WPKlugescheid/er 4/16/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region II (2)
Chron.

8623

DMEA Form 7
(12-56)

500

OFFICIAL FILE COPY

Date	Surname	Code
4/16	Klugescheid	500.

April 16, 1957

Memorandum

To: The Administrator

From: Base Metals Division

Subject: Denial of Application, Docket No. DMEA-4570, Hamilton Bros. Lumber Company, Alta Calif. Copper Mine, Del Norte County, California, Copper.

The cited application, dated December 6, 1956, was received by this office on December 14.

The Applicant proposed to explore the property by means of 1,200 feet of drifting and crosscutting, on various levels, 200 feet of rehabilitation, and 1,400 feet of diamond drilling. A large part of the proposed work would have to be classified as development work preparatory to mining operations. Only about 200 feet of drifting on the two lowest levels could be classified as exploration. The estimated cost of the work was $57,048.00. The samples taken by the Applicant's engineer were not very instructive and were taken in 12 inch to 16 inch cuts. Property maps have never been submitted although several letters were written requesting them.

The property was examined and sampled by R. G. Reeves, Geological Survey, and H. W. Jones, Bureau of Mines, on February 26 and 27, 1957. The examiners state: "Three parallel veins ranging from a few inches to three feet in width, contained several small lenses of secondary enriched copper ores in the upper levels. The primary ores in the lower levels were too low grade to mine."

The history and examination of the property indicate that the production has been meager compared to the amount of exploration and development done to date.

8623

ORE RESERVES

Area	Inferred	Per Cent Copper
West vein, upper	400	1.20
West vein, lower	600	2.52
East vein	1,700	1.43
Totals	2,700	1.65 (weighted average)

The examination did not confirm the tonnage estimate of 8,000 tons by the Applicant's consulting engineer, and sampling failed to indicate a grade of 3 per cent copper.

There are no known features that favor the existence of other ore shoots along the strike of the veins and even if found, they would be too small to justify the cost of the proposed exploration.

The examiners recommend that the application be denied in which the Field Team concurs.

We concur with the recommendations of the Field Team, the commodity members of the Geological Survey, and the Bureau of Mines, that the application be denied.

W. R. Griswold

W. R. Griswold

WPKlugescheid/er
Copy to: Docket
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION 500
WASHINGTON 25, D. C.

April 16, 1957

Memorandum

To: The Administrator

From: Base Metals Division

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The examiners recommend that the application be denied in which the Field Team concurs.

We concur with the recommendations of the Field Team, the commodity members of the Geological Survey, and the Bureau of Mines, that the application be denied.

W. R. Griswold

W. R. Griswold

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION 500
WASHINGTON 25, D. C.

April 16, 1957

Memorandum

To: The Administrator

From: Base Metals Division

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W. R. Griswold

W. R. Griswold

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

April 9, 1957

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Application Report, Docket No. DMEA 4570 (copper) Hamilton Brothers Lumber Company, Alta California Copper Mine, Del Norte County, California. $57,048.00

The field examination of this property revealed that there is little probability of making a significant discovery by the exploration program proposed by the applicant. Accordingly, the examiners recommended that the exploration application be denied.

I concur in their recommendation.

A. D. McMahon

A. D. McMahon

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

OFFICIAL FILE COPY
DMEA
RECEIVED APR 10 1957

DATE	INITIALS	CODE
4/10	JWG	220
		500

IN REPLY REFER TO:

OFFICIAL FILE COPY
D MDEA
RECEIVED APR 5 1957

DATE	INITIALS	CODE
4/5	C	220
4/5	Klag.	500
✓		

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

April 4, 1957
Re: DMEA 4570
Hamilton Bros. Lumber Co.
Alta Calif. Copper Mine
Del Norte County, Calif.
$57,048 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

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

Subject: Review of Field Team Report

The applicant requested assistance in reopening an old mine and exploring the narrow veins for other ore shoots. Good grade 'oxide' ore in small amounts was mined in the upper levels many years ago. The good near surface ore appears to have been mined out leaving only the sulfide ore of the lower levels.

The examiners estimate the inferred reserves as,

2,700 tons at 1.65% Cu.

and consider the probability of finding enough other ore too remote to warrant the proposed extensive work program. With the Field Team the examiners recommend that the application be denied.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

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

March 27, 1957

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DMEA
RECEIVED MAR 28 1957

DATE	INITIALS	CODE
3/29	C	220
		130
4/4	C	220
4/4	Klug	500

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4570 (Copper)
Hamilton Bros. Lumber Company
The Alta California Copper Mine
Del Norte County, California

Supplementary to our letter of March 22, 1957, we are enclosing four copies of a report on subject property by H. W. Jones, Bureau of Mines, and R. G. Reeves, Geological Survey.

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

(for) S. Ricker

Encls.

Reviewed by
DMEA OPERATING COMMITTEE
4-3-57
(date)

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DMEA
RECEIVED MAR 28 1957

DATE	INITIALS	CODE
		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-4570 (Copper)
Hamilton Bros. Lumber Company
Alta Calif. copper mine
Del Norte County, California

ON-SITE Report

by

H. W. Jones
U. S. Bureau of Mines

R. G. Reeves
U. S. Geological Survey

March 22, 1957

Reviewed by
DMEA OPERATING COMMITTEE
4-3-57
(date)

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ILLUSTRATIONS

Figure 1	Index map
2	Surface map
3	Composite plan and sections

INTRODUCTION

The Hamilton Bros. Lumber Company, P. O. Box 627, Crescent City, California, applied for Government assistance in a program under the Defense Minerals Exploration Administration, Docket DMEA-4570, to explore for copper at the Alta California Copper Mine, Low Divide mining district, Del Norte County, California.

A field examination was made February 26 and 27, 1957, by Henry W. Jones, U. S. Bureau of Mines, and R. G. Reeves, U. S. Geological Survey, while in the vicinity visiting nearby DMEA projects. The team was accompanied by E. P. Hamilton and Jean W. Pressler, consulting mineral engineer, representing the Applicant.

The Applicant proposed 1,050 feet of drifting, 150 feet of crosscutting, and 1,400 feet of diamond drilling from the five levels of the mine.

Total cost of program was estimated to be $57,048.00.

CONCLUSIONS AND RECOMMENDATIONS

Three parallel veins ranging from a few inches to three feet in width, contained several small lenses of secondary enriched copper ores in the upper levels. The primary ores in the lower levels were too low grade to mine. The high grade ore has long since been mined.

The history and examination of the property indicate that the production has been meager in proportion to exploration and development work done to date. There are no known features that favor the existence of other ore shoots along the strike of the veins and, even if found, they would be too small to justify the cost of the proposed exploration. In addition, a great part of the proposed work could be classified as development and not conformable to DMEA practice.

It is recommended the exploration application be denied.

LOCATION, ACCESSIBILITY, LOCAL RESOURCES

The Alta California Copper Mine is in the southwest corner of Sec. 35, T. 18 N., R. 1 E., Humboldt Meridian, Low Divide mining district, Del Norte County, California, at an altitude of about 1,650 feet (Fig. 1).

The property is reached from Crescent City, California, by traveling north for 14 miles along U. S. Highway 101 to the town of Smith River, then east on county road up Rowdy Creek, 8-1/2 miles to the Low Divide. Take the middle road that bears south, one-half mile to the mine shaft. The traveled county road is accessible to travel throughout the year, although heavy rainfall makes travel somewhat hazardous during winter months. Annual precipitation averages sixty inches per year, mostly as rain.

A bunk house, capable of housing six men, is on the property. Water can be obtained from many nearby creeks and springs. All supplies, materials and equipment can be obtained at nearby Crescent City or at Grants Pass, Oregon, 87 miles northeast of Crescent City. The nearest rail shipping point is also at Grants Pass.

HISTORY

The Alta Copper property was discovered in 1853. Between 1860 and 1867 an inclined shaft, 455 feet deep, was developed and 1,000 feet of drifts on five levels extended from it. About 2,000 tons of high-grade ore was mined and shipped to Swansea, Wales, during that period. Later the shaft timbers and head frame burned and the shaft caved. A brief and unsuccessful attempt was made to reopen the workings in 1907 by the Union Copper Company.

The property was purchased in May 1951 by John I. Noce. He and his partners rehabilitated the shaft, installed loading pockets, and reopened most of the levels. Some ore was mined and stockpiled on the dump, but none is known to have been shipped.

The property was leased to the applicant in September 1956.

PROPERTY AND OWNERSHIP

The property consists of patented Lot 38 of 74.36 acres, and the unpatented West Alta Extension No. 1 and No. 2. The Alta workings are all within Lot 38. Lot 38 is recorded in Book 2B, page 732, Deed Records of Del Norte County, Crescent City, California. The book and page numbers of the unpatented claims were not included in the application. The owners are listed as Owen Loghry and Delores Loghry, Lester D. Hobson and Phyllis H. Hobson, Albert Warmus, and Alvin Hegewald and Claire E. Hegewald.

GEOLOGY

The Alta Calif. mine is in an area of moderate relief on the Low Divide between Hardscrabble Creek to the south and Copper Creek to the north. The mine is about one and one-half miles east of the western edge of the great Josephine peridotite body that extends from a point east of Crescent City northward about 70 miles[1/]. The

---

1/ Wells, F. G., Cater, F. W., Jr., and Rynearson, G. A., 1946, Chromite deposits of Del Norte County, California: Calif. Div. of Mines Bull. 134, Part 1, Chapter 1, pp. 5-10.

peridotite is classified into two species; dunite, containing over 95 percent olivine; and saxonite, containing less than 95 percent olivine, and the remainder mainly pyroxene.

The peridotite body is bordered on the west, opposite the Alta Calif. mine, by Galice formation of Jurassic age.

At the Alta Calif. mine the peridotite consists mainly of saxonite, although small masses of dunite were observed. The peridotite is fractured and altered to serpentine along and adjacent to the fractures. The fractures consist of closely spaced joints trending easterly and dipping steeply northerly, some with minor movement, and faults.

ORE DEPOSITS

Copper ore bodies occur along north-trending mineralized faults, locally called veins, in the peridotite. Two veins, the East (?) and West, are known at the surface (fig. 2); a third vein that is cut on the second level is here called the Center vein (fig. 3).

The mineralized fault zones strike from north to about 15 degrees west of north, and dip from 55 degrees to 70 degrees east. They range from a few inches to a maximum of three feet in width. Very little gangue material has been introduced along with the copper; most of the gangue is alteration products of the peridotite: magnesite, serpentine, minor amounts of calcite, and some clay minerals.

The primary ore minerals are chalcopyrite and pyrite. In the uppermost levels chalcopyrite has been oxidized to malachite, chrysocolla, azurite, and chalcanthite; and most of the pyrite has been oxidized to limonite. Some chalcocite remains on the second and third levels, and much of the higher grade ore mined (reported from old records to average 15 to 18 percent Cu) may have been chalcocite. None of the ore below those levels contains that much copper.

Two apparently separate ore bodies were mined; an Upper ore body above the first level south of the shaft, and a Lower ore body extending from the fourth level to 30 feet above the second level, north of the shaft (fig. 3). The Upper ore body, which was about 100 feet long, 50 feet high, and averaged 1-1/2 feet thick, contained an estimated 650 tons of ore reported to have contained from 15 to 18 percent Cu. The Lower ore body, 125 feet long, 150 feet high, and 1-1/2 feet thick, contained an estimated 1,500 tons of ore reported to have contained 15 to 18 percent Cu.

SAMPLING

Ten samples were taken to determine the approximate grade of material exposed in the mine levels and to substantiate assays submitted by the applicant.

A few specimens from the vicinity indicated cobalt mineralization. Accordingly, a composite was made of the samples to test this possibility. Results are as follows:

Sample No	Width, feet	Percent Cu	Percent Co	Description
412	1.6	15.2		Outcrop above glory hole, mined below, gossan, azurite, and malachite.
413	1.45	1.20		West vein, adit level south first chute right of shaft, oxidized.
414	1.2	2.62		East vein, south face, 200 level, pinches to north, mostly malachite in gossan.
415	1.5	0.48		East vein, north face, 200 level, generally serpentine.
416	1.75	3.87		West vein raise, up 45 ft., 200 level north, slightly oxidized, some sulfides.
417	1.6	0.12		West vein, north drift, 300 level, 40 ft. back front face, serpentine, some copper mineralization.
418	2.35	6.93	0.05	West vein, face 400 level north, pyrite and chalcopyrite lens in serpentine.
419	1.25	0.10		West vein, face 400 level south, serpentine.
420	1.25	2.27		West vein, face 450 level south, serpentine. Some copper mineralization indicated.
421	4.0	0.98		West vein, face 450 level north, occasional pyrite in serpentine.

A composite sample indicated 0.01 percent cobalt, 0.02 oz./ton gold, and 0.10 oz./ton silver.

ORE RESERVES

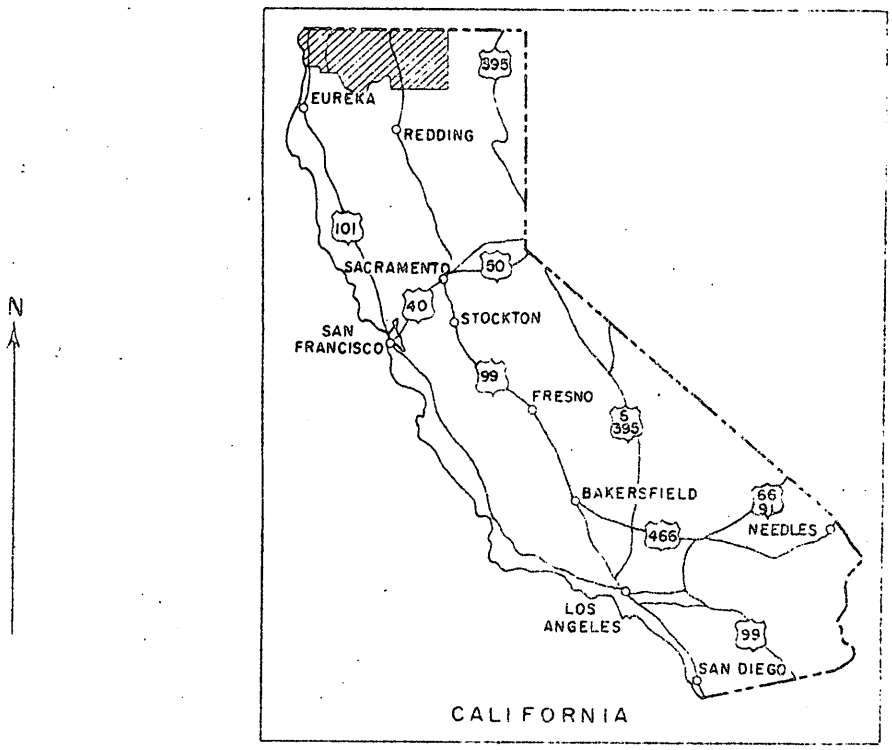
Area	Measured	Indicated	Inferred	Percent Cu
West vein, Upper	None	None	400	1.20
West vein, Lower	None	None	600	2.52
East vein	None	None	1,700	1.43
Totals:	None	None	2,700	1.65 (weighted average)

The mine contains no measured or indicated reserves. About 400 tons of 1.20 percent Cu ore are inferred around the edges but mainly south of the upper ore body, and about 600 tons of 2.52 percent Cu ore are inferred around the edge of the lower ore body. The East vein is inferred to contain 1,700 tons of 1.43 percent Cu ore in a

block 100 feet long, 100 feet high, and 2 feet thick, and north of its exposure on the second level, and extending 50 feet above and below the level.

The examination does not confirm the tonnage estimate of the Applicant's consulting engineer, and sampling fails to indicate a grade of 3 percent Cu.

The small amount of ore remaining in the present workings and the small size of a potential target north of the present workings does not justify the expenditure required to do the amount of exploration outlined by the Applicant or even the amount remaining if development type work is omitted.



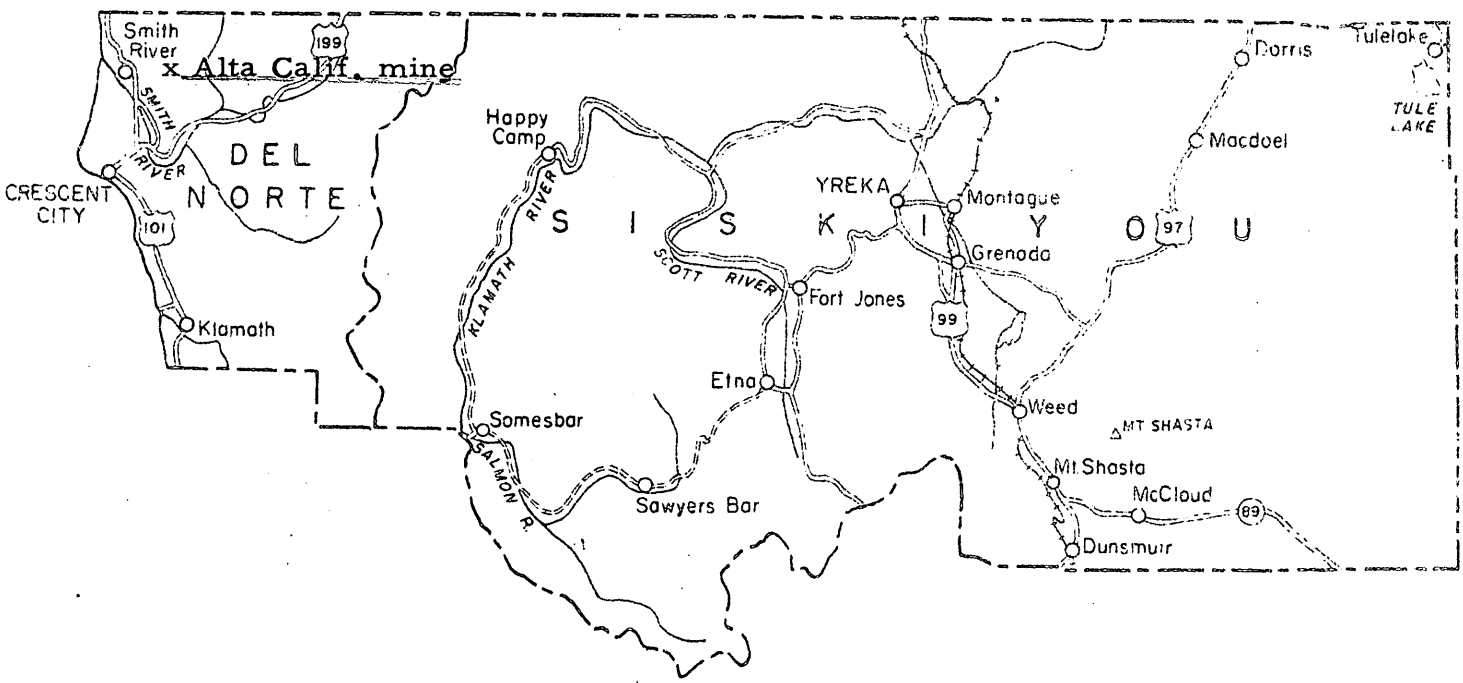


Figure 1. INDEX MAP OF DEL NORTE AND SISKIYOU COUNTIES, CALIFORNIA

0 20 40 60 Miles

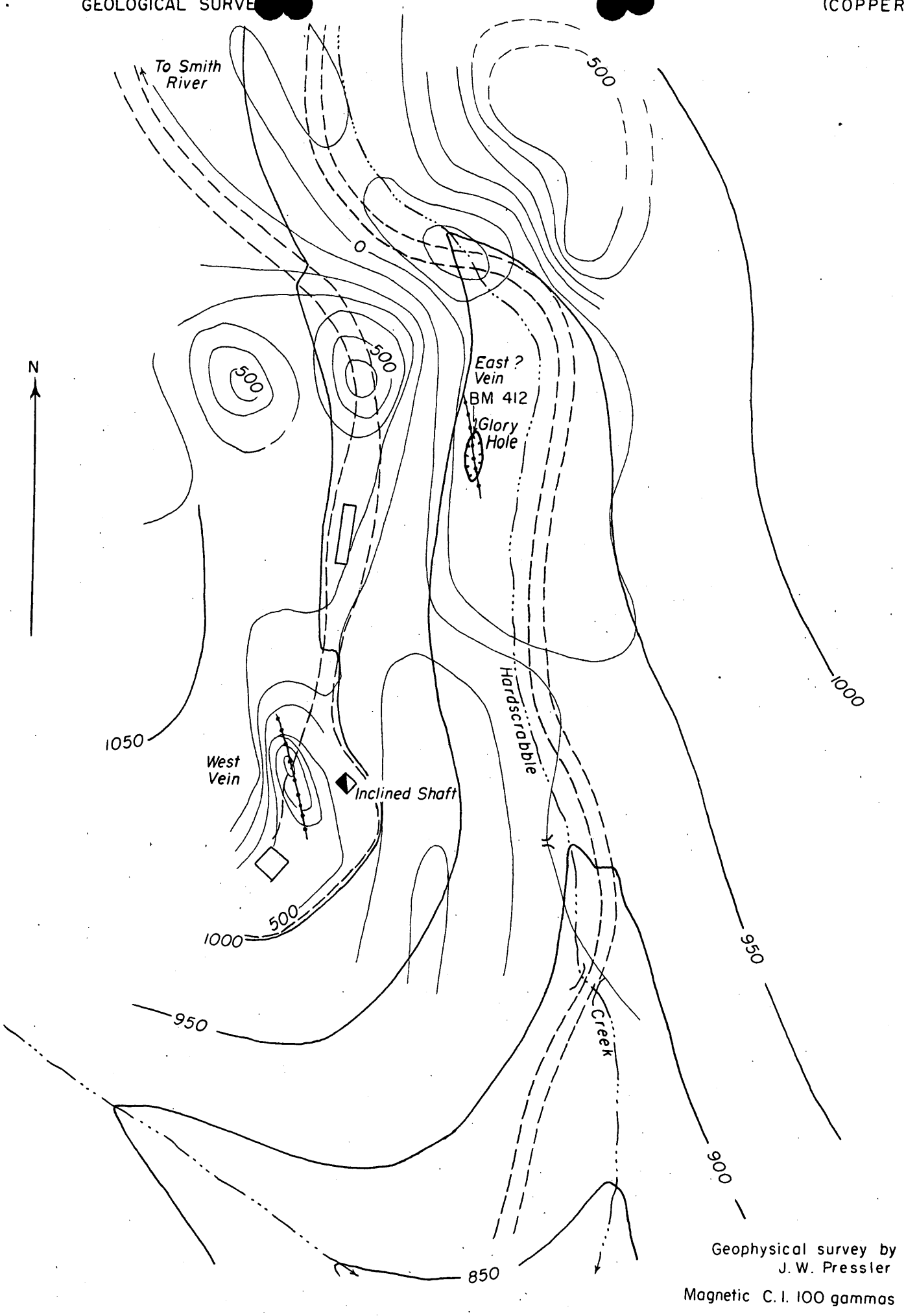


Figure 2. ALTA CALIF. COPPER MINE, DEL NORTE COUNTY, CALIFORNIA

0 100 200 300 Feet

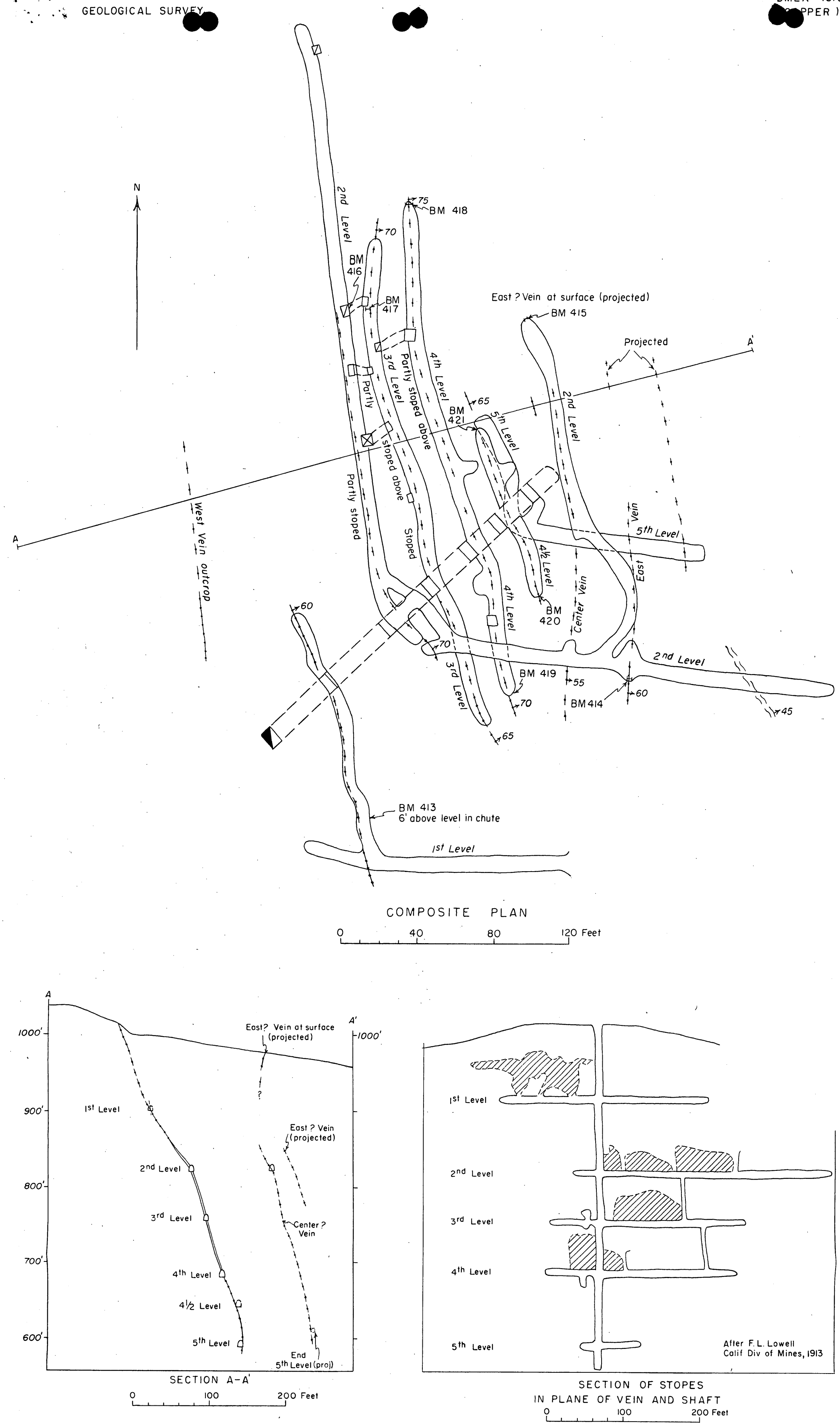


Figure 3. ALTA CALIF COPPER MINE, DEL NORTE COUNTY, CALIFORNIA

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

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DMEA
RECEIVED 1957

DATE		CODE
3/26	C	220
3/26	WPK	500

March 22, 1957

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4570 (Copper)
Hamilton Bros. Lumber Company
The Alta California Copper Mine
Del Norte County, California

Reference is made to your letter of March 4, 1957 relating to subject docket.

We have delayed our reply until receipt of assay results taken by our examining engineers. It so happened that we had an engineer and geologist available and that during the winter months we must use them when we have local spots that are temporarily accessible. This procedure is one we commonly use to distribute our work load more evenly and make a field examination in anticipation of a referral.

We agree that all points brought out in your letter to the Applicant were pertinent but believe that it may have been better, in order not to confuse the Applicant, to have had some of this called to our attention in your referral letter instead of to the attention of the Applicant. Your suggestions to us in your referral letters are always appreciated.

We are going to recommend a denial of DMEA exploration aid in this case. I would suggest that your referral be held in abeyance and further correspondence with the Applicant be delayed until you receive our report on the property.

S. Ricker

DME Form 7
(12-56)

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Date	Surname	Code
2/28	Hugoeckel	500
	[illegible]	500
3/1	Selfridge	130
"	Johnson	110
3/4	Mattendon	100
3/5	C	220
		500

500

MAR -4 1957

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

Re: Docket No. DMEA-4570 (Copper)
Hamilton Brothers Lumber Company
The Alta Calif. Copper Mine
Del Norte County, California

Dear Mr. Ricker:

We refer to our* letters to the Applicant, dated December 28, 1956, and February 7, 1957, and your letter, dated February 14, 1957.

It is the policy of DMEA to refer to the field only such applications in which we have received more or less complete information, and in which a real exploration project has been proposed. At times, when an applicant is obviously unequipped by education to plan a project and also lacks the means or know-how to employ a consultant, we make an exception and refer his application to the field. In this case, the Applicant is certainly able financially to employ a consultant and has done so, and could have submitted a better program. At least, after receiving our letter of December 28, 1956, Mr. Hamilton would have known more or less what we require and with the help of the consultant the necessary information could have been supplied.

We do not think that our letter was unduly severe and much of it was designed to outline necessary procedures.

We now refer to our letter of December 28, 1956, to Mr. Hamilton. The principal points, with our comments, are as follows:

(1) Certainly it was not unfair to request a property map when none was enclosed with the application.

(2) No data was given about the two mining claims.

*Mr. Griswold's

8623

(3) None of the proposed exploration work has been indicated on the map of the workings. This would have been of great help to us.

(4) The information requested in this paragraph is standard for all our projects and is not out of line.

(5) This is merely information to guide the Applicant in preparing costs for a unit cost contract.

(6) This is merely an explanation of how equipment should be depreciated in an estimate of costs.

(7) An assay laboratory is not warranted in a project of this size and would be primarily for the purpose of production.

(8) This is self-explanatory.

(9) Extension of the Adit level to the north is stated in the report of Mr. Pressler to be for the purpose of setting up sub-level mining between the Adit and the 2nd levels. The extension of the 450 and 500 levels south surely would not both be for exploration purposes. The exploratory drift between the Adit level to the north and the 2nd level, and the one between the 2nd level north and the 3rd level north would also appear to be for mining purposes.

(11) As you know, DMEA does not wish to become involved in the purchase of equipment except on the basis of sharing in the depreciation of said equipment. We were merely trying to point out to the Applicant what to expect in this item.

As we do not know what you and Mr. Hamilton discussed, we are somewhat at a loss as to what to do. If you have agreed that a field examination should be made, please advise us to this effect and we will refer the application to your office at once.

In any case, we do not feel that requesting a property map and the indication of the proposed program on the map of the workings was unreasonable and should have been complied with.

We will hold the application in abeyance until we hear from you further.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GB)

WPKlugescheid/er 2/28/57

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

Frank D. Lamb (GB)

Member, Bureau of Mines

N. E. Nelson (GB)

Member, Geological Survey

PHONE 3401

TWX 1243

HAMILTON BROS. LUMBER COMPANY

P. O. Box 627

CRESCENT CITY, CALIFORNIA

REDWOOD & FIR
GREEN - DRY
ROUGH - SURFACED

LOGGING CONTRACTORS
SAWMILL OPERATORS
PLANING MILL OPER.

February 19, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 25 1957

DATE	INITIALS	CODE
2/26	C	220
2/26	[illegible]	500

United States Dept. of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Atten: Mr. W. R. Griswold
Re: Docket No. DEMA 4570

Dear Sir:

I recently returned from my vacation trip and found your two letters of December 28, 1956 and February 7, 1957 awaiting me.

It will be a week or ten days before I can have a property map made and give you the additional information you requested in your letter of December 28th.

We are still definately interested in going ahead with the project. In the future please send all correspondence to me in care of Hamilton Bros. Lumber Company, P.O. Box 627, Crescent City, California. The Gasquet address is my personal address and the mail is held there during my absence. If mail is sent to the Company address it is taken care of immediately by one of my brothers if I am away at the time.

Sorry for this delay in answering your requests.

Hamilton Bros. Lumber Co.

E. P. Hamilton

By: E. P. Hamilton

egh/eph

DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 18 1957

DATE	INITIALS	CODE
2-19	C	220
		130
2-21	Klog	500

1605 Evans Avenue
Reno, Nevada

February 14, 1957

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4570 (Copper)
Hamilton Bros. Lumber Company
The Alta Calif. Copper Mine
Del Norte County, California

Reference is made to your letter of December 28, 1956 and February 7, 1957 to the applicant relating to subject docket.

Mr. Hamilton had visited this office previous to forwarding his application and we endeavored to give him information that would be required in order to justify a field examination. Upon his return from Honolulu on January 29 he telephoned from Gasquet and appeared to be quite annoyed with your letter of December 28. He seemed to think that muc h of the information required was premature until a field examination was made and the probability of a loan may be in the offing.

At the time of receipt of our copy of your letter to Mr. Hamilton it occurred to us that it was much more critical than usual and could cause antagonism and lack of interest in the DMEA program among applicants who do not have a mining staff to prepare their applications. Many of the points in question are always discussed and mutually resolved by our field engineers and the applicant. Very few questions have any relationship to the merit of the property as a possible DMEA project and seem to be irrelevant until a field examination is made.

Last sentence in the next to the last paragraph of your letter would appear to confirm these impressions. A lot of questions are asked and then the applicant is advised that most of them can be worked out with the Field Team.

It was our opinion that the applicant had furnished much more data than that contained in many of the applications that have been referred to us and that a field examination was possibly in order.

S. Ricker

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
	Klugescheid	
2/6	Bonner	110
2/7	Whitaker	100
2/8	C	

FEB 7 1957

Mr. E. P. Hamilton, Vice President
and General Manager
Hamilton Bros. Lumber Company
Post Office Box 351
Gasquet, California

Re: Docket No. DMEA-4570 (Copper)
Hamilton Bros. Lumber Company
The Alta Calif. Copper Mine
Del Norte County, California

Dear Mr. Hamilton:

On December 28, 1956, we wrote to you with reference to your application for aid in the cited exploration project. We advised you that further information was necessary before we could proceed with your application.

To date we have had no reply to our letter. Kindly advise us if you are still interested in the project, and if so, when we may expect the data requested.

Sincerely yours,

W. R. Griswold

W. R. Griswold, Chief,
Base Metals Division

WPKlugescheid/er 2/6/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region II (2)
Chron.

8623

File Copy
Surname
Klugescheid
Montgomery

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

DEC 28 1956

Mr. E. P. Hamilton, Vice Pres.
and General Manager
Hamilton Bros. Lumber Company
Post Office Box 351
Gasquet, California

Re: Docket No. DMEA-4570 (Copper)
Hamilton Bros. Lumber Company
The Alta Calif. Copper Mine
Del Norte County, California

Dear Mr. Hamilton:

We have received your application for aid in an exploration project in Del Norte County, California. Before we can proceed with your application, you should provide us with certain additional information. We also wish to clarify some points which do not seem to be understood.

(1) We received a map of the mine workings, but there was no property map of any sort. We require a map which shows the workings as well as the property lines. It is imperative that we know the relationship between the workings and the property lines.

(2) You must state whether the two mine claims given in the lease agreement are patented or not, and also where they are recorded, giving book and page number.

(3) All proposed exploration work should be plotted on the map of the workings, such as drifting, crosscutting, raising, diamond drilling, etc. Some details would, of course, be subject to change but we must have a clear outline of the project on which to base our analysis.

P.C.K.

(4) The small amount of diamond drilling which is planned would hardly warrant the purchase of a drill and the necessary equipment. On all drilling, the Government requires three bids from reputable outside contractors, and if the Applicant wishes to do the work, the price submitted must not be in excess of the lowest outside bid received. Will you, therefore, obtain three bids to submit to us. The size of core you think will be satisfactory, the approximate length of the holes, and the number of them must also be stated.

(5) Unit cost contracts, for exploration driving, must contain all the items of cost and must be presented in detail. The items are usually: Labor, supervision, explosive, track, pipe, drill steel, taxes and insurance, miscellaneous supplies, power, etc. All costs to be given as cost per foot.

(6) When an operator supplies equipment as a part of its portion of the cost, it is depreciated, generally, at a rate of one sixtieth of the value of said equipment per month. The value (for contract purposes) depends upon the age and condition of said equipment.

(7) Assay laboratories are not warranted for exploration projects of this kind.

(8) All assaying of samples must be presented in the following manner: State the metals for which analysis is to be made, the total number of samples to be assayed, cost per sample assayed, and the total amount of money to be expended in this class of work.

(9) We note that some of the work would seem to be for the purpose of developing the mine for production. DMEA is not permitted to provide aid for mine development but only for exploration. We would suggest that the project be revamped, leaving out any production development, and the revision submitted to us. Any work of this kind would have to be deleted in any case.

(10) Were the costs of taxes, insurance, contingencies, and depreciation of equipment absorbed by some of the other costs? If they were not, the total of $57,048.00 for the project is incorrect.

(11) We prefer not to have equipment purchases included in projects. The way this may be avoided is for the Applicant, to either rent the equipment or else to purchase it and in this latter case it would be depreciated in the same manner as outlined under section 6. Rental of equipment is a proper charge against the cost of a project.

It will be necessary for us to have the above information before we can determine the merits of the project. The initial evaluation will determine whether a field examination is warranted. Any final adjustments in the costs and planning of the work may be worked out with the Field Team after the property has been examined and the property adjudged of sufficient promise to warrant a contract.

We shall hold your application in abeyance until we hear from you.

Sincerely yours,

W. R. Griswold, Chief,
Base Metals Division

WPKlugescheid/er 12/26/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region II (2)
Chron.

IN REPLY REFER TO:

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

December 18, 1956
Re: DMEA 4570
Hamilton Bros. Lumber Company
Alta Copper Property
Del Norte County, California
$57,048.00 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

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

Subject: Review of application

The applicant requests assistance in reopening a mine last worked in 1867. Rehabilitation work has been done since that date and in 1951 the mine was readied for production. Work is now being done, the mine is probably open and can be started with a minimum of delay.

A narrow high grade vein in serpentine has been developed on 6 levels and good ore shows in 2 faces and fair ore in 4 faces. The widest face sample was cut across 24 inches and assayed 1.68% Cu.

An examination appears warranted. Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

RECEIVED
DEC 19 1956
D.M.E.A.

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

December 14, 1956

RECEIVED
DEC 17 1956
D.M.E.A.

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Assistant Chief, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4570 (copper)
Hamilton Bros. Lumber Co., The Alta, California Copper Mine,
Del Monte County, California. $57,048.00

The applicant proposes to explore for copper mineralization at the Alta mine by drifting and diamond drilling at an estimated total cost of $57,048.00.

It appears that a large part of the program is development rather than exploration. I believe that more diamond drilling and less drifting would adequately explore the area, and those drifts proposed for mining should be omitted from the exploration program.

The statement that a 14 percent copper ore cannot be beneficiated by any mineral dressing technology seems odd. I would like some clarification of this.

Referral of the application to the Field Team is recommended. The application is returned herewith.

J. W. Pennington

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

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

December 14, 1956

Hamilton Brothers Lumber Company
P. O. Box 627
Crescent City, California

Subject: DMEA-4570

Gentlemen

Your application for exploration assistance, dated December 6, 1956 submitted to our office at Reno, has been assigned Docket Number DMEA-4570 and referred to the Base Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

(Sgd) Allen S. Dakan

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

Region II. Reno, Nevada

Code 500

6416

U. S. Government Messenger Envelope

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

1. Use blocks consecutively, one at a
2. Void previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
~~Miss Pattiff~~ ~~Jm. Hall Off. Bldg~~	RUN STOP		RUN STOP
~~Mr. Samuel G. Luck~~ ~~Room 7245~~ ~~Interior Building~~	RUN STOP		RUN STOP
~~Mr. C. C. Anderson~~ ~~Room 4214 - State Bldg~~	RUN STOP		RUN STOP
~~Mr. [illegible]~~ ~~[illegible] No. 5 [illegible] Int.~~	RUN STOP		RUN STOP
W. R. Bowen [illegible]	RUN STOP		RUN STOP
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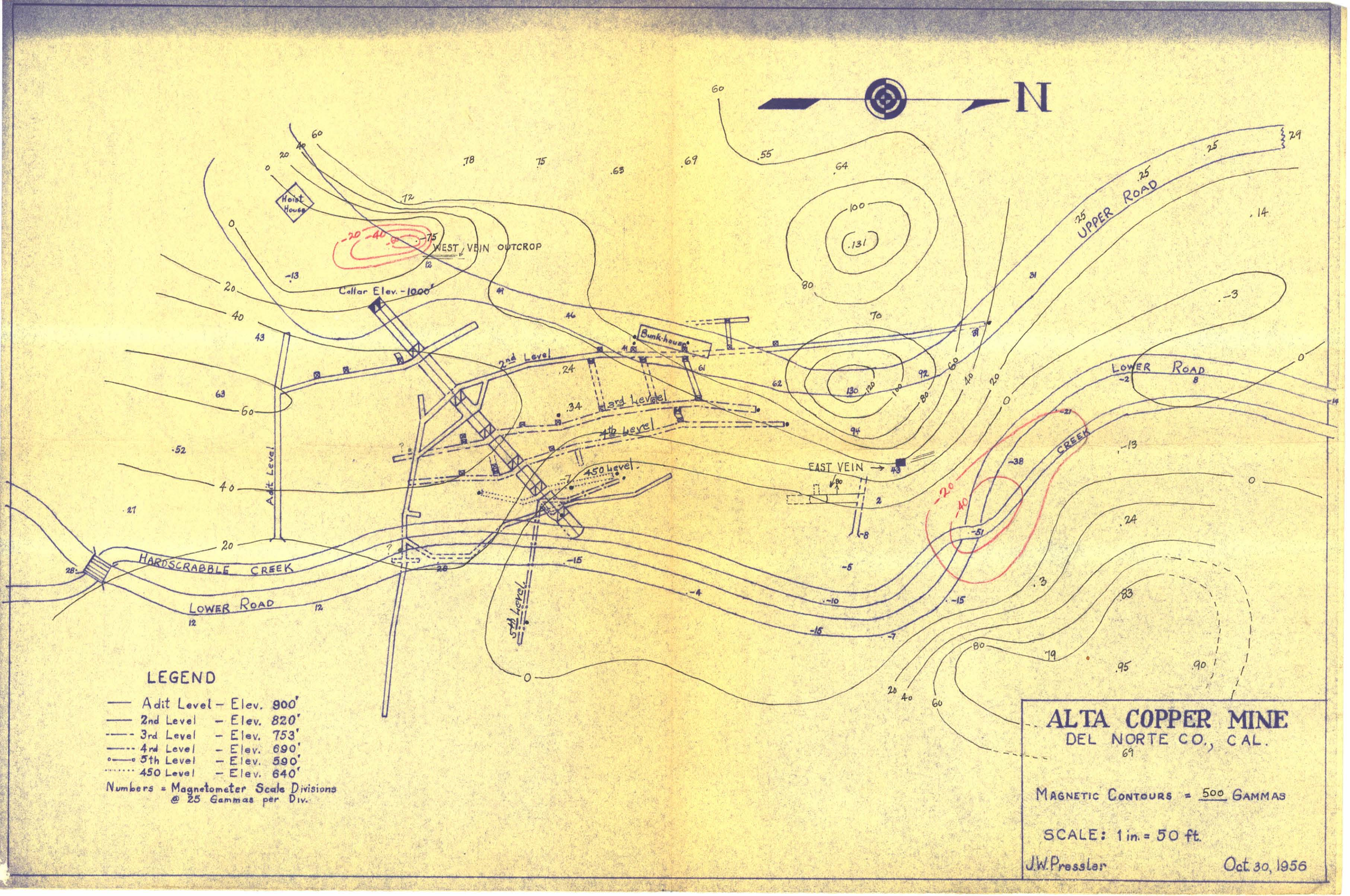
N
Hoist House
WEST VEIN OUTCROP
Collar Elev. -1000'
Bunk-house
2nd Level
3rd Level
4th Level
450 Level
5th Level
Adit Level
EAST VEIN
UPPER ROAD
LOWER ROAD
CREEK
HARDSCRABBLE CREEK
LOWER ROAD
LEGEND
Adit Level - Elev. 900'
2nd Level - Elev. 820'
3rd Level - Elev. 753'
4rd Level - Elev. 690'
5th Level - Elev. 590'
450 Level - Elev. 640'
Numbers = Magnetometer Scale Divisions @ 25 Gammas per Div.
ALTA COPPER MINE
DEL NORTE CO., CAL.
MAGNETIC CONTOURS = 500 GAMMAS
SCALE: 1 in. = 50 ft.
J.W. Pressler
Oct. 30, 1956