3142

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

August 4, 1958

MEMORANDUM

To: Mr. Wingfield H. Chamberlain
Division of Operation Control & Statistics

From: Director, Division of Base Metals

Subject: Semi-Annual Reports of Certified projects for the period January 1, 1958 thru June 30, 1958.

The following projects were inactive during the cited period.

Docket No.	Contract No.	Name
DMEA-3112	Idm-8651	Centrida Mines, Inc.
DMEA-132	Idm-81	Mines Management, Inc.
DMEA-81	Idm-818	United Minerals Corporation
DMEA-1166	Idm-876	American Zinc, Lead & Smelting Co.
DMEA-390	Idm-863	Highland-Surprise Cons. Mining Co.
DMEA-125	Idm-831	Bennett Mining Company
DMEA-981	Idm-888	Idaho Mining Company
DMEA-525	Idm-8137	Spokane Mining Syndicate
DMEA-1877	Idm-8155	William Kulcaly
DMEA-652	Idm-8177	South Mt. Mining & Concentrating Co.
DMEA-1596	Idm-8184	Kabob Silver-Lead Company

DMEA-2166	Idm-E208	Farmer Mine Enterprises
DMEA-1959	Idm-E223	Wylie M. Gardner and L. R. Vance
DMEA-2123	Idm-E228	Pacific Northwest Mining Company
DMEA-1831	Idm-E242	William Seren
DMEA-1175	Idm-E251	Amador Mining Company (assignee of Kootenay Copper Mines)
DMEA-1894	Idm-E266	Buchman, Brecken and Morden
DMEA-2213	Idm-E294	Elmer Kuderlin
DMEA-2388	Idm-E301	American Zinc, Lead & Smelting Co.
DMEA-2269	Idm-E308	Mines Management, Inc.
DMEA-2420	Idm-E380	Hypothesk Mining & Milling Co.
DMEA-2237	Idm-E421	Signal Mining Company
DMEA-2637	Idm-E475	Goldenda Lead Mines
DMEA-2862	Idm-E482	Spokane-Idaho Mining Co.
DMEA-2612	Idm-E489	Granore Company (assignee of Index Mining Company)
DMEA-2929	Idm-E587	Grandview Mines
DMEA-3142	Idm-E644	Howe Sound Company
DMEA-3288	Idm-E667-	Alaska Copper Mines, Inc.
DMEA-3664	Idm-E819	Highland-Surprise Cons. Mining Co.

W. R. Grimwald

WRG/dl 8-4-58
cc to: Decmts (28)
Admr. R. File
Chcnr.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code

January 30, 1958

Memorandum

To: Wingfield H. Chamberlain, Statistics Branch
Division of Operation Control & Statistics

From: Director, Division of Base Metals

Subject: Semi-annual reports on certified projects
Period - July 1 thru December 31, 1957

The following projects have been inactive throughout the reporting period:

DMEA No.	Contract No.	Name of Operator
2260	Idm-X246(amended)	Pohl and Hogan
2123	Idm-X226	Pacific Northwest Mining Co.
1175	Idm-X251	Amador Mining Company (assignee of Kootenay Copper Mines)
1877	Idm-X155	William Malsamy
2420	Idm-X300	Hypothesis Mining & Milling Company
2166	Idm-X208	Farmer Mine Enterprises
1959	Idm-X223	Fairway Uranium Corporation
3142	Idm-X644	Moon Sound Company

Please note that the property covered by DMEA-3142 has been abandoned and the mill and all structures removed, and the mine allowed to fill with water. It is most unlikely that this property will ever again be operated.

W. R. Grimwold

WRGrimwold:ms 1/30/58
Copies: Dockets as above
cheron

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DMEA
RECEIVED JAN 27 1958

DATE	INITIALS	CODE
1-28	C	220
28	Com	100

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period: July 1 to December 31, 1957

Date of report: December 23, 1957

Operator: Howe Sound Company
Holden, Wash.

Mine name: Holden

County and State: Chelan County, Washington

Docket number and commodity: DMEA-3142 (copper) G

Contract number: Idm-E644

Date of contract: December 7, 1953

Date of certification: July 24, 1957

Expiration date of royalty payments: December 7, 1963 6-25-67

Total amount of contract: $363,840.00

Total expenditures under contract: $308,708.89

Amount of Government participation at 50%: $154,354.45

Royalty payments this period: none

Previous royalty payments: none

Total royalty payments to date: none

Percent Government participation repaid: none

Royalty due on production to date: none

Royalty remarks: none

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT

Date 1-28

Referred to:

1. ~~Mr. Mousdorf~~
2. ~~Mrs. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. Division
6. ~~Docket Control Mails and Files~~
7. ~~500~~

Note comments in report regarding:

1. Inactive — a good bit of ore to
2. abandon
3.
4.

and take appropriate action.

- - - - - - - - -

Action taken by Division:

3142

Robert E. Adams

	Tons	Analysis
Original estimate of DMEA reserves (from Field Team final report) Mines X Survey ___ Joint ___	1,219,000	1.35 Cu .066 Au
	Indicated and inferred ore by diamond drilling	

Revised estimate of DMEA reserves (Field Team)
Mines___ Survey ___ Joint ___

Increase of reserves by work performed subsequent to DMEA project work	none
Production of DMEA ore (this period)	none
(previous)	none
(to date)	none
Production of Operator's ore found subsequent to DMEA work	
(this period)	none
(previous)	none
(to date)	none
Percent of revised reserves mined	____

Production remarks: All production and all mining operations ceased as of June 28, 1957. The mill and the mining camp are being removed from the property.

Signed: Galen G. Waddell (Engineer)

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
USBM (2)

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED SEP 20 1957 DMEA

Month of May, 1957 Docket No. DMEA 3142 Contract No. Ids-E644
Operator's Name Howe Sound Company - Chelan Division Minerals Copper
Address
Contract Amount, $ 363,840.00 Government Participation: 50 % Amount, $ 181,920.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						~~Approved~~ Duly
Drilling		37,965.75	37,965.75		37965.75	37965.75
Dia. Drill & Transfer Sta.		9,810.00	9,810.00		9810.00	9810.00
~~Supervision~~ As Per -)						
~~Bonus~~ Amendment 3)						
Drilling - Core)	2,795.20	18,878.83* (See Attached)	21,674.03	2795.20	18878.83	21674.03
(2) Labor and Supervision:						
Labor		106,278.53	106,278.53		106278.53	106278.53
Supervision		8,160.31	8,160.31		8160.31	8160.31
Technical Services		3,690.82	3,690.82		3690.82	3690.82
(3) Operating Mat'ls. and Supplies:						
Timber		9,966.33	9,966.33		9966.33	9966.33
Explosives		21,330.73	21,330.73		21330.73	21330.73
Pipe		5,398.99	5,398.99		5398.99	5398.99
Track		4,497.47	4,497.47		4497.47	4497.47
Drill Steel & Bits		12,300.71	12,300.71		12300.71	12300.71
Electric Cable - Instl'n.		358.64	358.64		358.64	358.64
Vent Pipe - Instl'n.		352.90	352.90		352.90	352.90
(4) Operating Equipment:						
Rental						
Purchase		17,549.07	17,549.07		17549.07	17549.07
Depreciation		3,873.75	3,873.75		3873.75	3873.75
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment		9,847.12	9,847.12		9847.12	9847.12
Sampling and Analysis		130.32	130.32		130.32	130.32
Payroll Taxes		3,621.00	3,621.00		3621.00	3621.00
Ind. ~~Medical~~ Insurance & Med. Aid		4,834.84	4,834.84		4834.84	4834.84
Tramming		8,832.15	8,832.15		8832.15	8832.15
Compressed Air		13,816.74	13,816.74		13816.74	13816.74
(8) Contingencies (specify):						
Miners' Lamps		593.42	593.42		593.42	593.42
Handling Supplies		2,440.20	2,440.20		2440.20	2440.20
Hoisting (2500 Level)		1,397.84	1,397.84		1397.84	1397.84
TOTALS	2,795.20	305,926.46	308,721.66	2782.45	305926.46	308708.91

I certify that the above bill is correct and just and that payment therefor has not been received.

Date May 31, 1957 *Payee Howe Sound Company - Chelan Division

Per [signature] Title Manager

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1391.18

Signature Dorothy F. Lang
(Authorized Certifying Officer)

Date 9/13/57 Vou. No. 2042

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E644 in accordance with the terms of the contract.

Signature /s/ John D. Bardill Title Metallurgist Date 9/10/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ D. R. MacLaren Title alternate act. Exec. Officer Date 9/10/57

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form DMEA-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1957 Docket No. DMEA 3142 Contract No. Idm-E644
Operator's Name Howe Sound Company - Chelan Division Minerals Copper
Address Holden, Washington

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting - 1500 Level	Feet			177,884.91	5,800	46.81		
Drifting - 2500 Level	"			43,837.90	1,365	32.12		
Crosscutting: D.D.Sta-1500 L.	Each			4,410.00	9	490.00	9	490.00
D.D.Sta-1500 L.	"			500.00	1	500.00	1	500.00
Shafts								
Winzes								
Drilling: Core - 1500 L.	Feet			4,440.00	1,200	3.70	1,200	3.70
Core - 2500 L.	"			5,557.75	1,285	(See	3,000	4.25
Core - Surface	"	2,795.20	385	11,676.28	1,385	Attchd)	4,000	(See Attached)
Core-1500 Lvl.	"			18,603.75	6,765	2.75	7,416	2.75
" 2500 Lvl.	"			19,362.00	6,454	3.00	7,000	3.00
D.D.Sta.2500 L.	Each			3,600.00	6	600.00	6	600.00
Trsfr. Sta. 2500 L.	"			1,500.00	3	500.00	3	500.00
Total Distributed Costs				291,172.59				Total Costs Authorized by Contract
Operating Equipment Purchased				17,549.07				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		2,795.20		308,721.66				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date May 31, 1957 Operator Howe Sound Company - Chelan Division

Per J. Hopper Title Manager

NOTE.—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.

(Instructions on reverse)

Remarks:

(For Government use only)

/s/ John D. Bardill

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

HOME SOUND COMPANY
Chelan - Division

May 31, 1957

DMEA Account
Docket No. DMEA - 3142
Amendment No. 3

	Adjusted Voucher May 1957	Previously Reported to December 31/56	Totals To Date
UNDERGROUND DIAMOND DRILLING			
1500 Level			
1200' @ $3.70 (Hole # U-15-232)	$	$ 4,440.00	$ 4,440.00
2500 Level			
1285' @ $4.25 (Hole Nos. U-25-140 & 147)		5,452.75	5,452.75
*Note - 1420' Submitted previously but deleted in DMEA payment		(See Below)	
30 Samples @ $3.50		105.00	105.00
SURFACE DIAMOND DRILLING			
(Hole S-N-11) Northwest Area			
150' @ $10.00 (Overburden)		1,500.00	1,500.00
350' 6.00		2,100.00	2,100.00
500' 7.30		3,650.00	3,650.00
385' 7.30	2,810.50	-	2,810.50
1,385'			
CEMENTING			
114' @ Actual Cost (12 Hours @ $9.60 plus cement $6.50-1 Bag)		121.70	121.70
LABOR, SUPERVISION, CONSULTANTS			
(a) Supervising Engineer - Geologist		298.13	298.13
(b) Engineer - Geologist Helpers		253.75	253.75
OPERATING MATERIALS & SUPPLIES			
41 Core Boxes @ $2.50		102.50	102.50
MISCELLANEOUS			
Mobilization of Surface Drill		750.00	750.00
30 Samples @ $2.99 (Actual Cost)	(Cr) 15.30	105.00	89.70
Total as now claimed	$ 2,795.20	$ 18,878.83	$21,674.03
*(Amount deleted from 2500 Level above)		6,035.00	
		$ 24,913.83	

1201 N. Division Street
Spokane 2, Washington

September 10, 1957

Mrs. Dorothy Long, Certifying Officer
DMEA Field Team, Region I
1201 N. Division
Spokane 2, Washington

Re: Docket No. DMEA-3142 (copper)
Howe Sound Company
Holden Mine
Contract No. Idm-2644

Dear Mrs. Long:

The work completed under the contract was done to the satisfaction of the Government. The contract was terminated by mutual agreement effective as of June 1, 1957. A final report evaluating the results of the exploration program has been presented by the Operator and accepted by the Executive Officer.

The Government has been reimbursed for its equity in the salvageable value of operating materials, supplies and equipment in accordance with the values set forth in the contract.

A pseudo-certification is included as Item 4 of the Termination Agreement dated July 24, 1957.

A final Report of Review dated August 21, 1957 by DMEA Auditor C. A. Turner has been received.

As all contract requirements have been met, it is requested that final settlement of our account with the Operator be made.

Sincerely yours,

Donald R. MacLaren
Alternate Acting Exec. Officer
DMEA Field Team, Region I

cc: DMEA (2)
USGS (2)
Contract Admin. & Audit Div. (2)

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DATE | INITIALS | CODE

September 13, 1957

DMEA Field Team, Region I

DMEA Certifying Officer, Region I

Monthly operating report for May 1957 and final payment
Contract No. Idm-2644

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

We have disallowed $12.75 for 3 ft. of diamond drilling claimed on the May 1957 MF-104 in accordance with Report of Review dated August 21, 1957. The Operator claimed 1283 ft. completed on the 2500 level while the final inspection showed 1280 ft. completed.

Dorothy F. Long

cc: DMEA (2)
USGS (2)
Contract Admin. & Audit Div. (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
1201 N. Division St.
Spokane 2, Washington

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RECEIVED AUG 1 1957

DATE	INITIALS	CODE
8/1	C	220
8/1	CBM	100
8/2	~~WEH~~	504

July 3, 1957

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: John D. Bardill, Bureau of Mines

Subject: Final inspection report, Docket No. DMEA-3142 (copper), Howe Sound Company, Holden Mine, Chelan County, Washington, Contract No. Idm-E644 (Amended)

The project was visited May 2, 1957, and the five diamond drill holes drilled downward from the 2500 level and the one surface hole in the Northwest Area included in Amendment No. 3 were discussed with Mr. J. S. Roper, manager, and Mr. R. A. Paasch, company geologist. Three of the underground holes had not been drilled to the depths and in the directions to conform with terms of the amendment. Since no decision was reached it was decided that Messrs. Roper and Paasch should meet with representatives of the Bureau and Survey to arrive at an agreement.

Accordingly, on May 13, Messrs. Agnew, Zoldok and Bardill of the Bureau of Mines and Messrs. Weissenborn and McLaren of the Geological Survey met at Spokane with Messrs. Roper and Paasch of the Howe Sound Co. An agreement was reached whereby the Field Team would allow holes U25-147 and U25-140 with depths of 578 and 702 feet, respectively, for a total of 1,280 feet.

Surface hole SN-11, drilled in the Northwest Area to a depth of 1,385 feet, was allowed.

Since the Howe Sound Co. has permanently terminated all operations at the Holden mine, the contract will be terminated as of June 1, 1957 by mutual agreement before completing the contract. The uncompleted work consists of two surface holes in the Northwest Area and three surface holes in the Ebbutt's Breccia Area.

The Government has been reimbursed for its equity in the salvage value of operating materials, supplies and equipment in accordance with the values set forth in the contract. See Salvage Statement attached to Voucher No. 1812.

The following work has been completed under the contract:

Amendment No. 2, (Stage I)

		Authorized	Completed
Crosscutting & drifting,	1500 level, ft.	4,100	3,800
Diamond drill stations,	1500 level	10	10
Diamond drilling,	1500 level, ft.	7,416	6,765
Crosscutting,	2500 level, ft.	1,368	1,365
Diamond drill stations,	2500 level	6	6
Transfer stations,	2500 level	3	3
Diamond drilling,	2500 level, ft.	7,000	6,454

Amendment No. 3, (Stage II)

Samples	30	0
Diamond drilling, 1500 level, ft.	1,200	1,200
Diamond drilling, 2500 level, ft.	3,000	1,280
Surface diamond drilling, Northwest Area	3,000	1,385
Surface diamond drilling, Ebbutt's Area	1,000	0

The Field Team has recommended that a pseudo-certification be embodied in the termination agreement.

John D. Bardill

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
Turner
Docket
Bardill

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

DMEA Certifying Officer, Region I

Contract No. Idm-2644, 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)
Contract Admin. (2)
JDB
AD

		CODE
2/18	wks.	500

DMEA-3142

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED FEB 15 1957 D.M.E.A.

Month of December 1956 Docket No. DMEA 3142 Contract No. Idm-E644
Operator's Name Howe Sound Company - Chelan Division Minerals Copper
Address Holden, Washington
Contract Amount, $ 363,840.00 Government Participation: 50% Amount, $ 181,920.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:				5/3/57 OK		
Drilling - Core		$ 37,965.75	$ 37,965.75		37965.75	37965.75
Dia. Drill & Transfer Sta.		9,810.00	9,810.00		9810.00	9810.00
~~Drilling~~ ~~Crosscutting~~ As Per -)						
~~Drilling~~ Amendment 3)						
Drilling - Core)	$2,567.80	22,546.03	24,913.83	2289.50	16589.33	18878.83
(2) Labor and Supervision:						
Labor		106,278.53	106,278.53		106278.53	106278.53
Supervision		8,160.31	8,160.31		8160.31	8160.31
Technical Services		3,690.82	3,690.82		3696.82	3696.82
(3) Operating Mat'ls. and Supplies:						
Timber		9,966.33	9,966.33		9966.33	9966.33
Explosives		21,330.73	21,330.73		21330.73	21330.73
Pipe		5,398.99	5,398.99		5398.99	5398.99
Track		4,497.47	4,497.47		4497.47	4497.47
Drill Steel & Bits		12,300.71	12,300.71		12300.71	12300.71
Electric Cable - Instl'n.		358.64	358.64		358.64	358.64
Vent. Pipe Installation		352.90	352.90		352.90	352.90
(4) Operating Equipment:						
Rental						
Purchase		17,549.07	17,549.07		17549.07	17549.07
Depreciation		3,873.75	3,873.75		3873.75	3873.75
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment		9,847.12	9,847.12		9847.12	9847.12
Sampling and Analysis		130.32	130.32		130.32	130.32
Payroll Taxes		3,621.00	3,621.00		3621.00	3621.00
Ind. ~~Liability~~ Insurance & Med. Aid		4,834.84	4,834.84		4834.84	4834.84
Tramming		8,832.15	8,832.15		8832.15	8832.15
Compressed Air		13,816.74	13,816.74		13816.74	13816.74
(8) Contingencies (specify):						
Miners' Lamps		593.42	593.42		593.42	593.42
Handling Supplies		2,440.20	2,440.20		2440.20	2440.20
Hoisting (2500 Level)		1,397.84	1,397.84		1397.84	1397.84
TOTALS	$2,567.80	$309,393.66	$311,961.46	2289.50	303636.96	305926.46

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 25/57 *Payee Howe Sound Company - Chelan Division

Per [signature] Title Manager

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1144 25

Signature [signature]
(Authorized Certifying Officer)

Date 2-1-57 Vou. No. 1937
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMEA-644 in accordance with the terms of the contract.

Signature /S/ John D. Bardill Title Metallurgist Date Jan 30-1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ A. E. Weissenborn Title Exec Officer Date Jan 31-1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED FEB 15 1957 D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1956 Docket No. DMEA 3142 Contract No. IGM-E644
Operator's Name Howe Sound Company - Chelan Division Minerals Copper
Address Holden, Washington

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting - 1500 Level	Feet			$177,884.91	3,800	$ 46.81		
Crosscutting 2500 Level	"			43,837.90	1,365	32.12		
~~Raising~~ D.D.Sta-1500 L.	Each			4,410.00	9	490.00	9	490.00
Shafts " 1500 L.	"			300.00	1	300.00	1	300.00
Winzes		2289.50						
Drilling: Core -1500 Level	Feet	~~2,567.80~~	694	4,440.00	1,200	3.70	1,200	3.70
Core ~~Core~~ 2500 "	"			11,592.75	2,703	(See	3,000	4.25
Core ~~Core~~ Surface	"			8,881.08	1,000	Attach'd)	4,000	(See Attach'd)
~~Stopping~~ Core - 1500 Lvl	"			18,603.75	6,765	2.75	7,416	2.75
~~Drifting~~ " - 2500 "	"			19,362.00	6,454	3.00	7,000	3.00
~~Trsfr~~ D.D.Sta. 2500 "	Each			3,600.00	6	600.00	6	600.00
Trsfr Sta 2500 "	"			1,500.00	3	500.00	3	500.00
TOTAL DISTRIBUTED COSTS		2289.50 ~~2,567.80~~		$294,412.39				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased				17,549.07				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		~~$2,567.80~~ -2289.50		~~$311,961.46~~ 305926.46				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Jan. 28/57 Operator Howe Sound Company - Chelan Division

Per [signature] Title Manager

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

/s/ John D Bardill

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

HOWE SOUND COMPANY

CHELAN DIVISION
HOLDEN, WASH.

January 28, 1957

EXTRA COPY
DMEA
RECEIVED FEB 15 1957

DATE	INITIALS	CODE

Mr. Wing Agnew, Member
DMEA Field Team, Region II
Defense Minerals Exploration Administration
c/o U. S. Bureau of Mines
1201 North Division Street
Spokane 2, Washington

Re: Docket No. DMEA 3142
Contract No. Idm-E644

Dear Mr. Agnew:

Enclosed please find five copies each of Forms MF104 and MF104A along with a statement showing the details of the costs to December 31, 1956 as set forth in Amendment No. 3.

Also enclosed are two copies of the diamond drill logs of hole No. U-15-232 drilled on the 1500 level. This hole is completed.

Our invoice in duplicate showing the amount due us is enclosed. We will appreciate it if you will make payment in the sum of $1,283.80 to this office.

Yours very truly,

J. S. Roper
Manager

JSR:be
Encl.

cc: V. H. Clarke

FORM 83A 1M 6-56 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

RECEIVED FEB 15 1957 D.M.E.A.

DIAMOND DRILLING RECORD

SHEET NO. 1
BY D.W.W.
DATE October 1956-January 1957

HOLE NO. U-15-232 MINE Holden LEVEL 1500
LOCATION 1500 Drift East of No. 3 Transfer at 662 1/2 Chute Section
BEARING N57°E DIP -1° LENGTH 1,315
LATITUDE OF COLLAR 19,908 DEPARTURE OF COLLAR 13,244 ELEVATION 3,568

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		0-3					3	Grey medium grained to fine grained massive amphibole schist
		3-6					3	Light grey medium grained foliated irregularly textured biotite diorite. Core loss 3' 0-6.
		6-17					11	Brown medium grained to fine grained "biotized peridotite". Core loss 2½' 6-11.
		17-18½					1½	Light grey medium grained foliated biotite diorite.
		18½-24½					6	Grey and brown medium grained to fine grained massive amphibole schist. Core loss 1½' 11-21.
		24½-28½					4	Same as 6-17.
		28½-50					21½	Blue grey medium grained to fine grained amphibole biotite schist.
		50-53					3	Green and grey medium grained foliated biotite diorite.
		53-54					1	Green medium grained to fine grained strongly chloritized schist?. (Possible fault)
		54-57					3	Brown medium grained to fine grained "biotized peridotite".
		57-73					16	Blue grey medium grained to fine grained faintly foliated diorite.
		73-89					16	Brown medium grained to fine grained "biotized peridotite".
		89-91					2	Light grey medium grained foliated biotite diorite.
		91-100					9	Same as 73-89 but generally coarser grained. Core loss 1½' 90-98.
		100-129					29	Light grey medium grained irregularly textured foliated biotite diorite. Core loss 1' 98-108.
		129-147					18	Green and light grey irregularly textured hornblende diorite about 50% replaced by light grey medium grained low mafic diorite.
		147-153					6	Brown medium grained to fine grained "biotized peridotite".
		153-159					6	Grey and light grey medium grained foliated biotite diorite. Core loss 1' 148-158.

FORM 83A 1M 6-56 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 2
BY D.W.W.
DATE October 1956-January 1957

HOLE NO. U-15-232 MINE Holden LEVEL 1500
LOCATION 1500 Drift East of No. 3 Transfer at 662 1/2 Chute Section
BEARING N57°E DIP -1° LENGTH 1,315
LATITUDE OF COLLAR 19,908 DEPARTURE OF COLLAR 13,244 ELEVATION 3,568

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		159-168					9	Same as 147-153. Core loss 3½' 158-168.
		168-173					5	Blue grey medium grained to fine grained foliated amphibole biotite schist.
		173-210					37	Green medium grained to coarse grained irregularly textured locally foliated hornblende diorite.
		210-227					17	Brown medium grained to fine grained "biotized peridotite".
		227 - 231					4	Blue grey medium grained to fine grained foliated diorite.
		231-241					10	Same as 210-227.
		241-246					5	Grey dioritic schist with "biotized peridotite" and green fine grained massive amphibole schist.
		246-252					6	Brown medium grained to fine grained biotized peridotite.
		252-282					30	Blue grey medium grained to fine grained massive amphibole biotite schist.
		282-287					5	Light grey medium grained faintly foliated biotite diorite.
		287-293					6	Grey medium grained biotite diorite.
		293-332					39	Blue grey medium grained to fine grained massive amphibole biotite schist.
		332-335½					3½	Grey medium grained foliated biotite diorite.
		335½-342					6½	Brown medium grained dioritic crystalline phlogopite schist.
		342-353					11	Green medium grained to fine grained massive amphibole schist.
		353-368					15	Grey medium grained to coarse grained foliated biotite diorite. Core loss 7½' 353-362.
		368-382					14	Light grey medium grained to fine grained irregularly textured biotite diorite.
		382-426					44	Dark green medium grained altered peridotite. Core loss 6' 402-413, 2' 413-416.
		426-432					6	Light grey medium grained foliated biotite diorite.
		432-439					7	Dark green medium grained altered peridotite with about 50% injection by light grey medium grained very irregularly textured biotite diorite.

FORM 83A 1M 6-56 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 3
BY D.W.W.
DATE October 1956-January 1957

HOLE NO. U-15-232 MINE Holden LEVEL 1500
LOCATION 1500 Drift East of No. 3 Transfer at 662 1/2 Chute Section
BEARING N57°E DIP -1° LENGTH 1,315
LATITUDE OF COLLAR 19,908 DEPARTURE OF COLLAR 13,244 ELEVATION 3,568

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		439-441					2	Grey medium grained to fine grained very faintly foliated diorite.
		441-443½					2½	Same as 432-439.
		443½-448½					5	Light grey medium grained foliated biotite diorite.
		448½-452½					4	Grey medium grained to fine grained somewhat irregularly textured altered peridotite.
		452½-482					29½	Same as 441-443½ with local diorite injection. Core loss 2½' 466-476.
		482-495½					13½	Green medium grained to fine grained massive amphibole schist.
		495½-500½					5	Blue grey medium grained to fine grained diorite.
		500½-506					5½	Green fine grained massive amphibole schist about 75% altered to medium grained to fine grained faintly foliated diorite.
		506-509					3	Dark grey medium grained to fine grained crystalline amphibole biotite schist.
		509-514					5	Light grey medium grained to coarse grained recrystallized biotite diorite.
		514-516					2	Dark grey medium grained to fine grained biotite diorite.
		516-517½					1½	Green medium grained to fine grained massive amphibole biotite schist.
		517½-530					12½	Light grey medium grained foliated biotite diorite.
		530-532					2	Grey medium grained to fine grained somewhat irregularly textured biotite diorite.
		532-535					3	Green fine grained amphibole schist about 80% replaced by strongly foliated medium grained biotite diorite.
		535-542					7	Green and grey medium grained to fine grained crystalline interbanded amphibole biotite schist.
		542-558					16	Dark green medium grained to coarse grained amphibole schist.
		558-564½					6½	Light grey medium grained somewhat irregularly textured biotite diorite.
		564½-568					3½	Green medium grained to fine grained massive amphibole biotite schist.

FORM 83A 1M 6-56 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 4
BY D.W.W.
DATE October 1956-January 1957

HOLE NO. U-15-232 MINE Holden LEVEL 1500
LOCATION 1500 Drift East of No. 3 Transfer at 662 1/2 Chute Section
BEARING N57°E DIP +1° LENGTH 1,315
LATITUDE OF COLLAR 19,908 DEPARTURE OF COLLAR 13,244 ELEVATION 3,568

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		568-572					4	Light grey medium grained irregularly textured biotite diorite.
		572-576					4	Same as 564½-568.
		576-581					5	Grey medium grained faintly foliated biotite diorite.
		581-602					21	Same as 564½-568.
		602-610					8	Grey medium grained strongly dioritic biotite schist.
		610-612½					2½	Light grey medium grained crystalline biotite schist.
		612½-627					14½	Grey and light grey medium grained to fine grained generally dioritized massive amphibole schist.
		627-656					29	Green and brown medium grained to fine grained interbanded amphibole and biotite schist.
		656-679½						Brown medium grained to fine grained
	A69839	656-661	Nil	Tr	Nil	Nil	5	amphibole biotite schist with pyrite.
		661-679½					18½	
		679½-687					7½	Blue fine grained massive amphibole schist.
		687-696					9	Similar to 679½-687. But with increased biotite.
		696-698½					2½	Light grey medium grained to fine grained phlogopite diorite. Core loss 1' 687-698.
		698½-699½	Nil	.025	.005	Nil	1	Grey medium grained dioritic crystalline schist with finely disseminated pyrite
		699½-704					4½	Light grey medium grained low mafic irregularly textured locally phlogopitic diorite.
		704-709					5	Grey medium grained to fine grained massive biotite schist.
		709-714					5	Grey medium grained very irregularly Textured low mafic diorite.
		714-720					6	Green medium grained sheared siliceous crystalline schist.
		720-726					6	Green medium grained to fine grained somewhat dioritic crystalline amphibole biotite schist.
		726-734					8	Brown medium grained to fine grained somewhat irregularly textured phlogopite diorite.

FORM 83A 1M 6-56 C.P.

HOWE SOUND COMPANY
CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 5
BY D.W.W.
DATE October 1956-January 1957

HOLE NO. U-15-232 MINE Holden LEVEL 1500
LOCATION 1500 Drift East of No. 3 Transfer at 662½ Chute Section
BEARING N57°E DIP /1° LENGTH 1,315
LATITUDE OF COLLAR 19,908 DEPARTURE OF COLLAR 13,244 ELEVATION 3,568

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		734-741					7	Blue grey medium grained dioritic crystalline amphibole biotite schist.
		741-749					8	Green and brown medium grained to fine grained crystalline amphibole and biotite schist
		749-759					10	Light grey medium grained to fine grained hightly dioritized siliceous crystalline schist. Core loss 4½' 749-759.
		759-767					8	Green and brown medium grained to fine grained interbanded crystalline amphibole and biotite schist.
		767-773					6	Blue grey medium grained to fine grained diorite.
		773-797(?)					24	Light grey medium grained irregularly textured biotite diorite.
		797(?)-820(?)					23	Green medium grained to fine grained crystalline amphibole schist. Core loss 10' 779-799, 2½' 799-804.
		820-823					3	Grey medium grained to fine grained foliated biotite diorite.
		823-828					5	Green medium to fine grained amphibole biotite schist.
		828-829					1	Light grey medium grained somewhat irregularly textured biotite diorite. Core loss 3' 810-829.
		829-835					6	Brown medium grained to fine grained crystalline amphibole biotite schist.
		835-841					6	Grey medium grained to fine grained very faintly foliated diorite.
		841-869					28	Same as 829-835. Core loss 5½' 849-859, 4' 859-869.
		869-887					18	Dark green medium grained to fine grained massive amphibole biotite schist. Core loss 4' 869-879.
		887-908					21	Brown medium grained to fine grained crystalline amphibole biotite schist. Core loss 4' 889-899, 3' 899-909.
		908-958					50	Light grey medium grained irregularly textured biotite diorite. Core loss 3' 899-909, 3' 949-958.
		958-969					11	Green fine grained crystalline amphibole schist. Core Loss 1' 958-969.

FORM 83A 1M 6-56 C.P.

HOWE SOUND COMPANY

CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 6

BY D.W.W.

DATE October 1956-January 1957

HOLE NO. U-15-232 MINE Holden LEVEL 1500

LOCATION Drift East of No. 3 Transfer at 662 1/2 Chute Section

BEARING N57°E DIP +1° LENGTH 1,315

LATITUDE OF COLLAR 19,908 DEPARTURE OF COLLAR 13,244 ELEVATION 3,568

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE CU.	AG.	AU.	ZN.	WIDTH	GEOLOGY AND REMARKS
		969-976					7	Grey medium grained to fine grained very faintly foliated dioritic schist.
		976-982					6	Light grey medium grained to coarse grained foliated biotite diorite.
		982-986					4	Dark brown medium grained to fine grained partially dioritic crystalline biotite schist.
		986-1016					30	Same as 976-982. Core loss 3' 999-1003, 1' 1003-1011, 1' 1011-1019.
		1016-1028					12	Green medium to fine grained dioritic massive amphibole schist.
		1028-1030½					2½	Brown medium grained to fine grained dioritic crystalline biotite schist.
		1030½-1035					4½	Green fine grained massive amphibole schist.
		1035-1041					6	Same as 1028-1030½. Core loss 1' 1031-1041.
		1041-1042½					1½	Light grey medium grained chloritic phlogopite (?) diorite.
		1042½-1050½					8	Green medium grained to fine grained crystalline amphibole schist. Lime silicate band at 1046.
		1050½-1055					4½	Light grey medium grained foliated biotite diorite.
		1055-1071					16	Dark grey medium grained to fine grained massive amphibole biotite schist light green lime silicate zones (with coarse grained garnet) 1055½-1056½, 1060½-1071. Core loss 7½' 1061-1071.
		1071-1082					11	Light grey medium grained to coarse grained locally foliated biotite diorite.
		1082-1101					19	Dark green grey medium grained to fine grained crystalline amphibole biotite schist. Lime silicate band at 1095.
		1101-1109					8	Light grey medium grained to coarse grained foliated biotite diorite.
		1109-1130					21	Grey medium grained to fine grained crystalline amphibole biotite schist.
		1130-1165					35	Dark fine grained amphibole schist.
		1165-1181					16	Grey medium grained to fine grained dioritic crystalline amphibole biotite schist.
		1181-1183					2	Light green medium grained faintly foliated amphibole diorite.

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CHELAN DIVISION

DIAMOND DRILLING RECORD

SHEET NO. 7

BY D.W.W.

DATE October 1956-January 1957

HOLE NO. U-15-232 MINE Holden LEVEL 1500

LOCATION 1500 Drift East of No. 3 Transfer at 662 1/2 Chute Section

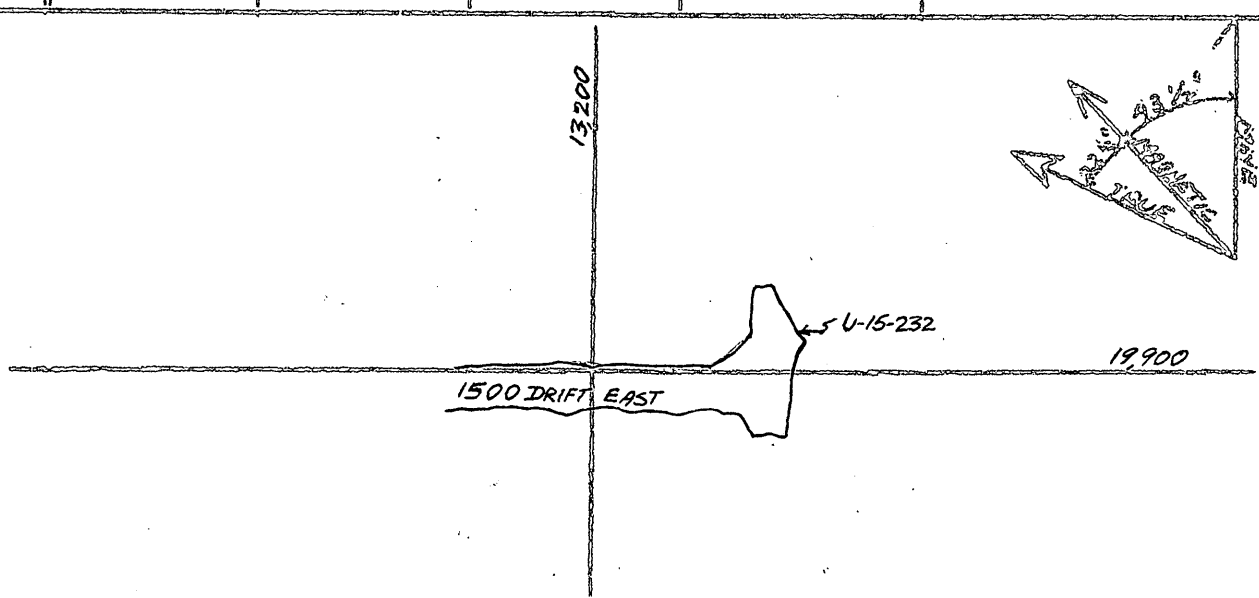
BEARING N57°E DIP ∠ 1° LENGTH 1,315

LATITUDE OF COLLAR 19,908 DEPARTURE OF COLLAR 13,244 ELEVATION 3,568

DATE	SAMPLE NO.	FOOTAGE	ASSAY VALUE				WIDTH	GEOLOGY AND REMARKS
			CU.	AG.	AU.	ZN.		
		1183-1235					52	Green medium grained to fine grained amphibole schist.
		1235-1243					8	Grey medium grained irregularly textured biotite diorite.
		1243-1251½					8½	Green medium grained to fine grained crystalline amphibole schist.
		1251½-1303½					52	Light grey medium grained to coarse grained irregularly foliated biotite diorite.
		1303½-1315					11½	Light grey medium grained foliated biotite diorite.
		-END OF HOLE-						

DIAMOND DRILL HOLE SURVEY

Latitude 19,908 Longitude 13,244 Elevation 3,568' HOLE NO. U-15-232

Feet From Collar	Magnetic Bearing	True Bearing	Mine Bearing	Inclination	Remarks
1			N57°E	+1°	
250	S73°E	S50½°E	N63½°E	-6°	
500	N78°E	S79½°E	N34½°E	-3°	
1000	N87°E	S70½°E	N43½°E	-6°	

RECEIVED FEB 15 1957 D.M.E.A.