DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 644 — DMEA NO. 3142

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - ~~Not Certified~~
- [x] Terminated - Certified -PSEUDO
- [ ] Cancelled
- [ ] Royalty Agreement

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [x] Cost Audits - 8-21-57
- [x] Termination ~~Notice~~ or Agreement - 6-1-57
- [ ] Recision Notice
- [ ] Assignment of Contract
- [x] Contract Amendments
- [x] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [x] Project summary (final) 3-30-59
- [x] Work Completed analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)- December/1958
- [x] Operator's Final Report (Tab)-6-11-57
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [ ] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 1,2 & 3 : Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

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

Folders No. 4 : Maps (Use pocket folder or envelope)

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty material

Reported Inactive 12/28/59

17963

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
		110
		220

AUG 14 1967

Howe Sound Company
500 Fifth Avenue
New York, New York 10036

Re: DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract Idm-E644

Gentlemen:

By the terms of the subject Exploration Project Contract and the Termination Agreement dated July 24, 1957, Annex IV, and Amendment No. 3 of the subject Amended Contract, all minerals mined or produced from June 25, 1954, to June 25, 1967, were subject to the Government's royalty as set forth in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any production therefrom. We, therefore, are closing our books and records on this contract. Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve certain records for the periods indicated.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: DRF
Division
Econ. Geol. Rdg.
OME Docket
OME Reading File
OME Region I
Branch of Budget and Finance
120M

GLAult/gpw 8/11/67

23263

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Amended Contract Idm-E644, Docket DMEA-3142 (copper), dated June 25, 1954, with

Howe Sound Company
500 Fifth Avenue
New York, New York 10036

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Holden Mine located in Chelan County, Washington, during the period September 9, 1959, through February 12, 1964.

In accordance with a Termination Agreement dated July 24, 1957, Annex IV, and Amendment No. 3 of the Amended Contract, royalty is payable on all minerals produced from the land described in Article 2, Annex II, and Amendment No. 1 of the contract for a period of 13 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated August 21, 1957, indicated accepted costs under the exploration contract amounting to $308,708.89 with the Government's contribution on a 50 percent basis being $154,354.45.

The status of the project, the scope of review, and the reasons therefor are stated on page 2.

This review found no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which also found no sales subject to the Government's royalty through September 8, 1959. Accordingly, as of February 12, 1964, the royalty account of this project was found to be:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

E. D. Talbert, OME Auditor

February 14, 1964

STATUS OF PROJECT, SCOPE OF REVIEW AND REASONS THEREFOR

The July 24, 1957, Termination Agreement specifically provides that the Operator, as principal if the producer or as surety if not the producer, shall pay to the Government a percentage royalty on all minerals produced from the land under the Amended Contract, as further amended. The land under the contract, as amended, consists of 10 patented claims and 36 unpatented claims, except for the known Holden ore body above the 2500 level between coordinates 3500 E and 7500 E. At the time the contract was executed the Operator was the owner of the claims. The contract contains the so-called "abandonment" provision, but this was deleted by Amendment No. 2.

Exploration work under the contract was terminated effective June 1, 1957, and all operations of the mine ceased on June 28, 1957. There was no production during the exploration period and a subsequent examination of the property and inquiries by DMEA and OME regional representatives disclosed no activity, other than dismantlement of mine and mill, through September 8, 1959.

In a February 12, 1964, reply to a MME Form 63 inquiry, the Operator advised "Mine was completely shut down in June of 1957 and the property was subsequently turned over to the Lutheran Bible Institute".

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(1) The files disclose no production subject to royalty since the date of the contract;

(2) The property has been inactive since June 1957; and

(3) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

Transcribed

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OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Office of Minerals Exploration, Washington, D. C., pertaining to Amended Contract No. Idm-E644, Docket No. DMEA-3142 (Copper), dated June 25, 1954, effective December 7, 1953, with

Howe Sound Company
Holden, Washington
and
730 Fifth Avenue
New York, New York

for the purpose of determining the amount of royalty due the U. S. Government on sales of minerals from property referred to as Holden Mine located in Chelan County, Washington, during the period December 7, 1953, through September 8, 1959.

In accordance with Termination Agreement dated July 24, 1957, effective June 1, 1957, royalty is payable on all minerals mined or produced from the land described in Article 2 of the contract, except production from the Holden ore body above the 2500 level between coordinates 3500E and 7500E, for a period of 13 years from the date of the amended contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review in lieu of final cost audit dated August 21, 1957, indicated accepted costs under the exploration contract amounting to $308,708.89 with the Government's contribution, on a 50 percent basis, being $154,354.45.

This review was made in lieu of an on-site audit of the Operator's accounts and records for following reasons:

(1) The operator discontinued all mining operations at this property in June, 1957; the exploration contract was terminated; the mill and other structures have been removed; and the mine allowed to fill with water;
(2) Semi-annual reports by representatives of the Field Team, Region I, and other documents in the files do not disclose any production or sales of minerals from that portion of the property covered by the contract during the exploration period or subsequent thereto; and
(3) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

The review indicated that there has not been any production or sales of minerals from that portion of the property covered by the contract since December 7, 1953, and no royalty is due the Government.

C. E. Fisher

October 16, 1959 C. E. Fisher, OME Auditor

MME Form 22
April 59

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name Howe Sound Company

Address Holden, Washington

Exploration Contract No. Idm-E644 Docket No. DMEA-3142

		Check One Yes	Check One No.
1.	(a) Does the Operator stockpile ore subject to royalty repayment?		X
	(b) If so, is segregation and identification procedure adequate?		
2.	(a) Does Operator commingle production subject to DMEA or OME royalties with exempt production?		X
	(b) If so, do you consider the allocation of the commingled production equitable?		
3.	(a) Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period?		X
	(b) If so, are adequate records maintained on such material to protect the Government's interest?		
4.	Do you consider the assay controls in effect are adequate?	X	
5.	Do you consider that the manner of disposing of production gives the Government its fair royalty returns?	X	
6.	Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA or OME royalties?	X	
7.	Does the Operator buy from or sell to other Operators?		X
8.	Comment on any item 2 (b) to 6 if answer is No.		

Property inactive. Mine and mill has been dismantled and equipment sold.

September 8, 1959
Date

S. W. Zoldok
Mining Engineer
S. W. Zoldok

53362

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Howe Sound Company
Holden, Washington and
730 Fifth Avenue
New York 19, New York

pertaining to Exploration Project Contract No. Idm-E644, Docket No. DMEA-3142, dated December 7, 1953, including Amendment No. 1, Amended Contract No. Idm-E644, Docket No. DMEA-3142 dated June 25, 1954, including Amendments Nos. 1 to 3 inclusive, and a Termination Agreement dated July 24, 1957 having an effective date of June 1, 1957, for the period of December 7, 1953 to June 1, 1957, covering a project for the exploration of copper, on property known as the Holden Mine, located in Chelan County, State of Washington.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Government representative who visited and examined the project, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reasons:

(a) The accepted costs, of all work on an actual cost basis ($255,104.00) and the agreed unit costs which were incurred under a contract provision for payment by the Government on the basis of agreed unit costs of units of work actually performed ($39,224.00) aggregating $294,328.00 for the period of December 7, 1953 to March 31, 1956, were covered by the first interim Audit Report and Certificate dated January 14, 1955 and the second interim Audit Report and Certificate dated May 11, 1956, issued by C. E. Fisher, DMEA Auditor;

(b) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible further disallowances thereunder;

(c) the Monthly Reports were supported by documentary proof of the costs accepted under the contract's provision for contribution by the Government on the basis of allowable costs incurred ($1,509.38);

(d) a major portion ($18,536.75) of the costs incurred were under a contract provision for payment by the Government on the basis of agreed unit costs of units of work actually performed; and

(e) the remainder ($10,166.90) of the costs incurred covered work performed at unit rates under independent contract.

The review disclosed the following facts in regard to the amount paid or to be paid the contractor:

Total cost as billed by contractor		$324,553.78
Less proceeds from property disposition (Schedule Attached)		15,832.14
Net Cost		308,721.64
Exceptions (Schedule Attached)		
By DMEA Finance Officer	$ None	
Herewith	12.75	12.75
Total Accepted Cost (Schedule Attached)		$308,708.89

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of One hundred fifty-four thousand three hundred fifty-four and 45/100 Dollars

--$154,354.45--

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

C. A. Turner, Auditor

August 21, 1957

Howe Sound Company — Schedule - Proceeds From Property Disposition — DMEA-3142 — Idm-E644

Cost of items established by Second Interim Audit Report and Certificate dated May 11, 1956, issued by C. E. Fisher, DMEA Auditor.

Salvage rates set by Amendment No. 2 dated January 17, 1956.

	Cost	Rate 50 Percent	Rate 20 Percent
Equipment			
1 Mancha Electric Mule	$ 3,662.96	$ 3,662.96	$ -
1 Charging Unit	952.75	952.75	-
2 Edison Batteries	7,425.40	7,425.40	-
1 Battery Box	374.36	374.36	-
2 Rock Drills	1,617.10	-	1,617.10
1 Toro-Pari Survey Instrument	1,136.81	1,136.81	
3500 feet Vent Pipe	5,367.95	-	5,367.95
6100 feet Messenger Cable	684.03	684.03	-
1225 feet Type W 600 Volt 49 Strand Cable	1,979.60	1,979.60	-
5007 feet No. 6 Tyrex Cable	7,706.13	7,706.13	-
Total Equipment	$30,907.09	$23,922.04	$6,985.05
Operating Supplies			
Pipe	$ 6,748.73	$ -	$6,748.73
Track	5,621.83	-	5,621.83
	$12,370.56	$ -	$12,370.56
Total Salvageable Items	$42,277.65	$23,922.04	$19,355.61
Total Salvage	$15,832.14	$11,961.02	$ 3,871.12
Government Equity	$ 7,916.07	$ 5,980.51	$ 1,935.56

Note -

The Operator on his final Form MF-104 dated May 1957, deducted from the appropriate items salvage in the total amount of $15,832.12, whereas he should have deducted a total of $15,832.14. This has been corrected on the Schedule Audit Summary in the "Corrected Distribution" column.

C. A. Turner, Auditor

August 21, 1957

Schedule of Exceptions

Howe Sound Company	DMEA-3142	Idm-E644
Disallowed by Review		
Diamond Drilling - 2500 level		
Claimed May 1957 MF-104	1283 ft. @ $4.25	$5,452.75
Final Inspection	1280 ft. @ 4.25	5,440.00
Disallowance	3 ft. @ $4.25	$ 12.75

C. A. Turner, Auditor

August 21, 1957

Grounds
Betty

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

RECEIVED
MAY 21 1956

SECOND INTERIM AUDIT CERTIFICATE

I have examined the records and transactions of the:

Howe Sound Company
Holden, Washington
and
730 Fifth Avenue
New York 19, New York

pertaining to Exploration Project Contract No. Idm-E644, Docket No. DMEA-3142, dated December 7, 1953, including Amendment No. 1, and Amended Exploration Project Contract No. Idm-E644, Docket No. DMEA-3142, dated June 25, 1954, including Amendments Nos. 1 and 2, covering a project for the exploration of copper on property known as Holden Mine located at Holden, Chelan County, Washington, for the period December 7, 1953, to March 31, 1956, inclusive.

My examination was made in accordance with generally accepted standards applicable in the circumstances.

The audit disclosed the following facts in regard to the amount to be paid the contractor:

Total cost as billed by contractor		$294,865.49
Exceptions (see Audit Report for details):		
Prior to this audit	$ -	
During this audit	537.49	537.49
Total accepted costs		$294,328.00

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of One hundred forty-seven thousand one hundred sixty-four and 00/100 dollars,

* * * $147,164.00 * * *

less the value of the Government's equity in any equipment and materials and supplies having a salvage value, is valid and proper.

This certificate is issued on the provision that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

C. E. Fisher, Auditor

May 11, 1956

SECOND INTERIM AUDIT REPORT

I. INTRODUCTION

During the period May 1 to 8, 1956, a second interim audit (covering the period December 1, 1954, to March 31, 1956) was made of the records and transactions pertaining to Exploration Project Contract No. Idm-E644, Docket No. DMEA-3142, dated December 7, 1953, including Amendment No. 1, and Amended Exploration Project Contract No. Idm-E644, Docket No. DMEA-3142, dated June 25, 1954, including Amendments Nos. 1 and 2, with the:

Howe Sound Company
Holden, Washington
and
730 Fifth Avenue
New York 19, New York

covering a project for the exploration of copper on property known as Holden Mine located at Holden, Chelan County, Washington.

First Interim Audit Report dated January 14, 1955, prepared by this auditor, covers the period from the date of the original contract, December 7, 1953, to November 30, 1954. The present report incorporates the results of the prior interim report and includes all transactions for which reimbursement has been claimed on Forms MF-104 through March 31, 1956.

The original records pertaining to this contract are maintained by and are in the custody of Mr. R. Scott, Chief Accountant, Chelan Division of Howe Sound Company, and are located in the mine office building at Holden, Washington. Mr. J. S. Roper, Mine Manager, was available for consultation during the audit. Mr. E. G. Erickson and Mr. Almon F. Robertson, Mining Engineers, Bureau of Mines, Spokane, Washington, were present and assisted the auditor during part of the field audit. The cooperation of all concerned greatly facilitated the audit work.

II. GENERAL INFORMATION ON RECORDS

The general books of the Company are maintained in its New York office; however, all of the needed records pertaining to the Chelan Division operations and particularly those relating to the DMEA exploration project are kept at the Holden, Washington, mine office and were made freely available to the auditor.

The Operator's Monthly Report and Voucher Forms MF-104 were

prepared under the direction of Mr. Scott and were sent to the New York office of the Company, where they were reviewed and signed by Mr. Vinton H. Clarke, Vice President, and submitted by the New York office to the DMEA Field Team, Region I, Northwest District, for payment.

The Operator has a complete and comprehensive cost accounting system at its Holden Mine. The cost records are well maintained and are considered to be adequate to insure proper allocations of costs to the exploration project. An effective system of internal check is maintained.

The accounts of Howe Sound Company, including those of the Chelan Division, are audited annually by Smith, Davis and Willis, Certified Public Accountants, 41 East 42nd Street, New York (17), New York.

III. SCOPE OF AUDIT AND FINDINGS

The audit was limited to ascertaining the accuracy, propriety and validity of the costs shown in the "Totals to Date" column of the Form MF-104, Operator's Monthly Report and Voucher, for the month of March, 1956. Since, by letter dated January 12, 1954, addressed to the Operator, the Executive Officer of the DMEA Field Team for Region II (now Region I, Northwest District) waived the requirement for the submission of supporting documents with the monthly Forms MF-104, a complete and detailed audit and analysis of all costs was made.

Amendment No. 2 to the Amended Exploration Project Contract eliminated reference to Items and Stages contained in the original contract. Instead, the exploration work to be accomplished was described separately for that on the 1500 Level and that on the 2500 Level and the claimed and allowed costs will be so divided for the purpose of this Second Interim Audit Report.

The Operator has allocated costs on Form MF-104 on basis of its cost accounting system. Although not conforming in all respects to the various items under the caption "Items of Cost" provided on Form MF-104, the classification used by the Operator is considered to be in substantial compliance with the intent of Form MF-104 and is accepted for the purpose of this audit. Adjustments in the Operator's classification and disallowance made as a result of this audit are discussed below and are summarized on Exhibit "A" attached to this report.

(1) Agreed Unit Costs

Item	Amendment No. 2	Accepted Costs	Remainder
1500 Level			
Diamond Drill Stations:			
9 @ $490.00/ea.	$ 4,410.00	$ 4,410.00	
1 @ $300.00/ea.	300.00	300.00	
Diamond Drilling:			
7,416 feet @ $2.75/ft.	20,394.00		
5,368 " " "		14,762.00	
2,048 " " "			5,632.00
Totals - 1500 Level	$25,104.00	$19,472.00	$ 5,632.00
2500 Level			
Diamond Drill Stations:			
6 @ $600.00/ea.	$ 3,600.00	$ 3,600.00	
Transfer Stations:			
3 @ $500.00/ea.	1,500.00	1,500.00	
Diamond Drilling:			
7,000 feet @ $3.00/ft.	21,000.00		
4,884 " " "		14,652.00	
2,116 " " "			$ 6,348.00
Totals - 2500 Level	$26,100.00	$19,752.00	$ 6,348.00
Totals - Agreed Unit Costs	$51,204.00	$39,224.00	$11,980.00

Amendment No. 2 provides that the stated rates per foot for diamond drilling shall include the cost of assaying and that total agreed unit costs of $25,104.00 and $26,100.00 applicable to the 1500 Level and 2500 Level, respectively, shall be allowable maximums. The audit did not disclose any separate charges for assaying in connection with the diamond drilling. The allowable maximums have not been exceeded as indicated in the above tabulation.

The number of drill stations and the footage of diamond drilling for which reimbursement has been allowed were verified by Mr. E. G. Erickson, Mining Engineer, Bureau of Mines, Spokane, Washington.

(2) Labor and Supervision

Item	Accepted Costs 1500 Level	2500 Level	Total
Labor			
Miners	$16,920.96	$ 7,555.94	$ 24,476.90
Muckers	25,132.97	7,225.07	32,358.04
Helpers	15,320.43	-	15,320.43
Timbering	12,394.57	313.64	12,708.21
Air and Water Line Installation	1,521.39	84.03	1,605.42
Track	2,326.77	690.61	3,017.38
Ventilation Pipe Installation	4,242.54	-	4,242.54
Repairs to Equipment	9,336.03	196.71	9,532.74
Electric Cable Installation	1,859.22	33.42	1,892.64
Drainage	23.68	-	23.68
Retroactive Payroll	608.06	492.49	1,100.55
Totals	$89,686.62	$16,591.91	$106,278.53
Supervision			
Shift Bosses	$ 6,113.09	$ 1,294.51	$ 7,407.60
Mine Foreman	597.75	-	597.75
Engineers	154.96	-	154.96
Total Supervision	$ 6,865.80	$ 1,294.51	$ 8,160.31
Technical Services	$ 2,627.98	$ 1,062.34	$ 3,690.32
Total Labor, Supervision and Technical Services	$99,180.40	$18,949.26	$118,129.66

The Operator's method of payroll accounting and allocation of labor costs to the DMEA contract were found to be the same as at the time of the prior interim audit as more fully described in First Interim Audit Report dated January 14, 1955. There were a few minor changes in the bonus rates applicable to work on the 1500 Level and bonus rates were established for work done on the 2500 Level during the period. The total bonuses paid for the period December 7, 1953, to March 31, 1956, and included in direct labor costs in the above tabulation amounted to $22,420.39 allocated as follows:

Item	1500 Level	2500 Level	Total
Miners	$ 5,728.85	$ 2,245.00	$ 7,973.85
Muckers	8,479.81	1,087.22	9,567.03
Timbering	1,932.30	-	1,932.30
Air and Water Line Installation	551.56	-	551.56
Track	19.48	341.39	360.87
Ventilation Pipe Installation	2,035.28	-	2,035.28
Totals	$18,747.28	$ 3,673.61	$22,420.89

A change was made in the manner of Supervision of the exploration project in March, 1955, when a full-time shift boss or pusher was assigned thereto. No subsequent charges were made to the project costs for any services of the mine foreman.

Amendment No. 2 provides allowable maximum costs for Supervision and Technical Services in the amount of $16,404.00 based on 5,468 feet of drifts and crosscuts at a maximum allowable rate of $3.00 per foot. The total charges to project accounts for these items to March 31, 1956, aggregated $11,851.13, for 5,165 feet at an average cost of approximately $2.29 per foot.

International Union of Mine, Mill and Smelter Workers, Chelan Miners Union, Local 379, is the bargaining agent for all employees at the mining property except foremen, clerks, secretaries, or members of the executive, supervisory or technical forces of the company. All wages paid to mine employees were based on rates provided by agreements between the Operator and the Union.

On October 8, 1955, a wage increase was granted to all mine employees represented by the Union retroactive to July 1, 1955. The increased pay rates were put into effect with the payroll for the last half of October, 1955. A separate payroll was made for the retroactive period and the portion thereof applicable to the exploration project was determined on basis of actual payments made for work on the exploration project.

The Operator claimed and was allowed reimbursement for the portion of such retroactive pay applicable to the exploration project under (7), Miscellaneous - Retroactive Payroll. For the purpose of this audit transfer has been made and the costs allowed under (2), Labor and Supervision - Labor.

(3) Operating Materials and Supplies

Sub-category	Accepted Costs 1500 Level	2500 Level	Total
Timber	$ 9,889.66	$ 76.67	$ 9,966.33
Explosives	15,270.90	6,059.83	21,330.73
Pipe	6,748.73	-	6,748.73
Track	4,865.67	756.16	5,621.83
Drill Steel and Bits	8,129.43	4,171.28	12,300.71
Electric Cable Installation	358.64	-	358.64
Ventilation Pipe Installation	352.90	-	352.90
Totals	$45,615.93	$11,063.94	$56,679.87

The costs chargeable to this category were ascertained by a detailed audit and analysis of material requisitions. It was determined that materials and supplies were charged to the exploration Project in accord with company practices throughout its operations and that costs included freight and delivery charges but did not include charges for company overhead expenses.

During this audit it was ascertained that costs amounting to $503.90 incurred during September, 1955, for rail and fittings had been improperly included in the sub-category "Timber" instead of "Track." Appropriate adjustment has been made in the accepted costs stated above.

Further explanation with respect to the various sub-categories of operating materials and supplies follows:

Timber

The accepted costs under this sub-category represent amounts, less $503.90 transferred to "Track,"charged to the Operator's code 4, Timbering, directly assigned to the exploration project, and include charges for rock bolts, plates, nuts, wedges and washers used in rock bolting in addition to lumber and nails, as follows:

Lumber	$ 6,849.92
Nails	146.15
Rock bolts	1,846.44
Plates, nuts, etc.	1,123.82
Total	$ 9,966.33

Explosives

The accepted costs under this sub-category represent amounts charged to the Operator's code 13, Explosives.

Charges were made each month based on the number of boxes of 1½ x 8 60% Gelodyn used in the exploration work and average cost per box of such explosives, including electric caps, used throughout the mine. The average cost per box of explosives, including electric caps, was approximately $10.95.

Pipe

The accepted costs under this sub-category represent amounts charged to the Operator's code 5, Air and Water Lines, directly assigned to the exploration project as follows:

2" and 4" pipe and fittings	$ 5,827.49
150 feet 2" Bull hose	324.00
365 feet 1½" air hose	368.30
300 feet 3/8" water hose	141.50
Other	87.44
Total	$ 6,748.73

Track

The accepted costs under this sub-category represent amounts charged to the Operator's code 6, Track, directly assigned to the exploration project, plus $503.90 transferred from "Timber," as follows:

Rail	$ 4,440.22
Fish plates	226.03
Spikes, bolts, etc.	487.07
Ties	468.51
Total	$ 5,621.83

Drill Steel and Bits

The accepted costs under this sub-category represent amounts charged to the Operator's codes 23, Drill Steel and Bits, and 24, Sharpening.

The charges to the exploration project represent the monthly prorated portion of cost of drill steel and bits purchased or reconditioned by the Operator during the month allocated to project costs on basis of relative hours of drilling applicable to project work during the month.

Electric Cable Installation

The accepted costs under this sub-category represent the cost of tape, clamps and other materials used in installing electric cables charged to the Operator's code 8, Electric Cable Installation, directly assigned to the exploration project. The cost of the cable is included in (4) Operating Equipment - Purchase.

Ventilation Pipe Installation

The accepted costs under this sub-category represent the cost of incidental materials used in the installation of ventilation pipe charged to the Operator's code 7, Ventilation Pipe - Installation, directly assigned to the exploration project. The cost of the ventilation pipe is included in (4) Operating Equipment - Purchase.

(4) Operating Equipment

Rental

There were no charges to this sub-category.

Purchase

Item	Amendment No. 2	Accepted Costs	Remainder
1 Mancha Electric mule - used	$3,662.96	$ 3,662.96	
1 Charging unit	952.75	952.75	
2 Edison batteries	7,425.40	7,425.40	
1 Battery box	374.36	374.36	
2 Rock drills	1,617.10	1,617.10	
1 Tro-Pari borehole survey instrument	1,136.81	1,136.81	
1 No. 1-U Diamond drill	2,000.00		$ 2,000.00
3,500 feet of ventilation pipe @ $2.00/ft	7,000.00	5,367.95	1,632.05
6,100 feet of Messenger cable	684.03	684.03	
1,225 feet Type W-600 volt - 49 strand cable	1,979.60	1,979.60	
5,007 feet #6 Tyrex cable	7,706.13	7,706.13	
Totals	$34,539.14	$30,907.09	$ 3,632.05

The Operator has not charged the diamond drill authorized under the contract to the exploration project. The authorized 3,500 feet of ventilation pipe has all been installed in the project. By purchasing sheeting and having the fabrication work done locally under contract, the Operator has held the costs of the pipe substantially below the estimate of $2.00 per foot.

The costs applicable to the various items of equipment purchased were verified with vendor's invoices and other documents.

Amendment No. 2 provides that the total amount of $34,539.14 for purchase of equipment shall be the allowable maximum costs chargeable to the project under this category. The amendment further provided that so much of the funds allowable for ventilation pipe as are not spent for ventilation pipe may, with the prior approval of the Government, be used for any item of actual costs allowable under the contract except such items of actual cost as are subject to an allowable maximum. A portion of the savings on the ventilation pipe has been diverted to other purposes as explained under (8)Contingencies.

Depreciation

The accepted costs under this sub-category are based on a fixed sum of 75 cents per foot for use of company-owned equipment, not otherwise included in any schedule in Amendment No. 2, used for drifting and crosscutting, as follows:

1500 Level -	3,800 feet of drifting @ 75¢	$2,850.00
2500 Level -	1,365 feet of crosscutting @ 75¢	1,023.75
Totals	5,165 feet of drifting and crosscutting	$3,873.75

The allowable maximum charge provided by Amendment No. 2 is $4,101.00 for 5,468 feet of drifting and crosscutting at 75¢ per foot.

(5) Initial Rehabilitation and Repairs

There were no charges under this category.

(6) New Buildings, Improvements, etc.

There were no charges under this category.

(7) Miscellaneous

The accepted costs under this category consist of the following:

Sub-category	1500 Level	2500 Level	Total
Repairs to Equipment	$ 7,431.51	$ 2,415.61	$ 9,847.12
Sampling and Analysis	130.32	-	130.32
Payroll Taxes	3,076.20	544.80	3,621.00
Liability Insurance	4,049.05	785.79	4,834.84
Tramming	6,498.00	2,334.15	8,832.15
Compressed Air	8,891.02	4,925.72	13,816.74
Miner's Lamps	449.12	144.30	593.42
Handling Supplies	1,772.30	667.90	2,440.20
Retroactive Pay	-	-	-
Hoisting - 2500 Level	-	1,397.84	1,397.84
Totals	$32,297.52	$13,216.11	$45,513.63

Further explanation with respect to the various sub-categories included under (7) Miscellaneous, follows:

Repairs to Equipment

Item	Accepted Costs
Rock Drills	$ 6,566.29
Other Equipment	3,280.83
Total	$ 9,847.12

The accepted costs under this sub-category with respect to rock drills represent charges made to the Operator's code 22, Drill Repairs. The total cost of material and labor expended in repairing rock drills during a month are assembled in a clearing account and prorated to various cost accounts, including exploration costs, on basis of relative number of hours of drilling operations during the month.

The accepted costs with respect to other equipment represent charges made to Operator's codes 16, Repairs to Equipment (other than Rock Drills) and 19, Underground Tools, assigned directly to project costs from the distribution of material requisitions. The charges cover costs of material used in repairing all equipment, other than rock drills, used in the exploration. The applicable labor costs are included under category (2) Labor and Supervision - Labor.

Sampling and Analysis

The accepted costs under this sub-category amounting to $130.32 represent the prorata portion of costs incurred in the company's laboratory analyzing samples from the 1500 Level drift. Amendment No. 2 did not permit any cost of sampling and analysis in connection with crosscutting on the 2500 Level being included in project costs. That amendment also provided that any cost of assaying in connection with diamond drilling was included in the unit prices of $2.75 and $3.00 per foot allowed for such diamond drilling. The cost of labor for sampling the 1500 Level is included under category (2) Labor and Supervision - Technical Services.

The audit did not disclose any improper charges to project costs for sampling and analysis.

Payroll Taxes

Item	Claimed Costs	Accepted Costs
Federal Insurance Contribution Act	$ 1,895.99	$ 1,895.99
Unemployment Insurance Act		
Federal	233.16	233.16
State of Washington		
Year 1954	216.40	216.40
Jan. 1, 1955, to March 31,1956	1,802.99	1,275.45
Totals	$ 4,148.54	$ 3,621.00

The claimed and accepted costs under FICA were based on 2% of the first $3,600.00 wages paid each employee during the year. The claimed costs for Unemployment Insurance were based on 3% of the first $3,000.00 of the employee's wages during the year with an appropriate adjustment made for State of Washington Experience Rating Credit received in connection with contributions made by the Operator to the State fund applicable to wages paid to employees during 1954.

The State determines and advises the Operator the amount of Experience Rating Credit applicable to a year usually in about September of the following year. In order not to delay settlement of the Operator's account with DMEA pertaining to this exploration project this auditor agreed with the mine manager and the chief accountant of the Chelan Division, Howe Sound Company, that the Experience Rating Credit determined for 1954 would be applied to that portion of unemployment insurance contribution made to the State and included in joint exploration costs during the period January, 1955, to March, 1956, inclusive, and that the excess claimed for that period would be disallowed in this audit.

Contributions to the State unemployment insurance fund for the period January, 1955, to March, 1956, inclusive, and included in project costs, based on 2.70% of employees' wages applicable to the act, amounted to $1,802.99. The Experience Rating Credit for 1954 to this Operator was based on .79% of the applicable wages paid during that year. Thus, the credit amounted to 29.259% (.79% divided by 2.70%). Application of this percentage to $1,802.99 results in a credit of $527.54 and a net acceptable cost for the period amounting to $1,275.45 as shown in the above tabulation.

Liability Insurance

The accepted costs under this sub-category amount to $4,834.84 and represent the portion of the Operator's contributions under the State of Washington Industrial Insurance and Medical Aid Acts. The charge has been computed by multiplying the number of hours of time worked by workmen covered by the Act and charged to the exploration project by the sum of the hourly rate for industrial insurance, plus one-half of the hourly rate for medical aid, as follows:

	1954	1955	1956
Industrial Insurance	$.0727	$.0972	$.1249
*1/2 Medical aid	.0175	.0175	.0150
Totals per hour	$.0902	$.1147	$.1399

*Employees contribute 1/2 of such cost.

Tramming

The accepted costs under this sub-category amounting to $8,832.15 are computed on basis of $1.71 per foot of advance made by drifting or crosscutting. As explained in the First Interim Audit Report the $1.71 rate was based on the company's cost experience in 1953 and is considered to be fully supported by the Operator's records and the use thereof has not resulted in excessive charges against exploration costs.

The claimed costs under this sub-category were $8,842.10 or $9.95 in excess of the accepted costs. Details of the disallowance follow:

February, 1955

245 feet advance on 1500 Level @ $1.71

Claimed	$428.95	
Accepted	418.95	$10.00

November, 1955

296 feet advance @ $1.71

Claimed	$506.11		
Accepted	506.16	(.05)	$9.95

Compressed Air

The accepted costs under this sub-category amounting to $13,816.74 represent that portion of the cost of operating air compressors allocated to the exploration project based on hours of drilling operations as fully explained in First Interim Audit Report.

The adjustment due to improper calculations referred to in the prior report was made in January, 1955. This adjustment was verified in detail and subsequent costs claimed under this sub-category were checked to the extent deemed necessary to establish the validity of the charges made.

Miner's Lamps

The accepted costs under this sub-category amounting to $593.42 are based on charges of $3.02, through December 31, 1954, and $3.70, subsequently, per month for each miner's lamp used on the exploration project.

This auditor finds that the rates used are representative of average costs of maintaining miner's lamps and that the total charge of $593.42 is properly includible in exploration costs.

Handling Supplies

The accepted costs under this sub-category amounting to $2,440.20 are based on rates of $.403 per foot of advance of drift or crosscut through December 31, 1954, and $.49 per foot for the subsequent period. The rate of $.403 per foot was

based on the Operator's actual cost experience during 1953 and the $.49 per foot rate was based on the cost experience for 1954.

This auditor finds that the rates used and the total charge to the exploration project are representative of actual costs, are substantiated by the Operator's cost records, and are properly includible in project costs.

Retroactive Pay

The amount of $1,100.55 claimed by the Operator under this sub-category has been transferred to and accepted as allowable cost under (2) Labor and Supervision - Labor.

Hoisting - 2500 Level

The accepted costs under this sub-category were computed at the rate of $1.024 per foot of advance in connection with crosscutting performed on the 2500 Level. The rate was determined on basis of the Operator's cost experience in connection with hoisting operations during the entire year 1954.

This auditor has verified the basis and the amounts used in computing the rate of $1.024 per foot of advance and has found the rate to be substantiated by the Operator's cost records, and to be fair and equitable for purpose of this cost determination.

(8) Contingencies

There have been no charges specifically set forth under this sub-category on Forms MF-104.

Amendment No. 2 provides for allowable maximum charges amounting to $11,445.00 for Contingencies to cover, among other things, increases in labor costs for drifting and crosscutting. That amendment also provides allowable maximum charges amounting to $224,246.86 covering estimated total actual costs on 1500 and 2500 Levels. A comparison of such costs set forth in Amendment No. 2 with the accepted costs found by this audit discloses that the total accepted costs amounted to $224,196.91 or $49.95 less than of the allowable maximum, as follows:

Item	Amendment No. 2	Accepted Costs	Over or (under) expended
(2) Labor	$95,915.75	$106,278.53	$ 10,362.78
(2) Supervision and Technical Service	16,404.00*	11,851.13	(4,552.87)
(3) Oper.Matls and Supplies	72,472.84	56,679.87	(15,792.97)
(4) Oper. Equip. - Depreciation	4,101.00*	3,873.75	(227.25)
(7) Miscellaneous	23,908.27	45,513.63	21,605.36
(8) Contingencies	11,445.00	-	(11,445.00)
Totals	$224,246.86*	$224,196.91	$ (49.95)

*Indicates allowable maximum

A savings amounting to $1,632.05 was made in cost of ventilation pipe as stated in (4) Operating Equipment - Purchase. Under terms of Amendment No. 2, such savings, with the prior approval of the Government, may be used for any item of actual costs allowable under the contract except such items of actual cost as are subject to an allowable maximum. Under date of March 9, 1956, the Field Team, Region I, Northwest District, approved the use of the unexpended amount provided for ventilation pipe within the limits stated. Thus, the total savings under the actual cost portions of the contract amount to $1,682.00 ($1,632.05 plus $49.95).

IV. CONCLUSIONS

The audit disclosed that all costs charged to this project are reasonable and proper under terms of the contract, except for the amounts of $527.54 and $9.95 disallowed under (7) Miscellaneous - Payroll Taxes and (7) Miscellaneous - Tramming, respectively.

The accepted costs per foot of drifting and crosscutting amounted to $47.35 and $32.42, respectively, allocated to various items of cost, excluding cost of equipment purchased, as follows:

	1500 Level (3,800 ft. 7'x7' Drift)	2500 Level (1,365 ft. 7'x7' Crosscuts)
(2) Labor and Supervision		
Labor	$23.60	$12.15
Supervision	1.81	.95
Technical Services	.69	.78
Totals	$26.10	$13.88
(3) Operating Materials and Supplies		
Timber	$ 2.60	$ .06
Explosives	4.02	4.44
Pipe	1.77	-
Track	1.28	.55
Drill Steel and Bits	2.14	3.06
Electric Cable Installation	.10	-
Ventilation Pipe Installation	.09	-
Totals	$12.00	$ 8.11
(4) Equipment - Depreciation	$ .75	$ .75
(7) Miscellaneous		
Repairs to Equipment	$ 1.96	$ 1.77
Sampling and Analysis	.03	-
Payroll Taxes	.81	.40
Liability Insurance	1.06	.57
Tramming	1.71	1.71
Compressed Air	2.34	3.61
Miner's Lamps	.12	.11
Handling Supplies	.47	.49
Hoisting - 2500 Level	-	1.02
Totals	$ 8.50	$ 9.68
Total Accepted Costs	$47.35	$32.42

This auditor did not verify the Operator's costs applicable to work performed on a unit cost basis. Such records did disclose that the recorded costs applicable to such work, exclusive of payroll taxes, has been in excess of the costs claimed on a unit basis, as follows:

Item	Recorded Costs	Allowed On Unit Cost Basis
Diamond Drill Stations	$11,072.01	$ 8,310.00
Core Drilling	32,589.10	29,414.00
Transfer Stations	2,864.54	1,500.00
Totals	$46,525.65	$39,224.00

All of the work to be performed under this contract on basis of actual costs had been completed prior to the date of this interim audit and the only exploration work remaining to be accomplished was diamond drilling on which settlement will be on basis of agreed unit costs. Therefore, it is recommended that steps be taken by the Field Team and the Operator to accomplish settlement with respect to disposition of the Government's equity in equipment, materials, etc., acquired for the exploration project in line with provisions of Article 11 of the Amended Contract and items (3) Operating Materials and Supplies and (4) Operating Equipment - To Be Purchased, in Amendment No. 2 to such Amended Contract.

Amendment No. 2 of the Amended Contract contained numerous items of cost expressly designated as "allowable maximums." The status of these allowable maximums, after deduction of the disallowances discussed in Section III of this report, is summarized as follows:

	Allowable Maximum	Acceptable Cost	Balance
(1) Agreed Unit Costs			
1500 Level	$ 25,104.00	$ 19,472.00	$ 5,632.00
2500 Level	26,100.00	19,752.00	6,348.00
(2) Labor and Supervision			
Supervision and technical services	16,404.00	11,851.13	4,552.37
do	3.00/ft	2.29/ft	.71/ft
(4) Operating Equipment			
Purchase	34,539.14	30,907.09	3,632.05
Depreciation	4,101.00	3,873.75	227.25
(8) Contingencies	11,445.00	11,395.05	49.95
Estimated Total Actual Costs on 1500 and 2500 Levels	224,246.86	224,196.91	49.95
Estimated Total Cost of the Project	309,990.00	294,328.00	15,662.00
Government Participation @ 50%	154,995.00	147,164.00	7,831.00

At the conclusion of the audit on May 8, 1956, the findings were discussed with Mr. Scott and Mr. Roper. On May 11, 1956, the findings were discussed with Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, Northwest District.

C. E. Fisher

C. E. Fisher, Auditor

May 11, 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTRACT ADMINISTRATION AND AUDIT DIVISION

Department of the Interior
Defense Minerals Administration
RECEIVED
JAN 19 1955

Snowold
Betty

FIRST INTERIM AUDIT CERTIFICATE

I have examined the records and transactions of the:

Home Sound Company
730 Fifth Avenue
New York 19, New York

pertaining to Exploration Project Contract No. Idm-664, Docket No. DMEA-3142, dated December 7, 1953, including Amendment No. 1 and Amended Exploration Project Contract No. Idm-664, Docket No. DMEA-3142, dated June 25, 1954, covering a project for the exploration of copper on property at Holden, Chelan County, Washington for the period of December 7, 1953 to November 30, 1954.

My examination was made in accordance with generally accepted standards applicable in the circumstances.

The audit disclosed the following facts in regard to the amount to be paid to the contractor.

Total cost as billed by contractor		$63,856.81
Exceptions		
Prior to this audit	$ -0-	
During this audit	-0-	-0-
Total accepted cost		$63,856.81

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Thirty-one thousand nine hundred twenty-eight and 40/100 Dollars,

--$31,928.40--

is valid and proper.

This certificate is issued on the provision that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

January 14, 1955

C. E. Fisher
C. E. Fisher, Auditor

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 13 1955

FIRST INTERIM AUDIT REPORT

I. INTRODUCTION

During the period January 5 to 11, 1955, an interim audit (covering operations for the period December 7, 1953 to November 30, 1954) was made of the records and transactions pertaining to Exploration Project Contract No. Idm-E644, Docket No. DMEA 3142, dated December 7, 1953, including Amendment No. 1 and Amended Exploration Project Contract No. Idm-E644, Docket No. DMEA-3142, dated June 25, 1954 with the:

Howe Sound Company
730 Fifth Avenue
New York 19, New York

covering a project for the exploration of copper on property at Holden, Chelan County, Washington

The original records under this contract are maintained by and are in the custody of Mr. R. Scott, Chief Accountant, Chelan Division of Howe Sound Company, and are located in the mine office building at Holden, Washington. Mr. J. B. Roper, Mine Manager, was available for consultation during the audit.

Mr. Stephen Zoldok, Mining Engineer and member of the Region II DMEA Field Team, and Mr. John McWilliams, Mining engineer, accompanied the auditor and assisted in the audit

The cooperation of all concerned greatly facilitated the audit work.

II. GENERAL INFORMATION ON RECORDS

The general books of the Company are maintained in the New York office, however, all of the needed records pertaining to the Chelan Division operations and particularly those relating to the DMEA exploration project were maintained at the Holden, Washington, mine office and were made freely available to the auditor

The Operator's Monthly Report and Voucher Forms MF-104 were prepared under the direction of Mr. Scott and were sent to the New York office of the Company where they were reviewed and signed by Mr. Vinton H. Clarke, Vice President, and submitted by the New York office to the Region II field office for payment.

The Operator maintains a cost accounting system in its Holden Mine which is considered to be adequate to insure proper allocations of costs to the exploration project. An effective system of internal check is maintained.

III. SCOPE OF AUDIT AND FINDINGS

The audit was limited to ascertaining the accuracy, propriety and validity of the costs shown in the "Totals to Date" column of the Form MF-104, Operator's Monthly Report and Voucher, for the month of November, 1954. Since, by letter dated January 12 1954, addressed to the Operator, the Executive Officer of the DMEA Field Team for Region II waived the requirement for the submission of supporting documents with the monthly Forms MF-104, a complete and detailed audit and analysis of all costs was necessary.

The work provided for in the exploration contract is divided into two major items, each of which is subdivided into two stages. During the period ended November 30, 1954, work was done only under Item I, Stage I of the contract and this interim audit report is limited to a consideration of the costs under said Item I, Stage I.

(1) Unit Costs:

Diamond Drilling 1,070 feet @$2.75/ft.		$2,942.50
Diamond Drill Stations:		
1 station @ $300.00	$ 300.00	
2 stations @ 490.00	980.00	1,280.00

Item I, Stage I of the exploration contract authorizes not to exceed 5,000 feet of diamond drilling at $2.75 per foot (including necessary assaying) and 8 diamond drill stations at $490.00 each.

The first diamond drill station was constructed in March, 1954 and reimbursement was claimed in the amount of $300.00 instead of $490.00 as provided in the contract. The Operator has advised that this reduction in price was considered to be equitable for the reason that it was necessary to slash a total of 8 feet instead of the original estimate of 13 feet contemplated when estimated costs were computed. The DMEA Field Team agreed that the station was adequate for the purpose of diamond drilling at that location. In this auditor's opinion this does not constitute a sufficient deviation from the contract provisions to warrant an amendment to the contract.

(2) Labor and Supervision

Labor

The basic records for the labor costs consist of semi-monthly payrolls, employees' daily time cards and weekly employee bonus statements. During the audit a sufficient number of the employees' daily time cards were reviewed, wages paid were recomputed and verified with the weekly bonus statements and the payrolls in order to establish the correctness and validity of charges to the exploration project for cost of labor.

Most of the labor performed in connection with this exploration project during the period under review was paid for under provisions of an incentive bonus plan. Under this plan the employees were carried on the payroll at regular days pay rates and were paid at such rates on the 23rd day of the month for wages earned through the 15th of the month and on the 8th day of the following month for their earnings during the last half of the month.

Measurements or counts of work accomplished during the previous week were made each Monday morning and a "bonus" computation was made based on the following rates:

Drilling and Blasting	(1)	$3.75 per foot of advance
Mucking	(2)	3.75 " " " "
Tramming over 1,500 feet		.25 " " " "
Tramming over 3,000 feet		.50 " " " "
Air and water lines		.30 " " " "
Ventilation pipe		.70 " " " "
Roof bolts (Prior August 28,1954)		.90 per bolt
Roof bolts (Subsequent to August 28, 1954)		1.50 per bolt
Mucking overbreak (Prior August 28, 1954		.07 per cubic foot
Mucking overbreak (Subsequent to August 28, 1954)		.08 per cubic foot
Timber installation (steel pins)		2.50 per foot of timbering
Timber installation (Caps)		3.50 " " " "

(1) Rate increased $.55 per foot of advance for larger section for post type timbering
(2) Rate increased $.50 per foot of advance for larger section for post type timbering

If the amounts determined at the above rates exceeded the amounts paid to the employees at the days pay rates, the amount of the excess was paid as a bonus on the semi-monthly payroll during which the computation was made. Thus, bonuses paid and charged to costs were frequently recorded in the accounts in the month following that in which they were earned by the employees.

The following tabulation shows the amount of wages and bonuses applicable to the various exploration operations during the period February to November, 1954, inclusive, as indicated by the Operator's records:

	Wages	Bonuses	Total
Miners	$ 2,827.11	$ 1,210.10	$ 4,037.21
Muckers	4,543.14	957.80	5,500.94
Helpers	1,202.14	(a)	1,202.14
Timbermen	2,023.39	122.68	2,146.07
Air and Water Lines	254.00	119.21	373.21
Track	270.01	(b) 19.48	289.49
Ventilation pipe installation	729.22	468.54	1,197.76
Electric cable installation	1,321.61	-0-	1,321.61
Repairs to equipment	2,533.45	-0-	2,533.45
Totals	$15,704.07	$ 2,897.81	$18,601.88

(a) A third man (classified as a helper) was added to the normal two-man crew in September 1954. No change was made in the bonus rates because of this addition. In computing the bonus, the earnings of all three men at days-pay rates was deducted from earnings at the bonus rates to determine the amount of bonus payable for the period. In accordance with agreement with the miners, 10 percent of the bonus was paid to the helper and the remaining 90 percent was divided between the two regular members of the crew.

(b) The amount of $19.48 was improperly allocated to "Track" and should have been allocated to one of the other listed classifications. No bonuses were paid on track installation.

Supervision $909.60

The charges under this category represent one hour of time of shift bosses for each shift during which exploration work was conducted, plus occasional time of the mine foreman or engineers performing services directly applicable to the exploration, as follows:

Shift bosses	$ 562.73
Mine foreman	199.41
Engineers	147.46
Total	$ 909.60

Technical Services $879.52

The charges under this category, amounting to $879.52, are for actual time of company geologists, surveyors and draftsmen working on the exploration project.

The total charge for supervision and technical services, $1,789.12 ($909.60 plus $879.52) is equivalent to $1.83 per foot for 978 feet of drifting accomplished to November 30, 1954, as compared with an allowable maximum of $3.00 per foot under Item I Stage I of the exploration contract.

(3) Operating Materials and Supplies

The costs chargeable to this category were ascertained by a detailed audit and analysis of material requisitions. It was determined that materials and supplies were charged to the exploration project in accord with company practices throughout its operations and that costs included freight and delivery charges and sales taxes but did not include charges for company overhead expenses. The following summarizes the costs determined by audit to be allowable:

Timber	$ 1,604.69
Explosives	4,068.33
Pipe	1,672.58
Track	1,244.66
Drill Steel and Bits	2,004.57
Electric cable installation	302.43
Vent pipe installation	117.45
Total	$11,014.71

Timber $ 1,604.69

Charges reported under this caption represent amounts charged to the Operator's code 4209-4, Timbering, and include charges for rock bolts, plates, nuts, wedges and washers used in rock bolting in addition to lumber and nails as follows:

Lumber	$ 873.10
Nails	24.20
Rock bolts	593.50
Plates, nuts, etc	113.89
Total	$1,604.69

Explosives $ 4,068.33

Charges for explosives were made each month based on the number of boxes of 1½ and 8 60% Gelodyn used on the exploration drift and average cost per box of such explosives, including electric caps, used throughout the mine. A total of 359 boxes were charged to the project at an average cost of $11.33 per box, including the necessary electric caps. Based on 978 feet of drift completed, the explosive costs amounted to $4.16 per foot of advance.

Pipe $ 1,672.58

The charges under this caption represent amounts charged to the Operator's code 4209-5, Air and Water Lines as follows:

2" and 4" pipe and fittings	$ 1,300.14
100 feet 2" Bull hose	216.00
100 feet 1½" Air hose	104.00
100 feet 3/8" Water hose	48.00
3 sacks cement	4.44
Total	$ 1,672.58

Track $ 1,244.66

The charges under this caption represent the cost of 100 pieces of 20# rail and the necessary fittings.

Drill Steel and Bits $ 2,004.57

The charges under this caption represent the monthly prorated portion of the total cost of drill steel and bits purchased or reconditioned by the Operator during the month allocated to project costs on basis of relative hours of drilling. The average cost of drill steel and bits has amounted to $2.05 per foot of advance.

Electric cable installation $ 302.43

The charges under this caption represent the cost of potheads, tape, clamps and other materials used in installing electric cables. The cost of the cable is included in (4) Operating Equipment-Purchase.

Ventilation pipe installation $ 117.45

The charges under this caption represent the cost of incidental materials used on the installation of ventilation pipe. The cost of the ventilation pipe is included in (4) Operating equipment-Purchase.

(4) Operating Equipment

Rental

There are no charges of this category.

Purchase

Equipment	Allowed Cost
Mancha Mule (used)	$ 3,662.96
Charging unit	952.75
2 Edison batteries	7,425.40
1 Battery box	374.36
2 Rock drills	1,617.10
810 feet ventilation pipe	1,138.06
2,607 feet 3 conduit cable	5,514.86
5,500 feet messenger cable	662.55
Total	$21,348.04

Battery box $ 374.36

This box was built in the Operator's mechanical department instead of being purchased. In letter dated March 17, 1954, the Field Team, Region II, advised the Operator that there would be no objection to this arrangement provided the cost was less than the estimated $572.00 authorized under Amendment No. 1 and that detailed record of labor and material costs were kept.

Ventilation pipe $ 1,138.06

The charges under this caption represent the cost of 810 feet of sheet metal (733.06) used to fabricate ventilation pipe, plus $405.00 representing costs of outside labor performing the fabrication at 50¢ per foot. Thus, the cost of ventilation pipe has averaged $1.41 per foot as compared with the estimated cost of $2.00 per foot provided in the contract for the purchase of ventilation pipe.

Depreciation

This charge, amounting to $733.50, was based on 978 feet of advance accomplished at the rate of 75¢ per foot of advance provided by the exploration contract.

(5) Initial Rehabilitation and Repairs

There were no charges of this category.

(6) New Buildings, Improvements, etc.

There were no charges of this category.

(7) Miscellaneous

Repairs to equipment

Rock Drills	$ 1,014.44
Other equipment	760.55
Total	$ 1,774.99

Rock Drills

The charges under this caption represent the monthly prorated portion of the total cost of material and labor expended in repairing rock drills allocated to project costs on basis of hours of drilling operations during the month.

Other Equipment

The charges under this caption represent the cost of materials and parts used in repairs to equipment other than rock drills. Such materials and parts are charged on basis of material requisitions.

Sampling and Analysis $34.97

Charges under this caption represent the prorate portion of cost incurred in the company's laboratory in sampling and analyzing specimens from the 1500 exploration drift under the exploration contract. The cost of sampling and analysis in connection with diamond drilling is absorbed by the Operator in accord with the contract provision that unit costs for diamond drilling shall include the necessary sampling and analysis.

Payroll taxes

Federal Insurance Contribution act		$ 243.04
Unemployment Insurance Act		
Federal	$ 28.81	
State of Washington	259.26	288.07
Total		$ 531.11

Federal Insurance Contributions Act $ 243.04

Contributions under this act, based on 2% of wages paid employees not to exceed $3,600.00 per employee during the year, are reported under this caption

Unemployment Insurance Act $ 288.07

The federal contribution represents .3 percent and the State of Washington contribution represents 2.7 percent of the wages paid to employees not to exceed $3,000.00 per employee during the year.

The State of Washington assesses unemployment tax at the 2.7 percent rate and in the following year an adjustment downward is made in the tax rate for the preceding year based on the employment record of the employer. Thus the ultimate tax liability of the operator for 1954 will not be known until 1955. The Operator will make the necessary adjustment on Form MF-104 as soon as the actual tax rate becomes known.

Liability Insurance $765.57

The charges under this caption represent the portion of the Operator's contribution under the State of Washington Industrial Insurance and Medical Aid Acts. The charge has been computed by multiplying the number of hours of time worked by workmen covered by the Act and charged to the DMEA project by the sum of the hourly rate for industrial insurance plus one-half of the hourly rate for medical aid as follows:

Industrial Insurance	$ .0727
*1/2 Medical aid	.0175
Total per hour	$ .0902

*Employees contribute 1/2 cost through payroll deductions.

Trimming $1,672.38

Charges under this category are based on amount of $1.71 per foot of advance. This rate was computed on basis of the Operator's cost experience during 1953 according to the following formula:

Item		Cost per ton
Total cost of maintenance of waste dump - 1953	$ 5,175.73	
Waste hauled - 1953	20,870 tons	
Cost per ton of waste		$ .2480
Bonus contract price for hauling waste from transfer station to surface dump		.0974
Average costs during 1953:		
Locomotive maintenance		.0039
Track maintenance		.0024
Timbering		.0052
Miscellaneous		.0002
Total cost per ton		$ .3571

This 7' x 7' drift produces 4.8 tons of muck per foot of advance. Trimming costs, based on the average cost during 1953, thus amounts to $1.71 per foot of advance.

The use of the above rate in computing charges to the exploration account was approved by the Executive Officer, DMEA Field Team, Region II, in letter dated February 5, 1954 with the provision that the rate be adequately supported at the time of audit. The auditor finds that the rate is fully supported by the Operator's records and the use thereof has not resulted in excessive charges against exploration costs.

Compressed air $ 877.27

The charges under this caption represent that portion of the cost of operating air compressors allocated to the DMEA project based on hours of drilling operations.

The cost of compressor operations includes the amounts paid Washington Water Power Company for electric current and the cost of labor and materials and supplies used. Direct allocation was made each month to mill operations, ore and waste hoisting and other uses of compressed air based on cubic feet of air used. The remaining costs were allocated to mining operations.

The portion of costs charged to the DMEA Project was determined by multiplying the percentage ratio of DMEA drill hours to total drill hours in the mine; by the percentage of consumption applicable to mining operations. The resulting percentage was applied to the total cost of compressor operations for the month to determine the amount chargeable to the DMEA project.

The method used to prorate compressed air costs is considered by this auditor to be fair and equitable and is approved.

Prior to this audit, Mr. Scott had discovered that certain improper calculations had been made resulting in undercharges to the DMEA project account. A statement of such undercharges was prepared and was reviewed by this auditor during the visit to Holden. The necessary adjustment will be accomplished on a subsequent Form MF-104.

Miners Lamps $ 96.64

The charge of $3.02 a month per miner's lamp for lamps used on the project was approved by the Executive Officer, DMEA Field Team, Region II, in letter dated February 5, 1954 with the limitation that when an audit is made the costs can be adequately supported.

The auditor considers that the rate of $3.02 and the total charge of $96.64 for the period is adequately supported.

Handling supplies $ 394.13

This charge is to cover the cost of transporting supplies from warehouses and storage points to the transfer stations within the mine. The rate of $.403 per foot of advance is based on the Operator's actual cost experience during 1953.

The use of this rate was approved by the Executive Officer, DMEA Field Team, Region II, in letter dated February 5, 1954, with the proviso that the rate be adequately supported at the time of audit. The auditor finds that the rate is fully supported by the Operator's records and the use thereof has not resulted in excessive charges against exploration costs.

(8) Contingencies

There were no charges under this category as of November 30,1954.

IV. CONCLUSIONS

The audit disclosed that all costs charged to this project are reasonable and proper under the terms of the contract. No adjustments have been made between "Items of Costs" as shown on November, 1954, Form MF-104. An audit summary, Exhibit "A", is attached.

This contract provides an "allowable maximum" of $195,260.00 for "Estimated Total Actual Cost of Item I". This amount is comprised of $155,475.00 and $39,785.00 applicable to Stages I and II, respectively, which are not individually designated as allowable maximums. The status of items expressly designated as allowable maximums under ItemI Stage I, are as follows:

Item I, Stage I	Allowable Maximum	Acceptable Cost	Balance
Supervision and technical services	* $ 9,300.00	$ 1,789.12	$ 7,510.88
Purchased equipment	31,607.01	21,348.04	10,258.97
Depreciation	2,325.00	733.50	1,591.50
Totals	$43,232.01	$23,870.66	$19,361.35

*An amount of $3.00 per foot of advance is stated in the contract to be the allowable maximum for supervision and technical services. At the time of the interim audit such charges averaged $1.83 per foot of advance.

At the conclusion of the audit on January 11, 1955 the findings were discussed with Mr. R. Scott, chief accountant, and Mr. J. S. Roper, manager of Chelan Division, Howe Sound Company. On January 14, 1955 the findings were discussed with Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region II.

C. E. Fisher

January 14, 1955 — 12 — C. E. Fisher, Auditor

Exhibit "A" AUDIT SUMMARY Idm-2644

	Item I, Stage I			
	Totals Nov.10-104	Corrected Distribution	Disallowed By Audit	Accepted Costs
(1) Unit Costs	$	$	$	$
Drilling	2,942.50	2,942.50		2,942.50
Diamond drill stations	1,280.00	1,280.00		1,280.00
(2) Labor and Supervision				
Labor	18,601.88	18,601.88		18,601.88
Supervision	909.60	909.60		909.60
Technical services	879.52	879.52		879.52
(3) Operating Matl. & Supplies				
Timber	1,604.69	1,604.69		1,604.69
Explosives	4,068.33	4,068.33		4,068.33
Pipe	1,672.58	1,672.58		1,672.58
Track	1,244.66	1,244.66		1,244.66
Drill steel & bits	2,004.57	2,004.57		2,004.57
Electric cable installation	302.43	302.43		302.43
Ventilation pipe installation	117.45	117.45		117.45
(4) Operating Equipment				
Rental				-0-
Purchase	21,348.04	21,348.04		21,348.04
Depreciation	733.50	733.50		733.50
(5) Initial Rehabilitation & Repairs				-0-
(6) New Bldgs., Improvements, etc.				-0-
(7) Miscellaneous				
Repairs to equip.	1,774.99	1,774.99		1,774.99
Sampling and analysis	34.97	34.97		34.97
Payroll taxes	531.11	531.11		531.11
Liability Insurance	765.57	765.57		765.57
Trucking	1,672.38	1,672.38		1,672.38
Compressed air	877.27	877.27		877.27
Miner's lamps	96.64	96.64		96.64
Handling supplies	394.13	394.13		394.13
Totals	$63,856.81	$63,856.81	$ -0-	$63,856.81

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DATE	INITIALS	CODE

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

TERMINATION AGREEMENT

It is agreed this 24th day of July, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Howe Sound Company, hereinafter called the "Operator," parties to Amended Exploration Project Contract IDM-E644 (Docket No. 3142), dated June 25, 1954, hereinafter called the "Contract," that:

1. Effective June 1, 1957, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute to allowable costs incurred prior to said effective date; and shall contribute to allowable costs incurred or to be incurred beginning with said effective date in performing winding-up and settlement actions provided for in the Contract, including (a) the preservation and disposal of property to the cost of which the Government has contributed, and (b) the making and rendering of reports and accounts.

3. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including (a) the disposal of any facilities, buildings, fixtures, equipment, or other items to the cost of which the Government has contributed; and (b) the rendering of the final report and final account. All rights of the Government under the Contract with respect to records, audits, and all rights with respect to recovery of overpayment, are preserved.

Long
Sharpe
Russell
Chambers
Martin
Johnson

4. The Operator, as principal if the Operator is the producer or as surety if the Operator is not the producer, shall pay to the Government the royalty on production provided for in the Contract in the same manner and amount, for the same period, and subject to the same conditions as if a certification of discovery or development has been made, such certification being hereby waived.

5. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said Contract, except as otherwise provided for in this Termination Agreement.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By C. P. Mittendorf
Administrator, Defense Minerals
Exploration Administration

HOWE SOUND COMPANY

By William T. Holmes

Title Secretary-Treasurer

Docket Copy

13

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

AMENDMENT NO. 3

It is agreed this 10th day of October, 1956, between the United States of America, acting through the Department of the Interior, and Howe Sound Company, that Amended Exploration Project Contract Idm-2644 (Docket No. DMEA-3142), dated June 25, 1954, as amended (hereinafter referred to as the "Amended Contract"), is further amended as follows:

1. The completion date, extended by Amendment No. 2 to July 1, 1956, is hereby further extended to January 1, 1958.

2. The maximum period for royalty payments and lien for the payment thereof, provided for in the Amended Contract, is extended to thirteen years.

3. All the work delineated in Exhibit "A" attached to Amendment No. 2 (dated January 17, 1956) to the Amended Contract, shall hereafter be referred to as Stage I work.

4. The following Stage II work and costs are added to the Amended Contract.

STAGE II

Description of the Work

A. Underground diamond drilling

1. One diamond drill hole, not to exceed 1200 feet in length, EX size or larger, shall be drilled from the face of the Buckskin drift, 1500 level.

2. Five drill holes, not to exceed a total length of 3000 feet, EX size or larger, shall be drilled downward from the 2500 level.

B. Surface drilling

1. Northwest Area. Three holes shall be drilled from the surface, not to exceed a total length of 3000 feet, in the Northwest Area. All diamond drilling done in bedrock shall be AX size or larger.

2. Ebbutt's Breccia Area. Three holes shall be diamond drilled, not to exceed a total length of 1000 feet, AX size or larger, in the Ebbutt's Breccia Area.

C. All drill holes shall be logged and all drill core shall be made available to the Government for examination.

All significantly mineralized core shall be properly sampled and the samples assayed for gold, silver, copper and zinc. Assays, logs of drill holes, and proper plan maps and sections showing progress of the work, shall be furnished to the Government.

D. The location, direction and inclination of all diamond drilling, both underground and from the surface, shall be subject to prior approval of the Government.

ESTIMATED COSTS OF STAGE II

I. Agreed Unit Costs

1500 level	
1200 feet of diamond drilling at $3.70 per ft.	$4,440.00
2500 level	
3000 feet of diamond drilling at $4.25 per ft.	12,750.00
30 samples to be assayed at $3.50 per sample	105.00
Total agreed unit costs	$17,295.00

The Government will contribute to the agreed unit costs set forth above as they accrue for units of work actually performed, in lieu of, and without regard to, the actual costs incurred for such work.

Actual Costs, Surface Drilling

(1) Independent Contracts

Drilling and driving pipe through overburden estimated 600 feet at $10.00 per ft.	$6,000.00
Diamond drilling, to depth of 500 feet estimated 1900 feet at $6.00 per ft.	11,400.00
Diamond drilling, depths from 500 to 1000 feet, estimated 1500 feet at $7.30 per ft.	10,950.00

Reaming and casing of drill holes, estimated 680 feet at $2.50 per ft.		$1,700.00
Cementing of drill holes, estimated 680 feet at $2.50 per ft.		1,700.00
Total estimated cost, Independent Contracts		$11,750.00

(2) Labor, Supervision, Consultants

(a) and (b) Supervising engineer - geologist, 7 months at $600.00 monthly, half time $300.00	$2,100.00	
(c) Labor Engineer's helper 70 days at $15.00	1,050.00	3,150.00

(3) Operating materials and supplies

240 core boxes at $2.50 each		600.00

(4) Operating Equipment

None

(5) Rehabilitation and repairs

None

(6) New Buildings, improvements, installations

None

(7) Miscellaneous

Mobilization of surface drill	$755.00	
3 drill moves at $65.00 each	195.00	
30 samples to be assayed at $3.50 each	105.00	1,055.00

(8) Contingencies

None

Summary of Costs

Estimated Total Costs Stage I (See Amendment No. 2 to Amended Contract)	$309,990.00
Estimated Total Costs Stage II	53,850.00
Estimated Total Cost of Project	$363,840.00
Government's Participation at 50%	$181,920.00

Executed in sextuplicate the day and year first above written.

UNITED STATES OF AMERICA

By C O Mitteudorf
Administrator, Defense Minerals
Exploration Administration

Indrity 10/9/56
Dunyon
"Appd. Col. Gill."
Charles Selfridge

HOWE SOUND COMPANY

By [illegible]

Title [illegible]

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AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

AMENDMENT NO. 3

It is agreed this 6th day of August, 1956, between the United States of America, acting through the Department of the Interior, and Howe Sound Company, that Amended Exploration Project Contract Idm-E644 (Docket No. DMEA-3142), dated June 25, 1954, as amended (hereinafter referred to as the "Amended Contract"), is further amended as follows:

1. The completion date, extended by Amendment No. 2 to July 1, 1956, is hereby further extended to July 1, 1957.

2. The maximum period for royalty payments and lien for the payment thereof, provided for in the Amended Contract, is extended to twelve years.

3. All the work delineated in Exhibit "A" attached to Amendment No. 2 (dated January 17, 1956) to the Amended Contract, shall hereafter be referred to as Stage I work.

4. The following Stage II work and costs are added to the Amended Contract.

STAGE II

Description of the Work

A. Underground diamond drilling

1. One diamond drill hole, not to exceed 1200 feet in length, EX size or larger, shall be drilled from the face of the Buckskin drift, 1500 level.

2. Five drill holes, not to exceed a total length of 3000 feet, EX size or larger, shall be drilled downward from the 2500 level.

B. Surface drilling

1. Northwest Area. Three holes shall be drilled from the surface, not to exceed a total length of 3000 feet, in the Northwest Area. All diamond drilling done in bedrock shall be AX size or larger.

2. Ebbutt's Breccia Area. Three holes shall be diamond drilled, not to exceed a total length of 1000 feet, AX size or larger, in the Ebbutt's Breccia Area.

C. The location, direction and inclination of all diamond drilling, both underground and from the surface, shall be subject to prior approval of the Government.

ESTIMATED COSTS OF STAGE II

I. Agreed Unit Costs

1500 level	
1200 feet of diamond drilling at $2.75 per ft.	$3,300.00
2500 level	
3000 feet of diamond drilling at $3.00 per ft.	9,000.00
Total agreed unit costs	$12,300.00

The Government will contribute to the agreed unit costs set forth above as they accrue for units of work actually performed, in lieu of, and without regard to, the actual costs incurred for such work.

Actual Costs, Surface Drilling

(1) Independent Contracts

Drilling and driving pipe through overburden estimated 600 feet at $10.00 per ft.	$6,000.00
Diamond drilling, to depth of 500 feet estimated 1900 feet at $6.00 per ft.	11,400.00
Diamond drilling, depths from 500 to 1000 feet, estimated 1500 feet at $7.30 per ft.	10,950.00
Reaming and casing of drill holes, estimated 680 feet at $2.50	1,700.00
Cementing of drill holes, estimated 680 feet at $2.50	1,700.00
Total estimated cost, Independent Contracts	$31,750.00

(2) Labor Supervision, Consultants

(a) Supervision - None

(b) Technical Services
Engineer - Geologist - 7 months at $450.00 mo. $3,150.00

(c) Labor - None

(3) Operating materials and supplies

240 core boxes at $2.50 each 600.00

(4) Operating Equipment

None

(5) Rehabilitation and repairs

None

(6) New Buildings, improvements, installations

None

(7) Miscellaneous

Mobilization of surface drill	$755.00	
3 drill moves from hole to hole at $65.00 each	195.00	950.00

(8) Contingencies

None

Summary of Costs

Estimated Total Costs Stage I (See Amendment No. 2 to Amended Contract)	$309,990.00
Estimated Total Costs Stage II	48,750.00
Estimated Total Cost of Project	$358,740.00
Government's Participation at 50%	$179,370.00

Executed in sextuplicate the day and year first above written.

UNITED STATES OF AMERICA

By C. O. Mitteudorf
Administrator, Defense Minerals
Exploration Administration

Indorsed 7/31/56
Duncan
Marwood
"Appd. Sol. Off."
Chambers
Martin
Johnson

HOWE SOUND COMPANY

By _____

Title _____

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FEB 17 1956

AMENDMENT NO. 2
to
AMENDED EXPLORATION PROJECT CONTRACT Idm-E644
dated June 23, 1954
DOCKET NO. DMEA-3142
between
THE UNITED STATES OF AMERICA
and
HOWE SOUND COMPANY

It is agreed this 17th day of January, 1956, that the Amended Contract, as amended, is further amended as follows:

1. The completion date, which Article 3 of the Amended Contract prescribes as "not later than December 7, 1955," is hereby extended to July 1, 1956.

2. The maximum period for royalty payments and lien for the payment thereof, provided for in the Amended Contract, is extended to eleven years.

3. That portion of the second sentence of Article 10 of the Amended Contract beginning with the word "Provided" is deleted.

4. All of Exhibit "A" attached to the Amended Contract (except the two maps attached thereto which are incorporated by reference in Exhibit "A" attached to this Amendment) is deleted, and the attached Exhibit "A" is substituted.

This amendment shall not be construed to increase the estimated total cost of the project or the aggregate total amount which the Government may be required to contribute.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C O Mitteustedt
Administrator, Defense Minerals
Exploration Administration

HOWE SOUND COMPANY

By [illegible]

Title Vice Pres.

Indexing [illegible] 1/5/56
"Appd. Sol. Off."
Klugescheid
Talbert
Selbridge
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AMENDED EXPLORATION PROJECT CONTRACT
MINE SOUND COMPANY
DOCKET NO. DMRA-3142

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EXHIBIT "A" of AMENDMENT NO. 2

Description of the Work

The purpose of the project is to explore for copper ores. The work is to be done on two levels, namely, the 1,500 and the 2,500, of the Holden Mine.

1500 Level

The work consists of drifting and crosscutting not in excess of 4,100 feet in an easterly direction from the existing drift on the 1500 level of the Holden Mine, and diamond drilling not in excess of 7,416 feet to test the eastern continuations of the general rock series which have been productive in the Holden Mine. The work is indicated roughly on the map entitled "Longitudinal Section through Holden Mine and Buckskin Mt., Nov. 5, 1953, DMRA-3142," which was attached to Exhibit "A" of the Amended Contract and is incorporated herein by reference. The location, direction, and inclination of the diamond drill holes shall be subject to Government approval. There shall be 10 diamond drill stations constructed.

2500 Level

The work consists of exploring in the Holden Mine at deeper horizons than are now known, by crosscutting and by diamond drilling from the 2500 level of this mine, roughly as indicated on the map dated April 2, 1954, entitled "Mine Sound Company, Chelan Division, Proposed Exploration below 2500 Level," which was attached to Exhibit "A" of the Amended Contract and is incorporated herein by reference. The location, direction, and extent of all work are subject to the approval of the Government. The crosscutting shall not be in excess of 1,368 feet and the diamond drilling shall not be in excess of 7,000 feet. Three transfer stations, each approximately 1,000 cubic feet in size, and 6 diamond-drill stations shall be constructed on this level.

Requirements Applicable to Both Levels

All drifts and crosscuts are to be of the approximate maximum size of 7 feet by 7 feet and timbered where necessary.

All diamond drilling shall be of EX size or larger.

Diamond drill stations shall be approximately 1,000 cubic feet in size.

All drifts and crosscuts shall be sampled at 5-foot intervals where mineralized, all diamond-drill cores shall be sampled in 5-foot core sections where mineralized, and proper assays shall be made of all samples. The Government shall be kept informed monthly as to the results of such sampling and assaying. Progress maps shall be prepared at the end of each month and copies furnished to the Government.

Estimated Costs of the Project

I. Agreed Unit Costs

1500 Level

Diamond-drill stations		
9 @ $490.00/ea.	$ 4,410.00	
1 @ $300.00/ea.	300.00	
		$ 4,710.00
Diamond drilling		
7,416 feet @ $2.75/ft. 1/	20,394.00	20,394.00
Total Agreed Unit Costs, 1500 Level		25,104.00

2500 Level

Diamond drill stations		
6 @ $600.00/ea.	3,600.00	
Transfer stations		
3 @ $500.00/ea.	1,500.00	5,100.00
Diamond drilling		
7,000 feet @ $3.00/ft. 1/	21,000.00	21,000.00
Total Agreed Unit Costs, 2500 Level		$ 26,100.00

The Government will contribute to the agreed unit costs set forth above as they accrue for units of work actually performed in lieu of actual costs. These agreed unit costs include all costs of the work set forth under the heading "Agreed Unit Costs," except as otherwise specifically provided below under the heading "Actual Costs."

1/ The cost of assaying is included in the unit price.

The work set forth under the heading "Agreed Unit Costs" may be performed by independent contractor without reference to the provisions relating to independent contracts and contractors in Articles 4(a) and (b) and 6(a)(1) of the contract form.

II. Actual Costs for drifting and crosscutting and for certain other costs specifically allowable below in connection with the Agreed Unit Costs set forth above. (*Indicates Allowable Maximum.)

(1) Independent Contracts

None

(2) Labor, supervision, consultants

Detailed schedules for labor and for superintendence and consultants are waived. The labor estimated here is for work other than drill stations, transfer stations, and diamond drilling. Costs of labor which are higher than the wage rates prevailing in the area shall not be allowable. The actual costs of all supervision and consultants (exclusive of the cost of surveying diamond drill holes under the heading "Miscellaneous") shall be allowable only in connection with drifting and crosscutting and at not to exceed an aggregate cost of $3.00 per foot* of drifting and crosscutting.

Labor	$95,915.75	
Supervision and technical services	16,404.00*	$112,319.75

(3) Operating materials and supplies

A detailed schedule is waived. Upon the completion or termination of the project, the Government may fix the value of its equity in all pipe and track purchased under this category of cost as 10 percent of the cost price and may deduct this percentage from vouchers due the Operator.

Operating materials and supplies	72,472.84

(4) Operating equipment

To be rented

None

To be purchased 2/

Upon the completion or termination of the project, the Government may (a) fix the value of its equity in the battery locomotive, charging unit, 2 Edison batteries, battery box, all 3-conductor cable, messenger cable, diamond drill, and surveying instrument at 25 percent of the delivered cost price of each; (b) fix the value of its equity in the rock drills and vent pipe as 10 percent of the delivered cost price of each; and (c) deduct these percentages from vouchers due the Operator.

1 Mancha Electric mule - used	$ 3,662.96	
1 Charging unit	952.75	
2 Edison batteries	7,425.40	
1 Battery box	374.36	
2 Rock drills	1,617.10	
1 Tro-Pari borehole survey instrument	1,136.81	
1 No. 1-U Diamond drill	2,000.00	
3,500 feet of ventilation pipe @ $2.00/ft.	7,000.00 3/	
6,100 feet of Messenger cable	684.03	
1,223 feet Type W-600 volt-49 strand cable	1,979.80	
5,007 feet #6 Tyrex cable	7,706.13	$ 34,539.14*

2/ The items set forth under this category may be used in connection with the work of making drill stations and transfer stations, and of diamond drilling, and the cost is not included in the agreed unit costs of said work.

3/ So much of the funds allowable for ventilation pipe as are not spent for ventilation pipe may, with the prior approval of the Government, be used for any item of actual costs allowable under this contract except such items of actual cost as are subject to an allowable maximum.

To be furnished by Operator

All equipment necessary for the project and not included in any schedules herein shall be furnished by the Operator. In lieu of the detailed schedule of requirements and in lieu of depreciation, the Operator shall be paid the fixed sum of 75 cents per foot for drifting and crosscutting.

5,468 feet of drifting and crosscutting @ $0.75/Ft.	$ 4,101.00*

(5) Rehabilitation and repairs

None

(6) New buildings, improvements, installations

None

(7) Miscellaneous

Costs of sampling and assaying of drifts and crosscuts are allowable for the work on the 1500 level. Costs of surveying of diamond drill holes are not allowable on this level.

Costs of assaying and sampling of crosscuts are not allowable on the 1500 level.

Costs of surveying diamond drill holes are allowable on the 2500 level.

Miscellaneous	23,908.27

(8) Contingencies

To cover, among other things, increases in labor costs for drifting and crosscutting.	11,445.00*

SUMMARY OF PROJECT COSTS

Estimated Total Actual Costs on 1500 and 2500 Levels	$124,246.86*
Estimated Agreed Unit Costs for 1500 Level	23,184.00*

Estimated Agreed Unit Costs for 2500 Level	$ 26,100.00 *	
Estimated Cost of Machinery to be Purchased	34,539.14*	
Estimated Total Cost of the Project		$309,990.00*
Government Participation @ 50%		$154,995.00*

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EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

AMENDMENT NO. 1

It is agreed this 28th day of January, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Howe Sound Company, that Amended Exploration Project Contract Idm-E644 (Docket No. DMEA-3142), dated June 25, 1954, is amended effective June 25, 1954, as follows:

1. In Article 2, the reference to "28 unpatented claims" is changed to read "36 unpatented claims".

2. In Annex II, the following claims are added at the end of the list of unpatented claims:

Name of Claim	Book	Page
Cliff	503	651
Crest	503	653
Lakeside No. 2	503	655
Lakeside No. 3	503	657
Lakeside No. 4	503	659
Pine Tree No. 2	503	661
Pine Tree No. 3	503	663
Pine Tree No. 4	503	665

All the land referred to in Article 2, as amended herein, is shown on the map entitled "Howe Sound Company Chelan Division Claim Map, . . .Date 4-2-54. . .Amended 12-22-54", attached hereto and made a part hereof.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, the amount of any item designated as "allowable maximum," nor the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

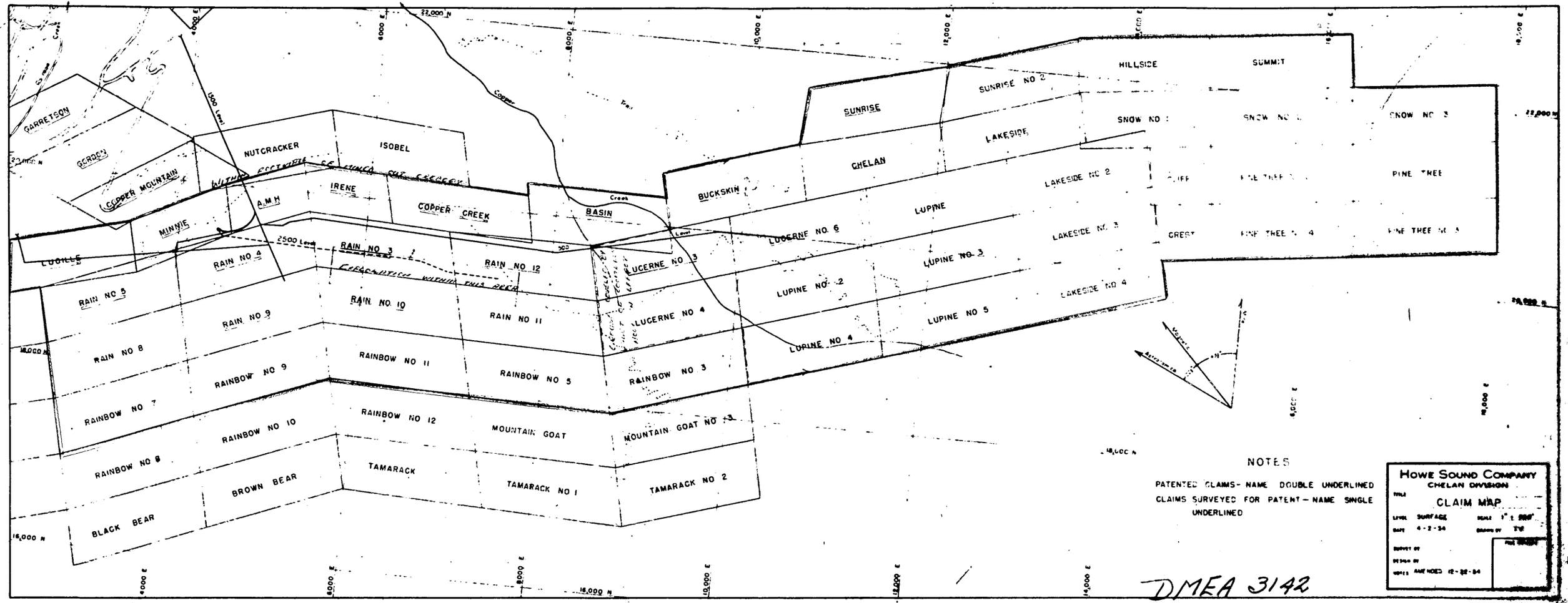
THE UNITED STATES OF AMERICA

By [signature]
Administrator, Defense Minerals Exploration Administration

Selfridge
Rubin
Appd. Sol. DM

HOWE SOUND COMPANY

By [signature]
Vice Pres.


GARRETSON
GERDES
COPPER MOUNTAIN
LUCILLE
MINNIE
A.M.H.
NUTCRACKER
ISOBEL
IRENE
COPPER CREEK
BASIN
BUCKSKIN
SUNRISE
CHELAN
SUNRISE NO 2
LAKESIDE
HILLSIDE
SUMMIT
SNOW NO 1
SNOW NO 2
SNOW NO 3
LAKESIDE NO 2
LAKESIDE NO 3
LAKESIDE NO 4
LUPINE
LUPINE NO 3
LUPINE NO 2
LUPINE NO 4
LUPINE NO 5
LUCERNE NO 6
LUCERNE NO 3
LUCERNE NO 4
PINE TREE
PINE TREE NO 4
PINE TREE NO 5
CREST
RAIN NO 3
RAIN NO 4
RAIN NO 5
RAIN NO 8
RAIN NO 9
RAIN NO 10
RAIN NO 11
RAIN NO 12
RAINBOW NO 7
RAINBOW NO 8
RAINBOW NO 9
RAINBOW NO 10
RAINBOW NO 11
RAINBOW NO 12
RAINBOW NO 5
RAINBOW NO 3
MOUNTAIN GOAT
MOUNTAIN GOAT NO 3
BROWN BEAR
BLACK BEAR
TAMARACK
TAMARACK NO 1
TAMARACK NO 2
1500 Level
2500 Level
22,000 N
20,000 N
18,000 N
16,000 N
6000 E
8000 E
10,000 E
12,000 E
14,000 E
NOTES
PATENTED CLAIMS - NAME DOUBLE UNDERLINED
CLAIMS SURVEYED FOR PATENT - NAME SINGLE UNDERLINED
HOWE SOUND COMPANY
CHELAN DIVISION
CLAIM MAP
SURVEYED
4-2-34
DRAWN BY
DATE
12-22-34

DMEA 3142

DMEA

RECEIVED
AUG - 8 1955

xxxxxxxxxxxxxxxxxxxx
No. 157 Howard Street
Spokane 4, Washington

August 3, 1955

Mr. J. M. Newmann
Howe Sound Company
Box 217
Chelan, Washington

Re: Docket No. DMEA-3142 (copper)
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-2644

Dear Mr. Newmann:

In view of the large dike that might interfere with diamond drilling from Station 1 on the 2500 level, we hereby approve your request of July 30, 1955.

By Field Team, Region I, NW District

A. E. Weissenburn, Exec. Officer
U. S. Geological Survey

Wing S. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (2) w/2 cys incoming
USBM (2)
USBM (AD)
Kellum

COPY

HOWE SOUND COMPANY
Chelan Division
Box 217 - Chelan, Washington

RECEIVED
AUG - 8 1955

July 30, 1955

Mr. A. E. Weissenborn,
Executive Officer, U. S. Dept. of Interior, D.M.E.A.
South 157 Howard,
Spokane 4, Washington.

Re: Docket No. D.M.E.A.-3142
Holden Mine, Chelan County, Wash.
Contract No. Idm.-E644

Dear Mr. Weissenborn:

In our diamond drilling from station 6 on the 2500 level, under Stage 1 of Item 2, we encountered a large dike which masked much of the mine zone in the longer hole. This caused us to re-examine the locations chosen for our other drill stations. We now believe it wise to move the No. 1 station about 100 feet east to about the 5700 east coordinate. Such a move will lessen any chance of diamond drilling into the steeply inclined dike which is shown on our map; Proposed Exploration Below 2500 Level, and dated April 2, 1954.

If Station 1 is moved a hundred feet closer to Station 2, then we propose to cut a transfer station at about the 5870 coordinate and crosscut toward the south for about220 feet in a direction roughly parallel to the fault plotted some 50 feet farther east. The crosscut would then make a "Y" to the drill stations, No. 1 and No. 2. The total distance for this new proposal would be about 25 feet greater than two separate crosscuts to the drill stations. Advantages for driving the single crosscut and "Y" are these:

1. There will be less interruption of ore haulage on the level by cutting only one transfer station and driving one crosscut.

2. A single crosscut would be collared east of our transformer station, located on the level at the 5800 coordinate, and would not interfere with the high voltage line to the transformers.

3. The one crosscut could be collared in better ground than could either of two crosscuts going directly to drill stations 1 and 2.

4. One transfer station would be eliminated. This saving would largely off-set the extra cost for the additional length of crosscutting.

COPY

Although the foregoing was discussed by yourself and the writer in a phone call this morning, this letter will perhaps more plainly present our proposal. We expect to finish cutting the third drill station this day and wish to start the work in Stage 2 with a minimum delay, hence our desire to secure a rather hurried approval for the proposed change.

Yours very truly,

/s/ J. M. Newman

J. M. Newman, Chief Engineer

MF-200
(June 1951)
(Revised Feb. 1952)

DOCKET NO. DMEA 3142

COMMODITY Copper

IDM * E 644
Docket Copy

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
AMENDED
EXPLORATION PROJECT CONTRACT[1]

IT IS AGREED this 25th day of June, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Howe Sound Company, a corporation duly organized and existing under and by virtue of the laws of the State of Maine
730 Fifth Avenue
New York 19, New York
and as set forth in Annexes I, II, III, and IV, attached hereto and made a part hereof:
hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Washington, County of Chelan, described as follows:[3] 28 unpatented and 10 patented claims, as set forth in Annex II and indicated on the map attached hereto and made a part hereof, entitled "Howe Sound Company, Chelan Division, Claim Map,"

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

None

(*b*) ~~That the Operator is a lessee, in possession and entitled to possession, and the Government's interest is subject and attached.~~

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, ~~within [illegible] days from the date of this contract~~ shall continue work on a project of exploration for[5] Copper ~~not later than December 7, 1955.~~ in or upon the described land; and shall bring the project to completion ~~within a period of [illegible]~~ The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided.

ARTICLE 4. *Performance of the work.*—(*a*) *Operator's responsibility.* The work shall be performed efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmens' compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. To the extent specified in Exhibit "A," attached hereto, the work may be performed by independent contractor or contractors; and work not specified in Exhibit "A" for performance by independent contractor may nevertheless be so performed upon amendment of Exhibit "A," as agreed to by the parties, to state the work to be so performed and the estimated unit costs thereof, as provided hereafter.

(*b*) *Independent contracts.*—Any independent contract for the performance of work shall be on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved), or on some basis that will indicate the amount due for work performed at any stage of the work to be performed under such independent contract. The Government shall not be nor be considered to be a party to any such independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of any such independent contract. If the reference in Exhibit "A" to any such independent contract states that the Government's approval thereof is required, the Government may refuse to participate in the cost thereof unless and until it has given its written approval of the independent contract.

(*c*) *Government may inspect.*—The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 5. *Estimated costs of the project.*—A statement of the estimated cost of the project is set forth in Exhibit "A," attached hereto. Except insofar as any item of requirement or the estimated cost thereof set forth in Exhibit "A" is there or elsewhere designated as an "allowable maximum," such items of requirement and of related cost are estimates only, and may be exceeded to the extent that the Government may from time to time approve for the most economic and beneficial performance of the work within the limitation of the total aggregate estimate of costs. The Government's approval of any such excess over the estimate for an item of requirement or related cost will be signified by its approval and payment of any invoice or voucher for payment which expressly calls attention to such excess. Items expressly designated in Exhibit "A" or elsewhere as "allowable maximum," and the total aggregate estimated cost are limitations, and any excess therein will be for the sole account of the Operator in which the Government will not participate.

ARTICLE 6. *Allowable costs of the project.*—(*a*) The costs of the project in which the Government will participate are limited to the following: See paragraph 2 of Annex I.

(1) *Independent contracts.*—Payments to independent contractors under independent contracts listed in Exhibit "A." The estimated cost of any work to be performed under an independent contract is or shall be included in the estimate of costs in Exhibit "A" in terms of the estimated numbers of units of work to be performed, the estimated amount to be paid per unit, and the estimated total amount to be paid to the independent contractor, and such estimates shall be allowable maximums above which the Government will not contribute. Regardless of the provisions of any such independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary. No such independent contract shall have the effect of increasing the estimated total cost of the exploration project contract nor the maximum amount which the Government will pay as provided in the exploration project contract.

(2) *Labor, supervision, consultants.*—Labor, supervision and technical services (including engineering and geological consultants), a schedule of which is included in the estimate of costs set forth in Exhibit "A." The requirements and related estimated costs for supervision and technical services are allowable maximums.

(3) *Operating materials and supplies.*—Necessary materials and supplies including items of equipment costing less than $50.00 each, and power, water, and fuel, a schedule of which is included in the estimate of costs in Exhibit "A."

(4) *Operating equipment.*—Any operating equipment to be rented or purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or the allowable depreciation, as the case may be, a schedule of which is included in Exhibit "A." Any items listed as owned and to be furnished by the Operator, and related ~~initial~~ allowable depreciation, are allowable maximums.

(5) *Rehabilitation and repairs.*—Any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and to be devoted to the purposes of the exploration contract, a schedule of which is included in the estimate of costs set forth in Exhibit "A." These items are allowable maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, or installations to be purchased, installed, or constructed for the purposes of the exploration work, with the estimated cost of each, a schedule of which is included in the estimate of costs in Exhibit "A." All of these items are allowable maximums.

(7) *Miscellaneous.*—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.

(8) *Contingencies.*—Such other necessary, reasonable direct costs of performing the exploration work, within the limit of the total aggregate estimate of costs, whether or not included in any schedule of costs in Exhibit "A," as may be approved by the Government in the course of the work, as indicated by its approval and payment of invoices and vouchers.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) The Government's payments in all cases will be based on actual, necessary costs (including contract unit prices) incurred not in excess of any "allowable maximum," and not in excess of the fixed percentage of the total aggregate estimated cost. Costs will be considered to be incurred only as they are or become due and payable.

(*c*) 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 this contract, shall be allowed as costs of the project in which the Government will participate.

ARTICLE 7. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operators shall provide the Government with monthly reports of work performed and costs (including contract unit prices) incurred under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of costs incurred on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) Compliance with requirements.—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account as provided in Article 12.

ARTICLE 8. *Payments by the Government.*—(*a*) The Government will pay 50 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $154,995.00, which is 50 percent of $309,990.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract.

(*b*) The Government may make any payment or payments direct to independent contractors and to suppliers, for the account of the Operator, rather than to the Operator.

ARTICLE 9. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) percent of any such net amounts, plus one-half (½) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts.

(For instance: The percentage royalty on a net amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(*b*) As here used, "net smelter returns," "net concentrator returns," and "other net amounts realized from the sale or other disposition," mean gross revenue from sales; or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income-tax determination.

(*c*) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations. **See Annex IV, substituted for Article 9.**

ARTICLE 10. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided,* that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 11. *Title to and disposition of property.*—All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

ARTICLE 12. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining.

ARTICLE 13. *Changes and added provisions.* ______

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By ______
Administrator, Defense Minerals Exploration Administration

HOWE SOUND COMPANY
(Operator)

By ______

I, WILLIAM T. HOLMES, certify that I am the secretary of the corporation named as Operator herein; that VINTON H. CLARKE, who signed this contract on behalf of the Operator, was then Vice President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

______

[CORPORATE SEAL]

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

ANNEX I

WHEREAS, the parties to this Amended Exploration Project Contract are also parties to Exploration Project Contract Idm-E644 (Docket No. DMEA-3142), dated December 7, 1953, as amended, hereinafter called the "Prior Contract"; and

WHEREAS, the parties desire to increase the scope of the project, to increase the estimated total cost thereof, and to restate their agreement;

NOW THEREFORE, it is mutually agreed that:

1. Effective as of December 7, 1953, the Prior Contract is amended and superseded by this Amended Contract in which all rights and obligations of both parties are fully merged.

2. To the extent that costs are set forth in Exhibit "A" as "agreed unit costs," they are in lieu of actual costs that would otherwise be allowable costs of the project as provided in Article 6(a) of the Amended Contract form.

3. The Operator hereby releases and agrees to save the Government harmless from all claims or demands arising out of the Prior Contract.

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

ANNEX II

The land referred to in Article 2 of the Amended Contract form and in Annex IV attached thereto consists of the following 28 unpatented and 10 patented claims, as follows:

Unpatented Claims	Book	Page No.
Basin	218	368
Buckskin	218	367
Chelan	218	367
Hillside	254	63
Lakeside	152	540
Lucerne No. 3	218	215
Lucerne No. 4	254	29
Lucerne No. 6	218	365
Lupine	218	354
Lupine No. 2	503	231
Lupine No. 3	503	233
Lupine No. 4	503	235
Lupine No. 5	503	237
Pine Tree	254	64
Rain No. 8	218	230
Rain No. 11	218	217
Rain No. 12	218	218
Rainbow No. 3	218	227
Rainbow No. 5	218	217
Rainbow No. 7	218	229
Rainbow No. 9	218	225
Rainbow No. 11	218	221
Summit	254	66
Snow No. 1	254	65
Snow No. 2	254	65
Snow No. 3	254	65
Sunrise	152	569
Sunrise No. 2	152	570

Patented Claims	Numbers
AMH	1,054,835
Copper Creek	1,068,711
Irene	1,054,835
Lucille	1,069,269
Minnie	1,054,835

Patented Claims	Numbers
Rain No. 3	1,111,729
Rain No. 4	1,111,729
Rain No. 5	1,111,729
Rain No. 9	1,111,729
Rain No. 10	1,111,729

The location notices of the unpatented claims are recorded with the Chelan County Auditor at Wenatchee, Washington.

Any land hereafter acquired by the Operator for the purposes of Stage II of Item I of Exhibit "A" shall be included in Article 2 of this Amended Contract.

Excepted from the land described in this Annex II is:

All production from the presently known Holden ore body above the 2500 level between coordinates 3500 E and 7500 E as shown on the ore reserve map (submitted by the company) entitled, "Howe Sound Company, Chelan Division, East-West Section, Holden Mine, Showing Ore Reserve Blocks, Scale: 1 In. = 200 Ft., Dec. 31, 1952." A copy of this map is contained in Docket No. DMEA-3142 and is incorporated herein by reference.

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

ANNEX III 1/

Materials and Supplies. For the purpose of determining the Government's interest in materials or supplies remaining upon any termination of the work, they shall be considered in groups or categories (such as pipe, or explosives, or rails, or drill steel), and if the original cost of the remaining unexpended portion of any such group or category exceeded $50, the Government shall have an interest therein as provided in Article 11 of the contract form.

Equities in Equipment. Unless expressly permitted by provisions in Exhibit "A", the operator shall not procure equipment or any other item under a rental-purchase agreement, an installment-purchase agreement, any agreement which creates or builds up an equity or interest in the thing procured which can be converted to legal title only by further payment or some other consideration, or any agreement other than for straight rental or cash purchase and delivery.

Preservation of Property. Until the final disposal of any equipment or other property in which the Government has an interest or equity, the operator shall preserve and protect same for the mutual best interests of the parties, any reasonable and necessary cost thereof to be treated as an allowable cost of the exploration work to which the Government will contribute.

1/ The provisions in this annex apply only to materials and supplies, equipment, and property to the cost of which the Government has contributed on an actual-cost basis; they have no application to costs contributed to on a unit-cost basis.

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

ANNEX IV

The following provisions are in lieu of Article 9 :

Repayment by Operator.--a. Certification.--If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Royalty on production.--The Operator, as principal, if the Operator is the producer, or as surety, if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

c. Basis for computation.--The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight paid by the buyer to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the

Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the raw ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

d. Unsold production.--If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

e. Percentages of royalty.--The percentages of the Government's royalty shall be as follows:

> One and one-half ($1\frac{1}{2}$) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half ($\frac{1}{2}$) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.
>
> (For instance: the royalty on an amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) percent; on an amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

f. Lien for payment.--To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

g. Notice to purchasers.--The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

h. No obligation to produce.--Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

i. Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

58694

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-3142

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for copper ores. The work is divided into two major items, each of which is subdivided into two stages.

ITEM I

Item I consists of drifting and crosscutting not in excess of 4,100 feet in an easterly direction from the existing drift on the 1500 level of the Holden Mine, and diamond drilling not in excess of 7,000 feet to test the eastern continuations of the general rock series which have been productive in the Holden Mine. The work is indicated on the attached map entitled "Longitudinal Section through Holden Mine & Buckskin Mt., Nov. 5, 1953, D.M.E.A. 3142," and is to be done in two stages. The work of the second stage is subject to the prior approval of the Government which shall not be granted unless and until the Operator acquires an interest, deemed adequate by the Government, in the land on which the work in Stage II is to be performed. The location, direction, and inclination of the diamond-drill holes shall be subject to Government approval. All drifts and crosscuts are to be of the approximate maximum size of 7 feet by 7 feet and timbered where necessary.

All drifts and crosscuts shall be sampled at 6-foot intervals, all diamond-drill cores shall be sampled in 5-foot core sections, and proper assays shall be made of all samples. The Government shall be kept informed monthly as to the results of such sampling and assaying. Progress maps shall be prepared at the end of each month and copies furnished to the Government.

Stage I

This stage consists of not more than 3,100 feet of drifting, the construction of 8 diamond-drill stations, and not more than 5,000 feet of diamond drilling.

Stage II

This stage consists of not more than an additional 1,000 feet of drifting and crosscutting, the construction of 2 diamond-drill stations, and not more than 2,000 feet of diamond drilling.

ITEM II

Item II consists of exploring in the Holden Mine at deeper horizons than are now known, by crosscutting and by diamond drilling from the 2500 level of this mine as indicated on the attached map entitled "Howe Sound Company, Chelan Division, Proposed Exploration below 2500 Level." The work shall be done in two stages with performance of the second stage subject to the prior approval of the Government. The location, direction, and extent of all work under both stages are subject to the approval of the Government.

The specifications for the work set forth under Item I apply equally to the same work under this Item II.

Stage I

This stage consists of not more than 1,000 feet of crosscutting, 4 transfer stations, 4 diamond-drill stations, and 4,000 feet of diamond drilling.

Stage II

This stage consists of not more than 450 feet of crosscutting, 2 transfer stations, 2 diamond-drill stations, and 2,000 feet of diamond drilling.

Estimated Costs of the Project

Agreed Unit Costs

ITEM I

Stage I

Diamond-drill stations 8 @ $490.00/ea.	$3,920.00

Diamond drilling 5,000 feet @ $2.75/ft. 1/	$13,750.00	$17,670.00
Stage II		
Diamond-drill stations 2 @ $490.00/ea.	$980.00	
Diamond drilling 2,000 feet @ $2.75/ft. 1/	5,500.00	6,480.00
Total Agreed Unit Costs, Item I		$24,150.00

ITEM II

Stage I		
Transfer stations 4 @ $500.00/ea.	$2,000.00	
Diamond-drill stations 4 @ $600.00/ea.	2,400.00	
Diamond drilling 4,000 feet @ $3.00/ft. 1/	12,000.00	16,400.00
Stage II		
Transfer stations 2 @ $500.00/ea.	$1,000.00	
Diamond-drill stations 2 @ $600.00/ea.	1,200.00	
Diamond drilling 2,000 feet @ $3.00/ft. 1/	6,000.00	8,200.00
Total Agreed Unit Costs, Item II		$24,600.00

The Government will contribute to the agreed unit costs set forth above as they accrue for units of work actually performed in lieu of actual costs. These agreed unit costs include all costs of the work set forth under

1/ The cost of assaying is included in the unit price.

the heading "Agreed Unit Costs," except as otherwise specifically provided below under the heading "Actual Costs." The work set forth under the heading "Agreed Unit Costs" may be performed by independent contractor without reference to the provisions relating to independent contracts and contractors in Articles 4 (a) and (b) and 6 (a)(1) of the contract form.

Actual Costs for drifting and crosscutting under Item I and Item II and for certain other costs specifically allowable below in connection with the Agreed Unit Costs set forth above.
(* Indicates allowable maximum)

(1) Independent contracts

None

(2) Labor, supervision, consultants

Detailed schedules for labor and for supervision and consultants are waived. The labor estimated here is for work other than drill stations, transfer stations, and diamond drilling. Costs of labor which are higher than the wage rates prevailing in the area shall not be allowable. The actual costs of all supervision and consultants (exclusive of the cost of surveying diamond-drill holes under Item II under the heading "Miscellaneous") shall be allowable only in connection with drifting and crosscutting and at not to exceed an aggregate cost of $3.00 per foot* of drifting and crosscutting.

ITEM I

Stage I		
Labor	$52,700.00	
Supervision and technical services	9,300.00*	$62,000.00
Stage II		
Labor	$17,000.00	
Supervision and technical services	3,000.00*	20,000.00

ITEM II

Stage I		
Labor	$17,000.00	
Supervision and technical services	3,000.00*	$20,000.00
Stage II		
Labor	$7,650.00	
Supervision and technical services	1,350.00*	9,000.00

(3) Operating materials and supplies

A detailed schedule is waived. Upon the completion or termination of the project, the Government may fix the value of its equity in all pipe and track purchased under this category of cost as 10 percent of the cost price and may deduct this percentage from vouchers due the Operator.

ITEM I

Stage I	$40,353.99	
Stage II	12,810.00	53,163.99

ITEM II

Stage I	$12,500.00	
Stage II	5,625.00	18,125.00

(4) Operating equipment

To be rented

None

To be purchased 2/

Upon the completion or termination of the project, the Government may fix the value of its equity in the battery locomotive, charging unit, 2 Edison batteries, battery box, all 3-conductor cable, messenger cable, mucking machine, diamond drill, and surveying instrument at 25 percent of the delivered cost price of each; and may fix the value of its equity in the rock drills and vent pipe as 10 percent of the delivered cost price of each; and the Government may deduct these percentages from vouchers due the Operator.

ITEM I

Stage I

1 Titan AN Mancha mule (used)	$3,250.00	
1 Charging unit	925.00	
2 Edison batteries	6,214.40	
1 Battery box	572.00	
	10,961.40	
3% tax	328.85	
Estimated freight	514.76	$11,805.01
2 Rock drills, complete @ $1,200/ea.		2,400.00
3,500 Feet vent pipe @ $2.00/ft.		7,000.00
1,600 Feet 3-conductor cable, 2200 V, No. 1		4,800.00
1,700 Feet 3-conductor cable, 600 V, No. 1		3,100.00
1,000 Feet 3-conductor cable, 600 V, No. 2		1,200.00
1,000 Feet 3-conductor cable, 600 V, No. 6		702.00
6,100 Feet messenger cable		600.00
		31,607.01

Stage II

None

2/ The items set forth under this category may be used in connection with the work of making drill stations and transfer stations, and of diamond drilling, and the cost is not included in the agreed unit costs of said work.

ITEM II

Stage I

1 - Gardner-Denver mucking machine	$3,281.00	
2 - Rock drills @ $806.50/ea.	1,613.00	
1 - No. 1-U diamond drill	2,000.00	
1 - Tro-pari surveying instrument	1,325.00	$8,219.00*

Stage II

None

To be furnished by Operator

All equipment necessary for the project and not included in any schedules herein shall be furnished by the Operator. In lieu of the detailed schedule of requirements and in lieu of depreciation, the Operator shall be paid the fixed sum of 75 cents per foot for drifting and crosscutting.

ITEM I

Stage I	$2,325.00*	
Stage II	750.00*	3,075.00*

ITEM II

Stage I	$750.00*	
Stage II	337.00*	1,087.00*

(5) **Rehabilitation and repairs**

None

(6) **New buildings, improvements, installations**

None

(7) **Miscellaneous**

ITEM I

Costs of sampling and assaying of drifts and crosscuts are allowable under this Item. Costs of surveying of diamond-drill holes are not allowable under this Item.

Stage I	$13,516.00	
Stage II	4,360.00	$17,876.00

ITEM II

Costs of assaying and sampling of crosscuts are not allowable under this Item. Costs of surveying of diamond-drill holes are allowable under this Item.

Stage I	$4,140.00	
Stage II	1,502.00	5,642.00

(8) **Contingencies**

To cover, among other things, increases in labor costs for drifting and crosscutting.

ITEM I

Stage I	$5,673.00	
Stage II	1,865.00	7,538.00*

ITEM II

Stage I	$2,550.00	
Stage II	1,357.00	3,907.00*

SUMMARY OF PROJECT COSTS

Estimated Total Actual Cost of Item I	$195,260.00*	
Estimated Total Agreed Unit Costs of Item I	24,150.00	
Estimated Total Actual Costs of Item II	65,980.00*	
Estimated Total Agreed Unit Costs of Item II	24,600.00	
Estimated Total Cost of Project		$309,990.00*
Government Participation @ 50%		$154,995.00*

Docket No. DMEA 3142
(copper)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
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AMENDMENT NO. 1

It is agreed this 13th day of January 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, and Howe Sound Company, New York, New York

each acting in consideration of the agreement of the other to the terms hereinafter set forth, that the Exploration Project Contract Idm-E 644 of December 7, 1953 between the parties hereto be modified and amended as described in Exhibit "F" attached hereto, which, with any maps or drawings attached thereto, is made a part of this agreement. The effective date of this amendment shall be December 7 1953.

This amendment is made by authority granted the Executive Officer, DMEA Field Team, Region II, in Order No. 2684 by the Acting Secretary of the Interior.

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "Allowable Maximum."

Executed in sextuplicate the day and year first above written.

HOWE SOUND COMPANY
(Operator)

By [signature]

THE UNITED STATES OF AMERICA

By A. E. Weissenborn
A. E. Weissenborn, Exec. Officer
DMEA Field Team, Region II

MOVE SOUND COMPANY
Holden Mine
Chelan County, Washington
Exploration Project Contract No. Ida-M44
Docket No. MMRA 3142 (copper)

AMENDMENT NO. 1

Exhibit "F"

1. Under "Estimated Costs of the Project", page 3, under "To be purchased" delete:

Stage I in its entirety

and substitute:

Stage I

1 Titan AN Mancha mule (used)	$3,250.00	
1 Charging unit	925.00	
2 Edison batteries	6,214.40	
1 Battery box	572.00	
	$10,961.40	
3% tax	328.85	
Estimated freight	514.76	
Total cost		$11,805.01
2 Rock drills, complete @ $1200/ea.		2,400.00
3500 feet vent pipe @ $2.00/ft.		7,000.00
1600 feet 3-conductor cable, 2300 V, No. 1		4,800.00
1700 feet 3-conductor cable, 600 V, No. 1		3,100.00
1000 feet 3-conductor cable, 600 V, No. 2		1,200.00
1000 feet 3-conductor cable, 600 V, No. 6		702.00
4100 feet messenger cable		400.00
		$31,407.51 1/

1/ As the value of its equity in the equipment purchased, the Government shall deduct from the final contribution payable to the Operator 25% of the delivered cost price of the battery locomotive, charging unit, 2 Edison batteries, battery box, 3-conductor cable, and messenger cable, and 10% of the delivered cost price of the rock drills and vent pipe.

2. Under "Estimated Cost of Project", page 4, item 8, Contingency, delete:

Stage I	$5,673.

and substitute:

Stage I	$6,466.

MONK ROUND COMPANY
Holden Mine
Chelan County, Washington
Contract No. I4s-3644
Docket No. MSHA 3142 (copper)

Justification of Amendment No. 1

The initial capital investment and cost of installation of the substituted equipment is less than that of the deleted equipment, primarily because of the excessive amount of ventilation required to comply with safety regulations governing the use of diesel equipment underground. In addition, the Operator will be able to utilize battery equipment in the ordinary operation of this property after the completion of the contract.

J. R. McWilliams

MF-200
(June 1952)
(Revised Feb. 1952)

DOCKET NO. DMEA 3142

COMMODITY Copper

UNITED STATES OF AMERICA Docket Copy
DEPARTMENT OF THE INTERIOR IDM-E 644
DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

IT IS AGREED this 7th day of December, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] The Howe Sound Company, a corporation duly organized and existing under and by virtue of the laws of the State of Maine
730 Fifth Avenue
New York, 19, N. Y.

hereinafter called the "Operator," as follows: as set forth in Annexes I, II and III attached hereto and made a part hereof

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Washington, County of Chelan, described as follows:[3] 19 unpatented claims as set forth in Annex II and indicated on the map attached hereto and made a part hereof, entitled "Claim map of Holden Area"

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

None

(*b*) ~~That the Operator is a lessee in possession and entitled to possession and the Owner's Consent to Lease is attached~~
The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within 60 days from the date of this contract shall commence work on a project of exploration for[5] Copper

in or upon the described land; and shall bring the project to completion within a period of 2 years from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided.

ARTICLE 4. *Performance of the work.*—(*a*) *Operator's responsibility.* The work shall be performed efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmens' compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. To the extent specified in Exhibit "A," attached hereto, the work may be performed by independent contractor or contractors; and work not specified in Exhibit "A" for performance by independent contractor may nevertheless be so performed upon amendment of Exhibit "A," as agreed to by the parties, to state the work to be so performed and the estimated unit costs thereof, as provided hereafter.

(*b*) *Independent contracts.*—Any independent contract for the performance of work shall be on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved), or on some basis that will indicate the amount due for work performed at any stage of the work to be performed under such independent contract. The Government shall not be nor be considered to be a party to any such independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of any such independent contract. If the reference in Exhibit "A" to any such independent contract states that the Government's approval thereof is required, the Government may refuse to participate in the cost thereof unless and until it has given its written approval of the independent contract.

(*c*) *Government may inspect.*—The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 5. *Estimated costs of the project.*—A statement of the estimated cost of the project is set forth in Exhibit "A," attached hereto. Except insofar as any item of requirement or the estimated cost thereof set forth in Exhibit "A" is there or elsewhere designated as an "allowable maximum," such items of requirement and of related cost are estimates only, and may be exceeded to the extent that the Government may from time to time approve for the most economic and beneficial performance of the work within the limitation of the total aggregate estimate of costs. The Government's approval of any such excess over the estimate for an item of requirement or related cost will be signified by its approval and payment of any invoice or voucher for payment which expressly calls attention to such excess. Items expressly designated in Exhibit "A" or elsewhere as "allowable maximum," and the total aggregate estimated cost are limitations, and any excess therein will be for the sole account of the Operator in which the Government will not participate.

ARTICLE 6. *Allowable costs of the project.*—(*a*) The costs of the project in which the Government will participate are limited to the following:

(1) *Independent contracts.*—Payments to independent contractors under independent contracts listed in Exhibit "A." The estimated cost of any work to be performed under an independent contract is or shall be included in the estimate of costs in Exhibit "A" in terms of the estimated numbers of units of work to be performed, the estimated amount to be paid per unit, and the estimated total amount to be paid to the independent contractor, and such estimates shall be allowable maximums above which the Government will not contribute. Regardless of the provisions of any such independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary. No such independent contract shall have the effect of increasing the estimated total cost of the exploration project contract nor the maximum amount which the Government will pay as provided in the exploration project contract.

(2) *Labor, supervision, consultants.*—Labor, supervision and technical services (including engineering and geological consultants), a schedule of which is included in the estimate of costs set forth in Exhibit "A." The requirements and related estimated costs for supervision and technical services are allowable maximums.

(3) *Operating materials and supplies.*—Necessary materials and supplies including items of equipment costing less than $50.00 each, and power, water, and fuel, a schedule of which is included in the estimate of costs in Exhibit "A."

(4) *Operating equipment.*—Any operating equipment to be rented or purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or the allowable depreciation, as the case may be, a schedule of which is included in Exhibit "A." Any items listed as owned and to be furnished by the Operator, and related ~~initial~~ allowable depreciation, are allowable maximums.

(5) *Rehabilitation and repairs.*—Any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and to be devoted to the purposes of the exploration contract, a schedule of which is included in the estimate of costs set forth in Exhibit "A." These items are allowable maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, or installations to be purchased, installed, or constructed for the purposes of the exploration work, with the estimated cost of each, a schedule of which is included in the estimate of costs in Exhibit "A." All of these items are allowable maximums.

(7) *Miscellaneous.*—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.

(8) *Contingencies.*—Such other necessary, reasonable direct costs of performing the exploration work, within the limit of the total aggregate estimate of costs, whether or not included in any schedule of costs in Exhibit "A," as may be approved by the Government in the course of the work, as indicated by its approval and payment of invoices and vouchers.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) The Government's payme[illegible]n [illegible] cases will be based on actual, necess[illegible] c[illegible] (including contract unit prices) incurred not in excess of any "allowable maximum," and not in excess of the fixed percentage of the total aggregate estimated cost. Costs will be considered to be incurred only as they are or become due and payable.

(*c*) 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 this contract, shall be allowed as costs of the project in which the Government will participate.

ARTICLE 7. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operators shall provide the Government with monthly reports of work performed and costs (including contract unit prices) incurred under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of costs incurred on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) Compliance with requirements.—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account as provided in Article 12.

ARTICLE 8. *Payments by the Government.*—(*a*) The Government will pay **50** percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $**109,705.00**, which is **50** percent of **219,410.00**, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract.

(*b*) The Government may make any payment or payments direct to independent contractors and to suppliers, for the account of the Operator, rather than to the Operator.

ARTICLE 9. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) percent of any such net amounts, plus one-half (½) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts.

(For instance: The percentage royalty on a net amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(*b*) As here used, "net smelter returns," "net concentrator returns," and "other net amounts realized from the sale or other disposition," mean gross revenue from sales; or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income-tax determination.

(*c*) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations. **See Annex I substituted for Article 9.**

ARTICLE 10. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided,* that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 11. *Title to and disposition of property.*—All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

ARTICLE 12. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining.

ARTICLE 13. *Changes and added provisions.* **To the extent that costs are set forth in Exhibit "A" as "agreed unit costs" they are in lieu of the actual costs that would otherwise be allowable costs of the project as provided in Article 6(a) of the contract form.**

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

HOWE SOUND COMPANY
(Operator)

By ______________________

By ______________________
Administrator, Defense Minerals Exploration Administration

I, WILLIAM T. HOLMES, certify that I am the secretary of the corporation named as Operator herein; that VINTON H. CLARKE, who signed this contract on behalf of the Operator, was then Vice President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

____

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66328-1

ANNEX I

The following provisions are in lieu of Article 9 :

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by this contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts, plus one-half ($\frac{1}{2}$) per cent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) per cent.)

c. Definitions.--As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

d. Lien for Payment.--To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

HOWE SOUND COMPANY
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-3142

ANNEX II

The land referred to in Article 2 of the contract form consists of the following 19 unpatented mining claims whose location notices are recorded as below indicated with the Chelan County Auditor at Wenatchee, Washington:

Claim	Book	Page
27 Sunrise	152	569
28 Sunrise No. 2	152	570
5 Lakeside	152	540
6 Lucerne No. 3	218	215
7 Lucerne No. 4	254	29
8 Lucerne No. 6	218	365
2 Buckskin	218	367
3 Chelan	218	367
9 Lupine	218	354
10 Lupine No. 2	503	231
11 Lupine No. 3	503	233
12 Lupine No. 4	503	235
13 Lupine No. 5	503	237
21 Hillside	254	63
23 Summit	254	66
24 Snow No. 1	254	65
25 Snow No. 2	254	65
26 Snow No. 3	254	65
14 Pine Tree	254	64

Any land hereafter acquired by the Operator for the purposes of Stage II of Exhibit "A", shall be included in Article 2 of this contract.

ANNEX III */

Materials and Supplies. For the purpose of determining the Government's interest in materials or supplies remaining upon any termination of the work, they shall be considered in groups or categories (such as pipe, or explosives, or rails, or drill steel), and if the original cost of the remaining unexpended portion of any such group or category exceeded $50, the Government shall have an interest therein as provided in Article 11 of the contract form.

Equities in Equipment. Unless expressly permitted by provisions in Exhibit "A", the operator shall not procure equipment or any other item under a rental-purchase agreement, an installment-purchase agreement, any agreement which creates or builds up an equity or interest in the thing procured which can be converted to legal title only by further payment or some other consideration, or any agreement other than for straight rental or cash purchase and delivery.

Preservation of Property. Until the final disposal of any equipment or other property in which the Government has an interest or equity, the operator shall preserve and protect same for the mutual best interests of the parties, any reasonable and necessary cost thereof to be treated as an allowable cost of the exploration work to which the Government will contribute.

*/ The provisions in this annex apply only to materials and supplies, equipment, and property to the cost of which the Government has contributed on an actual cost basis; they have no application to costs contributed to on a unit-cost basis.

HOWE SOUND COMPANY
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-3142

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for copper ores by drifting and crosscutting not in excess of 4,100 feet in an easterly direction from the existing drift on the 1500 level of the Holden Mine, and ~~by~~ diamond drilling not in excess of 7,000 feet to test the eastern continuations of the general rock series which have been productive in the Holden Mine. The work is indicated on the attached map entitled "Longitudinal Section Through Holden Mine & Buckskin Mt., Nov. 5, 1953, D.M.E.A. 3142," and is to be done in two stages. The work of the second stage is subject to the prior approval of the Government which shall not be granted unless and until the Operator acquires an interest, deemed adequate by the Government, in the land on which the work in Stage II is to be performed. The location, direction, and inclination of the diamond drill holes shall be subject to Government approval. All drifts and crosscuts are to be of the approximate maximum size of 7 feet by 7 feet, timbered, where necessary, but not in excess of 600 feet in Stage I and 200 feet in Stage II.

All drifts and crosscuts shall be sampled at six feet intervals and all diamond drill cores shall be sampled in 5-foot core sections, and proper assays shall be taken. The Government shall be kept informed monthly as to the results of such sampling and assaying. Progress maps shall be prepared at the end of each month and copies furnished to the Government.

Stage I

This stage shall consist of not more than 3,100 feet of drifting, the construction of 8 diamond drill stations and not more than 5,000 feet of diamond drilling.

Stage II

This stage shall consist of not more than an additional 1,000 feet of drifting and crosscutting, the construction of 2 diamond drill stations and not more than 2,000 feet of diamond drilling.

Estimated Costs of the Project
(*Indicates allowable maximum)

Actual Costs

Stages I and II

(1) Independent contracts

None

(2) Labor, supervision, consultants

Schedule waived, but labor shall not receive any more than the wage rate prevailing in the area, and the cost of supervision and technical services shall not exceed a maximum allowance of $3.00 per foot of drifting in Stage I, and $3.00 per foot of drifting or crosscutting in Stage II.

Stage I

Labor	$52,700.00	
Supervision and technical services	9,300.00*	$ 62,000.00

Stage II

Labor	17,000.00	
Supervision and technical services	3,000.00*	20,000.00

(3) Operating materials and supplies

Schedule waived for purchase of timber, explosives, pipe for air and water lines, track, fuel and lubricants, drill steel and bits, and other miscellaneous supplies.

Stage I	39,561.00	
Stage II	12,810.00	52,371.00

(4) Operating equipment

Stages I and II

To be rented

None

To be purchased

Stage I

1 - 3-ton diesel locomotive	$ 8,000.00	
2 - rock drills complete @ $1,200/ea.	2,400.00	
3,500 feet vent pipe @ $2.00/ft.	7,000.00	
5,000 feet of three-conductor cable @ $3.00/ft.	15,000.00	$32,400.00 1/

Stage II

None

To be furnished by Operator

The Operator shall furnish without any cost to the Government all other equipment necessary for the project, including diamond drill machines, mine cars, mine locomotives, battery-charging stations, and air compressors, and shall be allowed thereon a maximum depreciation at the rate of $0.75 per foot of crosscutting, or drifting.

Stage I	2,325.00 *	
Stage II	750.00 *	3,075.00

(5) Rehabilitation and repairs

Stages I and II

None

(6) New buildings, improvements, installations

Stages I and II

None

1/ As the value of its equity in the equipment purchased, from the final contributions payable to the Operator, the Government shall deduct 25% of the delivered cost price of the diesel locomotive and the three-conductor cable, and 10% of the delivered cost price of the rock drills and vent pipe.

(7) **Miscellaneous**

Including Assaying and Sampling

Stage I	$13,516.00	
Stage II	4,360.00	$ 17,876.00

(8) **Contingencies**

To cover among other things, increases in labor costs.

Stage I	5,673.00	
Stage II	1,865.00	7,538.00

Total Estimated Actual Costs	$195,260.00

The Government will contribute to the costs of the excavation of the below mentioned diamond drill stations and diamond drilling in Stages I and II as they accrue for units of work actually performed on the basis of the below agreed unit cost per foot and per station in lieu of actual costs. These costs include all costs of the excavation of these stations and of the diamond drilling including assaying and all costs of the work except those costs set forth under "Actual Costs," to which the Government will contribute on the basis of actual costs as set forth in Article 6(a) of the contract. Work to the costs of which the Government will contribute on the basis of agreed unit costs may be performed by independent contractor without reference to the provisions relating to independent contracts and contractors in Articles 4(a) and (b), and 6(a)(1) of the contract form.

Agreed Unit Costs

Stage I

Diamond drill stations - 8 @ $490.00/ea.	$ 3,920.00
Diamond drilling[2] 5,000 feet @ $2.75/ft.	13,750.00

2/ This includes cost of assaying.

Stage II

Diamond drill stations - 2 @ $490.00/ea.	$ 980.00	
Diamond drilling 3/2,000 feet @ $2.75/ft.	5,500.00	
Total Agreed Unit Costs		$ 24,150.00

S U M M A R Y

Total estimated actual costs	$195,260.00*	
Total estimated agreed unit costs	24,150.00	
Total estimated cost of the project		$219,410.00*
Government participation @ 50%		$109,705.00*

3/ This includes cost of assaying.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Department of the Interior
Defense Minerals Administration
RECEIVED
AUG 12 1953

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. DMEA-3142
Metal or Mineral
Date Received 8-12-53
Estimated Cost
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: Howe Sound Company - Chelan Division, a Corporation, State of Maine
730 Fifth Avenue, New York 19, N. Y.

(*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.

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

(*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 Four patented mining claims and 2 unpatented mining claims under Program 2 and 8 unpatented mining claims under Program 1.

(*b*) State any mine name by which the property is known. Holden

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

(*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.

(*e*) If you own the land, describe any liens or encumbrances on it None

(*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.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Copper, Nickel, ~~[illegible]~~

(*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.

(*c*) The work will start within 60 days and be completed within 26 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 [ ] 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 August 11th, 1953

HOME SOUND COMPANY-CHILAN DIVISION
(Applicant)

By [signature]

Vinton H. Clarke, Vice-Pres.

730 Fifth Ave., New York 19, N. Y.

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

HOWE SOUND COMPANY - CHELAN DIVISION

HOLDEN, WASHINGTON

DEPARTMENT OF THE INTERIOR
Bureau of Land Management
RECEIVED
AUG 12 1953

Additional Data for Application

1. (c) Officers of Company:

Reeve Schley,	Chairman of the Board	730 Fifth Ave., N.Y. 19, N.Y.
H. H. Sharp,	President	" "
E. Richter,	Vice President & Treasurer	" "
H. A. Pearse,	Vice Pres. in Charge of Metallurgy & Construction	"
V. H. Clarke,	Vice Pres. in Charge of Mining	"
W. T. Holmes,	Secretary	"
G. C. May,	Asst. Secretary & Asst. Treasurer	"

3. (a) Patented Mining Claims:

Irene	- Survey No. 1208)	
Copper Creek	- Survey No. 1213-A)	
Rain No. 3	- Survey No. 1239)	Program 2
Rain No. 10	- Survey No. 1239)	

3. (b) Unpatented Mining Claims:

Rain No. 11	- Book No. 218 - Page 217)	Program 2
Rain No. 12	- Book No. 218 - Page 218)	
Buckskin	- Book No. 218 - Page 367)	
Chelan	- Book No. 218 - Page 367)	
Lakeside	- Book No. 152 - Page 540)	
Lucerne No.3	- Book No. 218 - Page 215)	Program 1
Lucerne No.6	- Book No. 218 - Page 365)	
Lupine	- Book No. 218 - Page 354)	
Sunrise	- Book No. 152 - Page 569)	
Sunrise No.2	- Book No. 152 - Page 570)	

All recorded in the Office of the Chelan County Auditor at Wenatchee, Washington.

4. (a) The Holden operation consists of a completely equipped mine, mill, and surface plant of 2,200 tons per day capacity.

Total mine development done on the property up to the end of 1952 included 255,484 feet of shafts, raises, crosscuts, drifts, and miscellaneous mine workings.

The mine is accessible for examination purposes.

(b) Past Production - 1938 to 1952, inclusive:

Tons Milled - 8,866,273
Average per operating day - 2,014
Metals Produced - 184,896,550 lbs. Copper = 20.9 [illegible]
41,344,436 lbs. Zinc
534,741 oz. Gold
1,872,429 oz. Silver

4. (b) (continued)

Current Production - July, 1953

Tons Milled - 37,484
Average per Operating Day - 1,499
Metals Produced - 719,508 lbs. Copper = 19.2 lbs/ton
84,458 lbs. Zinc
1,520 oz. Gold
5,531 oz. Silver

(c) The ore body occurs as a hypothermal replacement deposit in a metamorphosed series of sedimentary rocks of Paleozoic Age, mainly gneiss and schist, in a shear zone several hundred feet wide.

The reason for wishing to explore new areas is simply to extend the life of the mine.

(d) and (e) All necessary facilities and equipment are available except as listed under Section 6 (d).

5. (b) Two programs are planned.

Program I

To drive an exploratory drift eastward on the 1500 level toward the downward projection of a nickel-copper zone which outcrops on the upper slopes of Buckskin Mountain and to diamond-drill the ground penetrated by this exploratory drift.

Program 2

To drive a series of short crosscuts and drifts on the 2500 level to provide 6 diamond drill stations in the hanging wall from which to prospect the downward extension of the main Holden ore body by diamond drilling.

5. (d) The Chelan Division has been operating the Holden mine for over 16 years with a competent staff which will have direct control of these projects under the direction of the mine manager who has held this position for the past 14 years.

6. (a) None.

6. (b) Present rates per shift for typical mine classifications include: Muckers, $13.28; drift miners and mucking machine operators, $14.02; timbermen, $14.78; and diamond drillers, $15.54.

Salaries for supervising and engineering personnel are the same as those prevailing in the industry.

6. (c) Operating materials and supplies available are considered as standard for an operating plant of this size.

6. (d) Cost of Program 1

Mine Work

3,100 lineal feet of 7' x 7' drift @ $37.00	$ 114,700.00	
8 Diamond Drill Stations @ $490.00	3,920.00	
5,475 feet of diamond drilling (flat holes) @ $2.75	15,056.25	
	$ 133,676.25	

New Equipment

1 3-ton Diesel Locomotive	$ 8,000.00	
2 Gardner-Denver CF89 Rock Drills Complete	2,400.00	
2,500 lineal feet of ventilation pipe @ $2.00	5,000.00	
5,000 lineal feet of 3 conductor cable @ $3.80 installed	19,000.00	
	$ 34,400.00	
Total for Program 1		$168,076.25

Cost of Program 2

Mine Work

2,016 lineal feet of 7' x 7' drifts and crosscuts @ $37.10	$ 74,793.60	
6 Diamond Drill Stations @ $600.00	3,600.00	
5,000 feet of diamond drilling (down holes) @ $3.00	15,000.00	
	$ 93,393.60	

New Equipment

1 Gardner-Denver Mucking Machine	$ 3,281.00	
1 Mancha Tramner complete with battery and charging equipt.	6,000.00	
2 Gardner-Denver CF89 Rock Drills Complete @ $1,200.00	2,400.00	
1 Boyles Bros. No. IU diamond drill	2,000.00	
	$ 13,681.00	
Total for Program 2		$107,074.60
Total Cost for both plans		$275,150.85

Other equipment considered necesary to carry on the work will be supplied by the Company.

6. (c) and (f) Do not apply

6. (g) Various miscellaneous costs are already included in the unit mining and drilling costs used in above estimates.

HOWE SOUND COMPANY - CHELAN DIVISION

HOLDEN, WASHINGTON

Page 4

6. (h) Amount allowed for contingencies should be at least 10% to compensate for possible increase in costs for labor and supplies.

Plan 1	Estimated Cost	$ 168,076.25	
	Plus 10% for contingencies	16,807.62	
	Total Cost		$ 184,883.87
Plan 2	Estimated Cost	$ 107,074.60	
	Plus 10% for contingencies	10,707.46	
	Total Cost		$ 117,782.06
	Total Cost for both plans		$ 302,665.93

Folio

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
REC...
AUG 12 1953

HOWE SOUND COMPANY - CHELAN DIVISION

CURRENT DEVELOPMENT - JUNE - 1953

DRIFTS AND CROSSCUTS 7' x 7'
(CONVENTIONAL METHOD)

	EXPENSE		COST PER FOOT		
	JUNE	TO DATE	JUNE	MAY	TO DATE
ROCK BREAKING					
Miners - Regular Wage	$ 1,261.51	$ 8,837.41	$ 7.29	$ 6.32	$ 7.24
Muckers - Regular Wage	1,252.70	8,838.64	7.24	7.58	7.24
Labor - Bonus	271.84	2,019.41	1.57	1.21	1.65
Nippers	17.12	201.11	.10	.17	.16
Explosives	801.74	5,294.46	4.63	4.07	4.34
Drill Repairs	236.83	2,405.70	1.37	2.70	1.97
Drill Steel and Bits	339.01	3,082.08	1.96	2.02	2.50
Sharpening	24.13	302.61	.14	.18	.25
Air	247.00	2,652.10	1.43	2.02	2.17
Air and Water Lines	279.05	2,830.04	1.61	2.06	2.32
Other Labor and Supplies	34.77	232.84	.21	-	.19
	$ 4,765.70	$ 36,666.40	$ 27.55	$ 28.33	$ 30.03
ROCK DISPOSAL					
Tramming	$ 168.36	$ 2,205.09	$ .98	$ 1.52	$ 1.81
Hoisting	159.21	1,548.33	.92	.97	1.26
	$ 328.57	$ 3,753.42	$ 1.90	$ 2.49	$ 3.07
MINE GENERAL	$ 474.35	$ 4,430.87	$ 2.74	$ 3.38	$ 3.63
TOTAL ROCK EXCAVATION	$ 5,568.62	$ 44,850.69	$ 32.19	$ 34.20	$ 36.73
TIMBERING					
Labor	$ -	$ 344.41	$ -	$ -	$ .28
Timber	-	105.86	-	-	.09
	$ -	$ 450.27	$ -	$ -	$ .37
TOTAL	$ 5,568.62	$ 45,300.96	$ 32.19	$ 34.20	$ 37.10
ADVANCE - FEET			173	165	1,221
EXCAVATION - CUBIC YARDS			29	-	29

LOCATION NOTICE

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 20 1953

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent,

the undersigned citizen of the United States, has this 6th day of October 1953, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 2 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 300 feet on the northeast side and 300 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 50 feet running S 41° 06' E from center of discovery cut, and 1,450 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet, to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked No. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet, to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a N. 41° 06' W direction from the center of the southeast end line, distant 50 feet. From Cor. No. 1 U. S. Mineral Monument No. 1 bears N. 32° 30' W distant 6,640 feet and Corner No. 1, Lucerne No. 6 bears N. 54° 15' E distant 600 feet. The northeast sideline is common with the southwest sideline of Lucerne No. 6. Corner No. 1 is common with Corner 4, Lucerne No. 6

This claim to be known as the Lupine No. 2

Discovered September 28 1953 _____ (Seal)

Located October 6 1953 _____ (Seal)

Witnesses: _____ (Seal)

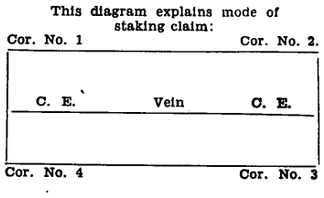
S/ Thomas L. Wilson _____ (Seal)

S/ J. M. Newman

Howe Sound Company, Chelan Division
Locator S/ Robert A. Paasch

THE FOLLOWING IS NOT TO BE RECORDED:---The Location Notice must be filed for record in all respects as required by the state or territorial laws and local rules and regulations, if there be any (in Alaska record must be made in the district recorder's office---in Washington in the district recorder's office, if location is within boundaries of an organized mining district; otherwise in the county auditor's office---in Idaho record must be made in the office of the county recorder of the county or the deputy recorder of the district in which claim is located). Describe the claim accurately with reference to some natural object or permanent monument, and mark the boundaries on the ground so they can be readily traced. Give distances and courses from one of the corners or the discovery stake to discovery shafts on adjoining claims, and to such natural objects as may be referred to. Lode locations may include 1500 feet on the course of the ledge, together with 300 feet on each side of the middle vein. Witnesses are not necessary, but advisable.

This diagram explains mode of staking claim:



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Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

LOCATION NOTICE

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent

the undersigned citizen of the United States, has this 6th day of October 19 53, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 3 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 300 feet on the northeast side and 300 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 1,350 feet running S 41° 06' E from center of discovery cut, and 150 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet, to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked No. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet, to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a S 41° 06' E direction from the center of the northwest end line, distant 150 feet. From Cor. No. 1, U. S. Mineral monument No. 1 bears N 34° 00' W distant 8,105 feet and Corner No. 2, Lucerne No. 6 bears N 54° 15' E distant 600 feet. The northeast sideline common with the southwest sideline of Lupine. Corner No. 1 is common with Corner No. 4 of Lupine.

This claim to be known as the Lupine No. 3

Discovered September 28 1953 (Seal)

Located October 6 1953 (Seal)

Witnesses: (Seal)

S/ Thomas L. Wilson (Seal)

S/ J. M. Newman

Howe Sound Company, Chelan Division
Locator S/ Robert A. Paasch

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This diagram explains mode of staking claim:

Cor. No. 1 Cor. No. 2.
C. E. Vein C. E.
Cor. No. 4 Cor. No. 3

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Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

LOCATION NOTICE

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent,

the undersigned citizen of the United States, has this 6th day of October 1953, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 4 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 400 feet on the northeast side and 200 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 50 feet running S 41° 06' E from center of discovery cut, and 1,450 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet, to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked No. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet, to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a S 80° W direction from the center of the southeast end line, distant 100 feet. From Cor. No. 1, U. S. Mineral Monument No. 1 bears N 37° 40' W distant 6,685 feet and Corner No. 1, Lucerne No. 6 bears N 54° 15' E distant 1,200 feet. The northeast side line is common with the southwest side line Lupine No. 2. Corner No. 1 is common with Corner No. 4, Lupine No. 2.

This claim to be known as the Lupine No. 4

Discovered September 28 1953 (Seal)

Located October 6 1953 (Seal)

Witnesses: (Seal)

S/ Thomas L. Wilson (Seal)

S/ J. M. Newman

Howe Sound Company, Chelan Division
Locator S/ Robert A. Paasch

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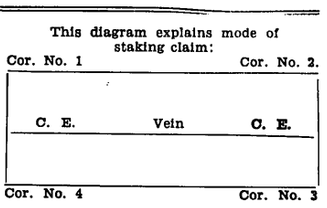
This diagram explains mode of staking claim:



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Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

LOCATION NOTICE

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent

the undersigned citizen of the United States, has this 6th day of October 19 53, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 5 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 300 feet on the northeast side and 300 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 1,250 feet running S 41° 06' E from center of discovery cut, and 250 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet, to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked No. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet, to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a S 41° 06' E direction from the center of the northwest end line, distant 250 feet. From Cor. No. 1, U. S. Mineral Monument No. 1 bears N 30° 00' W distant 8,140 feet and corner No. 3 Lucerne No. 6 bears N 54° 15' E distant 600 feet. The northeast side line is common with the southwest side line of Lupine No. 3. Corner No. 1 is common with Corner No. 4, Lupine No. 3.

This claim to be known as the Lupine No. 5

Discovered September 28 19 53 _____ (Seal)

Located October 6 19 53 _____ (Seal)

Witnesses: _____ (Seal)

S/ Thomas L. Wilson _____ (Seal)

S/ J. M. Newman

Howe Sound Company, Chelan Division
Locator S/ Robert A. Paasch

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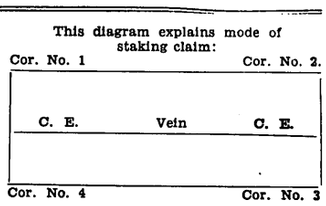
This diagram explains mode of staking claim:



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Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 2 1957

DATE		CODE
8/2	P.K.	220
8/3	~~[illegible]~~	500

So. 157 Howard Street
Spokane 4, Washington

July 30, 1957

Mr. J. S. Roper, Manager
Howe Sound Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-2644

Dear Mr. Roper:

As requested in your letter of May 31, 1957, our Washington office has prepared a Termination Agreement dated July 24, 1957, the original and four copies of which are enclosed. If this Termination Agreement meets with your approval, would you please sign all copies and return all but the copy marked for the Operator.

If the Agreement does not meet with your approval, please return all copies with your comments.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region 1

Enclosures

cc: DMEA (2)
USBM (2)
USBM (AD)
Sample

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7/22	Griswold	500
7-23	Chamber	
		800
7/24	Martin	130
"	Johnson	110
"	Hottenson	100
7/25	C	225
		500

500

JUL 25 1957

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Weissenborn:

With reference to your letter of June 6, with enclosures, we are enclosing the original and four copies of a proposed Termination Agreement to the cited Amended Contract, which has been signed by the Administrator, for the Government.

If the proposed termination meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute all the copies in the usual manner. In the event that the termination is not satisfactory, and cannot be amended within your delegated authority, return all copies with your recommendations concerning any modification.

Two extra copies of the termination are enclosed for use of the Field Team.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (JHB)
WRGriswold/er 7/23/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Chron,

Enclosures

APPROVED:

Horace T. Reno (JHB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JHB)
Member, Geological Survey

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code

500

July 8, 1957

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Director, Division of Base Metals

Subject: Preparation of a Mutual Termination Agreement for Docket No. DMEA-3142, Howe Sound Company, Holden Mine, Chelan County, Washington, Contract No. 1dm-E644, Copper

Will you please prepare a mutual termination agreement for the cited amended contract, to be effective as of June 1, 1957. The termination should include a pseudo certification.

W. R. Griswold

W. R. Griswold

WRG/er
Copy to:
Docket
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 8 1957

DATE	INITIALS	CODE
7/5	C	220
7/9	[illegible]	800
7/9	[illegible]	500

July 3, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644 (Compl.)

Dear Mr. Selfridge:

Enclosed are the original and one copy of the Operator's final report, dated June 11, 1957, and received June 28, 1957. We received one copy June 17 and wrote for additional copies June 18.

The Field Team, in its letter of June 6, 1957, recommended that either a Certification of Discovery or Development be issued or that a "pseudo-certification" be incorporated in the termination agreement.

By Field Team, Region I, NW Dist.

Donald R. MacLaren
Donald R. MacLaren
Alternate Acting Exec. Officer
U. S. Geological Survey

S. W. Zoldok
S. W. Zoldok, Acting Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USBM (AD)
Sample
Turner

RECEIVED
BUREAU OF MINES
JUN 28 1957
SPOKANE, WASH.

June 11, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 8 1957

DATE	INITIALS	CODE
		(Copper)

United States Department of the Interior
Defense Minerals Exploration Administration
1201 North Division Street
Spokane 2, Washington

Gentlemen:

Re: Docket No. D.M.E.A. 3142
Contract No. Ion-E644
Howe Sound Company
Holden Mine
Chelan County, Washington

OPERATOR'S FINAL REPORT

1. Summary of Project

The contract, with amendments, provided for exploration work to be carried out in four separate areas, contingent with or in proximity to the present Holden Mine ore body. The purpose of the work in the respective areas was as follows:

1500 Level - To test the eastern continuations of the general rock series which have been productive in the Holden Mine by means of extending the 1500 level drift and diamond drilling within the shear zone.

2500 Level - To explore the Holden Mine at deeper horizons than were then known by crosscutting to the hanging wall of the ore body on the 2500 level and diamond drilling from diamond drill stations established by these crosscuts.

Northwest Area - To test the western continuations of the general rock series which have been productive in the Holden Mine by diamond drilling into the series through the valley detrital which covers the area to a considerable depth.

Ebbutt's Breccia Area - To test this tectonically brecciated area of approximately 100,000 square feet lying to the northwest of the Holden Mine and adjacent to the Holden shear zone by diamond drilling.

A resume of the work accomplished and costs for each of the areas is given below:

1500 Level - The extension of the 1500 level drift east was begun on February 1, 1955, and 3,800 feet of drifting and the cutting of ten diamond drill stations was completed in February of 1956. Diamond drilling from these stations was begun in July of 1954, and was completed in January of 1957. Eighteen holes totaling 7,965 feet were drilled with D.M.E.A. participation.

The costs in which D.M.E.A. participated were as follows:

3,800 Feet Drifting	$ 177,884.91
10 Diamond Drill Stations	4,710.00
7,965 Feet Diamond Drilling	23,043.75
Purchased Equipment	16,980.66
Total	$ 222,619.32

A plan of the part of the 1500 level drift in which the D.M.E.A. participated is shown on the map entitled "Buckskin Mountain Exploration", dated June 1, 1957.

2500 Level - The first of five crosscuts to the hanging wall was begun in December of 1954, and all five crosscuts and six diamond drill stations established from these crosscuts were completed by February of 1956. The total footage of crosscutting for the five crosscuts was 1,365 feet. Three of the crosscuts required transfer stations at their junctions with the 2500 haulage level.

Diamond drilling was started in May of 1955 and was completed in October of 1956. The D.M.E.A. participated in the drilling of 15 diamond drill holes aggregating 7,737 feet.

The costs in which D.M.E.A. participated were as follows:

1,365 feet Crosscutting	$ 43,837.90
3 Transfer Stations	1,500.00
6 Diamond Drill Stations	3,600.00
7,737 Feet Diamond Drilling	24,814.75
30 Sample Assays	105.00
Tro-Pari Survey Instrument	568.41
Total	$ 74,426.06

Northwest Area - The diamond drilling for the Northwest Area program was begun in August of 1956 and was stopped in November of 1956 upon the completion of one hole to a depth of 1,385 feet. The remaining drilling to be done in the Northwest Area was cancelled due to the closing of the Holden Mine and to recommendations by company geologists.

The costs in which D.M.E.A. participated were as follows:

1,385 Feet Diamond Drilling	$ 10,060.50
114 Feet Cementing	121.70
30 Sample Assays	89.70
41 Core Boxes	102.50
Supervision	551.88
Mobilization of Surface Drill	750.00
Total	$ 11,676.28

Ebbutt's Breccia Area - None of the diamond drilling scheduled for this area was performed.

2. Geologic Features of the Project

General

The Holden Mine represents an ore body within an extensive pyritized shear zone having a strike of N30°W and a dip of 68°SW, which is consistant with the strike and dip of the meta-sediments in which it occurs. The ore shoot is about 2,500 feet long and has economically mineralized widths up to 80 feet. It contains copper, gold and zinc mineralization which, in the levels above the 1500 level, end abruptly against a minor drag fold having a rake of about 60° to the east. Below the 1500 level this fold is less severe and forms but a gentle warp at the 2500 level horizon. Here the mineralization has extended eastward beyond the fold and the fold has lost its effectiveness as an ore limit control. The mineralization on the west end of the mine gradually splits into two fingers and changes into pyrrhotite-pyrite-biotite type mineralization.

Several types of igneous rocks occur in the area, ranging from very late lamprophyre dikes cutting almost normal to the shear, to earlier diorites having both intrusive and replacement characteristics. Post-ore faulting is of two classes: steep, eastward dipping normal faults causing appreciable offsets to the ore zone; and shallow westward dipping thrust faults with very little displacement.

The geologic aspects of each of the projects is described below:

1500 Level - Earlier efforts on the part of the company had progressed the 1500 level drift east from the eastern limit of the ore body at approximately the 6400E coordinate to the 9523E coordinate. The drift was driven due east (mine) within the sheared zone to the 8057E coordinate, and here turned approximately 10° to the north to remain within the sheared zone which had here been offset to the north by steeply eastwardly inclined normal faults. Diamond drilling to both the north and south within this length of drift indicated negligible values within the siliceous meta-sediments, but minor copper and gold values were present in pyrrhotite associated with masses of peridotite.

The continuation of the drift under D.M.E.A. participation was planned to parallel the sheared meta-sediments as determined by vertical projection from surface outcroppings. The drift was continued on a bearing of N50°E to the 9709E coordinate, predominately in highly dioritized meta-sediments, and here again turned due east until it reached the 10,520E coordinate. The predominate rock in this section of drift was again dioritized meta-sediments but several large masses of peridotite were encountered. Minor amounts of both massive sulfides and disseminated sulfides containing less than one percent copper and nickel were found associated with the peridotite.

Due to bad ground conditions encountered in drifting through the biotized peridotite the drift was turned 55° to the south at the 10,520E coordinate to reach a horizon of amphibole schist, indicated by diamond drilling, which had proven to be a more stable rock during previous drifting operations. The drift was again turned due east at the 10,675E coordinate and continued on this bearing to its completion at the 13,242E coordinate. Dioritized meta-sediments were encountered from the 10,675E coordinate to the 11,430E coordinate, albeit without appreciable improvement in ground conditions, and from there to its completion the drifting was predominately in biotized and serpentized peridotite with its extremely bad ground conditions.

Original plans called for diamond drilling to both the north and south of the drift, but full cognizance was not given to the amount of northward offsetting of the sheared zone by the steep normal faults encountered. As the drilling progressed it became evident that the drift was on the hanging wall side and to the south of the zone, so later drilling was limited to longer holes (generally 600 feet plus) to the north and short holes to the south.

The diamond drilling within the sheared zone disclosed only negligible values of copper and gold although there was considerable disseminated pyrite present. The width of the sheared zone was approximately 300 feet where not masked on the hanging wall by an apparently continuous linear mass of peridotite in places at least 1500 feet wide. Several of the north drill holes, notably the U-15-215, U-15-221 and the U-15-223, penetrated a series of lime silicates several feet in thickness immediately beyond the siliceous meta-sediments. Within the Holden Mine ore body a similar series of skarn marks the footwall of the sheared zone and the two are believed analogous. Beyond the lime silicates the rock was a homogeneous series of amphibole schist which is also analogous to the footwall rock series in the vicinity of the ore body.

In order to drill to reach a distance of approximately 130 feet to either the east or west from a drill station it was sometimes necessary to collar the hole due east or west, or even a few degrees to the south. These holes seldom decreased in inclination and some increased slightly. But changes in the bearings tending to make the holes normal to the plane of schistosity were much more erratic, and varied from a few degrees to as much as 40 degrees at a distance of 500 feet. Consequently, the target was frequently missed considerably and some of the holes intercepted the ore at a depth of over 600 feet.

Several of the drill holes encountered a combustable gas, generally in the vicinity of steep faults. Similar occurrances have been noted by diamond drilling above the 2500 level. On analysis of this gas proved to be predominently methane.

The horizontal traces of all of the diamond drill holes on the 2500 level in which the D.M.E.A. participated are shown on the map titled "Diamond Drilling Below 2500 Level", dated June, 1956.

Northwest Area - In order to gain access to the diamond drill site for the surface hole No. S-N-11, it was necessary to construct slightly less than one mile of road by use of a bulldozer. Because of swamp-like conditions in the valley floor it was necessary to locate the road a sufficient distance up on the valley wall. A bridge was necessary to cross Railroad Creek, and this was constructed of logs felled near the site, and decked with rough lumber.

To reach bedrock with the diamond drill hole, it was first necessary to get through an undetermined depth of overburden. The first attempt to do this was by drilling with the use of bentonite "mud" to retain the walls of the hole. The hole was drilled to a depth of 96 feet, after reducing from NX to BX size, without reaching bedrock. It was then necessary to pull the casing and a second attempt was made by using a drive shoe on NX casing. By alternately drilling inside the casing with an NX core bit and driving the casing, the hole was finally bottomed in bedrock at 150 feet, and the casing was seated in bedrock.

The location of diamond drill hole No. S-N-11 is shown on the map titled "Northwest Mine Area, Sketch Map, Geology projected to 2325 Level - Elevation 2639'", dated January 20, 1956. An assay section of the hole is shown on the map titled "Northwest Mine Area, S-N Section D.D. Hole No. S-14-11" dated June, 1957.

Ebbutt's Breccia Area - The road to this area was partially completed without D.M.E.A. assistance.

Yours very truly,

J. S. Roper
Manager

JSR:be
Encl.

AMXXXXXXX-125K

AMXXXXXXX-126K

AMXXXXXXX-127K

AMXXXXXXX-128K

AMXXXXXXX-129K

AMXXXXXXX-130K

AMXXXXXXX-131K

AMXXXXXXX-132K

AMXXXXXXX-133K

MDRXXXXXX-134K

YWB145 WAT SP 33 I-GS-G

SPOKANE WASH 6-26-57. 1427U

GEORGE C. SELFRIDGE

CHAIRMAN OPERATING COMMITTEE, DMEA DEPT OF INTERIOR WASHN., DC

REURTT DATE DOCKET DMEA-3142,

HOME HOUND CO., EFFECTIVE DATE OF TERMINATION AGREEMENT

SHOULD BE JUNE 1, 1957.

DONALD R. MACLAREN

DMEA 3142 1 1957

VA 1429U

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 27 1957

DATE	INITIALS	CODE
6/27	C	220
6/28	WRS	500

RECEIVED
JUN 27 7 41 AM '57
DEPT. OF INTERIOR
OFFICE OF THE SECRETARY

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 24 1957

DATE	INITIALS	CODE
6/25	C	220
6/25	[illegible]	800
6/25	[illegible]	500

So. 157 Howard Street
Spokane 4, Washington

June 18, 1957

Mr. J. S. Roper, Manager
Howe Sound Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-5644

Dear Mr. Roper:

We have received one copy of your final report on the DMEA project with the accompanying ten illustrations. The report is entirely satisfactory, but in accordance with Article 7, paragraph b of the contract, we need five copies. If the stencils and tracings are still available, will you please send us four more copies of the report and accompanying maps.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW District

cc: DMEA (2)
USBM (2)
USBM (AD)
Kellum
Turner

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/26	[illegible]	500
6/26	[illegible]	130
6/26	Yager	130
6/26	Nelson	130
"	Johnson	110
"	[illegible]	[illegible]
6/27	[illegible]	725
		500

JUN 26 1957

WRGriswold/er Room 4442, Ext. 3669

DMEA- Division of Base Metals

14X4401(01) Revolving Fund,
Defense Production Act, Interior,
(Transfer to Office of Secy.)

T E L E T Y P E

XXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXX

Date:

To: Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, Northwest District, Spokane, Washington

Reurlet June 6, Docket DMEA-3142, Howe Sound Company, Contract No. Idm-E644, please advise us as to effective date for proposed termination agreement.

George C. Selfridge
Chairman, Operating Committee (243)

WRGriswold/er 6/26/57
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Confirmation Copy
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 10 1957

DATE	INITIALS	CODE
6/10	C	220
		130
6/11		500

June 6, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Selfridge:

Enclosed are two copies of a self-explanatory letter from J. S. Roper, Manager of the Holden Mine, requesting that contract Idm-E644 be terminated.

Essentially all work provided for in the contract, except for two surface diamond drill holes, has been completed. No ore was found in the one surface hole which has been drilled, nor was any discovery made in the Buckskin area. Drilling below the 2500 level was successful in that the results indicate that ore shoots continued well below that level. However, the grade of the ore is too low to warrant the company, in its opinion, to continue operations. The company is not only closing down all operations at this property, but is also dismantling all surface installations and buildings.

If, in view of this, you feel that a Certification of Discovery and Development below the 2500 level is not in order, we recommend that a mutual termination embodying a "psuedo-certification" be prepared.

By Field Team, Region I, NW Dist.

A. E. Weissenborn by [illegible]
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USBM (AD)
Sample

HOWE SOUND COMPANY
CHELAN DIVISION

May 31, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 10 1957

U. S. Department of the Interior
Defense Minerals Exploration Administration
1201 Division Street
Spokane 2, Washington

Attention: Mr. A. E. Weissenborn
Mr. W. G. Agnew

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

DMEA

Gentlemen:

We hereby apply for the cancellation of the unfinished portions of the above noted contract. One of the reasons for this cancellation request is the closing of our mine about June 28, 1957. As you are aware, the continual increase in operating costs coupled with the drastic decrease in selling price of copper and zinc, and combined with the non-discovery of sufficient tonnage or grade ore reserve have forced this unfortunate situation.

Our Company geologists have studied the results of all exploration to date and in light of the discouraging evidence they do not feel the expenditure of further monies is warranted.

We would appreciate your advice of concurrence with this cancellation. We also wish to inform you that the "Operators Final Report" as requested by your May 13th is well on its way to completion and we expect to have it in your hands at an early date.

Yours very truly,

J. S. Roper
Manager

RECEIVED
JUN 4 1957
U. S. G. S.
SPOKANE, WASH.

JSR:be

cc: E.C.R.
V.H.C.
F.E.

COPY

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 28 1957

DATE	INITIALS	CODE
5/28	[illegible]	220
5/28	[illegible]	800
5/29	[illegible]	500

1201 N. Division St.
Spokane 2, Washington

May 22, 1957

Mr. J. S. Reper, Manager
Chelan Division
Hecla Sound Company
Chelan, Washington

Re: Docket No. DMEA-3142 (copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-8644

Dear Mr. Reper:

Your November 1956 voucher, Form MF-104, on which actual costs are claimed must be supported by evidence of costs incurred.

Independent contracts which cover drilling, reaming and casing, and cementing must be supported by itemized invoices rendered by the subcontractor and evidence of payment by the Hecla Sound Company.

The remaining actual costs, core boxes, mobilization of drill, samples, and labor-supervision charges must be supported by detailed invoices and evidences of payment. In the case of costs in which payroll charges are a part of the cost, a transcript giving the employee's name, dates worked, hours worked, classification of labor, and total earnings charged to the project is required.

Photostats or certified true copies of invoices will be sufficient.

If you will please submit these documents an on-the-spot audit may be avoided.

Sincerely yours,

Wing G. Agnew
Acting Executive Officer
DMEA Field Team, Region I, NW Dist.

cc: DMEA (3)
USGS (2)
USBM (AD)
Turner

OFFICIAL FILE COPY
D M E A
RECEIVED FEB 7 1957

DATE	INITIALS	CODE
2-8	C	220
2/8		800
		225

XXXXXXXXXXXXXXXXXX
1201 N. Division Street
Spokane 2, Washington

February 1, 1957

Howe Sound Company
Chelan Division
Holden, Washington

Re: Contract No. Idm-E644
Docket No. DMEA 3142
Monthly operating report for
December 1956.

Gentlemen:

This is to inform you that payment of the subject voucher could not be made in the full amount claimed.

The amount deleted is explained in the attached copy of a memorandum to the Field Team from the Certifying Officer, Region I.

By Field Team, Region I, NW Dist.

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (2)
USGS (2)

DMEA Field Team, Region I, NW Dist. February 1, 1957

DMEA Certifying Officer, Region I

Contract No. Idm-E644, Howe Sound Company. Monthly operating report for December 1956.

In adjusting the costs for diamond drilling on the November 1956 MF-104 an error in the price per foot was made in connection with the 506 ft. drilled in Hole No. U-15-232. This was drilled on the 1500 level instead of the 2500 level and should have been paid for at $3.70 per foot instead of $4.25. $278.30 has been deducted from the costs claimed on the December 1956 MF-104 to bring the total cost for drilling on the 1500 level to $4,440.00, which is the amount called for in the contract.

Myrtle Purdy

cc: Operator
DMEA (2)✓
USGS (2)

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 7 1957

DATE	INITIALS	CODE

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

1201 N. Division St.
Spokane 2, Washington
January 28, 1957

FILE COPY
DMEA
RECEIVED 1957

DATE	INITIALS	CODE
2-1	C	220
2/1		800
2-5		225

Mr. J. S. Roper, Manager
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Roper:

This will acknowledge your letter of January 15, 1957 concerning deletion of holes U25-135, U25-139 and U25-154 from your November 1956 voucher.

Mr. John D. Bardill of the DMEA staff will discuss the deletions with you on his next inspection trip to the mine or if you or your geologist, Mr. Paasch, are in Spokane in the near future we shall be glad to meet with you.

By Field Team, Region I, NW Dist.

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (2)
USGS (2)
USBM (AD)

RECEIVED
BUREAU OF MINES
JAN 16 1957
SPOKANE, WASH.

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

Jan. 15, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 7 1957

DATE	INITIALS	COD.
2-8	C	220
		225

U. S. Department of the Interior
Defense Minerals Exploration Administration
1201 Division Street
Spokane 2, Washington

Attention: Mr. A. E. Weissenborn
Mr. W. G. Agnew

Re: Docket No. ~~DMEA-5142~~ (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Gentlemen:

This will acknowledge your letter of January the 11th in which you set forth reasons for the non-payment of the full amount claimed on our November, 1956 voucher on the above noted contract.

We would appreciate having a member of your field team visit us at your convenience to discuss this matter. From preliminary examination it appears there has been some misunderstanding or misinterpretation either of the conference of June the 8th, or it's relation to our submission. We would suggest that a complete discussion by our geologist, Mr. Paasch, and a member of your field team would serve to clarify this matter. Trusting this will meet with your approval, we remain,

Yours very truly,

J. S. Roper
Manager

JSR:jhk
cc:V.H.C.
W.T.H.
F.E.

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

1201 N. Division St.
Spokane 2, Washington
January 11, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 14 1957

DATE	INITIALS	CODE
1-14	cw	220
1/15	[illegible]	800
	[illegible]	225

Mr. J. S. Roper
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-5744

Dear Mr. Roper:

This is to inform you that payment in the full amount claimed in your November 1956 voucher cannot be made. The attached copy of a memorandum to the Field Team from the Certifying Officer, Region I, explains the deletions.

At the conference on June 8, 1956 between Messrs. Roper, Paasch and Ebbutt and representatives of the Field Team, it was agreed that five holes would be drilled from the 2500 level to intersect the ore zone at about 400 feet lower in elevation. Your November 1956 voucher shows that of the five holes drilled, and for which reimbursement is claimed, only holes U25-147 and U25-140 were drilled in accordance with this agreement.

The location of surface hole S-M-11 has our approval. On future surface drilling please notify the Field Team in advance of the proposed location of the holes as these must have prior approval of the Government in accordance with Item D. on page 2 of Amendment No. 3.

By Field Team, Region I, NW Dist.

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (3)
USGS (2)
USBM (AD)

DMEA Field Team, Region 1, NW Dist. January 2, 1957

DMEA Certifying Officer, Region 1

Contract No. Id,-2644, Docket No. DMEA 3142. Howe Sound Co.
Monthly operating report for November 1956.

The subject monthly operating report has been processed and forwarded to the Disbursing Officer for payment.

A deletion of $5,756.70 has been made from the costs claimed for underground drilling on the 2500 level. This covers holes Nos. U25-135, U25-139, and U25-154 which were drilled in locations not approved by the Government.

The Operator has shown costs on his work sheet for labor, supervision and consultants in one item. These are actual cost items for surface drilling and are shown separately in the contract with the estimated time and cost being given for each. It would be helpful if the Operator would give us a breakdown of this cost for November and for each month in which such costs are claimed. Payrolls are not necessary, but we would appreciate having the time worked and the cost under each heading shown.

Myrtle Purdy

FILE COPY
DMEA
RECEIVED JAN 14 1957
DATE INITIALS CODE

cc: Operator
DMEA (2)
USGS (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
NOV 5 1956
D.M.E.A.

November 1, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E744

Dear Mr. Selfridge:

Enclosed are the Government, Docket, and Division copies of Amendment 3, signed by the Administrator and Mr. Vinton H. Clarke, vice-president of the company.

Other copies of the amendment have already been distributed.

Sincerely yours,

Howard B Nickelson

Howard B. Nickelson
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team Region I, NW Dist.

Enclosures as above

cc: USBM (2)
USBM(AD)
Sample

RECEIVED

OCT 2 2 1956

xxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

October 17, 1956

Mr. J. S. Roper
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E744

Dear Mr. Roper:

Reference is made to your letter of August 18, 1956, suggesting revisions to Amendment 3 dated August 6. Enclosed are the original and six copies of a revised Amendment No. 3 dated October 10, 1956. Although the agreed unit cost for underground drilling has been increased, you will note that the surface drilling rates remain the same. The surface rates are essentially as we agreed in our conference at Spokane except that they are based on 1,000-foot holes. It is our recollection that at this conference we agreed on holes of this depth, rather than the 1,500-foot depth mentioned in your letter. You will note, however, that no allowance has been made for access roads.

If the amendment meets with your approval would you please sign all copies and return all but the copy marked for the Operator. If it does not meet with your approval please return all copies with your comments.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW District

Enclosures

cc: DMEA (2)
USBM (2)
USBM (AD)
Sample

File Copy
Surname

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

500

Chambers
Selfridge
Mathewson

OCT 10 1956

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Weissenborn:

Referring to your letter of September 28, with enclosure, we are enclosing the original and five copies of a revised Amendment No. 3 to the cited amended contract. Also enclosed are two extra copies of the amendment for the use of the Field Team.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute the copies in the usual manner. In the event that you are not in accord with any of the amendment specifications, and any proposed changes should lie beyond your delegated authority, please return all copies to us with your recommendations.

You will note that we have used your recommended figures of $3.70 per foot for diamond drilling on the 1500 level and $4.25 per foot on the 2500 level. However, we have placed this work on an agreed unit cost base rather than actual cost. When an actual cost base is used in an operating mine very much detail is needed to establish allowable cost factors. This would have involved more delay and, since the Operator had made a convincing cost presentation, we have used the agreed unit base.

No change has been made in the figures for surface drilling (other than a small addition for assaying) since you stated:

> "The Operator's objection to the costs of surface diamond drilling is concerned with the depth of the holes rather than with the cost per foot."

We have checked this with Fred W. Cater, Jr., and he is firmly convinced that a thousand foot depth of hole would be more than ample.

We have made no allowance for an access road; this was likewise discussed fully with Mr. Cater and he is emphatically of the opinion that it is unnecessary. He points out that the former drilling in the Ebbutt's Breccia Area was done without an access road and feels none is necessary at this time. Incidentally, on many of our diamond drilling projects, skid-mounted drills are used, without resorting to access roads.

We have noted the last paragraph of your letter in which you state:

> " . . . Mr. Roper states that a surface drill is being moved into the Northwest Area now."

Please note that the enclosed amendment specifically provides that the locations, etc., of all holes are subject to prior approval of the Government. Therefore, if this Operator, on its own initiative, has seen fit to drill at locations which do not meet with your full approval, such work should not be considered as meeting the requirements of the Government.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (SG)

WRGriswold/er 10/9/56

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

Enclosures

APPROVED:

Frank D. Lamb (SG)
Member, Bureau of Mines

Thor H. Kiilsgaard (SG)
Member, Geological Survey

File Copy

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

500

October 9, 1956

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Preparation of Amendment No. 3 to Amended Contract No. Idm-E644, Howe Sound Company, Docket No. DMEA-3142 (Copper), Holden Mine, Chelan County, Washington.

Will you please prepare a revised Amendment No. 3 to the cited contract. The Operator returned the original Amendment No. 3 unsigned, protesting the allowed costs. His contention, in part, appears well founded and some adjustment has been made.

W. R. Griswold

W. R. Griswold

WRG/ed

Copy to: Docket
Base Metals
Chron.

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

October 9, 1956

Memorandum for the Files

From: Chief, Base Metals Division

Subject: Justification for Amendment No. 3 on Contract No. Idm-E644, Docket No. DMEA-3142, Howe Sound Company, Holden Mine, Chelan County, Washington, Amended Contract.

The cited amendment increases the agreed unit costs for additional underground diamond drilling to be done. The Operator states that such work, being done by a contractor, actually is costing more than the previously allotted figure. It has returned unsigned the first Amendment No. 3 sent to it, stating that the proposed work could not be done unless a realistic cost estimate is used.

It is believed that the Operator's objection is well founded and the agreed unit costs have been adjusted in line with current costs.

W. R. Griswold
W. R. Griswold

WRG/er
Copy to: Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
OCT - 1 1956

September 28, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E744

Dear Mr. Selfridge:

Enclosed are all copies of Amendment No. 3 to the subject contract which the Howe Sound Company has returned unsigned. Also enclosed are two copies of a letter from the Operator stating his objections to the amendment. This letter, although dated August 18, 1956, was not received here until September 4. The Operator's main objection is to the prices authorized for both the underground and surface diamond drilling.

When we submitted our recommendations for additional work on July 2, 1956, we assumed that the established prices for underground drilling in the completed contract were firm and could not be raised for the new work; however, during his recent visit to Region I, Northwest District, Mr. Jay L. Chambers, Chief of the Contract Administration and Audit Division, pointed out that agreed unit costs can be raised where additional work is contemplated provided the Operator can justify the increased costs.

In his June 11 application, the Operator's estimate for drilling from the 1500 level drift was $3.50 per foot, and below the 2500 level $4.12 per foot. In his August 18 letter he estimates his drilling costs at from $3.70 to $4.15 per foot using figures quoted by Boyles Bros. With extras, this may amount to $4.25 per foot. Drilling costs are obviously now higher than were allowed under the original contract.

Since the cost of underground drilling under the schedule presented by Boyles Bros. would be variable, it is difficult to arrive at a valid estimated cost per foot. We suggest therefore that the underground drilling be placed on an actual cost basis with a maximum allowable of either $3.50 or $3.70 per foot for the 1500 level and $4.12 or $4.25 per foot for the 2500 level.

The Operator's objection to the costs of surface diamond drilling is concerned with the depth of the holes rather than with the cost per foot. The Operator originally proposed three holes each 1,750 feet long (250 in overburden + 1,500 feet in bedrock) costing $15,000 each. At our June 8 conference it was our understanding that these holes would each be 1,000 feet deep. In his letter of August 18 Mr. J. S. Roper, Manager, Chelan Division, Howe Sound Company, has used essentially the same costs as we did but because his holes are 500 feet deeper the total cost is higher. We believe that the 1,000-foot holes would be adequate to explore for the extension of the Holden zone. We would be glad to have you talk this over with Fred W. Cater, Jr., of the Geological Survey who is now in Washington, D. C. Our drilling recommendations were based on his advice.

In his June 11 letter, Mr. Roper estimated $50,000 as the cost of the three surface diamond drill holes; $45,000 for drilling and $5,000 for "preparatory work and moving," which presumably includes the cost of road construction. The cost of an access road was not discussed in our June 8 conference and appears to have been overlooked in the estimate of cost submitted following that meeting. Because of the rugged terrain $5,000 for a road to the drill sites does not seem excessive, but the cost is difficult to estimate closely. The Operator undoubtedly owns his own bulldozer and therefore we suggest an allowance of $10 per hour for a 50 H.P. or larger bulldozer complete with operator, fuel and maintenance, plus an allowance for whatever hand labor, powder, caps, fuse, drill steel and other supplies are needed, the total not to exceed a $5,000 maximum.

We assume that the $3,150 authorized under Technical Services is for the geologic study which is supposed to precede diamond drilling in the Northwest Area. However, the amendment as written does not specially mention that the work is to be done in the Northwest Area. The total amount is sufficient but it is difficult to forecast exactly how it should be broken down. Two geologists would be required at least part of the time and the salary of at least one should be higher--$600 a month would be more realistic. Also a helper employed on day's pay will be required part of the time. As written, the amendment will not cover these contingencies. Can it be revised slightly so as to be more flexible without increasing the cost of this item?

We are in accord with Mr. Roper's suggestion that the completion time be extended to January 1, 1958.

It is obvious that part of the trouble results from the fact that the Operator did not break down his estimated costs in sufficient detail. It is now apparent that the Field Team should have been more insistent that he do so. Actually there is little fundamental disagreement and we hope that the suggested changes and additions can be made to the amendment.

You will note that Mr. Roper states that a surface drill is being moved into the Northwest Area now. We understand that some surface geologic work was done last summer but inasmuch as the amendment was not in force we have not seen the results nor do we know what drilling site has been selected.

By Field Team, Region I, NW Dist.

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Stephen A. Zolotok
for Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USBM (AD)
Turner
Sample

HOWE SOUND COMPANY

CHELAN DIVISION

HOLDEN, WASH.

Aug. 28, 1956

RECEIVED
OCT - 1 1956

United States Department of the Interior
Defense Minerals Exploration Administration
South 157 Howard Street
Spokane 4, Washington

Attention: Mr. A. E. Weissenbaum
Mr. W. Agnew

Gentlemen:

We thank you for your letter of August 16th enclosing the original and six copies of Amendment No. 5. We are returning these documents unsigned and offer our comments for your perusal and consideration.

Sheet IV

A. Underground diamond drilling - 1800 Level
1000' @ $4.75 per foot

As we pointed out in our discussions with your group on June 8th diamond drilling in the 1500 Dr. 2 cost more than $6.75 and no objection was raised when we advised the submission would be at $5.00 per foot.

For your information, we quote below our current diamond drill schedule as is being charged for all underground drilling by Bayles Brothers, who are doing all the diamond drilling at the property:

1. Drilling rate shall be $45.00 per 8 hr. shift plus $1.00 per ft. drilled. Shift rate will apply for all shifts worked, breakdowns of over 1 hr. will not be charged for. A shift will be considered as 8 hrs. portal to portal with ½ hr. off for lunch.

2. Reaming - If necessary will be $45.00 per shift plus $1.00 per ft.

3. Grouting - If necessary will be $45.00 per shift plus cost of cement.

4. Surveying - Will be charged for at the shift rate only.

The footage being drilled per total shift is 20 to 25, which if you care to check will give a drilling rate of $3.70 to $4.15 per foot drilled. Also this does not include any charges for station cutting, compressed air, air and water lines, core boxes, core storage and sampling, so a minimum cost for underground diamond drilling would be $4.85 per foot.

The same remarks are equally applicable to the 5000 feet of drilling anticipated to be done below the 1800 Level.

RECEIVED
SEP 4

Stage II

B. Surface Drilling

1. Northwest Area.

During our discussions on June 6th we talked of three diamond drill holes, which would be up to 250 feet through overburden and up to 1500 feet in bedrock. Our discussions also questioned the practicability of rotary drilling in view of the U.S.G.S. feeling that the overburden should be shallow. For the purpose of our June 11th submission we estimated that each of these holes would cost $15,000 and reserved $5,000 for access roads. Since that date we have received a quotation from Bayles Brothers for the diamond drilling discussed with you on June 6th, which follows:

Proposal No. 1

1. Mobilization - $750.00 per drill to Chalco. Rice Sound Company will supply transportation for equipment to drill sites from Chalco and return.

2. Drilling Rates per foot:

	EX & AX	BX	NX	Overburden
0 - 500 feet	$6.00	$6.50	$7.50	$60.00 per shift,
500 - 1000 feet	$7.50	$7.00		plus $3.00 per foot,
1000 - 1500 feet	$8.00			plus bits & mud.
1500 - 1700 feet	$9.00			

3. Cementing, if required, will be $9.00 per hour plus cost of cement or cement substitute including drilling mud.

4. Reaming, if required, for AX Casing - $2.50 per foot.
Reaming, if required, for BX Casing - $2.50 per foot.

5. Moving between holes and from Kelkin to drill sites, including set-up, $66.00 per shift for each two man crew. Foreman not charged for.

6. Gasoline to be supplied to us at cost plus 15% and delivered to drill sites at no cost to Bayles.

7. Casing left in hole will be charged for at list price f.o.b. job.

An estimated cost per hole would be:

Overburden (estimate, 250') Estimate 15' drilled per shift
$60 + (3 x $12) = $116 per shift

$\frac{250}{15}$ = 17 shifts @ $116 per shift = ... $1972 plus bits plus mud.

Drilling 250 - 500' = 250' @ $6.00	=	$1500
Drilling 500 - 1000 = 500 @ 7.50	=	3750
Drilling 1000 - 1500 = 500 @ 8.00	=	4000
Surveying	=	100
Mobilization		750
		$12,072 (plus bits and mud through overburden)

Aug. 18, 1956

(plus cementing, reaming, lost casing, if required) plus a proportion of moving charge. Therefore it would appear a diamond drill hole as estimated would cost at least $15,000. In this terrain $5,000 would be a moderate charge for access roads to the three possible drill sites. Therefore the original estimate of $50,000 is substantiated

(3 x $15,000) + ($5,000)

Stage II

B. Surface Drilling

Ebbutt's Breccia Area

An estimated cost per hole would be - assuming hole collared in bedrock and no moving:

Drilling 0 - 334' = 334' @ 6 =		$2,004.
Mobilization	=	250.
Survey	=	30.
		$2,284 (plus a proportion of access road, cementing, lost casing, reaming, if required).

Therefore it would appear a diamond drill hole as estimated would cost approximately $2500, which substantiates the original estimate of (3 x 2500) = $7500.

It would appear the Geologic study has not been included in the Amendment, but that a Geologist has been allowed for 7 months.

Regarding the completion date extension to July 1st, 1957.

Barring unforeseen circumstances all the underground drilling will be completed well within that time. As we informed the group on June 8th some of the 2500 Level drilling was in progress at that time. However, it is very improbable that the Surface drilling can be completed by July 1st, 1957 unless the drilling continued throughout the winter months. Such a procedure, if possible, would increase the cost of the drilling. One surface drill is moving on to a hole in the Northwest Area this week, and it is estimated that each hole in this Area will require about two months to complete.

It is very unlikely that any drilling could be done on the Ebbutts Breccia area this year. This would require another diamond drill machine and more access road. Both of these would be difficult to obtain before winter sets in.

Therefore it is recommended the completion date of the Amendment be extended to January 1st, 1958, and the foregoing changes in costs be incorporated.

Yours very truly,

J.S. Roper
Manager

JSR:jhk
cc:V.H.C.

xxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
OCT - 1 1956

September 28, 1956

Mr. J. S. Roper, Manager
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E744

Dear Mr. Roper:

I find that we have not acknowledged receipt of your letter of August 18, 1956, returning proposed Amendment 3. This letter, incidentally, was not received here until September 4.

We do not know whether the adjustments you request can be made, but we have reviewed the case and have forwarded your letter and the proposed amendment to our Washington office together with our comments. We shall advise you as soon as possible of the results.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW District

cc: DMEA (2)
USBM (2)
USBM (AD)
Sample

RECEIVED
AUG 6 1956

xxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

August 10, 1956

Mr. J. S. Roper, Manager
Howe Sound Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-2644

Dear Mr. Roper:

In accordance with your request of June 11, 1956 enclosed are the original and six copies of Amendment No. 3. If this amendment meets with your approval would you please sign all copies and return all but the copy marked for the Operator.

If the amendment does not meet with your approval please return all copies with your comments.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW Dist.

Enclosure

cc: DMEA (2)
USBM (2)
USBM (AD)
Kellum

File Copy
Surname

Griswold
Chambers
Martin
Johnson
Weissenborn

500

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

AUG - 7 1956

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Weissenborn:

With reference to your letter of July 2, with enclosures, we are enclosing the original and five copies of Amendment No. 3 to the cited Amended Contract, providing for the additional work recommended. We are also enclosing two extra copies of the amendment for the use of the Field Team.

If the amendment meets with your approval, please present it to the Operator for signature and, when completed, distribute the copies in the usual manner. In the event that you are not in accord with any of the amendment specifications, and any proposed changes should be beyond the range of your delegated authority, please return all copies to us with your comments.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (HB)

Enclosures

WRGriswold/bjl (8/1/56)
Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Pennington
Mr. Kiilsgaard
Chron.

APPROVED:

FRANK D. LAMB (HB)
Member, Bureau of Mines

N. E. Nelson (HB)
Member, Geological Survey

500

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

RECEIVED
AUG - 6 1956

August 1, 1956

Memorandum for the Files

From: Chief, Base Metals Division

Subject: Docket No. DMEA-3142 (Copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Amended Contract No. Idm-E644

The Amendment No. 3 costs are $1500.00 lower than the Field Team recommended cost for the following reason:

The May 22, 1956 letter, signed by A. F. Goldsworth, quotes churn drilling costs in overburden at $10.00 per foot, saying "he will furnish the casing but charge the following price for casing left in the hole . . . "

We know of no reason for casing to be left in a hole after the hole is concluded. It is our invariable policy that if operators want casing left in a hole, it is at their expense.

The Field Team cost estimate shows the following item:

"Reaming and casing for AX, 600 ft. in overburden @ $2.50 $1,500"

We cannot understand what this means or what it is supposed to provide. Hence, it has been deleted. The work has already been covered by the Field Team item of

"Driving pipe, 600 ft. @ $10.00 $6,000"

The "driving pipe" also includes the drilling (see Goldsworthy letter).

W. R. GRISWOLD

WRGriswold/bjl

Copy to: Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
1201 N. Division Street
Spokane 2, Washington

RECEIVED
AUG - 9 1956

July 31, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D.C.

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644-Amended

Dear Mr. Selfridge:

We have written a letter to the Operator concerning his narrative reports as requested in your letter of July 12, 1956.

The Operator usually submits his logs and assays in from three weeks to a month from the time a hole is completed, although he vouchers his monthly drill advance every month. Since it may take from two to three months to complete a hole, there is a considerable time lag there. The Operator's logs and assays are transmitted to Washington within a day or two of their arrival in this office.

Holes U-25-130 and U-25-132 were completed in April and logs and assays were transmitted to Washington on May 29. In case these failed to arrive, we are enclosing two additional copies of each. We have written the Operator for data on holes U-15-223 (completed in May) and holes U-25-131 and U-15-224 (completed in June). These will be sent to Washington as soon as they arrive.

By Field Team, Region I, NW District

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: USGS (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
1201 N. Division Street
Spokane 2, Washington

RECEIVED
AUG - 9 1956

July 31, 1956

Mr. J. S. Roper, General Manager
Howe Sound Company, Chelan Div.
Holden, Washington

Re: Docket No. DMEA 3142 (copper)
Howe Sound Co.
Holden Mine
Chelan County, Wash.
Contract No. Idm-E644 (Amended)

Dear Mr. Roper:

We would like to receive, as soon as possible, the logs and assays on diamond drill hole U-15-223 completed at 975 feet and vouchered in May, as well as the same data on holes U-25-131 and U-15-224 completed at 669 feet and 437 feet, respectively, and vouchered in June.

In your future narratives we would appreciate it if you would also supply us with more current data as the drilling program progresses, such as assays and ore intercepts. If holes are barren, we would like this information also.

By Field Team, Region I, NW Dist.

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

cc: DMEA (2)
cc: USGS (2)

Wing G. Agnew, Member
U. S. Bureau of Mines

FORM RIA 1M 8-57 CP

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 1
BY JIB & DWW
DATE April 1956

HOLE NO. U-25-132 MINE Holden LEVEL 2500
LOCATION 294 XCSW Off 2500 Haulage Drift East at 285 Chute Section
BEARING North DIP LENGTH 445'
LATITUDE OF COLLAR 19,035 DEPARTURE OF COLLAR 5,698 ELEVATION 2,532'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		0 - 2						No core.
		2 - 24						Grey medium grained biotite diorite becomes coarse grained and somewhat porphyritic 9-24. Core broken 13-14½, 17, 19-21½. Core loss: ½' 2-6, 1' 13-21.
		24 - 26½						Blue grey medium grained to coarse grained somewhat crenulated crystalline amphibole biotite schist.
		26½ - 35						Blue grey fine grained diorite cut by occasional stringers of light grey medium grained biotite diorite.
		35 - 65						Grey medium grained to fine grained amphibole biotite schist. Core loss: 20'
		65 - 85						Blue grey medium grained crystalline amphibole biotite schist. Strong bleaching. 66-67, 70(?). Core generally broken 65-78, 85. Core loss: 8' 67-78'. 1' 78-85.
		85 - 94						Dark blue grey medium grained amphibole biotite schist.
		94 - 116½						Blue grey fine grained diorite. Core loss: 3' 88'-98'.
		116½ - 133						Blue grey medium grained crystalline amphibole biotite schist. Core loss: 1' 119-126.
		133 - 165						Fine grained to medium grained blue grey slightly gneissic diorite. Core loss: 2' 154-163.
		165 - 187						Light grey medium grained sheared diorite with pyrite and pyrrhotite.
		187 - 194						Blue green fine grained diorite with pyrite and pyrrhotite.
		194 - 199½						Blue grey medium grained to fine grained locally porphyritic, occasionally slightly gneissic diorite.
	A6314	199½-202½	Nil	.045	.005	Nil	3	Brown medium grained to fine grained crystalline biotite schist, with scattered pyrite throughout.
	A6315	202½-207	Nil	.080	Tr	.04	4½	Light grey medium grained somewhat sheared diorite with pyrite, pyrrhotite.

FORM 83A 1M 8-50 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 2
BY JIB & DNW
DATE April 1956

HOLE NO. U-25-132 MINE Holden LEVEL 2500
LOCATION 294 XCSW Off 2500 Haulage Drift East at 285 Chute Section
BEARING North DIP LENGTH 445'
LATITUDE OF COLLAR 19,055 DEPARTURE OF COLLAR 5,698 ELEVATION 2,532'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		207 - 216						Light grey medium grained sheared to irregulary textured diorite with disseminated pyrite and pyrrhotite.
		216 - 231½						Brown medium grained to coarse grained somewhat granulated crystalline phlogopite schist with scattered pyrite and pyrrhotite.
		231½ - 269½						Blue grey medium grained to fine grained very slightly gneissic diorite.
		269½ - 288						Blue grey medium grained diorite. Core loss: 1' 276-282 1' 282-288.
		288 - 319						Brown grey and blue grey medium grained mildly porphyritic biotite diorite. Strong bleaching 314-319. Core loss: 1' 299-308, 2' 308-313, 3' 313-319.
		319 - 324						Blue grey medium grained very slightly gneissic diorite.
		324 - 330½						Red brown medium grained somewhat phlogopitized biotite diorite with occasional stringers and grains of sulphides.
	A6316	330½-332	0.50	.025	.005	0.06	1½	Brown medium grained to coarse grained granulated phlogopite schist. scattered sulphides.
		332 - 343						Grey medium grained sheared crystalline schist with pyrite, pyrrhotite, chalcopyrite. Core loss: 3' 325-338.
	A6317	332-338	1.75	.125	.075	0.10	6	
	A6318	338-343	2.37	.090	.070	0.08	5	
		343 - 345						Light grey medium grained somewhat phlogopitic low mafic irregulary textured diorite.
		345 - 360						Grey medium grained amphibole schist with pyrite, pyrrhotite, chalcopyrite and occasional phlogopite bands. Core loss: 3' 343-349 2' 354 357.
	A6319	345 -349	1.62	.355	.065	0.06	4	
	A6320	349 -353	1.44	.450	.040	0.12	4	
	A6321	353 -357	3.75	.615	.205	0.35	4	
	A6322	357 -361	3.60	.670	.120	0.50	4	
		361 - 373						Diorite complex. Grey medium grained irregulary textured diorite. 361-362, 364-367. Blue grey fine grained diorite 367-373. Core Loss: 1' 360-364, 1' 364-367.
		373 - 386½						Grey medium grained siliceous crystalline schist with pyrrhotite, pyrite, chalcopyrite, sphalerite decreasing beyond 383. Core Loss: 2½' 367-374, ½ 374-380.
	A6325	373 - 378	1.44	.270	.040	0.30	5	
	A6326	378 -383	1.00	.275	.065	1.85	5	
	A6327	383 -386½	0.50	.175	.025	0.30	3½	

FORM 8SA JM 8-50 C.P.

HOWE SOUND COMPANY

CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 3

BY JIB & DWW

DATE April 1956

HOLE NO. U-25-132 MINE Holden LEVEL 2500

LOCATION 294 XCSW Off 2500 Haulage Drift East at 285 Chute Section

BEARING North DIP LENGTH 445'

LATITUDE OF COLLAR 19,035 DEPARTURE OF COLLAR 5,698 ELEVATION 2,532

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		386½ - 389						Blue grey medium grained biotite diorite.
		389 - 403½						Grey medium grained siliceous
	A6328	389 -394	0.56	.130	.020	0.20	5	crystalline schist with pyrrhotite,
	A6329	394 -399	0.62	.165	.015	0.15	5	chalcopyrite, sphalerite bands of light
	A6330	399 -403½	0.28	.070	.010	0.40	4½	grey medium grained phlogopitized biotite diorite.
		403½ - 404½						Light grey medium grained phlogo-pitized biotite diorite.
	A6331	404½-409	0.87	.320	.050	0.50	4½	Same as 389-403½.
		409 - 410						Grey medium grained somewhat gneissic biotite diorite.
	A6332	410 - 413	0.44	.165	.015	0.80	3	Green grey medium grained highly silicified schist with medium grained to coarse grained calcified silicates (?).
		413 - 415½						Blue grey fine grained diorite.
		415½ - 428½						Light grey medium grained slightly gneissic biotite diorite. Loss: 1½' 410-418.
		428½ - 424						Grey medium grained siliceous crystalline biotite schist with traces of sulphides.(pyrrhotite, pyrite.)
		424 - 430						Green medium grained amphibole biotite schist.
		430 - 434						Dark grey medium grained to fine grained somewhat porphyritic diorite.
		434 - 445						Green medium grained amphibole biotite schist. Loss 1' 430-437 2' 437-445
		END						

Cy Durney 5/24

FORM 83A 1M 8-50 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 1
BY DMW
DATE April 1956

HOLE NO. U-25-130 MINE Holden LEVEL 2500
LOCATION 294 XCSW Off 2500 Haulage Drift East at 285 Chute Section
BEARING North DIP LENGTH 548'
LATITUDE OF COLLAR 19,034 DEPARTURE OF COLLAR 5,698 ELEVATION 2,532'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		0 - 2						No Core.
		2 - 40						Grey irregulary textured medium grained biotite diorite. Core broken and blocky. Loss: 1' 2-12, 5' 12-20, 3½' 24-33, 2' 33-40.
		40 - 58						Amphibole biotite schist to amphibole phlogopite schist-strong bleaching 44-46. Loss: 4' 40-46, 2½' 46-51, 1' 51-55, 3' 55-58.
		58 - 62½						Green medium grained amphibole biotite schist. Core broken. Loss: 2½' 58-62.
		62½ - 75						Light grey medium grained biotite diorite. Strong yellowish bleaching 62½-63, 65-66, 68-73. Core broken. Loss: 1' 62-66, 4' 66-72. Driller reports caving 55-75.
		75 - 91						Dark blue grey medium fine grained diorite. Loss: 4' 80-92.
		91 -117						Dark blue grey medium grained to fine grained slightly gneissic diorite with small white flecks. Loss: 2' 107-114.
		117 -119						Very dark grey medium grained diorite and light grey medium grained biotite diorite. Core broken throughout.
		119 -136						Dark blue grey medium grained fine grained crystalline amphibole biotite schist. Core Loss: 1' 119-128.
		136 -150						Similar to 91-117, but shows interbanding with lighter coarser grained phases. Loss: 1' 141-150.
		150 -158						Green and dark brown medium grained and medium grained to fine grained crystalline amphibole biotite schist.
		158 -160½						Light grey medium grained irregulary textured biotite diorite.
		160½ -172						Green medium grained to fine grained diorite.
		172 -173						Dark blue grey medium grained crystalline amphibole biotite schist.
		173 -176½						Same as 160½-172. Core loss: 1' 168-177.
		176½ -181						Light grey medium grained very irregulary textured biotite diorite.

FORM 83A 1M 8-50 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 2
BY DWW
DATE April 1956

HOLE NO. U-25-130 MINE Holden LEVEL 2500
LOCATION 294 XCSW Off 2500 Haulage Drift East at 295 Chute Section
BEARING North DIP LENGTH 548'
LATITUDE OF COLLAR 19,034 DEPARTURE OF COLLAR 5,698 ELEVATION 2,532'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		181 -184½						Same as 176½-181. Core generally broken
		184½ -193						Brown medium grained to fine grained diorite. Loss: 1' 181-186
		193 -196						Remnants of green medium grained to fine grained diorite almost completely altered to brown. 70% replaced by stringers of grey medium grained diorite.
		196 -204½						Grey medium grained porphyritic diorite.
		204½ -207						Grey medium grained locally siliceous amphibole biotite schist. Scattered very minor sulfide mineralization.
		207 -214½						Blue grey very slightly porphyritic medium grained diorite.
		214½ -223						Grey medium grained crystalline amphibole biotite schist.
		223 -227						Green medium grained to fine grained amphibole biotite schist. Scattered pyrite.
		227 -228½						Same as 214-222.
		228½ -230						Grey medium grained to fine grained slightly gneissic porphyritic diorite with pyrite streaks.
		230 -239						Grey medium grained crystalline amphibole biotite schist. Scattered pyrite and chalcopyrite. 236-239. Core blocky 237-239.
		239 -240						Same as 228½-230. Loss: 2' 230-240
		240 -258						Grey biotite diorite complex. Core Loss: 3½' 240-250.
		258 -262						Light grey highly siliceous low mafic schist. Scattered pyrite, pyrrhotite.
		262 -273						Red Brown medium grained to coarse grained crenulated siliceous phlogopite schist; scattered pyrite. 262-266.
		273 -280						Light grey medium grained amphibole schist partly changed to irregulary textured diorite.
		280 -282½						Red brown medium grained to coarse grained crystalline crenulated phlogopite schist with distorted quartz granules and scattered pyrite.

FORM 83A 1M 8-50 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 3
BY DWW
DATE April 1956

HOLE NO. U-25-130 MINE Holden LEVEL 2500
LOCATION 294 XCSW Off 2500 Haulage Drift East at 285 Chute Section
BEARING North DIP LENGTH 548'
LATITUDE OF COLLAR 19,034 DEPARTURE OF COLLAR 5,698 ELEVATION 2,532'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		282½ -286½						Light grey slightly gneissic medium grained low mafic phlogopite diorite.
		286½ -294						Same as 273-280 with numerous medium grained to coarse grained phlogopite bands and very minor sulfide mineralizatio
		294 -299						Grey medium grained to fine grained somewhat irregulary textured diorite with occasional schist relicts. Loss: 1½' 283-295
		299 -314						Blue grey medium grained to fine grained diorite grades to medium grained diorite.
		314 -323						Somewhat sheared and crenulated light grey medium grained amphibole schist scattered pyrite and pyrrhotite throughout
	A6287	314-319	Nil	Nil	Nil	Nil	5	
	6288	319-323	Nil	Nil	Nil	Nil	4	
		323 -333						Green fine grained diorite with scattered low mafic diorite streaks. Loss 1': 326-333.
		334 -341½						Light grey medium grained low mafic phlogopite diorite with remnants of phlogopite schist containing weak sulfide mineralization.
	A6289	334-338	Nil	Nil	Tr	Nil	4	
	A6290	338-341½	Nil	.040	Tr	Nil	3½	
		341½ -344						Grey and blue grey medium grained to fine grained biotite diorite.
		344 -366						Brown medium grained crystalline phlogopite schist with pyrite, pyrrhotite chalcopyrite. Loss: 2' 344-354 7' 356-366
	A6291	344-349	Nil	.030	Tr	Nil	5	
	A6292	349-356	Nil	Nil	Tr	Nil	7	
	A6293	356-366	Nil	Nil	Tr	Nil	10	
		366 -379½						Blue fine grained diorite, cut by numerous small light grey medium grained low mafic diorite stringers.
		379½ -386						Light Pinkish grey medium grained phlogopite diorite with local concentrations of biotite flecks.
	A6294	386-388	Nil	.145	.005	Nil	2	Brown medium grained crystalline phlogopite schist. Very weak sulfides.
		388 -392						Blue grey medium grained diorite with phlogopite schist remnants. Loss: 1½' 382-392.
	A6295	392-394	Nil	.060	Tr	Nil	2	Same as 386-388.
		394 -397						Same as 388-392.

FORM 63A 1.M 8-50 C.P.

ROWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 4
BY RWW
DATE April 1950

HOLE NO. U-25-130 MINE Holden LEVEL 2500
LOCATION 294 XCSW Off 2500 Haulage Drift East at 225 Chute Section
BEARING North DIP LENGTH 548'
LATITUDE OF COLLAR 19054 DEPARTURE OF COLLAR 5,628 ELEVATION 2,532'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
	A6296	397-402	0.25	1.10	.010	Nil	5	Same as 384-388. Moderate pyrrhotite at 397½. Some chalcopyrite.
		402 -408						Core lost-run over ½" recovered. Contains some sulfides.
	A6297	408 -415	0.87	.130	.020	Nil	7	Siliceous crystalline grey medium grained amphibole schist with pyrite, pyrrhotite, chalcopyrite. Core loss: 4' 408-415.
		415 -422½						Light grey medium grained slightly gneissic irregulary textured biotite diorite with occasional relicts of schist. Schist remnant with pyrite, pyrrhotite, chalcopyrite.
		422½ -437½						Grey medium grained siliceous amphibole schist with occasional phlogopite bands. Pyrrhotite, pyrite, chalcopyrite throughout.
	A6298	422½-427½	2.24	.225	.025	0.10	5	
	A6299	427½-432½	1.43	.240	.030	0.08	5	
	A6300	432½-437½	1.62	.240	.080	0.14	5	
		437½ -438						Grey medium grained biotite diorite.
	A6301	438-439½	1.62	.130	.055	0.18	1½	Grey siliceous schist with pyrrhotite chalcopyrite, sphalerite.
		439½ -441						Grey medium grained irregulary textured biotite diorite.
	A6302	441-447	1.00	.060	.020	0.12	6	Same as 438-439½.
		447 -450						Light grey medium grained biotite diorite. Loss: 2' 438-440.
	A6303	450-451½	1.06	.080	.030	0.20	1½	Same as 438-439½.
		451½ -457						Blue grey medium grained diorite cut by numbrous stringers of blue grey diorite and grey medium grained biotite diorite.
	A6304	457-458	1.06	.285	.035	0.22	1	Grey medium grained somewhat siliceous amphibole schist, with pyrrhotite, chalcopyrite.
		458 -458½						Grey medium grained irregulary textured biotite diorite.
	A6305	458½-464½	0.81	.240	.035	0.16	6	Grey siliceous schist with pyrrhotite chalcopyrite, sphalerite.
		464½ -477						Dark grey medium grained to fine grained locally porphyritic diorite.
		477 -488						Grey medium grained hornblende diorite
		488 -498½						Light grey medium grained biotite diorite grades to medium grained coarse grained phase at center.

FORM 83A 1M 8-50 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 8
BY DMW
DATE April 1954

HOLE NO. U-25-130 MINE Holden LEVEL 2500
LOCATION 294 XCSW Off 2500 Haulage Drift East at 285 Chute Section
BEARING North DIP LENGTH 548'
LATITUDE OF COLLAR 19,054 DEPARTURE OF COLLAR 5,698 ELEVATION 2,532'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
	A6306	495½-500	0.40	.045	.050	0.60	4½	Light grey siliceous schist with pyrrhotite, chalcopyrite, sphalerite.
	A6307	500-500½	0.45	.245	.015	2.50	½	Same as 495½-500
		500½ -503						Very dark grey fine grained diorite.
		503 -521½						Light grey highly siliceous schist
	A6308	503-507	0.40	.245	.020	1.05	4	with pyrrhotite, chalcopyrite, sphalerite
	A6309	507-511	0.56	.245	.025	0.90	4	Very high silicification 516-521½.
	A6310	511-516	0.80	.345	.045	0.70	5	
	A6311	516-521½	0.28	Nil	Nil	0.70	5½	
		521½ -529						Blue grey medium grained gneissic hornblende biotite.
		529 -529½						Same as 521½-529.
	A6312	529½-532	0.90	.225	.045	0.36	2½	Grey siliceous crystalline schist with pyrrhotite, chalcopyrite, sphalerite.
		532 -537						Red brown medium grained irregulary textured phlogopite diorite.
		537 -548						Brown medium grained to fine grained amphibole biotite schist. Loss: 1½' 533-541 5' 541-548 (Dropped in Hole) Core blocky throughout.
		END						

File Copy
Surname

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

July 20, 1956

Memorandum

To: Associate Soliciter, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Preparation of An Amendment No. 3 for Docket No. DMEA-3142, Howe Sound Company, Holden Mine, Chelan County, Washington, Contract No. dm-E644, Amended, Copper.

Will you kindly prepare an Amendment No. 3 to the cited contract along the lines of the attached rough draft.

W. R. Griswold

W. R. Griswold

WRG/er
Copy to: Docket
Base Metals
Chron.

File Copy
Surname
Maxwell
Selfridge
Johnson
Mittendorf

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

500

JUL 18 1956

Mr. A. R. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street,
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-5644 Amended

Dear Mr. Weissenborn:

We have the MF-104 forms and narratives covering the April and May 1956 operations of the cited project. However, the narratives, signed by J. S. Reper, Manager, are of little value. They give drilling footages but nothing as to results of the drill holes.

Will you kindly advise this Operator that its monthly narrative should be supplied in proper detail with assays, ore widths, etc. In cases where drill holes were barren, it should be so stated.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (245)

APPROVED:

P. F. Yopes (245)
Member, Bureau of Mines

Thor H. Kiilsgaard (245)
Member, Geological Survey

WRGriwold/er 7/18/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Chron.

R.S.S.

cw

IN REPLY REFER TO:

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

RECEIVED
JUL 17 1956

July 17, 1956

Re: DMEA 3142, Idm E-644
Howe Sound Co.,
Holden Mine
Chelan Co., Wash.
Copper

Memorandum

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

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

Subject: Review of application for additional assistance on work at the Holden Mine.

Contract E-644 as awarded late in 1953 and amended approved 2 large projects: a) to explore by drifting and drilling on the 1500 level at a depth of from 1,400 to 4,000 feet, a zone whose steeply sloping surface resembled that over the Holden Mine; b) exploration on and below the 2,500 level, by crosscutting and diamond drilling of the Holden orebody.

E. G. Erickson in an interim report dated May 7, 1956, says 3,800 feet of drifting and crosscutting had been done on the 1,500 level. Diamond drilling was in progress but the total footage drilled is not given. He comments "Results of drifting and core drilling have been very disappointing. No significant ore mineralization has been disclosed." The cost of the work to date is not given but probably exceeds $225,000.

The same report says,"Core drilling below the 2,500 level is continuing. Drilling under the present contract should be completed in June 1956. The drilling has disclosed about a million tons of ore containing about 1% copper and 0.05 ounce gold per ton. The drilling has also indicated that dikes may be cutting up the orebody to an extent that profitable-sized stopes may not be in sufficient numbers to warrant the expense of opening a new level." The cost is not given but probably amounts to $75,000.

In an application for an extension of the term and further work the applicant stressed the need for more information concerning the ore below the 2,500 level before undertaking the mining of it. Additional drilling on the 1,500, to consist of a long diamond drill hole ahead of the drift and surface work, was asked for.

The examiners and Field Team recommend approval of the following revised work program:

Underground		
1,500 level, 1,200-ft. drill hole	$3,300	
2,500 " 3,000-ft drilling	$9,000	$12,300.00
Surface		
Northwest Area		
Drilling		27,195.00
"Ebbutt's Breccia" area Drilling		7,000.00
		$46,495.00
Miscellaneous, undistributed		3,750.00
		$50,245.00

The applicant requested:

Underground	
1,500 level drilling 1,200 ft	4,200.00
2,500 " " 17,000 ft	70,000.00
Surface	
Geologic mapping	3,000.00
Drill holes (3) along shear zone	50,000.00
"Ebbutt's Breccia" area Drilling	7,500.00
	$134,700.00

The resident manager of the applicant company in the application for an amendment intimates that the life of the Holden operation ".....could be dependent upon the proposed exploration program."

I concur with the recommendation of the examiners and the Field Team that the revised work program be approved.

N. E. Nelson

N. E. Nelson

cw

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

RECEIVED
JUL 16 1956

July 16, 1956

Memorandum

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

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Additional exploration reports, Docket No. DMEA 3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Contract Idm - E 644. $50,245.00

The reports by John D. Bardill, Bureau of Mines, and Fred W. Cater, Jr., Geological Survey, recommending additional exploration of the Holden mine have been reviewed.

Additional exploration would consist of one 1,200 foot diamond drill hole on the 1500-foot level of the Buckskin Mountain area; five diamond drill holes totaling 3,000 feet to test the downward extension of the Holden ore body below the 2,500-foot level; three 1,000-foot holes in the Northwest area; and three drill holes totaling 1,000 feet in the so-called "Ebbutts Breccia", at an estimated total cost of $50,245.00.

The program outlined by Cater appears warranted and the costs estimated by Bardill seem reasonable.

I concur with the recommendations of the Field Team for approval of the additional exploration program.

J. W. Pennington

J. W. Pennington

Attachment

Copy to: Division of Minerals
Branch of Base Metals 2
R. W. Geehan
Thor Kiilsgaard, U.S.G.S.
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
JUL 5 - 1956

July 2, 1956

Air Mail

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Selfridge:

Enclosed are three copies of a letter dated June 11, 1956 (with two sets of three maps) from Mr. J. S. Roper, Manager, Chelan Division, Howe Sound Company, requesting additional work at the Holden mine. This modifies the preliminary request on the same subject presented by Mr. Roper in his letter of March 12. Also enclosed are four copies of memoranda from F. C. Cater, U. S. Geological Survey, and J. D. Bardill, Bureau of Mines, recommending further work at the property.

Following receipt of the March 12 request, Cater with E. G. Erickson and A. F. Robertson, Bureau Engineers, went to the Holden mine early in May to review the proposals in the field and to discuss the proposal with Mr. Roper and his staff. On June 8, J. S. Roper, Frank Ebbutt, Consulting Geologist, and R. A. Paasch, Resident Geologist, met with the Field Team in Spokane and discussed the proposal thoroughly. Cater's and Bardill's recommendations as well as the Field Team's recommendations and comments expressed in this letter are based on these two conferences.

In his letter of June 11, written after the Spokane conference, Roper modified his proposal in a number of respects but has requested essentially the same 2500-level drilling as was set forth in his original request even though he was aware that in the Field Team's opinion only part of this could be justified as exploration. He felt that it was necessary to be on record as having requested the entire 2500-level drilling program but we are certain that the lesser program recommended by Cater and Bardill and endorsed by the Field Team will be acceptable to him.

The Field Team's comments on the specific proposals follow.

Buckskin Mountain Area

The Field Team has been somewhat concerned that after the long drive to reach a point under Buckskin Mountain the target area might be insufficiently explored. However, both Cater and the management are satisfied that the drill holes have adequately tested the ore horizon and consequently it would serve no purpose to deepen them. We do endorse the long hole from the face of the drift recommended by Cater. Its purpose is to test the ore zone as far ahead of the face as possible in case the ore body should rake in the direction of the drive.

The Field Team has been unimpressed with the value of geophysical work in the Buckskin Mountain area. After investigating several possible methods the Company has reached the same conclusion and has withdrawn the proposal for geophysical work.

Exploration below the 2500 level

Roper contends that with existing information the Company is unwilling to risk the investment required to deepen the shaft and develop the ground below the level; consequently, he regards the proposed drilling as exploration and states further that without assistance the Company may decide it will not attempt to exploit the deeper ore. The Field Team recognizes that there is, in truth, considerable uncertainty concerning the extension of the ore below the 2500 level because of the wide spacing (400 feet) of the DMEA drill holes and the presence of dike material in the ore zone which may dilute the grade excessively. It also recognizes that the best chance of repaying the amount the Government has expended to date in exploration is through mining the ore indicated by the DMEA 2500-level drilling. Nevertheless, it cannot agree that the closely spaced drilling advocated by the Howe Sound Company can be considered as exploration. It is the Field Team's conclusion that the five holes recommended by Cater and Bardill, although by no means eliminating all hazards, will give enough information so that the company will either abandon the project or will be encouraged to go ahead with the required development on its own account.

Northwest Area

In our opinion the area northwest of the Holden ore body along the strike of the ore zone is worth some exploration, although there are difficulties. However, in Cater's opinion glacial debris should not exceed 250 feet in depth and may be considerably less. The proposed geophysical work seems too uncertain and expensive; the company has presented figures to show that Cater's proposal for a churn drill

hole will likewise be expensive. Therefore, we believe that it would be just as well to attempt to get through the overburden with a diamond drill. Probable costs have been estimated by Bardill. We concur with Roper's proposal that before drilling is begun a thorough geologic study should be made to determine the most feasible drilling site as regards both locating a hole in a favorable part of the ore zone and the depth of overburden.

The cost of this work which is not included in Bardill's estimate is given by Roper as $3,000 and seems reasonable. Presumably, this would be on an actual cost basis.

"Ebbutt's Breccia"

The holes previously drilled in this general area did not test the "Ebbutt's breccia" but were directed away from it to another target.

We concur with the recommendation to explore "Ebbutt's breccia" by three drill holes totaling 1,000 feet of drilling.

Time Extension

It had been expected that a decision could be reached on the proposed amendment before the current contract expired on July 1 but because of delay in obtaining all the data this has not been possible. However, contract work is nearly completed but until we receive the June voucher we are not certain that all the drilling has been finished. If it has not been finished the contract will have to be extended.

By Field Team, Region I, NW District

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USGS(SRO)
USBM (2)
USBM (AD)
Kellum

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
June 25, 1956

RECEIVED
JUL 5 - 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: John D. Bardill, Bureau of Mines

Subject: Cost estimate for proposed additional exploration, Docket No. DMEA-3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Contract Idm-E644

The following exploration program has been agreed upon to supplement the project nearing completion. The contract should be amended to provide additional funds for the work.

Underground drilling

Buckskin Mountain	- 1 hole	1,200 feet
2500 level	- 5 holes totaling	3,000 "

Surface drilling

Northwest Area	- 3 holes totaling	3,000 feet
Ebbutt's Breccia	- 3 holes totaling	1,000 "

The exact location, bearing, and dip is to be determined later when a geologic survey has been completed. Holes will be standpiped through overburden and AX size in bedrock for surface holes.

The drilling cost for the 2500 level at $3.00 per foot and $2.75 per foot, EX size, for the Buckskin Mountain has been established by a previous contract.

Boyles Bros. Drilling Company submitted the following rates to the company for surface diamond drilling:

1. Mobilization: $750.00 per drill to Chelan

2. Drilling rates - per foot:

	EX & AX	BX	NX
0 - 500	$6.00	$6.60	$7.20
500 - 1,000	7.30	7.60	
1,000 - 1,500	8.60		
1,500 - 1,750	9.90		

3. Cementing: $9.60 per hour plus cost of cement where required.

4. Reaming - if required:

AX casing - $2.50 per foot
EX " - 2.20 " "

5. Moving between holes: $65.00 per shift for each two-man crew.

R. S. McClintock Diamond Drill Company did not submit a quotation.

Overburden in the Northwest Area is estimated to average about 200 feet thick. Holes in the Ebbutt's Breccia will be collared in bedrock.

Cementing and reaming of holes drilled from the surface is estimated to be about 20 percent of the depth drilled in bedrock. Driving pipe through overburden is estimated to cost $10.00 per foot.

Estimated Costs of Project

Underground drilling: 5½ months @ 25 days/mo. @ 30 ft./day

Surface drilling: 6½ months @ 25 days/mo. @ 25 ft./day

(1) Unit Cost Contracts:

Buckskin Mountain diamond drilling		
1,200 feet @ $2.75/ft.	$3,300.00	
2500 level, 5 holes totaling 3,000 ft.		
3,000 feet @ $3.00/ft.	9,000.00	$12,300.00
Mobilization of surface drill	750.00	
Northwest Area, 3 holes totaling 3,000 ft.		
Driving pipe 600 ft. @ $10.00/ft.	6,000.00	
Drilling, AX 900 ft. @ 6.00/ft.	5,400.00	
" AX 1,500 ft. @ 7.30/ft.	10,950.00	
Reaming and casing for AX 480 feet in bedrock) 600 feet in overburden) @ 2.50/ft.	2,700.00	
Cementing, 480 feet @ 2.50/ft.	1,200.00	
3 drill moves from hole to hole @ $65/move	195.00	
Ebbutt's Breccia Area, 3 holes totaling 1,000 feet @ $6.00/ft.	6,000.00	
Reaming and casing AX, 200 feet @ $2.50/ft.	500.00	
Cementing, 200 ft. @ $2.50/ft.	500.00	34,195.00

(2) Labor, supervision and consultants:

Labor: none	
Supervision: 7 months @ $450.00/mo.	3,150.00
Consultants: none	

(3) Operating materials and supplies:

240 core boxes, 30 ft/box @ $2.50/box	600.00

(4) Operating equipment: none

(5) Rehabilitation and repairs: none

(6) New buildings, etc: none

(7) Miscellaneous: none

(8) Contingencies: none

Total estimated cost of project	$50,245.00

Note: Drilling costs include assaying.

Recapitulation of Costs

(1)	Unit Cost Contracts:	
	Underground diamond drilling - 4,200 feet	$12,300.00
	Surface diamond drilling - 4,000 feet	34,195.00
(2)	Labor, supervision and consultants:	
	Supervision	3,150.00
(3)	Operating materials and supplies:	600.00
(4)	Operating equipment:	none
(5)	Rehabilitation and repairs:	none
(6)	New buildings, etc.:	none
(7)	Miscellaneous:	none
(8)	Contingencies:	none
	Total estimated cost of project	$50,245.00
	Government participation @ 50%	$25,122.50

Orig. & 3 cys - Wash.
USGS (2)
DMEA
AD
Engr.

RECEIVED
JUL 5 - 1956

DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

June 13, 1956

MEMORANDUM

To: Field Team, Region I, Northwest District

From: Fred W. Cater, Jr., Geologist, U. S. Geological Survey

Subject: Recommendations for additional exploration, Docket No. DMEA-3142 (Copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Contract No. Idm-E644

INTRODUCTION

Because of a request of March 12, 1956 by the Howe Sound Company for additional DMEA-supported exploration at and near the Holden mine, the mine was visited May 1-3, 1956 by E. G. Erickson and A. F. Robertson of the Bureau of Mines, and by Fred W. Cater, Jr. and Dwight F. Crowder of the Geological Survey, for the purpose of reviewing exploration to date and investigating the feasibility of additional work. As a result of this visit I recommend the exploration program that follows. In many respects this program is similar to that originally submitted by the Howe Sound Company, but in others it differs substantially.

EXPLORATION IN BUCKSKIN MOUNTAIN

The exploration tunnel on the 1500-foot level east has been finished, as has most of the drilling to be done under the present contract. Results of the exploration accomplished to date have not been encouraging, but as the ore horizon has been cut and most of the holes were stopped in the footwall amphibolite, no extensions of the holes are needed. A new hole should be drilled from the face of the drift in a northeasterly direction (mine coordinates) to test the ground beyond the coordinates reached by the drift. This hole should be about 1,200 feet long.

Some concern has been expressed because the company indicated no holes to be drilled from the south side of the drift. It appears to us that such drilling would not be warranted. The rocks that would be explored by such holes are well exposed on the surface and are almost entirely devoid of any sign of mineralization; furthermore, these rocks are highly migmatized and such rocks even in the Holden ore body are virtually unmineralized.

The company has withdrawn its proposal to conduct geophysical surveys in this area.

EXPLORATION IN THE HOLDEN MINE BELOW THE 2500 LEVEL

Drilling to explore the downward extension of the Holden ore body below the 2500-foot level shows that ore exists; it also shows that there is a large amount of barren dike material, especially in the east end of the ore body, the end of the ore body which in the upper levels yielded the largest part of the ore. Had the drilling shown either considerably more or considerably less ore the case for going ahead with a development program or abandoning further work could have been settled. As it stands the results are inconclusive and more drilling is needed. Of the holes drilled by the time the Operator submitted the new exploration proposals, only six masses of ore had been cut in which both grade and thickness were sufficient to form possible stoping ore -- that is, ore containing at least 1.00 percent copper and 0.05 ounce gold and having a thickness of at least 20 feet. Although the Government favored an exploration plan of winzing, drifting along the footwall, and drilling short holes when the original exploration plan was set up, such a program now could only be considered development and the only alternative remaining is to drill some of the holes proposed by the company.

It is questionable whether the amount of drilling proposed by the Operator can be considered as exploratory. We recommend that Government participation be limited to drilling the five following holes, all to cut the ore horizon at about 400 feet below the 2500 level.

	From	East coordinate of intersection
1.	320XC	E 6270
2.	320XC	E 6533
3.	340XC	E 6933
4.	360XC	E 7070
5.	360XC	E 7333

Total footage would be 3,000 feet.

Although at first glance these holes would appear to intersect the ore zone at very unfavorable angles, drilling experience has shown that because the rocks are strongly foliated the holes will curve to produce satisfactory intersections. All holes

If these holes are in ore it would appear that enough ore would be indicated to justify a program of sinking.

NORTHWEST AREA

The ground northwest along the strike of the Holden ore body beneath the valley floor of Railroad Creek has never been explored (see accompanying geologic map of the Holden mine area). Drilling done in about 1940 on the north valley wall in the vicinity of "Ebbutt' breccia" did not produce encouraging amounts of ore, nor did the drilling from the northwest end of the 2325-foot level, although small amounts of ore were found in both places. There is a change in strike of the foliation of the gneissic rocks exposed near the 4000-foot contour line on the north side of the valley between "Ebbutt's breccia" and Holden that appears to be similar to the "east end fold" that marks the southeast end of the Holden ore body (see map). The drilling done in "Ebbutt's breccia" area was northwest of this fold, and, by analogy with the east end fold, the tested area would have been in unfavorable ground. Although drilling from the end of the 2325-foot level indicated no large amount of ore, the ore zone was extensively silicified and impregnated with pyrite and pyrrhotite.

To explore this ground beneath the valley floor diamond drilling can be done either from the surface or by extending the 2325-foot level northwestward and drilling from underground. Surface drilling will be handicapped somewhat because moraine floors the valley, but it would appear to be much less expensive to explore by surface drilling than by underground drilling if the moraine is not more than 250 feet thick. The Operator proposed a geophysical survey to determine the depth of the moraine but it probably would be much cheaper to sink a churn drill hole. In our opinion the moraine is less than 250 feet thick, nevertheless it may be well to check the depth with a churn drill hole before proceeding with a drilling program.

Because of structural complexities the location of the ore zone cannot be exactly located beneath the moraine and it will be necessary to collar the first holes well west of the probable position of the ore zone and drill the flattest easterly holes possible to get a maximum distance across strike to ensure against missing the ore zone. The inferred position of the ore zone beneath the moraine is shown on the accompanying map. A geologic study involving mapping on a much larger scale, as requested by the company, might be of value in determining the drill sites. The first holes may need to be 1,000 feet long in order to avoid missing the ore zone, but once located much shorter holes would be required to test the zone. If the results of this surface drilling is promising a program of drifting and drilling from the 2325-foot level should be undertaken -- probably under a later contract. For the present, only three 1,000-foot holes are recommended.

It should be stressed at this point that the footwall of the ore zone in this area probably is not marked by a marble layer -- the marble layers exposed in the gneiss north of Railroad Creek are much farther in the footwall than is the layer marking the footwall of the Holden ore body.

"EBBUTT'S BRECCIA"

The so-called "Ebbutt's breccia" is a mass of tectonic breccia about 1,000 feet long by 500 feet wide that lies about half a mile north of the mouth of Holden Creek adjacent to the northwestward extension of the Holden ore zone (see map). As previously stated, it was this extension that was tested by diamond drilling in 1941. The breccia consists of angular and rounded fragments and cobbles of gneiss set in a matrix of sheared gneiss. The whole mass has been silicified and replaced in part by sulfides; the sulfides on the surface have all been oxidized to limonite. Quartz-lined vugs, many of them filled with limonite, are numerous. Although sulfides do not appear to be as abundant in this breccia as they are in the nearby extension of the Holden ore zone that was drilled in 1941 with unencouraging results, it is possible that ore may exist below the thin zone of oxidation in this breccia. The limonite that fills vugs and fractures in the breccia is not the variety ordinarily formed by the oxidation of pyrite or pyrrhotite. In view of these circumstances it seems reasonable that this breccia should be tested. Three holes totaling 1,000 feet should be adequate for a preliminary test of this zone.

Enclosure

Distribution:
DMEA (4)
USBM (2)
USGS(SRO)
Docket
Cater

HOWE SOUND COMPANY
CHELAN DIVISION

JUL 5 - 1956

June 11, 1956

United States Department of the Interior
Defense Minerals Exploration Administration
South 157 Howard Street
Spokane 4, Washington

Attention: A. E. Weissenborn
W. Agnew

Gentlemen:

Following discussions held in your offices last Friday when the Messrs. Weissenborn, Agnew, Zoldak, Cater, Fryklund, Ebbutt, Paasch, Roper were present, we submit herewith our "Application for DMEA Loan".

The urgency of ore discovery cannot be severemphasized as far as the Holden mine is concerned. Our ore supply is being reduced and the perpetuation of this phase of Washington's mining industry could be dependent upon the proposed exploration program.

We are enclosing the maps and sketches referred to in the application. Also enclosed is a copy of the quotation regarding surface drilling from Boyles Bros. We have written R. S. McClintock Diamond Drill Company for their quotation although it is unlikely they will be competitive with Boyles Bros because of the organization which Boyles Bros has here for our underground drilling.

We would again like to express our sincere appreciation for time and effort you and your staffs have gone to in the analysis of our proposals.

Yours very truly,

J. S. Roper
Manager

RECEIVED
JUN 13 1956
U. S. G. S.
SPOKANE, WASH.

JSR;jhk
cc: V.H.C.
Enc.

COPY

Copy.

HOWE SOUND COMPANY

CHELAN - DIVISION

HOLDEN, WASH.

RECEIVED
JUL 5 - 1956

June 11, 1956

Application for DMEA Loan.

Bucksin Mountain

The results obtained from the diamond drilling under DMEA Contract Idm-E644 indicate a North East hole from the most easterly diamond drill station, might give some information. This hole would traverse an area east of the present drift face, which has not been explored to date. (see map Proposted DD hole Buckskin Mt. June, 1956)

Estimated cost of the 1200 foot hole - $4,200.00.

Downward Extension below 2500 Level

Diamond drilling results from Contract Idm E644 indicate that additional drilling is required. 17,000 feet of drilling is applied for as shown on the enclosed print, "Proposed Diamond Drilling below 2500 Level - March, 1956".

Estimated cost of 17,000 feet of Diamond Drilling - $70,000.00.

Attached hereto is a listing which shows the length of the diamond drill holes at each section.

Northwest Area

A geological investigation has recommended the area along the shear zone to the northwest of the present ore, as being a possible area for finding new ore. We wish to investigate this area by:

(a) Carrying out a geologic study of the area to determine the location of diamond drill holes - cost - $3,000.00

(b) Drill three diamond drill holes along the shear zone at places determined by the geologic study. Each hole would be NX size through the overburden and AX size in the bedrock. Estimated cost of preparatory work, moving and diamond drilling of the three DD holes - $50,000.00.

(c) Drill three diamond drill holes in the area known locally as "Ebbutts Breccia". The terrain is such that all drill holes could be collared in bedrock. The three holes would not require over 1000 feet of drilling to explore the zone. See sketch map Northwest Mine Area, Jan. 1956. Estimated cost of preparatory work, moving and diamond drilling of the three DD holes - $7,500.00

Penetration of Ore Zone

Drill Station Location (Co-ordinate)	Vert. Depth	Hor. Distance From Station	Approx. Footage	Sub-Total
5700 E	135'	130' West	340	
	270'	"	460	
	400'	"	600	
	135'	0	280	1,680
6000 E	135'	130' West	340	
	270'	"	460	
	400'	"	600	
	135'	130' East	340	
	270'	"	460	
	400'	"	600	
	135'	0	280	3,080
6400 E	135'	130' West	340	
	270'	"	460	
	400'	"	600	
	135'	130' East	340	
	270'	"	460	
	400'	"	600	
	270'	0	420	3,220
6800 E	135'	130' West	340	
	270'	"	460	
	400'	"	600	
	135'	130' East	340	
	270'	"	460	
	400'	"	600	
	270'	0	360	3,160
7200 E	135'	130' West	340	
	270'	"	460	
	400'	"	600	
	135'	130' East	340	
	270'	"	460	
	400'	"	600	
	270'	0	420	3,220
7600 E	135'	130' West	350	
	270'	"	460	
	400'	"	600	
	135'	130' East	350	
	270'	"	460	
	270'	0	420	2,640
TOTAL				17,000

BOYLES BROS.
DRILLING COMPANY

CONTRACTORS.ENGINEERS.GEOLOGISTS
General Offices
1321 South Main Street Phone HUnter 4-4401
SALT LAKE CITY 15, UTAH

RECEIVED
JUL 5 - 1956

Reply to: S.L.C.

May 22, 1956

Mr. Jack Roper
Howe Sound Company
Holden, Washington

Dear Jack:

Paul has returned and outlined your plans for drilling on the surface this summer. Inasmuch as the program is more or less fluid, we will quote a Mobilization figure, which would take care of any change in plans on your part. Following are the rates for one or more holes.

1. Mobilization. $750.00 per drill to Chelan. Howe Sound Company will supply transportation for equipment to drill sites from Chelan and return.

2. Drilling rates, per foot.

	EX & AX	BX	NX
0 - 500	$ 6.00	$ 6.60	$ 7.20
500 - 1,000	7.30	7.60	
1,000 - 1,500	8.60		
1,500 - 1,750	9.90		

3. Cementing. If required, will be $9.60 per hour plus cost of cement or cement substitute including drilling mud.

4. Reaming. If required, will be for,

AX Casing.	$ 2.20 per foot
EX Casing.	2.50 per foot.

5. Moving between holes. $65.00 per shift for each two man crew. Foremen not charged for.

6. Gasoline to be supplied to us at cost plus 10% and delivered to drill sites at no cost to Boyles.

We have contacted a reliable churn drill operator in Walla Walla and he has quoted the following rates for drilling to bedrock.

1. Mobilization. $750.00. To Chelan and return.

2. Drilling rate. $10.00 per foot

3. He will furnish the casing, but charge the following prices for casing left in hole.

Eight inch.	$ 3.75 per foot.
Six inch.	2.85 per foot.
Four one-half.	2.05 per foot.

4. Access road to drill site necessary for these rates to be in effect.

I realize these rates must appear high to you, but they are considerably less than average for the country and are based on our costs for surface drilling done in 1930, 1940 and 1941 with today's costs applied.

We would greatly appreciate hearing of your plans as soon as possible as we are making our final plans at this time for the dispersment of the drills and crews for the summer.

Best personal regards.

Sincerely yours,

A. F. Goldsworthy
Manager, Drilling Division

JSR:ew

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUN 25 1956

Greenwold
Betty

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

June 13, 1956

Mr. J. S. Roper, Mgr.
Howe Sound Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-8644

Dear Mr. Roper:

We are enclosing for your information and files one copy each of the Second Interim Audit Certificate and the Second Interim Audit Report, for the period Dec. 7, 1953, to March 31, 1956, incl.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW District

Enclosures

cc: DMEA (2)
USBM (2)
USBM (AD)
Fisher

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

MAY 22 1956

Mr. Clarence E. Fisher
DMEA Auditor
1201 North Division Street
Spokane 2, Washington

Re: Audit Report
IAm-2644, DMEA-3142
Rose Sound Company

Dear Mr. Fisher:

Receipt is acknowledged of your Second Interim Audit Certificate and Report covering the above-cited project.

The report is acceptable and normal distribution may be made.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

WBorovies/wb
May 22, 1956

Copy to: Docket
Admr. Reading File
Mr. Chambers

A.C.S.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Sw. 157 Howard Street
Spokane 4, Washington

April 23, 1956

Mr. J. S. Roper, Manager
Howe Sound Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. ~~Ida-2044~~

Dear Mr. Roper:

In further reference to our letter of April 20, 1956, Mr. Fred W. Cater is planning to visit the Holden mine the week of April 30. He will be accompanied by Mr. Dwight Crowder.

We have asked Mr. Cater to discuss the geology of the Elbutt's breccia and the Buckskin Mountain areas with you and your geologists. Any assistance you can give him would be greatly appreciated.

I believe you already know that Mr. Erickson and Mr. Fisher are coming at the same time.

Sincerely,

A. R. Weinstenborn
Executive Officer, DMEA
Field Team, Region I, NW Dist.

cc: DMEA (2)
USBM (2)
USBM (AD)
Fisher

RECEIVED
APR 30 1956

RECEIVED
APR 23 1956

xxxxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

April 20, 1956

Mr. J. S. Roper, Manager
Howe Sound Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA-3142 (Copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Roper:

This is in reply to your letter of March 30, 1956.

We have reviewed your preliminary request for additional work in the Holden area and our comments about particular portions of the proposed projects follow.

Project I

Buckskin Mountain - Phase 1.

a. Extension of the existing drill holes as you propose seems warranted. In addition we would suggest a 1,000-foot horizontal hole directed (mine north) N. 45° E. from the face of the lateral and at least two 1,000-foot horizontal holes directed south of the lateral. Now that the area has been opened up we feel that both sides of the lateral should be tested.

b. A resistivity survey might be warranted. We will need a statement as to how the work will be done, by whom, and who will do the interpretation. We will also need a detailed breakdown on the costs of such work.

Phase 2.

If the results of Phase 1 drilling, and possibly the resistivity survey, appear to warrant it, a Phase 2 would be desirable. Again, we would like to have more detailed information as to what work might be done and possible costs.

Downward Extension below 2500 Level - Phase 1.

We do not believe further DMEA participation in exploration below the 2500 level can be justified. DMEA participation in the exploration of a deposit cannot go beyond a reasonable delineation and sampling of the ore, and we believe that drilling to date has demonstrated the continuity of the ore shoot below the 2500 level.

Phase 2.

Shaft sinking and driving of intermediate levels would be considered development, and there could be no Government participation in such work.

Project II

Northwest Area - Phase 1.

Before we can give further consideration to this proposal we will need four copies of all available geologic maps of this area. The report of the recent geologic investigation of the area, and the specific recommendations of the geologists would be of value to us. We understand that the Ebbutt's Breccia area was drilled in the 30's and we need four copies of a map showing the locations of these holes as well as the drill logs and the assay results.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

Verne C. Fryklund, Jr., Acting Member
U. S. Geological Survey

cc: DMEA (2)
USBM (2)
USBM (AD)
Kellum

File Copy
Surname

Mr. Selfridge
Mr. Johnson
Mr. Kennedy

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

500

APR 19 1956

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Weissenborn:

The cited application for additional exploration assistance is being referred to your office for consideration, a field examination of the property if warranted, and recommendation.

Copies of memoranda dated April 12 and 16, by T. N. Kiilsgaard, Geological Survey, and J. W. Pennington, Bureau of Mines, respectively, relating to the application, are enclosed for your information.

You will note that the commodity members feel that additional diamond drilling should be done on the 1500 level to thoroughly test for any ore occurrences at this horizon. We are in accord in this matter; we are likewise in accord with Mr. Kiilsgaard's contention that, if no ore exists at such horizon, the Buckskin area has been well tested and other work is not warranted.

We furthermore endorse the position of the commodity members that more diamond drilling may be warranted from the 2500 foot mine level. We also fully agree that a shaft project from such level now could only be considered as development and cannot be endorsed. Some two and a half years ago, we pointed out to this Operator that an exploratory program consisting of winzing, drifting along the footwall of the ore from the bottom of the winze, and short hole diamond drilling would have been a more logical program. However, the Operator could not see eye-to-eye with us and believed it better exploration to drive hanging wall crosscuts.

With regard to the proposed work to the northwest, it is our feeling that some work may be warranted, but that we should proceed with more caution than was the case in the Buckskin area. We should try to establish a logical sequence for a staged program, if the project should be viewed favorably.

It has been our observation that in the past this Operator has tended to take a firm position that its own exploratory proposals should be accepted without modification. However, in view of the inconclusive and negative results obtained to date, we suggest that the Field Team now take an equally firm position to the general effect that they will recommend nothing which does not have their whole-hearted endorsement.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

/s/ Robert W. Geehan

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

WRGriswold/er 4/13/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Chron.

Selfridge

April 18, 1956

Memorandum

To: The Files

From: George C. Selfridge
Special Assistant

Subject: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-8644

Mr. Clarke of the subject company telephoned today to learn of the status of the company's application for additional work at the subject property. The writer informed him that the application was being referred to the Field today and that he was sure that the Field Team would act upon the matter promptly. He also informed Mr. Clarke that subsequently it would be handled in Washington as expeditiously as possible.

George C. Selfridge
(Ty 257)

George C. Selfridge

GCSelfridge/esf
Copy to: Docket
Admr. R. File
Messrs: Griswold
Selfridge
Johnson

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

RECEIVED
APR 16 1956

April 16, 1956

Memorandum

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

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington

The applicant proposes to further explore the property by diamond drilling on the 1,500 foot level, shaft sinking below the 2,500 foot level, drifting off the shaft to establish drilling sites for diamond drilling below 2,500 foot level, and a resistivity survey of the Buckskin Mountain area. It is also proposed to conduct preliminary surveys of the Ebbutt's Breccia area northwest of the present workings.

It is believed that additional drilling on the 1,500 foot level to explore the downward extension of the Buckskin Mountain mineralized zone and diamond drilling to help delineate the ore zone below the 2,500 foot level are warranted.

In view of the information obtained by the drilling exploration on the 2,500 foot level, the proposed shaft appears to be development instead of exploration work. In addition, available information indicates that the resistivity survey on Buckskin Mountain would not be justified.

Exploration of the area Northwest of the mine may be warranted but additional data will be required to evaluate this proposed exploration.

I recommend that the application be referred to the Field Team for examination and comment.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
Files

RECEIVED
APR 13 1956

IN REPLY REFER TO:

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

April 12, 1956

Memorandum

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

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of Howe Sound application to do additional work at the Holden mine, Chelan County, Washington, DMEA Docket 3142 (copper).

This memorandum will corroborate the recommendations concerning the cited application, which were stated by the writer at a conference in your office on April 9, 1956. Present at the conference were Fred Cater, Geological Survey, members of your staff, and the writer.

Recommendations concerning the applicant's proposal are:

1. The Field Team should meet with the applicant and program enough additional diamond drilling, from the 1500 level, to thoroughly test the possible downward continuation of the mineralized zone that crops out on Buckskin Mountain. All drilling should be subject to Field Team approval.

2. The proposed Resistivity Survey on Buckskin Mountain should be disallowed. If the proposed drilling from the 1500 level does not find minable ore or indications of an ore zone it can be assumed that the area between the 1500 level and the outcrop is relatively barren. Ore bodies such as are mined at the Holden mine are not of the type that bottom suddenly; therefore, there would be little reason to expect any amount of ore to occur between the 1500 level and the outcrop.

3. The Field Team and the applicant should agree on the amount of additional diamond drilling beneath the 2500 level needed to better outline the limits and tenor of the projected Holden ore body. DMEA should not, however, participate in any shaft sinking program below the 2500 level as such work, in the light of information obtained from diamond drilling either already completed or proposed, would have to be considered as mine development.

4. The Ebbutt's Breccia area apparently warrants exploration, and an acceptable program for such exploration should be agreed on by the Field Team and the applicant. First, however, the applicant should furnish more information to justify this work, including some diamond drilling and self-potential data believed to be in the applicant's possession. In an area as deeply scoured by glaciation as is the Holden area the depth of oxidation should be slight and there is therefore some question as to the effectiveness of self-potential surveys. For this reason any self-potential data the applicant might have should be closely checked to see if more self-potential work is warranted.

If the Holden ore body or zone continues west of the face of the 2325 level there might be some validity for extending this level westward. In this respect it might be possible to determine the depth of alluvium in Railroad Creek valley by geologic mapping which would do away with the need for a Seismic Survey across the valley. On the map of the Northwest Mine Area there appears to be 660 feet difference in elevation between the 2325 level and Railroad Creek. This might be enough of a safety factor to allow westward advance of the 2325 level at least far enough to see what the Holden zone is like west of the mine area.

T. H. Kiilsgaard

T. H. Kiilsgaard

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

W. T. HOLMES
SECRETARY-TREASURER

3142

RECEIVED
APR 4 - 1956

April 3, 1956

Mr. George S. Selfridge,
Defense Minerals Exploration Administration,
Washington 25, D. C.

Dear Mr. Selfridge:

Enclosed herewith for your information, in accordance with arrangements made with Mr. Clarke at our conference on March 9th, are two copies of an application under date of March 30, 1956 filed by the Chelan Division with Mr. Weissenborn in Spokane, together with two copies of a letter written by Mr. Clarke to Mr. Weissenborn prior to the filing of the actual application.

I believe the work on the downward extension below the 2500 level is already started, and that Mr. Clarke has spoken with you about possible retroactivity with respect to this.

Mr. Clarke is presently away on a trip to the southwest but should be back in the office by the 15th of the month.

Yours sincerely,

William T. Holmes

WTH:MP

HOWE SOUND COMPANY
CHELAN DIVISION

RECEIVED
APR 4 - 1956

March 30, 1956

United States Department of the Interior,
Defense Minerals Exploration Administration,
South 157 Howard Street,
Spokane 4, Washington.

Attn: Mr. A. E. Weissenborn
Mr. W. Agnew.

Gentlemen:

Further to our discussion of January 27th and, with the completion of most of the work covered by DMEA Contract Idm-E644, it now appears more work is warranted to check the results to date.

Attached please find our application for DMEA loans to cover Project I and Project II.

Project I deals with further investigation of the areas covered in DMEA Contract Idm-E644, namely, Buckskin Mountain and below 2400 Level. See prints 1, 2, & 3.

Project II deals with a new phase of exploration at Holden, and that is the possibility of locating other ore bodies along the shear zone to the Northwest of the main ore body. We feel this project should be considered as separate and apart from Project I. See print.

We would appreciate your assessment of these projects, and, as pointed out in Mr. Clarke's letter, the speed with which these projects may be authorized and realized may have a great effect on the perpetuation or otherwise of the Holden mining operation

Also enclosed you will find the following prints which are relative to our present applications and Idm E644:

1. Proposed Diamond Drilling below 2800 Level - March 1956.
2. Proposed Extension of D.D. Holes, Buckskin Mountain - March 1956.
3. Longitudinal Section - August 1955.
4. Northwest Mine Area.
5. Exploration Drilling Below 2800 Level - 3-10-56. This print illustrates the results to date on Idm #644.

COPY

We will be pleased to expand on any of the enclosed information or supply any additional information you may require.

Yours very truly,

J. S. Roper
Manager

JSR:jhk

COPY

HOME SOUND COMPANY
CHELAN DIVISION
HOLDEN, WASH.

RECEIVED
APR 4 - 1956

March 31, 1956

APPLICATION FOR DMEA LOAN

PROJECT I
BUCKSKIN MOUNTAIN
PHASE I

(a) The diamond drilling to date under DMEA Contract Idm-E644 indicates a steep ending of the shear zone at depth and therefore we propose the deepening of three of the existing Diamond drill holes U-15-213, U-15-219 and U-15-222 to insure thorough exploration of the shear zone. This will require about 2000 feet of diamond drilling and is shown on the print - "Proposed Extension of D. D. Holes - Buckskin Mountain" March 1956.

(b) If possible, a Resistivity Survey is proposed for the area between the 1500 level diamond drill holes and the surface Buckskin tunnel. This may lead to the discovery of an ore zone between the horizons, see print - "Longitudinal Section - August 1953".

PHASE II

If favorable results are indicated during Phase I a diamond drill program of surface and up holes may be required to further evaluate the potentialities.

DOWNWARD EXTENSION BELOW 2500 LEVEL
PHASE I

Diamond drilling results from Contract Idm-E644 indicate that additional drilling is required. It is proposed that 28,000 feet be authorized as outlined on the enclosed print. "Proposed Diamond Drilling below 2500 Level" - March 1956.

PHASE II

If, upon completion of all or part of the diamond drilling outlined in Phase I, it is felt the exploration would be more effectively achieved by means of shaft sinking below the 2500 level and diamond drilling from Intermediate levels driven off the shaft, then the plans should be altered to make this possible.

PROJECT II
NORTHWEST AREA
PHASE I

A geological investigation has recommended the area along the shear zone to the northwest of the present ore, as being a possible area for finding new ore. We propose to investigate this area by:

(a) Conducting a Seismic survey to determine the depth of fill and the bedrock contour of Railroad Creek Valley. See print Northwest Mine Area.

(b) Carrying out a structural study of the immediate area.

(c) Doing more self potential survey work in the Ebbutt's Breccia area.

PHASE II

In the event that the indications from (a) and (b) of Phase I are favorable or it is considered otherwise advisable the area should be further investigated. This may be accomplished by surface diamond drilling and the westward extension of 2325 level from diamond drilling.

Favorable results from (c) of Phase I should be followed up by surface diamond drilling of the Ebbutt's Breccia area.

ESTIMATED POSSIBLE COSTS OF
EXPLORATION PROGRAM
HOWE SOUND COMPANY-CHELAN DIVISION

RECEIVED
APR 4 - 1956

PROJECT I		
BUCKSKIN		
PHASE I		
(a) Additional Diamond Drilling	$ 7,500.00	
(b) Resistivity Survey	10,000.00	
	$ 17,500.00	
PHASE II		
(a) Diamond Drilling (upholes, surface holes)?		$ 50,000.00
BELOW 2500 LEVEL		
PHASE I		
Additional Diamond Drilling	$ 98,000.00	
PHASE II		
Shaft Sinking		? To be sub-
Drifting, crosscutting, diamond drilling		? mitted later
PHASE I TOTAL	$ 115,500.00	
PHASE II TOTAL		
PROJECT II		
NORTHWEST AREA		
PHASE I		
(a) Seismic Survey	$ 15,000.00	
(b) Structural Survey	10,000.00	
(c) Ebbutt's Breccia (self potential)	1,000.00	
	$ 26,000.00	
PHASE II		
(a) Seismic follow up		
surface drilling possible		? To be sub-
2325 Level extension & drilling		? mitted
(b) Ebbutt's Breccia drilling		? later.
PHASE I TOTAL	$ 26,000.00	
PHASE II TOTAL		

March 12, 1956.

RECEIVED
APR 4 - 1956

Mr. A. E. Weissenborn,
Executive Office, Region I,
D.M.E.A. Field Team,
S. 157 Howard Street,
Spokane 8, Washington.

COPY

Dear Mr. Weissenborn:

As you know, work on our exploration contract IDM-E644 will soon be completed both in the Buckskin area (item 1, stages 1 and 2) and in the "downward extension" area (item 2, stages 1 and 2). This work was initiated for the purpose of investigating the depth possibilities of surface copper-nickel showings in the Buckskin area and also to explore the downward extension of the main ore zone below our deepest operating level.

Of immediate importance in regard to continued production at Holden is the possibility of ore below our 2500 level. As matters stand at the present time, production will continue for another year on a reduced tonnage basis. At the end of this period there will be some small tonnage available which may or may not be mineable, depending on practical mining problems and the price of copper. Such remaining tonnage, however, would be sufficient only for an additional year's production at the very best. If we are to continue production at Holden with a minimum shutdown time, ore must be found immediately. It was with this situation facing us that we recently sent four of our best geologists to Holden to work with the local staff and to (1) assess the results of the exploration projects now nearing completion, and (2) to make recommendations so that the future course at Holden could be chartered intelligently.

After a period of intensive study the group reported that the projects now nearing completion have provided considerable information, but have not answered the important questions. In regard to the downward extension of the main ore zone, present drilling does not provide sufficient information for appraisal and it is recommended that this work be extended. As you can readily understand, such information must be provided at an early date and no time can be lost if we are to contemplate continued operations. For this reason on March 9th, Mr. E. C. Roper, Mr. W. T. Holmes, and I discussed in a preliminary way with the D.M.E.A. people in Washington the possibility of additional exploration work at Holden. Weware advised that we should submit an application to your office detailing the work we have in mind, and in this connection Mr. J. S. Roper, Manager, will, in the near future, in order to save time, submit to you first a plan for additional drilling below the 2500 level, and later our complete proposal. We have now obtained approval from our people here to proceed with arrangements to increase the drilling speed on the downward extension pending your decision, so no time may be lost. We would, therefore, appreciate your early examination of our application and will, meanwhile, forward copies to Washington, D. C.

As will be indicated in Mr. Roper's submission, the drilling work proposed below the 2500 level will be part one of a two part proposal, the second part being dependent on the results of the first. Part two will entail the sinking of a shaft and level development for further drilling. Incidentally, I have noted in a one page outline, used for the purpose of illustrating our proposal in Washington, that level development was omitted.

Mr. Roper will later submit to you the remaining portions of the application containing additional work in the Buckskin project and new exploration along the shear zone to the North West. Our exploration team recommends that certain holes in the 1500 level, towards the Buckskin, be extended and that a resistivity survey be made to investigate the possibility of sulphides between the underground development and the surface. This work is proposed also as a preliminary step to further work such as up-hole drilling, surface work, etc., which may be justified by encouragement in the initial phase.

Exploration work proposed for the North West region is of a longer range nature and again is divided into two parts, the first part being entirely surface work, with additional work dependent upon results. Recommendations would seem to indicate that this favorable area has been somewhat neglected in past years. We believe that the North West area exploration project could go forward under a new contract, separated entirely from our previous work because of location and time. Strictly from the economics of the situation, we would not wish to have the decision on the downward extension of our present zone prejudiced by having to amortize additional exploration expense from this area.

The Chelan Division of the Howe Sound Company has been an important copper producer for some years, and has an existing plant capable of continuing for many years to come. We feel that every possibility for finding new ore should be investigated in this proven district, and for this reason we respectfully request your favorable consideration of our application.

Yours very truly,

Vinton H. Clarke
Vice President

VHC:RF

mp

COPY

Selfridge

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

MAR 13 1956

Mr. Vinton Clark, Vice President
Howe Sound Company
730 Fifth Avenue
New York 19, New York

Re: Docket No. DMEA-3142 - Copper
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-2644

Dear Mr. Clark:

Enclosed as promised you are the four maps left with us at the close of our meeting on March 8, 1956, entitled:

Geologic map of the Holden Area
Longitudinal Section, Holden Mine Area
Sketch Map, Northwest Mine Area
Holden Mine, Showing Ore Reserve Blocks

As soon as you formally submit your application for the additional work, or any part of it, please be assured that the earliest consideration possible, by both the Region I Field Team and us, toward reaching a decision will be given to your request.

Sincerely yours,

G. O. Mittendorf (for)

Administrator

Enclosures

GCSelfridge/esf
(3/13/56)
cc to: Docket
Admr. R. File
Messrs: Griswold
Johnson
Mittendorf
Selfridge

R.C.R.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON, D.C.~~

1201 N. Division St.
Spokane 2, Washington
March 9, 1956

RECEIVED
MAR 12 1956

Mr. J. S. Roper, Manager
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-8644

Dear Mr. Roper:

Your request of February 14 is hereby approved to use unexpended funds allowed for ventilation pipe for any item of actual cost allowable under Amendment No. 2 to the contract, except such items of actual cost as are subject to an allowable maximum.

The unexpended amount of $1,632.05 requested in your letter is subject to audit, as are other actual cost items in the contract, and therefore it is not considered a firm figure. However, use of the unexpended amount is approved within the limits stated.

By Field Team, Region I, NW District

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: Mr. V. H. Clarke, Vice-Pres.

DMEA (3)
USGS (2)
USBM (AD)

C
O
P
Y

HOWE SOUND COMPANY
Chelan Division
Holden, Wash.

RECEIVED
MAR 12 1956

February 14, 1956

Mr. Wing Agnew, Member
D.M.E.A. Field Team, Region II
Defense Minerals Exploration Administration
c/o U. S. Bureau of Mines
1201 N. Division St.
Spokane 2, Washington

Re: Docket No. DMEA 3142
Contract No. Idm-E644

Dear Mr. Agnew:

We hereby request permission to have the unexpended portion of funds allowable for ventilation pipe amounting to $1,632.05 set aside for any item of actual cost allowable under the Amended Contract No. Idm-E644 dated January 17, 1956, except such items of actual cost as are subject to an allowable maximum.

As per Contract	- 3500 ft. @ $2.00	$7,000.00
As Claimed to December 31, 1955 - Final	- 3500 ft. @ $1.53	5,367.95
	Amount Unexpended	$1,632.05

This request is made in accordance with the foot note on page four of the Amended Contract.

Yours very truly,

J. S. ROPER /s/

J. S. Roper
Manager

JSR:jhk
cc: V. H. Clarke

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~xWASHINGTON 25, D.C.x~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
FEB 17 1956

February 14, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Selfridge:

Enclosed are the Government, Docket, and Division copies of Amendment No. 2 to the above-cited contract.

By copy of this letter other copies of the amendment are being distributed.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW Dist.

Enclosures

cc: Finance Office w/encl.
USBM (2)
Kellum

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
JAN 26 1956

January 23, 1956

J. S. Roper, Manager
Howe Sound Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA-3142 (Copper
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-2644

Dear Mr. Roper:

Reference is made to your letters of October 22 and November 4, 1955.

As requested in your November 4 letter our Washington office has prepared Amendment No. 2, the original and six copies of which are enclosed. If this amendment meets with your approval would you please have an authorized official of your company sign all copies and return all but the copy marked for the Operator.

If the amendment does not meet with your approval please return all copies with your comments.

Sincerely yours,

A. H. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW Dist.

Enclosures

cc: DMEA (2)
USBM (2)
USBM (AD)
Kellum

File Copy
Surname

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

JAN 18 1956

WRGriswold/bjl, Rm. 4444, Ext. 3669

Base Metals Div., DMEA

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

14X4401(01)Revolving Fund,
Defense Production Act, Interior (allocated
Working Fund to Office of Secy.)

TELETYPE

Date:

To: A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, Northwest District, Spokane, Washington

Reurtt January 17, Docket DMEA-3142, Howe Sound Company, Contract Idm-E 644. Amendment No. 2 to Amended Contract mailed to you January 17.

George C. Selfridge
Chairman, Operating Committee

Written 1/18/56

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Pennington
Mr. Kiilsgaard
Chron.

RECEIVED

JAN 18 1956

RECEIVED
JAN 19 8 16 AM '56
GENERAL SERVICES ADMIN.
PUBLIC BLDGS. SERVICE
CHIP - COMMUNICATIONS

XDXXXXXX-174K

YWA181 WAF SP 38 I- GS- G

SPOKANE WN 1-17-56 500P

GEO C SELFRIDGE CHAIRMAN OPR. COMM DMEA DEPT OF INTERIOR

WA

REOURLET NOVEMBER 10, 1955 HOWE SOUND CO DOCKET DMEA 3142.

PAYMENT OF OPERATORS VOUCHERS HELD UP PENDING RECEIPT OF NEW AMENDMENT.

CAN YOU EXPEDITE.

A E WEISSENBORN

10 1955 3142

MAH 502P

File Copy
Surname
Klugescheid
Wiswell
Talbut
Selfridge
Johnson

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

JAN 17 1956

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-2644

Dear Mr. Weissenborn:

We are enclosing the original and five copies of Amendment No. 2 to the above contract, signed by the Administrator. We are also enclosing two extra copies of the amendment for the use of the Field Team.

The amendment was drawn as requested by the Operator and, under the heading of "Operating equipment to be purchased", the item of ventilation pipe was allowed to remain as in the original Exhibit "A". A clause was introduced which permits the use of any unexpended money in this item for other purposes with the consent of the Field Team.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the amendment is not satisfactory and cannot be amended within your delegated authority, return all copies with your recommendations concerning any modifications.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

Enclosures

APPROVED:

/s/ Robert W. Geehan
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

WPKlugescheid/bjl (1/12/56)
Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Pennington
Mr. Kiilsgaard
Chron.

File Copy
Surname
Klugeschei

500

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

December 22, 1955

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Amendment No. 2 to Amended Contract No. Idm-E644, Docket No. DMEA-3142, Howe Sound Company, Holden Mine, Chelan County, Washington (Copper)

Will you please prepare Amendment No. 2 to the cited amended contract as follows:

1. A new Exhibit "A" as attached.

2. The completion date shall be extended to July 1, 1956.

3. The royalty payment period shall become 11 years instead of 10 years.

In the Exhibit "A", all references to "Items" and "Stages" have been omitted. All second stages have been approved and so all work has been lumped under 1500 level and 2500 level.

4. Under "Operating Equipment to be purchased", we wish to add a clause which would permit the diversion of any unspent funds for ventilation pipe to any of the items of "Actual Costs" other than those which have an allowable maximum. This is to be done with the prior approval of the Field Team.

W. R. GRISWOLD

Attachment

WPKlugeschaid/bjl

Copy to: Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
December 7, 1955

RECEIVED
DEC - 9 1955

VIA AIR MAIL

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Selfridge:

Attached is a tabulation of equipment purchased to date under the subject contract, as requested by Mr. Klugescheid in his telephone call today.

According to the contract, items of equipment remaining to be purchased include a diamond drill, additional vent pipe, and a mucking machine. Since the work for which the mucker was intended has been in progress for a year it appears doubtful now that it will be acquired. The other two items probably will be purchased.

Sincerely yours,

Thomas E Howard

Thomas E. Howard, Acting Member
DMEA Field Team, Region I
Northwest District

Attachment

cc: USGS (2)
USBM (AD)

RECEIVED
DEC - 9 1955

HOWE SOUND COMPANY

Equipment Purchases

To September 30, 1955	Cost	Total
1 Manchu mule - used	$3,662.96	
1 Charging unit	952.75	
2 Edison batteries	7,425.40	
1 Battery box	374.36	
2 Rock drills	1,617.10	
1 Tro-Pari borehole survey instrument	1,136.81	$15,169.38
2810 feet ventilation pipe, plus 100% sheet metal (includes cost of sheet metal and cost of fabricating pipe locally)		4,362.22
6100 feet Messenger cable		684.03
1225 feet Type W-600, volt-49 strand cable	1,979.60	
5007 feet #6 Tyrex cable	7,792.25	
	9,771.85	
Less cable reel returned	42.12	9,729.73
Cost to September 30, 1955		$29,945.36

Claimed on October 1955 MF-104--not yet paid by DMEA

100 feet ventilation pipe fabrication	358.34	
Less credit for cable reel returned	44.00	314.34
Total		$30,259.70

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

December 7, 1955

Memorandum for the File

From: W. P. Klugescheid, Base Metals Division

Subject: Phone Conversation about Amendment No. 2 to Amended Contract, Docket No. DMEA-3142, Howe Sound Company, Contract No. Idm-E644

On this date a phone conversation was held between Mr. Klugescheid, of this office and Mr. Weissenborn, Executive Officer, and Mr. Fryklund, both of Region I, Northwest District.

Klugescheid wished to know if there would be any more money expended for equipment than the Diamond Drill which has already been provided for.

Weissenborn and Fryklund agreed that the extra 300 feet which they will probably not be able to do and stay within the costs allowed on the 1500 level should be left in as footage in case they should be able to cut the cost of driving.

An itemized list of all the money expended for equipment purchase was requested by airmail so that the amendment may be drawn up properly.

W. P. Klugescheid

WPK/er

Copy to: Docket
Base Metals
Chron.

IN REPLY REFER TO:

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

RECEIVED
NOV 23 1955

November 23, 1955

Re: DMEA 3142, Idm-E644
Howe Sound Co.
Holden Mine
Chelan Co., Washington
$309,990.00 - Copper

Memorandum

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

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

Subject: Review of request for an amendment permitting:-- (a) diversion of approved monies; (b) extension of term of the contract; and (c) increase in units of work but not in total cost.

The contract was approved to do:--

Item I, Stages I and II. Exploration on 1500 level in Buckskin Mountain, 2500 feet below a low-grade copper-nickel outcrop prospected by a short adit.

	Work	Units	Amount Approved
Item I, Stage I			
	Drifting	3100 feet	
	Drill stations	8	
	Diamond drilling	5000 feet	$173,145.00
Stage II			
	Drifting & crosscutting	1000 feet	
	Drill stations	2	
	Diamond drilling	2000 feet	46,265.00
	Total, Item I		$219,410.00

Item II, Stages I and II. Exploration and partial defining at 2500 level, the downward extension of the Holden mine ore bodies.

Item II, Stage I

	Work	Units	Amount Approved
	Crosscutting	1000 feet	
	Transfer stations	4	
	Drill "	4	
	Diamond drilling	4000 feet	$ 64,559.00
Stage II	Crosscutting	450 feet	
	Transfer stations	2	
	Diamond drill "	2	
	Diamond drilling	2000 feet	26,021.00
	Total, Item II		$ 90,580.00
	Total, Item I		219,410.00
	Grand Total		$309,990.00

It is now estimated by the operator that Item II will be completed at a smaller cost than that approved and Item I has exceeded the approved cost, due to heavy ground. Diversion of the estimated amount, $16,783.93, from Item II to Item I is recommended by the Field Team.

Due to bad ground work under Item I will not be completed by December 7, 1955, the expiration date. The request for a time extension has the approval of the Field Team.

"The estimated units of core drilling as originally set forth will be exceeded but not the agreed unit cost." Erickson-Field Team Nov. 8, 1955. The Field Team recommends acceptance of the change.

Since "No significant mineralization has been disclosed to date in the Buckskin area" (Erickson-Field Team Sept. 28, 1955). Erickson's recommendation that no additional funds be approved for work as requested by the operator in a letter dated October 22, 1955, is well taken.

I concur with the following recommendations of the Field Team. That the contract be amended to permit:--

(a) Diversion of approved funds.

(b) Extension of the term of the contract.

(c) Increase in the number of the units of work but not in total cost.

N. E. Nelson

N. E. Nelson

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

RECEIVED
NOV 23 1955

November 23, 1955

Memorandum

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

From: J. W. Pennington, Branch of Base Metals

Subject: Review of proposed Amendment to Contract No. Idm-E 644, Docket No. DMEA 3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington, $309,990.00

The applicant has requested that the contract be amended to transfer $16,783.73 from Item II to Item I, and to extend the expiration date of the contract from December 7, 1955 to July 1, 1956.

The exploration work under the amended contract will be as follows:

Item I, Stages I and II	Units, Original Contract	Units, Amended Contract
Drifting and Crosscutting	4,100 feet	3,800 feet
Drill Stations	10	10
Core Drilling	7,000 feet	7,416 feet
Item II, Stages I and II		
Crosscutting	1,450 feet	1,368 feet
Transfer Stations	6	3
Drill Stations	6	6
Core Drilling	6,000 feet	7,000 feet

Under the circumstances, both the transfer of funds and the extension of time appear justified. I recommend that the contract be amended as proposed by the applicant.

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals
J. W. Pennington
R. W. Geehan
Thor Kiilsgaard, U.S.G.S.
F i l e s

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

1201 N. Division St.
Spokane 2, Washington
November 10, 1955

RECEIVED
NOV 17 1955

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Selfridge:

Enclosed are four copies each of two letters from the Operator, dated October 22 and November 4, and four copies of an interim report prepared by Mr. E. G. Erickson, Bureau of Mines Engineer, after discussing the Operator's proposal with him.

It is recommended that the contract be amended as proposed by the Operator in his November 4 letter and by Mr. Erickson's memorandum.

Stage II of both Items I and II have been authorized and the reallocation of funds is necessary to allow completion of as much of the 1500 level exploration as possible within the total amount of the present contract.

The accounting of funds given in the Operator's November 4 letter was taken from the MF-104's and it shows that the cost of the exploration outlined for the 2500 level will be under the estimated cost, thus making funds available for the 1500 level exploration, the cost of which was underestimated. Mr. Erickson's memorandum shows that the cost of drifting 3800 feet on the 1500 level will be about $47.33/ft. and about $32.58/ft. for the 1368 feet of crosscutting on the 2500 level. The average cost for the total of 5168 feet of drifting and crosscutting on both levels will be about $43.42/ft. These costs are not out of line under the operating conditions.

The estimated amount of money to be transferred from Item II to Item I is $16,783.73, shown on page 2 of the Operator's letter of November 4.

The present expiration date of the contract is December 7, 1955. If the proposed amendment, including the time extension, cannot be prepared before the present expiration date, it is recommended that an extension of time be approved immediately.

By Field Team, Region I, NW District

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USGS (2)
USBM (AD)
Turner

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

RECEIVED
NOV 17 1955

November 4, 1955

United States Department of the Interior,
Defense Minerals Exploration Administration
1201 North Division St.
Spokane 2, Washington

Attention: Mr. A. E. Weissenborn
Mr. W. G. Agnew

Re: Docket No. DMEA - 3142
Holden Mine
Contract No. Idm-E644

Gentlemen:

During a recent visit of Mr. E. Erickson we discussed another approach to the problem of funds for the completion of the above noted contract and wish to set it for-th hereunder for your consideration.

The basic idea is to total the amounts allowed by the contract for both stages and both items and then estimate the amount of work which this money will complete regardless of the item or stage to which it was originally allocated. As you will note by reference to the accompanying tabulations we estimate this method of approach will allow us to complete all of the contract (plus an additional 1000' of Diamond Drilling in Item II) except approximately 300 feet of drifting or cross-cutting as authorized in Item I Stage II. While we appreciate that this is an estimate we feel it will be remarkable to come so close to fulfilling the work required without additional funds, having regard for the extenuating circumstances (such as ground conditions, labor costs, materials) which have been encountered since the original estimates were prepared.

Although present conditions allow us to estimate the completion of only 700 feet of Item I Stage II our feeling is that the actual footage should be left open in case better ground conditions are encountered. If ground conditions were to change we should be able to get closer to the original objective.

Our original request for an extension of the expiry date of the contract to July 1st, 1956, is still required, however, the above approach appears to be the only manner in which we can avoid applying for extra funds at this time.

Yours very truly,

J. S. Roper
Manager

JSR:ms

cc: V. H. Clarke

HOME SOUND COMPANY - CHELAN DIVISION

DMEA WORK

Item 1 Stage 1

Work to be done - 3,100' Drifting, 8 Diamond Drill Stations, 5,000' Diamond Drilling
Work completed by
September 30, 1955-3,039' Drifting, 7 Diamond Drill Stations, 4,816' Diamond Drilling

Financial At September 30, 1955

	Amount Allowed	Amount Expended to September 30/55
Labor	$ 52,700.00	$ 65,020.32
Technical Services	9,300.00	5,971.08
Operating Materials & Supplies	40,353.99	32,870.02
Operating Equipment	31,807.01	28,808.55
Depreciation	2,325.00	2,277.00
Miscellaneous	13,516.00	22,593.87
Contingencies	5,673.00	1,724.06
Diamond Drill Station	3,920.00	3,240.00
Diamond Drilling	13,750.00	13,244.00
	$ 173,145.00	$ 175,749.81

130,457.26

Item 1 Stage II

Work to be done - 1,000' Drifting & Crosscutting, 2 Diamond Drill Stations, 2,000 Diamond Drilling

Work done at September 30, 1955 - Nil

Financial

	Amount Allowed	Amount Expended to September 30/55
Labor	$ 17,000.00	
Technical Services	3,000.00	
Operating Materials & Supplies	12,810.00	
Operating Equipment	Nil	
Depreciation	750.00	
Miscellaneous	4,360.00	
Contingencies	1,865.00	
Diamond Drill Station	980.00	
Diamond Drilling	5,500.00	
	$ 46,265.00	
Amount Allowed	$ 219,410.00	
Amount Expended to September 30/55		$ 175,749.81
Amount Remaining		$ 43,660.19

Estimate of Work that may be done with Amount Remaining in Item 1 Stages 1 and II

2 Diamond Drill Stations @ $490.	$ 980.00
1400' Diamond Drilling @ $2.75	3,850.00
561' Drifting	38,830.19
	$ 43,660.19

(C)

51,823.92

Estimated amount to be Transferred from Item II - $16,783.73

Estimate of Work which can be accomplished with this money in 1500 Drift East

200' Drifting	$ 12,993.73
1 Diamond Drill Station @ $490.	490.00
1200' Diamond Drilling @ 2.75	3,300.00
	$ 16,783.73

(A)

Item II Stage I

Work to be done, 1,000' Crosscutting, 4 Transfer Stations, 4 Diamond Drill Stations, 4,000' Diamond Drilling
Work Completed by
September 30, 1955-786' Crosscutting, 2 Transfer Stations, 3 Diamond Drill Stations, 1,560' Diamond Drilling

Financial At September 30, 1955

	Amount Allowed	Amount Expended to September 30/55
Labor	$ 17,000.00	9,335.12
Supervision & Technical Services	3,000.00	1,489.94
Operating Materials & Supplies	12,500.00	6,576.97
Operating Equipment	8,219.00	1,136.81
Depreciation	750.00	594.75
Miscellaneous	4,140.00	5,714.45
Contingencies	2,550.00	1,281.12
Diamond Drill Station	2,400.00	1,800.00
Transfer Station	2,000.00	1,000.00
Diamond Drilling	12,000.00	4,680.00
	$ 64,559.00	$ 33,609.16

$27,992.35

Item II Stage II

Work to be done - 450' Crosscutting, 2 Transfer Stations, 2 Diamond Drill Stations - 2,000' Diamond Drilling
Work Completed by
September 30, 1955-257' Crosscutting, 1 Transfer Station.

	Amount Allowed	Amount Expended to September 30/55
Labor	$ 7,650.00	$ 2,617.70
Supervision & Technical Services	1,350.00	333.09
Operating Material & Supplies	5,625.00	2,001.89
Operating Equipment	Nil	Nil
Depreciation	337.00	192.75
Miscellaneous	1,502.00	2,624.28
Contingencies	1,357.00	422.40
Diamond Drill Station	1,200.00	
Transfer Station	1,000.00	500.00
Diamond Drilling	6,000.00	
	$ 26,021.00	$ 8,692.11

8,192.11

Amount Allowed	$ 90,580.00
Amount Expended to September 30/55	$ 42,301.27

Work to be completed after September 30, 1955

Item II Stage I

29 Ft. Crosscut @ $35.00	$ 1,015.00	
1 Diamond Drill Station	600.00	
2440 Ft. Diamond Drilling $3.00	7,320.00	
		$ 8,935.00

Item II Stage II

296 Ft. Crosscut @ $35.00	$ 10,360.00	
2 Diamond Drill Stations @ $600.	1,200.00	
2000' Ft. Diamond Drilling	6,000.00	
		$ 17,560.00
Add - 1 Diamond Drill	$ 2,000.00	
1000' Ft. Diamond Drilling @ $3.00	3,000.00	
		$ 5,000.00
		$ 31,495.00

(B)

Amount Allowed	$ 90,580.00	
Amount Expended to September 30, 1955		$ 42,301.27
Amount Expected to be required to complete		31,495.00
		$ 73,796.27
Amount Allowed		$ 90,580.00
Amount Expected to be required		73,796.27
Residual Amount		$ 16,783.73

(See Page 2)

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

RECEIVED
NOV 17 1955

October 23, 1955

United States Department of the Interior,
Defense Minerals Exploration Administration,
1201 North Division St.,
Spokane 2, Washington.

Attention: Mr. A. L. Weissenborn
Mr. N. G. Agnew

Re: Docket No. DMEA - 3142
Holden Mine
Contract No. Idm-2644

Gentlemen:

We have reached the point where it is necessary to apply for time extension to July 1, 1956, for the expiration date of the above noted contract and also an increase in the funds allowed to cover the work.

Attached please find a detailed financial breakdown of the money expended to September 30th 1955 on the work. As you are well aware the ground conditions encountered in the 1500 Drift East were not even thought possible at the time the original cost figures were estimated. It has been necessary to use rock bolts in every foot of the drift for over a year and in a large portion of this drive it has been necessary to use stringer caps with back lagging or full timber sets. Apart from increasing the costs above the original estimate it has naturally slowed the advance such that the original finishing date could not be attained.

Coupled with the above factors of delay and unexpected costs there has been substantial increase in the cost of working materials from the time of origin of the contract to the present, some examples are Drill steel - 11%, Bits 8%, Powder 4%, Caps 15%, Rail 7%, Roof Bolts 18%, Drill machine parts 9%, Mucking Machine parts 14%. Wages have also increased; at the beginning of the contract, miners were getting $14.02 per shift, they are now receiving $16.91 per shift.

The accompanying figures show the need for 500 feet additional diamond drilling in Item I, Stage I. At October 1st, 1955, 4,816 feet had been drilled leaving 184 feet for the drilling from the last diamond drill station. Without drilling any south hole it will require approximately 500 additional feet to reach the footwall rocks. This has come about because of an apparent steeping of the footwall from the original projection.

NOV 1 1955

We are requesting an increase in funds in two places in Item I, Stage II namely, the Labor and Miscellaneous sections. These have been calculated on our experience to date in Stage I which we feel is a conservative estimate due to the longer haul and the uncertainty of ground conditions.

We are requesting an increase in the Miscellaneous section of Item II, Stage I. As will be noted considerable savings have been effected in most of the sections in this stage because of the agreed upon change of layout of two of the crosscuts. These moves saved the cost of 2 transfer stations and approximately 185 feet of crosscutting.

Under Item II, Stage II it is necessary to request an increase in funds for 125 feet of crosscutting. It is not known how the figure of 450 feet of crosscuting was arrived at but it is obviously inadequate. We have estimated our fund requirements for the most part on the original estimates. Also, an approved change in this stage has saved the cost of one transfer station. It is quite possible from the examination of the figures under this item that the original funds may be sufficient, with two exceptions, if it was permissable to total all itemizations. However, we have not received any ruling in this matter and therefore, it is necessary to apply for an increase in each section.

To summarize we hereby apply for an extension of the expiry date of this contract from December 7th, 1955, to July 1st, 1956, - if we can obtain competent diamond drillers we feel we can complete the work by July 1st, 1956.

We also apply for the following increases in funds and additional work.

Item I Stage I

Increase Labor section $14,000, Miscellaneous section $10,000 and diamond drilling 500 feet at $2.75 per foot or $1,375.00 - Total $25,375.

Item I Stage II

Increase Labor section $7,000, Miscellaneous section $3,500 - Total $10,500.

Item II Stage I

Increase Miscellaneous section $2,000 - Total $2,000.

Item II Stage II

Increase Miscellaneous section $3,100, for the additional 125 feet increase the following, Labor $2,125, Supervision and Technical Services $375, Operating Materials and Supplies $1,562.50 Operating Equipment Nil, Depreciation $93.75, Miscellaneous $1,266.25, Contingencies $377.50, - Total $8,900.

Yours very truly,

J. S. Roper
Manager

JSR:ms

RECEIVED
NOV 17 1955

HOWE SOUND COMPANY - CHELAN DIVISION

DMEA WORK

Item 1 Stage 1

Work to be done - 3,100' Drifting, 8 Diamond Drill Stations, 5,000' Diamond Drilling
Work completed by
September 30, 1955-3,039' Drifting, 7 Diamond Drill Stations, 4,816' Diamond Drilling

Financial At September 30, 1955

	Amount Allowed	Amount Expended	Increase in Funds Requested
Labor	$ 52,700.00	$ 65,020.33	$ 14,000.00
Technical Services	9,300.00	5,971.08	Nil
Operating Materials & Supplies	40,353.99	32,870.02	Nil
Operating Equipment	31,607.01	28,808.55	Nil
Depreciation	2,325.00	2,277.00	Nil
Miscellaneous	13,516.00	22,593.87	10,000.00
Contingencies	5,673.00	1,724.96	Nil
500' Diamond Drilling @ $ 2.75/foot			1,375.00
			$ 25,375.00

Item 1 Stage II

Work to be done - 1,000' Drifting & Crosscutting, 2 Diamond Drill Stations, 2,000 Diamond Drilling

Work done at September 30, 1955 - Nil

Financial

	Amount Allowed	Amount Expected to be Required	Increase in Funds Requested
Labor	$ 17,000.00	$ 23,000.00	$ 7,000.00
Supervision & Technical Services	3,000.00	3,000.00	Nil
Operating Materials & Supplies	12,810.00	12,810.00	Nil
Operating Equipment	Nil	Nil	Nil
Depreciation @ 75¢/foot	750.00	750.00	Nil
Miscellaneous	4,360.00	7,430.00	3,500.00
Contingencies	1,865.00	1,865.00	Nil
			$ 10,500.00

HOME SOUND COMPANY - CHELAN DIVISION

DMEA WORK

Item II Stage 1

Work to be done, 1,000' Crosscutting, 4 Transfer Stations, 4 Diamond Drill Stations, 4,000' Diamond Drilling

Work completed by September 30, 1955-786' Crosscutting, 2 Transfer Stations, 3 Diamond Drill Stations, 1,560' Diamond Drilling

Financial At September 30, 1955

	Amount Allowed	Amount Expended	Increase in Funds Requested
Labor	$ 17,000.00	$ 9,335.12	Nil
Supervision & Technical Services	3,000.00	1,489.94	Nil
Operating Materials & Supplies	12,500.00	6,576.97	Nil
Operating Equipment	8,219.00	1,136.81	Nil
Depreciation	750.00	594.75	Nil
Miscellaneous	4,140.00	5,714.45	2,000.00
Contingencies	2,550.00	1,281.12	Nil
			$ 2,000.00

Item II Stage II

Work to be done - 450' Crosscutting, 2 Transfer Stations, 2 Diamond Drill Stations 2,000' Diamond Drilling

Work Completed by September 30, 1955-257' Crosscutting, 1 Transfer Station,

	Amount Allowed	Amount Expended	Increase in Funds Requested, Including Additional 125 Ft. XC
Labor	$ 7,650.00	$ 2,617.70	$ 2,125.00
Supervision & Technical Services	1,350.00	333.09	375.00
Operating Materials & Supplies	5,625.00	2,001.89	1,562.50
Operating Equipment	Nil	Nil	Nil
Depreciation	337.00	192.75	93.75
Miscellaneous	1,502.00	2,624.28	4,366.25
Contingencies	1,357.00	422.40	377.50
			$ 8,900.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~XXXXXXXXXXXXXXXXXX~~
WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Washington

RECEIVED
SEP 12 1955

September 7, 1955

Mr. J. S. Roper, Manager
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Roper:

Reference is made to your letter dated September 1, 1955, requesting authorization for the purchase of a BBU-2 model diamond drill, a safety clamp, and 500 feet of EX drill rods. The following authorization is granted:

1. The Government will participate in $2,000.00 of the cost of the BBU-2 model drill. The present drilling program does not indicate the necessity for a machine larger than the I-U model stated in the contract.

2. The Government will participate in the purchase of the safety clamp estimated to cost $82.00.

The Government will not participate in the cost of purchasing additional drill rods. Drill rods, bits, etc. are considered as a drilling cost and are included in the Agreed Unit Cost of the drilling.

As stated in the contract on page 7 under Item II, Stage II, all equipment necessary for the project and not included in any of the schedules listed in the contract shall be furnished by the Operator.

By Field Team, Region I, NW District

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

Verne C. Fryklund, Jr., Acting Member
U. S. Geological Survey

cc: DMEA (2)
USGS (2)
USBM (AD)

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

September 1, 1955

RECEIVED
SEP 12 1955

United States Department of the Interior
Defense Minerals Exploration Administration
1201 North Division St.
Spokane 2, Washington

Attention: Mr. A. E. Weissenborn
Mr. W. G. Agnew

Re: Docket No. DMEA-3142
Holden Mine
Contract No. Idm-E644

Gentlemen:

We have reached the point where we need to purchase a diamond drill in order that the drilling from the crosscuts on the 2500 level (Item II of our contract) will not seriously lag behind the completion of the crosscuts and drill stations.

Authorized under Stage I of Item II is the purchase of a (Boyles 1-U) diamond drill at an estimated cost of $2,000.00. Looking ahead it is likely that our future drilling program will require a larger machine than the 1-U model. For this reason we wish to purchase under our DMEA contract a drill with the capacity of about 2,000 feet of EX hole. The drill which seems to be best suited for our needs is the BBU-2 model sold by Boyles Bros. Company Ltd. at a quoted price of $3,604.40, F.O.B. Wenatchee.

The use of a second drill on steeply inclined holes will necessitate our purchase of another safety clamp at some $82.00. Also, for use with a new and more powerful drill purchase of some 500 feet of new EX rods will be required; this cost would be about $750.00.

It is our understanding that the total purchase cost of the several items of equipment in the contract is a limiting figure rather than the individual cost of the separate items. In which case special authorization may not be required for a larger expenditure than was specified for a diamond drill. Nevertheless we would like the approval of the Field Team for the purchase of a diamond drill larger than the Boyles 1-U model and at the cost of $3,604.40.

Since we will not need to buy a mucking machine for the completion of the work in Item II our total expenditure, even if we buy a diamond drill for some $3,604.40, will be substantially below $8,219.00 which is the amount set down in our contract. This being the case, we would like to purchase a safety clamp at a cost of some $82.00 and 500 feet of EX drill rod at a cost of about $750.00. Please advise us as to whether or not these expenditures may be made under our contract.

Yours very truly,

J. S. Roper
Manager

JSR:ms

cc: V. H. Clarke

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
AUG - 1 1955

July 27, 1955

Mr. J. S. Roper, Manager
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (copper)
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Roper:

This letter is in reply to your letters of July 13 and July 21.

Permission is hereby granted to start Stage II of both Item I and Item II.

We agree that it would be desirable to drill the north holes (Item I, Stage I) to the recognizable footwall rocks. We hesitate, however, to take drilling from Stage II work as it seems that the Stage II area has considerable geologic promise. The Stage I drilling to date has not indicated the presence of any significant structure north or south of the drift, and we therefore suggest that you adjust your drilling interval so as to eliminate one or more drill holes and use the resulting footage to increase the length of the north holes yet to be drilled.

We think it would be very desirable to increase the length of the drill holes of Item II, Stage I, so that the apparently promising footwall structure can be tested. Again, however, we hesitate to take funds from Stage II work of Item II. We suggest that at present the inclined holes from Stations 5 and 6 be extended until the footwall structure is cut. Then, depending on the character and assays of the structure cut, a decision can be made as to the desirability, or necessity, of drilling vertical holes from Stations 5 and 6. If the inclined holes show assays approaching ore grade in the footwall zone, we believe it would be highly desirable to have at least one penetration of the zone in a vertical hole, but it is our feeling at the moment that the elimination of one vertical hole

will provide the added footage needed without greatly reducing the chances of discovering ore.

By Field Team, Region I, NW District

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (2) w/cys incoming
USBM (2)
USBM (AD)
Kellum do.

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

July 13, 1955

United States Department of the Interior
Defense Minerals Exploration Administration
1201 North Division St.
Spokane 2, Washington

RECEIVED
AUG - 1 1955

DMEA

Attention: Mr. Wing G. Agnew
Mr. A. E. Weissenborn

Gentlemen:

Re: Docket No. D.M.E.A. 3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County; Washington
Contract No. Idm-E644

Application is hereby made for permission to proceed with Stage II of Item I and Stage II of Item II as outlined in the above noted contract.

Item I Stage I

As of July 1, 1955, the following work had been completed; 2,595 feet of drifting, construction of 6 diamond-drill stations, and 4,031 feet of diamond drilling. Since July 1st another diamond-drill station has been completed, as well as a reasonable amount of drifting and diamond drilling. It is expected the drifting in this stage may be completed by August 30th and the request for permission to proceed under stage II is made at this time to prevent any interruption in the work.

Item I Stage II

As required by the contract, the land on which the work in Stage II is to be performed has been covered (see your letter dated January 7 and February 7, 1955).

Item II Stage I

As of July 1, 1955, the following work had been completed; 557 feet of crosscutting, 2 transfer stations, 1 diamond-drill station and 403 feet of diamond drilling. Since July 1st another diamond-drill station has been completed and the crosscutting has been continued. It is expected that we may be ready to start on Stage II crosscutting about August 15th. It would be appreciated if permission could be granted in the near future and in this manner no interruption of the work would be necessary.

We believe your examining engineers are aware of the favorable geological information being obtained and the advisability of completing Stage II of Items I & II of the contract.

Respectfully submitted

J. S. Roper
Manager

JSR:ms
cc: V.H. Clarke, Vice President

RECEIVED
BUREAU OF MINES
JUL 2 1 1955
SPOKANE, WASH.

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

July 21, 1955

RECEIVED
AUG - 1 1955

DMEA

United States Department of the Interior
Defense Minerals Exploration Administration
1201 North Division Street
Spokane 2, Washington

Attention: Mr. A. E. Weisenborn
Mr. Wing G. Agnew

Re: Docket No. DMEA 3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Gentlemen:

Due to the conditions as stated below we are hereby making the following requests:

1. It is requested that we be allowed to use part of the 2,000 feet of diamond drilling, which is authorized under Stage II of Item I, to complete the drilling of the holes outlined in Stage I of Item I.

   We are finding it necessary to drill the north holes farther than was originally planned in order to reach the recognizable footwall rocks. Consequently, as of July 1, 1955, we have remaining only 969 feet of diamond drilling authorized under Stage I yet we will need some 1,700 feet to adequately finish the holes remaining to be drilled in this first stage.

   This first request and the ones that follow assume the authorization of Stage II under Items I and II. We recognize that at a later date we will wish to request permission to increase the total drilling for Item I. It is also apparent that, at this later date, we will need to request an extension of time for the completion of the work outlined in Stage II of both Items I and II.

2A. It is requested that we be allowed under Stage I of Item II to extend by 200 to 250 feet each of the four diamond drill holes from stations 5 and 6 (see our map, PROPOSED EXPLORATION BELOW 2500 LEVEL, dated April 2, 1954).

   The purpose for the extension of these holes would be to explore the copper-nickel occurrence which horizontal drilling from the east end of the 2500 level first indicated; actually at this writing the shorter hole from station 6 has been extended to cut this footwall mineralization and the finding, which is shown in the accompanying log of the hole, further convinces us of the importance of the additional drilling. We point out that it would not be practical or prudent for us to stop the holes now with the intention of extending them at a later date with or without DMEA assistance.

2B. It is further requested that we be allowed to use diamond drilling authorized under Stage II of Item II to complete the drilling outlined under Stage I plus the extension of holes from Stations 5 and 6.

With longer holes from the two east stations we might have to later request an increase in the total diamond drilling authorized under Item II in order to drill or finish drilling the last hole under the project.

We have discussed the above requests with your Mr. Erickson on his recent visit to Holden and we think he is well acquainted with the conditions that make desirable the increased latitude within the contract.

Yours very truly,

J. S. Roper
Manager

JSR:ms

cc: V. H. Clarke, Vice President

Enclosure:

FORM 83A 1M 9-50 C.P.

HOWE SOUND COMPANY

CHELAN DIVISION

DIAMOND DRILLING RECORD

RECEIVED AUG - 1 1955

SHEET NO. 4/4

BY WLM

DATE May-June - 1955

HOLE NO. U-25-117 MINE Holden LEVEL 2500

LOCATION 873 XCS off 2500 Haulage Drift East at 380' chute section.

BEARING North (collar) DIP -84° (collar) LENGTH 307'

LATITUDE OF COLLAR 19045 N DEPARTURE OF COLLAR 7100 E ELEVATION 2587'

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	[illegible]	WIDTH	GEOLOGY AND REMARKS
	A6008	401-404	0.30	Nil	Nil	0.54	3	
	A6009	404-414	Nil	Nil	Nil	0.28	5	
	A6010	414-420	0.05	Nil	Nil	0.[illegible]	5	
	A6011	420-425	0.05	Nil	Nil	0.18	5	
	A6025	425-427	0.5[illegible]	100	Tr.	0.06	2	
		427 - 437						Light gray to white, medium grained replacement diorite. 3' core loss.
		437 - 459						Altered peridotite with varying amounts of pyrrhotite and chalcopyrite.
	A6026	437-442	Nil	Nil	Nil	0.16	5	Replacement diorite 446-447, 448-453,
	A6027	442-446	0.05	Nil	Nil	0.1[illegible]	4	455½-456½. Core loss: 1' 437-442; 1'
	A6028	447-448	Nil	Nil	Nil	0.[illegible]	1	447-452.
	A6029	453-456½	0.25	Nil	Nil	0.1[illegible]	2½	
	A6030	456½-459	0.75	140	Nil	0.44	2½	
		459 - 482						Primarily a grayish-black, fine grained diorite with many gray, medium grained diorite intruding it. Also grades into dark gray color. 4" amphibole schist with garnet at 470. Specks of galena at 477 in ½" schist inclusion. Core loss: 1' 460-465; 2' 465-474; ½' 474-482.
		482 - 495½						Quartz soaked peridotite.
		495½ - 502						Mainly a light gray, medium grained, gneissic, replacement diorite. Some amphibole schist and some quartz soaked peridotite.
		502 - 516						Altered amphibole schist with garnet zones, mixed up with replacement diorite. Core loss: 1' 495-500; 2' 508-510; 1' 510-516.
		End						

FORM 83A 1M 8-52 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 3/4
BY TEF
DATE May-June - 1955

RECEIVED
AUG - 1 1955

HOLE NO. B-25-117 MINE Holden LEVEL 2500

LOCATION 573 [illegible]CS off 2500 Haulage Drift East at 380 chute section.

BEARING North (collar) DIP [illegible]° (collar) LENGTH 307[illegible]

LATITUDE OF COLLAR 19043 N DEPARTURE OF COLLAR 7600 E ELEVATION 2537[illegible]

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
	A5957	245-24[illegible]	0.93	.095	.005	0.06	½	Chloritized, black, fine grained
	A5958	247-25[illegible]	1.75	.200	.020	0.92	5	diorite 245½-247.
	A5959	252-255½	1.80	.070	.030	0.30	3½	
		255½ - 26[illegible]						Black, fine grained diorite. Chalcopyrite in fracture 258½-258[illegible]
	A5960	262 - 26[illegible]	1.50	.300	.050	0.68	5	Highly replaced siliceous biotite schist. In less replaced zones, core is massive pyrrhotite with chalcopyrite, pyrite, sphalerite.
		265 - 285						Coarse grained, gneissic, quartz biotite diorite that is a definite replacement of biotite schist, particularly 267-271. Broken core, 4' core loss 275-285.
		285 - 292						Border phase of above and amphibole schist, broken by slips and small gray diorite dikes. 3' core loss.
		292 - 307						Amphibole schist. Some alteration to biotite. Sprinkled with pyrite occasionally. Core loss: 3' 292-307.
		307 - 335					Nil	Amphibole schist. Some alteration to biotite. Sprinkled with pyrite 312-332. Occasional quartz zone.
		335 - 337						Light gray, coarse grained, gneissid replacement diorite.
		337 - 339						Black, fine grained diorite.
		339 - 375½						Peridotite in various stages of
	A5961	347-355	0.23	Nil	Tr	0.02	8'	alteration to chlorite. Scattered
	A5962	356-361	0.12	Nil	Nil	0.04	5	pyrrhotite and chalcopyrite, particularly
	A5963	361-365	0.37	Nil	Nil	0.17	4	after 361. Light gray, coarse grained,
	A5964	365-370	0.25	Nil	Nil	0.08	5	gneissic diorite 345-347, 355-356. Slips
	A5965	370-375	0.25	.010	.005	0.28	5	that are nearly parallel with hole at
	A5966	375-375½	0.20	.045	.005	0.3[illegible]	2½	359 and 372. Few small buff colored
								kaolin (?) spots 339-345. Core loss:
								2' 339-340; 5' 361-364; 3' 348-356.
								Light gray, coarse grained, gneissic,
								replacement diorite.
		384 - 427						Altered peridotite with pyrrhotite
	A5967	384-385	1.37	.300	.010	0.56	1'	and chalcopyrite. 100% sulfides 385-385½
	A5968	385-385½	1.25	.315	[illegible]	[illegible]	½	Light gray, medium grained diorite
	A5969	386-391	0.50	.210	[illegible]	[illegible]	[illegible]	404-409, 414-416. Core loss: 2' 399-
	A6006	391-396	[illegible]	.040	[illegible]	[illegible]	5	401, 2' 405-411; 1' 425-427.
	A6007	396-401	0.[illegible]	Nil	Tr	[illegible]	[illegible]	

FORM 83A 1M 8-50 C.P.

HOWE SOUND COMPANY

CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. [illegible]

DATE 1 May - 1 June 1952

HOLE NO. D-25-147 MINE Holden LEVEL 2500

LOCATION 375 XCS off 2500 Haulage Drift East at 580 chute section

BEARING North (collar) DIP [illegible] (collar) LENGTH 507'

LATITUDE OF COLLAR 19043 N DEPARTURE OF COLLAR 7600 E ELEVATION [illegible]

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		128 - 136						Black, fine grained diorite. Somewhat altered to biotite. Core loss: 1' 128-131; 1' 131-136.
		136 - 159						Siliceous biotite schist. 10-20% sulfides. Predominantly pyrrhotite. Some pyrite. Black fine grained diorite 138-139, 142-144. Light gray, coarse grained, replacement diorite 139-142. Broken core. Core loss: 1' 137-144; 2' 144-151; 3' 151-159.
		159 - 168						Almost completely silicitized biotite schist. Fine grained, brown and sprinkled with pyrite. Broken core. Core loss 4'
		168 - 175						Same as 128-136. Broken core.
		175 - 181						Fine grained, medium gray, [illegible] biotitized diorite.
		181 - 194						Siliceous biotite schist with [illegible]able pyrrhotite. 1' core loss.
		194 - 207						Siliceous biotite ([illegible]) schist [illegible]
	A5947	194-199	Nil	Nil	Nil	Nil	1	[illegible]
	A5948	199-205	Nil	Nil	Nil	Nil	10	[illegible]
	A5949	205-207	0.10	.045	.005	Nil	2	[illegible] diorite [illegible] 202-[illegible], 205-206. Broken core. Core loss: 1' 195-199; 1' [illegible]-205
		207 - 215						Predominantly medium gray, medium grained replacement diorite with several small [illegible] inclusions. Broken core. 2' core loss.
	A5950	215 - 220	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Siliceous biotite schist. [illegible] pyrrhotite, minor chalcopyrite. Gray replacement diorite 216-217. 1' core loss.
		220 - 227						Black fine grained diorite. Gray replacement diorite 220-222. 1' core loss. [illegible]
	A5951	227 - 232	0.10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		232 - 243						[illegible]
		243-254	0.10	.100	Nil	Nil	[illegible]	[illegible]
		[illegible]						[illegible]
		254-257						[illegible]
	A5952	257-263	0.07	[illegible]	[illegible]	0.76	[illegible]	[illegible]

FORM 173A 1M 6-50 C.P.

HOWE SOUND COMPANY

ORLAN DIVISION

DIAMOND DRILLING RECORD

RECEIVED

HOLE NO. U-23-117 MINE Golden DATE June-1953

LOCATION 375 X[illegible] off [illegible] Haulage Drift East at 500 chute [illegible]

BEARING Horiz. (collar) DIP -64° (collar)

LATITUDE OF COLLAR [illegible] DEPARTURE OF COLLAR [illegible] ELEVATION [illegible]

FROM	SAMPLE NO.	FOOTAGE	ASSAY VALUE Cu.	Au.	Au.	Zn.	GEOLOGY AND REMARKS
		0 - 29					[illegible]
		29 - 31					[illegible]
		31 - 37					[illegible]
		37 - 39					[illegible]
		39 - 40½					[illegible]
		40½ - 61					[illegible]
		61 - 64					[illegible]
		64 - 67					[illegible]
		[redacted]					[illegible]
		67 - 73					[illegible]
		73 - 78					[illegible]
		78 - 93					[illegible]
		93 - 94					[illegible]
		94 - 98½					[illegible]
		98½ - 105					[illegible]
		105 - 123					[illegible]
		123 - 128					[illegible]

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 21 1955

1201 N. Division St.
Spokane 2, Washington
April 15, 1955

Mrs. Myrtle Purdy
Certifying Officer
DMEA, Region I, NW District
1201 N. Division Street
Spokane 2, Washington

Re: Docket No. DMEA 3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mrs. Purdy:

This is in reference to the revision of base rates for several items chargeable to the cited contract.

Charges for such services as tramming, hoisting, handling supplies, and miners lamps for the calendar year are based on the actual cost for such services during the previous year. Therefore, the current charges for these services, based on actual costs during 1954, will reflect the increasing cost and be somewhat higher than previous charges based on the 1953 actual cost.

For example, during 1953 the actual cost of handling supplies was $0.403 per foot advance and this was the amount charged during 1954. The actual cost during 1954 was $0.49 per foot, and this will be the charge during 1955.

Handling supplies is the only item that will affect the contract to any extent. The cost of tramming is known to be higher but in view of the difficulty in correctly apportioning the costs, the company decided to charge $1.71 per foot, the same as in 1954. Hoisting under the contract was not necessary in 1954; therefore we are already being charged by the new base rate. There is a small increase in the cost of miners lamps but the exact amount is not yet known.

This is your authority to pay the current charges for tramming, hoisting, handling supplies, and miners lamps which are claimed or will be claimed on the Operator's monthly MF-104's. It is understood that these charges are subject to revision upon completion of a final audit of the Operator's books.

By Field Team, Region I, NW District

cc: DMEA (2)
USGS (2)

Wing G. Agnew, Member

A. E. Weissenborn, Exec. Officer

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
APR 11 1955

April 5, 1955

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Selfridge:

Enclosed are four copies of a memorandum by McWilliams and Zoldok, Bureau of Mines engineers, concerning the results of their visit to the Holden mine on January 5-7, 1955. As you know, the reason for this inspection was the slow progress and relatively high labor costs at the project.

As a result of certain recommendations made in this memorandum the Field Team considered it desirable to have Mr. J. S. Roper, general manager, and some of his staff come to Spokane for a conference, which they did on March 11, 1955. All phases of the contract work were discussed; however, particular emphasis was placed on the recommendations in the memorandum by McWilliams and Zoldok.

Concerning the recommendation for widening a section of the Buckskin drift to facilitate mucking and tramming, the Operator stated that this was unnecessary since the heading was on a two-shift basis and the greater advance always left a backlog of necessary work like roof bolting, hanging pipe, and timbering which were being done during the tramming cycle; consequently, there was no idle time on the part of any employee. The Operator's other objection to widening the drift is that the widened section would have to be at least 80 feet long, which would increase the cost of the project, and the advance would be held up until the widening was completed. In view of these objections the Field Team did not insist that the drift be widened.

Concerning the substitution of standard or pin-set timbering for rock bolting, the field examiners' contention was that rock bolting was ineffective as some of the rock-bolted sections were subsequently retimbered resulting in a duplication of costs. The Operator stated that this was due entirely to their being unable to anticipate beforehand the effectiveness of rock bolts and that at the time of installation they were believed adequate to cope with the rock support problem. Mr. Roper believes that this problem will not recur since the drift has left the zone of weakness. He stated that the last 350 feet of advance in the Buckskin drift has required only rock bolts for support, and he does not believe that timbering will be required.

The recommendation that the bonus footage measuring period correspond with the payroll period and that there be no carry-over of bonus payments into the next pay period posed a difficult problem for the Operator. Mr. Roper stated that the union had strenuously objected to this and the matter was dropped. It was then decided that the Operator, besides turning in a regular calendar month payroll transcript to accompany the MF-104s, would turn in another monthly payroll transcript covering either a 4- or 5-week period so that a comparison of wage with bonus values of the work can be made. This system should enable the Certifying Officer to check the validity of bonus payments, which was heretofore impossible.

By Field Team, Region I, NW District

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosure (in quad.)

cc: USBM (2)
USBM(AD)
Puffett

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
1201 N. Division St.
Spokane 2, Washington
March 24, 1955

RECEIVED
APR 11 1955

MEMORANDUM

To: DMEA Field Team, Region I, NW District

From: J. R. McWilliams and S. W. Zoldok, Mining Engineers, Bureau of Mines

Subject: Work progress and labor costs, Docket No. DMEA 3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Contract No. Idm-E644

This memorandum supplements the one written on the same subject on December 29, 1954, and summarizes the results of a trip to the mine on January 5-7, 1955.

The data summarized in the previous memorandum was taken from the Operator's payroll transcripts and, not being prorated to the various labor categories, is incorrect. New data made available to us on our recent visit to the mine showed the correct proration and is given in the attached tabulation. The total labor cost per foot of advance, however, has not been changed. The new tabulation is for the period February-December 1954 and does not give the taxes or insurance.

Discussion of DMEA Work

Diamond Drill Stations

Station I. This station measures 11.5 feet in length and was driven during February-March for a direct labor charge of $99.31 or $8.64 per foot. In the same period the Buckskin drift was advanced 232 feet for a direct labor charge of $1987.10 or $8.57 per foot.

Station II. This station measures 21.0 feet (drift equivalent) in length and was driven during June-July for a direct labor charge of $240.33 or $11.44 per foot. In the same period the Buckskin drift was advanced 183 feet for a direct labor charge of $1,858.71 or $10.16 per foot.

Station III. This station measures 20.0 feet and was driven during the October-November period for a direct labor charge of $261.21 or $13.06 per foot. In the same period the Buckskin drift was advanced 112 feet for a direct labor charge of $2221.71 or $19.84 per foot.

It will be noted that direct labor costs for drifting and station cutting are about even for the first two stations; however, the costs of drifting exceed by $6.78 per linear foot the equivalent costs of Station III. This is no doubt due to the miners' improper allocation of time between drifting and station cutting.

Air and Water Line Installation

During the February-December period, 1004 feet of air and water line was placed for a direct labor charge of $381.62 or $0.38 per foot. The air line is 4 inch and water line 2 inch with Victaulic couplings. Both lines are hung on steel pins on the side of the drift. This cost is considered reasonable.

Track Installation

During the February-December period, 1020 feet of track was installed at a cost of $355.73 or $0.35 per foot. Track installation is non-bonus work.

Vent Pipe Installation

During the February-December period, 994 feet of vent pipe was installed at a cost of $1,289.11 or $1.30 per foot. The vent pipe is of 16-inch diameter and is fabricated locally from 15 gauge steel. It is hung from steel pins on the side of the drift. The installation also includes two 15-h.p. booster fans.

Timbering and Roof Bolting

The Operator combines all labor costs in this category under "Timbering". During the February-August period, 333 rock bolts were placed at a cost of $695.24 or $2.09 per bolt. During this period the bonus rate was $0.90 per rock bolt. Also during this period, 6 feet of timber was placed which was disregarded in computing the average cost per bolt.

Starting in September the bonus was raised from $0.90 per bolt to $1.50 and also much timbering was done during the September-December period. The average cost per bolt for the September-December period was then assumed to be 150/90 x $2.09 or $3.48 per bolt. After allowing this installation cost for the rock bolts used during this period the balance of the funds totaling $1,623.18 under "Timbering" were charged against timber installation.

During an inspection of the workings, 38 pin sets and 11 post sets were counted, or a total of 294 feet of timbering. The Operator reports 381 feet of timbering completed and 293 feet of timbering paid

for under the bonus incentive plan. The bonus timbering agrees with the footage counted by the inspectors, leaving 88 feet unaccounted for. The excess footage could be retimbering. On the basis of 293 feet of effective timbering the installation cost is about $5.54 per foot.

Cable Installation

During the February-December period, 3000 feet of cable was strung and a transformer station installed at a cost of $1,321.61 or $0.44 per foot of cable. The electrical cable is hung on a messenger cable by means of clamps at about 2-ft. intervals.

Repairs to Equipment

During the February-December period, equipment repairs amounted to $2,713.41 or $2.60 per foot of advance.

Discussion of Bonus Incentive System

Mr. Clarence Fisher, DMEA auditor, in his First Interim Audit Report gives the bonus rates and discusses their method of computation under (2) Labor and Supervision, pages 3 and 4 of the report. It will be noted that every work category except track laying that is used in advancing the drift is represented. A spot check of several of the Operator's weekly wage and bonus sheets indicated to our satisfaction that the statements were correct.

Although the employees are paid semi-monthly, their wages and bonus are computed on a weekly basis as the bonus measurements are made every Monday for the previous week's advance. Due to this system it is impossible to check the validity of bonus payments due to carry-over of bonus payments from one month to the next.

Factors Affecting Contract Work

Tramming is a serious bottleneck in advancing the Buckskin drift. It is believed that the rate of advance might be increased as much as 25 percent if a short section of the drift is double-tracked to facilitate switching and for car storage.

Rock bolts are largely ineffective in prevent spalling from the sides and back of the drift. Pin sets are somewhat better than roof bolts but spalling from around the pins often makes the setting of posts necessary. All rock bolted sections that were seen indicated the need of standard timbering from a safety standpoint. The substitution of standard timbering or pin sets for roof bolting is indicated.

Work on the 2500 level was started on a single shift basis on December 28, 1954 and the Buckskin drift was scheduled to go on a two-shift basis on January 10, 1955.

Recommendations

1. That a section of the Buckskin drift be widened to accommodate a double track. The widening should be as near as possible to the present face and of sufficient length to accommodate 15 cars with trammer. The widened section should be substantially timbered.

2. That rock bolting be abandoned and standard or pin-set timbering be used exclusively.

3. That the bonus footage measuring period correspond to the payroll period, i.e., semi-monthly, and that there be no carry-over of bonus payments into the next pay period. This will permit close checking of payments.

Distribution:
Orig. & 3 cys - Wash.
USGS (2)
DMEA
AD
Engr

XXXXXXXXXXXXXXXXXX
1201 N. Division St.
Spokane 2, Washington
March 3, 1955

Howe Sound Company
Chelan Division
730 Fifth Avenue
New York, N. Y.

Re: Contract Idm-E644
Docket DMEA 3142
Monthly operating report for
January 1955

Gentlemen:

The subject monthly operating report has been processed and forwarded to the Disbursing Officer in Portland, Oregon, for payment.

This is to inform you that payment could not be made in the full amount claimed. Amounts deleted and reinstated are explained in the attached copy of a memorandum to the Field Team from the DMEA Certifying Officer, Region I.

By Field Team, Region I
Northwest District

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

cc: DMEA (2)
USGS (2)

Wing G. Agnew, Member
U. S. Bureau of Mines

March 3, 1955

DMEA Field Team, Region I,
Northwest District

DMEA Certifying Officer, Region I

Contract Idm-2644, Howe Sound Co. Operating report for month of January, 1955.

The subject operating report has been processed and forwarded to the Regional Disbursing Officer for payment.

The following reinstatements and deletions have been made:

Reinstatements:

Amount deducted from December 1954 MF-184 to hold cost for supervision and technical services to $3.00 per ft. of advance. Cost claimed for January 1955 is lower than the allowable cost. $62.66

Deletions:

Cash discount on invoice from North Coast Electric Co. for cable purchased- not taken into account by operator $39.20

Handling supplies- amount claimed is in excess of agreed amount allowable (40.3 cents per ft. of advance) by 19.23 58.43

Net reinstatements $ 4.23

Myrtle Purdy

cc: DMEA (2)
USGS (1)

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

March 3, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 11 1955

RECEIVED
BUREAU OF MINES
MAR 4 1955
SPOKANE, WASH.

United States Department of the Interior
Defense Minerals Exploration Administration
1201 N. Division Street
Spokane 2, Washington

Attention: Mr. A. E. Weissenborn, Exec. Officer, U. S. G. S.
Mr. S. W. Zoldok, U. S. Bureau of Mines

Dear Sirs:

Re: Docket No. DMEA 3142 (copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Replying to your letter of March 1 requesting a conference with regard to the costs on the above noted contract; we will try to be in Spokane on Friday, March 11 to discuss these matters. It is difficult to estimate the time of arrival; if road conditions are favorable, we should be there for a morning conference, otherwise it will be afternoon.

We trust the foregoing will be satisfactory with you; if not, please advise.

Yours very truly,

J. S. Roper
Manager

JSR:mb
cc: Mr. V. H. Clarke, Vice President

XXXXXXXXXXXXXXXXX
1201 N. Division St.
Spokane 2, Washington
March 1, 1955

Mrs. Myrtle Purdy, Certifying Officer
DMEA Field Team, Region I
1201 North Division Street
Spokane 2, Washington

Re: Docket DMEA 3142
Contract Idm-E644
Howe Sound Company

Dear Mrs. Purdy:

The method used by the Howe Sound Co. in arriving at costs to be charged to DMEA contract Idm-E644 for compressed air has been discussed with the operator and is satisfactory to the Field Team.

By Field Team, Region I
Northwest District

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (2)
USGS (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Washington
March 1, 1955

RECEIVED
MAR 4 - 1955

Mr. J. S. Roper, Manager
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA 3142 (copper)
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Roper:

As you no doubt know, the Field Team has been a little concerned about the labor cost under the referenced contract. This cost has been greater than was originally estimated, and it is possible that the objectives of the exploration might not be reached with the authorized funds.

The Field Team therefore would like to arrange a conference with you, Mr. Scott, your Chief Accountant, and possibly Mr. Wilson, your Geologist, or Mr. Newman, your Chief Engineer. This conference would be held at 1201 N. Division St., Spokane, and preferably before March 12, 1955, as members of the Field Team will be absent from the office for considerable periods after that date.

The matters we would like to discuss with you are the labor costs, with particular emphasis on the "bonus system", rock bolting, timbering, and the feasibility of double tracking a section of the Buckskin drift to facilitate mucking and tramming.

We do not believe that it will be necessary for you to bring any accounts or documents with you as the discussion will be informal and we hope of mutual benefit.

We would like to be notified of the date that would be most convenient for you.

By Field Team, Region I, NW District

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

cc: DMEA, Wash. (2)
USGS (2)

Wing G. Agnew, Member
U. S. Bureau of Mines

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

1201 N. Division St.
Spokane 2, Washington
February 28, 1955

Approved
Betty

Mrs. Myrtle Purdy
Certifying Officer
DMEA Field Team, Region I
Spokane, Washington

Re: Docket No. DMEA 3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract Idm-E644

Dear Mrs. Purdy:

This is in reference to hoisting charges which will be claimed under Item II, Stages I and II of the above contract.

Item II deals with exploration by crosscutting and diamond drilling from the 2500 level of the Holden mine. Inasmuch as the main haulage way is on the 1500 level, it is necessary to hoist rock from the 2500 level to the 1500 level for tramming to the surface for disposal.

Since hoisting is a necessary adjunct to exploration on the deeper levels, the cost of hoisting is an allowable charge under the contract. The cost will be computed in a manner similar to the present tramming charge, i.e., prorated on a tonnage basis.

It is suggested that the hoisting costs be allowed as claimed, subject to audit.

By Field Team, Region I, NW District

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA, Wash. (2)
USGS (2)

DMEA Field Team, Region I

February 25, 1955

DMEA Certifying Officer, Region I

DMEA - 3142

Howe Sound Company. Monthly operating report for the month of December 1954

The subject operating report has been processed and forwarded to the Disbursing Officer at Portland, Oregon, for payment.

A disallowance of $62.66 was made from the amounts claimed for supervision and technical services. According to the contract, charges for these items are not to exceed $3.00 per foot of drifting and crosscutting advance. The amount deleted represents the amount claimed over this maximum allowable of $3.00 per foot.

No adjustment was made in the payroll taxes as the $62.66 will be reinstated on the first MF-104 submitted in which the cost for supervision and technical services falls below the $3.00 per foot of advance allowable.

Myrtle Purdy

cc: DMEA (2)
USGS (2)

XXXXXXXXXXXXXXXXXX
1201 N. Division St.
Spokane 2, Washington
February 25, 1955

Rowe Sound Company, Chelan Div.
730 Fifth Avenue,
New York City, N. Y.

Re: Docket No. DMEA 3142
Contract No. Idm-3644
Monthly operating report for
December 1954

Gentlemen:

The subject monthly operating report has been processed and forwarded to the Disbursing Officer in Portland, Oregon, for payment.

This is to inform you that payment could not be made in the full amount claimed. Deletions are explained in the attached copy of a memorandum to the Field Team from the DMEA Certifying Officer, Region I.

By Field Team, Region I
Northwest District

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

cc: DMEA (2)
USGS (2)

Wing G. Agnew, Member
U. S. Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

February 21, 1955

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Selfridge:

Attached are the Government, Docket, and Division copies of Amendment No. 1 to the above-cited contract.

Distribution of this amendment is being made in the usual manner.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Attachment

cc: Finance Office w/encl.
USBM (2)
Puffett

xxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

February 7, 1955

Mr. J. S. Roper, Manager
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-2644

Dear Mr. Roper:

Enclosed are the original and six copies of Amendment No. 1 to your DMEA contract. This amendment has been prepared to include additional unpatented claims listed in the contract, in accordance with your letter of December 23, 1954.

If this amendment meets with your approval, please have all copies signed, retain that copy marked "Operator's Copy" and return the rest to this office.

Yours very truly,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures

cc: DMEA (2)
USBM (2)
Puffett

TELEPHONES, CIRCLE 7-5695-6-7

HOWE SOUND COMPANY

CHELAN DIVISION

HOLDEN, WASH.

NEW YORK OFFICE
730 FIFTH AVENUE

NEW YORK

3142

February 1, 1955

Dr. John S. Vhay, Acting Member
DMEA Field Team, Region I
North West District
U. S. Department of Interior
South 157 Howard Street
Spokane 4, Washington

Dear Dr. Vhay:

I have just received your letter of January 26, with which you included a copy of the first interim audit certificate and report, covering the period up to November 30, 1954, at our Chelan division.

We are very pleased to have the certificate and report, and I am glad to note that everything appears to be satisfactory. I am sure that you will find at all times that those in charge will cooperate fully with you and your auditors and engineers, both at Chelan and at the Blackbird.

Yours sincerely,

Vinton H. Clarke
Vice President

VHC:mh

RECEIVED
FEB 3 1955
U.S.G.S.
SPOKANE, WASH.

File Copy
Surname

Griswold
Talbut
Selfridge
Johnson
McHenry

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

JAN 31 1955

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Weissenborn:

Referring to your letter of January 7, we are enclosing the original and five copies of Amendment No. 1 to the Amended Contract. If it meets with your approval please present it to the Operator for signature and make distribution of the copies in the usual manner. Otherwise, all copies should be returned to us with your recommendations.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GHB)

Enclosures

APPROVED:

J. H. Hedges (GHB)
Member, Bureau of Mines

E. L. Newcomb (GHB)
Member, Geological Survey

WRGriswold/er 1/25/55
Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. M. E. Volin, USBM
Mr. Kiilsgaard, USGS
Chron.

R.C.J.

[redacted]
So. 157 Howard Street
Spokane 4, Washington

January 26, 1955

Mr. Winton S. Clarke, Vice President
Hecla Sound Company
730 Fifth Avenue
New York 19, New York

Re: Docket No. DMEA-3142 (copper)
Holden Mine
Chelan County, Washington
Amended Contract Ldm-2644

Dear Mr. Clarke:

Enclosed for your information and files are copies of the First Interim Audit Certificate and First Interim Audit Report for the period December 7, 1953, to November 30, 1954, by C. L. Fisher, auditor, covering the above-captioned contract.

Sincerely yours,

John S. Vosy
Acting Masher, DMEA
Field Team, Region I
Northwest District

Enclosures

cc: DMEA(2)
USBM(2)
Fisher
Puffett

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Washington
January 24, 1955

RECEIVED

Mr. J. S. Roper, Manager
Chelan Division
Howe Sound Company
Holden, Washington

Re: Docket No. DMEA 3142 (copper)
Holden Mine
Chelan County, Washington
Contract Idm-E644

Dear Mr. Roper:

This will acknowledge your letter of January 13, 1955, requesting approval to enlarge certain exploration crosscuts. Under the proposed change there would be substituted for 437 feet of 7'x7' crosscut (in two headings) 530 feet of 7'x9' crosscut (in two headings) where 205 feet of the larger size crosscutting would be for your own account and the balance of 325 feet would be for DMEA.

This is your authority to make the substitution provided the cost is no greater, or is actually less, than the cost of 437 feet of 7'x7' crosscut. If in the opinion of the Field Team the cost is greater then the DMEA will not participate in what is, in its opinion, the excess cost.

By Field Team, Region I

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

John S. Vhay, Acting Member
U. S. Geological Survey

cc: DMEA, Wash. (2) w/cys Operator's letter and cys Engr.'s memo
USGS (2) " " " " " " "
Certifying Officer " " " " " " "

HOWE SOUND COMPANY
CHELAN DIVISION

January 13, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 31 1955

Mr. A. E. Weissenborn, Executive Officer
U. S. Geological Survey.
U. S. Department of the Interior
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

Re: Docket No. DMEA 3142 (Copper)
Holden Mine
Chelan County, Washington
Amended Contract Idm-E844
Item II Stage I

The existing plans for DMEA work on our 2500 level include the driving of 2 crosscuts to reach certain points on our 6800 and 7200 east coordinates from which diamond drilling will be done. Lengths of these crosscuts were to be some 210 feet and 227 feet respectively. Their size was to be 7' x 7'; their sill elevation would be about 7 feet above the rail of the 2500 haulage drift, and each would have a transfer station at its collar and over the main haulage drift.

We have recently been able to outline two stopes above the 2500 level, (334 and 354 stopes, see accompanying map). For the development of these 2 stopes the 336 and 357 crosscuts will be driven on the 2500 level, 8' x 9' in size, to lengths of some 125 and 80 feet, respectively. On completion, the faces of these development crosscuts will be considerably closer to the desired drill stations on the 6800 and 7200 coordinates than is the main drift. For reasons of economy and convenience, we wish to extend these crosscuts under our DMEA contract driving them 7' x 9' in section, to permit use of larger equipment than could be used in a 7' x 7' drift, rather than drive the longer 7' x 7' crosscuts with transfer station at the haulage drift.

A 7' x 9' heading is 28% larger in area than a 7' x 7' drift, but the cost of the larger should be only about 14% greater. Comparison of the estimated costs of the two schemes is given below:

Required length of 7' x 7' crosscuts - 210 + 227 = 437 feet

Required length of 7' x 9' crosscuts - 160 + 165 = 325 feet

COPY

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
JAN 31 1955

If the cost of a 7' x 7' crosscut is d dollars per foot, then:

Cost of 437 feet of 7' x 7' crosscut 437d

Cost of 325 feet of 7' x 9' crosscut - 325 x 1.14d = 370.5d

Percent saving with 7' x 9' crosscuts $\frac{437 - 370.5}{437} = 15\%$

As shown above, by driving the shorter 7' x 9' crosscuts, a 15% cost saving may be expected in addition to the $1,000 saved by eliminating the 2 transfer stations. From an operational standpoint, there also will be a saving in man-hours.

In view of the expected savings resulting from the proposed change, we request your approval of the revision.

We are enclosing one extra copy of this submission for your files.

Yours very truly,

J. S. Roper
Manager

JSR:mb
Enc.

cc: Mr. V. H. Clarke, Vice President

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

1201 N. Division St.
Spokane 2, Washington
January 24, 1955

MEMORANDUM

To: DMEA Field Team, Region II

From: S. W. Zoldok, mining engineer, Bureau of Mines

Subject: Change in size of crosscut, Docket No. DMEA 3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Contract Idm-E644

In his letter of January 13, 1955, the Operator requested an increase in the size of two of the four crosscuts authorized under Item II, Stage I, of the Amended Contract. The requested increase is from a 7'x7' cross section to a 7'x9' size. The purpose of the larger size is so that portions of the two exploration crosscuts could be used as ore haulageways for the Nos. 334 and 354 stopes. The chief advantage to the company is that it would obviate the necessity of later having to lower the floors to the 2500 level elevation for haulage. Their reason for wanting to continue a 7'x9' crosscut heading beyond the section that would be used for haulage is that the heavier equipment would be used to drive the balance of the crosscut and no transfer stations would be necessary as the big cars used would be dumped directly into the skip pocket. Since the stub ends of these larger size crosscuts would be used for exploration only, there would be no other advantage to the Operator.

This matter was discussed with Mr. J. S. Roper, manager, on my recent trip to Holden, and since there seemed to be an apparent advantage, costwise, to the Government to agree to the change, provisional approval was given, subject to the Field Team's agreement. Under the proposed change there would be substituted for 437 feet of 7'x7' crosscutting (in two headings) 530 feet of 7'x9' crosscutting (in two headings) where the Operator would drive 205 feet of the larger size crosscut on his own account, leaving a net of 325 feet as DMEA work.

The volume per linear unit of 7'x9' heading is about 28 percent greater than for a 7'x7' heading; however, it is believed that the cost would be only about 14 percent greater. On this basis there is an apparent saving in total cost of about 15 percent in driving 325 feet of 7'x9' crosscut over 437 feet of 7'x7' crosscut. In addition two transfer stations costing $1,000 would be eliminated. The elimination of transfer stations would also facilitate tramming.

It is therefore recommended that the Operator be permitted to drive 325 feet of 7'x9' crosscut (in two headings) in lieu of 437 feet of 7'x7' crosscut (in two headings).

S. W. Zoldok

Orig. & 3 cys - Wash.
USGS (2)
DMEA
AD
Engr.
SWZ/he

Rubin

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

JAN 21 1955

Memorandum

To: The Administrator, DMEA
Attention: W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3142, Howe Sound Company, Holden Mine, Chelan County, Washington, Amended Contract Idm-2614, Copper

Pursuant to a memorandum dated January 14 from Mr. Griswold we have prepared the attached Amendment No. 1 to the subject Amended Contract, which is in satisfactory legal form for execution, subject to the attachment of the map referred to in the Amendment.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

HCRubin:gjb 1/21/55
Copy to: DMEA Docket
Solicitor's Docket
W. R. Griswold
J. L. Hofflund
H. C. Rubin
Chron. File

Department of the Interior

Defense Minerals Exploration Admin.

1AX440I(G1) Revolving Fund

Talbert

TELEGRAM

JAN 19 1955

MR. CLARENCE E. FISHER
DMEA AUDITOR
1201 NORTH DIVISION STREET
SPOKANE 2, WASHINGTON

AUDIT REPORT FOR IDM-E644, DMEA-3142, HOME SOUND CO., IS ACCEPTABLE AND DISTRIBUTION AUTHORIZED AFTER ADDITION OF FOLLOWING TO FIRST PARAGRAPH OF AUDIT CERTIFICATE:

"FOR THE PERIOD OF DECEMBER 7, 1953 TO NOVEMBER 30, 1954."

(Signed) J. L. Chambers

JAY L. CHAMBERS, CHIEF
CONTRACT ADMINISTRATION
AND AUDIT DIVISION

EDTalbert/wb
January 19, 1955

Copy to: Mails & Files
Admr. Reading File
Mr. Chambers

R.C.G.

File Copy
Surname

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

January 14, 1955

Memorandum

To: Acting Assistant Solicitor, Defense Minerals

From: Chief, Base Metals Division

Subject: Docket No. DMEA-3142, Howe Sound Company, Holden Mine, Chelan County, Washington, Amended Contract Idm-E644, Copper.

Will you kindly prepare an Amendment No. 1 to the Amended Contract which will add the following unpatented mining claims to the lands to be included in the contract.

Name of Claim	Book	Page	Date Recorded
Cliff	503	651	9-22-54
Crest	503	653	9-22-54
Lakeside No. 2	503	655	9-22-54
Lakeside No. 3	503	657	9-22-54
Lakeside No. 4	503	659	9-22-54
Pine Tree No. 2	503	661	9-22-54
Pine Tree No. 3	503	663	9-22-54
Pine Tree No. 4	503	665	9-22-54

All of these claims are recorded in the Office of the Chelan County Auditor at Wenatchee, Washington.

W. R. Griswold

W. R. Griswold

WRG/er 1/14/55
Copy to:

Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 13 1955

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

January 7, 1955

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract Idm-E644

Dear Mr. Selfridge:

With his letter of December 23, 1954, Mr. J. S. Roper, manager of the Howe Sound Company's Chelan Division, enclosed a revised claim map and a revised list of claims. Four copies of each are enclosed, and we have retained one for our files.

According to the next to the last paragraph of page 2 of Annex II of the cited contract, the eight claims located this year should be included in Article 2 of the amended contract; therefore, it is requested that proper steps be taken to include these additional claims in the contract.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
(U. S. Geological Survey)

Wing G. Agnew

Wing G. Agnew, Member
(U. S. Bureau of Mines)

Enclosures
cc: USBM(2)
Puffett

HOWE SOUND COMPANY

CHELAN DIVISION

HOLDEN, WASH.

December 23, 1954

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 13 1955

RECEIVED
BUREAU OF MINES
DEC 27 1954
SPOKANE, WASH.

			DATE
	N		

Mr. Wing Agnew, Member
D.M.E.A. Field Team, Region 11
c/o U. S. Bureau of Mines
1201 North Division Street
Spokane 2, Washington

Dear Mr. Agnew:

Re: Docket No. DMEA 3142
Contract No. ldm-E644

The following is a list of eight claims located on Buckskin Mountain this year:

Name of Claim	Book No.	Page	Date Recorded
Cliff	503	651	September 22, 1954
Crest	503	653	" " "
Lakeside No. 2	503	655	" " "
Lakeside No. 3	503	657	" " "
Lakeside No. 4	503	659	" " "
Pine Tree No. 2	503	661	" " "
Pine Tree No. 3	503	663	" " "
Pine Tree No. 4	503	665	" " "

These claims were recorded in the Chelan County Auditor's office, Wenatchee, Washington.

Enclosed please find five copies of our revised claim map, showing these newly staked claims, and also five copies of claim data including 36 unpatented claims and 10 patented claims.

Yours very truly,

J. S. Roper
Manager

RS:mb
Enc.

cc: Mr. V. H. Clarke, Vice President

RECEIVED
DEC 28 1954
U.S.B.M.
SPOKANE, WASH.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 13 1955

AMENDED EXPLORATION PROJECT CONTRACT
HOWE SOUND COMPANY
DOCKET NO. DMEA-5142

ANNEX II

The land referred to in Article 2 of the Amended Contract form and in Annex IV attached thereto consists of the following 56 unpatented and 10 patented claims, as follows:

Unpatented Claims	Book	Page No.
Basin	218	568
Buckskin	218	567
Chelan	218	567
Cliff	503	651
Crest	503	653
Hillside	254	63
Lakeside	152	540
Lakeside No. 2	503	655
Lakeside No. 3	503	657
Lakeside No. 4	503	659
Lucerne No. 3	218	215
Lucerne No. 4	254	29
Lucerne No. 6	218	363
Lupine	218	354
Lupine No. 2	503	251
Lupine No. 3	503	253
Lupine No. 4	503	255
Lupine No. 5	503	257
Pine Tree	254	64
Pine Tree No. 2	503	661
Pine Tree No. 3	503	663
Pine Tree No. 4	503	665
Rain No. 8	218	250
Rain No. 11	218	217
Rain No. 12	218	218
Rainbow No. 3	218	227
Rainbow No. 5	218	217
Rainbow No. 7	218	229
Rainbow No. 9	218	223
Rainbow No. 11	218	221
Summit	254	66
Snow No. 1	254	65
Snow No. 2	254	65
Snow No. 3	254	65
Sunrise	152	569
Sunrise No. 2	152	570

Patented Claims	Numbers
AMH	1,054,833
Copper Creek	1,068,711
Irene	1,054,833
Lucille	1,069,269
Minnie	1,054,833

Patented Claims	Numbers
Rain No. 3	1,111,729
Rain No. 4	1,111,729
Rain No. 5	1,111,729
Rain No. 9	1,111,729
Rain No. 10	1,111,729

Defense Minerals Administration
RECEIVED
JAN 13 1955

xxxxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

January 7, 1955

Mr. J. S. Roper, Manager
Chelan Division, Howe Sound Company
Holden, Washington

Re: Docket No. DMEA 3142 (copper)
Holden Mine
Chelan County, Washington
Amended Contract Idm-8644

Dear Mr. Roper:

This will acknowledge receipt of and thank you for your letter of December 23, 1954, together with the revised claim map and claim data on 36 unpatented and 10 patented claims.

This information has been forwarded to our Washington office so that proper steps can be taken to include these additional claims in the contract. This, of course, is in line with the next to the last paragraph on page 2 of Annex II of the amended contract, which states: "Any land hereafter acquired by the Operator for the purposes of Stage II of Item I of Exhibit "A" shall be included in Article 2 of this Amended Contract."

By Field Team, Region II

A. E. Weissenborn, Exec. Officer
(U. S. Geological Survey)

Wing G. Agnew, Member
(U. S. Bureau of Mines)

cc: [illegible] (A)
[illegible] (2)
Taffett

XXXXXXXXXXXXXXXXXX
1201 N. Division Street
Spokane 2, Washington
December 30, 195[illegible]

Received [illegible]
JAN - 1 1955

Nmca-3142

Mr. C. A. Turner, Auditor
Defense Minerals Exploration Admin.
1201 N. Division Street
Spokane 2, Washington

Re: Contract [illegible]
Rose Sound Mining Co.

Dear Mr. Turner:

The fact that labor costs under contract [illegible] Rose Sound Mining Co. have been running disproportionately high has been called to the attention of the Field Team.

It is requested that a criteria audit of the subject contract be made at your early convenience. [illegible] and Mr. John [illegible], Bureau engineers will personally [illegible] assist in any way they can.

[illegible] Field Team, Region II

[illegible]
U. S. Bureau of Mines

cc: DMEA (2)
USGS (2)

[illegible]
U. S. Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
December 29, 1954

RECEIVED
JAN 1 1955

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Selfridge:

Enclosed are four copies of a memorandum written by J. R. McWilliams and S. W. Zoldok, mining engineers, Bureau of Mines, concerning the high labor costs at the cited project.

The Field Team has been cognizant for some time of the high labor costs and slow progress at the Holden mine; however, it was hoped that both the costs and the progress would improve as the project got underway. Since this has not been the case, the Field Team is sending Mr. McWilliams and Mr. Zoldok with Mr. Clarence Fisher, DMEA auditor, to make an investigation sometime during the first week in January 1955. Definite recommendations concerning the project will be made following the visit to the property.

By Field Team, Region II

A. E. Weissenborn per J. S. V.
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew
Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosure

cc: USGS (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
December 29, 1954

DEPARTMENT OF THE INTERIOR
BUREAU OF MINES WASHINGTON
RECEIVED
JAN 1 1955

MEMORANDUM

To: DMEA Field Team, Region II

From: J. R. McWilliams and S. W. Zoldok, Mining Engineers, Bureau of Mines, Region II

Subject: Work progress and labor costs, Docket No. DMEA 3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Contract No. Idm-E644

This memorandum reviews the high labor costs and also calls attention to the slow progress being made under the cited contract.

The contract is dated December 7, 1953 and is effective for two years or until December 7, 1955. Work was started on February 1, 1954, and to November 30, 1954 the Buckskin drift had been advanced to 978 feet or an average advance of 97.8 feet per month. Under the original and the amended contracts 5,550 feet of drifting and crosscutting is authorized. To complete the contract drifting and crosscutting on schedule (from Feb. 1, 1954), an advance of 250 feet per month should have been maintained. To complete the remaining footage from December 1, 1954 an advance of about 373 feet per month will be necessary.

The exploration work on the 2500-ft. level of the Holden mine which is authorized under ITEM II in the Amended Exploration Project Contract (dated June 25, 1954) has not yet been started.

The following table summarizes most of the pertinent data for the months of February-November 1954:

	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
Advance/ft.	107	125	106	131	72	111	113	101	61	51
Rounds blasted	18	20	19	22	12	17	19	17	13	11
Rock bolts placed	74	47	--	30	124	6	52	21	17	13
1/ Feet of timber placed	--	--	--	--	6	—	--	96	174	54
Feet of advance/round	5.9	6.3	5.6	6.0	6.0	6.5	5.9	5.9	4.7	4.6
2/ Manshifts worked	60-6/8	69	59-6/8	64	74-6/8	59-7/8	85	93-5/8	93-2/8	57-6/8
2/ Manshifts per round	3.37	3.45	3.14	2.91	6.23	3.51	4.47	5.51	7.17	5.26
2/ Feet per manshift	1.76	1.81	1.77	2.05	0.96	1.86	1.33	1.08	0.65	0.88
2/ Cost direct labor/ft.	$10.07	$11.80	$11.68	$9.49	$22.55	$10.41	$13.37	$16.61	$29.45	$17.47
3/ Indirect labor/ft.	--	--	--	--	1.10	0.50	1.62	5.19	10.88	2.21
4/ Supporting labor/ft.	1.92	0.89	1.44	2.12	1.89	5.11	9.15	5.47	2.67	2.04
Taxes, insurance/ft.	1.15	1.19	1.25	0.96	1.29	1.09	1.58	1.84	2.01	1.11
Total labor/ft.	13.14	13.88	14.37	12.57	26.83	17.11	25.72	29.11	45.01	22.83

1/ Standard set is 6 feet.
2/ Direct labor - miners and muckers.
3/ Indirect labor - timbermen and trammers.
4/ Supporting labor - electricians, welders, machinists, mechanics, oilers, carpenters, common labor.

The labor is broken down into three categories: direct, indirect and supporting. Taxes and insurance are shown as a separate item. The total labor costs were taken from the Operator's MF-104's, and the breakdown into the three labor categories used was made from the payroll transcripts; in many cases this was figured on a percentage basis where the amount shown on the payroll transcript exceeded that claimed in the MF-104. The taxes and insurance for every month shown were computed on a percentage basis since these were claimed as lump sums on the MF-104's.

Discussion

During February and March, $99.31 was spent for direct labor for cutting 8 feet of drill station which, having the same cross section as the drift, is equivalent to an 8-ft. drift advance. The direct labor for driving this drill station is $12.41 per foot as against a direct labor cost of $10.07 and $11.80 per foot for drifting for the months of February and March, respectively. It will be noted that the direct labor cost for drifting and station excavation are about even.

The total labor costs for the four-month period, February-May 1954, ranged from $12.57 to $14.37 per foot. In June the labor costs increased appreciably and remain high with the exception of a decrease for the month of July; however, July's costs are still higher than the average of the February-May period. An increase might be justified for the September-October period, when considerable timbering was being done but the direct or at face labor remained high.

Mr. John Curzon, the former mine manager, was replaced on May 15, 1954 by Mr. J. S. Roper, the present mine manager.

During June, $204.44 for direct labor was spent in excavating a diamond drill station (equivalent to 17 feet of drift) and another $35.89 was spent for this same station in July. Since the bulk of the work was done in June, then this month will be used for comparison. In June the Operator's direct labor cost on the Buckskin drift was $22.55 per foot and for the drill station ($204.44 + $35.89 ÷ 17) or $14.14 per foot. The cost per foot of the drill station is $8.41 less than for the drift even though the drill station is composed of two 8½-ft. crosscuts off the drift and undoubtedly much of the mucking must be done by hand. The Operator documents his labor costs for the drill stations but does not claim the costs as these stations are paid for at a unit cost of $490.00 each.

During October, the Operator's documentation shows $199.14 direct labor for a diamond drill station and for November $62.07 for the same. The direct labor charge is thus $15.36 per foot. The Operator's direct labor charge for drifting is $29.45 and $17.47, respectively, for the

months of October and November. On the basis of the percentage of drill station charges that were incurred in October and November, then the October charges are given a weight of 76 percent and the November charges 24 percent. The weighted average of the direct labor for drifting thus becomes $26.57 per foot as against $15.36 per foot for the diamond drill stations.

Conclusions

The direct labor charges for the first diamond drill station excavated in the February-March period were a little more per foot of advance than for the drifting, which is normal and to be expected. The direct labor charges for the drill station completed in June and the one completed in October-November were considerably higher per foot than were those for drifting during the same period when the opposite should have been the case. It appears that either the labor charges have been improperly documented or that the drill stations were driven with much greater efficiency than was the drift.

Recommendations

No recommendations concerning this matter are being made at this time. DMEA field examiners and an auditor will visit the Holden mine in the very near future to make an investigation, and this will be covered in a subsequent memorandum.

Orig. & 3 cys - Wash.
USGS (2)
DMEA
AD
Auditor Fisher
JRM/he

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 16 1954

November 15, 1954.

3142

Mr. C. O. Mittendorf, Administrator,
Defense Minerals Exploration Administration,
United States Department of the Interior,
Washington 25, D. C.

Re: CONTRACT IDM-E644

Dear Mr. Mittendorf:

This will advise you that on October 25, 1954, a Mine, Mill & Smelter Workers Union strike was called at our Holden Mine. This strike lasted for two weeks and the men returned to work on November 8th.

Production and development schedules, of course, will be reduced until our full crew returns to work. I was recently in to see Mr. W. R. Griswold, of your office regarding the matter and was advised that there were no particular contract requirements of which you should be advised in regard to the strike but as a matter of record we would like to state the facts of the case.

We expect that as far as our exploration projects are concerned, interruption of progress will amount to approximately one month.

Yours very truly,
HOWE SOUND COMPANY

Vinton H. Clarke
Vice President

VHC:MP

IN REPLY REFER TO:

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

August 16, 1954

Re: DMEA-3142, Idm E644
Holden Mine
Chelan County, Wash.
Copper

Memorandum

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

From: R. D. Trace, U. S. Geological Survey

I have read Dwight Crowder's report on routine inspection dated June 30, 1954. I note on page 2, 3rd paragraph, "the basic rock contains . . . 30-50 percent pyrrhotite. . .", and on sheet 1 a 2' x 12' (in plan) "bleb" of basic intrusive is shown that contains the pyrrhotite as noted in the narrative.

I am wondering whether the sample taken represents the entire "bleb" of basic intrusive, or is a selected grab sample of a small area. Also, was the "bleb" found only in the drift, plastered on the north wall, or could it be seen in the roof. Because of my unfamiliarity with the type of ore occurrence here, a simple cross section would have helped me.

Bob Trace
R. D. Trace

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

August 4, 1954

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Selfridge:

We have read with interest the comments in your letter of July 30, 1954, concerning the current low rate of progress on the Holden project. We have been aware that progress on the project has been slow, but we do not believe that this is due to a lack of interest on the part of the Howe Sound Company. When the project started, the operator stated that because of the long tram and a weak battery for the trammer, it would be possible to advance the drift at the rate of only one round per day until a new battery could be obtained. It was expected that this new battery would arrive in late June or early July.

Mr. John McWilliams, Bureau of Mines, visited the Holden mine on July 22, 1954. He reports that the new battery is not now expected until late August and consequently will not go into service until early September. After the battery is in service, the rate of advance is expected to be two rounds a day. At this rate, the proposed work should be completed in the time allotted by the contract.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: USBM(2)
Puffett

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

Griswold
Selfridge
Johnson
McHenry

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-F644

Dear Mr. Weissenborn:

A review of the above project shows that the progress of the work under the outlined program is disappointingly slow. For the five months, February to June, inclusive, the total advance was 541 feet, an average of 108 feet per month. For a large and presumably efficient mining organization, with an ample supply of modern equipment, such a rate of advance is not understandable, especially since the total amount of drifting and crosscutting under this item of the contract is 4,100 feet, plus diamond drill stations and a substantial amount of diamond drilling.

We feel that you should write this Operator, pointing out, in a tactful manner, that Article 4 of the contract stipulates that the work should be performed in a manner to bring the project to completion with the time period fixed in the contract. As you know, we rarely refuse to grant an extension of a work completion period if any real reason exists for so doing, but nevertheless it is a cause for concern when a major project, such as this, is prosecuted in such a lackadaisical and perfunctory manner, as though the Operator had little real interest in the exploration program. If a drastic labor shortage existed so that the Operator was in dire need of every available miner to carry on his normal work of mine operation, we could see some reason for exploration project delay, but we do not believe that such a condition presently exists.

Sincerely yours,
George C. Selfridge
Chairman, Operating Committee (GCS)

APPROVED:
J. H. Hedges
Member, Bureau of Mines (GCS)
D. M. Larrabee
Member, Geological Survey (GCS)

WRGriswold/bjl (7/29/54)
Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. C. H. Johnson
Mr. Gildersleeve
Chron

File Copy
Surname

Sincerely
Selfridge
Johnson
Mattendorf

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

JUL 1 - 1954

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3142 (Copper)
Hove Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-5644

Dear Mr. Weissenborn:

Enclosed are the Finance Office and Field Team copies of the cited amended contract which have been signed by the Administrator and the Operator.

We believe the new work provided for under Item II closely conforms to your recommendations as delineated in your letter of May 20.

With reference to the use of NX bits for diamond drilling, we presume that such bit size is adequate to insure satisfactory core recovery. However, when the first hole or two have been drilled we suggest that you check on core recovery and, if not satisfactory, recommend to the Operator that a larger sized bit be used.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GHB)

Enclosures 2

WRGriswold/bjl (6/30/54)

APPROVED:

J. H. Hedges

Member, Bureau of Mines (GHB)

Philip W. Guild

Member, Geological Survey (GHB)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
C. H. Johnson
Mr. Gildersleeve
Chron.

R.C.G.

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

Defense Minerals Administration
JUN 29 1954

Unsealed
Betty

June 28, 1954.

Mr. C. O. Mittendorf, Administrator,
Defense Minerals Exploration Administration,
U. S. Department of the Interior,
Washington 25, D. C.

Re: DOCKET NO. DMEA-3142 - (Copper)

Dear Mr. Mittendorf:

Please find enclosed original and ~~five~~ 4 copies of the amended contract covering the exploration project at our Chelan Division Mine located at Holden, Washington. We have retained the operator's copy for our files and have approved and signed the enclosed contracts.

Yours very truly,
HOWE SOUND COMPANY

Vinton H. Clarke
Vice President

VHC:MP

File Copy
Surname
Gilbert
Hedges
Newcomb
Farrar
Selfridge
F. Johnson

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

Mr. Vinton H. Clarke
Vice President
Howe Sound Company
730 Fifth Avenue
New York 19, New York

JUN 25 1954

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Clarke:

We are enclosing the original and five copies of the amended contract covering the cited exploration project, which have been signed by the Government. We believe the contract follows the outlines agreed upon by yourself and Mr. Weissenborn.

~~In accordance with the provisions of the Government's regulations, a copy of this contract will be forwarded to the Internal Revenue Service.~~

If the contract meets with your approval, will you kindly sign all copies, retain the "Operator's Copy for your files, and return the remaining copies to this office.

Sincerely yours,

C. O. Mittendorf
(857)
Administrator

Enclosures 6

WRGriswold/bjl (6/23/54)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Gildersleeve
Mr. C. H. Johnson (USBM)
Region II (2)
Chron.

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

Mr. Vinton H. Clarke
Vice President
Howe Sound Company
730 Fifth Avenue
New York 19, New York

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Amended Contract No. Idm-E644

Dear Mr. Clarke:

We are enclosing the original and five copies of the amended contract covering the cited exploration project, which have been signed by the Government. We believe the contract follows the outlines agreed upon by yourself and Mr. Weissenborn.

You will note that the time period for repayment to the Government has been extended from ten to thirteen years due to the larger sum involved.

If the contract meets with your approval, will you kindly sign all copies, retain the "Operator's Copy for your files, and return the remaining copies to this office.

Sincerely yours,

Administrator

Enclosures 6

Stage II

This stage consists of not more than an additional 1,000 feet of drifting and crosscutting, the construction of 2 diamond-drill stations, and not more than 2,000 feet of diamond drilling.

ITEM II

Item II consists of exploring in the Holden Mine at deeper horizons than are now known, by crosscutting and by diamond drilling from the 2500 level of this mine as indicated on the attached map entitled "Howe Sound Company, Chelan Division, Proposed Exploration below 2500 Level." The work shall be done in two stages with performance of the second stage subject to the prior approval of the Government. The location, direction, and extent of all work under both stages are subject to the approval of the Government.

The specifications for the work set forth under Item I apply equally to the same work under this Item II~~,~~ ~~with the added provision that diamond-drill holes shall be not less than~~ EX in size. If the Government determines that AX size holes are required the contract will be amended to provide a cost for AX size holes.

Stage I

This stage consists of not more than 1,000 feet of crosscutting, 4 transfer stations, 4 diamond-drill stations, and 4,000 feet of diamond drilling.

Stage II

This stage consists of not more than 450 feet of crosscutting, 2 transfer stations, 2 diamond-drill stations, and 2,000 feet of diamond drilling.

Estimated Costs of the Project

Agreed Unit Costs

ITEM I

Stage I

Diamond-drill stations 8 @ $490.00/ea.	$3,920.00

Stage II

This stage consists of not more than an additional 1,000 feet of drifting and crosscutting, the construction of 2 diamond-drill stations, and not more than 2,000 feet of diamond drilling.

ITEM II

Item II consists of exploring in the Holden Mine at deeper horizons than are now known, by crosscutting and by diamond drilling from the 2500 level of this mine as indicated on the attached map entitled "Howe Sound Company, Chelan Division, Proposed Exploration below 2500 Level." The work shall be done in two stages with performance of the second stage subject to the prior approval of the Government. The location, direction, and extent of all work under both stages are subject to the approval of the Government.

The specifications for the work set forth under Item I apply equally to the same work under this Item II, with the added provision that diamond-drill holes shall be EX in size. If the Government determines that AX-size holes are required, the contract will be amended to provide a unit cost for AX-size holes.

Stage I

This stage consists of not more than 1,000 feet of crosscutting, 4 transfer stations, 4 diamond-drill stations, and 4,000 feet of diamond drilling.

Stage II

This stage consists of not more than 450 feet of crosscutting, 2 transfer stations, 2 diamond-drill stations, and 2,000 feet of diamond drilling.

Estimated Costs of the Project

Agreed Unit Costs

ITEM I

Stage I

Diamond-drill stations 8 @ $490.00/ea.	$3,920.00

IN REPLY REFER TO:

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

June 15, 1954

Memorandum

Re: DMEA-3142
Holden Mine
Chelan County, Washington
Proposed Amendment
$90,576.50
Copper

To: Mr. W. R. Griswold, DMEA

From: E. L. Newcomb, USGS

Subject: Concurrence with field team recommendation for approval

The field team has recommended a two-stage project be approved.

The proposed crosscutting and diamond drilling is sufficient to determine whether the Holden ore body projects 400-500 feet below present bottom mine level (2500 level). The reduced program in this compromise project represents good exploration planning, and avoids the excessive work of the original proposal which was more like development than acceptable exploration.

I concur with the field team's two-stage proposal and the provision that Stage II will be done only if Stage I work is inconclusive.

E. L. Newcomb
E. L. Newcomb
Geologist

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

June 9, 1954

Memorandum

To: W. R. Griswold, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-3142 (Copper) Howe Sound Company, Holden Mine, Chelan County, Washington

I have reviewed the Field Team's report of May 20, 1954, recommending approval of a 2-stage, $90,000 exploration project for the downward extension of the Holden orebody. It is noted that if the results of Stage I are satisfactory, or if they are positively discouraging, in either event Stage II will be unnecessary, thus reducing the total cost by $26,000.

The project appears to have been very thoroughly discussed, and although the Field Team has conceded to the Company, without wholly agreeing, that fanned-out holes would be unsatisfactory, I believe such concession, in the case of a competent and experienced operator, is justifiable. I am pleased that exploration is to be carried deeper than at first planned, as this adds to the exploratory value of the work.

I spoke to you about the use of EX bits in diamond drilling. Unless company experience in this orebody indicates that 75 percent or better core recovery is obtained in the ore zone with that size, and unless experience in the current project bears this out from the start, the Government would be wise to urge the adoption of a larger size. Presumably, the Field Team discussed this point, but failed to deal with it in its report.

The map you sent me "Proposed Exploration below 2500 Level" is returned herewith.

C. H. Johnson

C. H. Johnson

Attachment

Copy to - Mr. Newcomb, USGS
Minerals Division
C. H. Johnson
Files

File Copy
Surname

500

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

H.S. in R.R.

June 4, 1954

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Chief, Base Metals Division

Subject: Docket No. DMEA-3142, Howe Sound Company, Contract No. Idm-E644

Attached is a draft of an amended contract for the Howe Sound Company. This Operator has made an application for a new project to be performed in the same general property holding, but at some distance from the project now in progress.

Hence, we have outlined an amended contract to include both projects, calling the current Project Item I and the proposed work Item II.

W. R. Griswold

W. R. Griswold

WRGriswold/bjl

Copy to: Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

Defense Minerals Administration
RECEIVED
MAY 25 1954

May 20, 1954

Air Mail

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington

Dear Mr. Selfridge:

On Tuesday afternoon, May 18, 1954, members of the Field Team conferred in Spokane with Mr. Vinton H. Clarke, Vice-President, Howe Sound Company, and Mr. Thomas L. Wilson, Howe Sound Geologist at the Holden Mine. In this conference, the two recent proposals for exploration for the deeper extension of the Holden ore body were discussed. These proposals were the "Alternate Proposal No. 2," submitted to your office by Mr. Clarke in a letter of April 8, 1954, and our counterproposal described in our letter to you of May 6, 1954.

As explained in our letter of May 6, our primary objection to the features of "Alternate Proposal No. 2" was the great amount of crosscutting necessary for a relatively small amount of diamond drilling. In our counterproposal we had hoped to solve this by driving fewer crosscuts and drilling more holes from each crosscut. Some of our proposed diamond drill holes would be fanned at horizontal angles to the crosscut, instead of having them all drilled parallel to the north-south coordinates, as was outlined in Mr. Clarke's proposal. Our proposal also included much longer crosscuts than those proposed by Mr. Clarke. With a longer crosscut, we believed it would be possible to make more satisfactory angles of intersections with the projected position of the deeper portions of the Holden ore body.

Mr. Clarke objected to our proposal for two reasons: (1) the longer crosscuts would increase the unit cost per foot of driving the crosscuts as the bonus system now in effect at the mine would mean that after a certain distance, it would be necessary to pay the

miners a higher rate. This increase would result in a unit cost of $38.89 per foot for crosscutting as compared to $38.70 per foot for the shorter crosscut; and (2) by drilling holes at an angle to the north-south coordinates, there would be increased difficulty in correlating geologic information from known areas in the mine.

Although we do not wholeheartedly agree with Mr. Clarke that his objections are unsurmountable, we accept them inasmuch as the Howe Sound Company will probably spend many times more than this initial exploration project in ultimately developing any lower level in the Holden Mine. If the exploration project is successful and the Howe Sound Company develops the lower levels, there is little doubt that royalties from resulting production will more than repay any amount the Government will contribute to the project.

Mr. Clarke and Mr. Wilson emphasized that there is a decided plunge of the Holden ore body to the east. Evidence on the 2300 and 2500 levels suggests that this plunge is becoming somewhat flatter with depth. Thus, they believe that it is important that any proposed exploration should first be concentrated near the east end of the ore body on the 2500 level, to more fully determine if this possible flattening of the plunge is indeed a fact.

As a result of the conference, accord was reached between the members of the Field Team and Mr. Clarke and Mr. Wilson that the proposed exploration project be set up as a two-stage project. The first stage would explore the downward extension of the eastern part of the Holden ore body. If this work were successful, no further exploration would be necessary. If the work in Stage I were not positively encouraging, Stage II would permit drilling the downward extension of the west half of the Holden ore body. If the results of Stage I were positively discouraging, then no further exploration would be necessary.

The two-stage program agreed on includes essentially all the features of Mr. Clarke's "Alternate Proposal No. 2." Stage I would include driving the four easternmost crosscuts as shown on the map submitted with Mr. Clarke's letter. From the ends of these crosscuts two holes will be drilled parallel to the 7600E, 7200E, 6800E, and 6400E coordinates. As outlined in Mr. Clarke's letter, the total length of these holes is 3,280 feet. We have added 720 feet, making a total of 4,000 feet. This extra footage is to permit one or two holes to be drilled at angles to the above coordinates should results necessitate closer control.

Stage II would include the two west crosscuts as proposed in Mr. Clarke's "Alternate Proposal No. 2," to permit two holes to be drilled parallel to the 6000E and the 5600E coordinates.

Summary of the costs of this proposed exploration is as follows:

Stage I

Exploration Work

1,000'	Crosscuts, 7' x 7', 4 locations at $38.70/ft.	$38,700.00	
4	Transfer Stations at $500.00	2,000.00	
4	Diamond Drill Stations, app. 1,000 cf. each at $600.00	2,400.00	
4,000"	Diamond Drilling, EX at $3/ft.	12,000.00	
	Tro-pari Surveying	600.00	
200	Assays at $2.70	540.00	
			$56,240.00

Equipment

1	Gardner-Denver Mucking Machine	$ 3,281.00	
2	Gardner-Denver C.F. 89 Rock Drills at $806.50	1,613.00	
1	Boyles Bros. No. 1-U Diamond Drill	2,000.00	
1	Tro-pari Surveying instrument	1,325.00	
	Total equipment		$ 8,219.00
	Total cost of Stage I		$64,459.00

Stage II

Exploration Work

450'	Crosscuts, 2 locations at $38.70	$17,415.00	
2	Transfer Stations at $500.00	1,000.00	
2	Diamond Drill Stations at $600.00	1,200.00	
2,000'	Diamond Drilling at $3/ft.	6,000.00	
75	Assays at $2.70	202.50	
	Tro-pari Surveying	300.00	
	Total cost of Stage II		$26,117.50
	Total cost of Project		$90,576.50
	Government's Share at 50 percent		$45,288.25

The Tro-Pari surveying has been included as it is anticipated that the vertical holes drilled from the ends of the crosscuts may deviate considerably from vertical.

It is recommended that the above-outlined proposal for a unit-cost project at the Holden Mine be approved. It is also recommended that provisions be made in the contract regarding final disposal of jointly owned equipment, as was done in Contract No. Idm-E644, and that Contract No. Idm-E644 be combined with this contract (if granted) for repayment purposes.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: USBM (2)
Puffett

500

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

N.S. in R.R.

May 11, 1954

Memorandum for the Files

I received a phone call from Mr. Vinton Clarke, Vice President, Howe Sound Company, (Docket No. DMEA-3142) inquiring as to their application for exploration below the 2500 level of the Holden mine. I explained that the Field Team had recommended a different project (letter of May 6, 1954). I suggested to Mr. Clarke that since he planned on going to the Holden mine in a few days, he might see Mr. Weissenborn and discuss the proposal with him.

W. R. Griswold

W. R. Griswold, Chief
Base Metals Division

WRGriswold/bjl
Copy to: Base Metals
Mails & Files
Chron.

DMEA

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 17 1954

May 10, 1954

3142

Mr. A. E. Weissenborn
Executive Officer - Region 2,
D.M.F.A. Field Team
South 157 Howard Street,
Spokane 4, Washington.

Dear Mr. Weissenborn:

Please be advised that Mr. J. J. Curzon has resigned from his position as Manager of the Howe Sound Company, Chelan Division, Holden, Washington, effective May 15th.

Mr. J. S. Roper will take over as of the above date and leaves the position of Mine Superintendent of our subsidiary, Howe Sound Exploration Company, Ltd., Snow Lake, Manitoba.

Yours sincerely,

Vinton H. Clarke
Vice President

VHC:MP

RECEIVED
air Mail
MAY 12 1954
U.S.G.S.
SPOKANE, WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

May 6, 1954

Air Mail

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

E644

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington

Dear Mr. Selfridge:

In response to your letter of April 15, 1954, we have given our attention to "Alternate Proposal No. 2," as submitted by Mr. Clarke to explore for deeper extensions of the Holden ore body below the 2500 level by diamond drilling.

In studying Mr. Clarke's proposal we have conferred with our field personnel who are familiar with the Holden mine, particularly with Mr. Fred W. Cater, Jr., U. S. Geological Survey, who has devoted the better part of the past three years to a detailed study of the Holden mine area.

All of our field men familiar with the Holden mine believe there is but little doubt that the Holden ore body will continue downward to depths below those that Mr. Clarke's "Alternate Proposal No. 2" will explore. There is, of course, the fact that the ore body appears to be narrowing with depth; however, a more pertinent question confronting continued mine development is whether the ore on the lower levels will be of minable grade. Work aimed at answering this question would, in our opinion, be considered as exploration as there would be little purpose in putting down costly development workings to these lower levels if the grade of ore was too low to be profitably mined.

We are concerned with the great amount of crosscutting needed to carry out Clarke's "Alternate Proposal No. 2." According to this proposal it will be necessary to drive six crosscuts aggregating 1,465 feet to locate six diamond drill stations from which only 5,000 feet of diamond drilling will be done. As we see it,

Clarke has proposed six crosscuts so that all drilling from these crosscuts may be normal to the strike of the vein in planes of north-south coordinates, a common drilling practice at that mine. With reference to this proposed drilling program, however, we note in J. J. Curzon's letter of February 5, 1954, a copy of which was attached to your letter of April 15, that the mine management was concerned with maintaining a proper level interval and in laying out a usable stope pattern on the proposed lower levels. From this background, and from our own knowledge of the mine, we gather that the proposed drilling program is designed not only to explore below the 2500 level, but also to "drill out" and in part develop at least two lower proposed levels. It seems to us that such work would go beyond the limit of exploration and we fail to see how DMEA could justify Government participation in such an extensive program. We believe the Government should participate only in enough drilling to determine if the ore body projects to the proposed lower levels and if it is of minable grade. Any excess drilling or crosscutting that the company might want to do to lay out level or stope patterns should be for their own account.

Our proposal to explore the downward extension of the Holden ore body would be to drive two crosscuts into the hanging wall from the 2500 level from the end of which six diamond drill holes would be directed through the central portion of the ore body. If this were done, the crosscuts could be driven longer, allowing a more satisfactory angle of intersection of the ore zone by the drill holes. Although it has been the practice at the mine to direct all holes at right angles to the ore body, we believe that holes intersecting the ore body at angles of 50 to 60 degrees, will satisfactorily obtain the information needed in this type of exploration. The applicant has submitted a proposal where the vertical angle of intersection with the ore zone is only 25 degrees, and we can see no reason why he should object if the horizontal angle of intersection is as low as 50 degrees.

The suggested locations of these crosscuts would be along the 5800E and 6700E coordinates. The crosscuts would be extended to lengths of 400 feet rather than the 220-foot crosscuts as suggested by the applicant. Of the six holes drilled from the crosscut, two would be drilled in the vertical plane of the crosscut, two to the east at angles of 30 to 40 degrees from the center line of the crosscut at negative angles of 50 and 70 degrees, respectively, and two to the west at angles of 30 to 40 degrees from the crosscut at negative angles of 50 and 70 degrees, respectively. The holes are planned to intersect the ore body at elevations of 300 and 500 feet below the 2500 level.

The two holes drilled in the vertical plane of the crosscut will measure 460 and 600 feet. The four holes drilled at angles to the crosscut will consist of two holes 580 feet long plus two holes 770 feet long. The accompanying sketch shows the plan and generalized sections of the proposed drill holes.

This proposed drilling program will test the ore zone on the 2800 level along a strike distance 150 feet to the east and 150 feet to the west of each crosscut. The deeper holes will test the ore zone for 250 feet to the east and 250 feet to the west of each crosscut. Thus, drilling from one drill station will test the ore zone on the 2800 level for a total strike length of 300 feet and will test the ore zone on the 3000 foot level for a total strike length of 500 feet.

By placing the two crosscuts along the 5800E and the 6700E coordinates, the drilling will test the ore zone on the 2800 level over a strike length of 1,200 feet and will test the ore zone on the 3000 level over a strike length of 1,400 feet.

Using the costs outlined in Mr. Clarke's letter of April 9, 1954, as a basis, the following are the costs of our counterproposal to "Alternate Proposal No. 2."

Mine Work	
800 feet 7' by 7' crosscuts @ $38.70	$30,960.00
2 Transfer stations @ $500.00	1,000.00
2 Diamond drill stations @ $600.00	1,200.00
7,520 feet of diamond drilling @ $3.00	22,560.00
	$55,720.00
Equipment	
Same as in Mr. Clarke's letter of April 9	$ 6,894.00
Total costs	$62,614.00

The total costs of this proposal represent a decrease of $22,575.00 from the amount proposed by Mr. Clarke.

A further modification of our counterproposal would be to drive only one crosscut from a location near the 6400E coordinate and drill six diamond drill holes, to be directed as outlined above. This exploration would test the ore body on the 2800 and 3000 levels for strike lengths of 300 and 500 feet, respectively. If drilling results in these holes proved favorable the company would very likely sink the shaft and develop the proposed levels. A project consisting of only one crosscut and six diamond drill holes would reduce the total cost to an estimated $34,750.00. A second crosscut with attendant drilling could be made part of the contract on a second-stage basis, to be entered into only if the first drilling program failed to find substantial amounts of ore. The location of this crosscut would be based on results obtained from the previous drilling program.

It is recommended that any equipment purchased for the proposed work be depreciated in the same manner as equipment used in Howe Sound Contract Idm-E644.

The Field Team recommends exploration of the Holden ore body below the 2500 level, such exploration to be along the modified lines presented in this letter, rather than as proposed by the applicant.

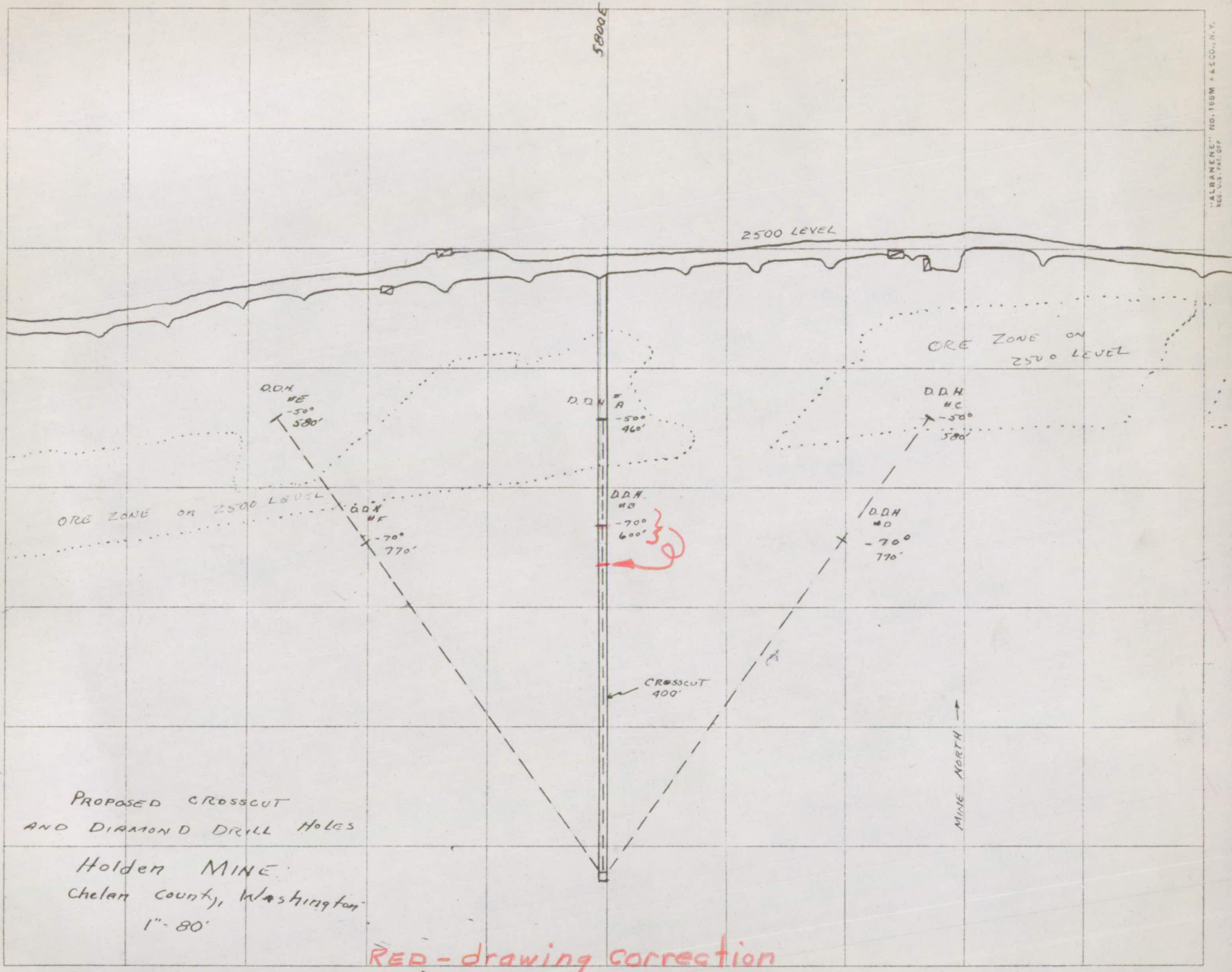
By Field Team, Region II

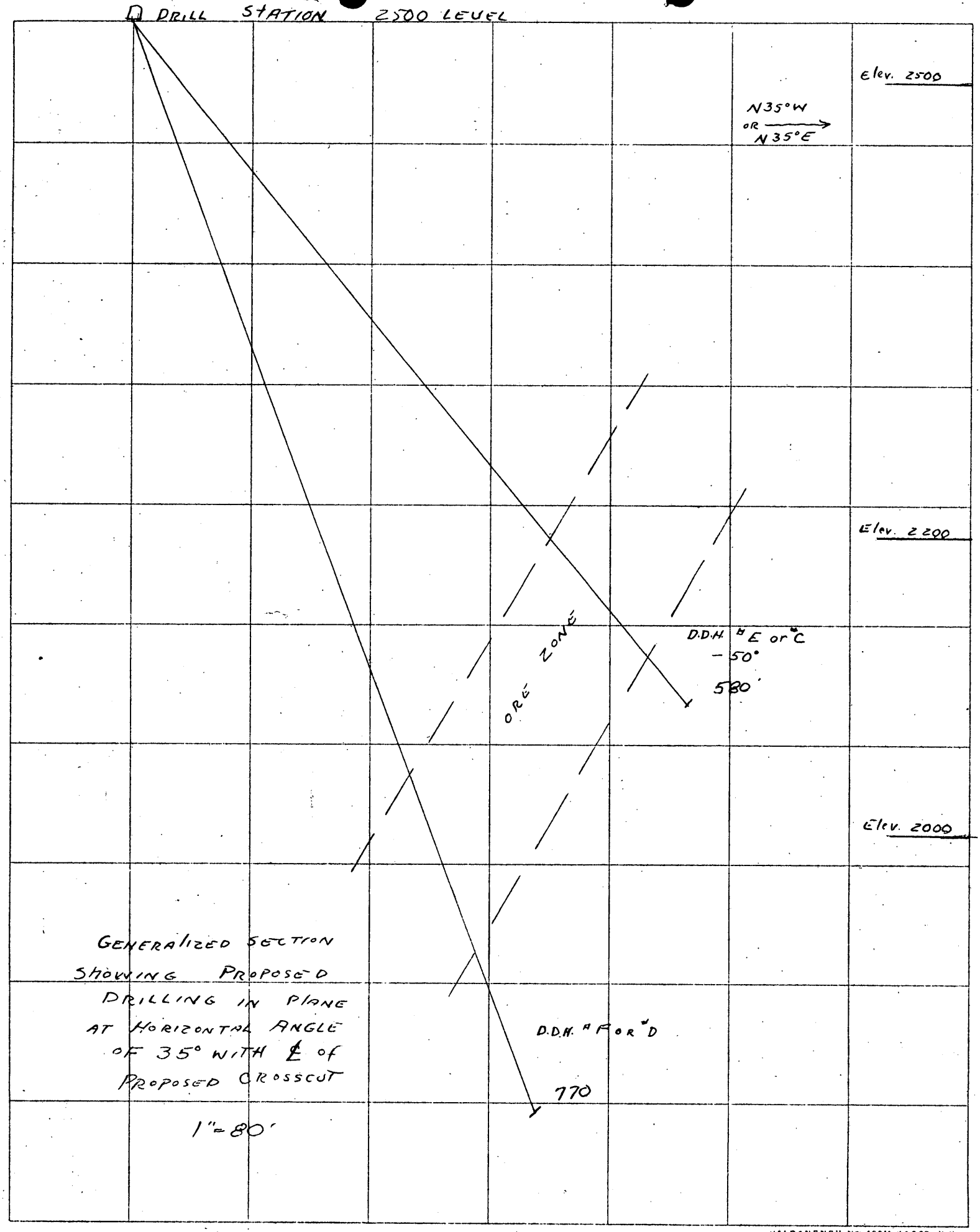
Wing G. Agnew, Acting Executive Officer
U. S. Bureau of Mines

Thor H. Kiilsgaard, Acting Member
U. S. Geological Survey

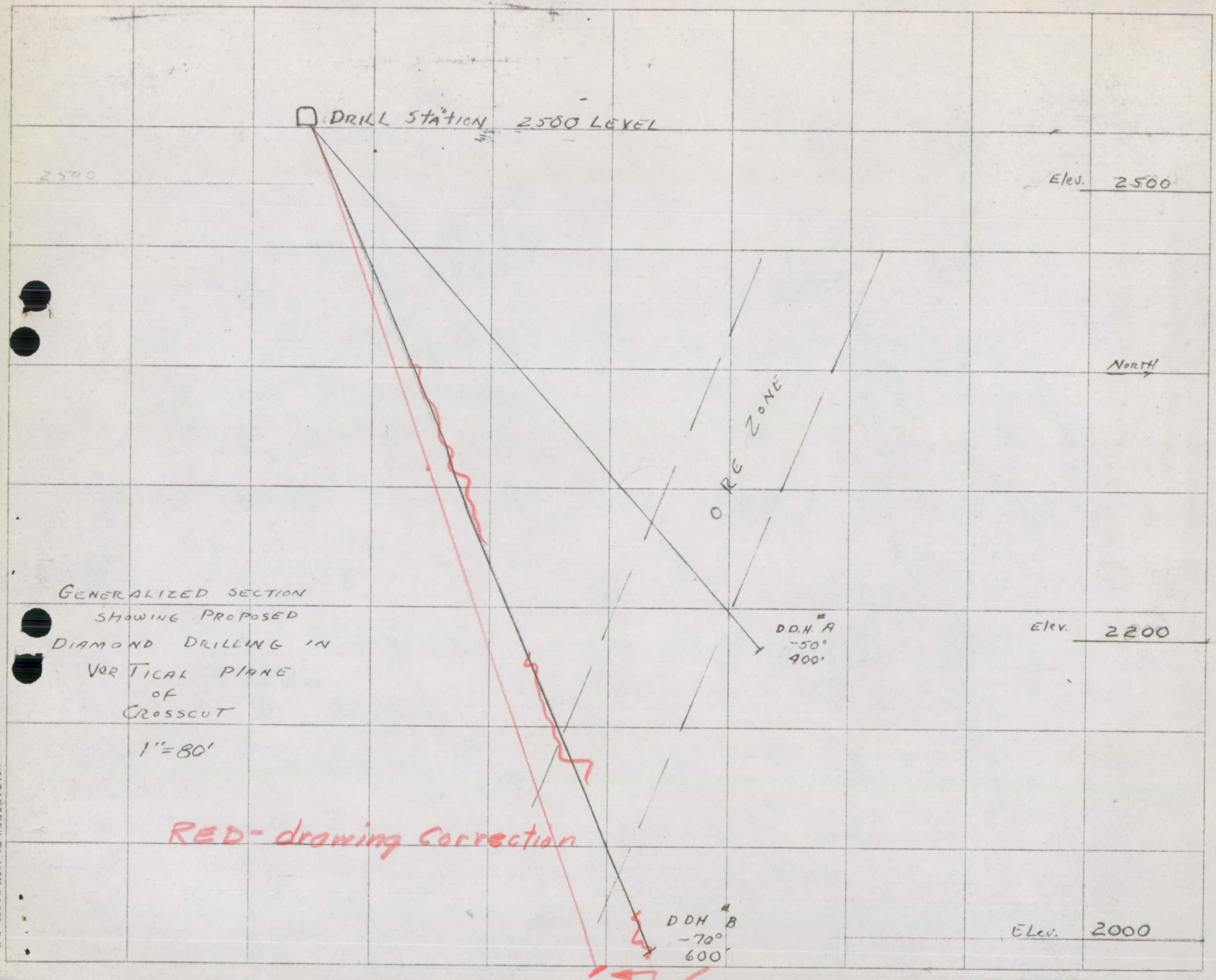
Enclosures 3 (in quad.)

cc: USBM (2)
Puffett


5800E
2500 LEVEL
ORE ZONE ON 2500 LEVEL
ORE ZONE ON 2500 LEVEL
D.D.H #E -50° 580'
D.D.H #A -50° 460'
D.D.H #C -50° 580'
D.D.H #B -70° 600'
D.D.H #F -70° 770'
D.D.H #D -70° 770'
CROSSCUT 400'
MINE NORTH
PROPOSED CROSSCUT AND DIAMOND DRILL HOLES
Holden MINE
Chelan County, Washington
1" = 80'
RED - drawing correction



"ALBANENE" NO. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF.



GENERALIZED SECTION
SHOWING PROPOSED
DIAMOND DRILLING IN
VERTICAL PLANE
OF
CROSSCUT

1" = 80'

"ALBANENE" NO. 195M K&E CO., N.Y.
MADE IN U.S.A.

File Copy
Surname

Griswold
Selfridge
Hoffman

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

Mr. A. F. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

APR 15 1954

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Weissenborn:

Mr. Vinton H. Clarke, Vice President of the cited company, has presented an application for exploration work below the 2500 level of the Holden mine, to consist essentially of diamond drilling.

You will recall that a somewhat similar proposal had previously been submitted, but involving the use of "T" shaped crosscuts and laterals, which seemed unduly expensive. We had further suggested to Mr. Clarke that he investigate the possibility of doing exploration by winzing and drifting, with diamond drilling, but his studies now appear to render such procedure overly costly.

In conversations with us, Mr. Clarke has stated that they are principally interested in the project "Alternate Proposal No. 2", with a total estimated cost (amended by his letter of April 9) of $85,189.50. His company therefore wishes us to consider such proposal as the basis for this application.

Will you therefore review the proposed project and let us have your recommendations as soon as convenient. We understand that they would like to start work as soon as possible in the event of favorable consideration on our part.

WRGriswold/bjl(4/13/54

Sincerely yours,

George C. Selfridge (GCS)
Chairman, Operating Committee

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Kinkel
Mr. Bishop
Chron.

Enclosures 5

APPROVED:

J. H. Hedges (JHH)
Member, Bureau of Mines

D. M. Larrabee (DML)
Member, Geological Survey

R.C.S.

File Copy
Surname

Griswold
Hedges
Jarecke
Selfridge
H Johnson

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

APR 15 1954

Mr. Vinton H. Clarke, Vice President
Howe Sound Company
730 Fifth Avenue
New York 19, New York

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Clarke:

I have your letter of April 9, noting modifications to your application for an amendment to your exploration project on the Holden mine.

We are forwarding copies of all pertinent material to Mr. Weissenborn for his recommendations. Since he is already familiar with many of the features involved, there should be no undue delay in this matter.

Sincerely yours,

H. O. Mittendorf (fw)

Administrator

WRGriswold/bjl (4/13/54)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Chron.

R.C.G.

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

April 9 1954

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

RE: DOCKET NO. DMEA-3142 (COPPER)

Dear Mr. Mittendorf:

Confirming my telephone conversation with Mr. Selfridge in Mr. Griswold's absence this morning, I wish to call your attention to one correction and one omission in our recent application for consideration of our plan for exploring below our bottom operating level at Holden, Washington.

I call your particular attention to my letter of March 30th and the proposition designated NO. 2 and entitled "Alternate Proposal". I am advised by the management that upon further consideration of the method that must be used in driving the first 50 feet of each 7' x 7' crosscut, the cost per foot figure must be adjusted slightly upwards to $38.70 compared with the old figure of $37.40. Apparently in the early footage of these crosscuts, which must be collared from our main haulage level, the usual mucking machine equipment cannot be well protected from blasting and, therefore, small slusher equipment must be used. After this first 50 feet is driven, of course, the usual mucking machine equipment is installed. This adjustment will result in a total cost for this particular item of $56,695.50 in place of the old $54,893.55. For some peculiar reason, 6 diamond drill stations were omitted from the list of work to be done. These stations will be cut at the rate of $600 each and would total $3,600. Below, please find corrected list of mine work and also equipment which, in itself, remains unchanged. You will note that the new total cost of the project amounts to $85,189.50 compared with the original $79,787.55.

NO. 2 ALTERNATE PROPOSAL

Mine Work

1,465 feet of 7' x 7' crosscuts	@ $	38.70	$ 56,695.50
6 Transfer stations	@	500.00	3,000.00
6 Diamond drill stations-approx. 1000 cft each	@	600.00	3,600.00
5,000 feet of diamond drilling	@	3.00	15,000.00
			$ 78,295.50

Equipment

1 Gardner-Denver mucking machine			$ 3,281.00
2 Gardner-Denver C. F. 89 rock drills	@	806.50	1,613.00
1 Boyles Bros. No. 1-U diamond drill			2,000.00
			$ 6,894.00
	TOTAL COSTS		$ 85,189.50

I hope you will please excuse this correction in our application - indeed, it is an occurrence which should not have happened and I hope that it will not put you to too much inconvenience.

Yours sincerely

Vinton H. Clarke
Vice President

VHC:c

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

April 8 1954

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

RE: DOCKET NO. DMEA-3142 (COPPER)

Dear Mr. Mittendorf:-

Further in regard to my letter to you under date of April 7th, I now have additional information on patented and unpatented claims involved.

Although my information is not yet complete, I find that we have full data on claims lying north of the southern boundary of claims lying between RAINBOW NO. 7 and RAINBOW NO. 3. Since this line is a continuation to the west of the southern boundary of area contained within the approved part of our present contract, I expect that you may not be interested in the ground beyond this line. I find that should the ground to be explored be found favorable and should it extend on a normal dip of between 65 and 67 degrees, it would not pass through a vertical plane bounded by the line above mentioned until a vertical depth below the 2500 level of some 4000 feet were reached. For this reason I believe that the data given on claims listed below will be amply sufficient for your protection.

Patented Claims *	Nos.
Lucille	1,069,269
Minnie	1,054,835
AMH	1,054,835
Irene	1,054,835
Copper Creek	1,068,711
Rain No. 5	1,111,729
Rain No. 4	1,111,729
Rain No. 3	1,111,729
Rain No. 9	1,111,729
Rain No. 10	1,111,729

Unpatented Claims *	Book No.	Page No.
Basin	218	368
Rain #12	"	218
" # 8	"	230
" #11	"	217
Rainbow #7	"	229
" #9	"	225
" #11	"	221
" #5	"	217
" #3	"	227

* Recorded in Chelan County Courthouse, Wenatchee, Washington.

Yours sincerely

Vinton H. Clarke
Vice President

VHC:c

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 8 1954

April 7 1954

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

RE: DOCKET NO. DMEA-3142 (COPPER)

Dear Mr. Mittendorf:

Please refer to my letter to you under date of March 30th regarding our application for exploration loan.

After a conversation on the subject with Mr. Griswold, I was advised that two additional maps would be necessary and I am enclosing herewith seven copies each of the following:

1. Claim map showing claims covering the ground to be explored.

2. A new plan map illustrating proposed development work and diamond drilling for a proposal calling for the latter to be done from the ends of individual crosscuts. This plan is referred to in my previous letter as an alternative plan costing $79,787.55.

I have not received full information on book and page numbers for unpatented claims involved or patent numbers for the patented claims. However, as soon as they are available to me I will send them on to you.

Referring to the claim map I presume that you will not require the above information on any ground north of a line forming the north boundary of claims between Rain #5 and Rain #12. The ground lying outside this line is within the footwall of the Chelan main orebody which has already been mined out.

I believe that most of the information contained in both maps is self-explanatory - however, should you have any question, we stand ready to supply any additional data required.

Yours sincerely

Vinton H. Clarke
Vice President

VHC:c
Enc.

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

Defense Minerals Administration
RECEIVED
APR - 5 1954

March 30 1954

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

RE: DOCKET NO. DMEA-3142 (COPPER)

Dear Mr. Mittendorf:

Please refer to correspondence regarding exploration at our Holden Mine and in particular to the second part of our application dealing with exploration to depth of possible extensions of our ore body.

You will recall that the first part of our application was approved and a contract was concluded embracing the work described, bearing the identification IDM-E644. This development is now proceeding smoothly. During discussions in December various objections were brought up regarding the plan of action for the second part of our application. It was my impression through Mr. Griswold that it was felt some thought should be given to a sinking program with subsequent drifting and diamond drilling, this to be done in place of crosscutting and down drilling from our lowest operating level. During my discussion with Mr. Griswold I made some rough pencil estimations of the cost of this method in order to illustrate the approximate cost of sinking and additional drifting and drilling. I did not make a note of these figures but they may still be available for comparative purposes. I subsequently instructed the local management to make an exhaustive study of the whole project in order to obtain precise cost figures for a sinking program.

I believe there was a distinct preference for the sinking method if it could be shown that the cost for such were not too far away from that indicated for a program calling for all information to be obtained through diamond drill holes, drilled downwards from the lowest operating level. We believe that this preference under similar cost conditions or even for costs slightly higher would be wise, mainly for the reason then stated - that after completion of the project both shaft and drift would be available for further development and possible production. Even after a rather lengthy and thorough study, however, we have been unable to produce a plan of sinking which would be low enough in cost to compare with the diamond drilling method. I am enclosing a copy of our manager's letter to me which details the cost of sinking and exploring from one and two levels respectively. The cost of the sinking proposal for one level only amounts to $209,443.90 and for 2 levels $373,886.70.

Since it is extremely important that each level be placed in the proper location, and that a production shaft be adequate to take care of the correct tonnage, we feel the information on any ore below our bottom level

should be obtained in the least costly manner possible. Once this information is available, such decisions can be made which we feel will make it possible for us to develop any newly discovered ore bodies in the most efficient and most inexpensive manner.

Our originally proposed method for exploring at depth has been reviewed and all alternatives considered. I am enclosing one copy of cost estimates of 4 different proposals, all calling for down drilling. The first method is our original proposal as presented to you with a few minor changes to take care of omissions and different equipment. The total cost of this plan is now $109,044.60 as compared with the old figure of $107,074.60. An alternative plan and one which I believe was first proposed by your Spokane people calls for crosscuts opposite each drilling location instead of fewer crosscuts with T drifts on the ends. This plan costs the least and amounts to $79,787.55. It does have the disadvantage of not providing for future access to intermediate drilling locations midway between the 400 ft. interval, should additional drilling seem advisable. However, the cost is considerably less and would give us the essential information. For that reason I am personally in favor of this approach. Two other plans are included, one providing for a long drift parallel and in the hanging wall of the ore zone as shown on the bottom level, from which down drilling is done. This plan is the most costly, amounting to $134,831. The advantages of this method are first that down holes can be located at any point along the zone and second that the drift would have a residual value as a ventilation drift. The last plan, called a "compromise plan", is essentially the $79,000 proposal with additional diagonally drilled down holes to explore the ground between the crosscuts. The cost estimate for this plan indicates that an expenditure of $121,037.55 is required.

I am enclosing a plan map similar to our original one but which now includes in color the development necessary for the various plans mentioned above. Plan 1 is shown in original black-white print lines. Plan 2 is shown by green lines. Plan 3 shows the hanging wall drift and access crosscuts in broken blue lines. Plan 4 shows the additional diagonal drill holes in brown, drilled from the end of the green crosscuts.

Please pardon the long period of time since our last discussion on the matter. In the interval we have spent considerable time both at the property and in general correspondence in an attempt to come up with a favorable plan of action. I have decided to place these various plans before you for your consideration and advice, after which if acceptable to you I will follow up with something more definite. We will appreciate it very much if you will advise us of your reactions and if you will direct us in the furtherance of our application.

Yours sincerely
HOWE SOUND COMPANY

Vinton H. Clarke
Vice President

VHC:c
Encl.

HOWE SOUND COMPANY
CHELAN DIVISION

Holden, Washington
February 5, 1954

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR - 5 1954

Mr. V. H. Clarke, Vice President
Howe Sound Company
730 Fifth Avenue
New York 19, New York

Dear Mr. Clarke:

In response to your recent request, the enclosed estimated costs for prospecting the ground below 2500 level by diamond drilling from drifts in the footwall were prepared by Mr. Newman, chief engineer. These figures indicate that the cost for one level would be $ 209,443.80 and for two levels $ 373,886.70.

When considering any plan for prospecting the ground below 2500 level, certain basic facts must be taken into account. Recent experience has indicated that any future stoping areas below 2500 level must be limited in both lateral and vertical extent. In our opinion, therefore, levels should be spaced not over 200 feet apart and each level will have to be laid out as a haulage level.

Other facts that have been clearly demonstrated through actual experience in recent years are that a strict stoping and filling sequence must be followed, and that adjacent stopes cannot be mined simultaneously from the same level. To produce the desired arching effect in actual stoping, each level would be limited to two active stopes. Therefore, at least two mining levels must be prepared to provide the minimum of four active stopes which would be required to produce the tonnage needed from below the 2500 level to be added to the ore form the remaining stopes above the 2500 level.

This means that even though the 2700 level were to be drilled out according to Plan I, future planning for the mine would still be a matter of considerable conjecture, as nothing would be known about the ground at the 2900 level horizon. It is an indesputable fact that one mining level only, below the 2500 level, would not carry sufficient stoping areas, consistent with safety, to sustain the tonnage necessary to continue the operation. Therefore, if the ground below 2500 level is to be prospected by diamond drilling from the footwall, provision must be made for drilling from two levels, as shown under Plan II.

The costs used in the estimates for drifting and crosscutting are for development-sized headings only. It would be necessary to sideswipe these workings later to provide room for adequate haulage equipment if mining is to continue.

Another point that should be mentioned is that No. 3 shaft was originally designed as a prospecting shaft only. It cannot be expected to do all the work required for maintaining production from lower levels. If another shaft was provided for men and supplies, the capacity of No. 3 shaft for hoisting only is estimated at from 900 to 1,000 tons per 24 hours.

In any case, a crusher should be installed below the lowest mining level. The compartments in No. 3 shaft are so small that it is doubtful if the No. 1 crusher from 1950 level could be dismantled enough to be lowered below 2500 level. It could be handled in a larger service shaft similar to our original No. 1 shaft, provided such a shaft were put in later. The best solution in the long run would seem to be the deepening of No. 2 shaft an additional 400 feet and the installation of the crusher just below the 2900 level in the same manner as the No. 2 crusher room is now located just below 2500 level. As both the 2700 and 2900 levels would eventually become hualage levels, these headings should be driven downhill toward No. 2 shaft, if the program proposed in Plan II is adopted.

Yours very truly,

John J. Curzon

JOHN J. CURZON

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 5 1954

ALTERNATE PLANS FOR PROSPECTING GROUND

BELOW THE 2500 LEVEL

PLAN 1 (One Level Only)

Summary of work

1. Resume No. 3 shaft work and sink to 280' below the 2500 level.

2. At 2700 level, 200 feet below the 2500 level, cut station and crosscut from shaft to 40 feet from mine ore zone.

3. Drift off end of crosscut and parallel to footwall for distance of 2,000 feet between the 260 and 360 chute sections.

4. Diamond drill ore zone from new drift at 200-foot intervals.

Estimated Costs

1. No. 3 Shaft Work

Completing hoist room	200 cubic yards	@ $ 25.00	$ 5,000.00
Rope raise	104 feet	@ 40.00	4,160.00
Completing shaft raise	46 feet	@ 75.00	3,450.00
Dismantling & reinstalling hoist, sheaves, idlers, etc.			7,000.00
Shaft sinking (7'x17½')	280 feet	@ 200.00	56,000.00
2700 level station	40 cubic yards	@ 18.00	720.00
2700 level waste pocket			1,600.00
2700 level waste chute & measuring pocket			3,000.00
2700 level waste grizzly			400.00
Installation of electric cable & transformers			1,750.00
			$ 83,080.00

2. 2700 Level

Crosscutting	250 feet	@ $ 38.25	$ 9,562.50
Drifting	2,000 Feet	@ 38.25	76,500.00
Diamond drill stations	11 x 6 foot	@ 38.25	2,524.50
			$ 88,587.00

3. Diamond Drilling

1,430 feet		@ $ 2.23	$ 3,188.90

4. New Equipment Needed

1 Gardner-Denver mucking machine			3,281.00
1 Mancha trammer w/charger & extra battery			7,257.00
2 Gardner-Denver C.F. 89 rock drills		@$ 806.50	1,613.00
1 Boyles Bros. No. 1-U diamond drill			2,000.00
4 Card cars, 31 cubic foot		@ 512.00	2,048.00
Ventilation pipe 15 in. diam.	2,600 ft.	@ 2.00	5,200.00
Wire rope, 7/8 in. diam.	1,200 ft.	@ .47	564.00
Electric cable	3,700 ft.	3.25	12,025.00
Transformers			600.00
			$ 34,588.00

TOTAL $ 209,443.90

PLAN 2 (Two Levels)

Summary of Work

1. Resume No. 3 shaft work and sink to 480 feet below 2500 level.

2. Cut shaft stations and crosscut to within 40 feet of mine ore zone at the 2700 and 2900 levels, 200 and 400 feet respectively below the 2500 level.

3. Drift off each crosscut 2,000 feet parallel to footwall between 260 and 360 chute sections.

4. Diamond drill ore zone at 200-foot intervals from both levels.

Estimated Costs

1. No. 3 shaft work

Preparation for sinking			$ 19,610.00
Shaft sinking	480 feet	@ $ 200.00	96,000.00
2 level stations			1,440.00
2 waste pockets			3,200.00
2 waste pocket grizzlies			800.00
2 waste chutes and 2 measuring pockets			6,000.00
Installation of electric cable & transformers			1,850.00
			$ 128,900.00

2. Work on Levels

Crosscutting 250 ft. plus 350 ft.	@ $ 38.25	$ 22,950.00
Drifting 4,000 feet	@ 38.25	153,000.00
Diamond drill stations 22 x 6 ft.	@ 38.25	5,049.00
		$ 180,999.00

3. Diamond Drilling

2 X 1,430 ft.	@ $ 2.23	$ 6,377.80

4. New Equipment Needed

2 Gardner-Denver mucking machines	@ $ 3,281.00	6,562.00
2 Mancha trammers w/chargers & extra batteries		14,514.00
4 Gardner-Denver C. F. 89 rock drills	@ 806.50	3,226.00
2 8-foot CMA feeds for rock drills	@ 942.45	1,884.90
1 Boyles Bros. 1-U diamond drill		2,000.00
8 31 cubic foot Card cars	@ 512.00	4,096.00
Ventilation pipe 5,000 ft.	@ 2.00	10,000.00
Wire rope, 7/8 diam. 1,600 ft.	@ .47	752.00
Electric cable 4,300 ft.	@ 3.25	13,975.00
Transformers		600.00
		$ 57,609.90

TOTAL	$ 373,886.70

J. M. Newman
J. M. NEWMAN
Chief Engineer

3 February 1954

COST ESTIMATES FOR DEEP DRILLING BELOW 2500 LEVEL

ORIGINAL PROPOSAL

NO. 1

Mine Work

2,016 feet of 7' x 7' drifts & crosscuts	@ $	37.10	$ 74,793.60
3 transfer stations	@	500.00	1,500.00
6 Diamond drill stations	@	600.00	3,600.00
5,000 feet of diamond drilling	@	3.00	15,000.00
			$ 94,893.60

Equipment

1 Gardner-Denver mucking machine			$ 3,281.00
1 Mancha Trammer, extra battery, and charger			7,257.00
2 Gardner-Denver C. F. 89 rock drills	@ $	806.50	1,613.00
1 Boyles Bros. No. 1-U diamond drill			2,000.00
			$ 14,151.00

Total Revised Costs $ 109,044.60

NO. 2

ALTERNATE PROPOSAL

Mine Work

1,465 feet of 7' x 7' crosscuts	@ $	37.47	$ 54,893.55
6 Transfer stations	@	500.00	3,000.00
5,000 feet of diamond drilling	@	3.00	15,000.00
			$ 72,893.55

Equipment

1 Gardner-Denver mucking machine			$ 3,281.00
2 Gardner-Denver C. F. 89 rock drills	@	806.00	1,613.00
1 Boyles Bros. No. 1-U diamond drill			2,000.00
			$ 6,894.00

Total Costs $ 79,787.55

NO. 3 PREFERRED PLAN (by local management)

Mine Work

2,300 feet of 7' x 7' drifts and crosscuts	@ $	37.10	$ 85,330.00
2 Transfer stations	@	500.00	1,000.00
11 Diamond drill stations	@	600.00	6,600.00
9,250 feet of diamond drilling	@	3.00	27,750.00
			$ 120,680.00

Equipment (Same as original proposal)

1 Gardner-Denver mucking machine			$ 3,281.00
1 Mancha Trammer, extra battery & charger			7,257.00
2 Gardner-Denver C. F. 89 rock drills	@	806.50	1,613.00
1 Boyles Bros. No. 1-U diamond drill			2,000.00
			$ 14,051.00

Total Costs $ 134,831.00

NO. 4 COMPROMISE PLAN

Mine Work

1,465 feet of 7' x 7' crosscuts	@ $	37.47	$ 54,893.55
6 Transfer stations	@	500.00	3,000.00
18,750 feet of diamond drilling	@	3.00	56,250.00
			$ 114,143.55

Equipment (Same as alternate Proposal)

1 Gardner-Denver mucking machine			$ 3,281.00
2 Gardner-Denver C. F. 89 rock drills	@ $	806.50	1,613.00
1 Boyles Bros. No. 1-U diamond drill			2,000.00
			$ 6,894.00

Total Costs $ 121,037.55

Prepared by John J. Curzon
February 4, 1954

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

1201 N. Division St.
Spokane 2, Washington
March 17, 1954

Howe Sound Mining Company
Chelan Division
Holden, Washington

Re: Docket No. DMEA 3142 (copper)
Holden Mine
Howe Sound Company
Contract No. Idm-E644

Gentlemen:

Reference is made to your letter of March 12, 1954 to Mr. R. J. Hindman, Certifying Officer, concerning the method of payment for 1000 feet of 3 conductor No. 1 Tyrex cable which you have in stock and wish to use under the DMEA exploration contract.

We have no objections to your using the 3 conductor cable out of your warehouse stock; however, only the actual cost of the cable, which can be supported by an invoice, may be claimed for reimbursement even though the current price of the cable may be greater than when purchased.

We also have no objections to your mechanical department constructing a battery box if its cost is less than the estimated $572.00 authorized under Amendment No. 1. The only requirement would be that a detailed record of all labor and materials be kept to show how you arrived at the cost of the box.

By Field Team, Region II

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: Contr. Admin. & Audit Div.
DMEA, Wash. (2)
USGS (2)
Certifying Officer
Auditor

HOME SOUND COMPANY
Chelan Division
Holden, Wash.

March 12, 1954

Mr. R. Hindman
Certifying Officer DMEA
Bureau of Mines
North 1207 Division Street
Spokane, Washington

Dear Mr. Hindman:

Re: Docket No. DMEA-3142
Holden Mine
Contract No. Idm-E644

Due to extra work on our engineering and accounting departments at the first of the month, we were unable to prepare the necessary documents for your report as quickly as we had hoped.

It has recently been forwarded to New York and should be sent to your office in short order.

We have in stock 1,000 feet of 3-cond. No. 1 Tyrex cable which was originally purchased for a shaft sinking program. This is the same type of cable that will be used in the exploration contract. We will have to install this type of cable in April and are desirous to know if it is permissible to charge this 1,000 feet from stock at current prices and forward a certified copy of the purchase invoice with the increased price added when our account is submitted. We suggest the use of current prices as this cable will have to be replaced when our shaft sinking program is resumed.

Our mechanical department now advises that they can construct a battery box for less than the price shown in Amendment No. 1 of $572.00 which covers a factory-made box.

Your comments on the above proposals will be appreciated at your convenience.

Yours very truly,

R. Scott /s/

R. Scott

RS:mel

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
xxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

FEB 3 1954

February 5, 1954

Howe Sound Company
Chelan Division
Holden, Washington

Attention: Mr. E. D. Haddon, Chief Accountant

Re: Docket No. DMEA 3142
Holden Mine
Contract Idm-E644

Dear Mr. Haddon:

This is in reply to your letter of January 21, 1954 regarding waiver of invoice documentation requirements.

Your understanding of the documentation requirements is correct. It will not be necessary for you to submit invoices for any items of supply with the exception of equipment, which includes the Titan Mancha Mule and related equipment, rock drills, vent pipe, and the electrical cable. As we also pointed out, you should attach a copy of that part of the payroll pertaining to the DMEA exploration, including those men employed partly on DMEA work and partly on straight company work. You should also include a computation of the payroll taxes. This will facilitate auditing your account at a later date and in the long run will save time not only for our auditors but for your accounting department as well.

Your manner of arriving at the cost of tramming, miners' lamps, and handling supplies is permissible provided that when an audit is made these costs can be adequately supported. This also holds true regarding the expense of drill up-keep, drill steel and bits, air, etc.

At the time you submit your first MF-104 your method of computing these expenses can be checked against the requirements of the contract.

Please let us know if we can be of further assistance.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc: DMEA (2)
USBM (2)
Hindman
Hull

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
28 1954

29

January 25, 1954

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company, Inc.
Holden Mine
Chelan County, Washington
Contract No. Idm-E644

Dear Mr. Selfridge:

Attached are the original and two signed copies of Amendment No. 1 to the above-referenced contract, with attached justification.

Distribution of this amendment is being made in the usual manner.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Attachment

cc: Finance Office w/encl.
USBM (2)
Puffett

RECEIVED
FEB 5 - 1954
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

7

HOWE SOUND COMPANY
Holden Mine
Chelan County, Washington
Contract No. Idm-2644
Docket No. MSHA 3142 (copper)

Justification of Amendment No. 1

The initial capital investment and cost of installation of the substituted equipment is less than that of the deleted equipment, primarily because of the excessive amount of ventilation required to comply with safety regulations governing the use of diesel equipment underground. In addition, the Operator will be able to utilize battery equipment in the ordinary operation of this property after the completion of the contract.

J. R. McWilliams

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 18 1954

January 14, 1954

Mr. John J. Curzon
General Manager
Howe Sound Mining Company
Holden, Washington

Re: Docket No. DMEA-3142
Holden Mine
Contract No. Idm-3644

Dear Mr. Curzon:

Enclosed are the original and six copies of Amendment No. 1 to the subject contract for your approval providing for the installation of battery equipment because of the excessive amount of ventilation required to comply with safety regulations governing the use of diesel equipment underground.

If the terms and conditions of this amendment meet with your approval, please forward all copies to Mr. Vinton H. Clarke for signature. The copy marked for the operator should be retained and the remaining copies returned to this office.

Sincerely yours,

A. E. Weissenborn, Exec. Officer
DMEA Field Team, Region II

Enclosures

cc: [illegible] (2)
USGS (2)
Corfett

Greenwood
Betty

XXXXXXXXXXXXXXXXX
Spokane, Washington
January 12, 1954

3142

The Howe Sound Company,
Chelan Division,
Holden, Washington

Subject: Waiver of invoice documentation requirements - Contract No. Idm-E644

Gentlemen:

The Contract Administration and Audit Division, DMEA, has determined on authority from the General Accounting Office that the requirements for documentary support of monthly invoices, except for purchases of equipment, may be waived at the discretion of the Field Team Executive Officer.

If this requirement is waived, however, it will be necessary that an auditor of the Contract Administration and Audit Division examine the accounts maintained by the Operator under his contract, render an audit report, and issue an audit certificate which becomes a part of the final invoice (Form MF-104 Revised). Under the waiver procedure, payment of the final voucher cannot be made until after the audit of the Operator's records.

This will inform you that invoicing requirements for work within the terms of your exploration project contract will be waived effective as of the date of the subject contracts, provided such procedure meets with your approval.

An early reply indicating your wish in this matter will be appreciated.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc:
Contract Admin. & Audit Div. (2)
Certifying Officer
DMEA Auditors (2)
USGS
DMEA

FILE COPY
500 SURNAME

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

DEC 22 1953

Mr. Vinton H. Clarke, Vice President
Howe Sound Company
730 Fifth Avenue
New York 19, N. Y.

Re: Docket No. [illegible] 3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Ida-[illegible]644

Dear Mr. Clarke:

As requested in your letter of December 11, 1953, we are enclosing an extra copy (unsigned) of the above contract.

As to the two additional cost items which you cite, if at a later date, such items might appear logical and necessary, it would certainly be permissible for you to request an amendment to such effect.

Sincerely yours,

Frank E. Johnson

ACTING Administrator

Enclosure

WRGriswold/hmg
(12/18/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Region II (2)
Mr. Kinkel
Mr. Bishop
Chron.

R.C.G.
12-22-53

FILE COPY
SURNAME:

500

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

DEC 22 1953

Mr. A. E. Weissenborn, Executive Officer
Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMA 3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington
Contract No. Ida-2644

Dear Mr. Weissenborn:

Enclosed are two signed copies (Field Team and Finance Office) of the contract covering the above project.

We also enclose a copy of a letter received from the Operator. You will note that it has cited the omission of an allowance for an additional 1,000 feet of three conductor cable for drifting and crosscutting under Stage II.

In a telephone conversation with the operator's vice president we explained we had omitted this item deliberately in that, as far as we know, there was no special reason why electric power would be required closer than a thousand feet from the working heading. However, he maintained that they planned on having a battery locomotive switching cars close to the drift face and that they would like to have the battery charging station nearby.

He also stated that they would prefer to keep their electrical driven ventilating fan relatively close to the working face. In view of this, we would probably be disposed to give consideration, at the proper time, to a request for an amendment to cover this item.

The Operator cites the fact that we have not allotted funds to provide for assaying for nickel. This was done inasmuch as the project is given for copper only. Nevertheless, if later work under the project might indicate an interesting degree of nickel mineralization it would appear that, under such a condition, a request for an amendment to allow for nickel assaying would be reasonable.

The company's vice president also brought up the question of assaying and sampling, since the contract stipulates that drifts

R. C. G. 12-22-53

should be sampled every six feet and diamond drill holes at 5 foot intervals. He inquired if this stipulation required them to waste money sampling and assaying when a drift was in areas which were obviously barren rock. He was advised that such was not the intent of the contract. We suggested, however, that to avoid confusion, the monthly assay maps submitted to the Government definitely indicate barren areas so that no one will question the lack of recorded assays at such points.

We are providing the Operator with an extra unsigned copy of the contract, as he requested.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

J. H. Hedges (GCS)

Member, Bureau of Mines

T. P. Thayer (GCS)

Member, Geological Survey

WRGriswold/hmj
(12-18-53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Chron.

12-14

HOWE SOUND COMPANY
(A CORPORATION)
730 FIFTH AVENUE
NEW YORK 19, N.Y.

December 11 1953

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington, 25, D. C.

RE: DOCKET NO. DMEA-3142 (COPPER)

Dear Mr. Mittendorf:

This will acknowledge your letter of December 7th regarding the above and please find enclosed five (5) signed copies of the contract dated December 7, 1953.

You have called our attention to the fact that you require certain book and page numbers covering the claim locations in Annex 2. This information has been inserted in the space provided. We have noticed also that the time covered by the contract has not been inserted and we have, after discussion with Mr. W. R. Griswold, typed in time period of two years.

It is our intention to stake additional claims as soon as possible next summer in order to cover the ground under which exploration work on Stage 2 will be done. You will of course be fully advised when this work has been completed and before any development has been started on Stage 2 of this contract.

We have noted two particular items of cost in the contract which are omitted but which we feel should logically be part of the program. These items of cost have been discussed with Mr. Griswold and, in brief, call for three conductor cable at $3000.00 necessary for completion of Stage 2, and the cost for nickel assays of approximately $4000.00. We do not feel it wise to hold up the contract at this time for these items but may wish to request some amendment at a future date if it then seems necessary.

I understand that all reports from the operating property must be submitted to your Spokane office and that invoices should be sent to the same address. We will require that our property submit these particular reports to our New York office and we will then re-submit the report with invoice to the Spokane office of the D.M.E.A.

We would appreciate it very much if you can find it possible to mail us one additional copy (unsigned, if more convenient) for our Chelan Division.

Yours sincerely
HOWE SOUND COMPANY

Vinton H. Clarke
Vice President

VHC:ac
Encl.

FILE COPY
SURNAME:

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

508

12-7

DEC 7 - 1953

Griswold
Chenoweth
Farrar
Hedges
Johnson
K. Johnson

Howe Sound Company
730 Fifth Avenue
New York 19, New York

Re: Docket No. DMEA-3142 (Copper)
Howe Sound Company
Holden Mine
Chelan County, Washington

Gentlemen:

We are enclosing a contract, signed by the Administrator, for the above-cited exploration project.

Please note that among the mining claims listed in Annex I to the contract there are several in which the book and page numbers covering claim locations are missing. Kindly insert the proper book and page numbers where lacking.

We note that the mining claims recently located are still inadequate to cover the work of Stage II of the exploration project. It is our understanding that such additional claims are to be located next summer as soon as climatic conditions permit. Obviously, no work should be done on Stage II until such additional claim locations have been made.

If the contract meets with your approval please sign all copies, retaining the "Operator's Copy" for your files, and return the remaining signed copies to this office. In the event that you are not in accord with the contract provisions, please return all copies with your comments.

Sincerely yours,

C. O. Mittendorf (for) WRGriswold/bjl (12/3/53)

Administrator

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kinkel
Region II (2)
Chron.

Enclosures 6

R.C.G. 12-8-53

FILE COPY
SURNAME: 913

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

Griswold
Selfridge
Matthews

Docket

DEPARTMENT OF THE INTERIOR
AGENCY: DMEA

Originator: WMGriswold/bjl
Rm.: 4058 Ext. 3669

Dated: December 3, 1953

To: A. E. Weissenborn, Executive Officer, DMEA Field Team, Region II, Spokane, Washington

Reurtt December 2, 1953, Rowe Sound Company, Docket DMEA-3142.

Contract will be considered by Operating Committee December 4, 1953.

George C. Selfridge
Chairman, Operating Committee (GCS)

cc: Docket
Admr. R. File
Op. Committee
Base Metals (DMEA)
Accounts
Mr. Kinkel (USGS)
Mr. Bishop (USBM)
Chron.

12-4-53

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34 WA SP I-GS-G

SPOKANE WASH 12/2/53 450 P

GEORGE C SELFRIDGE

CHAIRMAN OPERATING COMMITTEE, DMEA, DEPT. OF THE INTERIOR
WASHINGTON, D. C.

PLEASE ADVISE ON STATUS OF FOLLOWING DMEA APPLICATIONS - HOWE SOUND - HOLDEN MINE, DOCKET DMEA 3124 (Corrected to Read 3142)., HOW SOUND-CALERA MIN DOCKET DMEA-3143., TROUT MINING DIVISION, AMERICAN MACHINE AND METALS COMPANY, DOCKET DMEA-3076. ALSO ON STATUS OF AMENDED TAYLOR-KNAPP CONTRACT IDM-E-9. NORTHWEST MINING ASSOCIATION TO HOLD ANNUAL CONVENTION IN SPOKANE DECEMBER 4 AND 5. ANTICIPATE OFFICIALS FROM REFERENCED PROPERTIES TO ATTEND AND THAT THEY WILL HAVE QUESTIONS CONCERNING CURRENT STATUS. WIRE REPLY APPRECIATED.

THOR H. KIILSGAARD, FOR A. E. WEISSENBORN, EXEC. OFFICER,
DMEA FIELD TEAM REGION II

FILE COPY
SURNAME:

140

KANE
Burton

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

N.S. in R.P.

December 2, 1953

Memorandum

To: The Administrator

Through: W. R. Griswold

From: Chief Counsel

Subject: Howe Sound Company - Docket No. DMEA-3142

There is attached, in satisfactory legal form for execution, a contract covering the above-described project, subject to the Operator filling in the book and page number of the recording of the location notices of the last six claims in Annex II, and the Lucerne No. 4 claim.

J. L. Hofflund
Chief Counsel

Attachments

AEKane/ema

P.S. Your attention is invited to the fact that the contract provides for the inclusion in Article 2 of land hereafter acquired by the Operator, so that the work of Stage II may be performed thereon.

Copy to: Docket
W. R. Griswold
A. E. Kane
J. L. Hofflund
Chron.

FILE COPY
SURNAME:

500

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

December 1, 1953

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Howe Sound Company, Docket No. DMA 3142

The project which is covered by the attached contract is based almost entirely upon loose, unsubstantiated inference. The tangible exhibits which might form a foundation for project evaluation are meager. Four samples (of unknown width) were taken along the wall of a twenty-foot drift, with one more sample from an outcrop about thirty feet from the drift portal. The average assay of such five samples was 1.05 per cent nickel and 0.69 per cent copper. It is not known whether such sampling may only represent a narrow and non-continuous mineralized streak.

We also have a plan showing the results of soil sampling done by the USGS, the results of which are reported by the Field as being indeterminate. Apparently such work did show some nickel indication but not to the extent of the permitting of any conclusions. The Field has recommended favorably on the project and their reports may be summarized by the following quotations:

> "The mineralized zone on Buckskin Mountain occurs in the same sequence of rocks (gneiss) as does the Holden ore body."
>
> "The basis of the proposal is an iron stained mineralized area, very similar to the outcrop over the Holden orebody."
>
> "A similar zone of crush breccia (similar to Holden) exists on the Buckskin Mountain, the rock is highly shattered and impregnated with sulphides, in which some chalcopyrite is visible. These crush zones occur where the foliation or banding in the gneiss changes strike."

The outcrop area referred to is located some five to six thousand feet easterly of the Holden mine and at about 2000 feet higher elevation. The project consists of exploring this area by means of 4,100 feet of drifts and crosscuts, plus 7,000 feet of diamond drilling.

This work is to be done by continuing the present Holden 1500 level, at an elevation some 2,500 feet below the Buckskin outcrop.

Beyond doubt there are reasonable grounds for doing some exploratory work in this area of Buckskin mountain, but we had hoped that such work might be arranged in a more logical pattern and based upon a more moderate expenditure, at least in the initial stages. It appears somewhat out of order to endorse such an elaborate proposal, exploring 2,500 feet below the outcrop, without first doing some diamond drilling from surface or perhaps having a limited underground exploration program at a lesser depth. However, it is the contention of both the Applicant and the Field Team that the rugged terrain and severe winter conditions make it impractical to do such work.

It is not clear to us why the Applicant company should have failed to follow the usual and normal geological and engineering procedures in making an investigation of an area which it felt might be promising. No geological map covering the area has been submitted and, as far as we know, no geophysical prospecting has been done. Nor has any attempt been made to obtain more comprehensive data by means of aerial photos, which would have seemed to be a logical procedure in this case where rugged terrain presented a problem. We have not even been supplied with a memorandum on the project by the company's geologists. While much of the area is covered with mantle rock, yet there are also many outcrop exposures and it would have been relatively simple and inexpensive to have put down many small test pits for sampling and assaying.

Nevertheless, since our field men are united in giving a favorable opinion on the project, we are also endorsing it, though with some degree of reluctance, due to the inadequacy of the corroborative data submitted.

The Applicant had requested that the project be classified as "nickel-copper," with a 70 per cent Government participation in project costs; however, the substantiating evidence is so inadequate that we cannot endorse such a request. It is quite true that there are isolated and sporadic occurrences of nickel within the Holden ore zone. In fact we have inquired of the Applicant as to why he did not sample the normal Holden mill tailings for nickel, with the thought that there might be a small amount present which would warrant scalping off before the tailing was finally discarded.

It is quite likely (from the assays submitted from one small patch of ground) that such sporadic nickel occurrence might likewise be characteristic of any mineralized zone existing within the Buckskin Mountain area, but no evidence has been submitted which would warrant us

in assuming that any such nickel mineralization would be continuous and persistant to the extent of being a major economic factor.

In addition to the above delineated Buckskin Mountain project, the Applicant had also submitted a request for Government assistance in a project to test the Holden orebodies below the present bottom level (2500). Such work would take the form of driving three "T" shaped crosscuts into the hanging wall, with a total length of 2,016 feet, with an overall project cost estimated at $115,000.00, and embracing 5,000 feet of diamond drilling. Actual diamond drilling costs are given as $3 per foot; in essence, we are requested to endorse the expenditure of the sum of $115,000.00 to achieve $15,000.00 worth of effective exploration. Putting it another way, the project would cost $115,000.00 to accomplish 5,000 feet of diamond drilling, giving an exorbitant figure of $23 per foot of diamond drilling achieved.

We have suggested to the Applicant that if, later on, they should see fit to submit what appeared to be a more logical proposal, it is possible that we might be willing to give it consideration, assuming that we still possessed such authority. Perhaps such a program might consist of a 200-foot winze (plus sump), to be followed by drifting along the footwall of the ore structure and short hole diamond drilling.

The Applicant company has just negotiated a contract with EPS which provides for the sale of 18,000,000 pounds of copper (production to end of year 1955) at 31.5¢ per pound. Included in the costs submitted by the company to justify such price, is an item of 41¢ per ton for "current development." The Applicant's representative has stated verbally that such allowed cost item would not be adequate for them to do any work below the 2,500 level.

W. R. Griswold

W. R. Griswold

WRGriswold/hmj
CC to: Docket
Op. Committee
Base Metals
Chron.

FILE COPY
SURNAME:

500

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

N. S. in A. R.

November 24, 1953

Memorandum

To: Chief Counsel

From: Chief, Base Metals Division

Subject: New contract — Docket No. DMFA-3142, Howe Sound Company

Will you kindly prepare a contract along the lines delineated in the attached draft.

W. R. Griswold

W. R. Griswold

Attachment

WRGriswold/bjl

Copy to: Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

NOV 27 1953

November 23, 1953

Mr. George Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 3124 (copper-nickel)
Howe Sound Company, Inc., application
Chelan County, Washington

Dear Mr. Selfridge:

I am enclosing a copy of a self-explanatory letter from Mr. John J. Curzon, general manager of the Howe Sound Mining Company, together with copies of the location notices for the Lupine 2, 3, 4, and 5 claims.

Evidently, at the request of the Operating Committee, through the Administrator, the company has located some additional claims.

Sincerely yours,

A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II

Enclosures

cc: USBM (2)

HOWE SOUND COMPANY
Chelan Division
Holden, Wash.
November 20, 1953

C
O
P
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File - 111

Mr. A. E. Weissenborn, Executive Officer
D.M.E.A. Field Team, Region 2
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

Re: Docket No. 3124

In accordance with a telegram from Mr. Clarke of our New York office requesting we wire Mr. Mittendorf the recording data on the four claims staked on Buckskin Mountain, we enclose copy of our wire sent yesterday.

He also requested we send you copies of the location notices showing the recording data. They are enclosed herewith.

Very truly yours,

John J. Curzon
Manager

JJC:mel
Enclosures

cc: Mr. V. H. Clarke, Vice President
Howe Sound Company

RECEIVED
NOV 23 1953
USGS
SPOKANE, WASH.

HOWE SOUND COMPANY
Chelan Division
Holden, Wash.

CONFIRMATION

Telegram X
Telephone Call ___

TO C.O. MITTENDORF
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON, D.C.

REFERENCE DOCKET NUMBER 3124. STOP FOLLOWING FURNISHED YOU AS REQUESTED BY MR. CLARKE COVERING FOUR ADDITIONAL CLAIMS STAKED ON BUCKSKIN MOUNTAIN. STOP. LUPINE NUMBER 2 BOOK 503 PAGE 231, LUPINE NUMBER 3 BOOK 503 PAGE 233, LUPINE NUMBER 4 BOOK 503 PAGE 235, LUMPINE NUMBER 5 BOOK 503 PAGE 237. STOP. ALL FILED FOR RECORD NOVEMBER 16th. WITH CHELAN COUNTY AUDITOR, WENATCHEE.

HOWE SOUND COMPANY
HOLDEN, WN.

RECEIVED
NOV 23 1953
USGS
SPOKANE, WASH

C
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Copy

LOCATION NOTICE

Book 503 Page 231

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent.

the undersigned citizen of the United States, has this 6th day of October 1953, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 2 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 300 feet on the northeast side and 300 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 50 feet running S 41° 06' E from center of discovery cut, and 1,450 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet, to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked No. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet, to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a N 41° 06' W direction from the center of the southeast end line, distant 50 feet. From Cor. No. 1 U. S. Mineral Monument No. 1 bears N 32° 30' W distant 6,640 feet and Corner No. 1, Lucerne No. 6 bears N 54° 15' E distant 600 feet. The northeast sideline is common with the southwest sideline of Lucerne No. 6. Corner No. 1 is common with Corner 4, Lucerne No. 6.

This claim to be known as the Lupine No. 2

Discovered September 28 1953 (Seal)

Located October 6 1953 (Seal)

Witnesses: (Seal)

S/ Thomas L. Wilson (Seal)

Howe Sound Company, Chelan Division

S/ J. M. Newman Locator S/ Robert A. Paasch

THE FOLLOWING IS NOT TO BE RECORDED:---The Location Notice must be filed for record in all respects as required by the state or territorial laws and local rules and regulations, if there be any (in Alaska record must be made in the district recorder's office---in Washington in the district recorder's office, if location is within boundaries of an organized mining district; otherwise in the county auditor's office---in Idaho record must be made in the office of the county recorder of the county or the deputy recorder of the district in which claim is located). Describe the claim accurately with reference to some natural object or permanent monument, and mark the boundaries on the ground so they can be readily traced. Give distances and courses from one of the corners or the discovery stake to discovery shafts on adjoining claims, and to such natural objects as may be referred to. Lode locations may include 1500 feet on the course of the ledge, together with 300 feet on each side of the middle vein. Witnesses are not necessary, but advisable.

This diagram explains mode of staking claim:

Cor. No. 1 Cor. No. 2

C. E. Vein C. E.

Cor. No. 4 Cor. No. 3

This blank is guaranteed against successful alteration, which guaranty is insured in LLOYD'S, London
Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

478230

INDEX R.

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FILED FOR RECORD

Howe Sound Co.

1953 NOV 16 AM 9 37

Loc

BOOK 503 PAGE 231
CHELAN COUNTY AUDITOR
WENATCHEE, WASHINGTON

HOLDEN, WASHINGTON

BOOK 503 PAGE 232

Copy

LOCATION NOTICE

Book 503 Page 233

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent.

the undersigned citizen of the United States, has this 6th day of October 1953, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 3 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 300 feet on the northeast side and 300 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 1,350 feet running S 41° 06' E from center of discovery cut, and 150 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet, to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked No. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet, to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a S 41° 06' E direction from the center of the northwest end line, distant 150 feet. From Cor. No. 1, U. S. Mineral Monument No. 1 bears N 34° 00' W distant 8,105 feet and Corner No. 2, Lucerne No. 6 bears N 54° 15' E distant 600 feet. The northeast sideline common with the southwest sideline of Lupine. Corner No. 1 is common with Corner No. 4 of Lupine.

This claim to be known as the Lupine No. 3

Discovered September 28 1953 (Seal)

Located October 6 1953 (Seal)

Witnesses: (Seal)

S/ Thomas L. Wilson (Seal)

Howe Sound Company, Chelan Division

S/ J. M. Newman Locator S/ Robert A. Paasch

THE FOLLOWING IS NOT TO BE RECORDED:---The Location Notice must be filed for record in all respects as required by the state or territorial laws and local rules and regulations, if there be any (in Alaska record must be made in the district recorder's office---in Washington in the district recorder's office, if location is within boundaries of an organized mining district; otherwise in the county auditor's office---in Idaho record must be made in the office of the county recorder of the county or the deputy recorder of the district in which claim is located). Describe the claim accurately with reference to some natural object or permanent monument, and mark the boundaries on the ground so they can be readily traced. Give distances and courses from one of the corners or the discovery stake to discovery shafts on adjoining claims, and to such natural objects as may be referred to. Lode locations may include 1500 feet on the course of the ledge, together with 300 feet on each side of the middle vein. Witnesses are not necessary, but advisable.

This diagram explains mode of staking claim:

Cor. No. 1 Cor. No. 2

C. E. Vein C. E.

Cor. No. 4 Cor. No. 3

This blank is guaranteed against successful alteration, which guaranty is insured in LLOYD'S, London
Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

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Howe Sound Co.

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BOOK 503 PAGE 233
CHELAN COUNTY AUDITOR
WENATCHEE, WASHINGTON

M R

Holden, Washington

BOOK 503 PAGE 234

Copy

LOCATION NOTICE

Book 503 Page 235

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent.

the undersigned citizen of the United States, has this 6th day of October 1953, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 4 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 400 feet on the northeast side and 200 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 50 feet running S 41° 06' E from center of discovery cut, and 1,450 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet, to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked NO. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet, to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a S 80° W direction from the center of the southeast end line, distant 100 feet. From Cor. No. 1, U. S. Mineral Monument No. 1 bears N 37° 40' W distant 6,685 feet and Corner No. 1, Lucerne No. 6 bears N 54° 15' E distant 1,200 feet. The northeast side line is common with the southwest side line Lupine No. 2. Corner No. 1 is common with Corner No. 4, Lupine No. 2.

This claim to be known as the Lupine No. 4

Discovered September 28 1953 (Seal)

Located October 6 1953 (Seal)

Witnesses: (Seal)

S/ Thomas L. Wilson (Seal)

Howe Sound Company, Chelan Division

S/ J. M. Newman

Locator S/ Robert A. Paasch

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This diagram explains mode of staking claim:

Cor. No. 1 Cor. No. 2

C. E. Vein C. E.

Cor. No. 4 Cor. No. 3

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Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

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Howe Sound Company

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BOOK 503 PAGE 235
CHELAN COUNTY AUDITOR
WENATCHEE, WASHINGTON

M R

Holden, Washington

BOOK 503 PAGE 236

Copy

LOCATION NOTICE

Book 503 Page 237

Know All Men by These Presents That Howe Sound Company, Chelan Division by Robert A. Paasch, Agent.

the undersigned citizen of the United States, has this 6th day of October 19 53, located and claimed, and by these presents does locate and claim, by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent Acts, and with local customs, laws and regulations, 1,500 linear feet and horizontal measurement on the Lupine No. 5 lode, vein, ledge or deposit along the vein thereof, with all its dips, angles and variations, as allowed by law, together with 300 feet on the northeast side and 300 feet on the southwest side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges or deposits and surface ground, within the lines of said claim 1,250 feet running S 41° 06' E from center of discovery cut, and 250 feet running N 41° 06' W from center of discovery cut; said discovery cut being situated upon said lode, vein, ledge or deposit, and within the lines of said claim, in Chelan Mining District, Chelan County, Washington described by metes and bounds as follows, to-wit:

BEGINNING at Cor. No. 1 (the northeast corner), running thence feet , to a post marked ; thence 1,500 feet S 41° 06' E, to a post marked No. 2 corner (Cor. No. 2); thence 600 feet S 54° 15' W, to a post marked No. 3 corner (Cor. No. 3); thence feet , to a post marked ; thence 1,500 feet N 41° 06' W, to a post marked No. 4 corner (Cor. No. 4); thence 600 feet N 54° 15' E to a post marked No. 1 corner, the place beginning.

This claim is further described as follows: The point of discovery upon which this notice is posted is in a S 41° 06' E direction from the center of the northwest end line, distant 250 feet. From Cor. No. 1, U. S. Mineral Monument No. 1 bears N 30° 00' W distant 8,140 feet and Corner No. 3, Lucerne No. 6 bears N 54° 15' E distant 600 feet. The northeast side line is common with the southwest side line of Lupine No. 3. Corner No. 1 is common with Corner No. 4, Lupine No. 3.

This claim to be known as the Lupine No. 5

Discovered September 28 19 53 (Seal)

Located October 6 19 53 (Seal)

Witnesses: (Seal)

S/ Thomas L. Wilson (Seal)

Howe Sound Company, Chelan Division

S/ J. M. Newman

Locator S/ Robert A. Paasch

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This diagram explains mode of staking claim:

Cor. No. 1 Cor. No. 2

C. E. Vein C. E.

Cor. No. 4 Cor. No. 3

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Washington Legal Blank Co. (Location Notice) Form No. 252 Printing Date 5-1-50

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Filed For Record

Howe Sound Company

1953 Nov 16 AM 9 37

Loc

Book 503 Page 237
Chelan County Auditor
Wenatchee, Washington

M R

Holden, Washington

BOOK 503 PAGE 238

IN REPLY REFER TO:

G-MD-CNF

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

November 23, 1953

Memorandum

To: W. R. Griswold

From: E. L. Newcomb

Subject: Review of application and field team reports.

Re: DMEA-3142
Howe-Sound Company
Holden-Buckskin Properties
Chelan County, Washington
$267,981.97
Copper-nickel

The field team reports recommend Program I and II on the Holden and Buckskin properties be favorably considered for approval by DMEA. However, only Program I is recommended without reservation for approval.

The crosscutting and drilling on the 2500 level of the Holden mine (Program II) is essentially development work. The ore zone can reasonably be expected to extend to the depth of the proposed drilling (250-300 feet vertically). Also the Company has a subsidy contract with DMPA, which guarantees 31½ cents per pound for all Holden copper production through 1955. This contract should be sufficient incentive to assure further exploration and development will be done below the 2500 level. I recommend Program II be denied.

The field team and company reports have presented a strong case for the exploration of the Buckskin from the 1500 level. Although an intermediate stage of surface drilling or extension of the Chelan adit would be desirable, it is apparent that topography and hazardous slide rock on the slopes of the Buckskin property make this type of work infeasible. The copper-nickel assays and the similarity of the Holden and Buckskin ore structures indicate that further exploration is warranted.

Sufficient work has not been done on the property to justify a 70 per cent participation copper-nickel contract, based upon the nickel content of the area. We recommend that a straight 50 per cent contract based upon the copper content be approved for the proposed Program I on the Buckskin.

E. L. Newcomb

E. L. Newcomb
Geologist

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WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

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LT=[redacted] Telegram

VLT=Int'l Victory Ltr.

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HOWE SOUND COMPANY HOLDEN WASH=

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THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 20 1953

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

SYMBOLS

DL=Day Letter

NL=Night Letter

LT=Int'l Letter Telegram

VLT=Int'l Victory Ltr.

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

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C O MITTENDORF= DEPT INTERIOR

DEFENSE MINERAL EXPLORATION ADMN WASHDC=

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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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NOV 20 1953

REFERENCE DOCKET NUMBER 3124 STOP FOLLOWING FURNISHED YOU AS REQUESTED BY MR CLARK COVERING FOUR ADDITIONAL CLAIMS STAKED ON BUCKSKIN MOUNTAIN STOP LUPINE NO 2 BOOK 503 PAGE 231. LUPINE NO 3 BOOK 504 PAGE 233. LUPINE NO 4 BOOK 503 PAGE 235 LUPINE NO 5 BOOK 503 PAGE 237 STOP ALL FILED FOR RECORD NOV 16 WITH CHELAN COUNTY

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 20 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 20 1953

November 17, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (nickel-copper)
Howe Sound Company
Holden Mine
Chelan County, Washington

Dear Mr. Selfridge:

At the suggestion of Mr. Weissenborn, Mr. Snodgrass of the Howe Sound Mining Company was contacted by telephone on November 13 and asked to obtain information concerning certain mining claims to be affected by the proposed DMEA project. It was pointed out to Mr. Snodgrass that the proposed extension of the 1500 level would get beyond the limits of the Lucerne No. 6 claim and the Lupine claim and that this affected ground to be explored by these workings should be made applicable to the contract.

Mr. Snodgrass contacted Mr. John Curzon, Manager of Howe Sound, who in turn forwarded to this office the information enclosed with this letter. It will be noted that four additional claims, the Lupine No. 2, No. 3, No. 4, and No. 5, have been staked and that these claims cover most of the affected area. The book and page numbers of these claims were not available to the company at the time of Mr. Curzon's letter and, therefore, a copy of the location notice was substituted instead.

We are enclosing four copies of Mr. Curzon's letter and four copies of the location notices, but only one copy of the map as that is all we have available. It is suggested that the location of the four added claims be transferred to copies of Howe Sound claim maps already available in the Washington office.

Sincerely yours,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosures

cc: USBM (2)

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

November 14, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 20 1953

Mr. A. E. Weissenborn, Executive Officer
D.M.A. Field Team, Region 2
South 157 Howard Street
Spokane 4, washington

Dear Mr. Weissenborn:

The enclosed data is submitted as a result of your telephone conversation with Mr. Snodgrass yesterday morning.

Four new claims were located on the western slope of Buckskin Mountain during October, as shown on the enclosed print. The names of these claims are Lupine No. 2, Lupine No. 3, Lupine No.4, and Lupine No. 5. These claims cover the ground directly over the proposed 1500 drift east extension and diamond drilling programs.

Location notices were mailed to the Chelan County Auditor yesterday. As soon as we are notified regarding the book and page numbers these claims are recorded under, you will be notified accordingly. Copies of these location notices are enclosed.

It is our intention to stake additional ground toward the Southeast beyond the Lupine group and parallel to existing claims along the zone, in order to cover any possible extension of the 1500 drift east beyond the arbitrary line referred to as Point 2 on the map and section accompanying my letter of November 6th. Due to the precipitous nature of the ground, only 4 claims were staked in October and the field work had to be postponed until next spring or summer, when it is planned to work from the Wilson Creek side first rather than try and carry a line up and over the impassable cliffs on the Copper Creek side. This work will start just as soon as the snow is off and the area is safe from slides.

Some confusion may arise over the fact that MINE NORTH is actually 66 degrees east of ASTRONOMICAL NORTH. This fact must be given consideration when comparing company maps on mine coordinants with regular surface maps such as those used by the Geological Survey.

Yours very truly,

John J. Curzon
Manager

JJ:mel

Enclosures

cc: Mr. V. H. Clarke, Vice President
Howe Sound Company

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 17 1953

November 16, 1953

Memorandum

To: W. R. Griswold, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-3142 (Copper) Howe Sound Company, Chelan Division, Holden Mine, Chelan County, Washington

Mr. Olund and I have reviewed the Field Team report on the above-named application and as you know, I have discussed it on a number of occasions with you and Mr. Newcomb of the Geological Survey. I have also talked briefly with Mr. Weissenborn about it.

As you will recall, this application was changed from straight copper to nickel-copper after the initial submission. This was done on the strength of the strong nickel showings obtained in the course of a geochemical survey on the surface along the projected mineralized zone. I do not feel that this is a quite adequate justification for regarding this as a nickel-copper project and believe it should be approved as a straight copper project. However, if you and the Geological Survey feel otherwise, I should not raise further objection to treating it as a combined metal project.

The justification for phase 1 of the project, namely, the exploration of the extension of the Holden mineralized copper zone by a deep-level drift and crosscut drilling does not seem to me to be as well justified as a project of this size should be. Nevertheless, I believe I must accept the strong and definitely expressed opinion of the field geologists and engineers who have been on the ground, who hold that it is a very worthwhile project. In general I agree that exploring along the strike of a richly productive ore zine such as that of the Holden mine is a good type of prospecting. I am therefore prepared to concur in approval of this phase of the project. I understand that it would be your intention to divide it into a first step and a second step in order to cut the cost to a minimum if results are discouraging when workings are well into the target area.

As to phase 2, which consists of driving hanging wall cross-cuts and drilling to depths of 200 feet below the stoping area of the Holden mine, I shall be glad to concur in approval of this phase of the project, if that is your decision, particularly, if the company fails to obtain the contract assistance for which I understand it has applied to GSA. If the company receives a purchase contract at or above the market price, it hardly seems to me that this diamond drilling will be necessary, but that the company could count on finding sufficient ore at the lower level to repay the venture, given an assured and adequate market for the copper.

C. H. Johnson
C. H. Johnson by O. W. Bishop

Copy to - Mr. Kinkel - USGS
Minerals Division
C. H. Johnson
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 12 1953

November 9, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (nickel-copper)
Howe Sound Company, Holden Mine
Chelan County, Washington

Dear Mr. Selfridge:

Reference is made to your letter of October 21, 1953, and to Mr. A. E. Weissenborn's reply to that letter dated October 31, 1953. Both of these letters concern the Howe Sound application for DMEA work in the Buckskin area, Mr. Weissenborn's letter presenting evidence as to why the proposed work should be done on the 1500 level and not from the surface of Buckskin Mountain.

In a further effort to substantiate Mr. Weissenborn's recommendations for work on the 1500 level, we have asked Mr. Dwight Crowder, U. S. Geological Survey, to prepare a memorandum on the unfeasibility of doing work on Buckskin Mountain. Mr. Crowder has spent two field seasons in the Holden area and is familiar with the geology and topography of the region about the Howe Sound mine. Four copies of Mr. Crowder's memorandum are enclosed.

We have also contacted Mr. Curzon, Manager, Holden Mine, for additional assay and geologic data on the Buckskin area, and for his comments on exploration from the surface in that area. Four copies of Mr. Curzon's comments with attached maps are enclosed.

In conclusion, we can only again emphasize what has already been emphasized: The topography and weather conditions make any work on Buckskin Mountain unfeasible. Exploration from the 1500 level of the Howe Sound mine is the most advantageous way of exploring the Buckskin deposit for a number of reasons, all of which are presented in the enclosed reports. It is therefore recommended that DMEA accept the previously presented program of proposed work as being the more feasible manner of exploring the Buckskin deposit.

By Field Team, Region II

M. E. Volin, Acting Exec. Officer
(U. S. Bureau of Mines)

Thor H. Kiilsgaard, Acting Member (USGS)

Enclosures
cc: USBM (2)
Geologist

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
~~XXXXXXXXXXXXXXXXXXXX~~
No. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Conservation
DEC 12 1953

November 27, 1953

Memorandum

To: A. T. Weissenborn, Executive Officer, DMEA Field Team, Region II

From: D. F. Crowley, Geologist, U. S. Geological Survey

Subject: Docket No. DMEA-9142 (nickel-copper), Howe Sound Company, Holden Mine, Chelan County, Washington.

In your letter of October 31 to H. C. Selfridge you mentioned asking F. L. Cater for his comments on surface exploration of the Buckskin area and for additional justification of the proposed 4500 level program. Mr. Cater will be on leave for perhaps three more weeks. I will try to furnish information that will be of immediate use.

Because of the inaccessibility of the Buckskin area, it would be unusually difficult to do even a few hundred feet of exploration on an extension of the Chelan adit. Horses have supplied transportation from Holden for previous exploration. The heavy machinery needed to extend the Chelan adit several hundred feet would necessitate a vehicle road. This road might be built from the end of the old road that ends near the 500 level adit of the Holden mine. The route would be up the west side of Copper Creek. The 500 level adit is at an altitude of 4500 feet and the Chelan adit at 5000 feet. The last 1500 feet of elevation would involve nearly continuous blasting. The working season would be three to four months as it would be impossible to keep the road open during the winter. Much of the route would be on actively moving talus across slopes swept by snowslides from Copper Peak. Winter snow at Holden, nearly 3000 feet below the Chelan adit, averages 35 to 50 feet.

Falling rock would be a constant hazard on the surface in the Buckskin area. Gullies adjacent to the Chelan adit are more rock chutes than waterways. Buildings, trucks, equipment and men would be in constant danger.

It seems evident that the Buckskin area should be completely investigated before the Holden mine is exhausted and the Company is forced to abandon operations. The answers are needed quickly. Surface exploration is one of the slowest possible approaches.

If it is decided to begin the exploration with a surface phase, the logical point to start would be near the lower drill hole (coordinates 20,800, 10,400) and not at the Chelan adit. Much of building difficulty of an access road would be avoided. Also, the exploration would be entering the center of the 2500 block of ground between the 1500 level and the Chelan adit instead of at the top.

However, I feel that because of probable slow progress and access difficulty, the originally proposed 1500 level program is far superior to any surface program. Information from this program will completely prove or disprove Buckskin. A surface program will give only very partial answers.

Since the proposed 1500 level drifting and drilling will still leave considerable unexplored ground (nearly 2000 feet of it between up holes and the Chelan adit), I would suggest raising from the 1500 level at about the 11,500 coordinate rather than continuing on east. This should lower the cost of the program.

I spent nearly a month on the surface outcrops of the Buckskin zone and Holden mine zone while collecting geochemical samples. The similarity between the two areas is striking. On the Holden quadrangle mapping project both areas were mapped as migmatite due to the high percentage of dike material. In both areas there is considerable silicification and visible pyrite in most specimens. The oxidation in both areas is very superficial--merely skin deep staining in fractures and on exposed surfaces. Gossan is developed in scattered small shears six inches to two feet wide and a few feet long. Chalcopyrite and sphalerite are rarely seen in either the Holden or Buckskin outcrops. Where the Holden ore body comes close to the surface the exposures are very poor due to a thick transported soil cover. For this reason it is difficult to evaluate the Buckskin exposures by comparison with the Holden exposures. The Buckskin outcrops are not impressive, but they are fully as impressive as what we see over the Holden ore body.

The Buckskin oxidized zone is on strike with the numerous parallel oxidized zones on the west side of Copper Creek. These zones include the Holden mine zone, the Midway zone, the Mountain Goat zone and numerous smaller ones. The Buckskin zone is the only one on the east side of Copper Creek and it seems likely that it is a continuation of the widest and best mineralized zone on the west side--the Holden mine zone.

On the Copper Creek-Wilson Creek-Entiat River divide, a mile from the Buckskin zone, is an igneous contact complex that may be a portion of the Chelan batholith contact. If this is the source of ore solutions the Buckskin area is favorably located near the contact, apparently nearer than the Holden mine.

Assays are available for the Chelan adit and the drill hole #2 near it. There is a discrepancy between the map location of the drill hole and the location given on the log sheet; however, assuming the log sheet location is correct, the hole is 80 feet below the adit. Although copper-zinc-gold assays in adit and hole are low, they do show that mineralization carries through to at least 80 feet below the Chelan adit.

Distribution:
DMRA (4)
USBM (2)
Crowder
Docket

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

November 6, 1953

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region 2
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

In accordance with a telephone conversation between our representative at Chelan, Mr. Snodgrass, and your representative, Mr. Kiilsgaard, on November 4th, the following data is hereby submitted as additional evidence in support of our application of August 11, 1953:

Outline of various factors involved in Buckskin Mountain proposal.
Surface map of Copper Creek Basin and Buckskin Mountain Zone.
Longitudinal Section through Holden Mine and Buckskin Mountain.
Log of diamond drill core in S-B-2 hole at upper drill station.
Assay plan of eastern end of 2500 level.

In order to settle several controversial points, a special trip was made into Copper Basin on October 28th to try and find answers for the following questions:

1. Could the zone be adequately diamond drilled from the surface.
2. Are there any possible tunnel sites.
3. Could a road be built into the basin.

This trip reemphasized our previous conclusion that it would be an impossibility to adequately diamond drill the Buckskin Mountain zone from the surface. There is simply no way in which holes can be drilled to intersect the zone in any way but at an oblique angle.

Another definite fact established was that possible tunnel sites are extremely scarce due to the precipitous nature of the area and the ever constant danger of snow slides and rolling rocks. The best point for a semi-protected camp and portal is on the hanging wall side where the trail passes a rocky cliff at about an elevation of 4950 feet. About 650 feet of crosscutting would be required before this tunnel would reach the point where it could be turned parallel to the zone.

A road could be built into the basin at considerable expense, not only for initial cost but for maintenance later on due to the necessity of passing through slide areas. To realize an average grade of 10 percent, this road would have to be extended about 11,500 feet beyond the old Honeymoon Heights road at the base of the 1100 level dump.

The steepness of the mountain slopes and the rather terrific destructive force of snow slides can be realized only by actually being on the ground. Maps cannot show the complete picture.

Another important point to keep in mind is that working time in that area is only 4 months or so in duration. This is no exageration as slides boom down the mountainside all spring and new snows come again in November.

The location of two tunnel possibilities, Tunnel A and Tunnel B, are shown on the enclosed map and section.

In view of greater speed and lower cost when speed is essential for the life of the Holden mine, it would seem that the continuation of 1500 drift east, as originally proposed, is far more desirable than any work done from the surface. In our opinion, any work done from the surface now should be as a last resort only.

The surface map accompanying our application of August 11th, 1953 shows only actual exposures of oxidized portions of the zone as determined by a detailed plane table study made of the area during the summer of 1952. Although the surface map does not emphasize that these exposures are actually parts of a continuous zone, this fact is clearly apparent in the field. Actually, the zone is cut in places by intrusive dikes of various types while in other areas it is apparently covered by talus and vegetation.

Diamond drilling from the two locations shown on the maps was done during the summer of 1941 at a cost of about $ 2.87 per foot. At that time, nobody ever dreamed that the massive pyrrhotite found in the core might contain nickel. Consequently, assays were run for copper and gold only and the drill cores were thrown away sometime during the ensuing years. Now, it is realized that the descriptions given in the core log corresponds with the massive sulphide material found on the surface and in the old Chelan Tunnel, which contains an interesting nickel content.

Only negative results were obtained by the holes drilled from the lower drill station as most of the drilling was in waste. Some sulphides were noted, chiefly pyrite. Only traces of copper and gold were found, but here again, no assays were run for nickel at all. Apparently, this station was not located advantageously, as one of the holes was in dike material all the way while two others were in rotten or caving material, which resulted in high core loss.

Some interesting nickel showings are being found in our current diamond drilling program at the east end of the 2500 level, as shown by the enclosed assay map. It is encouraging to note that the amount of nickel has been increasing with depth at the east end of the mine. This fact, in our opinion, is a strong argument in favor of pushing the 1500 drift east ahead without delay.

Incidentally, a large sample of fresh ore was taken from the little tunnel on Buckskin Mountain to the mill for testing purposes and assayed 0.50% Cu. and 0.80% Nickel.

If more copies of the enclosed material or any additional information is needed, please let us know.

Yours very truly,

John J. Curzon
Manager

JJC:mel

Enclosures

cc: Mr. V. H. Clarke, Vice President
Howe Sound Company

FORM 63-A 1M 3-47 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 1
BY G.R.J.
DATE July 16, 1941

HOLE NO. S-B-2 MINE Buckskin Mt. LEVEL Surface
LOCATION No. 2 D. D. Station on Buckskin Mt.
BEARING S 75° E DIP Horizontal LENGTH 233 feet
LATITUDE OF COLLAR 20,900 DEPARTURE OF COLLAR 11,400 ELEVATION 6,020

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		0-10	W		W			Gneissic biotite granite.
		10-96	W		W			Gneissic biotite granite in appearance but has much old sediment reminants indicating that the ground is an extremely granitized sediment. Lime at 21. Much biotite throughout. Where sediment is most evident there is considerable silicification and small quartz veins.
		96-98	W		W			Siliceous biotite gneissic granite with small sulphide veinlets at 98.
		98-127						Diorite with much sulphides.
	23829	98-103	0.27		0.015		5	massive sulphides locally. Bornite,
	23830	103-108	Nil.		Nil.		5	chalcopyrite and pyrrhotite are present.
	23840	108-113	Nil.		Tr.		5	Hornblende and biotite throughout. Small
	23841	113-118	0.34		0.010		5	chalcopyrite veinlets are present.
	23842	118-123	0.70		0.015		5	
	23831	123-128	0.23		0.015		5	
		127-217						Diorite with much sediment reminants. Somewhat saturated with hornblende. Two inch veinlets of sulphides locally.
	23832	128-133	Nil.		Nil.		5	
	23833	133-140	Nil.		Tr.		7	
	23833	140-145	0.04		Tr.		5	
	23834	145-150	0.07		Tr.		5	
	23835	150-155	0.05		Tr.		5	
	23836	155-160	0.24		0.020		5	
	23837	160-165	0.21		0.010		5	
		165-217	W		W			
		217-233	W		W			Fractured old siliceous granite intrusive.

11/6/53
J.J.C.

BUCKSKIN MOUNTAIN PROBLEM

I. Location of Surface Showings

From about 5280' elevation to top at 7600' elevation.

Terrain very difficult - rugged and steep, nearly 45° slope from lower diamond drill station to peak.

Oxidized zone is eroded away forming steep draws which are filled with talus.

Actual outcrops are few, although the continuation of the zone is quite apparent.

Mountain sides are so steep that snow and rock slides are bringing down fresh talus material every winter through spring and well into summer.

Impossible to do any work in area during winter. Work period would be from July through October (4 months) except under extremely advantageous conditions.

Any surface work done in area lies within water shed for domestic water supply for Holden mine and camp.

II. Possibility of Surface Drilling

As geology is quite complex with several unpredictable intrusive dikes, sparcely spaced diamond drill holes can lead to erroneous conclusions, according to actual experience in Holden mine, where one hole might be in dike material while nearby hole would be in waste.

Only satisfactory way, therefore, to test ground in this area is by fairly closely spaced holes normal to strike.

Impossible to diamond drill zone adequately from surface because the zone lies in the eroded valleys and extends directly into the face of the mountain.

Any holes drilled from the surface, therefore, must pass through zone at oblique angle.

Only chance to diamond drill intelligently would be from underground tunnel driven parallel to strike of zone.

III. Tunnel Prospects

Above 6000-foot elevation

Would be difficult, costly, and dangerous

a. No protected area for compressor, etc.

b. Would require pack string or aerial tram.

III. Tunnel Prospects (Continued)

Location A - Elevation about 5260 feet

Possible chance for portal near lower diamond drill station.

a. Portal would be partially protected, but everything else would be in area exposed to slides.

b. Approximate location - N 20,800
E 10,400

Location B - Elevation about 4950 feet

Best chance for portal would be near present trail where it passes rocky cliffs on hanging wall side of zone.

a. Portal would be protected.

b. Small protected area available for compressor, sheds, etc.

c. Approximate location - N 20,130
E 10,130

General

Any location would require access road.

a. To move equipment in and out.

b. Transportation for men and supplies.

IV. Road Problems

Road into basin is possible but difficult.

Best scheme would be to take advantage of elevation gained by old Honeymoon Heights road and start new road from section passing under old 1100 dump.

Elevation of proposed tunnel - 4950 feet
Elevation at base of 1100 dump - 3800 feet
Elevation to be gained by new road - 1150 feet.

At 10 percent average grade, road would have to be about 11,500 feet long.

Should be easy digging in most places, probably very little rock work.

Difficulties:

a. Bridge over Copper Creek. Appears to be a rather deep cut when road should cross creek.

Difficulties: (Continued)

b. Snow Slides. One area on Copper Peak side and long area of slide on Buckskin Mountain side extending about 3,000 feet. Cutting road through slide areas would be quite dangerous until rock movement stops.

c. Under normal conditions, would require most of first summer to get road in, equipment set up, and portal collared.

V. Comparison of Proposals

Tunnel A

For - a. Shortest distance to drive - D to E - 2450 ft. approximately.

b. Closest to old tunnel andoutcrop.

Against - a. Location of portal exposed and dangerous.

b. No chance for protected camp at all.

c. Would have to rebuild considerable portion of upper road each year where switchbacks would be in slide area.

d. Effective time that tunnel could be driven extremely limited, estimated as July through October, 4 months.

e. At 300 feet per month, project would take over 8 months driving or three years including building road, setting compressor, water pipe line, etc.

Conclusion - A last resort only.

Tunnel B

For - a. Protected area for small camp.

b. Portal at protected place.

c. Better approach for service road.

d. Lowest possible point of attack on surface.

e. Effective working time should be a little longer, because portal and camp would be away from slides - say 4 1/2 to 5 months.

Against - a. Would require 650 feet approximately of crosscut to reach zone.

b. Total distance B to E equals about 3100 feet, at 300 feet per month would take 10½ months or 3 full years including road, etc.

Conclusion - Best chance for portal if work has to be done from the surface.

V. Comparison of Proposals (Continued)

1500 Drift East

For

- a. Company has already advanced over 2800 feet and face is at E 9523
- b. Cheaper and easier to drive.
- c. Work can be carried forward continuously regardless of weather.
- d. Work will not be lost, as heading can be converted into haulage tunnel.
- e. Speed in finding new ore is essential for property and drift east would be under zone before a start could be made on any surface work.
- f. Distance to drive, C to E, about 3300 feet approximately. At 300 feet per month would require 11 months or one year approx.
- g. Therefore, entire program, both drifting and drilling, could be completed within 2 years.

Against

- a. Slightly longer to drive - approximately 200 feet.
- b. 1700 feet below lower drill station.
  2800 feet below Buckskin Tunnel.

Conclusions

- a. Estimated cost for road and compressor, etc., far exceeds cost for driving additional 200 feet.
- b. Depth of bite not prohibitive.
  1. The fact that mineralized zones in Holden area extend to depth is shown by Holden orebody which is proven to extend over 2500 feet below outcrop.
  2. Encouraging nickel showings are being revealed by recent diamond drilling at eastern end of 2500 level, which is 1,000 feet below 1500 drift east.

VI. Final Conclusions

Advantages for 1500 drift east far outweigh any surface tunnel.

a. Final cost would be far less.

b. Speed is essential for life of property.

c. Value of information greater:

1. If ore found, drift east can be converted into haulage level and ore mined by gravity to that level.

2. If a surface tunnel were driven first and ore disclosed, then 1500 drift east would have to be driven anyway.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 2 1953

October 31, 1953

Griswold
Betty

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 3142 (nickel-copper)
Howe Sound Company
Holden Mine
Chelan County, Washington

Dear Mr. Selfridge:

Reference is made to your letter of October 21 concerning whether we should not try to work out a set program for the exploration for the Buckskin area.

I am in agreement with you that wherever possible it is highly desirable to break a large project down into successive steps. In the case of the Buckskin area, it would of course be possible to do additional diamond drilling or some exploration from the so-called Chelan adit if this were necessary; however, because of the exceptionally steep terrain there is no doubt that such work would be done at an inordinately high cost and I am not at all convinced that the results would justify it. It is my present opinion, at least, that the only logical way to explore the area is through the extension of the 1500 level, as has been proposed, and that through no other means will it be possible to say that the area has received a thorough examination. I think that this is another case where we should shoot for the works or not go into the vein at all.

However, I am referring your letter to Mr. Fred Cater, who is far more familiar with the conditions in the Buckskin area than I and I am asking for his comments and such additional information that he may have as to the justification for undertaking the exploration, as well as any other scheme that he may suggest. We are also writing Mr. Curzon asking him to send us the logs of the two diamond drill holes put down in the area.

Mr. Cater's reply will be delayed as he is on leave at present and is not available to answer this letter; in fact, he is completely out of contact with the office. A reply will be prepared just as soon as possible.

We regret the delay as we consider that this is a worthwhile project and would like to see it get underway.

Sincerely yours,

Thor H. Kilsgaard

FOR: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc: USBM (2)
Cater

FILE COPY
SURNAME:

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

N. D. in R.&R.

OCT 21 1953

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMA 3142 (nickel-copper)
Howe Sound Company
Holden Mine
Chelan County, Washington

Dear Mr. Weissenborn:

With reference to Proposal I of the above project, there have been some preliminary discussions regarding it, and certain points have been brought up which we shall ask you to clarify for us. The principal point is as follows:

(Proposal I) The project provides for 4,100 feet of drifting and 7,075 feet of diamond drilling, at a depth of some 2,500 feet below the outcrop, and at a substantial cost of some $222,000.00, all based upon what must be considered as somewhat meager evidence at surface. About all we have of a concrete nature are three assays taken in a short tunnel (perhaps 20 feet in length) and one assay from a surface exposure some 35 feet from the tunnel portal. We are left with an uneasy feeling that we may be neglecting the cardinal principle of doing exploratory work in logical steps and sequences, in that we are "taking too big a bite" at one time.

Certainly there are occasions when a large project cannot be broken down into successive steps. In the case of the Bunker Hill and Sullivan contract we either had to endorse, or deny, a proposal aimed at exploring what is generally considered to be a highly favorable horizon for ore occurrence. The same would apply to the recent contract given for sinking of the Vindicator shaft with subsequent drifting.

Nor are we opposed to projects which are based largely upon geological evidence and inference; quite the contrary is true.

Yet, in cases where it is at all feasible, we should break such projects into logical and conditional steps, so that negative evidence anywhere along the line could prevent further wasted expenditures.

It has been stated that the area is too rugged for diamond drilling, though (according to the map), two diamond drill holes were previously put down in the area by the company. Incidentally, we should be provided with the results of such drilling.

Would it be possible to continue the short tunnel previously referred to, which we believe is called the "Chelan Adit" for a distance of some 200 feet, or until it was well below the zone of oxidation, and then to stem off crosscuts in the direction of mine coordinate north and south, to cut across all or most of the supposed ore bearing structure? Possibly a total of 600 feet of such work might let us have highly significant information.

We should like to have your comments, perhaps there might be other preliminary steps you could suggest. If not, and if you should feel that any preliminary work is inadvisable in advance of the proposed 1,500 level work, possibly more corroborative evidence could be assembled to better substantiate a project of such magnitude.

Perhaps the 1,500 level project could also be broken into two stages, with the second stage contingent upon prior results obtained. Obviously, in such case, the first stage would have to be of a substantial nature, involving at least a considerable amount of drifting, with some diamond drilling.

Sincerely yours,

George C. Selfridge (GCS)

Chairman, Operating Committee

APPROVED:

J. H. Hedges

Member, Bureau of Mines (JHH)

D. M. Larrabee

Member, Geological Survey (DML)

WRGriswold/hmj (10-21-53)

CC to: Docket
Adm. R. File
Op. Committee
Mr. Kinkel, USGS
Mr. Bishop USBM
Mr. Newcomb, USGS
Mr. Charles Johnson USBM
Base Metals Division
Chron.

R.C.G. 10-21-53

500 FILE COPY
SURNAME:

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

October 20, 1953

Memorandum

To: Mr. Charles H. Johnson
Bureau of Mines, Rm 3619

From: W. R. Griswold, Chief
Base Metals Division, DMEA.

Subject: Docket No. DMEA 3142 (nickel-copper)
Howe Sound Company
Holden Mine, Chelan County, Washington

Referring to our recent conversation of October 16, regarding the proposed Howe Sound exploration project, I tried to phone Mr. Weissenborn but was advised that both he and Mr. Kiilsgaard will be out of town all week.

Therefore, I shall cover the subject in an air mail letter. I attach a rough draft of such a proposed letter, may I have your comments?

W. R. Griswold

Attachments

CC TO: Docket
Base Metals
Chron.

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

FILE COPY
SURNAME:

Griswold
Selfridge
Whitehouse

AGENCY DMEA

ORIGINATOR: W. R. Griswold
Ext. 3669 Room 4058

October 7, 1953

To: Mr. A. E. Weissenborn, Executive Officer, Region II, Spokane, Washington

Referring Docket DMEA 3142 Howe Sound Company program No. 1 nickel-copper when can you forward your recommendations regarding nickel phase of this part of project.

George C. Selfridge

Chairman, Operating Committee

WRGriswold/hmj
(10-7-53)
CC to; Docket
Adm. R. File, DMEA
Op. Committee, DMEA
Audits
Base Metals, 4058
Mr. Kinkel, USGS
Mr. Bishop, USBM
Chron.

R.C.S. 10-5-53

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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OCT - 8 1953

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GENERAL SERVICES ADMIN.
PUBLIC BLDGS. SERVICE
MD - COMMUNICATIONS

406 WA SP /I-GS-G/

SPOKANE 10-7-53 242P

MR. GEORGE C. SELFRIDGE
CHAIRMAN OPERATING COMMITTEE
DMEA DEPARTMENT OF INTERIOR
WASHINGTON 25 DC

REURTT THIS DATE CONCERNING DOCKET 3142, YONE SOUID CO., PROGRAM NO. 1, NICKEL-COPPER . OUR AIRMAIL LETTER OF SEPTEMBER 29 CONTAINED RECOMMENDATIONS REGARDING NICKEL PHASE OF THIS PROJECT. IF THIS HAS NOT BEEN RECEIVED PLEASE ADVISE.

A E WEISSTHORN

3142 1 29
WA 242P

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

October 2, 1953

Mr. George C. Selfridge
Chairman, Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Application
Docket No. DMEA-3142 (Cu-Ni)

Dear Mr. Selfridge:

Supplementing Field Team memorandum of October 2, I am submitting a copy of a letter from Mr. John J. Curzon of the Howe Sound Mining Company in which he gives schedule for assays from the company. This information might be useful in figuring either a short form or a long form type of contract, and I am forwarding it to you for whatever use can be made of it. You will observe that all of the assaying charges are very much under what would be normal commercial rates.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc: USBM (2)

C
O
P
Y

HOWE SOUND COMPANY
Chelan Division
Holden, Wash.
October 1, 1953

Mr. A. E. Weissenborn, Executive Officer
D.M.E.A. Field Team, Region 2
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

Pursuant our recent conversation in Seattle regarding prices for various assays, we would like to submit the following schedule for your consideration:

Copper	- under 2 percent	= 35 ¢	per assay
	over 2 percent	= 70 ¢	per assay
Gold		= 1.00	per assay
Gold and Silver		= 1.35	per assay
Zinc		= 1.00	per assay
Nickel		- 2.00	per assay

For example, a normal sample for copper, gold, and zinc would cost $ 2.35. Including nickel, the cost would be $ 4.35 per sample.

Yours very truly,

/s/ John J. Curzon
John J. Curzon

JJC:mel

RECEIVED
OCT 2 1953
U.S.G.S.
SPOKANE, WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

Department of the Interior
Defense Minerals Administration
RECEIVED
OCT - 6 1953

September 29, 1953

Air Mail

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Chelan County, Washington

Dear Mr. Selfridge:

This letter answers questions raised on the subject application by Mr. W. R. Griswold, Chief, Base Metals Division, in a telephone call to Mr. T. H. Kiilsgaard of the Spokane DMEA office on September 16, 1953. On September 21, while at Seattle attending the American Mining Congress convention, Messrs. Weissenborn and Volin conferred with Mr. V. H. Clarke and Mr. John J. Curzon, representing the Howe Sound Company. All of the comments brought up by Mr. Griswold were discussed at that time, and it is our hope that on the basis of the additional data presented herewith and the recommendations made in this letter, a contract can now be negotiated.

We had observed the high nickel assays submitted by the Howe Sound Company, had discussed them with Mr. Curzon, and had mentioned them in our previous Field Team memorandum. We had not emphasized the nickel previously because the Holden ore body has been a producer of copper, not nickel, and neither in the application nor in our previous discussions with company officials had very much stress been placed on the nickel. We had, consequently, regarded the project as primarily an exploration for copper and had tended to discount the nickel, regarding it as an interesting but probably minor constituent of the ore.

On discussing this matter again at some length with Messrs. Clarke and Curzon of the Howe Sound Company and with F. M. Cater of the Geological Survey, we find that the situation is quite different from what we had believed. The Buckskin prospect had been known for a long time. Previous work had suggested that the deposit might run somewhere around 0.7 to 0.8

percent copper. Under the circumstances, this is not enough copper to be of much interest and as the gold, which is an important constituent of the Holden ore body is very low, the prospect was considered unattractive and was left unexplored. Recently assays were made of specimens of pyrrhotite which is found in small lenses in the Holden ore body. These assays indicated interesting amounts of nickel, but because of the small size and limited occurrence of the lenses, which, according to Cater, are associated with amphibolite, the discovery has little economic significance. However, someone remembered the similarity between the Holden pyrrhotite and the occurrence at the Buckskin prospect. Additional samples were taken from the Buckskin, some of which assayed one percent or more in nickel, as is shown in the company's application and supporting data. Soil sampling by Crowder of the Survey also indicated nickel anomalies. Cater reports that the company geologist has identified pentlandite as the nickel mineral. Because of the lack of a market, nickeliferous ore would not ordinarily be of too much interest unless there was a possibility of developing a very large ore body. However, Clarke and Curzon point out that the ore could be treated in the company's cobalt refinery at Salt Lake. They maintain that because of this combination of circumstances the Buckskin prospect, which was unattractive when considered for copper alone, is of very great interest because of the nickel and argue that because of this, the nickel should be considered as at least as important as the copper. It is, of course, obvious that there is no certainty that the exploration will be successful in finding a nickeliferous ore body--but neither is there any assurance that a minable copper deposit will be found. After consideration of the above facts, we have concluded that the Howe Sound Company has a sound basis for its argument and we recommend that the project be considered as a nickel-copper exploration. Cater, who has studied the area as part of a USGS project concurs. The company should have emphasized this in their application, but their failure to do so does not alter the fact that as far as we know now the nickel in the Buckskin deposit is potentially at least as important as the copper.

In view of our previous cost analysis by Mr. T. E. Howard, Bureau of Mines, and discussions with Mr. Griswold in Washington, D. C., Mr. Clarke thought that the unit cost type of contract would not be the best one for his company and stated a preference for the long form type of contract with reimbursement on the basis of costs actually incurred. The Field Team discussed with him some of the difficulties inherent in the long form type of contract in an operating mine, but Mr. Curzon was confident that his operating staff, including his bookkeeping section, could handle this type of contract without undue difficult. We believe that a unit cost contract would be simpler to administer, but we

do not believe that the accounting difficulties involved in a long form contract would be insurmountable.

With respect to the question raised about the Government equity in approximately $44,000 worth of machinery to be purchased for the project, Mr. Clarke stated that his company would be willing to reach a firm agreement that they would purchase the Government equity at the conclusion of the project, but he wanted to have some understanding in advance about the rate of depreciation allowable on such machinery and a mutual agreement about the approximate value of the machinery at the end of the two-year contract period.

The item of 5,000 feet of conductor cable to be purchased for the project at a cost of about $19,000 was explained by Mr. Curzon. The 1500 level has been extended out some 3,000 feet from the Holden mine stoping area, and under the proposed program is to be extended another 4,100 feet into the Buckskin area. For these distances ventilation and haulage both become considerable problems. The conductor cable is to be utilized wholly for these purposes but will not be of the capacity or size that can be utilized later in any mine development. To explain this matter further, an electric-driven fan is necessary to give the ventilation required in driving the proposed heading. A "whizz-bang" type of booster fan actuated by air would not be adequate for this purpose. The electric-driven fan will be moved forward as the drift is advanced. Likewise, whereas diesel haulage is used on the 1500 level, this cannot be used in extending the level because of problems in ventilation and the offset in the track level. The level will be extended using a battery-driven locomotive which will haul the muck to the offset where it will be dumped into cars to be hauled to the hoisting shaft by the diesel locomotive. For the battery locomotive a small charging rack will be required, and this rack will have to be advanced as the drift is advanced. This explanation by Mr. Curzon is completely satisfactory as far as the Field Team is concerned and undoubtedly will be to Mr. Griswold's satisfaction.

The conference at Seattle was ended with an agreement that the Field Team would recommend a long form type of contract, but upon returning to Spokane and giving further consideration to the matter, and especially to the fact that many individual items would probably be set up as allowable maximums in the long form type of contract, it was decided to try to work up new unit costs which might be acceptable to Mr. Clarke and his company. It seems advisable, however, before approaching Mr. Clarke about this that we submit our new unit costs to the Operating Committee for review and approval; then, if these unit costs seem reasonable, Mr. Clarke can be approached with these new suggestions for a short form contract. We believe that he will be agreeable to this because the revisions have been made along the lines requested by him.

The attached memorandum by E. G. Erickson, Bureau of Mines, gives new unit costs incorporating a depreciation allowance for machinery as requested by Mr. Griswold and also incorporating a contingency item as urged by Mr. Clarke, this item to be available to the company only to cover such things as increased union wage scales, higher costs because of unpredictable bad rock conditions, and miscellaneous items that can be demonstrated by the company to actually increase drifting costs.

The Field Team believes that the unit costs given by Mr. Erickson are reasonable and consistent with costs for comparable work on other DMEA contracts in this Region. If the Operating Committee approves these costs it is suggested that you contact Mr. Clarke directly for his approval of a contract based on these costs, giving him the full background of why the Field Team changed its position after the conference with him and Mr. Curzon in Seattle. We believe that the contingency item as suggested by Mr. Erickson and the Field Team, although new in the short form type of contract, has much merit and will result in a contract equitable to both the Government and the contractor. If this is not acceptable, then a long form contract would appear to be the only solution. The Field Team will be glad to assist further in any way possible, especially in providing additional factual information, if required, but we suggest that further negotiations be carried on directly with Mr. Clarke in the New York office. It is Mr. Clarke, not the local management, who in the end, will negotiate the proposed contract.

By DMEA Field Team, Region II

A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosure

cc: USBM (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
September 29, 1953
1201 N. Division
Spokane, Washington

MEMORANDUM

To: DMEA Field Team, Region II

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Estimated costs, Howe Sound Company, Holden Mine, Chelan, Washington, Docket No. DMEA 3142 (copper-nickel)

The applicants' cost estimate including 1,000 feet of additional drifting and 2,000 feet of diamond drilling in Program I proposed after a discussion of original application with the Field Team, has been re-evaluated in line with suggestions from Mr. W. R. Griswold of the Base Metals Division, DMEA, Washington, D. C.

The following unit costs are recommended:

Program I

Drifting 4100 feet at $40/ft.	$164,000.00
Diamond drilling 7075 feet at $3.60/ft.	25,470.00
Diamond drill stations - 10 at $490/ea.	4,900.00
Timbering (if necessary) - est. 800 feet at $7.50/ft.	6,000.00
Contingency (4100 feet drifting) 10 percent of $40 or $4/ft. 1/	16,400.00
Contingency (7075 feet diamond drilling) 10 percent of $3.60 or $0.36/ft. 1/	2,547.00
Total - Program I	$219,317.00

Program II

Drifting and/or crosscutting 2016 feet at $40/ft.	$ 80,640.00
Diamond drilling 5000 feet at $3.60/ft.	18,000.00
Diamond drill stations, 6 at $600/ea.	3,600.00
Timbering (if necessary) - est. 400 ft. at $7.50/ft.	3,000.00
Contingency (2016 ft. drifting) 10 percent of $40 or $4.00/ft. 1/	8,064.00
Contingency (5000 ft. diamond drilling) 10 percent of $3.60 or $0.36/ft. 1/	1,800.00
Total - Program II	$115,104.00
Grand total, Programs I and II	$334,421.00

1/ May be allowed if Operator can show to the satisfaction of the Government that the unit cost allowed has been exceeded because of increased direct costs, such as labor, supplies, etc., or extreme change in working conditions other than curtailment of present production, that might reflect an unduly high indirect cost against the exploration project.

Discussion of Costs

The applicants' breakdown of unit cost for drifting and cross-cutting during 1953 has been reviewed, and it appears that the unit cost of $37.10 per foot to date is reasonable and acceptable. Mr. T. E. Howard, U. S. Bureau of Mines Engineer, in a memorandum to the Field Team dated September 10, 1953, had previously recommended $36.42 per foot, and the additional $0.68/ft. is believed justified by maintenance and repair of additional equipment to be purchased and other necessary equipment, such as fans, which are not listed but will be furnished by the applicant.

The applicants' estimate of cost for Program I includes the purchase of additional equipment amounting to $34,400. Allowing depreciation of 40 percent or $13,760 as chargeable to the estimated costs and prorating $3,285 to the estimated cost of diamond drilling and $10,475 to the estimated cost of drifting, it is found that the drifting unit cost is increased $2.55/ft. and the diamond drilling $0.46/ft. Assaying for nickel at 6-foot intervals in drift and 5-foot core intervals at $2.00 per sample adds $0.35/ft. to the unit cost of drifting and $0.40/ft. to the unit cost of diamond drilling. In the case of this operating company, the sampling and assaying can be safely incorporated in the unit costs with assurance that these items will be adequately performed.

The purchase of 5,000 feet of conductor cable has been questioned by Mr. Griswold as being a legitimate charge to the exploration project. The present drift east on the 1500 level is 3000 feet beyond stoping area and 5000 feet from the shaft as shown on the company's longitudinal section of Holden Mine Area which accompanied the application. Improved ventilation is necessary to extend the drift 4100 feet as proposed, and electric energy is considered the best means of power for adequate ventilation. If the heading is not properly ventilated the increased costs due to labor inefficiency would amount to much more than the prorated depreciated cost of the cable.

The applicants' cost breakdown shows a small charge of $0.37/ft. for timbering. The exploration heading is directed into an area of unknown rock conditions. It is believed that if difficult conditions are encountered which necessitate support, they will be of such a nature that an additional $7.50/ft. will be justified. Allowance is made for 800 feet of timbered drift, which is approximately 20 percent of the total drifting.

The applicants' request for 10 percent contingencies is reasonable in view of rising labor and material costs. The present wage scale is approximately 7 percent below the Coeur d'Alene district, and it is quite

probable the present scale will have to be raised to meet the Coeur d'Alene scale. It is recommended that a 10 percent contingency be allowed as shown in the above estimated costs. Before the Operator would be allowed any of the contingency he would have to show to the satisfaction of the Government that his unit cost had been exceeded because of increased direct costs such as labor, supplies, etc., or extreme change in working conditions other than curtailment of present production, or other conditions that might reflect an unduly high indirect cost against the exploration project. Should present operating conditions continue, the timbering and contingency allowances would not be used and the cost of Program I would be reduced $24,947 and Program II $12,864, in turn reducing the total estimated cost of the project to $296,610.

The recommended unit costs set a maximum of $51.50/ft. for 800 feet of drifting and $44.00/ft. for 3300 feet of drifting outlined in Program I.

The $490 allowed for each flat hole diamond drill station is considered reasonable and adequate, and a contingency for this item does not appear appropriate. The same reasoning applies for the timbering.

Estimated unit costs for drifting and/or crosscutting and diamond drilling are less ($39.80 and $3.56 for drifting and diamond drilling, respectively) in Program II because less equipment totaling $13,681 is scheduled for purchase. The $39.80 includes $37.10 drifting cost, $2.35 depreciation and $0.35 for assaying. The $3.56 includes $3.00 drilling cost (down holes), $0.16 depreciation, and $0.40 for assaying. The estimated figures for Program II are so near those for Program I that the latter are used.

Diamond drill stations for down holes outlined in Program II require raising for head room as well as enlarging; therefore, a cost of $600 each is considered reasonable and adequate.

A drifting program with intermittent diamond drilling as planned is subject to delays and interrupted cycles which lower the average advance and increase costs. In view of this fact and the operating conditions, the recommended unit costs are considered reasonable and realistic and are in line with costs experienced on other DMEA projects for comparable work and conditions.

The project can be completed within two years if Programs I and II are operated concurrently.

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

September 16, 1953

Memorandum for the Files

From: Base Metals Division

Subject: Howe Sound Company, Docket No. DMEA-3142 (Copper)

I had a phone conversation today with Mr. Thor Kiilsgaard of Region II at Spokane, regarding the Howe Sound, Chelan application.

I advised him that this company requested consideration of their "Project 1" on a basis of nickel-copper, with a 70 per cent Government participation and that therefore the Field should consider and make recommendations referring to such request.

I also pointed out that the Applicant's request for 5,000 feet of power cable in the list of material to be purchased seemed out of line and should be investigated. Also that, if possible, a contract should be so written so as to avoid terminal problems of equipment disposal.

I mentioned various ways in which this could be accomplished and advised that he should consult with the applicant company.

Hence, application will be tabled until Field advises further.

W. R. Griswold

Copy to: Docket
Admr. R. File
Op. Committee
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

September 11, 1953

Mr. George Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket DMEA 3142 (copper-nickel)
Application of Howe Sound Co.,
Chelan Division, for exploration
in the Holden-Chelan area,
Chelan County, Washington

Dear Mr. Selfridge:

Enclosed are memoranda from T. E. Howard of the U. S. Bureau of Mines and A. E. Weissenborn of the U. S. Geological Survey discussing the proposal of the Howe Sound Company, Chelan Division, for exploration in the Holden-Chelan area. Also attached are the following documents submitted by Mr. Curzon after our conference with him at Spokane:

1. Letter from Mr. Curzon dated August 22, 1953.
2. Claim map showing company holdings, and claim to be included in the contract.
3. Two assay maps illustrating the type of mine development normally carried out by the company.
4. The company's production schedule.
5. An ore reserve map of the Holden ore body.
6. A breakdown of the mine general expense.
7. A breakdown of current drifting and crosscutting costs.

These are submitted in single copy only, except for items (6) and (7) ozalid copies of which are appended to Howard's memorandum.

The Field Team recommends Program 1, the exploration of the Buckskin area, without reservation. We have suggested that an additional 1,000 feet of drifting and crosscutting be permitted because the footage asked for in the company's application would be insufficient to explore the zone thoroughly should there be a rake to the ore. This would also permit one crosscut through the ore zone.

In a memo accompanying Mr. Ellis' letter of August 27, Mr. C. H. Johnson raises the issue as to whether Program 2 is exploration

Reviewed by
O. C. 9-18-53

or development. This point has also been recognized by the Field Team and was discussed with Mr. Curzon, Manager of the Chelan Division. It is also mentioned in Weissenborn's and Howard's memorandum. Additional facts and comments are given herewith:

"We doubt if there is much reason to believe that the Holden ore zone does not continue to some considerable depth," and consequently the proposed work would not be exploration in the sense that a new ore body is being sought. Nevertheless, as Cater has pointed out in the last paragraph of his letter (page 2 of Weissenborn's memo), "Mill heads were higher grade in the upper levels and this fact is not entirely due to dilution of ore in the lower levels resulting from rock bursts. Furthermore, the ore body appears to be narrowing at depth . . . possibly . . . from the invasion of the ore body by later intrusions . . . ." Although this possible drop in grade is not reflected in the company's production schedule, it is obvious that a slight drop in grade and a possible thinning of the ore body is of great concern, for the Chelan operation, although profitable, does not have much margin to work with. There appears to be sufficient uncertainty concerning the grade and thickness of the ore below the 2500 level so that the management is unwilling to risk sinking the shaft and establishing deeper levels without first drilling. Since at present no one knows whether the material below the 2500 level is ore or merely mineralized rock, it follows that the proposed drilling can fairly be termed exploration rather than development and could, therefore, be included in a DMEA contract.

In regard to Mr. Johnson's query concerning the significance of the nickel, recent assays made in a short adit on the Buckskin property have shown unexpectedly high nickel values.

In Mr. Ellis' letter of August 27 it is suggested that the amount of diamond drilling outlined under Program II may be excessive, beyond normal exploratory needs. The company proposal provides for drilling on sections 400 feet apart. Since the determination of grade is so critical to the success of the operation, it is not believed that spacing is too close. Development drilling at Chelan is done on very much closer spacing as is shown by the assay maps of the 2500 level submitted with Mr. Curzon's letter.

The possibility of eliminating some of the drifting by fanning out drill holes was discussed with Mr. Curzon, who was very firmly of the opinion that drilling on section at right angles to the ore zones will not only give much better intersections but will permit much easier correlation with drill holes from the upper level which are all drilled in sections normal to the ore zone. This has been company custom and Mr. Curzon maintains that results are much more reliable than would be obtained by fanning out holes; consequently, we hesitate to recommend

any radical divergence from established practice.

Mr. C. H. Johnson has pointed out that six crosscuts would eliminate the need for the hanging wall drifts and thus permit an appreciable saving (720 feet of crosscutting as contrasted to 1560 feet of crosscutting and drifting). Unfortunately, we did not discuss this with Mr. Curzon; but since the hanging wall drifts serve no purpose except to gain access to the 6 drill stations (unless additional non-contract drilling from intermediate stations is contemplated), we agree that Mr. Johnson's suggestion should be followed. It is difficult for us to contact Mr. Curzon as there is no telephone at the Holden mine, but this matter might be discussed with Mr. Clark, who, we understand, will call on you in Washington to discuss the details of the contract.

As stated in Mr. Ellis' letter, the suggestion to diamond drill the Buck~~horn~~skin zone from the surface is impracticable due to the excessively rugged topography.

Provisions for assaying costs were discussed with Mr. Curzon and it was suggested that a sum be set up for this purpose; however, we find that the costs of normal assaying (Cu, Zn, Au) are already included in the estimated drilling and drifting costs. Mr. Curzon has suggested an allowance for assaying for nickel. As this is a comparatively small amount, we suggest that this also be included in the unit costs and this has been taken into account by Mr. Howard in arriving at these costs. (See Curzon's letter of August 22). Recent assays of samples from the Buckskin area have shown unexpectedly high nickel values. (See the company's sketch map attached to Weissenborn's memo.) A considerable number of Ni assays should be run, but perhaps the number might be reduced from the 2,000 estimated by Mr. Curzon by compositing groups of samples.

In summation we wish to point out that Programs 1 and 2 are quite distinct. We recommend both, but either one could be approved without the other. The costs submitted by the company are well substantiated and are the result of long experience in the district. We recommend that they be accepted with the revisions made by Mr. Howard.

By DMEA Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

M. E. Volin

M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosures

cc: USBM (2)
Geologist

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

Memorandum

August 22, 1953

To: DMEA Field Team, Region II

From: A. E. Weissenborn

Subject: Docket No. DMEA 3142 (Copper-Nickel), Application of Howe Sound Company, Chelan Division, for exploration in the Holden-Chelan area, Chelan County, Washington

The Holden-Chelan project was discussed with Mr. John S. Curzon, manager, on August 18. The over-all proposal was reviewed in the Survey office, following which a detailed discussion concerning costs and related matters was held with Bureau of Mines personnel. This memorandum will be concerned with the general aspects of the proposal and analysis of the pertinent geological factors. Costs will be covered in a separate memorandum by Johnson and others of the Bureau of Mines.

The geology of the Holden mine has been described by Elton A. Youngberg and Thomas L. Wilson (Economic Geology, Vol. 47, No. 1, January-February 1952, pp. 1-12). No discussion of the general geology will be attempted here but the reader is referred to this publication. The Howe Sound Company program can be split into two parts: Program 1 is to consist of driving an exploratory drift eastward on the 1500 level toward the downward projection of a nickel-copper zone which outcrops on the upper slopes of Buckskin Mountain, and diamond drilling the ground penetrated by the exploratory drift. Program 2 is to consist of driving a series of short crosscuts and drifts on the 2500-foot level to provide 6 drill stations in the hanging wall from which to prospect the downward extension of the main Holden ore body by diamond drilling. This program was not reviewed in the field. The proposal, however, has been referred to Mr. Fred M. Cater of the Geological Survey, who has been mapping a Survey project in the area and is familiar with the district. His comments are included below:

"Dwight Crowder and I have discussed the proposed DMEA loan to the Howe Sound Company for exploration at their Holden property. As a result of his geochemical work on Buckskin Mountain last fall, Dwight is more familiar with it than am I. On all essential points we are in general agreement.

"First considering drifting and drilling to explore the Buckskin Mtn. area: Very little surface exploration has been done here, but the outcrops are nearly as impressive as those on the surface overlying the Holden ore body in which the company has been mining. To digress a moment--the 'mineralized shear zone'

of the company geologists forming the Holden ore body does not, in my opinion, exist; the mineralized area might more properly be spoken of as elongate zones of crush breccia that have been replaced by sulphides." A similar zone of crush breccia exists on the Buckskin Mtn.; the rock is highly shattered and impregnated with sulphides in which some chalcopyrite is visible." These crush zones occur where the foliation or banding in the gneiss changes strike. The exposures on Buckskin Mtn. are about 1,000 to 1,500 feet higher in altitude than are the surface outcrops of the Holden ore body. If it is assumed--and I grant it is a speculative assumption--that the ore bodies had an essentially common vertical extent, then it is probable that the exposed part of the problematical Buckskin ore body is considerably higher in the 'mineralization plumbing system' than the Holden ore body. I should add the mineralized zone on Buckskin Mtn. occurs in the same sequence of rocks as does the Holden ore body. These points might be considered on the credit side of the ledger; perhaps on the negative side might be considered the fact that Dwight found no geochemical anomaly in his work last fall except for one line of samples. The results, for that matter, over the Holden ore body were anything but impressive, so I think the unfavorable results on Buckskin may be discounted considerably. All in all I think exploration under Buckskin is a good bet and would recommend granting a loan for that purpose. On the other hand, I would not feel quite so favorably inclined if there were not already an operating mill in the area.

"Second, concerning exploration at depth in the Holden ore body: As you are well aware mining this ore body at present copper prices is a marginal operation--maybe sub-marginal would be a better term. There appears to be no geologic reason to believe either grade or size of the ore body is going to increase at depth. On the contrary, the reverse appears to be more likely. Mill heads were higher grade in the upper levels and this fact is not due entirely to dilution of the ore in the lower levels resulting from rock bursts. Furthermore, the ore body appears to be narrowing at depth--possibly (as I recall, for we do not have the mine maps with us) from the invasion of the ore body by later intrusions. These as I see it are the geologic aspects to be considered in granting a loan. We know a large tonnage of ore probably exists below the lowest levels yet reached, and the grade of this ore can be rather closely estimated--it is not high, probably 0.7 percent Cu and 0.4 percent Zn. The real basis for granting a loan seems to me rests with economic and policy matters rather than with the geologic estimates of the ore body."

In regard to program 1 the following might be added from our discussion with Mr. Curzon. The basis of the proposal is an iron-stained mineralized area very similar to the outcrop over the Holden ore body. Some diamond drilling was done in the area in 1941 but without much knowledge of the

geologic structures; as stated in their application, some of these holes hit mineralized rock!! Recent sampling of an old adit has given some rather interesting results, particularly for nickel and zinc. These assay results are shown on the attached sketch map. Soil sampling of the area by Crowder of the Survey did show some nickel and zinc anomalies but the results cannot be considered very conclusive. As Crowder points out soil sampling over the Holden ore body did not reveal much either. The surface over both areas is covered with talus so that the soil sampling is difficult and the results are inconclusive. The evidence available suggests that the area is worthy of exploration and this is confirmed by Cater who is personally familiar with the Chelan region.

The question then would be as to the best method of exploration. The possibility occurs that it could be explored by diamond drill holes collared at the surface; however, it should be realized that this property is in the exceptionally ~~weathered~~ rugged Cascade Mountains. The surface over the Buckskin ore body is very steep and there are no practicable drilling sites from which the surface drilling could be conducted. Exploration by the company has carried the 1500 level drift to within striking distance of the deposit so that exploration by continuation of this drift is the most feasible method. The aim would be to locate the drift in the approximate center of the ore zone and prospect the ore zone itself by drill holes spaced at about 400-foot intervals. A marble bed forms the footwall of the ore body in the Holden mine. A similar marble bed is found in the Buckskin area, where it also forms the footwall of the mineralized zone. This marker bed would be of considerable assistance in determining the position of the drift in the ore zone. No such definite hanging wall is known. The company has proposed 3100 feet of drift supplemented by 5475 feet of diamond drilling from 8 diamond drill stations. In my opinion about 1000 feet of drifting or crosscutting should be added in order to provide for any possible eastward rake of the ore body and to permit supplementing the diamond drill information by at least one crosscut the full width of the ore body. Provision should be made for careful sampling of both the drift and the drill hole cores. Samples should be for copper, gold, nickel and zinc. Because of the proposed increased length, provision should be made for about 10 drill stations.

Program 2. Program 1 is exploration by any definition. Program 2 which provides for testing of the ore body beneath the 2500 level, the lowest level of the mine, is not so clearly exploration. The situation at the mine is something as follows: The estimated production for the next two years (to the end of 1955) is 1,107,000 tons containing .96 percent copper, .05 percent gold, 0.3 percent zinc. The tonnage remaining at the end of that period will be 1,024,700 tons averaging 1.01 percent copper, .06 ozs. of gold, and .34 percent zinc. This represents the original assays decreased by 10 percent. Depending on ground conditions there may be a further reduction of the grade of the mill heads; however, better ground is expected below the 2500 level than is being mined at present. It is quite clear that whether the program is called development or exploration, it represents work that must be done now if the mine is to continue in operation.

The company's contention is that they cannot afford to do it without assistance under present conditions and in the face of the impending drop in price of copper. Production at present is of the order of 1500 tons per day and at present metal prices, production must be kept at that level if the work is to continue. If the mine is abandoned, the workings will immediately deteriorate and the potential deeper production might be irretrievably lost. The decision then as to whether program 2 could be approved must be made in Washington. I would disagree slightly with Cater's conclusion that "The real basis for granting a loan seems to me to rest with economic and policy matters rather than with the geologic estimates of the ore body" since I feel that in view of the successful record of the company with this type of ore, there is ample economic justification for the deeper exploration. I will agree that this is a policy matter on how far into development the DMEA can go. Government assistance on program 2, whether it be considered exploration or development, might, if the work is successful, result in a continued operation of the ore body which could very likely otherwise shut down permanently. This would, to me, have some bearing on the decision that is made. In summary, then, on the basis of information from our field men and following our discussions with Mr. Curzon, I would warmly recommend program 1, the Buckskin exploration, and would recommend program 2 on a technical basis provided that it could come within the DMEA program. Mr. Curzon, incidently, has been informed that program 2 might be classed as development rather than exploration and, therefore, not eligible for assistance. Since this is an operating mine, working an ore body already discovered, it would not seem logical to exact royalty from the entire property in the event of a certification of discovery. In the event that only program 1 is approved, I would suggest that royalty be paid only on any ore extracted from east of coordinate E9500 (see the map of the Buckskin Mountain area attached to the application). If program 2 is approved, then royalty should be exacted from all ore below the 2500 level and west of coordinate E9500 and from all ore east of coordinate E9500 regardless of what level it came from. These dividing lines can be clearly seen on the longitudinal section which accompanies the application. This section incidently which shows the profile of the surface in its true scale (that is, it is not distorted) illustrates clearly why diamond drilling of the Buckskin ore body from the surface would be impracticable.

The information submitted by Mr. Curzon did not include a clear claim map although he has listed the claims in the application. Mr. Curzon has promised to submit a small scale map showing the claims that will be involved.

Enclosure (1)

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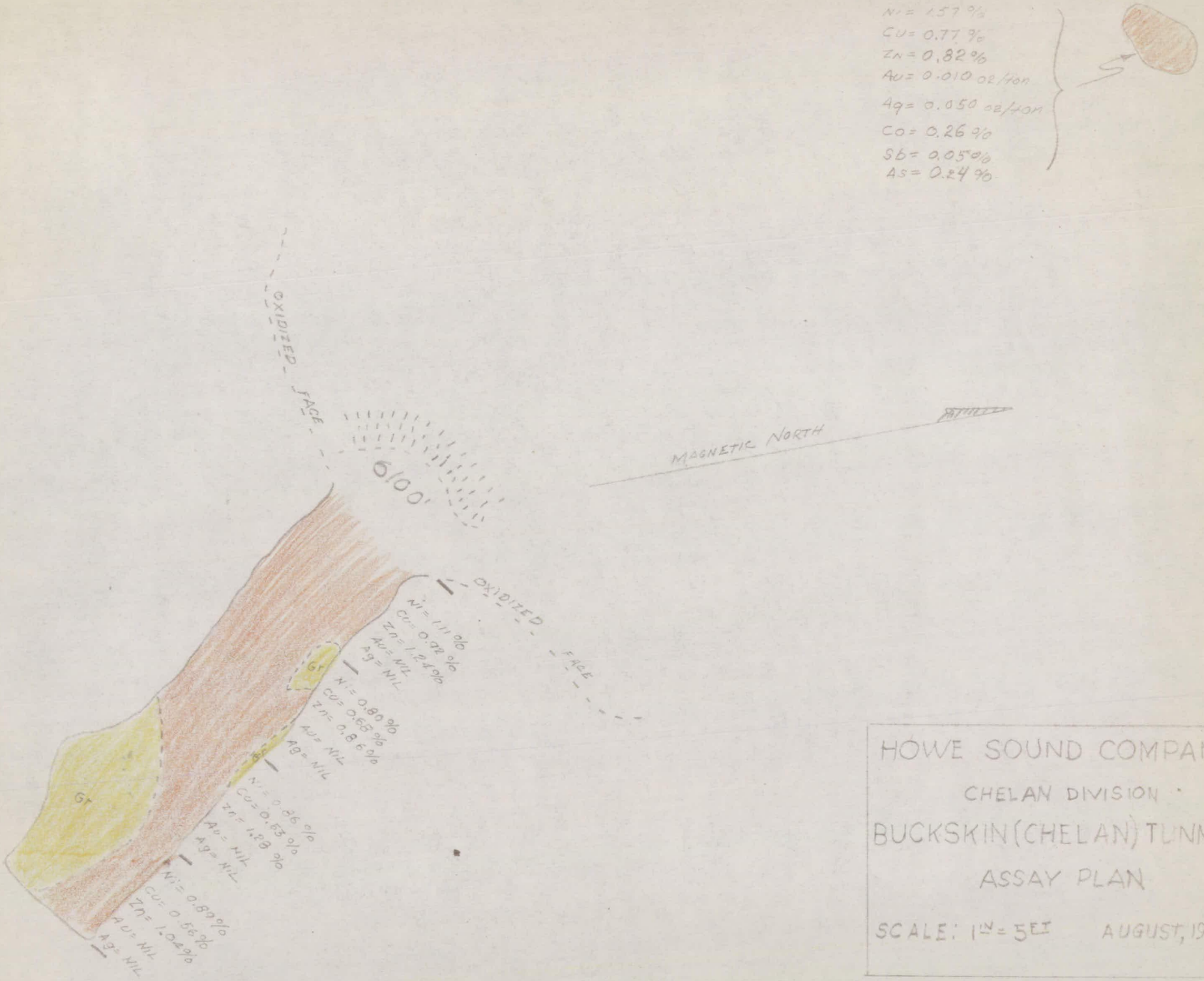
Ni = 1.57 %
Cu = 0.77 %
Zn = 0.82 %
Au = 0.010 oz/ton
Ag = 0.050 oz/ton
Co = 0.26 %
Sb = 0.05 %
As = 0.24 %
OXIDIZED FACE
6100'
MAGNETIC NORTH
OXIDIZED FACE
Ni = 1.11 %
Cu = 0.92 %
Zn = 1.24 %
Au = NIL
Ag = NIL
Ni = 0.80 %
Cu = 0.65 %
Zn = 0.86 %
Au = NIL
Ag = NIL
Ni = 0.86 %
Cu = 0.63 %
Zn = 1.28 %
Au = NIL
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Ni = 0.89 %
Cu = 0.56 %
Zn = 1.04 %
Au = NIL
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HOWE SOUND COMPANY
CHELAN DIVISION
BUCKSKIN (CHELAN) TUNNEL
ASSAY PLAN
SCALE: 1IN = 5FT
AUGUST, 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
1201 N. Division Street
Spokane 2, Washington
September 10, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: T. E. Howard, Mining Engineer, U. S. Bureau of Mines

Subject: Review of application for DMEA Exploration Contract, Howe Sound Company, Chelan Division, Chelan, County, Washington, Docket No. DMEA-3142 (Copper-Nickel)

The estimate of costs submitted by the applicant in the application and on the attached breakdown of drift and crosscut costs is considered reasonable. The costs will be somewhat higher than the average for other DMEA projects because of the remote location of the property and the long tram and difficult ventilation problem involved in Program 1 of the project.

An agreed unit cost type contract appears applicable, although the applicant requests Government participation in equipment purchases.

Work Program

Program 1 as proposed includes 3,100 feet of drifting and 5,475 feet of diamond drilling to explore the Buckskin mountain area.

Program 2, as submitted, is merited but borders on development. It proposes to extend the main Holden ore body below the 2500 level by cross-cutting about 120 feet beyond the ore body at 800-foot intervals, and then drifting 200 feet each direction parallel to the ore body for diamond drill stations. Total costs of Program 2 as estimated in the application is $107,074.

Detailed Costs

Drifting

The breakdown of drifting costs as submitted by the applicant is taken from operating records which are somewhat different than those outlined in form MF-104. Applicant's costs with corresponding recommended costs per foot of drift or crosscut are shown in the tabulation below:

Unit	Operator's Current Cost Proposed for Project Crosscut and Drift	Bureau of Mines Recommended Costs Crosscut and Drift		
Labor and Supervision:				
Labor				
Miners	$7.24	All phases including taxes	$ 17.00	
Muckers	7.24			
Labor Bonus	1.65			
Nippers	0.16			
Tramming	1.81			
Hoisting	1.26			
Timbering labor	0.28			
Mine, general	3.63			
Supervision			1.50	
Technical Services			1.50	$20.00
Operating Materials and Supplies:				
Timber	0.09		0.10	
Explosives	4.34		4.00	
Pipe (Air and Water Lines)	2.32		1.80	
Track			2.00	
Fuel and Lubricants (Diesel)			.71	
Drill Steel and bits	2.50		2.50	
Other	.19		.20	11.31
Operating Equipment:				
Depreciation			0.75	0.75
Miscellaneous:				
Sharpening	0.25			
Drill repairs	1.97		2.50	
Power (air)	2.17		.86	
Assaying and sampling			1.00	4.36
Totals per foot drift	$37.10			$36.42

Diamond Drilling Costs

The Operator's estimate of $2.75/ft. for diamond drilling in Program 1 and $3.00/ft. for diamond drilling in Program 2, are reasonable and should be accepted. The difference of $0.25/foot is justified since there are several long down holes planned in Program 2.

Diamond Drill Stations

The cost submitted for an overhead station to accommodate rods from down holes is $600.00 in Program 2 which seems reasonable as does $490.00 per diamond drill station by drift enlarging in Program 1. It is recommended that these costs be accepted.

SUMMARY

Unit Costs

Program I

Drift 3100 feet @ $36.42	$112,902.00
Diamond Drill 5475 feet @ $2.75	15,056.25
Excavate 8 diamond drill stations @ $4.90	3,920.00
Total	$131,878.25

Program II

Drift and crosscut 2016 feet @ $36.42	$ 73,422.72
Diamond drill 5000 feet @ $3.00	15,000.00
Excavate 6 diamond drill stations @ $600.00	3,600.00
Total	$ 92,022.72

Actual Costs

Equipment to be purchased:

1 3T Diesel locomotive	$ 8,000.00
4 GD CF89 Rock Drills complete	4,800.00
2500 ft. Vent Pipe @ $2.00	5,000.00
5000 ft. 3 conductor Cable @ $3.00	15,000.00
1 GD Mucking Machine	3,281.00
1 Mancha Trammer with battery and charging unit	6,000.00
1 Boyles Bros. No. IU Diamond Drill	2,000.00
Total	$44,081.00
Grand Total	$267,981.97

Thomas E Howard

Thomas E. Howard

JUNE - 1941

	EXPENSE JUNE	EXPENSE TO DATE	COST PER TON JUNE	COST PER TON MAY	COST PER TON TO DATE
ORE DRAWN FROM STOPES - TONS			33,197	32,564	186,201
From Folio 18 - Tons Broken			37,915	44,576	176,129
GENERAL UNDERGROUND					
Mine Incidentals	$ 10.42	$ 359.37	$ .0003	$ .0008	$ .0010
Tugger Hoists	95.35	1,044.30	.0029	.0055	.0055
Underground Tools	1,729.76	8,911.20	.0521	.0427	.0479
Blasting Circuits	777.57	3,847.02	.0234	.0198	.0207
Power Feeders	9.05	23.69	.0002	.0001	.0002
Miners' Lights - Carbide	659.19	3,928.58	.0193	.0200	.0211
Mine Lights - Electric	177.84	1,183.94	.0054	.0050	.0055
Underground Telephone	29.43	290.15	.0009	.0036	.0016
Ventilation	1,420.49	6,359.18	.0428	.0270	.0449
General Timbering	1,423.74	5,722.98	.0429	.0153	.0307
Sanitation	68.25	394.93	.0020	.0024	.0021
Mine Drainage	3,007.99	15,203.24	.0906	.0859	.0709
Level Maintenance	1,734.77	10,148.59	.0531	.0420	.0544
	$ 11,160.85	$ 57,405.15	$ .3359	$ .2685	$ .3083
GENERAL OVERHEAD					
Mineralogy and Research	$ 215.66	$ 2,478.97	$ .0064	$ .0129	$ .0135
Geology	380.20	4,704.50	.0146	.0211	.0253
Office and Purchasing	2,303.76	15,794.61	.0693	.0921	.0849
Superintendence	1,323.25	10,952.50	.0399	.0559	.0588
Shaft Repairs	4,081.86	22,698.39	.1229	.1270	.1165
Safety	1,442.63	7,027.03	.0430	.0408	.0377
Sorting and Assaying	374.54	902.03	.0113	.0049	.0055
Surveying and Drafting	1,363.35	8,471.00	.0412	.0391	.0455
Industrial Insurance & Ind. Aid	8,552.31	16,557.22	.2577	.0845	.0889
	$ 14,237.09	$ 89,586.65	$ .4824	$ .4799	$ .4781
MINING REVENUE					
Stope Chargeout	$ 1,261.52	$ 8,758.63	$ .0380	$ .0537	$ .0470
Building Supplies	3,377.37	14,265.79	.1017	.0764	.0765
	$ 4,638.89	$ 23,023.42	$ .1397	$ .1301	$ .1235
TOTAL	$ 31,189.81	$ 169,016.01	$ .9380	$ .9285	$ .9082
DEVELOPMENT					
Ore Breaking and Stope Dev.	$ 22,[illegible]	$ 150,[illegible]	216,131	= 77.33 cents per ton ground	
Surface Development	988.81	7,474.87	1,817,144.31	cost per ton ground	
Other Revenue	840.87	1,863.40			
	$ 23,[illegible]	$ 159,[illegible]			
Tons Broken - 176,129 tons		1,960.70			
Development - 23,002 "		167,144.31 - Total General expense & Development			

Engineers report equivalent in tons - 5728
(Built up from calculations made for individual headings)

MINE GENERAL Apportioned to various types of headings by tonnages broken.

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

August 22, 1953

Mr. A. E. Weissenborn, Executive Officer
D.M.E.A. Field Team, Region 2
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

As a result of our conference in Spokane on August 17th, the following are being submitted in support of our application of August 11, 1953:

1. Small scale claim map showing areas affected by Program 1 and Program 2.
2. Assay plans of 2500 level.
3. Copy of ore reserve map.
4. Estimated production to end of 1955.
5. Details of MINE GENERAL account.
   (This was requested by Mr. Howard and Mr. Johnson.)

You will note on the claim map that additional ground is now being staked by our company in the Buckskin Mountain area.

One of the points brought up during our discussions was the matter of sampling and assaying. Routine sampling of mine headings and assaying for copper, zinc, and gold is included under Mine General. Likewise routine core sampling and assaying for copper, zinc, and gold is included in our price of $ 2.75 per foot for flat holes and $ 3.00 per foot for down holes. Assaying for nickel, however, is another matter and we would like to suggest a charge of $ 2.00 for each nickel assay run.

Assaying costs for Program 1 would be estimated as follows:

Face Samples

Every 6 feet along 4000 feet of drifting = 667 samples.

Diamond Drill Core

7075 feet of drilling at 5-foot intervals = 1,415 samples.

Total Cost

2,082 samples @ $ 2.00 each = $ 4,164.00.

This includes the additional 1,000 feet of drifting and 2 more drill stations suggested during our discussions. If these additions are approved, the total cost for Program 1 would be as follows:

Mr. [illegible] Weissenborn, Executive Officer
August 28, 1953

Cost of Program 1

Mine Work

4,100 lineal feet of 7' x 7' drift at $ 37.00	$ 151,700.00
10 diamond drill stations at $ 400.00	4,000.00
7,073 feet of diamond drilling (flat holes) @ 2.75	19,450.75
2,[illegible] nickel assays @ $ 2.00	1,[illegible]34.00
	$ 1[illegible],220.[illegible]
New Equipment	34,400.00
Estimated Cost	$ 214,320.25
Plus 10% for contingencies	21,[illegible].[illegible]
Total estimated cost	$ 236,082.97

If additional copies of any of the enclosures are needed, please let me know immediately.

The courtesy shown me by your group and the Bureau engineers is much appreciated and I wish to emphasize again our willingness to cooperate in all respects in the presentation of adequate data in support of our application.

With best personal regards.

Yours very truly,

John J. Curson
Manager

JJC:mcl

Enclosures

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

August 22, 1953

REFER TO	ACTION	NOTED	DATE
ANSWERED			

Mr. A. E. Weissenborn, Executive Officer
D.M.E.A. Field Team, Region 2
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

As a result of our conference in Spokane on August 17th, the following are being submitted in support of our application of August 11, 1953:

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You will note on the claim map that additional ground is now being staked by our company in the Buckskin Mountain area.

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Assaying costs for Program 1 would be estimated as follows:

Face Samples

Every 6 feet along 4000 feet of drifting = 667 samples.

Diamond Drill Core

7075 feet of drilling at 5-foot intervals = 1,415 samples.

Total Cost

2,082 samples @ $ 2.00 each = $ 4,164.00.

This includes the additional 1,000 feet of drifting and 2 more drill stations suggested during our discussions. If these additions are approved, the total cost for Program 1 would be as follows:

Mr. [illegible] E. Weissenborn, Executive Officer
August 22, 1953

Cost of Program 1

Mine Work

4,100 lineal feet of 7' x 7' drift at $ 37.00	$ 151,700.00
10 diamond drill stations at $ 400.00	4,000.00
7,073 feet of diamond drilling (flat holes) @ 2.75	19,[illegible]
2,[illegible] nickel assays @ $ 2.00	1,[illegible].00
	$ 1[illegible],[illegible]
New Equipment	34,400.00
Estimated Cost	$ 214,[illegible].25
Plus 10% for contingencies	21,[illegible].22
Total estimated cost	$ 236,[illegible].27

If additional copies of any of the enclosures are needed, please let me know immediately.

The courtesy shown me by your group and the Bureau engineers is much appreciated and I wish to emphasize again our willingness to cooperate in all respects in the presentation of adequate data in support of our application.

With best personal regards.

Yours very truly,

John J. Curson
Manager

JJC:mel

Enclosures

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.
August 22, 1953

REFER TO	ACTION	INITIAL	DATE
ANSWERED			

Mr. A. E. Weissenborn, Executive Officer
D.M.E.A. Field Team, Region 2
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

As a result of our conference in Spokane on August 17th, the following are being submitted in support of our application of August 11, 1953:

1. Small scale claim map showing areas affected by Program 1 and Program 2.
2. Assay plans of 2500 level.
3. Copy of ore reserve map.
4. Estimated production to end of 1955.
5. Details of MINE GENERAL account.
   (This was requested by Mr. Howard and Mr. Johnson.)

You will note on the claim map that additional ground is now being staked by our company in the Buckskin Mountain area.

One of the points brought up during our discussions was the matter of sampling and assaying. Routine sampling of mine headings and assaying for copper, zinc, and gold is included under Mine General. Likewise routine core sampling and assaying for copper, zinc, and gold is included in our price of $ 2.75 per foot for flat holes and $ 3.00 per foot for down holes. Assaying for nickel, however, is another matter and we would like to suggest a charge of $ 2.00 for each nickel assay run.

Assaying costs for Program 1 would be estimated as follows:

Face Samples

Every 6 feet along 4000 feet of drifting = 667 samples.

Diamond Drill Core

7,075 feet of drilling at 5-foot intervals = 1,415 samples.

Total Cost

2,082 samples @ $ 2.00 each = $ 4,164.00.

This includes the additional 1,000 feet of drifting and 2 more drill stations suggested during our discussions. If these additions are approved, the total cost for Program 1 would be as follows:

Mr. A. E. Weissenborn, Executive Officer
August 22, 1953

Cost of Program 1

Mine Work

4,100 lineal feet of 7' x 7' drift at $ 37.00	$ 151,700.00
10 diamond drill stations at $ 490.00	4,900.00
7,075 feet of diamond drilling (flat holes) @ 2.75	19,456.25
2,082 nickel assays @ $ 2.00	4,164.00
	$ 180,220.25
New Equipment	34,600.00
Estimated Cost	$ 214,820.25
Plus 10% for contingencies	21,482.02
Total estimated cost	$ 236,082.27

If additional copies of any of the enclosures are needed, please let me know immediately.

The courtesy shown me by your group and the Bureau engineers is much appreciated and I wish to emphasize again our willingness to cooperate in all respects in the presentation of adequate data in support of our application.

With best personal regards.

Yours very truly,

John J. Carson
Manager

JJC:mel

Enclosures

HOWE SOUND COMPANY - CHELAN DIVISION

MINE GENERAL EXPENSE

JUNE - 1953

DEPART... Defense ...

(6)

	EXPENSE JUNE	EXPENSE TO DATE	COST PER TON JUNE	COST PER TON MAY	COST PER TON TO DATE
ORE DRAWN FROM STOPES - TONS			33,197	32,564	186,201
From Folio 18 - Tons Broken			37,915	44,576	176,129
GENERAL UNDERGROUND					
Mine incidentals	$ 10.42	$ 359.37	$ .0003	$ .0008	$ .0019
Tugger Hoists	95.35	1,044.30	.0029	.0055	.0056
Underground Tools	1,729.76	8,911.20	.0521	.0427	.0479
Blasting Circuits	777.57	3,847.02	.0234	.0198	.0207
Power Feeders	8.05	28.69	.0002	.0001	.0002
Miners' Lights - Electric	639.19	3,928.58	.0193	.0200	.0211
Mine Lights - Electric	177.84	1,163.94	.0054	.0059	.0063
Underground Telephone	29.43	290.13	.0009	.0038	.0016
Ventilation	1,420.49	8,359.18	.0428	.0270	.0449
General Timbering	1,423.74	5,722.98	.0429	.0136	.0307
Sanitation	66.23	394.93	.0020	.0024	.0021
Mine Drainage	3,007.99	13,206.24	.0906	.0859	.0709
Level Maintenance	1,764.77	10,148.59	.0531	.0420	.0544
Rock Drills Expense	-	-	-	-	-
	$ 11,150.83	$ 57,405.15	$ .3359	$ .2695	$ .3083
GENERAL OVERHEAD					
Efficiency and Research	$ 213.66	$ 2,478.97	$ .0064	$ .0129	$ .0133
Geology	490.00	4,704.00	.0148	.0211	.0253
Office and Warehouse	2,666.76	15,794.61	.0803	.0921	.0848
Superintendence	1,826.25	10,952.50	.0550	.0559	.0588
Shift Bosses	4,031.96	21,696.59	.1215	.1278	.1165
Safety	1,492.63	7,027.03	.0450	.0409	.0377
Sampling and Assaying	174.84	992.02	.0053	.0056	.0053
Surveying and Drafting	1,698.65	8,471.06	.0512	.0391	.0455
Industrial Insurance & Med.Aid	2,812.34	16,537.80	.0846	.0845	.0889
	$ 15,407.09	$ 88,654.58	$ .4641	$ .4799	$ .4761
SURFACE EXPENSE					
Shops Overhead	$ 1,264.32	$ 8,798.49	$ .0381	$ .0557	$ .0473
Handling Supplies	3,377.27	14,243.79	.1017	.0704	.0765
	$ 4,641.59	$ 23,042.28	$ .1398	$ .1261	$ .1238
TOTAL	$ 31,199.51	$ 169,102.01	$ .9398	$ .8755	$ .9082
APPORTIONED					
Ore Breaking and Stope Dev.	$ 29,918.93	$ 159,666.74			
Current Development	939.91	7,474.57			
Other Accounts	340.67	1,960.70			
	$ 31,199.51	$ 169,102.01			

$\frac{216,131}{1,617,141.31}$ = 77.33 cents per ton average cost for Mine General

Tons Broken - 176,129 tons
all development - 40,002 "
216,131 "

1960.70
167,141.31

Mine general expense for ore breaking and development

HOWE SOUND COMPANY - CHELAN DIVISION

CURRENT DEVELOPMENT - JUNE - 1953

DRIFTS AND CROSSCUTS 7' x 7'
(Conventional Method)

DEPARTMENT OF ... Defence ... SEP 14 1953

	EXPENSE		COST PER FOOT		
	JUNE	TO DATE	JUNE	MAY	TO DATE
ROCK BREAKING					
Miners - Regular Wage	$ 1,261.51	$ 8,837.41	$ 7.29	$ 6.32	$ 7.24
Muckers - Regular Wage	1,252.70	8,838.64	7.24	7.58	7.24
Labor - Bonus	271.84	2,019.41	1.57	1.21	1.65
Nippers	17.12	201.11	.10	.17	.16
Explosives	801.74	5,294.46	4.63	4.07	4.34
Drill Repairs	236.83	2,405.70	1.37	2.70	1.97
Drill Steel and Bits	339.01	3,052.08	1.96	2.02	2.50
Sharpening	24.13	302.61	.14	.18	.25
Air	247.00	2,652.10	1.43	2.02	2.17
Air and Water Lines	279.05	2,830.04	1.61	2.06	2.32
Other Labor and Supplies	34.77	232.84	.21	-	.19
	$ 4,765.70	$ 36,666.40	$ 27.55	$ 28.33	$ 30.03
ROCK DISPOSAL					
Tramming	$ 169.36	$ 2,205.09	$ .98	$ 1.52	$ 1.81
Hoisting	159.21	1,548.33	.92	.97	1.26
	$ 328.57	$ 3,753.42	$ 1.90	$ 2.49	$ 3.07
MINE GENERAL	$ 474.35	$ 4,430.87	$ 2.74	$ 3.38	$ 3.63
TOTAL ROCK EXCAVATION	$ 5,568.62	$ 44,850.69	$ 32.19	$ 34.20	$ 36.73
TIMBERING					
Labor	$ -	$ 344.41	$ -	$ -	$ .28
Timber	-	105.86	-	-	.09
	$ -	$ 450.27	$ -	$ -	$ .37
TOTAL	$ 5,568.62	$ 45,300.96	$ 32.19	$ 34.20	$ 37.10
ADVANCE - FEET			173	165	1,221
EXCAVATION - CUBIC YARDS			29	-	29

Engineers report equivalent in tons - 5728
(Built up from calculations made for individual headings)

MINE GENERAL Apportioned to various types of headings by tonnages broken

FILE COPY
500
SURNAME:

Original
Ellis
Selfridge

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

AUG 27 1953

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. [illegible] 3142 (Copper-Nickel)
Howe Sound Company
Holden Mine
Chelan County, Washington

Dear Mr. Weissenborn:

With reference to the above application for Government assistance in the cited exploration project, we enclose copies of recommendations by the commodity members of the USGS and the USBM.

Regarding the points which they bring up, with reference to the possibility of covering Phase I by diamond drilling from the surface, this question had been discussed with Mr. V. H. Clarke of the applicant company, and he did not feel that such procedure was practical due to the rugged topography and excessive depth of holes.

You will also note that it is felt the diamond drilling program, as outlined under Phase II, provides for an excessive number of holes, beyond normal exploratory needs. We are inclined to concur in such an opinion.

Kindly let us have your recommendations covering this project at your convenience.

Sincerely yours,

Ernest Wm. Ellis
657
ACTING Chairman, Operating Committee

Enclosures 2
APPROVED:
M. H. Kline 657
Member, Bureau of Mines

D. M. Larrabee
657
Member, Geological Survey

WRGriswold/hmj
(8/25/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Chron.

HHK
8-27-53

IN REPLY REFER TO:

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

August 25, 1953

Memorandum

To: W. R. Griswold

From: E. L. Newcomb

Re: DMEA-3142
Holden Mine
Chelan County, Washington
$275,150.85
Copper

Subject: Recommendation for field referral

This application appears to have considerable merit, but should be referred to the field team for an examination before a firm recommendation is made.

It may be of some interest to know that Howe Sound has reapplied for a DMPA Maintenance of Production contract for copper from the Holden mine.

Program I is planned to test at depth the importance of a Cu-Ni geochemical anomaly. If the topography on the property will permit, it seems that surface drilling would be better preliminary exploration than the proposed extension of the 1500 E. drift. Program II appears to be reasonable exploration; however, the amount of work is too extensive for straight exploration purposes. The significance of the Cu-Ni anomaly should be investigated and commented upon by the field team. These questions can best be answered by an on-site examination.

I recommend the application be referred to the field team for their review and recommendation.

E. L. Newcomb

E. L. Newcomb

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 21 1953

August 19, 1953

Memorandum

To: W. R. Griswold, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-3142 (Copper), Howe Sound Company, Holden mine, Chelan County, Washington

I have reviewed the subject application. I think it has considerable merit and will be glad to concur in referral to the Field Team for investigation and report.

Phase I is clearly exploration, but Phase II is open to argument, whether it is exploration or development; anyway it is of a borderline nature, and if the project is referred to the field for investigation, it might be well to give the Field Team some criteria to apply to help determine which this is. If there is serious question as to the downward extension of the orebody, and if the chief or only purpose of Phase II is to establish this downward extension, this would probably be regarded as exploration. But in that case it may be that fewer holes would do it. If it is intended largely to assist in laying out development workings on lower levels, it is perhaps not exploration but development.

Phase I is in itself such a sizeable project, the question may be asked whether it ought not to be preceded by some less costly shallow exploration. Is it not practicable to drill the ore zone from the surface? I note a drill hole on the plan at about 20,800 N, 10,400 E and another at 21,000 N, 11,400 E. Is there any dope on these?

With further reference to the map of Phase I, it appears the proposed drift goes outside the property line, or what seems to be a property line. The Field Team presumably will clear up the question if it reports favorably, and will describe the definite area subject to royalty.

The application speaks of this as a copper-nickel project. The field might be asked to discuss the significance of nickel in the geochemical anomaly, and suggest whether the project can properly be regarded as nickel exploration.

A minor question about Phase II is the reason for the T-shaped hanging-wall corsscuts to the diamond-drill stations. Offhand, it looks as if more footage is required than for driving a simple crosscut to each station.

The application is returned herewith.

C. H. Johnson

C. H. Johnson

Attachment

Copy to - Mr. Kinkel, USGS, B-242-A
Minerals Division
Mr. Johnson
Files

August 12, 1953

Mr. Vinton H. Clarke
Howe Sound Company
730 Fifth Avenue
New York 19, New York

Subject: DMEA-3124 42
Re: Exploration Assistance
Holden

My dear Mr. Clarke:

The receipt of your application dated August 11, 1953 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3124 and referred to the Base Metals Division.

Kindly refer to DMEA-3124 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Chief, Operations Control
and Statistics Division

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

August 12, 1953

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number DMEA-3142

There is listed below the assigned docket number to an application recently received from Region II.

DMEA -3142 - Howe Sound Company

ROBERT E. ADAMS

Robert E. Adams
Chief, Operation's Control
and Statistics Division

P. S.
This application was sent to you by the applicant.

RECEIVED

COPY

August 11, 1953

Mr. A. E. Weissenborn, Executive Officer,
D.M.E.A. Field Team, Region 2,
South 157 ~~Howard Street~~,
Spokane 4, Washington.

Dear Mr. Weissenborn:

Please find enclosed one copy of our application for a D.M.E.A. exploration loan for the Howe Sound Company, Chelan Division Mine, located at Holden, Washington.

I believe that all information necessary is included. However, if there should be any additional data required we will be pleased to send it on to you immediately.

Yours sincerely,

Vinton H. Clarke
Vice President

VHC:MP

cc:
Mr. Robert E. Adams,
Chief, Operations Control and Statistics Division,
Defense Minerals Ecploration Administration,
Washington 25, D. C.

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

xxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

August 6, 1953

Mr. Vinton H. Clarke
Howe Sound Company
730 Fifth Avenue
New York, New York

Dear Mr. Clarke:

This will acknowledge your letter of July 30, 1953, in which you announce your intention of applying for exploration contracts at your Chelan and Blackbird properties.

As you infer, we have a good deal of information concerning the Blackbird or Calera area from the work done by Jack Vhay and later soil sampling by Herb Eaakes and others. On the basis of this information, we would regard as desirable exploration the general proposal which you have outlined in your letters. Specific approval from the Field Team would, of course, have to wait until a definite application is submitted by Mr. Douglas. I do not believe that a field examination will be necessary, but we would be glad to discuss the proposed project with Mr. Douglas at any time. I would suggest that when Mr. Douglas has worked out his proposal, he or one of his engineers come to Spokane and meet with the Field Team. We would review the application as to objectives and costs and could at that time iron out any differences or difficulties that might arise. We have found that a conference of this sort frequently will result in getting the material submitted in such form that its processing in Washington is made much easier and quicker.

I am not as personally familiar with the Chelan proposal as with the Blackbird one. We, at the moment, are extremely shorthanded and have no one who would be available immediately for a DMEA examination in that area. However, Mr. Fred Cater, who is in charge of the Survey's northern Cascade mapping project, is familiar with the area and may well have discussed these proposals with the local staff at Chelan. I am therefore sending your letter to him for his comments. I believe that Cater will be sufficiently familiar with the area so that no further geologic field examination will be required. As soon as Mr. John Curson has his proposal in such shape as he feels can be presented to us, we think it might save time if he or one of his engineers could also come to Spokane and discuss the matter with representatives from the Bureau of Mines and the Geological Survey. I think in this case also we might be able to assist in getting the proposal in such shape that it could be acted upon more readily in the Washington office.

I am taking the liberty of sending copies of this letter to both Mr. Ed Douglas and Mr. John Curson.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DNEA
Field Team, Region II

cc: Mr. Ed Douglas
Mr. John Curson
Mr. Fred Cater

UEHM (2)
DNEA (2)

Telephones. Circle
7-5695-6-7

C
O
P
Y

HOWE SOUND COMPANY
Chelan Division
Holden, Wash.

New York Office
730 Fifth Avenue

New York, July 30 1953

Mr. A. E. Weissenborn
Executive Officer, Region II
DMEA Field Team
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

I recently had the opportunity of discussing the matter of a DMEA copper loan with Mr. W. R. Griswold, Chief, Base Metals Division, DMEA, and as a result of information gained about the program we have decided to apply for a loan for our Holden Mine.

I would therefore kindly request you to consider this as a formal application for a DMEA copper loan for the Howe Sound Company-Chelan Division, Holden, Washington. I note that the application forms require considerable detail and for this reason cannot immediately send them on to you. However, in general, the program at Holden will consist of exploration in two parts as follows:

1) Drifting some 3000 feet eastward to a location beneath what is known as Buckskin Mountain with accompanying diamond drilling.

2) Crosscutting and deep drilling to explore extension of our present orebody below our lowest operating level.

I have sent Mr. J. J. Curzon, Manager, the necessary application forms and he will proceed with the details of required data, cost, etc. We will attempt to get this material into your hands at the earliest possible date.

Yours sincerely,

/s/ Vinton H. Clarke
Vinton H. Clarke
Vice President

VHC:ac
cc: Administrator
DMEA-Dept. of Int.
Washington 25, D. C.
JJCurzon

RECEIVED
AIR MAIL
AUG 3 1953

C
O
P
Y

HOWE SOUND COMPANY
(A CORPORATION)
730 Fifth Avenue
New York 19, N.Y.

July 30 1953

Mr. A. E. Weissenborn
Executive Officer, Region II
DMEA Field Team
South 157 Howard Street
Spokane 4, Washington

Dear Mr. Weissenborn:

When I saw you recently in Idaho I had no idea that the turn of events would be such that I would be writing you at this time. However, after returning to New York we decided to look into the possibilities of exploration loans for both the Chelan Division and Calera. I subsequently made a trip to Washington and talked to Mr. W. R. Griswold, Chief of the Base Metals Division, DMEA and also Mr. Martin of the Cobalt Branch. From the information obtained, we have decided to make formal applications for loans at both of these properties.

In connection with Chelan, Mr. Griswold advised me to address a letter of application to you with copies to go to the Administrator, the main purpose of this being to save time. In connection with the cobalt letter of application, Mr. Martin preferred that I write directly to the Administrator, sending one copy to you for whatever action you may care to take at this time.

Very briefly, at Chelan as you probably know, we have been having a rather difficult time for the past two years mainly due to underground rock conditions with resulting dilution. We have in the course of time made several changes in mining methods which have helped to relieve somewhat this condition. However, resulting mine costs and grade have been such that we have found it necessary to obtain subsidy help. Our subsidy contract, of course, expired late in February when the ceilings went off copper. The future of the copper market at the present time is not too bright and indeed with the present price we are no more than swapping dollars. We are at the present time applying for a government purchase contract to enable us to continue operations. We feel that it is necessary to pursue a definite and aggressive program of exploration so that we may at some time in the future get our feet back on the ground.

As mentioned in the application letter, we have two main projects in mind at Chelan, one of which is to drift under what we call Buckskin Mountain where we have had some encouraging surface showings, and the other is to explore the downward extension of our present ore zone below our bottom operating level. Both projects as we see it are necessary for the future of the mine but which we are unable to finance ourselves.

At the Blackbird you, of course, are quite familiar with our situation. We believe that now is the time for us to determine with a greater degree of certainty just what lies to the north of our presently known ore and also if there is ore available in a parallel zone some 800 to 1000 feet to the northeast. Dr. Vhay has of course walked all over this country and through the mine and knows probably better than we do ourselves of the particular merits of these two locations. I am sending application forms to Mr. Douglas and he will prepare the material for your use and will make it available to you as soon as possible.

We consider both the Chelan project and the Calera project of equal importance. However, we feel that the Chelan project should have priority at the present time due to the present unstable copper market situation. Mr. Griswold has also stressed this latter point. You may wish to send a man up to Holden in the near future and indeed, if you do before all the data has been presented, I am sure that the boys at Holden will appreciate it since there is much in the application with which they are unfamiliar. You could undoubtedly point them in the right direction.

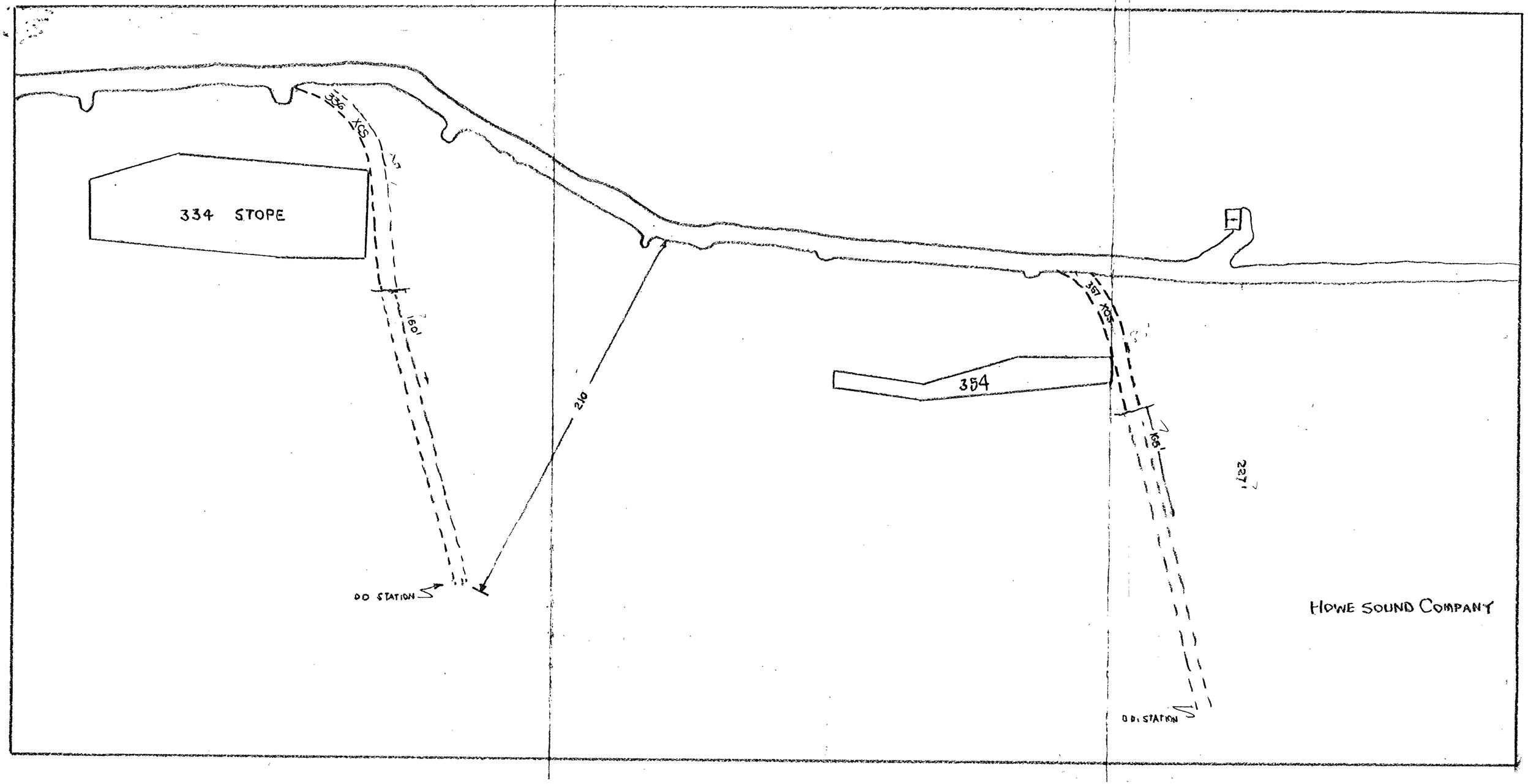
It was indeed a pleasure seeing you and I will look forward to paying you a visit again in the not too distant future. Perhaps you will attend the Mining Congress Convention in Seattle in September and I will be able to see you there.

Yours sincerely

/s/ Vinton H. Clarke
Vinton H. Clarke
Vice President

VHC:ac
Encl.

RECEIVED
AIR MAIL
AUG 3 1953
U.S.G.S.
SPOKANE, WASH.

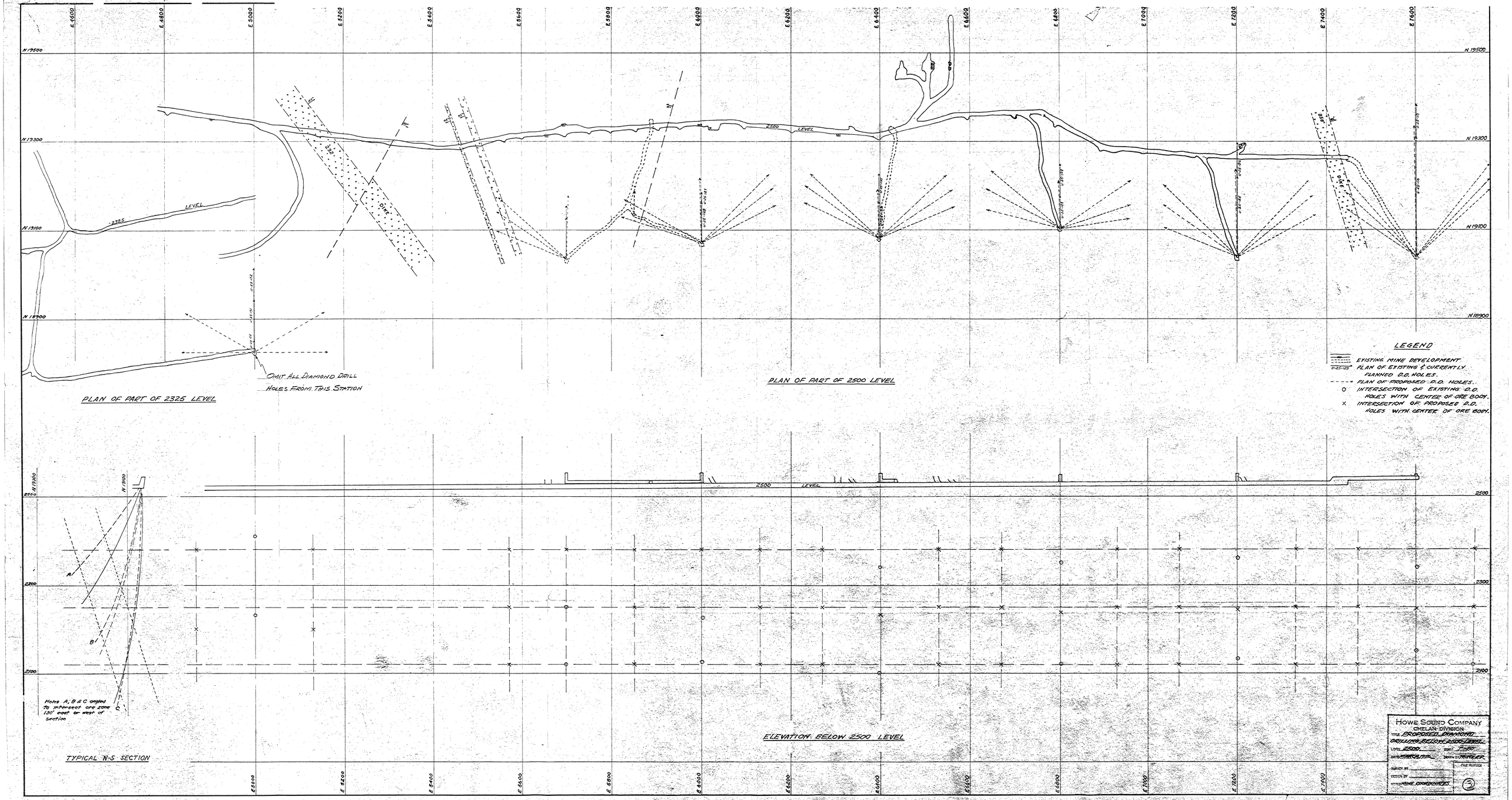

334 STOPE
336 XCS
150'
210
DD STATION
354
351 XCS
150'
227'
D.D. STATION
HOWE SOUND COMPANY

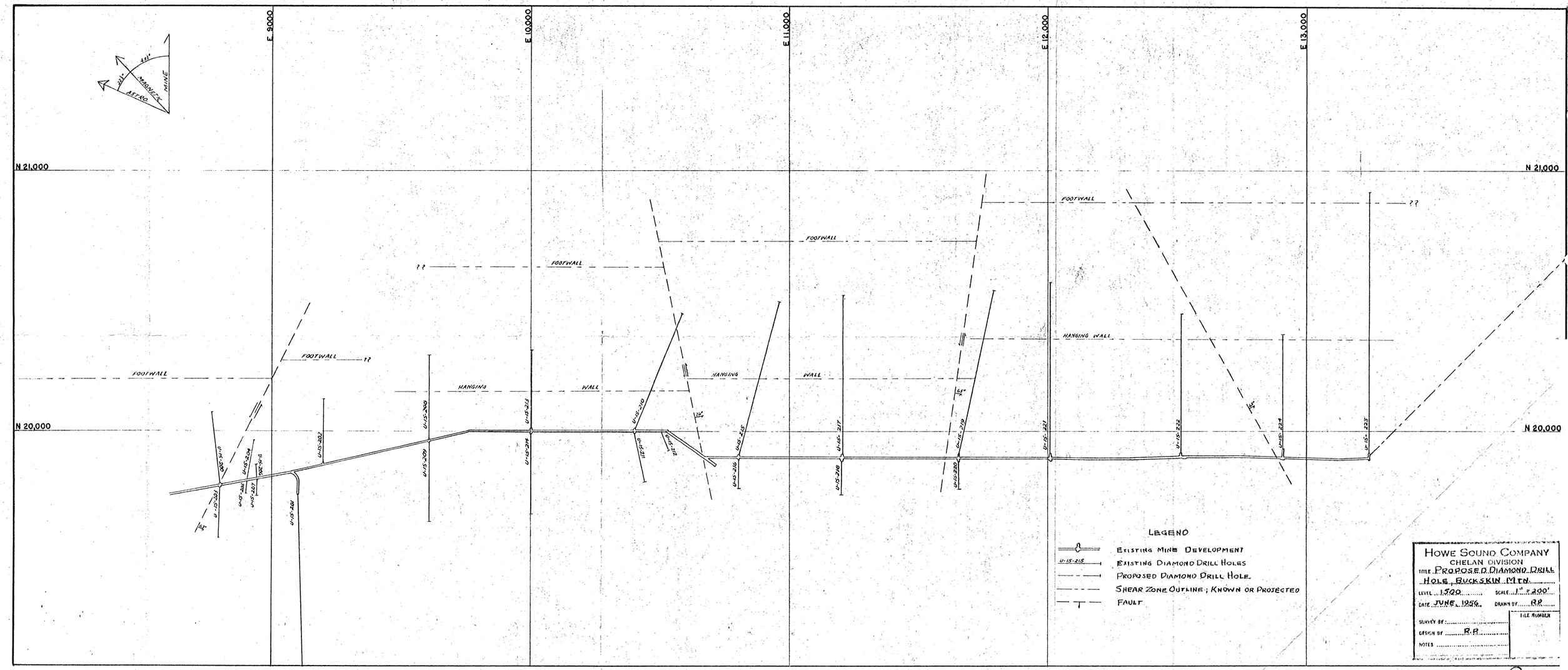
Docket No. DMEA 3142
Contract Idm-E644

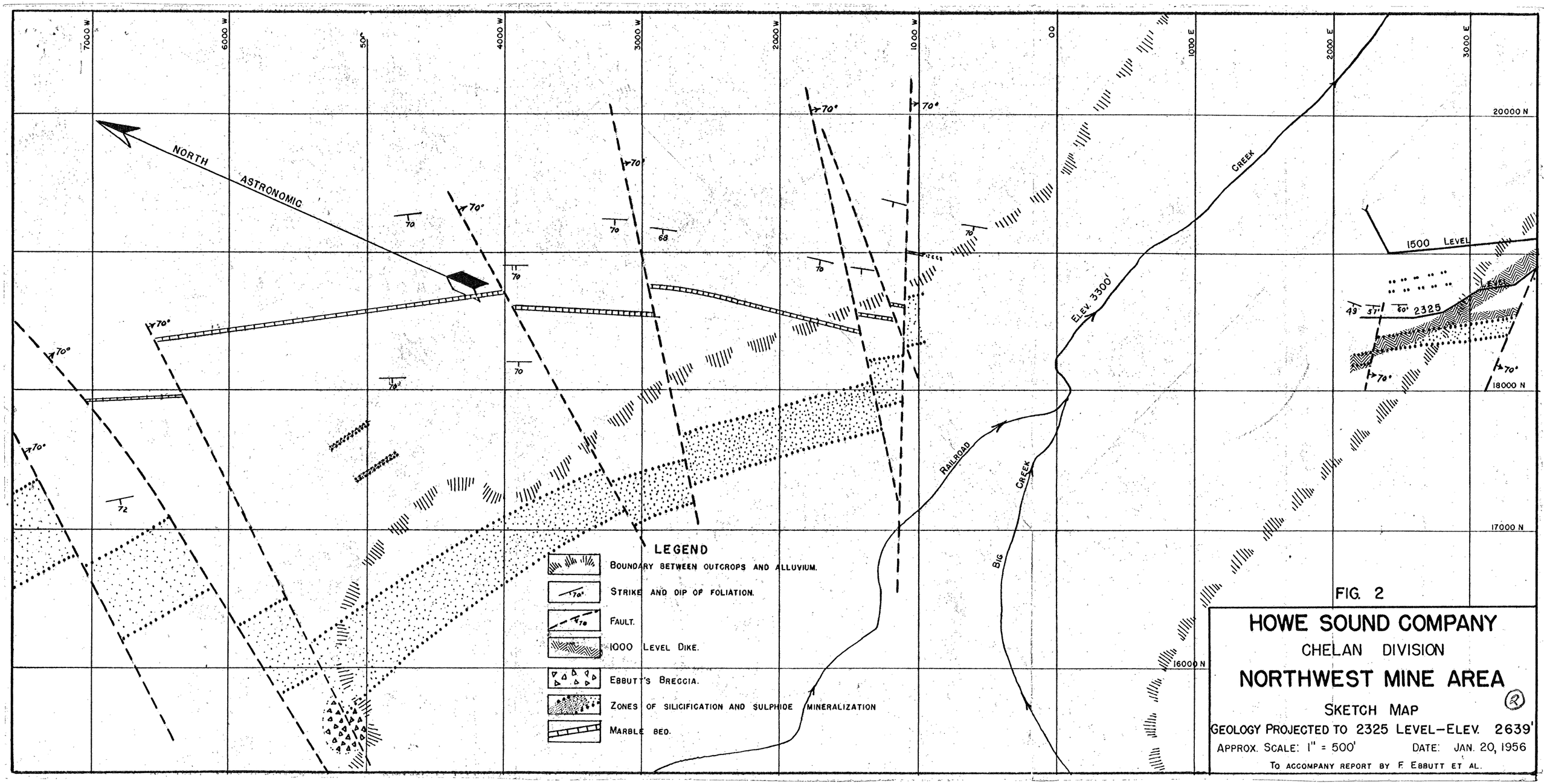
1954	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals			
Advance - ft.	107	125	106	131	72	111	113	101	61	51	64	1042'			
Rounds blasted	18	20	19	22	12	17	19	17	13	11	13	181			
Advance per round - ft.	5.9	6.3	5.6	6.3	6.0	6.5	5.9	5.9	4.7	4.6	4.9	5.76'			
Rock bolts placed	74	47	--	30	124	6	52	21	17	13	48	432			
Feet of timber placed	--	--	--	--	6	--	--	96	174	54	51	381'			
Labor															
Miners 1/ 2/	$ 877.46	1109.64	1142.79	1064.24	911.31	947.40	937.22	1528.54	1492.65	729.06	1065.28	$11,805.59	÷ 1042'	=	$11.33/ft.
Air & water line installed	33.56	33.70	26.92	41.64	32.75	33.33	50.56	44.16	44.06	28.63	12.31	381.62	÷ 1004'	=	0.38/ft.
Track installed	--	53.12	--	--	--	42.31	48.46	49.24	79.28	17.08	66.24	355.73	÷ 1020'	=	0.35/ft.
Vent pipe installed 2/	--	122.69	46.69	37.39	160.08	94.79	519.65	96.53	119.94	--	91.35	1,289.11	÷ 994'	=	1.30/ft.
Total drift labor	911.02	1319.15	1216.40	1143.27	1104.14	1117.83	1555.89	1718.47	1735.93	774.77	1235.18	$13,832.05			
Cost per ft. of drift	8.51	10.55	11.47	8.73	15.33	10.07	13.77	17.01	28.46	15.19	19.30	13.27			
Rock bolts 2/	136.44	54.08	--	50.32	223.97	77.60	152.83	500.48	723.78	226.57	517.06				
Timber 2/															
Cost per rock bolt	1.84	1.15	--	1.68	1.81	12.93	2.94	3.48*	3.48*	3.48*	3.48*				
Cost per ft. timber								4.45	3.82	3.36	6.86				
Cable installation	--	43.90	--	20.51	231.77	399.25	622.44	--	--	3.74	--	1,321.61	÷ 3000'	=	0.44/ft.
Repairs to equipment	235.37	165.29	175.31	298.38	278.76	183.41	396.73	535.31	162.45	102.44	179.98	2,713.41	÷ 1042'	=	2.60/ft.
TOTAL - ALL LABOR	$1282.83	$1586.42	$1391.51	$1512.68	$1838.64	$1777.99	$2727.89	$2754.26	$2622.16	$1107.50	$1932.23	$20,534.11	÷ 1042'	=	19.71/ft.
PER FOOT	11.99	12.69	13.13	11.55	25.54	16.02	24.14	27.27	42.99	21.72	30.19				

*Avg. Feb-Aug = $2.09 per bolt. Approximate Sept-Dec avg. = 150/90 = $3.48. Balance of costs thrown into timbering.

1/ Mining, mucking, tramming (inc. helpers)
2/ Under bonus incentive system.


E 4600
E 4800
E 5000
E 5200
E 5400
E 5600
E 5800
E 6000
E 6200
E 6400
E 6600
E 6800
E 7000
E 7200
E 7400
E 7600
N 19500
N 19300
N 19100
N 18900
LEVEL
2325
2500 LEVEL
ORE
OMIT ALL DIAMOND DRILL
HOLES FROM THIS STATION
PLAN OF PART OF 2325 LEVEL
PLAN OF PART OF 2500 LEVEL
LEGEND
EXISTING MINE DEVELOPMENT
PLAN OF EXISTING & CURRENTLY PLANNED D.D. HOLES.
PLAN OF PROPOSED D.D. HOLES.
O INTERSECTION OF EXISTING D.D. HOLES WITH CENTER OF ORE BODY.
X INTERSECTION OF PROPOSED D.D. HOLES WITH CENTER OF ORE BODY.
2500
2300
2100
A
B
C
Holes A, B & C angled to intersect ore zone 130' east or west of section
TYPICAL N-S SECTION
ELEVATION BELOW 2500 LEVEL
HOWE SOUND COMPANY
OWELAN DIVISION
TITLE PROPOSED DIAMOND DRILLING BELOW 2500 LEVEL
LEVEL 2500
SCALE 1"=100'
DATE MAR. 4/58
DRAWN BY M.W.E.F.
FILE NUMBER
SURVEY BY
DESIGN BY
SYSTEM MINE COORDINATES
3


E 9000
E 10,000
E 11,000
E 12,000
E 13,000
N 21,000
N 20,000
MAGNETIC
AZ 160
MINE
FOOTWALL
HANGING WALL
??
U-15-200
U-15-201
U-15-202
U-15-203
U-15-204
U-15-205
U-15-206
U-15-207
U-15-208
U-15-209
U-15-210
U-15-211
U-15-212
U-15-213
U-15-214
U-15-215
U-15-216
U-15-217
U-15-218
U-15-219
U-15-220
U-15-221
U-15-222
U-15-223
U-15-224
U-15-225
LEGEND
EXISTING MINE DEVELOPMENT
U-15-215 EXISTING DIAMOND DRILL HOLES
PROPOSED DIAMOND DRILL HOLE
SHEAR ZONE OUTLINE; KNOWN OR PROJECTED
FAULT
HOWE SOUND COMPANY
CHELAN DIVISION
TITLE PROPOSED DIAMOND DRILL HOLE, BUCKSKIN MTN.
LEVEL 1500
SCALE 1" = 200'
DATE JUNE, 1956
DRAWN BY RP
SURVEY BY
DESIGN BY R.P.
NOTES
FILE NUMBER
1


7000 W
6000 W
5000
4000 W
3000 W
2000 W
1000 W
00
1000 E
2000 E
3000 E
20000 N
18000 N
17000 N
16000 N
NORTH
ASTRONOMIC
1500 LEVEL
2325
ELEV. 3300'
RAILROAD
BIG
CREEK
LEGEND
BOUNDARY BETWEEN OUTCROPS AND ALLUVIUM.
STRIKE AND DIP OF FOLIATION.
FAULT.
1000 LEVEL DIKE.
EBBUTT'S BRECCIA.
ZONES OF SILICIFICATION AND SULPHIDE MINERALIZATION
MARBLE BED.
FIG. 2
HOWE SOUND COMPANY
CHELAN DIVISION
NORTHWEST MINE AREA
SKETCH MAP
GEOLOGY PROJECTED TO 2325 LEVEL—ELEV. 2639'
APPROX. SCALE: 1" = 500'
DATE: JAN. 20, 1956
TO ACCOMPANY REPORT BY F. EBBUTT ET AL.

Docket No. DMEA-3142

RECEIVED
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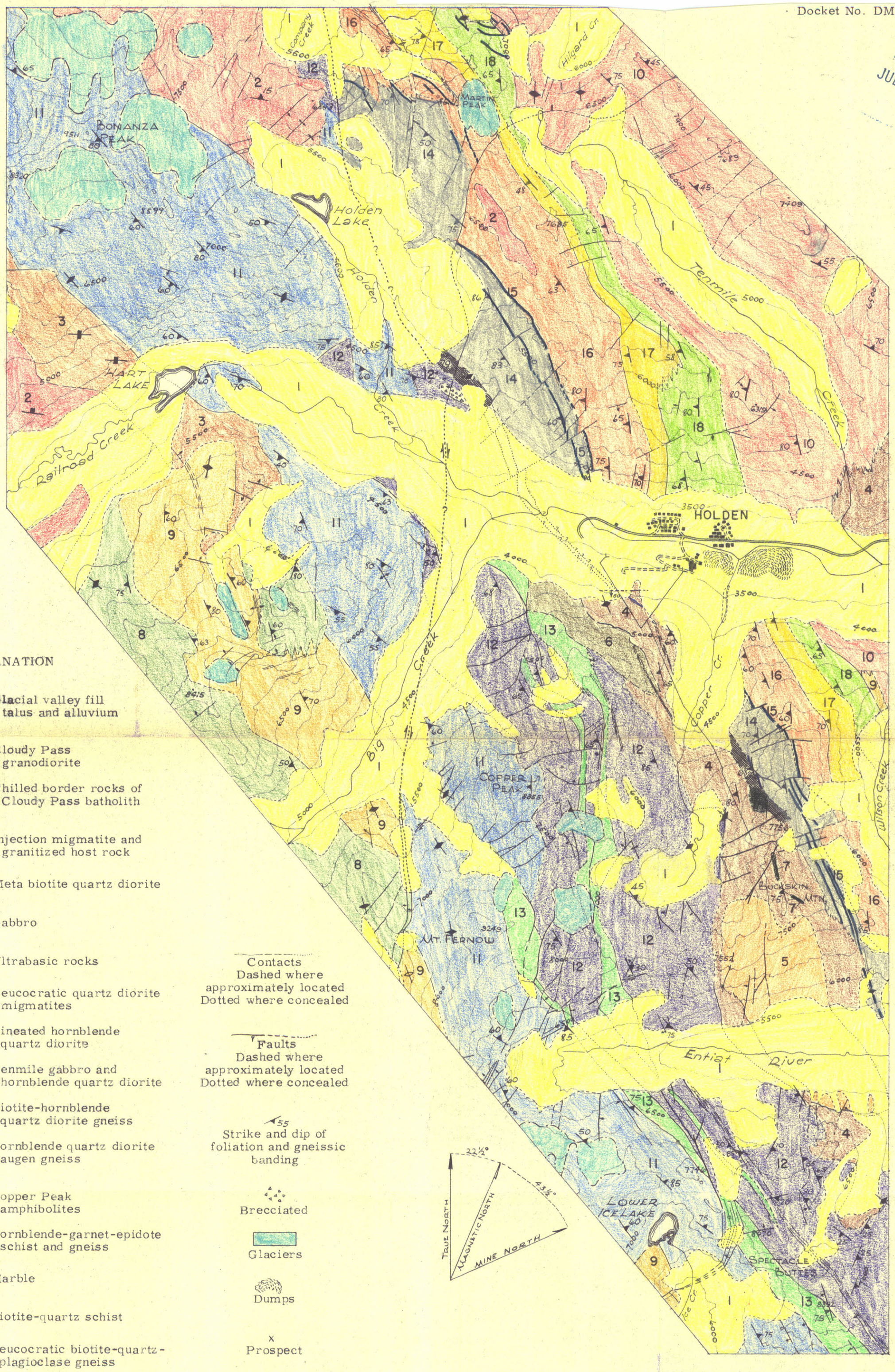


EXPLANATION

Pleistocene and Recent

- 1 — Glacial valley fill talus and alluvium

Paleocene or younger

- 2 — Cloudy Pass granodiorite
- 3 — Chilled border rocks of Cloudy Pass batholith

Chelan Batholith (?) Middle or late Cretaceous

- 4 — Injection migmatite and granitized host rock
- 5 — Meta biotite quartz diorite
- 6 — Gabbro
- 7 — Ultrabasic rocks
- 8 — Leucocratic quartz diorite migmatites
- 9 — Lineated hornblende quartz diorite
- 10 — Tenmile gabbro and hornblende quartz diorite
- 11 — Biotite-hornblende quartz diorite gneiss
- 12 — Hornblende quartz diorite augen gneiss

Holden gneisses Pre Cretaceous

- 13 — Copper Peak amphibolites
- 14 — Hornblende-garnet-epidote schist and gneiss
- 15 — Marble
- 16 — Biotite-quartz schist
- 17 — Leucocratic biotite-quartz-plagioclase gneiss
- 18 — Amphibole gneiss

Mineralized zone

Contacts
Dashed where approximately located
Dotted where concealed

Faults
Dashed where approximately located
Dotted where concealed

55 Strike and dip of foliation and gneissic banding

Brecciated

Glaciers

Dumps

x Prospect

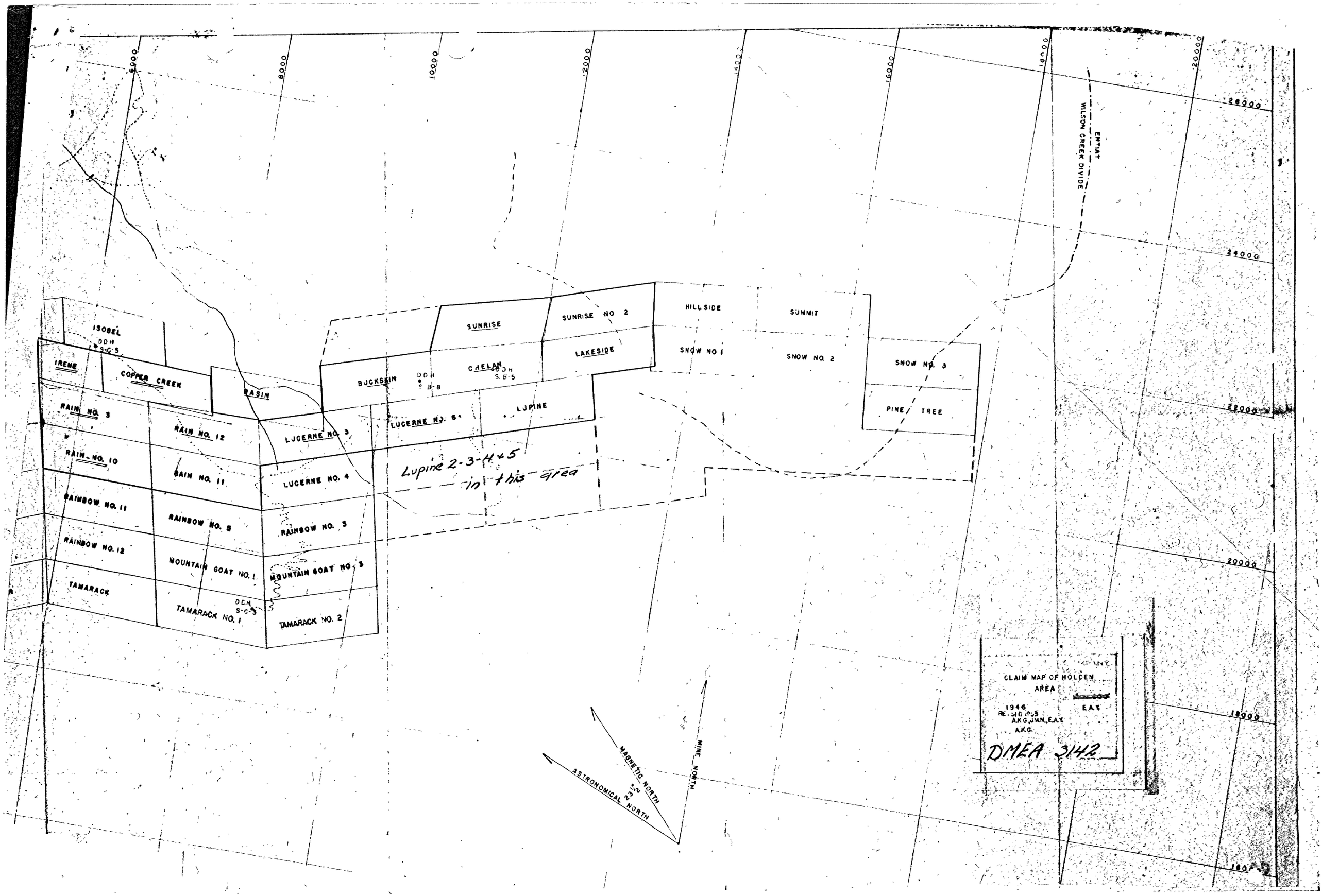
Adit

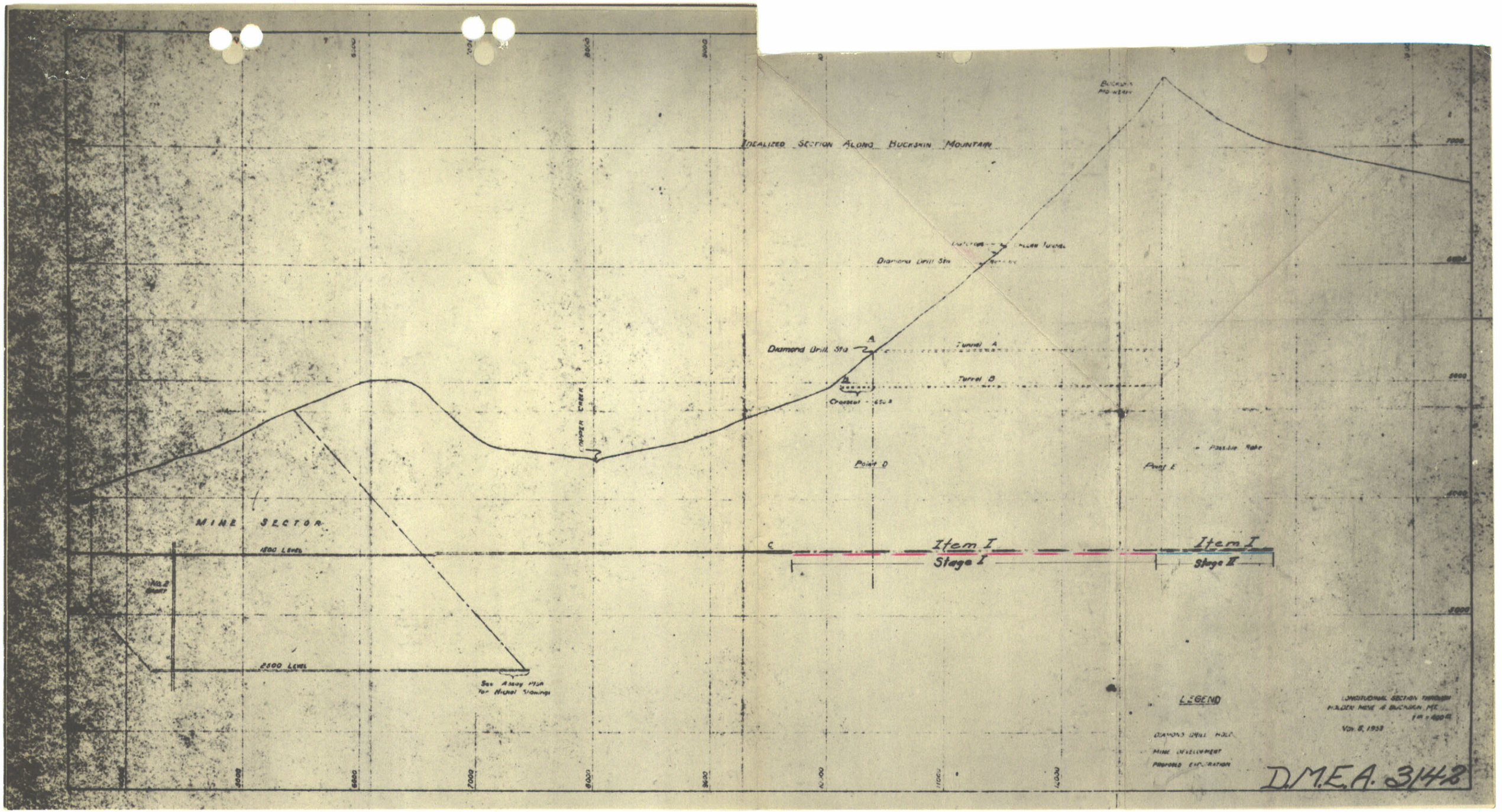
GEOLOGIC MAP OF THE HOLDEN MINE AREA, CHELAN COUNTY, WASHINGTON

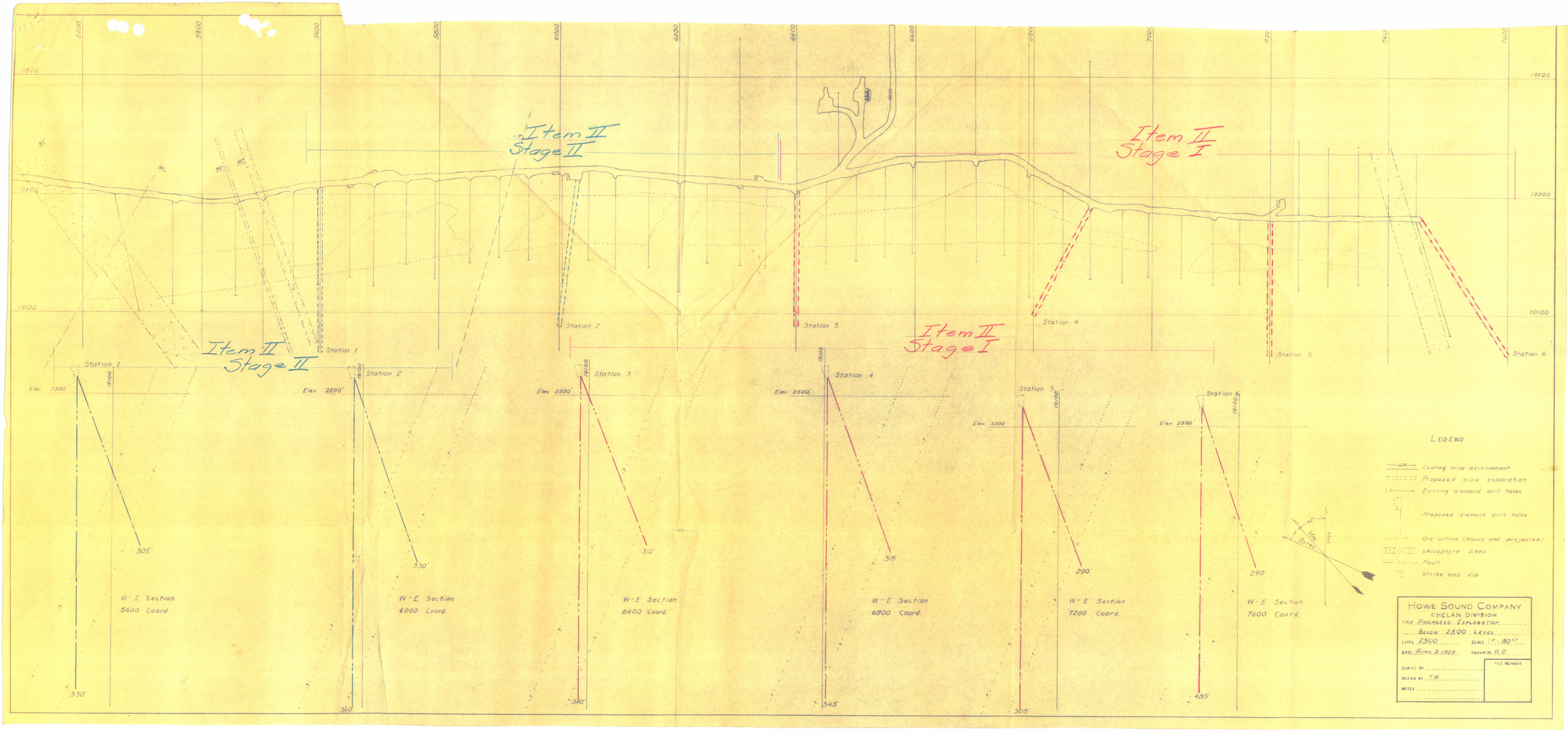
by F. W. Cater, D. F. Crowder, C. A. Hopson, D. F. Kellum, and R. W. Tabor

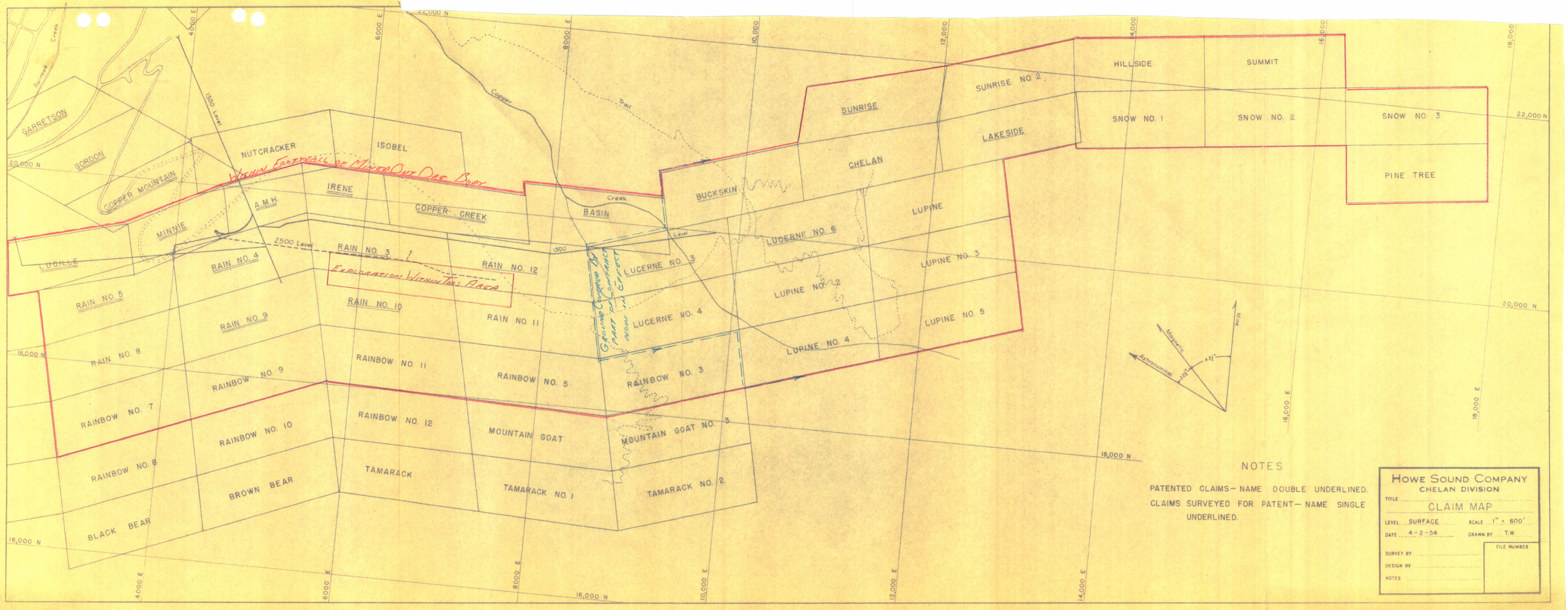
Scale 1:31,680

1 0 1 mile


6000
8000
10000
12000
14000
16000
18000
20000
26000
24000
22000
20000
18000
160
ENTIAT
WILSON CREEK DIVIDE
ISOBEL
DDH
S-C-5
IRENE
COPPER CREEK
BASIN
RAIN NO. 3
RAIN NO. 12
RAIN NO. 10
RAIN NO. 11
RAINBOW NO. 11
RAINBOW NO. 5
RAINBOW NO. 12
MOUNTAIN GOAT NO. 1
TAMARACK
TAMARACK NO. 1
DCH
S-C-3
SUNRISE
SUNRISE NO 2
BUCKSKIN
DDH
S-B-8
CHELAN
DDH
S-B-5
LAKESIDE
LUPINE
LUCERNE NO. 3
LUCERNE NO. 6
LUCERNE NO. 4
RAINBOW NO. 3
MOUNTAIN GOAT NO. 3
TAMARACK NO. 2
HILLSIDE
SUMMIT
SNOW NO 1
SNOW NO. 2
SNOW NO. 3
PINE TREE
Lupine 2-3-4 & 5
in this area
MAGNETIC NORTH
ASTRONOMICAL NORTH
MINE NORTH
CLAIM MAP OF HOLDEN
AREA
1946
RE-SURVEYED
A.K.G., J.M.N., E.A.Y.
A.K.G.
E.A.Y.
DMEA 3142


IDEALIZED SECTION ALONG BUCKSKIN MOUNTAIN
BUCKSKIN MOUNTAIN
Diamond Drill Sta
Diamond Drill Sta
A
Tunnel A
Tunnel B
B
Crosscut - Sta B
COPPER CREEK
Point D
Point E
Possible Raise
MINE SECTOR
1800 LEVEL
No. 2 Shaft
2500 LEVEL
See Assay Map for Nickel Showings
C
Item I
Stage I
Item I
Stage II
7000
6000
5000
4000
3000
2000
6000
7000
8000
9000
10000
11000
12000
LEGEND
DIAMOND DRILL HOLE
MINE DEVELOPMENT
PROPOSED EXPLORATION
LONGITUDINAL SECTION THROUGH
HOLDEN MINE & BUCKSKIN MT.
1 in = 400 ft
Oct. 8, 1959
D.M.E.A. 3148


Item II Stage II
Item II Stage I
Item II Stage II
Item II Stage I
Station 1
Station 2
Station 3
Station 4
Station 5
Station 6
Elev. 2500'
W-E Section 5600 Coord.
W-E Section 6000 Coord.
W-E Section 6400 Coord.
W-E Section 6800 Coord.
W-E Section 7200 Coord.
W-E Section 7600 Coord.
LEGEND
Existing mine development
Proposed mine exploration
Existing diamond drill holes
Proposed diamond drill holes
Ore outline (known and projected)
Leucophyre dikes
Fault
Strike and dip
HOWE SOUND COMPANY
CHELAN DIVISION
TITLE PROPOSED EXPLORATION
BELOW 2500 LEVEL
LEVEL 2500
SCALE 1" = 80'
DATE March 2, 1954
DRAWN BY R.P.
SURVEY BY
DESIGN BY T.W.
NOTES
FILE NUMBER



NOTES

PATENTED CLAIMS – NAME DOUBLE UNDERLINED.
CLAIMS SURVEYED FOR PATENT – NAME SINGLE UNDERLINED.

HOWE SOUND COMPANY
CHELAN DIVISION

TITLE: CLAIM MAP
LEVEL: SURFACE — SCALE: 1" = 600'
DATE: 4-2-54 — DRAWN BY: T.W.
SURVEY BY:
DESIGN BY:
NOTES:
FILE NUMBER

Exhibit "A" AUDIT SUMMARY Idn-8644

	Totals Max. MP-104	Corrected Distribution	Disallowed by Audit	Accepted Costs
(1) Agreed Unit Costs				
Diamond drill stations	$ 8,310.00	$ 8,310.00	$	$ 8,310.00
Core drilling	29,414.00	29,414.00		29,414.00
Transfer stations	1,500.00	1,500.00		1,500.00
(2) Labor and Supervision				
Labor	105,177.93	106,278.53		106,278.53
Supervision	8,160.31	8,160.31		8,160.31
Technical services	3,690.82	3,690.82		3,690.82
(3) Operating Matl's and Supplies				
Timber	10,470.23	9,966.33		9,966.33
Explosives	21,330.73	21,330.73		21,330.73
Pipe	6,748.73	6,748.73		6,748.73
Track	3,117.93	3,621.83		3,621.83
Drill steel and bits	12,300.71	12,300.71		12,300.71
Electric cable installation	338.64	338.64		338.64
Ventilation pipe installation	352.90	352.90		352.90
(4) Operating Equipment				
Rental	-	-		-
Purchase	30,907.09	30,907.09		30,907.09
Depreciation	3,873.75	3,873.75		3,873.75
(5) Initial Rehabilitation and Repairs	-	-		-
(6) New Buildings, Improvements, etc.	-	-		-
(7) Miscellaneous				
Repairs to equipment	9,847.12	9,847.12		9,847.12
Sampling and analysis	130.32	130.32		130.32
Payroll taxes	4,148.34	4,148.34	327.34	3,821.00
Liability insurance	4,834.84	4,834.84		4,834.84
Training	8,842.10	8,842.10	9.95	8,832.15
Compressed air	13,816.74	13,816.74		13,816.74
Miner's lamps	393.42	393.42		393.42
Handling supplies	2,440.20	2,440.20		2,440.20
Retroactive pay	1,100.55	-		-
Hoisting - 2300 Level	1,397.84	1,397.84		1,397.84
Totals	$294,865.49	$294,865.49	$ 337.49	$294,328.00

SCHEDULE - AUDIT SUMMARY

Howe Sound Company DMEA 3142 Idm E 644

	Totals May 1957 Form MF-104	Corrected Distribution	Disallowed By Audit	Corrected Costs	1500 Level	2500 Level	Surface
1. Agreed Unit Costs	$	$	$	$	$	$	$
Drill Stations		8,310.00		8,310.00	4,710.00	3,600.00	—
Transfer Stations	9,810.00	1,500.00		1,500.00	—	1,500.00	—
Diamond Drilling	37,965.75	47,858.50	12.75	47,845.75	23,043.75	24,802.00	—
Samples Assayed	—	105.00		105.00	—	105.00	—
Independent Contracts							
Drilling	21,674.03	10,045.20		10,045.20	—	—	10,045.20
Cementing	—	121.70		121.70	—	—	121.70
2. Labor and Supervision							
Labor	106,278.53	106,278.53		106,278.53	89,686.62	16,591.91	—
Supervision	8,160.31	8,712.19		8,712.19	6,865.80	1,294.51	551.88
Technical Services	3,690.82	3,690.82		3,690.82	2,627.98	1,062.84	—
3. Operating Materials & Supplies							
Timber	9,966.33	9,966.33		9,966.33	9,889.66	76.67	—
Explosives	21,330.73	21,330.73		21,330.73	15,270.90	6,059.83	—
Pipe	5,398.99	6,748.73		6,748.73	6,748.73	—	—
Track	4,497.47	5,621.83		5,621.83	4,865.67	756.16	—
Drill Steel & Bits	12,300.71	12,300.71		12,300.71	8,129.43	4,171.28	—
Electric Cable	358.64	358.64		358.64	358.64	—	—
Vent Pipe	352.90	352.90		352.90	352.90	—	—
4. Operating Equipment							
Rental	—	—		—	—	—	—
Purchased	17,549.07	30,907.09		30,907.09	30,907.09	—	—
Depreciation	3,873.75	3,873.75		3,873.75	2,850.00	1,023.75	—
5. Initial Rehabilitation & Repairs	—	—		—	—	—	—
6. New Buildings, Impv., Etc.	—	—		—	—	—	—
7. Miscellaneous							
Repairs to Equipment	9,847.12	9,847.12		9,847.12	7,431.51	2,415.61	—
Sampling and Analysis	130.32	235.32		235.32	130.32	—	105.00
Payroll Taxes	3,621.00	3,621.00		3,621.00	3,076.20	544.80	—
Ind. Ins. and Med. Aid	4,834.84	4,834.84		4,834.84	4,049.05	785.79	—
Tramming	8,832.15	8,832.15		8,832.15	6,498.00	2,334.15	—
Compressed Air	13,816.74	13,816.74		13,816.74	8,891.02	4,925.72	—
Core Boxes	—	102.50		102.50	—	—	102.50
Mobilization of Drill	—	750.00		750.00	—	—	750.00
Miner's Lamps	—	593.42		593.42	449.12	144.30	—
Handling Supplies	—	2,440.20		2,440.20	1,772.30	667.90	—
Hoisting	—	1,397.84		1,397.84	—	1,397.84	—
8. Contingencies							
Miner's Lamps	593.42	—		—	—	—	—
Handling Supplies	2,440.20	—		—	—	—	—
Hoisting	1,397.84	—		—	—	—	—
Total	$308,721.66	$324,553.78	$ 12.75	$324,541.03	$238,604.69	$ 74,260.06	$ 11,676.28
Less Salvage	—	15,832.14*	—	15,832.14	15,832.14	—	—
Total	$308,721.66	$308,721.64 *	$ 12.75	$308,708.89	$222,772.55	$ 74,260.06	$ 11,676.28

* See Schedule - Proceeds from Property Disposition

August 21, 1957

C. A. Turner, Auditor

TONNAGE & GRADE ESTIMATE TO END OF 1955

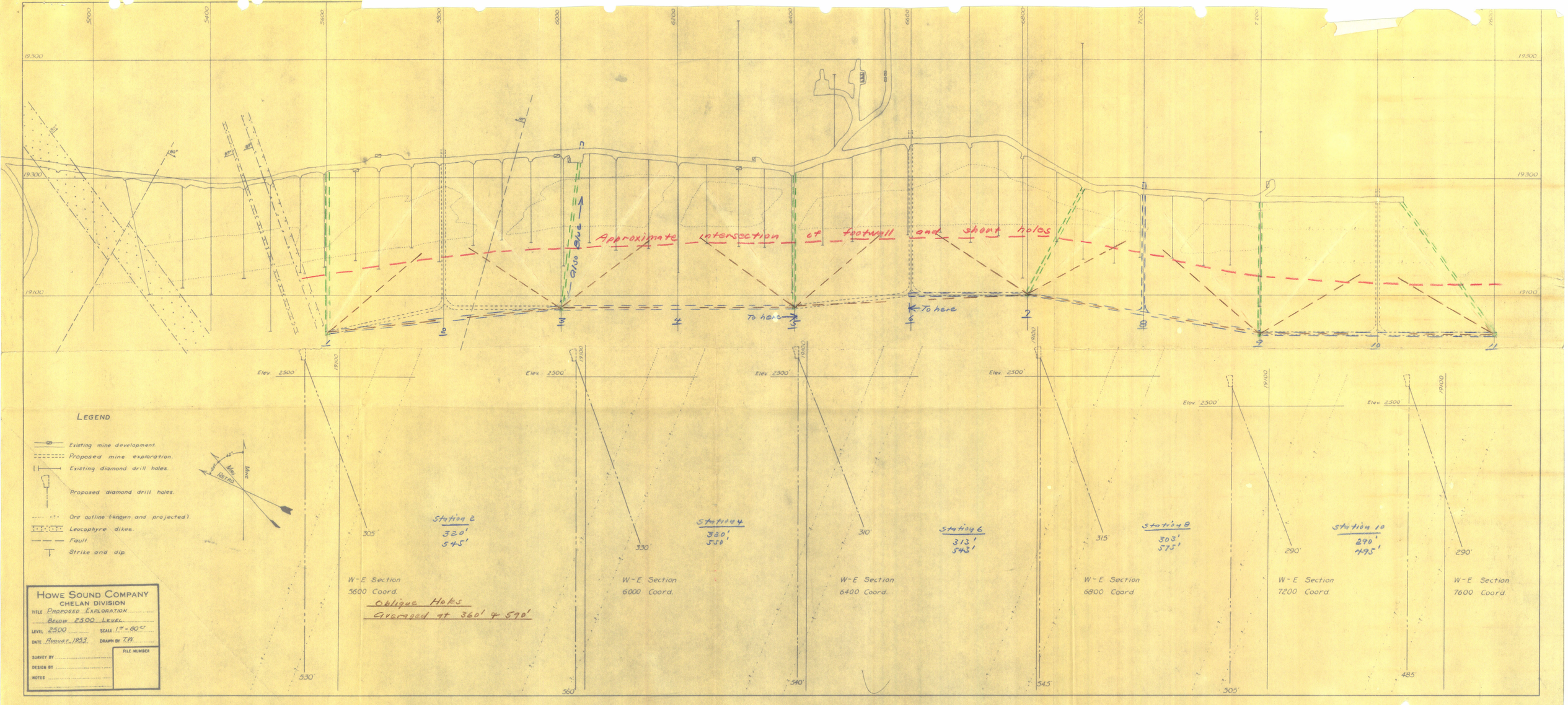
PREPARED - JULY 29, 1953

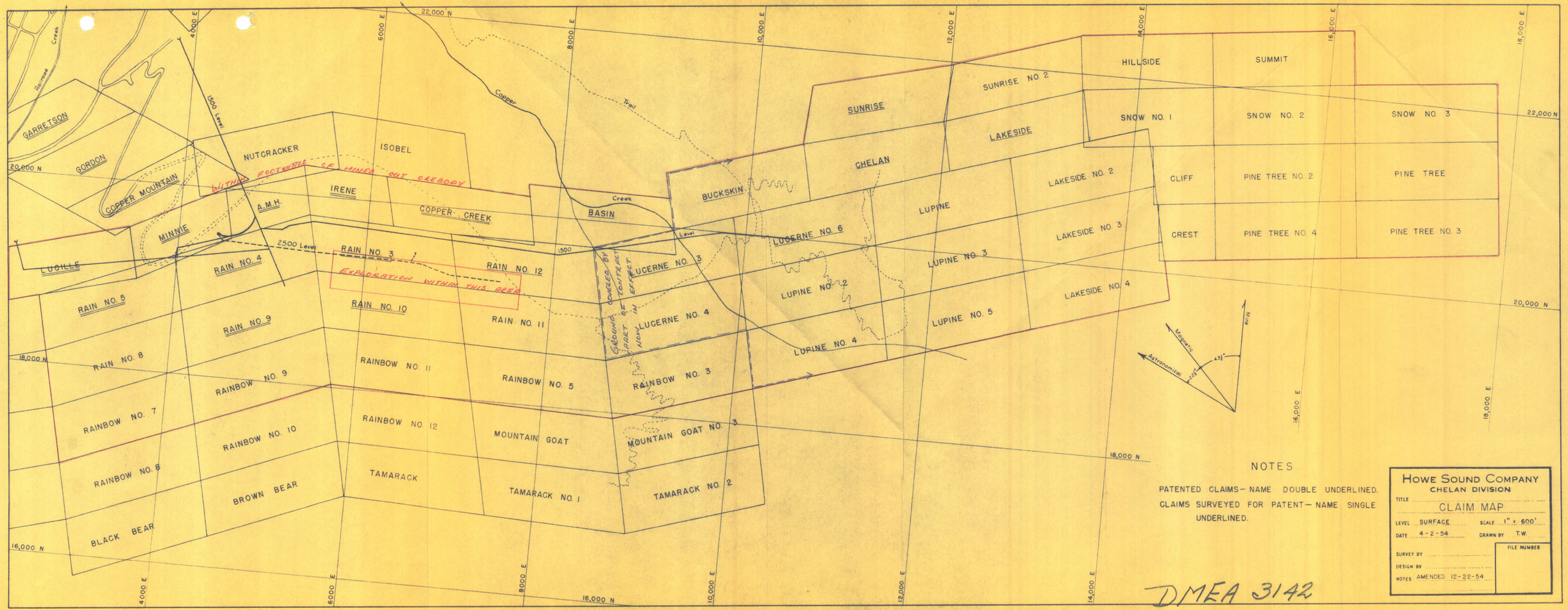
HOWE SOUND COMPANY
CHELAN DIVISION
HOLDEN, WASHINGTON

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
SEP 11 1953

1953 MONTH	201	218	226	242	243	244	251	261	270	273	291	315W
Aug.	450			200					20	200	30	
Sept.	550			250					20	250	300	
Oct.	550			250				20		250	350	
Nov.	550		20	250				30		250	300	
Dec.	550	20	30	Empty						250	350	
1954												
Jan.	550	30	20							250	350	
Feb.	550			Filled						Empty	450	150
March	550		100							Filled	200	300
April	100		550						100		Empty	400
May	Empty		550						200		Fill	400
June			550						200		Filled	400
July	Fill		550						250			350
Aug.	Fill		550						250			350
Sept.	Fill		550						250			350
Oct.	Fill		550				20		250			350
Nov.	Fill		550				200		Empty			400
Dec.	-		550				200		Filled			400
1955												
Jan.	Fill		550				200					400
Feb.	Filled		500		25		Empty	200				400
March		275	Empty		25		Filled	250				200
April		400	Fill		250			250				Empty
May		500	Fill		250			250				
June		500	Filled		250			250				
July		500			250			Empty				Fill
Aug.		500			250							Fill
Sept.		500			250							Filled
Oct.		475			250	25		Filled				
Nov.		475			250	25						
Dec.		500			250							
					Empty							
Reserves	-	37,000	-	-	-	65,000	-	-	-	-	-	-

3155	325	326	327	336	Devel.	Total Per Day	Operating Days	Tons Month	% Cu	Oz. Au	% Zn	
	450			30	100	1,500	26	39,000	.92	.050	.17	
	Empty			30	100	1,500	24	36,000	1.01	.060	.16	
	Fill				100	1,500	27	40,500	1.04	.071	.17	
	Fill				100	1,500	25	37,500	1.01	.067	.15	
	Fill			200	100	1,500	25	37,500	1.14	.079	.26	1953
							127	190,500	1.02	.065	.18	Average
	Filled			200	100	1,500	25	37,500	1.14	.079	.22	
				250	100	1,500	24	36,000	1.03	.085	.28	
		250			100	1,500	27	40,500	0.92	.069	.30	
		250			100	1,500	26	39,000	0.96	.076	.31	
		250			100	1,500	25	37,500	1.02	.079	.31	
		250			100	1,500	26	39,000	1.02	.079	.31	
		250			100	1,500	25	37,500	1.04	.079	.30	
		250			100	1,500	26	39,000	1.04	.079	.30	
		250			100	1,500	24	36,000	1.04	.079	.30	
		250			100	1,500	26	39,000	1.04	.079	.30	
		250			100	1,500	26	39,000	1.03	.077	.31	
		250			100	1,500	25	37,500	1.03	.077	.31	1954
							305	457,500	1.025	.078	.30	Average
		250			100	1,500	25	37,500	1.03	.077	.31	
25		250			100	1,500	24	36,000	.97	.075	.31	
300		300	50		100	1,500	27	40,500	.98	.062	.36	
200		250	50		100	1,500	26	39,000	1.04	.066	.27	
100		250	50		100	1,500	26	39,000	1.04	.063	.28	
150		250			100	1,500	26	39,000	1.03	.064	.25	
300		250		100	100	1,500	24	36,000	1.01	.066	.33	
300		250		100	100	1,500	27	40,500	1.01	.066	.33	
300		250		100	100	1,500	24	36,000	1.01	.066	.33	
300		250		100	100	1,500	26	39,000	.99	.066	.34	
300		200		150	100	1,500	26	39,000	1.02	.066	.33	
50		Empty	300	300	100	1,500	25	37,500	1.05	.063	.29	1955
Empty							306	459,000	1.015	.067	.31	Average
-	-	-	110,000	45,000				1,107,000	1.02	.071	.28	Total Average
									.96	.05		Used in long range forecast.


5200
5400
5600
5800
6000
6200
6400
6600
6800
7000
7200
7400
19300
19100
Approximate intersection of footwall and short holes
Also
To here
To here
1
2
3
4
5
6
7
8
9
10
11
Elev. 2500'
305'
530'
Station 2
320'
545'
W-E Section
5600 Coord.
Oblique Holes
Averaged at 360' & 590'
330'
560'
Station 4
380'
550'
W-E Section
6000 Coord.
310'
540'
Station 6
313'
543'
W-E Section
6400 Coord.
315'
545'
Station 8
303'
575'
W-E Section
6800 Coord.
290'
305'
Station 10
290'
495'
W-E Section
7200 Coord.
290'
485'
W-E Section
7600 Coord.
LEGEND
Existing mine development.
Proposed mine exploration.
Existing diamond drill holes.
Proposed diamond drill holes.
Ore outline (known and projected).
Leucophyre dikes.
Fault.
Strike and dip.
Mine
HOWE SOUND COMPANY
CHELAN DIVISION
TITLE PROPOSED EXPLORATION BELOW 2500 LEVEL
LEVEL 2500
SCALE 1" = 80'
DATE AUGUST, 1953
DRAWN BY T.W.
FILE NUMBER
SURVEY BY
DESIGN BY
NOTES



NOTES

PATENTED CLAIMS— NAME DOUBLE UNDERLINED.

CLAIMS SURVEYED FOR PATENT— NAME SINGLE UNDERLINED.

HOWE SOUND COMPANY
CHELAN DIVISION

TITLE: CLAIM MAP

LEVEL: SURFACE — SCALE: 1" = 600'

DATE: 4-2-54 — DRAWN BY: T.W.

SURVEY BY:

DESIGN BY:

NOTES: AMENDED 12-22-54

FILE NUMBER

DMEA 3142