DEFENSE MINERALS EXPLORATION ADMINISTRATION

Iron and Ferro-Alloys Division Date ~~February 4, 1958~~

Semi-Annual Report - Certified Project Date Jan. 1, 1957 to June 30, 1957

DMEA No. 2436 Operator Northfield Mines, Inc. Contract No. Idm-E 334

Ore Reserves

Ore Estimates	82,500	Tons	Inferred	Analysis	0.33% cobalt 0.62% copper
Original (DMEA)	82,500*				
Increase (Operator)	None				
Total	82,500				
Decrease (Production)	None				
Net Available					

Investment

Shafts			Winzes			Drifts & Crosscuts		
Size	Feet	Cost	Size	Feet	Cost	Size	Feet	Cost

Raises			Drilling			Rehabilitation	
Size	Feet	Cost	Type & Size	Feet	Cost	Description	Cost

Facilities

Mine Plant		Mill		Roads	
Description	Cost	Description	Cost	Description	Cost

No work since June 21, 1955. and no change in ore estimate.

Remarks

File with 400 Docket

Northfield Mine 2436

Ore Reserve Estimate, S.P. Hanna

Average Assays Nos. 5 Zone, 7000 Level

Place	Length of Ore	Co %	Cu %	L × Co	L × Cu
DH-7001	5.0	.264	.75	1.320	3.75
	7.0	.176	.42	1.232	2.94
	5.5	.234	.32	1.287	1.76
	3.5	.880	3.80	3.080	1.33
	6.5	.557	.90	3.621	5.85
	5.0	.381	.35	2.096	1.93
	11.0	.234	.32	2.574	3.52
	10.0	.234	.30	2.340	3.00
	54.0	Av .325	Av .[illegible]	17.550	24.08
		Co .381			
7000 Main XC-E Wall	4.0	.323	1.23	1.292	4.92
	5.0	.411	.70	2.055	3.50
	4.5	.190	.60	.855	2.70
	4.5	.484	1.18	2.178	5.31
	[illegible]	[illegible]	.27	0.475	1.35
	5.	1.042	1.56	5.210	7.80
	4.5	.278	.80	1.251	3.60
	5.0	.535	.88	2.675	4.40
	5.0	.403	1.21	2.015	6.05
	5.0	.25	.58	1.250	2.90
	5.0	.24	1.03	1.2[illegible]	5.15
	4.5	.17	.45	.765	2.03
	4.0	.23	.43	.920	1.72
	61.0	Av 0.363	Av 0.843	22.141	51.43
		Co .468			

822
038
850

Average Assays, cont.

Place	Length of Cut	Co %	Cu %	L × Co	L × Cu
7000, Main Level, W. Wall	4.5	.249	.53	1.121	2.385
	4.5	.322	1.56	1.449	7.020
	5.0	.132	.35	0.660	1.750
	5.0	.278	1.03	1.390	5.150
	4.5	.176	.25	.792	1.125
	5.0	.367	.63	1.835	3.150
	5.0	.594	2.88	2.970	14.400
	3.0	.43	.68	2.150	3.400
	5.0	.24	.33	1.200	1.650
	4.5	.25	.40	1.125	1.800
	4.0	.16	.38	0.640	1.320
	5.0	.125	.68	0.625	3.400
	5.0	.191	.50	.955	2.500
62.0	Av.	0.273	0.791	16.912	49.050
		Co = .372			

DH 701-3	4	.469	1.21	1.876	4.840
	5	.660	.73	3.300	3.650
	5	.469	1.05	2.345	5.250
	3	.679	.55	2.037	1.650
	3	.073	.22	.219	.660
	4.5	.374	.83	1.683	3.735
	2.5	.477	1.27	1.193	3.175
	3	.763	2.10	2.289	6.300
30.0	Av.	.498	0.975	14.942	29.260
		Co = 0.620			

Place	Length of Core	Assay Co %	Assay Cu %	L × Co	L × Cu
DH 701A1	8.0	.307	0.65	2.456	5.20
	2.0	.425	1.96	.850	3.92
	8.	.264	0.55	2.112	4.40
	7	.220	0.32	1.540	2.24
	6.5	.234	0.27	1.521	1.76
.253	5.5	.220	0.90	1.210	4.95
.073	9.0	.220	0.20	1.980	1.80
.320	1.5	.234	2.34	0.351	3.51
	47.5	Av. .253	Av 0.585	12.020	27.78
			Co = 0.324		
701.1	6.	.352	0.48	2.112	2.88
	10.	.234	0.25	2.340	2.50
	8.	.220	0.15	1.760	1.20
	3.	.381	0.12	1.143	0.36
.313	9.	.220	0.15	1.980	1.35
.02	9.	.337	0.07	3.033	0.63
.337	5.	.660	0.17	3.300	0.85
	50.0	Av. 0.313	Av. 0.195	15.668	9.77
			Co = 0.337		
Overall Average					
DH 700-1	54.0	0.325	0.46	17.550	24.08
700 Main-Wall	54.0 ⊗	0.363	0.843	19.602	45.52
700 Hanging-Wall	54.0 ⊗	0.273	0.791	14.742	42.71
701-3	30.0	0.498	3.975	14.940	119.26
701A-1	47.5	0.253	0.585	12.020	27.78
701-A	50.0	0.313	0.195	15.668	9.77
	289.5	Av. 0.327	Av. 0.619	94.524	179.12
			Co = .404		

.32%
.01
.40

⊗ Reduced to perpendicular to length of ore body.

SPH

How about tonnage between bottom of oxidized zone and top of 100' block ($\frac{1}{2}$ above & $\frac{1}{2}$ below 7000) I'm happy to see it left out if that's your intention. In effect that uses 7000 grades for a block 100 feet above and 0 feet below the 7000.

✓ Intended to omit that, as highly questionable. S.P.H.

Ore Reserve

Merle 5 Zone

Using map titled "Assay Map 7000 Level" in Brown's Final Report, 5/23/53

Average Widths -

50' S. of DH. 700-1	= 0.
Main Crosscut ⊗	= 54
DH. 700-1	= 57
" 701-3	= 30
" 701-A1	= 47.5
" 701-1	= 50.0
50' N. of 701-1	= 0.0
	232.5

7300 — oxidized ??? — 50 feet, 50 feet

Average = 33.2
Say 33.0

Estimating oxidized zone down 200' from average surface 7300 - 200 = 7100 and the values equal to 7000 level average at ½ that distance above level = 50 feet and equal distance below level = 50 feet

Tons of reserve, assuming 12 cuft per ton

$$= \frac{33 \times 800 \times 100}{12}$$

$$= 82{,}500 \text{ tons}$$

S. O. Holt
11-18-55

⊗ reduced by approximately 1/2 per geologists topographic sections

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DMEA
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DATE | INITIAL | CODE
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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 exam: December 6, 1957

Operator: Northfield Mines, Inc.
230 Park Avenue
New York 17, N. Y.

Assignee: Idaho Metallurgical Industries

Mine name: Stevenson property

County and State: Lemhi County, Idaho

Docket number and commodity: DMEA-2436 (cobalt-copper)

Contract number: Idm-E334

Property inactive. No change in royalty status since report of January 1 to June 30, 1956.

According to Mr. E. B. Douglas, manager, Calera Mining Company, Cobalt, Idaho, one diamond drill hole about 900 feet long was drilled in September 1957. The hole was drilled on the Merle No. 3 claim to explore the cobalt and copper mineralization at depth. The firm of Shennon and Full directed this work.

Signed: Wm. M. Romischer (Engineer)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period: January 1 to June 30, 1957 Date of exam: June 5, 1957

Operator: Northfield Mines, Inc., 230 Park Avenue, New York 17, N. Y.

Mine name: Stevenson property

County and State: Lemhi County, Idaho

Docket number and commodity: DMEA-2436 (cobalt-copper)

Contract number: Idm-E334

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DMEA
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DATE	INITIALS	CODE
7/11	P	220
11	Com	100

Project inactive. No change ~~in status~~ since report of January 1 to June 30, 1956.

Signed: D. D. Walker (Engineer)

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

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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JAN 22 1957
D.M.E.A.

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period: July 1 to December 31, 1956 Date of exam: Dec. 6, 1956

Operator: Northfield Mines, Inc., 230 Park Ave., New York 17, N. Y.

Mine name: Stevenson property

County and State: Lemhi County, Idaho

Docket number and commodity: DMEA-2436 (cobalt-copper)

Contract number: Idm-E334

Project inactive. No change in status since report of January 1 to June 30, 1956.

Signed: D. D. Walker (Engineer)

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

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JUL 18 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period: January 1 to June 30, 1956 Date of exam: May 21, 1956

Operator: Northfield Mines, Inc., 230 Park Ave., New York 17, N. Y.

Mine name: Stevenson property

County and State: Lemhi County, Idaho

Docket number and commodity: DMEA-2436 (cobalt-copper)

Contract number: Idm-E334

Date of contract: June 2, 1952

Date of certification: December 21, 1955

Expiration date of royalty payments: June 2, 1967

Total amount of contract: $233,150.00

Total expenditures under contract: $ 96,862.62

Amount of Government participation at 70%: $ 67,803.83

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

original estimate of reserves (from final Engr.-Geol. report):	82,500 tons of 0.33% cobalt and 0.62% copper inferred
Increase (or decrease) of reserves by work performed subsequent to original and last Field Team estimates:	none
Revised estimate of reserves:	none
Production this period:	none
Amount of previous production (since date of contract):	none
Total DMEA production to date:	none
Percent of revised reserves mined:	none

Production remarks:

No ore has been produced from this property.

Other remarks:

The access road to the mine was blocked by snow which made it impossible to make an examination. It was learned by local inquiry that the status of the Northfield mine had not changed since the final inspection was made on June 21, 1955.

Signed: A. L. Service (Engineer)

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

ADDENDUM TO
SEMI-ANNUAL REPORT OF CERTIFIED PROJECT
March 15, 1956

Reporting period: July 1, 1955 to December 31, 1955

Operator: Northfield Mines, Inc.

Mine name: Stevenson Property

County and State: Lemhi County, Idaho

Docket No. and Commodity: DMEA-2436 (cobalt-copper)

Contract No.: Idm-E334

Other remarks (Investments, etc.):

Idaho Metallurgical Industries, Inc. is conducting a DMEA program to explore for cobalt on Big Deer Creek, a few miles north of the Northfield property. Initial phases of trenching and surface diamond drilling have been completed.

Signed: A. L. Service (Engr.)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Period: July 1, 1955 to December 31, 1955

Docket No.: DMEA-2436
Contract No.: Idm-E334

Operator: Northfield Mines, Inc., 230 Park Ave., New York 17, N. Y.

Commodity: Cobalt-copper

Mine name: Northfield

County: Lemhi
State: Idaho

Date of contract: June 2, 1952

Date of certification: December 21, 1955

Expiration date of royalty payments: June 2, 1967

Date of examination for this report: No examination made

Total amonnt of contract: $233,150.00

Total expenditures under contract: $ 96,862.62

Amount of Government participation at 70%: $ 67,803.83

Royalty payments this period: none

Previous royalty payments: none

Total royalty payments to date: none

% Loan repayment completed: none

Amount of royalty due: none

Royalty remarks:

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Original estimate of reserves
(from final Engr.-Geol. report): 82,500 tons of 0.33% cobalt and 0.62% copper inferred

Increase (or decrease) of reserves
by work performed subsequent to
expiration or termination of contract: none

Revised estimate of reserves:

Production this period (ore or concentrates): none

Amount of previous production (since date of contract): none

Total DMEA production to date: none

% of revised reserves mined:

Production remarks:

No ore has been produced from this property.

Other remarks: (Investments, etc.)

Signed: A. L. Service (Engr.)

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

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
July 26, 1955

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: A. L. Service, Mining Engineer, Bureau of Mines

Subject: Final inspection and verification of work units completed, Docket No. DMEA 2436 (cobalt-copper), Northfield Mines, Inc., Lemhi County, Idaho, Contract No. Idm-E334

A final inspection was completed at the Stevenson property on July 21, 1955. All of the drifting and crosscutting that was completed at the property was measured. These measurements totaled 861.5 feet as compared with a total of 860.0 feet reported in an interim report, dated October 13, 1953, by V. Z. Johnson, former mining engineer, U.S.B.M.

An interim audit covering all costs to April 30, 1953 was made by Mr. Robert M. Hull, DMEA auditor. The audit has been accepted and constitutes a verification of all work units completed to April 30, 1953. The work units comprised:

Crosscutting and drifting	766.2 feet
Diamond drilling	2028.0 "
Trenching	425.5 hours
Roads and trails	141.0 "

Additional work completed during the period from May to September 1953 and claimed by the Operator follows:

Drifting and crosscutting	74.0 feet
Diamond drilling	400.0 "
Assays	92 units

The drifting and crosscutting footages have been verified in the field, and maps and invoices have made it possible to verify the other units.

In his May-September 1953 MF-104A the Operator erroneously shows a cumulative total of 898 feet for drifting and crosscutting when the correct total should be 840.2 feet. The Operator did some drifting and crosscutting on his own account which was not claimed on his MF-104's.

Org. & 3 cys - Wash.
USGS (2)
DMEA
Auditor Mavor
AD
ALS/he

A. L. Service

A. L. Service

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

August 23, 1954

Memorandum

To: DMEA Field Team, Region II

From: Howard B. Nickelson, Geologist, U. S. Geological Survey

Subject: Docket No. DMEA-2436 (cobalt-copper), Northfield Mines, Inc., Lemhi County, Idaho, Contract No. Idm-E334

During my visit on August 5, 1954, in the Cobalt area, it was reported Roy Full and Phil Shenon are continuing their geologic work on the property. It was also reported that they expect to use their D-8 bulldozer for another two-week period. I did not visit the property because the consulting geologists will no doubt submit a report, and at that time an inspection of the property can be planned.

Distribution:
DMEA (Orig. &3)
USBM (2)
Docket
Nickelson

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

June 29, 1954

Memorandum

To: DMEA Field Team, Region II

From: Howard B. Nickelson, Geologist, U. S. Geological Survey

Subject: Docket No. DMEA-2436 (cobalt-copper), Northfield Mines, Inc., Lemhi County, Idaho, Contract No. Idm-E334.

During my recent visit in Cobalt, I was informed by individuals that Northfield Mines, Inc., had hired Phil Shenon and Roy Full to do rather extensive geological work in the Northfield and adjoining areas. They will be aided by two D-8 bulldozers.

Roy Full visited this office on June 23, 1954, to obtain geological information from Jack Vhay, geologist, Geological Survey, on the Blackbird area. Mr. Full stated they were hired through Northfield's New York office.

No attempt has been made as yet to start the DMEA crosscut to the Merle 3 zone.

A final report submitted by the Eureka office has been received in this office.

Distribution:
DMEA (orig. & 3)
USBM (2)
Docket
Nickelson

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

1201 N. Division St.
Spokane 2, Washington
October 13, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: V. Z. Johnson, Mining Engineer, Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho, Contract No. Idm-E334, Docket No. DMEA 2436 (cobalt-copper)

The inspection was made on October 4 with Milo Manz and George Mitchell, Jr., operator's engineers and the only personnel now employed at the mine.

Project funds have been nearly exhausted and a proposed extension of the contract is held up pending ownership clarification for one claim in the property group. During the past few months some diamond drilling has been completed and 22 feet of crosscut has been started for the proposed project extension - all at the Operator's own expense.

Twenty-four inch gauge, 20-lb. track now replaces all the old 18-inch gauge lighter track. The cross section required is 8x10 feet, timbered with 12-inch diameter posts and caps at 2 feet to 5 feet centers supporting occasional booms and spiling.

Total contract units completed remain as follows:

7000 adit crosscut	265 feet	
701 drift north	254 feet	
702 drift south	282 feet	
701 crosscut	59 feet	
Total units Item 8 (adit)		860 feet
Diamond drilling		3028 feet
Trenching		425 hours
Trails and drill sites		150 hours

Total for 701 drift north was incorrectly shown as 212 feet in the tabulation of totals submitted with the July 5 inspection report.

The Operator's diamond drilling developed the low-grade cobalt copper zone west of drift No. 701 north with 20 feet of core from hole No. 701-5, assaying 0.64 percent cobalt and 0.27 percent copper between 105 and 125 feet; the hole was drilled 242 feet 75° W. from about 244 feet in 701 drift north. Holes No. 701-3 and 701-4 were drilled due west but at 0° and minus 30° respectively from about 75 feet in 701 drift north. The ore zones were cut between 65 and 75 feet and between 93.5 - 96.5 feet in the horizontal hole. There was a composite sample taken on the minus 30° hole from 167.5 - 108.5 feet which assayed 0.33 percent cobalt and 0.81% copper.

Mr. Manz stated that Mr. Sharpe of the Howe Sound Company had expressed his permission to allow Northfield an easement through the disputed David No. 18 claim, while its ownership is being determined. Mr. Manz and Mr. Mitchell are catching up on surveying details while the proposed contract extension is being studied.

V. Z. Johnson

V. Z. Johnson

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
AD
VZJ/he

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

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OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May thru September, 1953 Docket No. DMEA 2436 Contract No. Idm 0334
Operator's Name Northfield Mines, Inc. Minerals cobalt-copper
Address % A. J. O'Connell, Eureka, Nevada
Contract Amount, $ 233,150.00 Government Participation: 70% Amount, $ 163,205.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Contracts						
Drilling	2,000.00	19,357.00	21,357.00			
Bulldozing		7,533.00	7,533.00			
Drifting	4,125.00	3,790.52	7,915.52			
Snow Removal		1,808.80	1,808.80			
(2) Labor & Supervision						
Labor		20,958.83	20,958.83			
Supervision		4,200.00	4,200.00			
Technical Services		2,500.00	2,500.00			
(3) Op.Mat'ls & Sup:						
Bunkhouse Furnish.		768.25	768.25			
Cookhouse Furnish.		1,020.38	1,020.38			
Powder,caps,fuse,etc		1,546.67	1,546.67			
Steel		867.89	867.89			
Pipe & Fittings		1,643.66	1,643.66			
Mine Rail		1,894.11	1,894.11			
Ventube		488.65	488.65			
Diesel Fuel, etc.		2,350.94	2,350.94			
Gasoline		1,128.58	1,128.58			
Tools		862.98	862.98			
Eng. & Geo. Sup.		728.07	728.07			
Medical Supplies		113.30	113.30			
Core Boxes		235.20	235.20			
Mine Timber		2,143.87	2,143.87			
(4) Operating Equipment						
Rented		8,401.90	8,401.90			
Purchased		1,601.79	1,601.79			
(6) New Bldgs & Improve.etc.		3,724.62	3,724.62			
(7) Miscellaneous						
Analytical	551.00	1,481.18	2,032.18			
Accounting Fees		1,039.81	1,039.81			
Travel for Engineer		1,000.00	1,000.00	6676.00	98761.62	105437.62
Telephone		350.00	350.00			
Automotive Repair		771.78	771.78			
Repair Parts-Machines		818.30	818.30			
Payroll Taxes		1,203.95	1,203.95			
Liability Insurance		1,209.13	1,209.13			
Boardinghouse Loss		543.46	543.46			
Cabin Rental		350.00	350.00			
Freight on Drill		325.00	325.00			
	$6,676.00	$98,761.62	$105,437.62			

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

$

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

- final Mfiod

(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. 6334 in accordance with the terms of the contract.

Signature /S/ Verdo Z Johnson Title Mining Engr Date 7-7-54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /S/ Stephen W Zoldok Title Mining Engr Date 6-15-55

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.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May thru September 1953 Docket No. DMEA 2436 Contract No. Idm E334

Operator's Name Northfield Mines, Inc. Minerals cobalt-copper

Address % A. J. O'Connell, Eureka, Nevada

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	ft	4125.00	74	60976.35	898	67.90		
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	ft	2000.00	400	21917.20	4752	4.61		
Churn								
Auger								
Stripping								
Trenching	hrs			5700.50	425½	13.40		
Test Pits								
Roads and Trails	hrs			1832.50	141	13.00		
Other		551.00		9684.66				
TOTAL DISTRIBUTED COSTS		6676.00		100,111.21				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased				1,601.79				
Initial Rehabilitation and Repairs				3,724.62				
New Buildings, Improvements, etc.								
TOTAL COSTS		6676.00		105,437.62				

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 6-16-54 Operator Northfield Mines Inc

Per [signature] Title Accountant

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: Unit cost reflects only DMEA Contract costs. Operators cost is considerably more.

(Instructions on reverse)

(For Government use only)

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 83-38475

NORTHFIELD MINES, INC.
Stevenson Property - Idaho

PROGRESS REPORT #12
May 1953

The total advance for the month was 11 feet, making a total 804.7 feet since the Adit was started.

7000 ADIT

The laying of 24" gage track in the main Adit was completed; forty pound rail was used from the portal to the 702 turnoff, and twenty pound rail was used between the 702 and 701 turnoffs. A number of sets had to be taken out and replaced with heavier timber. The Mancha trammer and the 47 cu. ft. rocker type cars were put into service the early part of this month.

701 DRIFT

The installation of 24" gage track, using twenty pound rail, was completed to the face of the drift, and drifting operations were resumed on May 31. Total advance for the month was 11 feet, and the face is now 208.1 feet from the P.C. in the 7000 adit. Heavy ground caused considerable delay and about twelve sets were replaced with heavier timber. The heading is now in green biotite schist that contains occasional quartz pods, and some sulfide mineralization. The formation has a strike of N 20 E, and is dipping 50 to 60 degrees to the west.

702 DRIFT

No advance this month. Started laying 24" gage track, using forty pound rail, and advanced to a point about forty feet from the P.C. in the 7000 Adit. In order to make room for the large ore cars the drift has been enlarged and the sets replaced with 12 and 14 inch timber.

DIAMOND DRILLING - UNDERGROUND

An underground diamond drilling program on the 7000 level was started this month, and the total footage drilled this period was 325 feet.

DD HOLE 701a-1

The hole was started and completed during this period, and the final depth of the hole was 110 feet. The hole was collared near the 701a crosscut, and has a bearing of S 80 W, with a zero degree inclination. Nine samples were sent out for assay.

LOG OF HOLE 701a-1

0	to	15.5'	---------Grey schist
15.5'	to	22.0'	---------Green biotite schist, little sulfides in quartz stringers
22.0'	to	22.5'	-------- Basic dike
22.5'	to	46.0'	-------- Green biotite schist with sulfide mineralation
46.0'	to	49.5'	-------- Basic dike
49.5'	to	63.5'	-------- Green biotite schist, small amount of sulfides
63.5'	to	69.0'	-------- Grey schist
69.0'	to	110'	-------- Intercalated, quartzite-grey schist

DD HOLE 700-1

Hole started and completed during the period, and final depth of hole was 85 feet. Hole was collared near 701 switch; bearing S 70 W, inclination zero degrees. Nine samples were sent out for assay.

Log of HOLE 700-1

0	to	15'	--- Grey schist, some iron staining
15'	to	38'	--- Green biotite schist with sulfide mineralizatic Arear between 21.5' and 27.5' contains some cobaltite.
38'	to	48.5'	--- Grey Schist
48.5'	to	77.5'	--- Green biotite schist with sulfides. Strong showing of copper between 54' and 56'.
77.5'	to	78'	--- Basic Dike
78'	to	85'	--- Intercalated, quartzite-grey schist

DD HOLE 701-1

Hole started and completed during this period with the final depth of the hole being 130 feet. Hole collared in the 701 drift about 190 feet from the 7000 Adit; bearing S 80 W, inclination zero degrees. Eleven samples were sent in for assay.

LOG OF HOLE 701-1

0	to	38'	------- Grey schist, some sulfides at 3, 14 & 29 feet.
38'	to	40'	------- Basic dike
40'	to	77.5'	----- Green biotite schist. At 71 feet there was some fault gouge material.
77.5'	to	103'	------ Grey schist.
103'	to	130'	------ Intercalated, quartzite-grey schist

DIAMOND DRILLING - SURFACE

DD HOLE D14

The drill site was prepared and the drill rig set up for drilling.

The drilling opeations will begin when drill casing for the hole is obtained. The hole will be collared about 89 feet from the north end of trench #32; bearing of the hole will be S 80 W, inclination -60 degrees.

GENERAL

Two 14 x 16 foot tents were set on wooden frames for housing purposes; and on May 26 two house trailers were brought in from Eureka. The balance of the labor was spent on maintenance, brush and timber slashing, and timber framing.

LABOR

The total man shifts worked were 385.

DRILLING

The total footage drilled was 325 feet.

DRIFTING

The total footage advance was 11 feet.

Respectfully submitted,

George W. Mitchell

by John K. Brozo

GWM/wp

NORTHFIELD MINES, INC.
Stevenson Property- Idaho

PROGRESS REPORT #13
June 1953

The advance for the month was 51.3 feet makeing a total of 856.0 feet since the adit was started.

701 DRIFT

All of the advance for the month was in 701 Drift. A curve to the west, to place the drift closer to the ore zone, was started and advance was fair during the first ten days. Pressure on the drift sets developed thirty to forty feet behind the face, breaking a number of posts and causing much delay while changing posts, placing doubling up sets and easing the pressure from others.

Soft biotite schist, containing a small amount of sulphide mineralization, was present.

702 DRIFT

Replacing the timbers on the curve leaving the 7000 Adit was continued on one shift per day. The old timbers, squeezed to a height of about 5½ feet, are being replaced by heavier timbers 6' x 8' in the clear. The ground is breaking from 10 to 12 feet above the new timbers, making a difficult repair job. It is expected that the new timber will remedy the trouble. Only about 30 feet remains to be repaired. The curve is part of the crosscut to be driven to the Merle #3 zone some 900 feet west and, while repairs are troublesome, the other alternative of repairing the 7000 Adit through the soft biotite schist would be more so.

DIAMOND DRILL HOLE #14

Advance was 519 feet from 0 to 519. The hole is laid out to intersect the Merle #3 zone at the 7000 Adit horizon, obtaining information that will be valuable in directing the exploration crosscut. It is hoped that the information will be positive but, if not, a second hole may be drilled. The expected depth of the hole is 650 feet.

Trouble in advancing the casing through an area of sandy material and crushed quartz pods, was experienced. Blasting ahead of the casing and, later, cementing solved the problem.

The hole penetrated alternate zones of quartzite, quartzite schist and biotite schist. A number of showings or iron oxide and arsenate stain were encountered at various places, indicating that the area between the Merle #5 and Merle #3, though not yet prospected on the surface or elsewhere, is good prospecting ground. It will, of course, be traversed by the 7000 crosscut when it is driven to explore the Merle #3. The showings also indicate almost complete oxidation to depths as great as 400 feet.

GENERAL

Four house trailers were moved from Eureka, Nevada to the 7000 Adit site and three house tents were erected in anticipation of this year's program.

The application for continuence of the contract with the Defense Minerals Exploration Administration has not yet been approved. The funds provided for the work last year were exhausted in April, so at least some of the financing durint the period May and June was the sole responsibility of Northfield. Because of the heavy expense of continuing the drifting, a decision was reached to shut down most of the work.

Repairs to 701 Drift and 702 Drift were continued on one shift to complete them. 701 should be in shape in a week while the 702 work may require 3 weeks to a month. Drilling hole #14 is continuing and several underground holes are planned to augment the drilling information already obtained. Some engineering work, including analysis of a number of geochemical (soil) samples taken on possible south extensions of the Merl #5 and Merle #3, is to be continued. It is hoped that the BMEA will extend the contract during July in order that the maximum amount of the present good weather may be utilized.

Respectfully submitted,

George W. Mitchell

GWM/m

NORTHFIELD MINE, INC.
Stevenson Property - Idaho

PROGRESS REPORT #14

July 1953

The work performed included 14 feet of drift repairs to 703 Crosscut, 151 feet of surface drilling at Hole #14 and 431.5 feet of underground drilling in 4 holes. Assessment work was completed on the two non-contiguius Duffy claims and 1235 feet of road was build as assessment work for the benefit of 20 claims below the Merle #3.

703 CROSSCUT

Advance for this period was 14 feet; three timber sets were placed on the curve and room was made for the next set. The face is now at a point s63°W, 26 feet from Survey Sta 70-6. Advance has been hampered by the continual caving of the face and back due to bad ground conditions. It is hoped that the ground will improve within the next 20 to 30 feet, at which point the crosscut should intersect the quartzite shhist. The work has been done on a one shift basis part of the month.

DRILL HOLE D14

The drill hole was stopped at a depth of 670 feet, total advance this period was 151 feet. The hole intersected beds of quartzite schist that were occasionally mineralized with small stringers of chalcopyrite and pyrite. None of the mineralized intersections were of sufficient strength or frequency to be identified as a positive intersection of the surface exposures aligned into what has been called the Merle 3 zone. There is considerable evidence that the zone dips to the east and should be intersected by the hole. If a westerly dip is present, Hole #14 would not reach the zone. A flatter hole has been laid

out but, for the present, it was decided to stop surface drilling to conserve funds.

DRILL HOLE D700-2

The hole was collared in the south wall of the 7000 Adit from drill station D700-1 to test continuity of the ore shoot indicated by 7000 Adit, holes D700-1 and others. The direction is S70°W at an inclination of -31°. It was drilled to a depth of 141 feet, total advance for the period being 141 feet. Green biotite schist and considerable fault gouge material was intersected from 0 to 63 feet both of which showed some sulfide mineralization. At 63 feet the quartzite schist, unmineralized, came in and continued to the bottom of the hole. There is good evidence that the mineralized zone was cut off by a fault complex that has shifted the Merle 5 zone to the south east.

DRILL HOLE D701-2

The hole was collared in the floor of 701 Drift near the 701 turnout and was drilled on a bearing of N65°E at an inclination of -63.5°. The purpose was to test the continuity of the structure exposed in the 7000 Adit yard. It was bottomed at 134.5 feet, making the total advance 134.5 feet. From the collar to 55' the rock was grey schist with occasional streaks of green biotite schist and small stringers of chalcopyrite and pyrite; 55' to 67' was basic dike with fault gouge at 67'; and from 67' to 134.5', bottom, the rock was grey schist changing to very quartzy grey schist at 119' and quartzite schist at 129'. The section from 67' to 134.5' showed very little mineralization except for sparse sulfides in 90' to 92' section. The fault complex previously mentioned has probably displaced the structure out of the line of the hole.

DRILL HOLE D701-3

The hole was collared in the west wall of 701 drift at a point 93' from the 701 drift turnout. Its bearing was S80°W and inclination 0°. The

Purpose was to test the continuity of the ore shoot indicated in the 7000 adit and D700-1. From the collar to 19', the rock was grey schist with some sulfide mineralization at 12' to 15.5', there was fault gouge at 19'; 19' to 71' was green biotite schist mineralized with small stringers of sulfides; 71' to the bottom at 120' the rock was quartzite schist. The main mineralized zones were from 60' to 77' and 93.4' to 96.5', showing good sulfide mineralization. The assays are not yet available.

DRILL HOLE D701-4

The hole was drilled beneathe Hole D701-3 on a S80°W bearing at an inclination of -30°. The depth on 7-30-53 was 36 feet, the total advance for the period. It logged grey schist from 0' to 32' with a small stringer of chalcopyrite and pyrite at 25.5'. From 32' to 36' it showed green biotite schist that panned cobaltite. The planned depth of the hole is approximately 150 feet.

GEOCHEMICAL WORK

A total of 131 soil samples were taken for analysis. Assay results are shown on the enclosed geochemical maps. Earlier in the month a small laboratory was constructed for assaying soil samples and logging cores.

Respectfully submitted,

George W. Mitchell

GWM/m

NORTHFIELD MINES, INC.
Stevenson Property - Idaho

PROGRESS REPORT #15
August 1953

The work performed included 28 feet in 703 crosscut and 298 feet of underground diamond drilling in two holes, D701-4 and D701-5.

All operationsat the property were suspended at the end of the month because of lack of funds. The only employees at the property are the superintendent and an engineer.

703 CROSSCUT

The bad ground adjacent to the 702 Drift turnout was caught up by a crew of two men and the face carried forward into better ground ready to be continued toward the Merle #3 zone when underground work is resumed.

Some good cobaltite, covellite, pyrite stringers were intersected in the crosscut, though they were erratic. One face assayed 0.44% cobalt and 0.88% Copper.

D701-4 DIAMOND DRILL HOLE

Advance was from 36 to 154 feet, a total of 118 feet.

The location of the hole, log and assays are shown on the accompanying plan and section. The hole was drilled to obtain further information on the mineralized shoot cut by Hole D700-1, the 7000 Adit and Hole D701-3. The zone is present from 60 to 110 but assays are not quite so good as Hole D701-3 above it.

D701-5 DIAMOND DRILL HOLE

Advance was from 0 to 180, a total of 180 feet.

The hole was drilled to prospect the area ahead of 701 Drift adjacent to surface hole #d8. The shear is present from 105 to 128, somewhat narrower but in its projected location.

GENERAL

In the latter part of the month, Calera did some trenching on our David #18 claim (which covers a fraction between the Merle #5 and Merle #3 claims) and on our David #23 claim, north and east of the Merle #5. Calera had staked claims over all of the Stevenson property in 1951 at approximately the same time we were surveying the Stevenson properties and staking intervening ground.

Our attorney has notified Calera that they were in trespass and is prepairing to file court action to establish title to the ground. It is believed that the title to the fraction on the David #18 can be defended successfully but the ground covered by the David #23 might be a little more difficult.

The David #18 ground must be crossed by the 703 crosscut from the Merle #5 ore zone to the Merle #3 zone. The Defense Minerals Exploration Administration is hold up this year's contract (for $125,000) until title can be established or until Northfield can put up a bond to protect the Government against any damages that might arise from defective title.

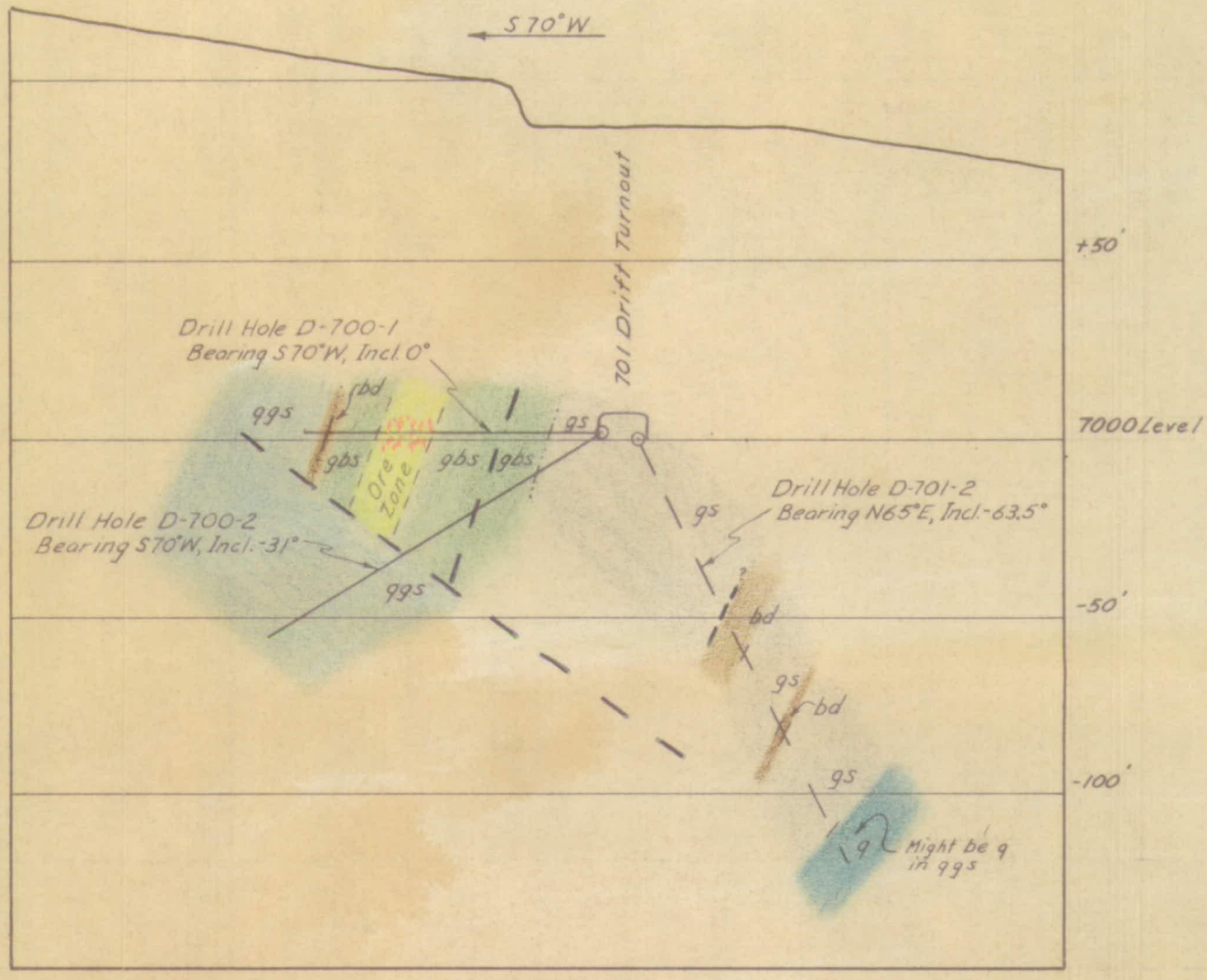
If Calera contests the court action, which seems probable, it may take three months to clear up the matter. Other methods of obtaining the DMEA contract are being studied. Surveying location monuments of the Calera claims, photographing conditions and other details of prepairing our case are in progress.

Respectfully submitted,

George W. Mitchell

GWM/m

Note: Calera has since consented to allow Northfield Mines, Inc. to cross the ground in question without prejudicing either's right to settle the dispute of ownership by agreement or court action.



ASSAY RESULTS

No.	Interval	Type	% Co	% Cu
D-700-2-1	0-10'	Core	0.022	0.15
-2	10'-20.5'	"	0.029	0.07
-3	24.5'-31'	"	0.220	0.43
-4	31'-36'	"	0.059	1.54
-5	36'-41'	"	0.183	1.01
-6	41'-48'	"	0.044	0.50
-7	48'-53'	"	0.044	0.60
-8	53'-63'	"	0.059	0.17
-9	63'-73'	"		
-10	73'-93'	"		
-11	93'-107'	"		
-12	107'-122'	"		
-13	131'-141'	"		

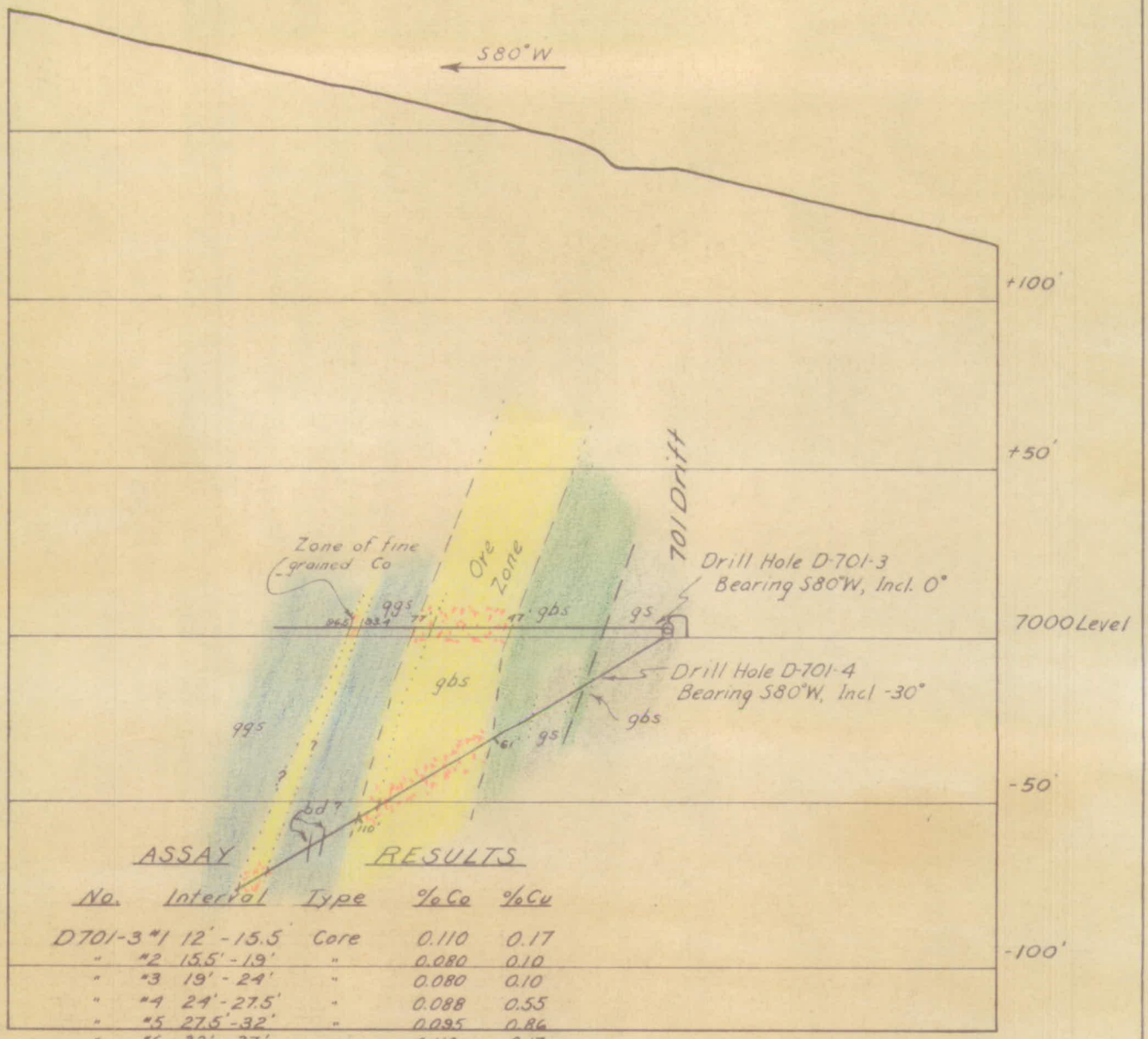
LEGEND

- gs — Grey Schist
- q — Quartzite
- qgs — Quartzite-Grey Schist (intercalated)
- qtz — Quartz
- qms — Quartz Mica Schist
- gbs — Green Biotite Schist
- bd — Basic Dike
- ms — Mineralization-qtz., Fe gossan & Sulfides
- ms — Mineralization-Cobalt
- Contact
- Fault

NORTHFIELD MINES, INC.
Blackbird Mining District, Idaho

SECTION 1

Scale: 1" = 50'



ASSAY RESULTS

No.	Interval	Type	%Co	%Cu
D701-3 #1	12'-15.5'	Core	0.110	0.17
" #2	15.5'-19'	"	0.080	0.10
" #3	19'-24'	"	0.080	0.10
" #4	24'-27.5'	"	0.088	0.55
" #5	27.5'-32'	"	0.095	0.86
" #6	32'-37'	"	0.110	0.17
" #7	37'-42.5'	"	0.095	0.38
" #8	42.5'-47'	"	0.102	0.40
" #9	47'-50'	"	0.763	2.10
" #10	50'-52.5'	"	0.477	1.27
" #11	52.5'-57'	"	0.374	0.83
" #12	57'-60'	"	0.073	0.22
" #13	60'-63'	"	0.697	0.55
" #14	63'-68'	"	0.469	1.05
" #15	63'-68'	Sludge	0.249	1.39
" #16	68'-73'	Core	0.660	0.73
" #17	68'-73'	Sludge	1.027	0.88
" #18	73'-77'	Core	0.469	1.21
" #19	93.4'-96.5'	"	0.822	0.30
D701-3 #20	93.5'-96.5'	Sludge	1.057	1.21
D701-4 #1	31.2'-34'	Core	0.103	0.50
" #2	34'-36'	"	0.117	0.48
" #3	51'-54'	"	0.103	0.71
" #4	54'-57.5'	"	0.088	0.63
" #5	57.5'-61.5'	"	0.073	0.43
" #6	61.5'-67.0'	"	0.308	0.68
" #7	67'-73'	"	0.367	1.95
" #8	73'-78'	"	0.396	0.58
" #9	78'-86.5'	"	0.147	0.68
" #10	86.5'-94'	"	0.367	0.43
" #11	95'-102'	"	0.624	0.93
" #12	102'-108.5'	"	0.374	1.14
" #13	129'-132.5'	"	0.132	0.76
" #14	57.5'-108.5'	Composite	0.337	0.81
D701-4 #15	141'-152'	Core	0.147	0.63

LEGEND

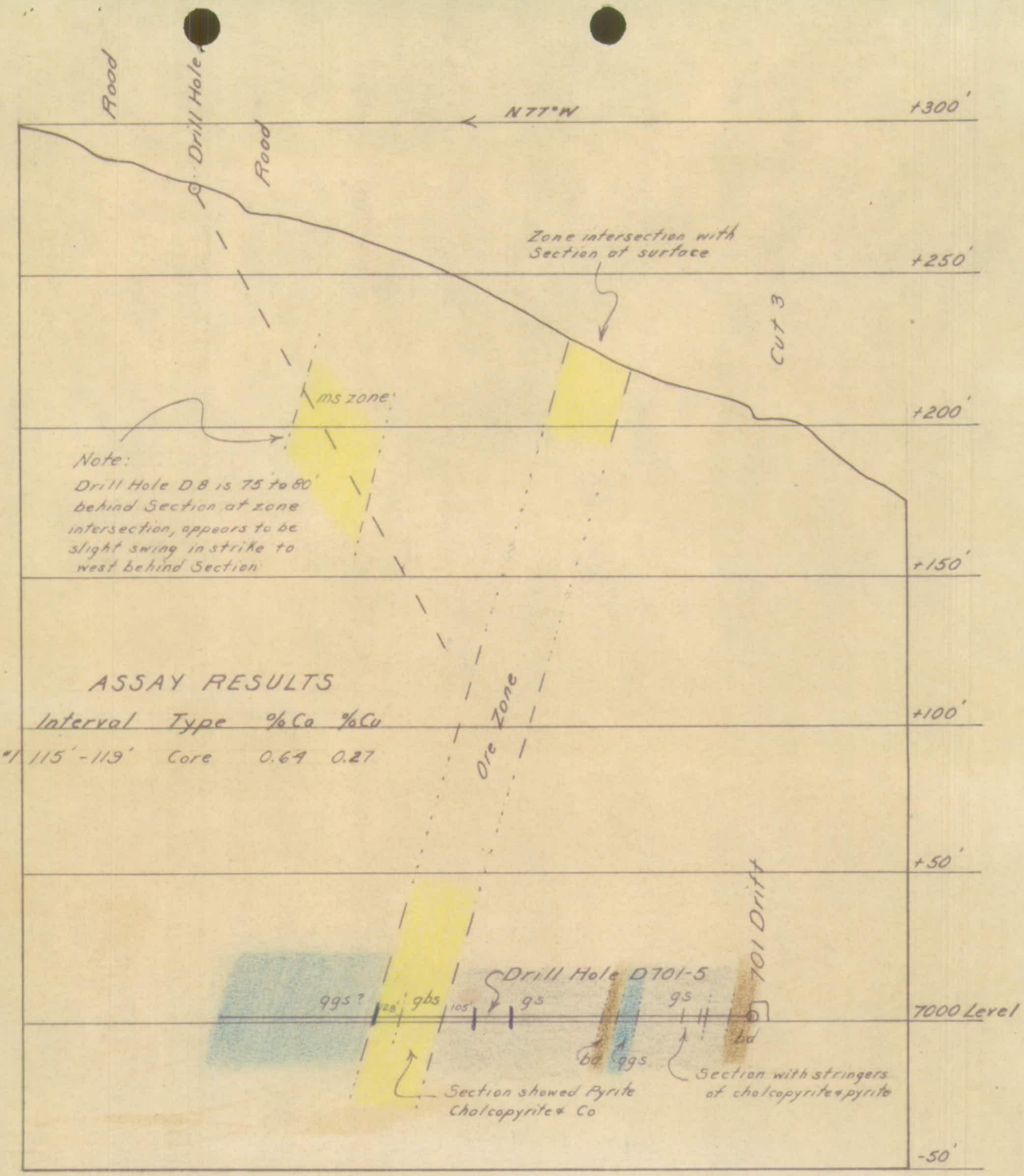
- gs — Grey Schist
- q — Quartzite
- gqs — Quartzite-Grey Schist (intercalated)
- qtz — Quartz
- qms — Quartz Mica Schist
- gbs — Green Biotite Schist
- bd — Basic Dike
- ms — Mineralization - qtz., Fe gossan & Sulfides
- ms — Mineralization - Cobalt
- Contact
- Fault

NORTHFIELD MINES, INC.
Blackbird Mining District, Idaho

SECTION 2

Scale: 1" = 50'

RECEIVED
AUG 26 1955



ASSAY RESULTS

No.	Interval	Type	%Co	%Cu
D701-5 #1	115'-119'	Core	0.64	0.27

LEGEND

- gs — Grey Schist
- q — Quartzite
- qgs — Quartzite - Grey Schist (intercolated)
- qtz — Quartz
- qms — Quartz Mica Schist
- gbs — Green Biotite Schist
- bd — Basic Dike
- ms — Mineralization - qtz, Fe gossan & sulfides
- ms — Mineralization - Cobalt
- Contact
- Fault

NORTHFIELD MINES INC.

Blackbird Mining District - Idaho

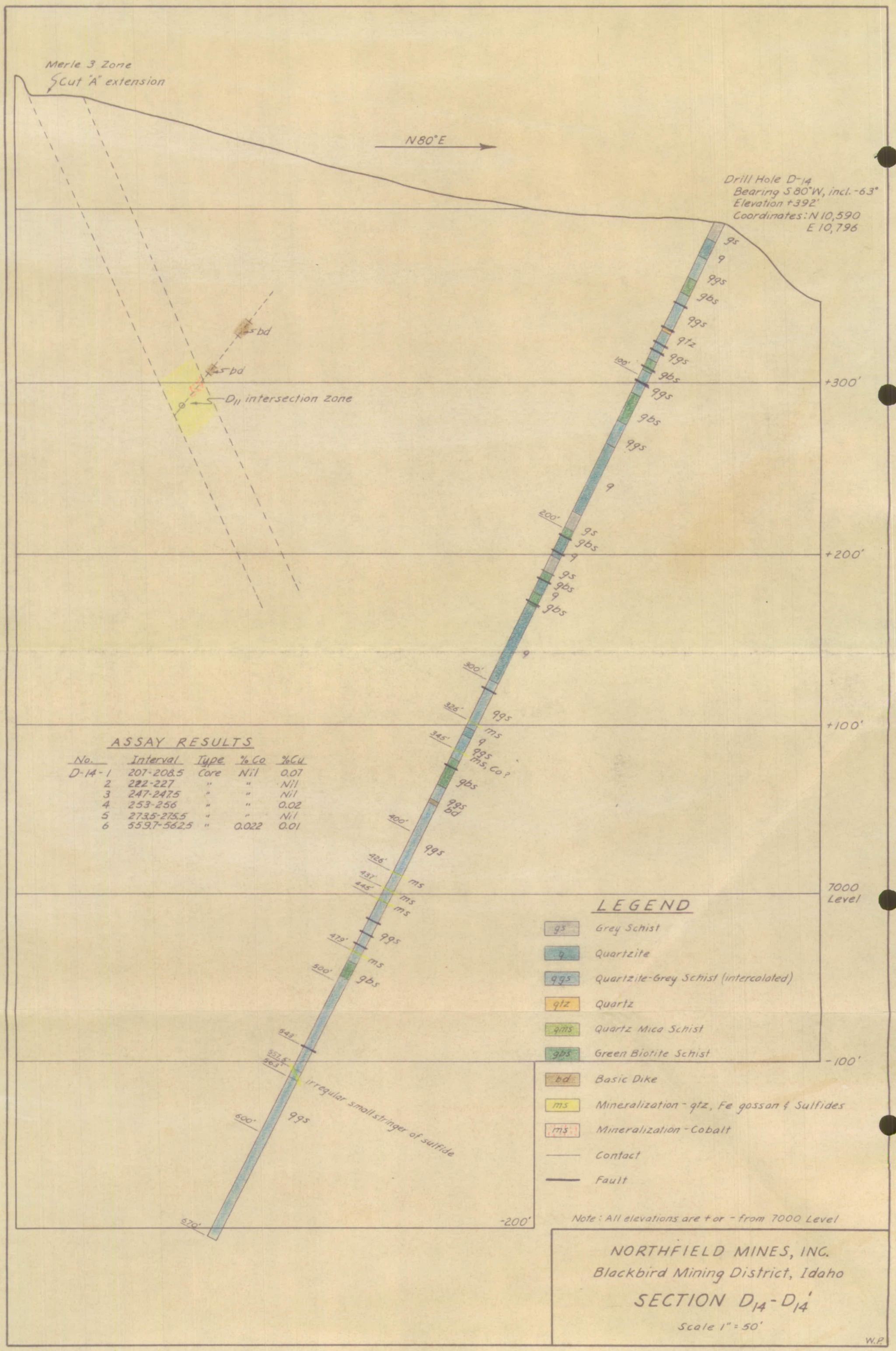
SECTION 3

Scale 1" = 50'

J.B.

9/4/53

RECEIVED
AUG 26 1955


Merle 3 Zone
Cut "A" extension
N80°E
Drill Hole D-14
Bearing S 80°W, incl. -63°
Elevation +392'
Coordinates: N 10,590
E 10,796
bd
bd
D11 intersection zone
+300'
+200'
+100'
7000 Level
-100'
-200'
100'
200'
300'
326'
345'
400'
426'
431'
445'
479'
500'
543'
557.5'
563'
600'
670'
irregular small stringer of sulfide
ASSAY RESULTS
No. Interval Type % Co %Cu
D-14-1 207-208.5 Core Nil 0.07
2 222-227 " " Nil
3 247-247.5 " " Nil
4 253-256 " " 0.02
5 273.5-275.5 " " Nil
6 559.7-562.5 " 0.022 0.01
LEGEND
gs Grey Schist
q Quartzite
qgs Quartzite-Grey Schist (intercalated)
qtz Quartz
qms Quartz Mica Schist
gbs Green Biotite Schist
bd Basic Dike
ms Mineralization - qtz, Fe gossan & Sulfides
ms Mineralization - Cobalt
Contact
Fault
Note: All elevations are + or - from 7000 Level
NORTHFIELD MINES, INC.
Blackbird Mining District, Idaho
SECTION D14-D14'
Scale 1" = 50'
W.P.

RECEIVED
AUG 26 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
1201 N. Division Street
Spokane 2, Washington
July 28, 1954

2

Area 2436

Mr. Jay L. Chambers, Chief
Contract Administration and Audit Division
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Chambers:

Attached is one copy each of corrected 104A, letter, progress reports, and maps received by us from Northfield Mines, Inc., contract Idm-E334, for the period May through September 1953.

The first report submitted for this period was returned to the operator for correction and the corrected copies were received in this office June 21, 1954. However, payment is being held up until work is resumed.

This regrettable delay was caused by my being away for a few days on vacation and by my being kept quite busy since my return by the GAO auditors.

Yours very truly,

Myrtle Purdy

Myrtle Purdy
DMEA Certifying Officer,
Region II

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May thru September 1953 Docket No. DMEA 2435 Contract No. Idm 1334

Operator's Name Northfield Mines, Inc. Minerals cobalt-copper

Address % A. J. O'Connell, Eureka, Nevada

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	ft	4125.00	74	60976.35	898	67.90		
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	ft	2000.00	400	21917.20	4752	4.61		
Churn								
Auger								
Stripping								
Trenching	hrs			5700.50	425½	13.40		
Test Pits								
Roads and Trails	hrs			1832.50	111	13.00		
Other		551.00		9654.66				
Total Distributed Costs		6676.00		100,111.21				Total Costs Authorized by Contract
Operating Equipment Purchased				1,601.79				
Initial Rehabilitation and Repairs				3,724.62				
New Buildings, Improvements, etc.								
Total Costs		6676.00		105,437.62				

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 6-16-54 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

Remarks: Unit cost reflects only DMEA Contract costs. Operators cost is considerably more.

→ 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)

(For Government use only)

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 83-38475

Copy

2

NORTHFIELD MINES, INC.
Cobalt, Idaho

June 16, 1954

Mr. A. E. Weissenborn, Executive Officer
U. S. Geological Survey
So. 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-2436
Contract Idm-E334

Dear Mr. Weissenborn:

In accordance with your letter of May 26, 1954, we are resubmitting our claim for the months of May, June, July and August 1953.

You will note that we are claiming $551.00 for assay charges. The individual assay bills were included with our MF-104 dated April 8, 1954.

We have had considerable expense in Mine Maintenance and would like your advise as to how we might make claim for this account. It is thought that as the allowable maximum is $5,000.00 and that the contract calls for 3,648 feet of drifting that it would only be fair to allow us $1.37 pef foot for footage already completed. We shall appreciate your thought on this.

We shall appreciate your prompt attention to our claims.

Very truly yours,

NORTHFIELD MINES, INC.

s/s A. J. O'Connell

NORTHFIELD MINES, INC.
Stevenson Property - Idaho

PROGRESS REPORT #12
May 1953

The total advance for the month was 11 feet, making a total 804.7 feet since the Adit was started.

7000 ADIT

The laying of 24" gage track in the main Adit was completed; forty pound rail was used from the portal to the 702 turnoff, and twenty pound rail was used between the 702 and 701 turnoffs. A number of sets had to be taken out and replaced with heavier timber. The Mancha trammer and the 47 cu. ft. rocker type cars were put into service the early part of this month.

701 DRIFT

The installation of 24" gage track, using twenty pound rail, was completed to the face of the drift, and drifting operations were resumed on May 31. Total advance for the month was 11 feet, and the face is now 208.1 feet from the P.C. in the 7000 adit. Heavy ground caused considerable delay and about twelve sets were replaced with heavier timber. The heading is now in green biotite schist that contains occasional quartz pods, and some sulfide mineralization. The formation has a strike of N 20 E, and is dipping 50 to 60 degrees to the west.

702 DRIFT

No advance this month. Started laying 24" gage track, using forty pound rail, and advanced to a point about forty feet from the P.C. in the 7000 Adit. In order to make room for the large ore cars the drift has been enlarged and the sets replaced with 12 and 14 inch timber.

DIAMOND DRILLING - UNDERGROUND

An underground diamond drilling program on the 7000 level was started this month, and the total footage drilled this period was 325 feet.

DD HOLE 701a-1

The hole was started and completed during this period, and the final depth of the hole was 110 feet. The hole was collared near the 701a crosscut, and has a bearing of S 80 W, with a zero degree inclination. Nine samples were sent out for assay.

LOG OF HOLE 701a-1

0	to	15.5'	---------Grey schist
15.5'	to	22.0'	---------Green biotite schist, little sulfides in quarts stringers
22.0'	to	22.5'	-------- Basic dike
22.5'	to	46.0'	-------- Green biotite schist with sulfide mineralation
46.0'	to	49.5'	-------- Basic dike
49.5'	to	63.5'	-------- Green biotite schist, small amount of sulfides
63.5'	to	69.0'	-------- Grey schist
69.0'	to	110'	-------- Intercalated, quartzite-grey schist

DD HOLE 700-1

Hole started and completed during the period, and final depth of hole was 85 feet. Hole was collared near 701 switch; bearing S 70 W, inclination zero degrees. Nine samples were sent out for assay.

Log of HOLE 700-1

0	to	15'	---- Grey schist, some iron staining
15'	to	38'	---- Green biotite schist with sulfide mineralizatio Arear between 21.5' and 27.5' contains some cobaltite.
38'	to	48.5'	---- Grey Schist
48.5'	to	77.5'	---- Green biotite schist with sulfides. Strong showing of copper between 54' and 56'.
77.5'	to	78'	---- Basic Dike
78'	to	85'	---- Intercalated, quartzite-grey schist

DD HOLE 701-1

Hole started and completed during this period with the final depth of the hole being 130 feet. Hole collared in the 701 drift about 190 feet from the 7000 Adit; bearing S 80 W, inclination zero degrees. Eleven samples were sent in for assay.

LOG OF HOLE 701-1

0	to	38'	------- Grey schist, some sulfides at 3, 14 & 29 feet.
38'	to	40'	------- Basic dike
40'	to	77.5'	------ Green biotite schist. At 71 feet there was some fault gouge material.
77.5'	to	103'	------- Grey schist.
103'	to	130'	------- Intercalated, quartzite-grey schist

DIAMOND DRILLING - SURFACE

DD HOLE D14

The drill site was prepared and the drill rig set up for drilling.

The drilling opeations will begin when drill casing for the hole is obtained. The hole will be collared about 89 feet from the north end of trench #32; bearing of the hole will be S 80 W, inclination -60 degrees.

GENERAL

Two 14 x 16 foot tents were set on wooden frames for housing purposes; and on May 26 two house trailers were brought in from Eureka. The balance of the labor was spent on maintenance, brush and timber slashing, and timber framing.

LABOR

The total man shifts worked were 385.

DRILLING

The total footage drilled was 325 feet.

DRIFTING

The total footage advance was 11 feet.

Respectfully submitted,

George W. Mitchell

by John K. Brozo

GWM/wp

NORTHFIELD MINES, INC.
Stevenson Property- Idaho

PROGRESS REPORT #13
June 1953

The advance for the month was 51.3 feet makeing a total of 856.0 feet since the adit was started.

701 DRIFT

All of the advance for the month was in 701 Drift. A curve to the west, to place the drift closer to the ore zone, was started and advance was fair during the first ten days. Pressure on the drift sets developed thirty to forty feet behind the face, breaking a number of posts and causing much delay while changing posts, placing doubling up sets and easing the pressure from others.

Soft biotite schist, containing a small amount of sulphide mineralization, was present.

702 DRIFT

Replacing the timbers on the curve leaving the 7000 Adit was continued on one shift per day. The old timbers, squeezed to a height of about 5½ feet, are being replaced by heavier timbers 6' x 8' in the clear. The ground is breaking from 10 to 12 feet above the new timbers, making a difficult repair job. It is expected that the new timber will remedy the trouble. Only about 30 feet remains to be repaired. The curve is part of the crosscut to be driven to the Merle #3 zone some 900 feet west and, while repairs are troublesome, the other alternative of repairing the 7000 Adit through the soft biotite schist would be more so.

DIAMOND DRILL HOLE #14

Advance was 519 feet from 0 to 519. The hole is laid out to intersect the Merle #3 zone at the 7000 Adit horizon, obtaining information that will be valuable in directing the exploration crosscut. It is hoped that the information will be positive but, if not, a second hole may be drilled. The expected depth of the hole is 650 feet.

Trouble in advancing the casing through an area of sandy material and crushed quartz pods, was experienced. Blasting ahead of the casing and, later, cementing solved the problem.

The hole penetrated alternate zones of quartzite, quartzite schist and biotite schist. A number of showings or iron oxide and arsenate stain were encountered at various places, indicating that the area between the Merle #5 and Merle #3, though not yet prospected on the surface or elsewhere, is good prospecting ground. It will, of course, be traversed by the 7000 crosscut when it is driven to explore the Merle #3. The showings also indicate almost complete oxidation to depths as great as 400 feet.

GENERAL

Four house trailers were moved from Eureka, Nevada to the 7000 Adit site and three house tents were erected in anticipation of this year's program.

The application for continuance of the contract with the Defense Minerals Exploration Administration has not yet been approved. The funds provided for the work last year were exhausted in April, so at least some of the financing durint the period May and June was the sole responsibility of Northfield. Because of the heavy expense of continuing the drifting, a decision was reached to shut down most of the work.

Repairs to 701 Drift and 702 Drift were continued on one shift to complete them. 701 should be in shape in a week while the 702 work may require 3 weeks to a month. Drilling hole #14 is continuing and several underground holes are planned to augment the drilling information already obtained. Some engineering work, including analysis of a number of geochemical (soil) samples taken on possible south extensions of the Merl #5 and Merle #3, is to be continued. It is hoped that the BMEA will extend the contract during July in order that the maximum amount of the present good weather may be utilized.

Respectfully submitted,

George W. Mitchell

GWM/m

NORTHFIELD MINE, INC.
Stevenson Property - Idaho

PROGRESS REPORT #14

July 1953

The work performed included 14 feet of drift repairs to 703 Crosscut, 151 feet of surface drilling at Hole #14 and 431.5 feet of underground drilling in 4 holes. Assessment work was completed on the two non-contiguius Duffy claims and 1235 feet of road was build as assessment work for the benefit of 20 claims below the Merle #3.

703 CROSSCUT

Advance for this period was 14 feet; three timber sets were placed on the curve and room was made for the next set. The face is now at a point s63°W, 26 feet from Survey Sta 70-6. Advance has been hampered by the continual caving of the face and back due to bad ground conditions. It is hoped that the ground will improve within the next 20 to 30 feet, at which point the crosscut should intersect the quartzite schist. The work has been done on a one shift basis part of the month.

DRILL HOLE D14

The drill hole was stopped at a depth of 670 feet, total advance this period was 151 feet. The hole intersected beds of quartzite schist that were occasionally mineralized with small stringers of chalcopyrite and pyrite. None of the mineralized intersections were of sufficient strength or frequency to be identified as a positive intersection of the surface exposures aligned into what has been called the Merle 3 zone. There is considerable evidence that the zone dips to the east and should be intersected by the hole. If a westerly dip is present, Hole #14 would not reach the zone. A flatter hole has been laid

out but, for the present, it was decided to stop surface drilling to conserve funds.

DRILL HOLE D700-2

The hole was collared in the south wall of the 7000 Adit from drill station D700-1 to test continuity of the ore shoot indicated by 7000 Adit, holes D700-1 and others. The direction is S70°W at an inclination of -31°, It was drilled to a depth of 141 feet, total advance for the period being 141 feet. Green biotite schist and considerable fault gouge material was intersected from 0 to 63 feet both of which showed some sulfide mineralization. At 63 feet the quartzite schist, unmineralized, came in and continued to the bottom of the hole. There is good evidence that the mineralized zone was cut off by a fault complex that has shifted the Merle 5 zone to the south east.

DRILL HOLE D701-2

The hole was collared in the floor of 701 Drift near the 701 turnout and was drilled on a bearing of N65°E at an inclination of -63.5°. The purpose was to test the continuity of the structure exposed in the 7000 Adit yard. It was bottomed at 134.5 feet, making the total advance 134.5 feet. From the collar to 55' the rock was grey schist with occasional streaks of green biotite schist and small stringers of chalcopyrite and pyrite; 55' to 67' was basic dike with fault gouge at 67'; and from 67' to 134.5', bottom, the rock was grey schist changing to very quartzy grey schist at 119' and quartzite schist at 129'. The section from 67' to 134.5' showed very little mineralization except for sparse sulfides in 90' to 92' section. The fault complex previously mentioned has probably displaced the structure out of the line of the hole.

DRILL HOLE D701-3

The hole was collared in the west wall of 701 drift at a point 93' from the 701 drift turnout. Its bearing was S80°W and inclination 0°. The

Purpose was to test the continuity of the ore shoot indicated in the 7000 adit and D700-1. From the collar to 19', the rock was grey schist with some sulfide mineralization at 12' to 15.5', there was fault gouge at 19'; 19' to 71' was green biotite schist mineralized with small stringers of sulfides; 71' to the bottom at 120' the rock was quartzite schist. The main mineralized zones were from 60' to 77' and 93.4' to 96.5', showing good sulfide mineralization. The assays are not yet available.

DRILL HOLE D701-4

The hole was drilled beneathe Hole D701-3 on a S80°W bearing at an inclination of -30°. The depth on 7-30-53 was 36 feet, the total advance for the period. It logged grey schist from 0' to 32' with a small stringer of chalcopyrite and pyrite at 25.5'. From 32' to 36' it showed green biotite schist that panned cobaltite. The planned depth of the hole is approximately 150 feet.

GEOCHEMICAL WORK

A total of 131 soil samples were taken for analysis. Assay results are shown on the enclosed geochemical maps. Earlier in the month a small laboratory was constructed for assaying soil samples and logging cores.

Respectfully submitted,

George W. Mitchell

GWM/m

NORTHFIELD MINES, INC.
Stevenson Property - Idaho

PROGRESS REPORT #15
August 1953

The work performed included 28 feet in 703 crosscut and 298 feet of underground diamond drilling in two holes, D701-4 and D701-5.

All operations at the property were suspended at the end of the month because of lack of funds. The only employees at the property are the superintendent and an engineer.

703 CROSSCUT

The bad ground adjacent to the 702 Drift turnout was caught up by a crew of two men and the face carried forward into better ground ready to be continued toward the Merle #3 zone when underground work is resumed.

Some good cobaltite, covellite, pyrite stringers were intersected in the crosscut, though they were erratic. One face assayed 0.44% cobalt and 0.88% Copper.

D701-4 DIAMOND DRILL HOLE

Advance was from 36 to 154 feet, a total of 118 feet.

The location of the hole, log and assays are shown on the accompanying plan and section. The hole was drilled to obtain further information on the mineralized shoot cut by Hole D700-1, the 7000 Adit and Hole D701-3. The zone is present from 60 to 110 but assays are not quite so good as Hole D701-3 above it.

D701-5 DIAMOND DRILL HOLE

Advance was from 0 to 180, a total of 180 feet.

The hole was drilled to prospect the area ahead of 701 Drift adjacent to surface hole #d8. The shear is present from 105 to 128, somewhat narrower but in its projected location.

GENERAL

In the latter part of the month, Calera did some trenching on our David #18 claim (which covers a fraction between the Merle #5 and Merle #3 claims) and on our David #23 claim, north and east of the Merle #5. Calera had staked claims over all of the Stevenson property in 1951 at approximately the same time we were surveying the Stevenson properties and staking intervening ground.

Our attorney has notified Calera that they were in trespass and is prepairing to file court action to establish title to the ground. It is believed that the title to the fraction on the David #18 can be defended successfully but the ground covered by the David #23 might be a little more difficult.

The David #18 ground must be crossed by the 703 crosscut from the Merle #5 ore zone to the Merle #3 zone. The Defense Minerals Exploration Administration is hold up this year's contract (for $125,000) until title can be established or until Northfield can put up a bond to protect the Government against any damages that might arise from defective title.

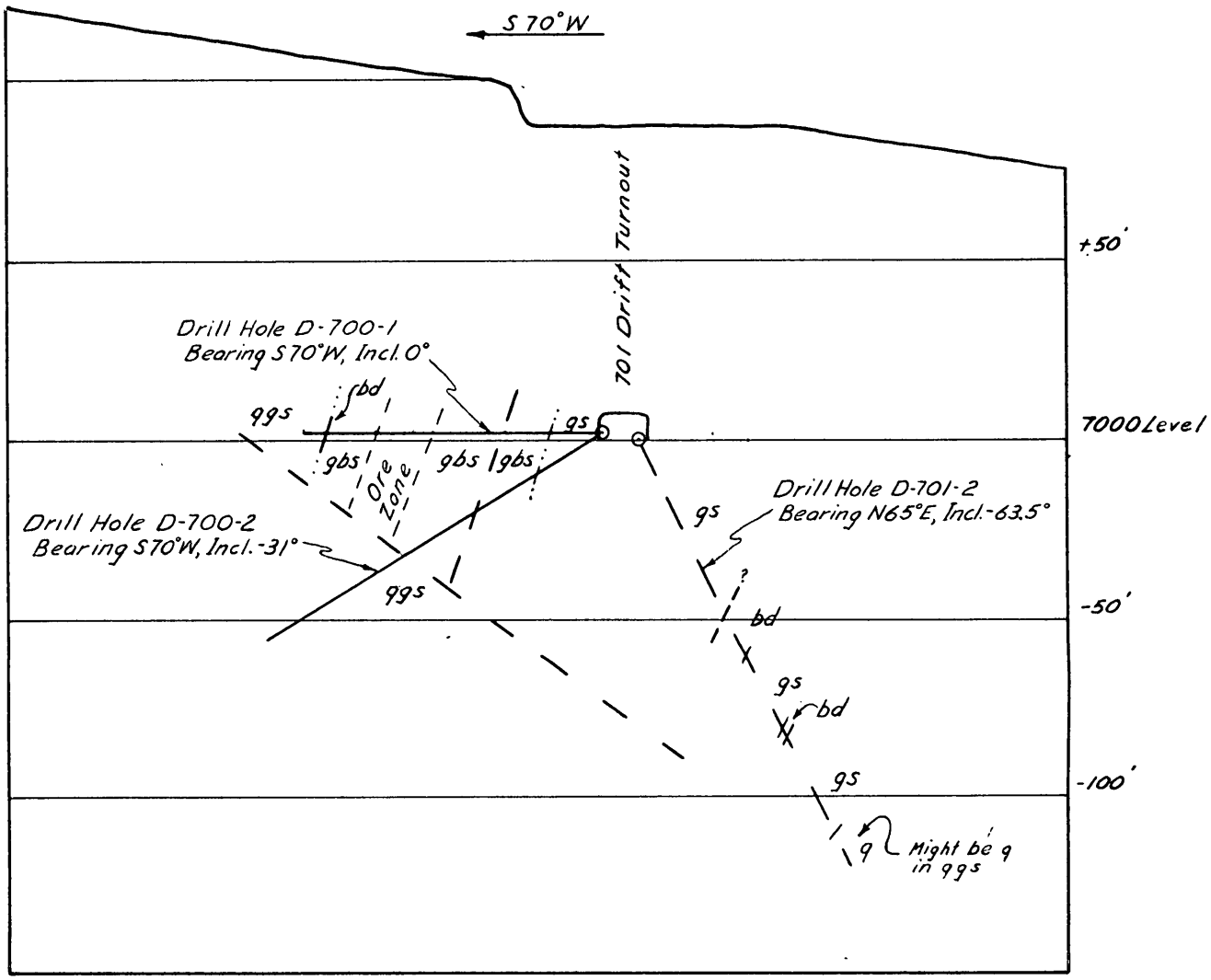
If Calera contests the court action, which seems probable, it may take three months to clear up the matter. Other methods of obtaining the DMEA contract are being studied. Surveying location monuments of the Calera claims, photographing conditions and other details of prepairing our case are in progress.

Respectfully submitted,

George W. Mitchell

GWM/m

Note: Calera has since consented to allow Northfield Mines, Inc. to cross the ground in question without prejudicing either's right to settle the dispute of ownership by agreement or court action.



ASSAY RESULTS

No.	Interval	Type	% Co	% Cu
D-700-2-1	0-10'	Core	0.022	0.15
-2	10'-20.5	"	0.029	0.07
-3	24.5'-31'	"	0.220	0.43
-4	31'-36'	"	0.059	1.54
-5	36'-41'	"	0.183	1.01
-6	41'-48'	"	0.044	0.50
-7	48'-53'	"	0.044	0.60
-8	53'-63'	"	0.059	0.17
-9	63'-73	"		
-10	73'-93'	"		
-11	93'-107'	"		
-12	107'-122'	"		
-13	131'-141'	"		

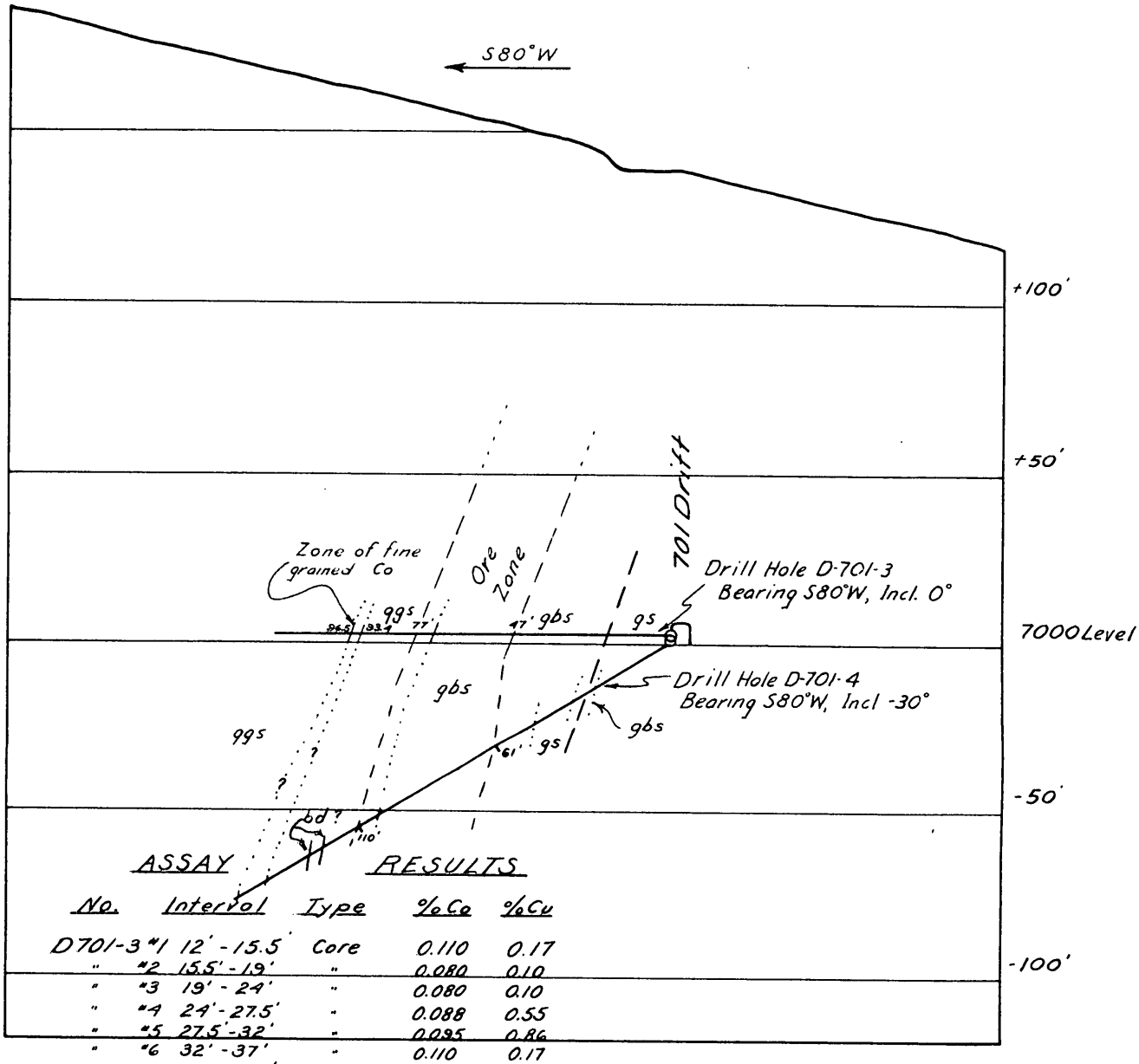
LEGEND

- gs — Grey Schist
- q — Quartzite
- qgs — Quartzite-Grey Schist (intercalated)
- qtz — Quartz
- qms — Quartz Mica Schist
- gbs — Green Biotite Schist
- bd — Basic Dike
- ms — Mineralization-qtz., Fe gossan & Sulfides
- ms — Mineralization-Cobalt
- Contact
- Fault

NORTHFIELD MINES, INC.
Blackbird Mining District, Idaho

SECTION 1

Scale: 1" = 50'



ASSAY RESULTS

No.	Interval	Type	%Co	%Cu
D701-3 #1	12'-15.5'	Core	0.110	0.17
" #2	15.5'-19'	"	0.080	0.10
" #3	19'-24'	"	0.080	0.10
" #4	24'-27.5'	"	0.088	0.55
" #5	27.5'-32'	"	0.095	0.86
" #6	32'-37'	"	0.110	0.17
" #7	37'-42.5'	"	0.095	0.38
" #8	42.5'-47'	"	0.102	0.40
" #9	47'-50'	"	0.763	2.10
" #10	50'-52.5'	"	0.477	1.27
" #11	52.5' 57'	"	0.374	0.83
" #12	57' 60'	"	0.073	0.22
" #13	60' 63'	"	0.697	0.55
" #14	63'-68'	"	0.469	1.05
" #15	63'-68'	Sludge	0.249	1.39
" #16	68'-73'	Core	0.660	0.73
" #17	68'-73'	Sludge	1.027	0.88
" #18	73'-77'	Core	0.469	1.21
" #19	93.4'-96.5'	"	0.822	0.30
D701-3 #20	93.5'-96.5'	Sludge	1.057	1.21
D701-4 #1	31.2'-34'	Core	0.103	0.50
" #2	34'-36'	"	0.117	0.48
" #3	51'-54'	"	0.103	0.71
" #4	54'-57.5'	"	0.088	0.63
" #5	57.5'-61.5'	"	0.073	0.43
" #6	61.5'-67.0'	"	0.308	0.68
" #7	67'-73'	"	0.367	1.95
" #8	73'-78'	"	0.396	0.58
" #9	78'-86.5'	"	0.147	0.68
" #10	86.5'-94'	"	0.367	0.43
" #11	95'-102'	"	0.624	0.93
" #12	102'-108.5'	"	0.374	1.14
" #13	129'-132.5'	"	0.132	0.76
" #14	57.5'-108.5'	Composite	0.337	0.81
D701-4 #15	141'-152'	Core	0.147	0.63

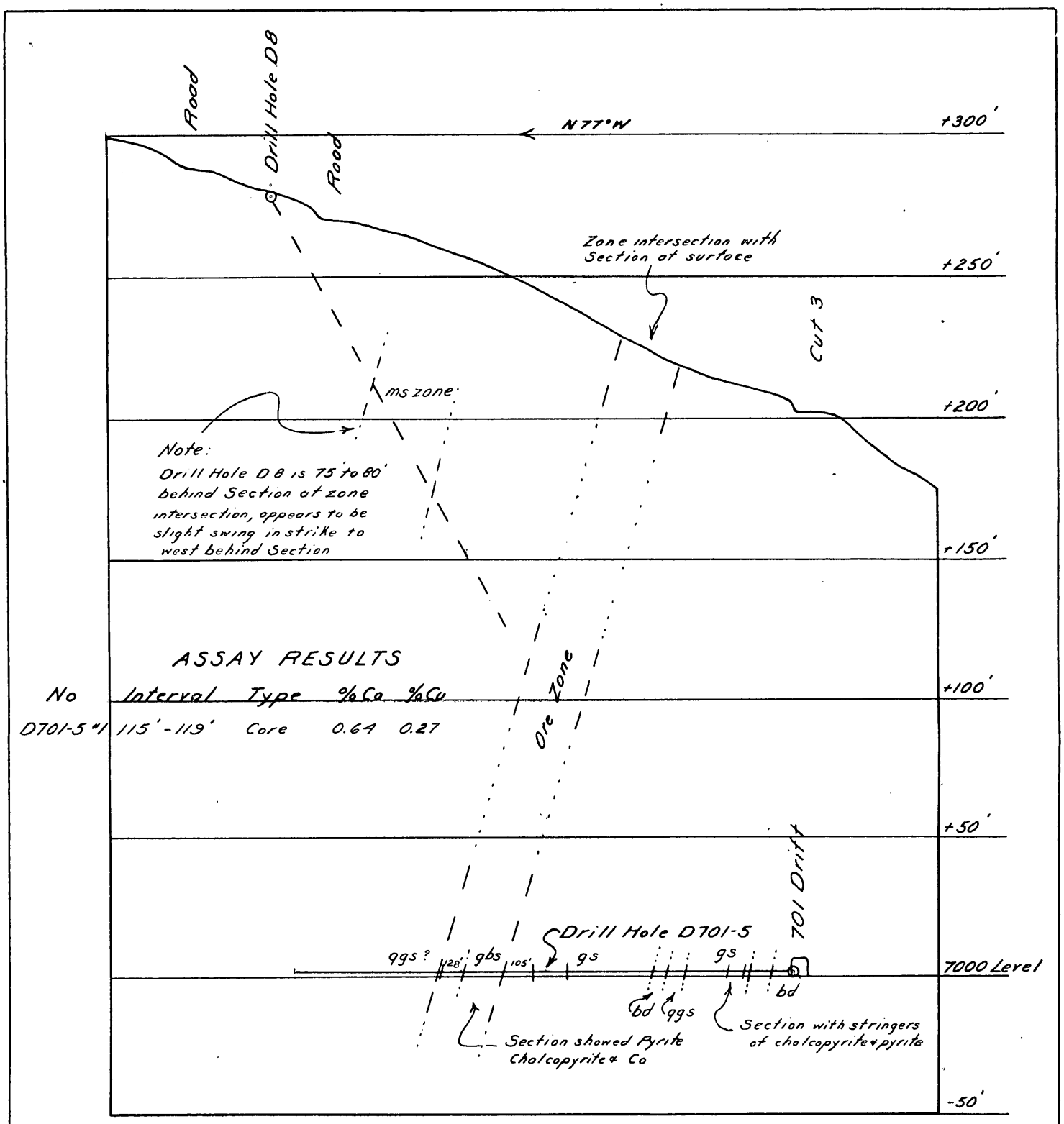
LEGEND

- qs — Grey Schist
- q — Quartzite
- qqs — Quartzite-Grey Schist (intercalated)
- qtz — Quartz
- qms — Quartz Mica Schist
- gbs — Green Biotite Schist
- bd — Basic Dike
- ms — Mineralization - qtz., Fe gossan & Sulfides
- ms — Mineralization - Cobalt
- Contact
- Fault

NORTHFIELD MINES, INC.
Blackbird Mining District, Idaho

SECTION 2

Scale: 1" = 50'



LEGEND

- gs — Grey Schist
- q — Quartzite
- qgs — Quartzite - Grey Schist (intercalated)
- qtz — Quartz
- qms — Quartz Mica Schist
- gbs — Green Biotite Schist
- bd — Basic Dike
- ms — Mineralization - qtz, Fe gossan & sulfides
- ms — Mineralization - Cobalt
- —— Contact
- —— Fault

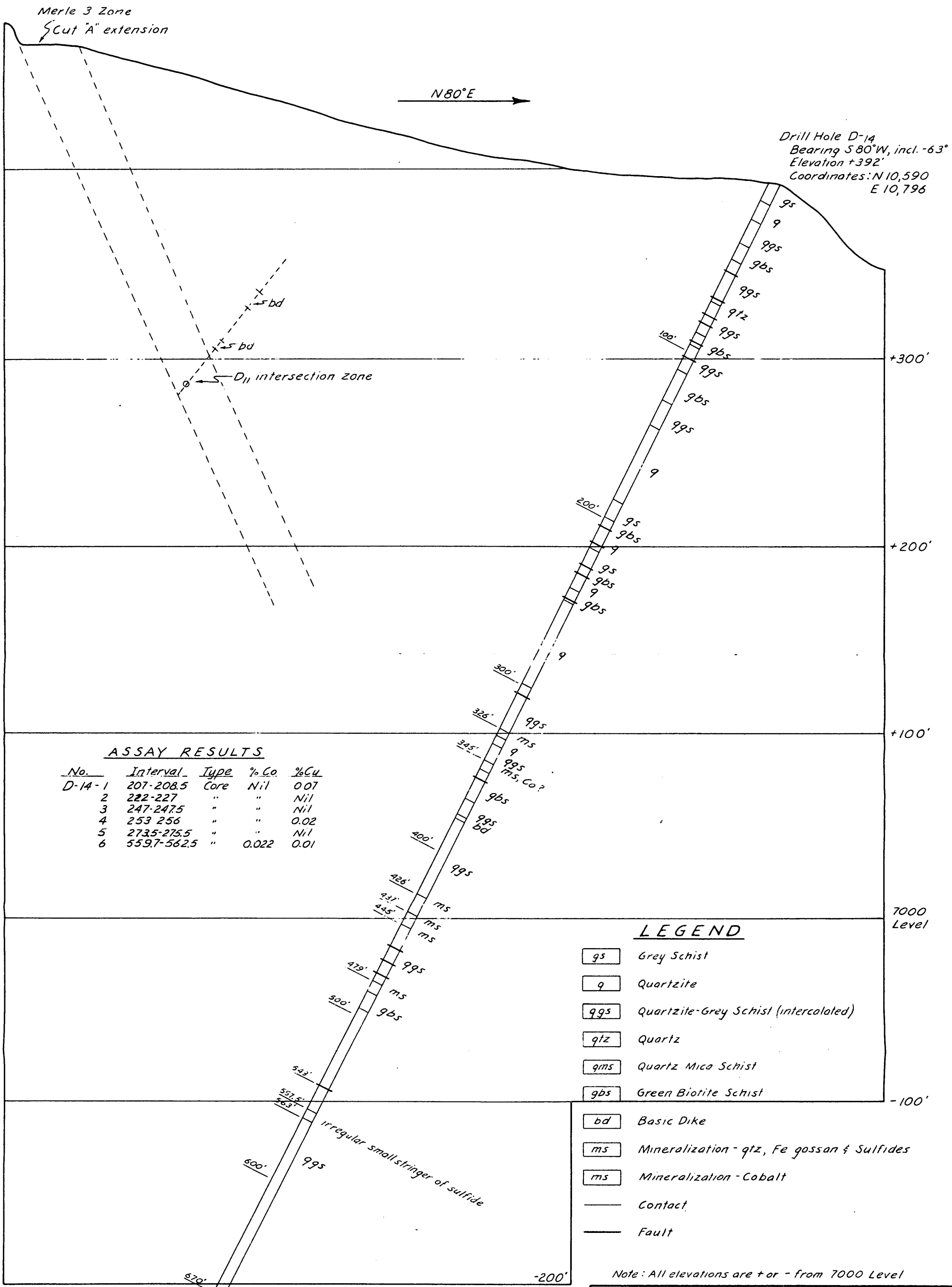
NORTHFIELD MINES INC.

Blackbird Mining District - Idaho

SECTION 3

Scale 1" = 50'

J.B. 9/1/53


Merle 3 Zone
Cut "A" extension
N80°E
Drill Hole D-14
Bearing S 80°W, incl. -63°
Elevation +392'
Coordinates: N 10,590
E 10,796
bd
bd
D11 intersection zone
+300'
+200'
+100'
7000 Level
-100'
-200'
100'
200'
300'
326'
345'
400'
426'
437'
445'
479'
500'
543'
557.5'
563'
600'
670'
irregular small stringer of sulfide
ASSAY RESULTS
No. Interval Type % Co %Cu
D-14-1 207-208.5 Core Nil 0.07
2 222-227 " " Nil
3 247-247.5 " " Nil
4 253 256 " " 0.02
5 273.5-275.5 " " Nil
6 559.7-562.5 " 0.022 0.01
LEGEND
gs Grey Schist
q Quartzite
qgs Quartzite-Grey Schist (intercalated)
qtz Quartz
qms Quartz Mica Schist
gbs Green Biotite Schist
bd Basic Dike
ms Mineralization - qtz, Fe gossan & Sulfides
ms Mineralization - Cobalt
Contact
Fault
Note: All elevations are + or - from 7000 Level
NORTHFIELD MINES, INC.
Blackbird Mining District, Idaho
SECTION D14-D14'
Scale 1" = 50'
W.P.

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

1201 N. Division St.
Spokane 2, Washington

July 21, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: V. Z. Johnson, Mining Engineer, Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho
Contract Idm-E334, DMEA Docket No. 2436 (cobalt copper)

The inspection was made July 5, 1953. There was no one at the project because of the holiday weekend. The access road was dry for the first time in several months.

Project funds had been exhausted some time previous—the exact date would depend on audits now in progress. The 701 N. drift had advanced 42 feet, 8 x 10 foot cross section, in heavy ground requiring tunnel sets of 12-inch diameter at 3-foot centers since the inspection of June 2, 1953. No other openings had been advanced but the Operator had continued widening timbered opening to provide clearance for 24-inch gauge track. Diamond drilling has also been continued but the details of this operation could not be obtained because drillers and supervisors were absent.

The 701 N. drift is now at a total of 254 feet and most of the advance has required fore-poling, crown bars or booms with occasional spiling. Breast boards have not been required but the schist is soft so that it is difficult to block timbers firmly and there is enough weight to require sets at 3-foot centers.

The original compass bearing on the 701 N. drift was read N. 4° E. which is corrected by transit survey to N. 4° W. and shown on the attached sketch. USBM tag #289 was placed as a measure point at 200 feet in the 701 N. drift.

Total units completed in May which are probably covered by the contract are as follows:

7,000 adit crosscut	265 feet	
701 drift north	212	
702 drift south	282	
701 crosscut	59	
Total units Item 8 (adit)		816 feet
Diamond drilling		3,028 feet

Trenching	425 hrs.
Trails and drill sites	150 hrs.

The status of the past month's advance and current drilling will be determined after a proposed contract extension is processed.

Retimbering 45 feet of 702 S. drift in preparation to cross-cut (800-1300 ft.) to the Merle 3 zone made it possible to sample (V.J. 12 and 14) across 3 feet of vein material. Check sample assays are shown on the attached sketch.

The 7000 adit remains open 125 feet beyond the turn out for 701 drift north, but there are a few broken posts and sets are slightly distorted.

Workmanship has been satisfactory. Costs per foot advanced is high ($55.50) because of little, if any, systematizing of operations--there has been too many changes.

V. Z. Johnson

V. Z. Johnson

CC: Orig & 3-Wash
2-USGS
DMEA
M/D
VZJ

400

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

1201 North Division Street
Spokane 2, Washington

June 15, 1953

DMEA DV

To: DMEA Field Team, Region II

From: W. H. Johnson, Mining Engineer, Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho, Contract Idm-8334, DMEA Docket No. 2430 (cobalt-copper)

The inspection was made June 2, 1953 with Mr. Ems, supervisor, and Mr. Sharp, geologist for the operator. Access from the Blackbird Mine two miles away, was by the operator's jeep. There was about 3-inches of fresh snow and several trees had fallen across the road.

The only project advance was about 14 feet in the 701 drift north since the inspection of May 3, 1953. The cross section advanced is about 8 x 10 to allow 12-inch diameter timbers and 24-inch gauge, 20 lb. rail which the operator is placing from the portal to all working faces.

The drift south, No. 702, was inaccessible because of a muck pile from the enlarging operation.

During the period the operator had completed diamond drill holes 700A-1, 701-1, and 700-1 which crosscut the shear zone for 110 feet, 35 feet, and 132 feet respectively. Diamond drill hole No. 701-1 was drilled nearly horizontal in schist from near the north end of the 701 drift and cut some quartz and sulfides from 0 - 20 feet, followed by barren schist to about 44 feet, then schist with quartz and sulfides to about 107 feet, indicating the zone or zones have widths from 20 to 75 feet. Copper sulfides were logged in all holes by Mr. Sharp, but cobalt content and possibility of commercial ore is dependent upon forthcoming assay returns.

It is recommended that the above drilling and proposed holes totaling about 700 feet from the DMEA drifts and crosscuts become part of this contract by an appropriate amendment. Attached is a sketch showing holes completed and proposed for current drilling program undertaken by the operator.

Total units completed to date are as follows:

7000 adit crosscut	265	
701 drift north	212	
702 drift south	282	
701 crosscut	59	
Total Units Item 8 (Adit)		816 feet
Diamond drilling		3,028 feet
Trenching		425 hours
Trails and drill sites		150 hours

Authorized diamond drilling units have been exhausted and the total contract amount has about been reached, pending an audit of March and April invoices. However, it is believed that the diamond drilling now in progress would constitute an important phase to the exploratory project and should therefore be included by a Washington authorized amendment adding funds to the total cost of this project.

No recommendations or suggestions were made to the Operator. The workmanship is satisfactory. Core recovery by Nichols and Thompson, drill contractors, would average better than 75 percent.

Adit costs have been about $55.50 to date, subject to correction of later invoices. Changing programs, personnel, and the remote location are probably as much to blame for the high costs as is the heavy ground.

V. Z. Johnson

V. Z. Johnson

Orig. & 3 - Wash.
USGS - 2
BMEA
S/D
VZJ/vf

ASSAY RESULTS
7000 Adit

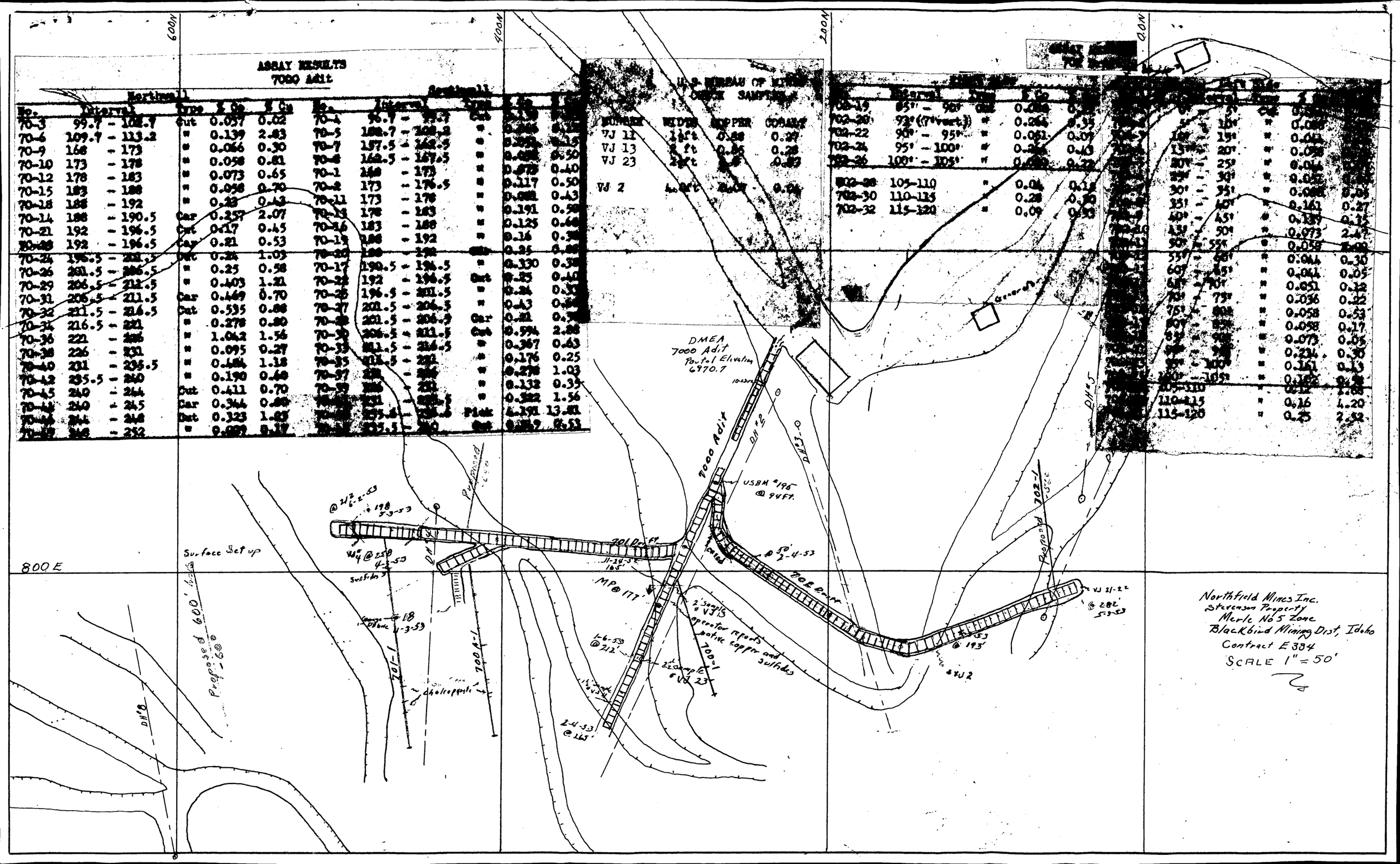
Northwall No.	Interval	Type	% Cu	% Cu	Southwall No.	Interval	Type	% Cu	% Cu
70-3	99.7 - 102.7	Cut	0.057	0.02	70-4	96.7 - 99.7	Cut	[illegible]	[illegible]
70-6	109.7 - 113.2	"	0.139	2.83	70-5	102.7 - 105.2	"	[illegible]	[illegible]
70-9	168 - 173	"	0.066	0.30	70-7	157.5 - 162.5	"	[illegible]	[illegible]
70-10	173 - 178	"	0.058	0.81	70-8	162.5 - 167.5	"	[illegible]	0.50
70-12	178 - 183	"	0.073	0.65	70-1	168 - 173	"	[illegible]	0.40
70-15	183 - 188	"	0.058	0.70	70-2	173 - 176.5	"	0.117	0.50
70-18	188 - 192	"	0.23	0.43	70-11	173 - 178	"	[illegible]	0.43
70-14	188 - 190.5	Car	0.257	2.07	70-13	178 - 183	"	0.191	0.59
70-21	192 - 196.5	Cut	0.17	0.45	70-16	183 - 188	"	0.125	0.66
70-28	192 - 196.5	Car	0.21	0.53	70-19	188 - 192	"	0.16	0.38
70-24	196.5 - 201.5	Cut	0.24	1.03	70-20	188 - 192	Car	0.25	0.88
70-26	201.5 - 206.5	"	0.25	0.58	70-17	190.5 - 194.5	"	0.330	0.38
70-29	206.5 - 212.5	"	0.403	1.21	70-22	192 - 196.5	Cut	0.25	0.40
70-31	206.5 - 211.5	Car	0.469	0.70	70-25	196.5 - 201.5	"	0.24	0.32
70-32	211.5 - 216.5	Cut	0.535	0.88	70-27	201.5 - 206.5	"	0.43	0.61
70-34	216.5 - 221	"	0.278	0.80	70-28	201.5 - 206.5	Car	0.21	0.38
70-36	221 - 226	"	1.042	1.56	70-30	206.5 - 211.5	Cut	0.594	2.28
70-38	226 - 231	"	0.095	0.27	70-33	211.5 - 216.5	"	0.367	0.63
70-40	231 - 235.5	"	0.484	1.18	70-35	211.5 - 216.5	"	0.176	0.25
70-42	235.5 - 240	"	0.190	0.60	70-37	216.5 - 221	"	0.298	1.03
70-45	240 - 244	Cut	0.411	0.70	70-39	221 - 226	"	0.132	0.35
70-48	240 - 245	Car	0.344	0.80	70-41	221 - 226.5	"	0.322	1.56
70-44	244 - 248	Cut	0.323	1.85	70-43	225.5 - 230.5	Plak	4.191	13.81
70-47	248 - 252	"	0.089	0.17	70-46	225.5 - 230	Cut	0.242	0.53

U.S. BUREAU OF MINES
CHIP SAMPLES

NUMBER	WIDTH	COPPER	COBALT
VJ 11	1 ft	0.88	0.27
VJ 13	2 ft	0.86	0.28
VJ 23	2 ft	[illegible]	0.27
VJ 2	4.0 ft	[illegible]	0.04

No.	Interval	Type	% Cu	% Co
702-19	85' - 90'	Cut	0.086	[illegible]
702-20	92' ((7' vert.))	"	0.264	0.35
702-22	90' - 95'	"	0.061	0.07
702-24	95' - 100'	"	[illegible]	0.43
702-26	100' - 105'	"	[illegible]	0.22
702-28	105-110	"	0.04	0.15
702-30	110-115	"	0.28	0.30
702-32	115-120	"	0.09	0.53

Left Side				Right Side			
				0' - 5'	Cut	0.[illegible]	[illegible]
				5' - 10'	"	0.087	[illegible]
				10' - 15'	"	0.042	[illegible]
				15' - 20'	"	0.058	[illegible]
				20' - 25'	"	0.044	[illegible]
				25' - 30'	"	0.05[illegible]	[illegible]
				30' - 35'	"	0.088	0.05
				35' - 40'	"	0.161	0.27
				40' - 45'	"	0.137	0.15
				45' - 50'	"	0.073	2.47
				50' - 55'	"	0.058	[illegible]
				55' - 60'	"	0.044	0.30
				60' - 65'	"	0.044	0.05
				65' - 70'	"	0.051	0.12
				70' - 75'	"	0.036	0.22
				75' - 80'	"	0.058	0.53
				80' - 85'	"	0.058	0.17
				85' - 90'	"	0.073	0.05
				90' - 95'	"	0.234	0.30
				95' - 100'	"	0.161	0.13
				100' - 105'	"	0.16[illegible]	[illegible]
				105-110	"	[illegible]	1.05
				110-115	"	0.16	4.20
				115-120	"	0.25	2.52



Northfield Mines Inc.
Stevenson Property
Merle No 5 Zone
Blackbird Mining Dist, Idaho
Contract E 384
SCALE 1" = 50'

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed?_____

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data?_____ If so, attach a draft.

e) Are the cost estimates reasonable?_____

f) Should more information be requested from applicant?_____

g) Is a field examination necessary to complete Exhibit A?_____

11. Exhibit B (question 23-d)*

a) Is it applicable?_____

b) If so, are sufficient data furnished?_____ If so, attach a draft.

c) Is a field check needed?_____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable?_____

b) Sufficient data?_____ If so, attach a draft.

c) Are rents and charges reasonable?_____

d) Is a field check needed?_____

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data?_____

b) Is the schedule adequate for the work proposed?_____

c) Is the schedule excessive for the work proposed?_____

d) Are the proposed wages and salaries reasonable?_____

e) Is a field check needed?_____

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

May 27, 1953

Memorandum

To: DMEA Field Team, Region II

From: Howard B. Nickelson, Geologist, U. S. Geological Survey

Subject: Routine Inspection, Docket No. DMEA-2436 (Cobalt-Copper), Northfield Mines, Inc., Lemhi County, Idaho, Contract No. Idm-E334.

The property was visited on May 12, 1953, by J. S. Vhay, Geologist, U. S. Geological Survey, and the writer.

The sketch map attached to this report shows the diamond drill holes, trenches, and the underground workings for the purpose of illustrating the Merle No. 5 mineralized zone in reference to the underground work. The Merle No. 5 mineralized zone projected to the elevation of the adit is illustrated by two heavy lines. The numbers shown by the drill holes give the elevations + or - the adit floor elevation. Assay grades are illustrated by the colors described in the legend. The map has been compiled from USGS and company maps.

The company has done extensive bulldozer work to provide an area for living quarters and storage space by cutting into the side of the hill south of the portal. The face of the hill has given a very good exposure of the Merle No. 5 mineralized zone. This was mapped and is shown on the attached map. All advance has been stopped until completion of diamond drilling and re-laying heavier track in portal.

The company has decided to explore the Merle No. 5 zone by diamond drilling. The writer does not know their proposed drilling plan except that they are attempting to drill from near the face of the 701 drift to intersect the zone by about 100 to 150 feet of hole. This length hole will never reach the Merle No. 5 zone as shown on the enclosed map. Mr. Manz was informed of this fact. Mr. Manz mentioned advancing the 701 drift and was informed that the 701 drift was getting farther away from their Merle No. 5 zone. The general bearing of the Merle No. 5 zone is N. 30° W. and the bearing of the 701 drift is about N. 4° W. From the conversation with Mr. Manz, another crosscut from the 702 drift parallel with the adit will be attempted for a main haulageway. All of the proposed work described above will be undertaken by the company because the funds under Contract Idm-E334 are exhausted or about so.

The timbers in the 7000 adit west of the 701 drift are taking considerable weight and have required doubling up sets.

It is recommended that further work on the Merle No. 5 mineralized zone consist of drifting, either in the zone or west of the zone parallel to it. This recommendation will decide several factors which haven't been proved from the DMEA contract. First, drifting within the Merle No. 5 zone will determine its economic feasibility both to the grade of ore and the possibility of mining the fractured zone. Second, drifting northwest on the zone will determine at what depth the oxidation of the cobalt minerals has taken place because present exposures have been partly or in the depth of surface leaching.

Project work under DMEA contract has encountered heavy ground that has caused considerable trouble. Heavy ground is to be expected in any proposed work.

Attachment

Distribution:
DMEA (Orig. & 3)
USBM (2)
Docket
Nickelson

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

1201 North Division Street
Spokane 2, Washington

May 19, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: V. Z. Johnson, Mining Engineer, Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho, Contract Idm-E334, DMEA Docket No. 2436 (cobalt-copper)

The inspection was made May 3, 1953 with Mr. Sayler, mine foreman.

Drift No. 702 south had advanced 89 feet and drift No. 701 north had advanced 40 feet since the inspection of April 2, 1953. Spiling was not used during the period in either heading but the ground is very heavy. Rounds are blasted for 5 to 6 feet advance of ground and timber and later a double-up set is placed so that sets are on 2-1/2 - 3-1/2 foot centers.

The Operator advances an 8 x 8 foot cross section which enlarges by sloughing to 10 x 9 feet and more.

An error was made in computation and scaling of totals in the April 22, 1953 inspection memorandum; i.e., the total for No. 701 drift north should have been 158 feet rather than the 258 feet reported as of April 2, 1953. Total units completed to date are as follows:

7000 Adit crosscut	265	
701 Drift north	198	
702 Drift south	282	
701 Crosscut	59	
Total units Item 8 (Adit)		804 feet
Diamond drilling		3028 feet
Trenching		425 hours
Trails and drill-sites		150 hours

The blower (Serial No. 53S47 with 25 h.p. motor #1417) purchased under the contract, has been placed near the portal and vent tubing is being placed in the adit.

Operator's improvements include setting a 50 KW Palmer Generator with International Harvester Model J.D. 18, Diesel power unit about 100 feet southeast of the portal, a 5 h.p. Mancha charging unit near the portal, moving bunkhouse and cookhouse about 280 feet southeast of the portal, and widening the camp-site area to about 80 feet. A new access road which can be more easily maintained than the existing road is scheduled to be bulldozed from Panther Creek up Little Deer Creek which will eliminate the steep climb over the ridge from the south.

The north and south drifts are parallel from 10 to 20 feet east of the main mineralized zone exposed in the 700 adit so as to eliminate the heaviest ground. However, significant copper and cobalt mineralization is indicated by samples by the Operator along the 702 drift south. Assays are attached.

The drifts are operated on two shifts with 4 to 6 workmen per shift. A Mancha trammer is being readied so that hand tramming will no longer be necessary. Excessive timbering has interrupted drift cycles.

Changes among supervisors and workmen, heavy ground, and the procurement of native timbers on steep terrain at an isolated camp have caused the high mining costs of $52.00 per foot. The workmanship is satisfactory.

V. Z. Johnson

V. Z. Johnson

Orig. & 3 - Wash.
USGS - 2
DMEA
M/D
VZJ/vf

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

Budget Bureau No. 42-F
Approval expires 6-30-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1953 Docket No. DMEA 2436 Contract No. Idm E-334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address % A. J. O'Connell, Eureka, Nevada
Contract Amount, $ 102,900.00 Government Participation: 70 % Amount, $ 70,300.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Contracts:						
Drilling		19,357.00	19,357.00			
Bulldozing		7,533.00	7,533.00			
Drifting		3,645.45	3,645.45			
Snow Removal	390.00	1,576.77	1,966.77			
(2) Labor & Supervision:						
Labor	7,718.35	19,296.45	27,014.80			
Supervision		4,200.00	4,200.00			
Technical Services		2,500.00	2,500.00			
(3) Op. Mat'ls & Sup:						
Bunkhouse Furnishings	1.68	766.57	768.25			
Cook house Furn.	94.40	925.98	1,020.38			
Powder, Caps, Fuse, Etc	259.45	1,287.22	1,546.67			
Steel	263.29	686.23	949.52			
Pipe & Fittings	709.14	1,559.06	2,268.20			
Mine Rail	706.78	1,187.33	1,894.11			
Ventube		488.65	488.65			
Diesel Fuel, Etc.	696.05	1,741.99	2,438.04			
Gasoline	427.44	701.14	1,128.58			
Tools	473.39	519.67	993.06			
Eng.& Geo. Sup.	28.63	704.59	733.22			
Medical Supplies		113.30	113.30			
Core Boxes		235.20	235.20			
Mine Timber	660.21	1,483.66	2,143.87			
(4) Operating Equipment:						
Rented	1,165.65	8,972.56	10,138.21			
(Purchased		1,601.79	1,601.79			
(6) New Bldgs & Imp.:	389.66	3,334.96	3,724.62			
(7) Miscellaneous:						
Analytical	192.00	1,289.18	1,481.18			
Accounting Fees		1,039.81	1,039.81	12,747.15	86,014.47	98,761.62
Travel for Engineer		1,000.00	1,000.00			
Telephone		350.00	350.00			
Automotive Rep.	96.11	627.47	723.58			
Repair Parts-Machines	93.23	725.07	818.30			
Payroll Taxes	808.67	2,264.08	3,072.75			
Boarding House Loss & Cabin Rent	421.56	480.49	902.05			
Freight on Drill		325.00	325.00			
	$15,595.69	$92,519.67	$108,115.36			

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

$ 8,922.99 with $222.98

Signature _____ (Authorized Certifying Officer)

Date 1-8-54 Vou. No. 1039

(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. ..... in accordance with the terms of the contract.

Signature ..... Title ..... Date .....

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ..... Date .....

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.

GPO 83-38476

Form MF-104A.
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1953 Docket No. DMEA2436 Contract No Idm E-334
Operator's Name Northfield Mines, Inc. Minerals Cobalt-Copper
Address % A. J. O'Connell, Eureka, Nevada

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	Ft	15,206.03	114.2	49,149.23	766.2	64.15		37.19
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	ft			19,357.00	3028	6.39		6.49
Churn								
Auger								
Stripping								
Trenching	hrs			5,700.50	425½	13.40		13.00
Test Pits								
Roads and Trails & sites	hrs			1,832.50	141	13.00		13.00
Other Allowable				26,749.72				
TOTAL DISTRIBUTED COSTS		15,206.03		102,788.95				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased				1,601.79				1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		389.66		3,724.62				7,500.00
								93,560.00
TOTAL COSTS		15,595.69		108,115.36				102,900.00

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 15, 1953 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

REMARKS:

→ 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)

(For Government use only)

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 83-38475

NORTHFIELD MINES, INC.
Stevenson Property - Idaho

PROGRESS REPORT #11
April 1953

Docket #IMEA 2436
Contract #Idm E-334

The total advance for the month was 114.2 feet, making a total of 793.7 feet since 7000 Adit was started.

701 DRIFT

Advance was 26.6 feet, a total of 197.1 feet from 7000 Adit. The ground is such that timber sets are still being placed on 3 foot centers. Seepage from the spring thaw caused pressure on the sets in the area near 701a crosscut, breaking a number of posts. Twelve replacement and doubling up sets were placed, using minimum twelve inch diameter locally cut fir timbers.

The ground traversed was grey schist containing a few small stringers of mineralization. The soft biotite schist contact has been in or very near the west side of the face.

701a CROSSCUT

No work was performed in the crosscut this month. Some short underground diamond drill holes are planned to test the structure early in May.

702 DRIFT

Advance for the month was 87.6 feet. The face is now 281.6 feet south of 7000 Adit. Drift timbers on three foot centers are required. Difficulties with thaw seepage were less than in 701 Drift, though 702 is making about ten gallons of water per minute.

The ground is intercalated thin bedded quartzite and grey schist with some excellent very irratic showings of coarse cobaltite which make proper sampling difficult. Appreciable oxidation and leaching has probably removed some of the cobalt. The structure appears to be a small anticlinal fold, often very favorable for mineralization at the adjacent Calera Mining Company's property. Plans are to test the area by short underground diamond drill holes as soon as possible.

GENERAL

The number of shifts on surface work, cutting timbers for drift repairs and current work, was increased. This work was hampered by deep snow though warmer weather has started the thaw on the east and south hillsides.

Some work, to increase the size of the 7000 Adit yard, was done as well as some timber slashing adjacent to the yard.

Respectfully submitted,

George W. Mitchell

GWM/m

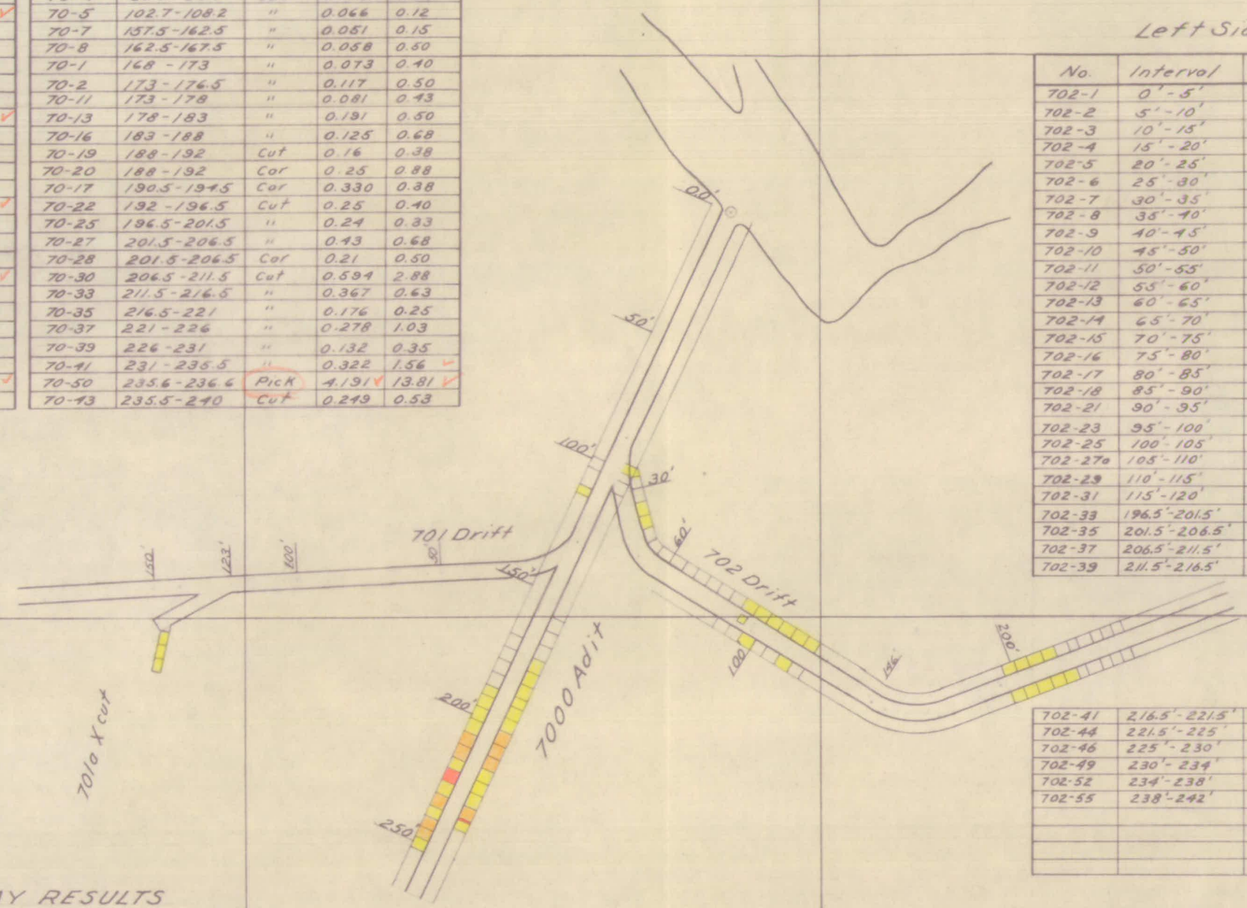
ASSAY RESULTS
7000 ADIT

Northwall

No.	Interval	Type	% Co	% Cu
70-3	99.7-102.7	Cut	0.037	0.02
70-6	109.7-113.2	"	0.139	2.83 ✓
70-9	168 - 173	"	0.066	0.30
70-10	173 - 178	"	0.058	0.81
70-12	178 - 183	"	0.073	0.65
70-15	183 - 188	"	0.058	0.70
70-18	188 - 192	Cut	0.23	0.43
70-14	188 - 190.5	Car	0.257	2.07 ✓
70-21	192 - 196.5	Cut	0.17	0.45
70-23	192 - 196.5	Car	0.21	0.53
70-24	196.5 - 201.5	Cut	0.24	1.03
70-26	201.5 - 206.5	"	0.25	0.58
70-29	206.5 - 211.5	"	0.403	1.21 ✓
70-31	206.5 - 211.5	Car	0.469	0.70
70-32	211.5 - 216.5	Cut	0.535	0.88
70-34	216.5 - 221	"	0.278	0.80
70-36	221 - 226	"	1.042 ✓	1.56 ✓
70-38	226 - 231	"	0.095	0.27
70-40	231 - 235.5	"	0.484	1.18
70-42	235.5 - 240	"	0.190	0.60
70-45	240 - 244	Cut	0.411	0.70
70-44	240 - 245	Car	0.344	0.80
70-46	244 - 248	Cut	0.323	1.23 ✓
70-47	248 - 252	Cut	0.029	0.17

Southwall

No.	Interval	Type	% Co	% Cu
70-4	96.7 - 99.7	Cut	0.139	0.25
70-5	102.7 - 108.2	"	0.066	0.12
70-7	157.5 - 162.5	"	0.051	0.15
70-8	162.5 - 167.5	"	0.058	0.50
70-1	168 - 173	"	0.073	0.40
70-2	173 - 176.5	"	0.117	0.50
70-11	173 - 178	"	0.081	0.43
70-13	178 - 183	"	0.191	0.50
70-16	183 - 188	"	0.125	0.68
70-19	188 - 192	Cut	0.16	0.38
70-20	188 - 192	Car	0.25	0.88
70-17	190.5 - 194.5	Car	0.330	0.38
70-22	192 - 196.5	Cut	0.25	0.40
70-25	196.5 - 201.5	"	0.24	0.33
70-27	201.5 - 206.5	"	0.43	0.68
70-28	201.5 - 206.5	Car	0.21	0.50
70-30	206.5 - 211.5	Cut	0.594	2.88
70-33	211.5 - 216.5	"	0.367	0.63
70-35	216.5 - 221	"	0.176	0.25
70-37	221 - 226	"	0.278	1.03
70-39	226 - 231	"	0.132	0.35
70-41	231 - 235.5	"	0.322	1.56 ✓
70-50	235.6 - 236.6	Pick	4.191 ✓	13.81 ✓
70-43	235.5 - 240	Cut	0.249	0.53



ASSAY RESULTS
702 DRIFT

1000 E

Left Side

No.	Interval	Type	% Co	% Cu
702-1	0' - 5'	Cut	0.044	0.00
702-2	5' - 10'	"	0.088	0.00
702-3	10' - 15'	"	0.044	0.05
702-4	15' - 20'	"	0.058	0.12
702-5	20' - 25'	"	0.044	0.07
702-6	25' - 30'	"	0.051	0.00
702-7	30' - 35'	"	0.088	0.05
702-8	35' - 40'	"	0.161	0.27
702-9	40' - 45'	"	0.139	0.35
702-10	45' - 50'	"	0.073	2.47 ✓
702-11	50' - 55'	"	0.058	2.09 ✓
702-12	55' - 60'	"	0.044	0.30
702-13	60' - 65'	"	0.044	0.05
702-14	65' - 70'	"	0.051	0.12
702-15	70' - 75'	"	0.036	0.22
702-16	75' - 80'	"	0.058	0.53
702-17	80' - 85'	"	0.058	0.17
702-18	85' - 90'	"	0.073	0.05
702-21	90' - 95'	"	0.234	0.30
702-23	95' - 100'	"	0.161	0.43
702-25	100' - 105'	Cut	0.102	0.58
702-27a	105' - 110'	"	0.12	1.68 ✓
702-29	110' - 115'	"	0.16	4.20 ✓
702-31	115' - 120'	"	0.25	2.52 ✓
702-33	196.5' - 201.5'	"	0.117	0.12
702-35	201.5' - 206.5'	"	0.103	0.07
702-37	206.5' - 211.5'	"	0.139	0.12
702-39	211.5' - 216.5'	"	0.117	0.05

Right Side

No.	Interval	Type	% Co	% Cu
702-19	85' - 90'	Cut	0.088	0.12
702-20	93' (7' vert.)	"	0.264	0.35
702-22	90' - 95'	"	0.051	0.07
702-24	95' - 100'	"	0.264	0.43
702-26	100' - 105'	Cut	0.080	0.22
702-28	105' - 110'	"	0.04	0.15
702-30	110' - 115'	"	0.28	0.30
702-32	115' - 120'	"	0.09	0.33
702-34	196.5' - 201.5'	"	0.103	0.07
702-36	201.5' - 206.5'	"	0.117	0.10
702-38	206.5' - 211.5'	"	0.146	0.10
702-40	211.5' - 216.5'	"	0.191	0.17
702-42	216.5' - 221.5'	"	0.103	0.08
702-43	216.5' - 221.5'	Car	0.081	0.05
702-45	221.5' - 225'	Cut	0.088	0.21
702-47	225' - 230'	"	0.073	None
702-48	225' - 230'	Car	0.066	"
702-50	230' - 234'	Cut	0.066	"
702-51	230' - 234'	Car	0.058	"
702-53	234' - 238'	Cut	0.066	"
702-54	234' - 238'	Car	0.073	"
702-56	238' - 242'	Cut	0.058	"

800 E

702-41	216.5' - 221.5'	Cut	0.088	0.05
702-44	221.5' - 225'	"	0.088	0.08
702-46	225' - 230'	"	0.058	None
702-49	230' - 234'	"	0.058	"
702-52	234' - 238'	"	0.051	"
702-55	238' - 242'	"	0.073	"

ASSAY RESULTS
701a X-CUT

Face

No.	Interval	Type	% Co	% Cu
701a-1	35' (5' Vert.)	Cut	0.103	0.05
701a-3	40' (5' Vert.)	"	0.103	0.05
701a-5	45' (5' Vert.)	"	0.117	0.32

Muck

No.	Interval	Type	% Co	% Cu
701a-2	30' - 35'	Car	0.147	0.20
701a-4	35' - 40'	"	0.117	0.12
701a-6	40' - 45'	"	0.132	0.17

LEGEND

- 0.10 to 0.30 % Co
- 0.30 to 0.60 % Co
- 0.60 to 0.90 % Co
- Over 0.90 % Co

600 E

600 N

400 N

200 N

0.0 N

200 S

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho

ASSAY MAP
7000 ADIT

Drawn by - J.B. Date 2/8/53
Scale 1" = 50'

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 5 1953

1201 North Division Street
Spokane 2, Washington

April 22, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: Howard Nickelson, Geologist, U. S. Geological Survey, and V. Z. Johnson, Mining Engineer, U. S. Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho, Contract Idm-E334, DMEA Docket No. 2436 (cobalt-copper)

The inspection was made April 2, 1953 by Messrs. Nickelson and Johnson in company with Messrs. Wm. Perino and Milo Manz, Operator's engineers.

Crosscut No. 702 has been swung south and east so as to become part drift, but for the most part lateral; and was at 193 feet total to indicate 79 feet advance since Messrs. Roberts' and Nickelson's visit of March 1, 1953. Retimbering and realignment was necessary from 20 to 45 feet in this lateral. The opening must immediately be timbered although spiling was not required for the past month's advance. The cross section is about 8 x 9-1/2 feet and timber sets have been placed on 5 and 4 foot centers. The face has been directed away from the main mineralized structure but there were enough sulphides along joint and schistose planes to suggest a 4 foot sample (No. VJ 2) at 193 feet in No. 702 south lateral. Timbering and local disturbances obscure geological features.

Lateral No. 701 north has advanced 201 feet for a total of 258 feet; and from 208 feet in the lateral 28 feet of drift has been driven to the edge of the shear zone, and normal to the drift, 18 feet of crosscut has been driven - all since the previous inspection of March 1, 1953. Lateral and drift are timbered 8 x 9 cross sections (outside timber) with an occasional sluff which may run 6 to 8 feet above timber. The crosscut is driven about 5 x 6-1/2 foot cross section with 3-1/2 and 5 foot lengths of 3" x 12" cribbing for timbers. The 3-1/2 foot members are the sill plate and cap. The 5 foot pieces are placed vertically. Notches cut in vertical and horizontal members bind them as cribbing. It is probable this smaller cross section will stay open. Mucking is by slusher and very little blasting has been done.

An opening over this crosscut was discussed with the Operator's supervisors. It was suggested that this opening be cribbed over the installed cribbing at crosscut level, and back to the drift so that the crosscut could be driven at the higher elevation. The supervisors agreed that this would present a means of slushing directly into cars and stated they would catch up the opening before crosscutting further at either elevation.

The 7000 adit crosscut has caved closed from the face of February 2, 1953 at 265 feet back for about 5 feet and it appears the remainder will be difficult to maintain. The condition is due in part to the attitude and soft broken nature of the country rock as well as a tendency of the workmen to do as little blocking and cribbing as possible. Experienced timber men employed during the past two months have improved this phase of timbering considerably.

Total units completed to date are diamond drilling - 3028 feet; trenching - 425 hours; roads, trails and drill sites - 150 hours; adit - 762 feet. Aggregate length of adit as authorized in Item 8, Exhibit 'A' of the contract, is not to exceed 1,000 feet in total length. Remaining authorized units of adit would be about 247 feet, providing total amounts of money have not been exhausted. The 5 x 6-1/2 foot crosscut currently advanced may require at least 100 units to cross the mineralized structure. The inspecting party recommended that the current crosscut be advanced across the mineralized zone and that laterals be extended north and south without further crosscutting by excavation. Diamond drilling by reverse circulation is the suggested means of crosscutting the broken mineralized shear zone.

Excessive timber requirements have somewhat defeated the purpose of crosscuts because only the Operator's resident engineer can sketch geologic features and take samples across the shear zone. Lagging must accompany timber so that geologic sketchings and sampling cannot be carried on by the monthly inspecting personnel. There is some mining risk and high costs ($53/ft.) are associated with crosscutting in this zone. It is believed that diamond drilling by reverse circulation will provide a satisfactory lower cost means of sampling the structure and should provide geologic information that could be adequately interpreted.

The project operation is now on two shifts with about six workmen under ground and a compressor man on each shift. A camp cook and timber haulers are employed on the day shift. The allowable maximum for supervision has been exceeded but the Operator has at least 4 men employed in supervisory status at the project.

V. Z. Johnson

V. Z. Johnson

Orig. & 3 - Wash.
USGS - 2
DMEA
M/D
VZJ/vf

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

MAY 20 1953

Month of March, 1953 Docket No. DMEA 2436 Contract No. Idm E-334
Operator's Name Northfield Mines, Inc. Minerals Cobalt-Copper
Address % A. J. O'Connell, Eureka, Nevada
Contract Amount, $ 102,900.00 Government Participation: 70 % Amount, $ 70,300.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Contracts:						
Drilling		19,357.00	19,357.00			
Bulldozing		7,533.00	7,533.00			
Drifting		3,645.45	3,645.45			
Snow Removal	380.00	1,196.77	1,576.77			
(2) Labor & Supervision:						
Labor	7,822.09	11,474.36	19,296.45			
Supervision		4,200.00	4,200.00			
Technical Services		2,500.00	2,500.00			
(3) Op. Mat'ls & Sup:						
Bunkhouse Furn.		766.57	766.57			
Cookhouse Furn.	1.74	924.24	925.98			
Powder, Caps, Fuse, Etc.	236.42	1,050.80	1,287.22			
Steel	44.68	641.55	686.23			
Pipe & Fittings	265.06	1,294.00	1,559.06			
Mine Rail	79.38	1,107.95	1,187.33			
Ventube		488.65	488.65			
Diesel Fuel, Etc.	161.06	1,580.93	1,741.99			
Gasoline	37.47	663.67	701.14			
Tools	81.26	438.41	519.67			
Eng.& Geo. Supplies		704.59	704.59			
Medical Supplies		113.30	113.30			
Core Boxes		235.20	235.20			
Mine Timber	414.26	1,069.40	1,483.66			
(4) Operating Equipment:						
Rented	1,534.33	7,438.23	8,972.56			
Purchased	48.00	1,553.79	1,601.79			
(6) New Bldgs.& Improv:						
	22.60	3,312.36	3,334.96			
(7) Miscellaneous:						
Analytical	36.00	1,253.18	1,289.18			
Accounting Fees		1,039.81	1,039.81			
Travel for Engineer		1,000.00	1,000.00			
Telephone		350.00	350.00			
Automotive Repair	177.94	449.53	627.47			
Repair Parts-Machines	83.39	641.68	725.07			
Payroll Taxes	780.56	1,483.52	2,264.08			
Boarding House Loss-Cabin Rent	26.73	453.76	480.49			
Freight on Drill		325.00	325.00			
	$12,232.97	$80,286.70	$92,519.67			

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

$

Signature
(Authorized Certifying Officer)

Date Vou. No.
(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. ..... in accordance with the terms of the contract.

Signature ..... Title ..... Date .....

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ..... Date .....

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.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1953 Docket No. DMEA 2436 Contract No. Idm E-334
Operator's Name Northfield Mines, Inc. Minerals Cobalt- Copper
Address % A. J. O'Connell, Eureka, Nevada

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	ft.	12,162.37	207½	33,943.20	652'	52.06		37.19
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	ft			19,357.00	3028	6.39		6.49
Churn								
Auger								
Stripping								
Trenching	Hrs.			5,700.50	425½	13.40		13.00
Test Pits								
Roads and Trails & Sites				1,832.50	141	13.00		13.00
Other Allowable				26,749.72				
TOTAL DISTRIBUTED COSTS		12,162.37		87,582.92				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		48.00		1,601.79				1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		22.60		3,334.96				7,500.00
Other Allowable								93,560.00
TOTAL COSTS		12,232.97		92,519.67				102,900.00

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.

REMARKS:

Date 4-16-53 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

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)

(For Government use only)

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 83-38475

NORTHFIELD MINES, INC.

STEVENSON PROPERTY - IDAHO

PROGRESS REPORT #10

March 1953

Docket No. DMEA 2436
Contract No. Idm E-334

The total advance for the month was 207.5 feet making a total footage to date of ~~652.~~ 679.5'

7000ADIT

Further work in the adit has been suspended because of the bad ground west of the 701 Drift. The track was removed for use elsewhere.

701 DRIFT

The month's advance was 100.5 feet to a point 170.5 feet from the turn-out from the 7000 Adit. Ground conditions have been fair though a little seepage water is entering. The drift is in the east wall of the mineralized shear following it north.

701a CROSSCUT

Advance was 45.0 feet from the turn-out in 701 Drift. The mineralized zone was intersected at 30.5 feet where the ground condition is similar to that encountered in the 7000 Adit when the intensely sheared biotite schist was entered. The crosscut was advanced an additional 14.5 feet using cribbing to support the bottom, sides and back. Breast boards are used and each round of 3 x 12 inch cribbing is placed as room is made for it. The inside dimension is 3½ x 5 feet. Work was delayed waiting for delivery of a small air operated slusher to facilitate removal of the broken rock.

The shear is only slightly mineralized where excavated, similar to the condition in the 7000 Adit. No assays are yet available. It is expected that both the mineral content and the ground condition will improve.

702 DRIFT

Advance for the month was 620 feet to a point 194 feet from the 7000 Adit turn-out. A turn to the south east was made at 146 in order to follow the shear zone south keeping the drift in the west wall. The direction is determined by the best intersection in diamond drill Hole D-6, approximately 100 feet ahead of the face. Atleast one crosscut east will be driven across the shear to determine its value. Considerable oxidation is present because the backs in the area are only about 75 feet.

GENERAL

Snow conditions were a little better than in February but deep snow in the timber hampers cutting lagging and drift sets. 702 Drift dried up the camp spring so another spring about 600 feet away had to be equipped for water supply.

Preparations are being made to enlarge the yard space at the 7000 Adit portal to accommodate equipment and buildings for an enlarged exploration program immediately following break up.

The total shifts worked including the cook and all labor and supervision was 256.

Respectfully submitted,

George W. Mitchell

George W. Mitchell

ASSAY RESULTS
7000 ADIT

Northwall

No.	Interval	Type	%Co	%Cu
70-3	99.7'-102.7	Cut	0.037	0.02
70-6	109.7-113.2	"	0.139	2.83
70-9	168-173	"	0.066	0.30
70-10	173-178	"	0.058	0.81
70-12	178-183	"	0.073	0.66
70-15	183-188	"	0.058	0.70
70-18	188-192	Cut	0.23	0.43
70-14	188-190.5	Cor	0.257	2.07
70-21	192-196.5	Cut	0.17	0.45
70-23	192-196.5	Cor	0.21	0.53
70-24	196.5-201.5	Cut	0.24	1.03
70-26	201.5-206.5	"	0.25	0.58
70-29	206.5-211.5	"	0.403	1.21
70-31	206.5-211.5	Cor	0.469	0.70
70-32	211.5-216.5	Cut	0.535	0.88
70-34	216.5-221	"	0.278	0.80
70-36	221-226	"	1.042	1.56
70-38	226-231	"	0.095	0.27
70-40	231-235.5	"	0.484	1.18
70-42	235.5-240	"	0.190	0.60
70-45	240-244	Cut	0.411	0.70
70-44	240-245	Cor	0.344	0.80
70-46	244-248	Cut	0.323	1.23
70-47	248-252	Cut	0.029	0.17

Southwall

No.	Interval	Type	%Co	%Cu
70-4	96.7-99.7	Cut	0.139	0.25
70-5	102.7-108.2	"	0.066	0.12
70-7	157.5-162.5	"	0.051	0.15
70-8	162.5-167.5	"	0.058	0.50
70-1	168-173	"	0.073	0.40
70-2	173-176.5	"	0.117	0.50
70-11	173-178	"	0.081	0.43
70-13	178-183	"	0.131	0.50
70-16	183-188	"	0.125	0.68
70-19	188-192	Cut	0.16	0.38
70-20	188-192	Cor	0.25	0.88
70-17	190.5-194.5	Cor	0.330	0.38
70-22	192-196.5	Cut	0.25	0.40
70-25	196.5-201.5	"	0.24	0.33
70-27	201.5-206.5	"	0.43	0.68
70-28	201.5-206.5	Cor	0.21	0.50
70-30	206.5-211.5	Cut	0.594	2.88
70-33	211.5-216.5	"	0.367	0.63
70-35	216.5-221	"	0.176	0.25
70-37	221-226	"	0.278	1.03
70-39	226-231	"	0.132	0.35
70-41	231-235.5	"	0.322	1.56
70-50	235.6-236.6	Pick	4.191	13.81
70-43	235.5-240	Cut	0.249	0.53

ASSAY RESULTS
702 DRIFT

Left Side

No.	Interval	Type	%Co	%Cu
702-1	0'-5'	Cut	0.044	0.00
702-2	5'-10'	"	0.088	0.00
702-3	10'-15'	"	0.044	0.05
702-4	15'-20'	"	0.058	0.12
702-5	20'-25'	"	0.044	0.07
702-6	25'-30'	"	0.051	0.00
702-7	30'-35'	"	0.088	0.05
702-8	35'-40'	"	0.161	0.27
702-9	40'-45'	"	0.139	0.35
702-10	45'-50'	"	0.073	2.47
702-11	50'-55'	"	0.058	2.09
702-12	55'-60'	"	0.044	0.30
702-13	60'-65'	"	0.044	0.05
702-14	65'-70'	"	0.051	0.12
702-15	70'-75'	"	0.036	0.22
702-16	75'-80'	"	0.058	0.53
702-17	80'-85'	"	0.058	0.17
702-18	85'-90'	"	0.073	0.05
702-21	90'-95'	"	0.234	0.30
702-23	95'-100'	"	0.161	0.43
702-25	100'-105'	Cut	0.102	0.58
702-27a	105'-110'	"	0.12	1.68
702-29	110'-115'	"	0.16	4.20
702-31	115'-120'	"	0.25	2.52

Right Side

No.	Interval	Type	%Co	%Cu
702-19	85'-90'	Cut	0.088	0.12
702-20	93' (7' vert)	"	0.264	0.35
702-22	90'-95'	"	0.051	0.07
702-24	95'-100'	"	0.264	0.43
702-26	100'-105'	Cut	0.080	0.22
702-28	105'-110'	"	0.04	0.15
702-30	110'-115'	"	0.28	0.30
702-32	115'-120'	"	0.09	0.33

LEGEND

- 0.10 to 0.30 % Co
- 0.30 to 0.60 % Co
- 0.60 to 0.90 % Co
- Over 0.90 % Co

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist., Idaho

ASSAY MAP
7000 ADIT

Drawn by - J.B. Date 2/8/53
Scale 1" = 50'

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 Office
MAR 19 1953

March 6, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: W. A. Roberts, Geologist, U. S. Geological Survey

Subject: Interim report, Docket No. DMEA-2436 (Cobalt-Copper), Northfield Mines, Inc., Merle et al. Claims, Lemhi Co., Idaho, Exploration Project Contract No. Idm-E334.

The Northfield property was visited on March 1, 1953, by H. Nickelson and W. Roberts of the U. S. Geological Survey. The DMEA representatives were accompanied by M. Manz and W. Parino of Northfield Mines, Inc.

Since the inspection of February 4, 1953, the 702 crosscut was advanced about 64 feet. The main crosscut was advanced slightly but caved. A new crosscut, the 701 crosscut to the north, was started after the main crosscut caved and has been advanced about 57 feet.

The 702 crosscut is lagged almost to the face. The ore minerals are oxidized. About 7 or 8 feet show covellite with iron arsenates and oxides with minor copper strains. The 701 crosscut is, for the most part, slightly mineralized rock. The ore minerals present were oxidized. Some iron arsenates and oxides and some secondary copper minerals were exposed by this crosscut.

Attached is a list of assays on samples taken in the main crosscut.

Enclosures
Distribution:
DMEA(Orig.&3)
USBM(2)
Docket
Roberts

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February 1953 Docket No. DMEA 2436 Contract No. Idm-2334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada
Contract Amount, $ 102,900.00 Government Participation: 70 % Amount, $ 70,300.00

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) Contracts:						
Drilling		19,357.00	19,357.00	✓		
Bulldozing		7,533.00	7,533.00	✓		WSM
Drifting		3,645.45	3,645.45	✓		
Snow Removal	350.00	846.77	1,196.77	✓		
(2) Labor & Supervision:						
Labor	6,024.31	6,729.30	12,753.61			
Supervision		4,200.00	4,200.00	✓		
Technical Services		2,500.00	2,500.00	✓		
(3) Op. Mat'ls. & Sup.:						
Bunkhouse Furn.	48.23	718.34	766.57			
Cook House Furn.	47.84	876.40	924.24			
Powder Caps, Fuse, Carbide, etc.	424.70	626.10	1,050.80			
Steel	1.24	640.31	641.55			
Pipe & Fittings	40.60	1,253.40	1,294.00			
Mine Rail	33.81	1,074.14	1,107.95			
Ventube		488.65	488.65			
Diesel Fuel, etc.	589.85	991.08	1,580.93			
Gasoline	219.77	443.90	663.67			
Tools	22.67	415.74	438.41			
Eng. & Geo. Supplies	36.78	667.81	704.59			
Medical Supplies		113.30	113.30			
Core Boxes		235.20	235.20			
Mine Timber	1,069.40		1,069.40			
(4) Operating Equipment:						
Rented	1,444.00	6,438.23	7,882.23			
Purchased	238.36	1,315.43	1,553.79			
(6) New Bldgs. & Improve.:						
	96.92	3,215.44	3,312.36			
(7) Miscellaneous:						
Analytical	186.00	1,067.18	1,253.18			
Accounting Fees		1,039.81	1,039.81	✓		
Travel for Engineer	124.50	875.50	1,000.00	✓		
Telephone		350.00	350.00	✓		
Automotive Repairs	243.72	205.81	449.53	10293.20	69993.80	788.86.00
Repair Parts-Machines	121.10	520.58	641.68			
Payroll Taxes	570.85	999.13	1,569.98			
Boarding House Loss - Cabin Rent	168.26	285.50	453.76			
Freight on Drill		325.00	325.00			
Totals	$12,102.91	$69,993.50	$82,096.41			

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

$ 7205.24

Signature [signature]
(Authorized Certifying Officer)

Date 4/6/53 Vou. No. 711
(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. E 324 in accordance with the terms of the contract.

Signature /s/ Verda G Johnson Title Mining Engr Date 3/23/53

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ M. E. Volin Title Member DMEA Field Team Reg 11 Date 3/23/53

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

Northfield Mines, Inc.
c/o A. J. O'Connell, Eureka, Nevada.

Contract Idm-E334

	Month-Feb. 1953 (approved)	Approved Totals Forward	Approved Totals to Date
(1) Contracts:			
Snow removal	350.00		350.00
Drilling		19,357.00	19,357.00
Bulldozing		7,533.00	7,533.00
Drifting (adit)		3,834.90	3,834.90
(2) Labor & Supervision	4,745.06		
Labor	[illegible]	6,729.30	11,474.36
Supervision		4,200.00	4 200.00
Technical services		2,500.00	2,500.00
(3) Operating Materials & Supplies			
Core boxes		235.20	235.20
Geology Supplies	36.78	667.81	704.59
Small tools	22.67	415.74	438.41
Drill Steel	1.24	625.86	627.10
Mine rail	33.81	959.41	993.22
Pipe fittings	40.60	1,253.40	1,294.00
Cook house furnishings	47.84	876.40	924.24
Medical supplies		113.30	113.30
Gasoline	219.77	443.90	663.67
Bunkhouse furnishings	48.23	718.34	766.57
Fuel oil, tires, etc.	589.85	906.18	1,496.03
Ventube		488.65	488.65
Powder, caps & fuse	424.70	626.10	1,050.80
Mine timber	1,069.40		1,069.40
(4) Operating Equipment			
Rental	1,000.00	6,438.23	7,438.23
Purchases	238.36	725.43	963.79
(6) New Buildings & Equipment	96.92	3,215.44	3,312.36
(7) Miscellaneous			
Drill parts & repairs	121.10	520.58	641.68
Repairs to Equipment	243.72	266.51	510.23
Sampling & Analysis	186.00	1,067.18	1,253.18
Payroll taxes	484.39	999.13	1,483.52
Telephone		350.00	350.00
Freight on drill		325.00	325.00
Accounting		1,039.81	1,039.81
Engineer travel	124.50	875.50	1,000.00
Cabin rent		350.00	350.00
Boarding house loss	,168.26		103.76
	10,293.29	68,592.80	78,886.00

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 13 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1953 Docket No. DMEA 2436 Contract No. Idm-E334

Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper

Address c/o A. J. O'Connell - Eureka, Nevada

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	Ft.	11,767.63	172 1/2	23,590.54	444 1/2	53.07	1000	37.19
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.			19,357.00	3028	6.39		6.49
Churn								
Auger								
Stripping								
Trenching	Hrs.			5,700.50	425 1/2	13.40		13.00
Test Pits								
Roads and Trails & Sites	Hrs.			1,832.50	141	13.00		13.00
Other Allowable				26,749.72				
TOTAL DISTRIBUTED COSTS		11,767.63		77,230.26				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		238.36		1,553.79				1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		96.92		3,312.36				7,500.00
Other Allowable								93,560.00
TOTAL COSTS		12,102.91		$82,096.41				$102,900.00

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 3-19-53 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

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)

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 83-38475

MORNINGSTAR MINES, INC.
Stevenson Property - Idaho

PROGRESS REPORT #9
February 1953

Docket AEC 2436 Contract Idm E-334

NORTHFIELD MINES, INC.

STEVENSON PROPERTY - IDAHO

PROGRESSS REPORT #9

February 1953

Docket #DMEA 2436
Contract Idm E-334

The total advance for the month was 172.5 feet.

7000 ADIT

The adit was advanced 3.5 feet to 270 feet from the portal. The ground at this point and at several other points between 170 feet and the face was such that the turnout north from the face was abandoned. A turnout, 701 Drift, was made from a point 130 feet from the portal on the east side of the ore zone where better mining conditions were expected.

701 DRIFT

Advance for the month was 70 feet to a point about 50 feet north of 7000 Adit.

After the turnout from 7000 Adit was made, a very bad piece of ground was intersected and work in 701 seemed to cause the timber in 702, the south drift, to take weight. It appeared for a while as though the cost of maintaining the headings might be great enough to necessitate a radical change in the exploration plan. However, near the end of the month conditions improved to such an extent in 701 that this possibility seems remote.

701 Drift is being driven in the grey schist just east of the ore zone. When it has been advanced another 20 to 30 feet, depending on ground conditions, a crosscut west will be driven to explore the ore zone.

If ground conditions within the ore zone are good enough, which seems unlikely, the drift will be continued in the zone. If not, it will continue north in the footwall with crosscuts through the ore zone about every 70 feet. Timber sets of native pine on three foot centers are being placed. A supply of 10 x 10 fir timbers are on hand for use if heavier ground is encountered.

The drift is gaining backs rapidly as it is driven deeper into the steep hill.

702 DRIFT

Advance for the month was 99 feet to a point 132 feet south of 7000 Adit. The bearing of the drift is such that it is a diagonal crosscut. When the ore zone has been crosscut, a drift turnout will be made south in the best grade material in order to explore it, provided ground conditions permit. Otherwise, the drift will be driven in the footwall with short crosscuts through the zone.

The shape of the surface terrain is not so favorable as 701 for gaining backs. It is expected that 702 will contain some oxide material so the drift does not have the importance of 701 at the 7000 Adit horizon. Furthermore, the "slump" in the surface rocks, which has caused them to dip flatly to the west, is not far ahead of the present face.

A number of "helper" or "doubling up" drift sets were placed earlier in the month in 702 because of weight. This condition seems to have improved though there is some water in the drift which often causes ground movements.

Assays of the mineralized zone are on the plans and section.

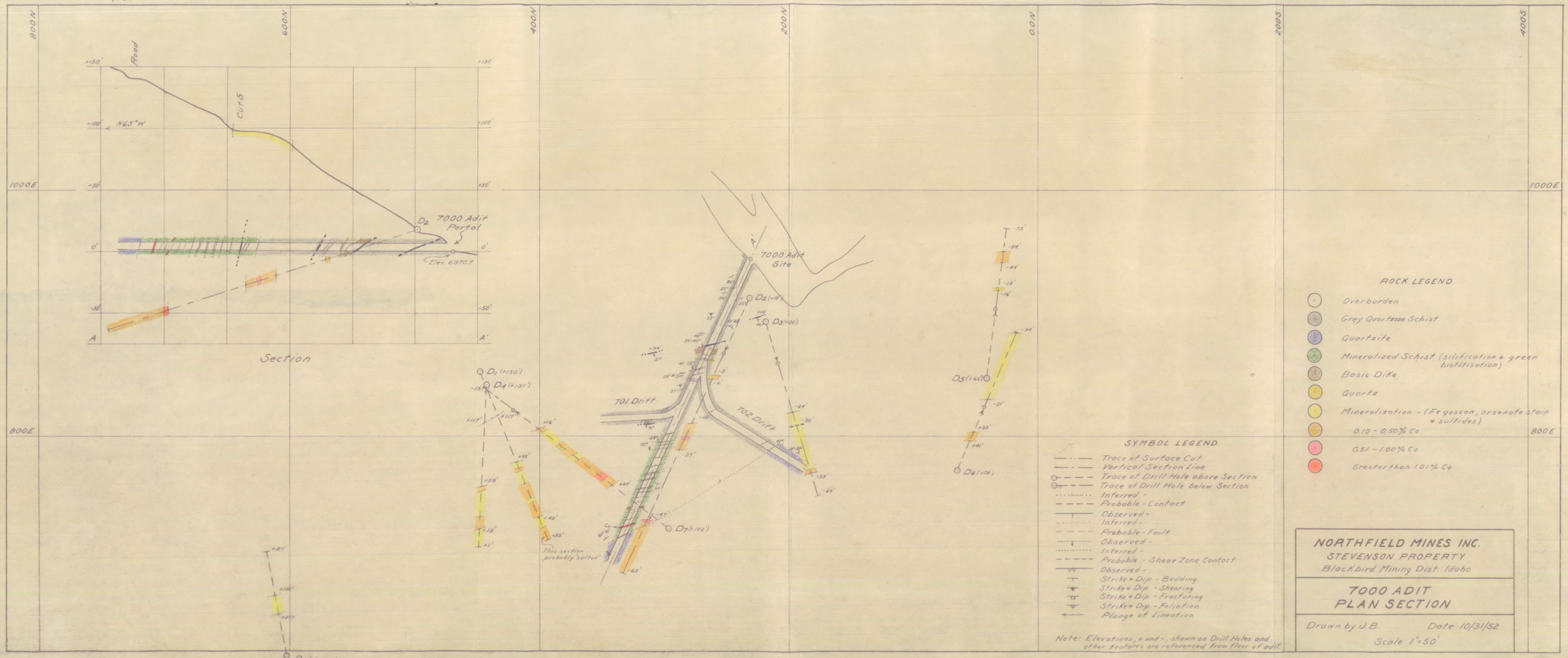
GENERAL

Improvement in organization and accomplishment was marked during the month. The crew now consists of two sets of drift men on day shift and one set on each of the other two shifts. Snow conditions have been bad, hampering the cutting of native timbers used as drift sets and lagging as well as necessitating much road plowing. A stock of fir is on hand in the event heavy ground requires its use.

The total man shifts worked, including the cook and all labor and supervision, was 258.

Respectfully submitted

George W. Mitchell


800N
600N
400N
200N
0.0N
200S
400S
1000E
800E
Road
Cut 5
N65°W
7000 Adit Portal
Elev. 6970.7
Section
7000 Adit Site
701 Drift
702 Drift
This section probably "salted"
ROCK LEGEND
Overburden
Grey Quartzose Schist
Quartzite
Mineralized Schist (silicification + green biotitisation)
Basic Dike
Quartz
Mineralization - (Fe gossan, arsenate stain + sulfides)
0.10 - 0.50% Co
0.51 - 1.00% Co
Greater than 1.01% Co
SYMBOL LEGEND
Trace of Surface Cut
Vertical Section Line
Trace of Drill Hole above Section
Trace of Drill Hole below Section
Inferred -
Probable - Contact
Observed -
Inferred -
Probable - Fault
Observed -
Inferred -
Probable - Shear Zone Contact
Observed -
Strike + Dip - Bedding
Strike + Dip - Shearing
Strike + Dip - Fracturing
Strike + Dip - Foliation
Plunge of Lineation
Note: Elevations, + and -, shown on Drill Holes and other features are referenced from floor of adit.
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist. Idaho
7000 ADIT
PLAN SECTION
Drawn by J.B.
Date 10/31/52
Scale 1"=50'

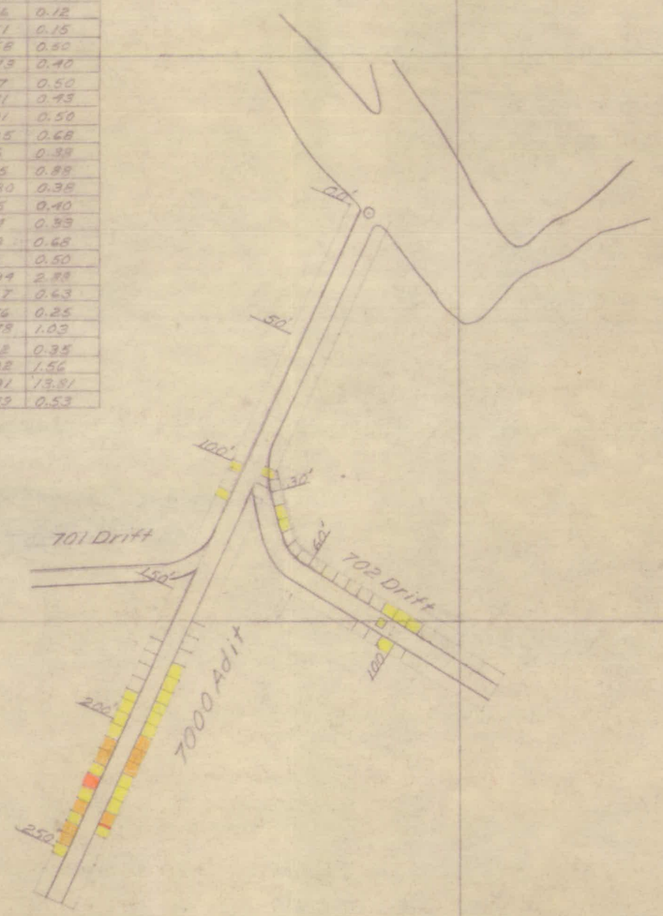
ASSAY RESULTS
7000 ADIT

Northwall

No.	Interval	Type	% Co	% Cu
70-3	93.7-102.7	Cut	0.037	0.02
70-6	109.7-113.2	"	0.139	2.83
70-9	168-173	"	0.064	0.30
70-10	173-176	"	0.058	0.81
70-12	178-183	"	0.073	0.65
70-15	183-188	"	0.058	0.70
70-18	188-192	Cut	0.23	0.43
70-14	188-190.5	Car	0.257	2.07
70-21	192-196.5	Cut	0.17	0.45
70-23	192-196.5	Car	0.21	0.53
70-24	196.5-201.5	Cut	0.24	1.03
70-26	201.5-206.5	"	0.25	0.58
70-29	206.5-211.5	"	0.403	1.21
70-31	206.5-211.5	Car	0.469	0.70
70-32	211.5-216.5	Cut	0.535	0.88
70-34	216.5-221	"	0.378	0.80
70-36	221-226	"	1.048	1.56
70-38	226-231	"	0.095	0.27
70-40	231-235.5	"	0.484	1.18
70-42	235.5-240	"	0.190	0.60
70-45	240-244	Cut	0.411	0.70
70-44	240-245	Car	0.344	0.80
70-46	244-248	Cut	0.323	1.23
70-47	248-252	Cut	0.028	0.17

Southwall

No.	Interval	Type	% Co	% Cu
70-4	96.7-99.7	Cut	0.139	0.25
70-5	102.7-108.2	"	0.066	0.12
70-7	157.5-162.5	"	0.051	0.15
70-8	162.5-167.5	"	0.058	0.50
70-11	168-173	"	0.073	0.40
70-2	173-176.5	"	0.117	0.50
70-11	173-178	"	0.081	0.43
70-13	178-183	"	0.191	0.50
70-16	183-188	"	0.125	0.68
70-19	188-192	Cut	0.16	0.38
70-20	188-192	Car	0.85	0.88
70-17	190.5-194.5	Car	0.330	0.38
70-22	192-196.5	Cut	0.25	0.40
70-25	196.5-201.5	"	0.24	0.33
70-27	201.5-206.5	"	0.43	0.68
70-28	201.5-206.5	Car	0.21	0.50
70-30	206.5-211.5	Cut	0.594	2.88
70-33	211.5-216.5	"	0.347	0.63
70-35	216.5-221	"	0.176	0.25
70-37	221-226	"	0.278	1.03
70-39	226-231	"	0.138	0.35
70-41	231-235.5	"	0.322	1.56
70-50	235.6-236.6	Pick	4.191	13.81
70-43	235.5-240	Cut	0.243	0.53



ASSAY RESULTS
702 DRIFT

Left Side

No.	Interval	Type	% Co	% Cu
702-1	0'-5'	Cut	0.044	0.00
702-2	5'-10'	"	0.088	0.00
702-3	10'-15'	"	0.044	0.05
702-4	15'-20'	"	0.058	0.12
702-5	20'-25'	"	0.044	0.07
702-6	25'-30'	"	0.051	0.00
702-7	30'-35'	"	0.066	0.05
702-8	35'-40'	"	0.161	0.27
702-9	40'-45'	"	0.139	0.35
702-10	45'-50'	"	0.073	2.47
702-11	50'-55'	"	0.066	2.29
702-12	55'-60'	"	0.044	0.30
702-13	60'-65'	"	0.044	0.05
702-14	65'-70'	"	0.051	0.12
702-15	70'-75'	"	0.036	0.22
702-16	75'-80'	"	0.058	0.53
702-17	80'-85'	"	0.058	0.17
702-18	85'-90'	"	0.073	0.05
702-21	90'-95'	"	0.284	0.30
702-23	95'-100'	"	0.161	0.43
702-25	100'-105'	Cut	0.102	0.58

Right Side

No.	Interval	Type	% Co	% Cu
702-19	85'-90'	Cut	0.088	0.18
702-20	93' (7' vert)	"	0.264	0.35
702-22	90'-95'	"	0.051	0.07
702-24	95'-100'	"	0.264	0.43
702-26	100'-105'	Cut	0.080	0.22

1000E

800E

600E

LEGEND

- 0.10 to 0.30 % Co
- 0.30 to 0.60 % Co
- 0.60 to 0.90 % Co
- Over 0.90 % Co

600N 400N 200N 0.0N 200S

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist., Idaho

ASSAY MAP
7000 ADIT

Drawn by: J.B. Date 2/8/53
Scale 1" = 50'

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
FEB 24 1953

February 12, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: W. A. Roberts, Geologist, U. S. Geological Survey, and V. Z. Johnson, Engineer, U. S Bureau of Mines

Subject: Interim report, Docket No. DMEA-2436 (Cobalt-Copper), Northfield Mines, Inc., Merle et al Claims, Lemhi Co., Idaho, Exploration project contract Idm-E334.

This month's inspection was made on February 4, 1953, by W. A. Roberts and H. B. Nickelson of the U. S. Geological Survey and V. Z. Johnson of the U. S. Bureau of Mines. The DMEA representatives were accompanied by Mr. W. Parino, Engineer of Northfield Mines, Inc.

About 94 feet of crosscutting was completed between the field examinations made on January 11 and February 4, 1953, total crosscutting completed as of February 4, 1953, was 329 feet. Progress in the last month has been satisfactory. The new work is timbered except the last part of the new southwest crosscut and is about 8 by 8 feet in cross section. U. S. Bureau of Mines spad No. 195 was placed at portal plus 94 feet where the southwest crosscut was started.

Mr. Corrigan, the sub-contractor formerly doing the tunnel work, was replaced prior to the visit on February 4, 1953. It is reported that Corrigan could not meet the payrolls.

Mineralization of pyrite, chalcopyrite and some cobaltite(?) has decreased toward the face of the main crosscut. The attached map shows only the geology of the work completed between January 10 and February 4, 1953. They country rock exposed by the new southwest crosscut is slightly mineralized; however, most of the sulfides have oxidized.

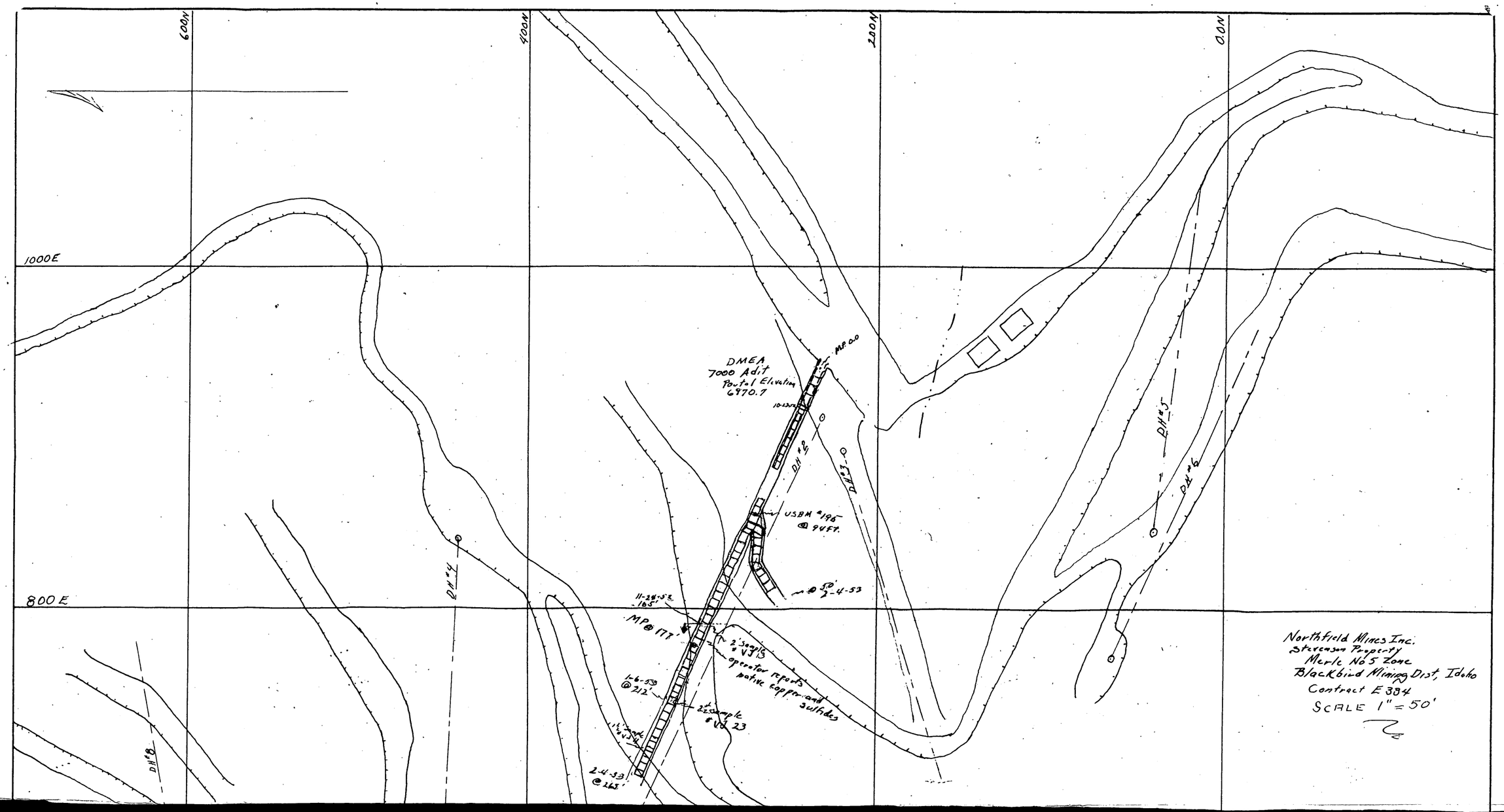
The method of exploring this wide zone of mineralization with ore pods and lenses distributed in unpredictable locations in the mineralized zone was discussed with the Operator last summer. At that time

it was Roberts' opinion that the best method would be as follows: drifting northerly, parallel to the schistosity, in good ground with short diamond drill holes on close centers penetrating the adjacent mineralized zone perpendicular to the schistosity with occasional dog holes or crosscuts to inspect intersections with rock of ore grade and width.

At the time of the visit on January 10, the southwest crosscut was proposed. Roberts stated at that time that in his opinion the footage in the contract could be better used in drifting northerly. The southwest crosscut was planned to intersect the mineralized zone containing 0.63 percent cobalt cut by DDH #3. The backs at the projected point of intersection would be about 70 feet. Intersection of the crosscut and this zone will be about 20 feet above the intersection of DDH #3 and this zone.

The Operator reports 0.25 percent cobalt in car samples through the zone 190-195 feet in the main crosscut. A check sample #V.J. 23 at about 212 feet in the adit contained 0.57 percent Co. and 4.8 percent Cu. across a 2½-foot thick stringer. Sample #V.J. 11 was taken on 1½ feet of sulfides at 244 feet in the adit during this inspection. Assays of samples taken underground by the Operator, not reported in last month's report, have not yet been received by the representatives.

Enclosures
Distribution:
DMEA(Orig.&3)
USBM(2)
Docket
Roberts


600N
400N
200N
0N
1000E
800E
DMEA
7000 Adit
Portal Elevation
6970.7
MP 0.0
10-13-53
DH #2
DH #3
USBM #196
@ 94 FT.
@ 50'
2-4-53
DH #4
DH #5
DH #6
DH #8
11-28-53
165'
MP @ 177'
2' sample
VJ 13
operator reports
native copper and
sulfides
1-6-53
@ 212'
2' sample
VJ 23
1' sample
VJ 24
2-4-53
@ 263'
Northfield Mines Inc.
Stevenson Property
Merle No 5 Zone
Blackbird Mining Dist, Idaho
Contract E 384
SCALE 1" = 50'

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

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 1 8 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January 1953 Docket No. DMEA 2436 Contract No. 3d105334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada
Contract Amount, $102,900.00 Government Participation: 70 % Amount, $70 300.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Contracts:						
Drilling		19,803.60	19,803.60			
Bulldozing		7,644.00	7,644.00			
Drifting	573.65	3,933.02	4,506.67	573.65		
(2) Labor & Supervision:						
Labor	3,709.31	3,913.07	7,622.38	3709.31		
Supervision		4,200.00	4,200.00			
Technical Services		3,616.00	3,616.00			
(3) Op. Mat'ls. & Sup.:						
Core Boxes		235.20	235.20			
Geology Supplies	14.20	653.61	667.81	14.20		
Small Tools	259.95	155.79	415.74	259.95		
Drill Steel		625.86	625.86			
Mine Rail	15.76	1,058.38	1,074.14	15.76		
Pipe & Fittings	35.73	1,217.67	1,253.40	35.73		
Cook House Furn.	519.49	356.91	876.40	519.49		
Medical Supplies	93.88	19.42	113.30	93.88		
Gasoline	56.18	396.77	452.95	56.18		
Bunkhouse Furn.	140.04	578.30	718.34	140.04		
Fuel Oil, Tires, etc.	188.92	802.16	991.08	188.92		
Ventube		488.65	488.65			
Powder, Caps & Fuse	623.10	3.00	626.10	623.10		
(4) Operating Equipment:						
Rented	1,040.65	5,449.58	6,490.23	1040.65		
Purchased	740.53	574.90	1,315.43	740.53		
(6) New Bldgs. & Improve.:	823.63	2,437.11	3,260.74	823.63		
(7) Miscellaneous:						
Drill Parts & Repairs		520.58	520.58			
Repairs to Equipment	70.28	135.53	205.81	70.28		
Sampling & Analysis	168.00	899.18	1,067.18	168.00		
Payroll Taxes	395.25	659.66	1,054.91	395.25		
Telephone	50.00	344.03	394.03	40.62		
Freight on Drill		325.00	325.00			
Accounting		1,039.81	1,039.81			
Engineer Travel		878.75	878.75			
Cabin Rent & Boarding House Loss	64.50*	350.00	285.50			
TOTALS	$9,454.05	$63,315.54	$72,769.59	7808.46	60784.74	68593.20

*Credit

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

Date 2-13-53 *Payee Northfield Mines, Inc.

Per A. J. O'Connell Title Accountant

*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:

$ 5465 64

Signature (Authorized Certifying Officer)

Date 3/5/53 Vou. No. 675
(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. E 334 in accordance with the terms of the contract.

Signature /s/ Webster S Anderson Title Mining Engr Date 2/18/53

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Thomas E Howard Title Mining Engr Date 2/18/53

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.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 13 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 1953 Docket No. DMEA 2436 Contract No. Idm-1334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Ft.	7,889.89	87	11,822.91	272	43.47	1000	37.19
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.			19,803.60	3,028	6.54	2980	6.49
Churn								
Auger								
Stripping								
Trenching	Hrs.			5,700.50	425½	13.40	435	13.00
Test Pits								
Roads and Trails & Sites				1,943.50	149½	13.00	171	13.00
Other Allowable				28,922.91				
TOTAL DISTRIBUTED COSTS		7,889.89		68,193.42				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		740.53		1,315.43				1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		823.63		3,260.74				7,500.00
Other Allowable								93,560.00
TOTAL COSTS		$9,454.05		$72,769.59				$102,900.00

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 2-13-53 Operator Northfield Mines, Inc.

Per A. J. O'Connell Title Accountant

REMARKS:

→ 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)

(For Government use only)

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 83-38475

NORTHFIELD MINES, INC.

STEVENSON PROPERTY - IDAHO

PROGRESS REPORT #8

January 1953

Docket #DMEA 2436
Contract Idm E-334

ADIT 7000

The total advance for the month was 54 feet, 38.5 of which was done by the contractor from January 1 to 20. The adit heading is at 266.5 feet from the portal. The average assay of mineralized zone from 188 to 245 (57 feet) was 0.32% cobalt and 0.79% copper. The west 38.5 feet averaged 0.37% cobalt and 0.94% copper. At 235.5 to 236.5 a pick sample assayed 4.19% cobalt and 13.8% copper. Ground conditions in the mineralized sone remained poor, necessitating timber and some spiling but was considerably improved from that penetrated in December. However, two sets at 244 and 248 took weight and had to be doubled up. The area where trouble was experienced in December will require repairs again when the ground has had a chance to stabilize.

702 DRIFT

The south drift was turned off of the 7000 Adit at a point 89 feet from the portal. Advance was 33 feet. Four sets not previously placed in the 7000 Adit at the 702 turn out were placed. 702 will explore the mineralized zone south of the adit. It is expected that the zone may be partially oxidized to the south because the surface is less than 100 feet above.

701 DRIFT

The north drift will be turned off of the face of the adit, 266.5 feet from the portal, early in February. 701 will explore the zone of

mineralization to the north. The surface is more than 100 feet above the drift collar and this distance will increase as the drift goes deeper into the hillside. The showings in the drill holes appear a little better to the north.

The location from which both 702 and 701 drifts turn off of the 7000 Adit was controlled in a large degree by the presence of very bad ground where the adit intersected the ore zone. Both drifts attempt to avoid this area and it is hoped that ground conditions will be better at the points the two drifts will reenter the zone to the north and south of the adit. If this is not the case, 702 will remain in the east wall and 701 in the west wall of the zone which will be explored by short crosscuts from each.

Because of the

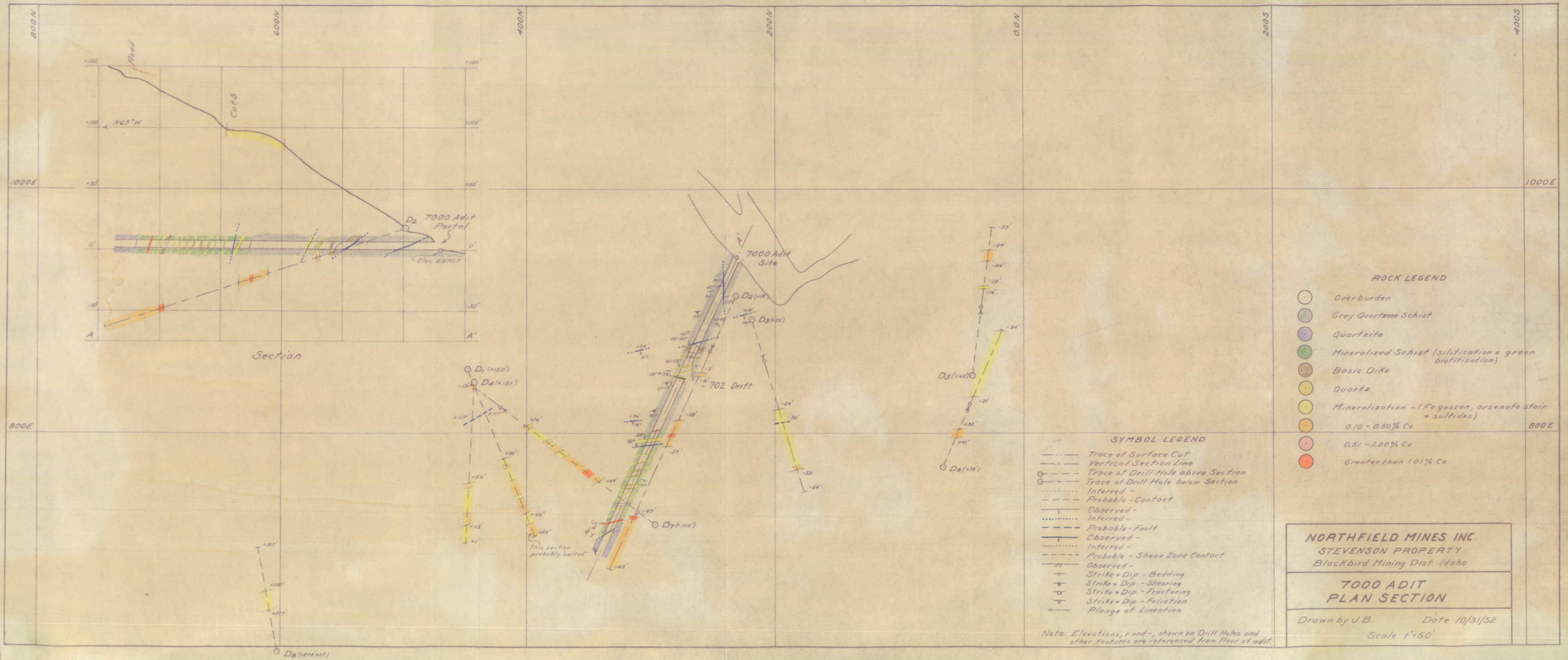
GENERAL

Because of the fact that the adit contractor had not been able to improve his footage in the first half of the month, the contract was cancelled as of January 20. Attempts to interest other parties in a contract even at a better price per foot failed, but one of Calera Mining Company's shift bosses who has been with Calera throughout their exploration, development and production program to date took over operation on a company basis. He is well acquainted with the miners in the district, is young and aggressive so should build up a good crew that will greatly improve progress. Our engineer is remaining to check the work, handle the business end, map and do other technical work.

Respectfully submitted,

George W. Mitchell

George W. Mitchell


800N
600N
400N
200N
0N
200S
400S
1000E
800E
Pond
Cut-5
N65°W
D2
7000 Adit Portal
Elev. 6970.7
A
A'
Section
7000 Adit Site
D2(+18')
D3(+20')
D1(+150')
D4(+151')
702 Drift
D7(+102')
This section probably bolted
D6(+178')
D5(+165')
D8(vertinst.)
ROCK LEGEND
Overburden
Grey Quartzose Schist
Quartzite
Mineralized Schist (silification + green biotitisation)
Basic Dike
Quartz
Mineralization - (Fe gossan, arsenate stain + sulfides)
0.10 - 0.50% Co
0.51 - 1.00% Co
Greater than 1.01% Co
SYMBOL LEGEND
Trace of Surface Cut
Vertical Section Line
Trace of Drill Hole above Section
Trace of Drill Hole below Section
Inferred -
Probable - Contact
Observed -
Inferred -
Probable - Fault
Observed -
Inferred -
Probable - Shear Zone Contact
Observed -
Strike + Dip - Bedding
Strike + Dip - Shearing
Strike + Dip - Fracturing
Strike + Dip - Foliation
Plunge of Lineation
Note: Elevations, + and -, shown on Drill Holes and other features are referenced from floor of adit.
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist. Idaho
7000 ADIT
PLAN SECTION
Drawn by J.B.
Date 10/31/52
Scale 1"=50'

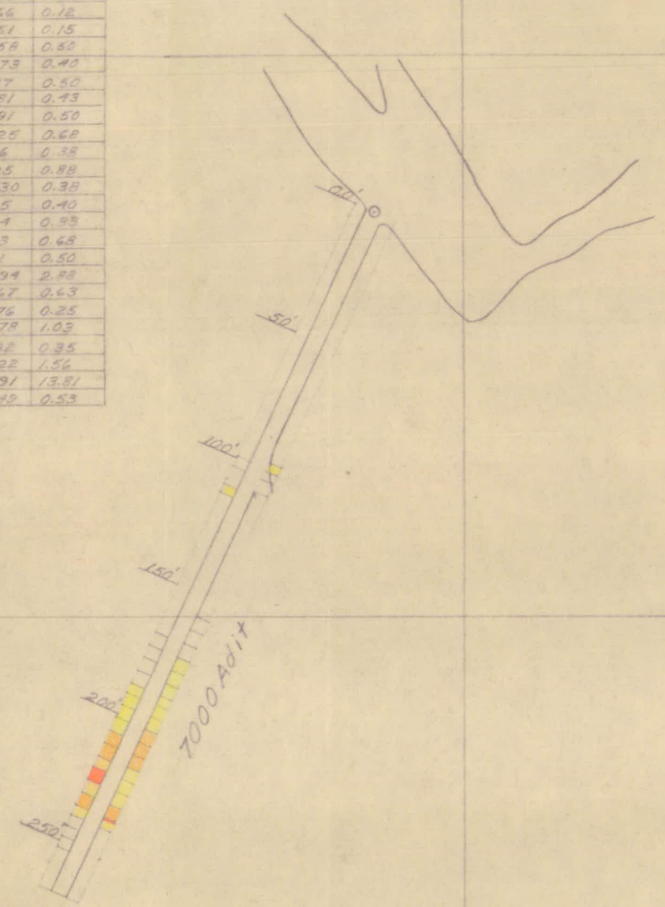
ASSAY RESULTS
7000 ADIT

Northwall

No.	Interval	Type	%Co	%Cu
70-3	99.7-102.7	Cut	0.037	0.02
70-6	109.7-113.2	"	0.139	2.83
70-9	168-173	"	0.066	0.30
70-10	173-178	"	0.058	0.81
70-12	178-183	"	0.073	0.65
70-15	183-188	"	0.058	0.70
70-18	188-192	Cut	0.23	0.43
70-19	188-190.5	Car	0.257	2.07
70-21	192-196.5	Cut	0.17	0.45
70-23	192-196.5	Car	0.21	0.53
70-24	196.5-201.5	Cut	0.24	1.03
70-26	201.5-206.5	"	0.25	0.58
70-29	206.5-211.5	"	0.403	1.21
70-31	206.5-211.5	Car	0.469	0.70
70-32	211.5-216.5	Cut	0.535	0.88
70-34	216.5-221	"	0.278	0.80
70-36	221-226	"	1.042	1.56
70-38	226-231	"	0.095	0.27
70-40	231-235.5	"	0.484	1.18
70-42	235.5-240	"	0.190	0.60
70-45	240-244	Cut		
70-44	240-245	Car	0.344	0.80
70-46	244-248	Cut		
70-47	248-252	Cut		

Southwall

No.	Interval	Type	%Co	%Cu
70-4	96.7-99.7	Cut	0.839	0.25
70-5	102.7-108.2	"	0.066	0.12
70-7	157.5-162.5	"	0.051	0.15
70-8	162.5-167.5	"	0.058	0.50
70-1	168-173	"	0.073	0.40
70-2	173-176.5	"	0.117	0.50
70-11	173-178	"	0.081	0.43
70-13	178-183	"	0.191	0.50
70-16	183-188	"	0.125	0.68
70-19	188-192	Cut	0.16	0.38
70-20	188-192	Car	0.25	0.88
70-17	190.5-194.5	Car	0.330	0.38
70-22	192-196.5	Cut	0.25	0.40
70-25	196.5-201.5	"	0.24	0.93
70-27	201.5-206.5	"	0.43	0.68
70-28	201.5-206.5	Car	0.21	0.50
70-30	206.5-211.5	Cut	0.594	2.88
70-33	211.5-216.5	"	0.367	0.63
70-35	216.5-221	"	0.176	0.25
70-37	221-226	"	0.278	1.03
70-39	226-231	"	0.132	0.35
70-41	231-235.5	"	0.322	1.56
70-50	235.6-236.6	Pick	4.191	13.81
70-43	235.5-240	Cut	0.249	0.53



1000E

800E

600E

600N

400N

200N

0N

200S

LEGEND

- 0.10 to 0.30 % Co
- 0.30 to 0.60 % Co
- 0.60 to 0.90 % Co
- Over 0.90 % Co

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist., Idaho

ASSAY MAP
7000 ADIT

Drawn by - J.B. Date 2/3/53

Scale 1" = 50'

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

January 15, 1953

MEMORANDUM

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 1 5 1953

To: DMEA Field Team, Region II

From: Wayne A. Roberts, Geologist
U. S. Geological Survey

Subject: Interim Report, Docket No. DMEA-2436 (Cobalt-Copper), Northfield Mines, Inc., Merle et al. Claims, Lemhi County, Idaho. Exploration Project Contract Idm-334

About 235 feet of underground crosscutting has been completed since the underground work was begun in October 1952. About 140 feet of crosscutting was done during the period between the field examinations made on November 8, 1952, and January 11, 1953. Progress has been slow during the last two months due to heavy ground. Overhead lagging and spiling began about 107 feet from the portal and has been continued almost to the face. The section in and near the fault zones shown on the enclosed map was particularly bad. Spiling was driven forward overhead and on both sides for about 35 feet.

The rock is mineralized with pyrite, chalcopyrite, cobaltite(?) and secondary iron arsenates and oxides from the portal plus 99 feet to the face. The sulfides occur as stringers and pods up to four inches thick parallel to the shearing. Some assays of samples taken by the Operator have been received and are listed in Table 1.

It is recommended that exploration under Contract Idm-334 be continued. It is further recommended that crosscutting be continued from the present face at approximately right angles to the shearing or on a bearing of about S. 60° to 80° W. It is further recommended that drifting to the northwest along the shearing in or near an ore zone be started as soon as possible at a point in the shear zone where the rock appears to be competent.

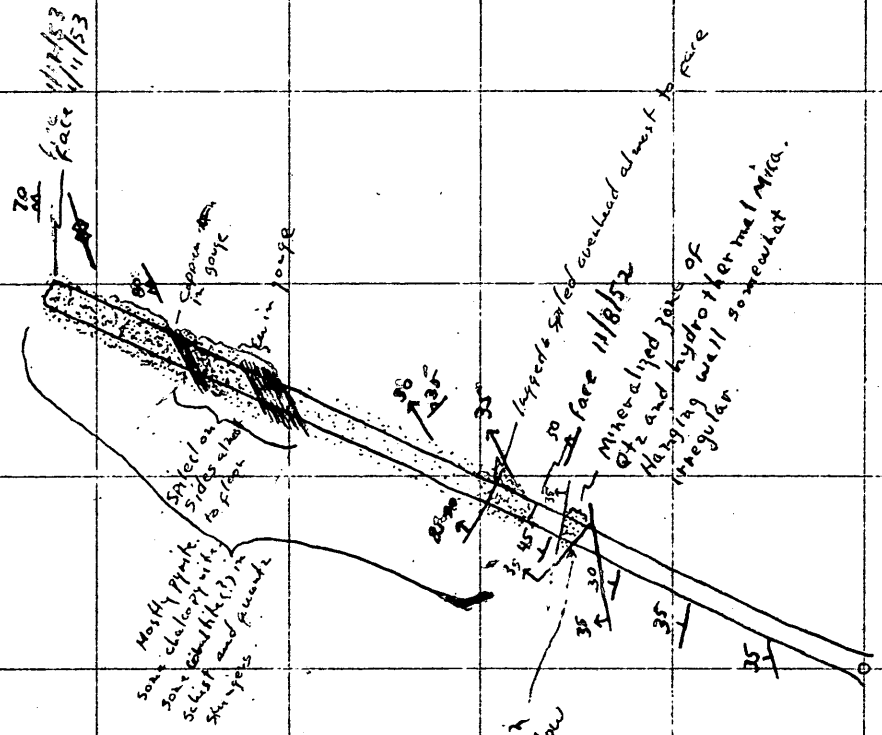
Wayne A. Roberts
Wayne A. Roberts

Enclosures 2
Distribution:
DMEA(Orig. & 3)
USBM(2)
Docket
Roberts

TABLE 1

SAMPLE NO.	FOOTAGE	TYPE	LOCATION	% CU	% CO
70-1	168-173	Horizontal Channel	S.Wall	0.40	0.073
-2	173-176.5	" "	" "	0.50	0.117
-3	99.7-102.7	" "	N.Wall	0.02	0.037
-4	96.7-99.7	" "	S.Wall	0.25	0.139
-5	102.7-108.2	" "	" "	0.12	0.066
-6	109.7-113.2	" "	N.Wall	2.83	0.139
-7	157.5-162.5	" "	S.Wall	0.15	0.051
-8	162.5-167.5	" "	" "	0.50	0.058
-9	168-173	" "	N.Wall	0.30	0.066
-10	173-178	" "	" "	0.81	0.058
-11	173-178	" "	S.Wall	0.43	0.081
-12	178-183	" "	N.Wall	0.65	0.073
-13	178-183	" "	S.Wall	0.50	0.191
-14	188-190.5	Car Grab		2.07	0.257
-15	183-188	Horizontal Channel	N.Wall	0.70	0.058
-16	183-188	" "	S.Wall	0.68	0.125

Docket # DMFA-2436



Explanation

35 — Fault, showing dip

30 — Bedding, showing dip

35 — Schistosity;

30 — Plunge

80 — Schistosity due to shearing

Mineralization — intensity of stipling approximates intensity of mineralization

Fault zone

Northfield Mines, Inc. Adit
Merle, et al. claims
Lemhi County, Idaho
Contract # Idm-E 334

Scale: 1" = 50'

"ALBANENE" NO. 1653M K&E CO., N.Y.
REG. U.S. PAT. OFF.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

1201 N. Division St.
Spokane 2, Washington
January 14, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 19 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: V. Z. Johnson, Mining Engineer, Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho, Contract Idm-E334, DMEA Docket No. 2436 (cobalt-copper)

The inspection was made January 6, 1953, with the workmen on duty.

The 7000 adit (elev. 6970.7) had been advanced 47 feet at 7x10-foot cross-section through a soft mica schist and fault which required spiling and side lagging. This is the only project activity since the inspection of November 24, 1952. A measure point was placed at 177 feet in the adit. Total units completed to date are as follows: Adit - 212 feet; diamond drilling - 3028 feet; trenching - 425 hours; roads, trails and sites - 150 hours.

Sample No. V.J. 13, taken at 164' in the adit, 2-foot width in the footwall of the shear zone, assayed copper 0.85% and cobalt 0.28%. The Operator's November narrative mentions native copper and sulfides in the sheared schist from 171 to 172 feet in the adit which was pole lagged and gobbed at the time of the inspection. Sample No. V.J. 23 was taken across 2-1/2 feet of quartz and sulfide vein striking northwesterly across the adit at about 212 feet.

There are three men underground on each of two shifts. A cook and helper, camp handy man, and Mr. Carrigan, the subcontractor, are also employed. Cycles have not yet been established in the soft ground. The subcontractor is probably operating at a loss.

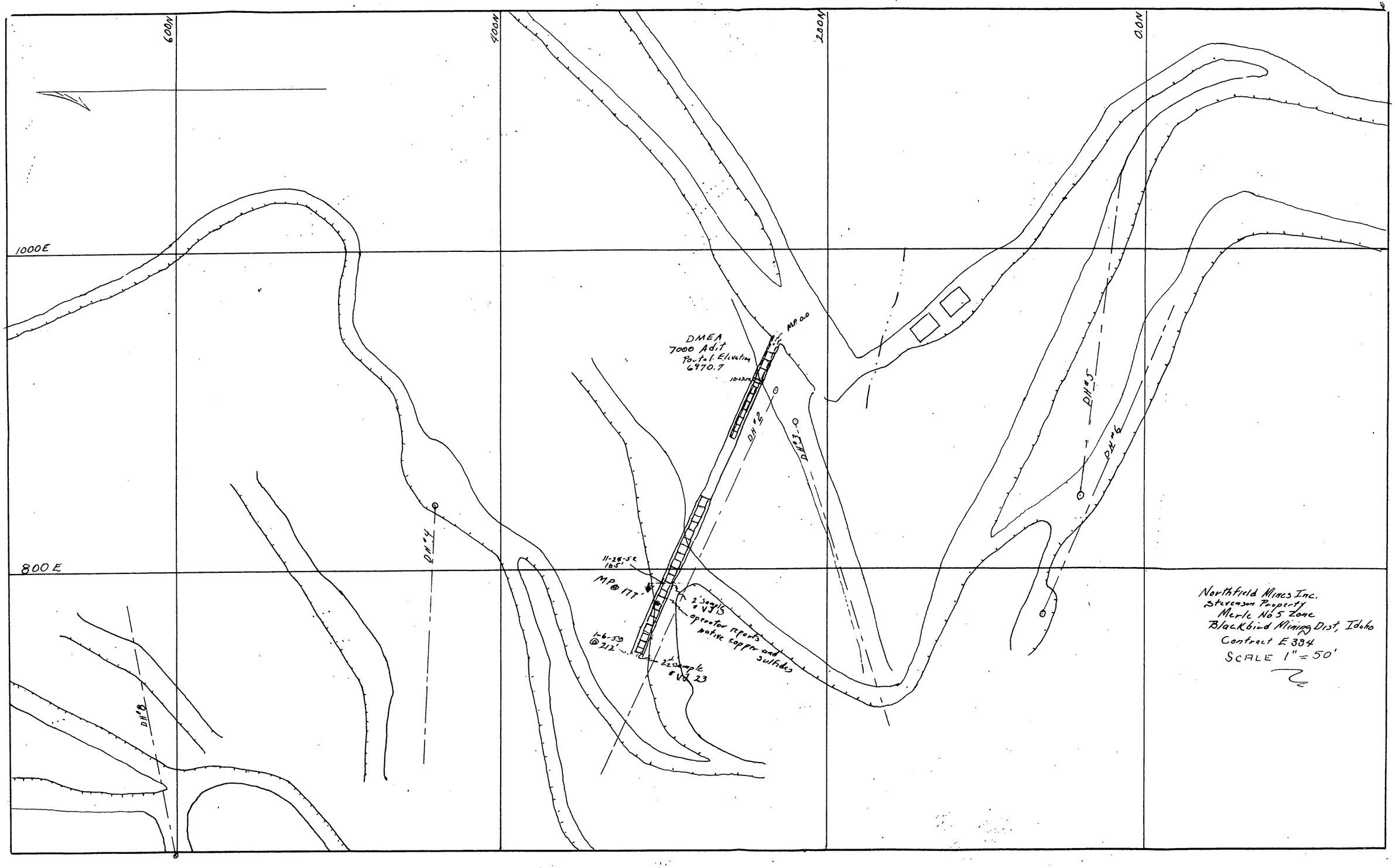
A two cylinder gas-powered light plant with three lamp chargers, switches and controls has been installed. Serial numbers on the plant are 35 UA, W2012004.

It was recommended that the Operator place bearing blocks under posts that were settling into the soft broken material of the adit.

The workmanship is satisfactory.

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
VZJ/he

V. Z. Johnson


600N
400N
200N
0.0N
1000E
800E
DMEA
7000 Adit
Portal Elevation
6970.7
M.P. 0.0
DH #2
DH #3
DH #4
DH #5
DH #6
DH #8
11-28-52
165'
MP @ 177'
2' sample
VJ 13
operator reports
native copper and
sulfides
1-6-53
@ 212'
2' sample
VJ 23
Northfield Mines Inc.
Stevenson Property
Merle No 5 Zone
Blackbird Mining Dist, Idaho
Contract E 384
SCALE 1" = 50'

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

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Department of the Interior
Defense Minerals Administration
RECEIVED

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1952 Docket No. DMEA 2436 Contract No. Idm-2334

Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper

Address c/o A. J. O'Connell - Eureka, Nevada

Contract Amount, $102,900.00 Government Participation: 70 % Amount, $70,300.00

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) Contracts:						
Drilling		19,803.60	19,803.60			
Bulldozing		7,644.00	7,644.00			
Drifting	1,231.17	2,701.85	3,933.02			
(2) Labor & Supervision:						
Labor	293.08	3,619.99	3,913.07			
Supervision	600.00	3,600.00	4,200.00			
Technical Services		3,616.00	3,616.00			
(3) Co. Mat'ls. & Sup.:						
Core Boxes		235.20	235.20			
Geology Supplies	3.50	650.11	653.61			
Small Tools	26.57	129.22	155.79			
Drill Steel	67.60	558.26	625.86			
Mine Rail	91.03	967.35	1,058.38			
Pipe & Fittings	150.90	1,066.77	1,217.67			
Cook House Furn.	175.98	180.93	356.91			
Medical Supplies		19.42	19.42			
Gasoline	31.28	365.49	396.77			
Bunkhouse Furn.	193.44	384.86	578.30			
Fuel Oil, Tires, etc.	87.42	714.74	802.16			
Ventube		488.65	488.65			
Powder, Caps, Fuse		3.00	3.00			
(4) Operating Equipment:						
Rented	1,123.65	4,325.93	5,449.58			
Purchased		574.90	574.90			
(5) New Bldgs. & Improve.:	16.80	2,420.31	2,437.11			
(7) Miscellaneous:						
Drill Parts & Repairs		520.58	520.58			
Repairs to Equipment	.63	134.90	135.53			
Sampling & Analysis	104.00	795.18	899.18			
Payroll Taxes	22.75	636.91	659.66			
Telephone	19.66	324.37	344.03			
Freight on Drill		325.00	325.00			
Accounting	150.00	889.81	1,039.81			
Engineer Travel	153.25	725.50	878.75			
Cabin Rent	50.00	300.00	350.00			
TOTALS	$4,592.71	$58,722.83	$63,315.54			

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

Date 1-14-53 *Payee Northfield Mines, Inc.

Per [signature] Title Accountant

*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:

$2552.60

Signature [signature] (Authorized Certifying Officer)

Date 1/29/53 Vou. No. 639

(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. E 334 in accordance with the terms of the contract.

Signature Verdo E. Johnson Title Mining Engr. Date 1-26-53

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Thomas E Howard Title Mining Engr Date 1/26/53

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 5 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1952 Docket No. DMEA 2436 Contract No. Idm-B334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada

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	Ft.	1,231.17	40.8	3,933.02	185	21.26	1000	18.00
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.			19,803.60	3028	6.54	2980	6.49
Churn								
Auger								
Stripping								
Trenching	Hrs.			5,700.50	425	13.40	435	13.00
Test Pits								
Roads and Trails & Sites	Hrs.			1,943.50	149	13.00	171	13.00
Other Allowable		3,344.74		28,922.91				
TOTAL DISTRIBUTED COSTS		4,575.91		60,303.53				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased				574.90				1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		16.80		2,437.11				7,500.00
Other Allowable								93,560.00
TOTAL COSTS		$4,592.71		$63,315.54				$102,900.00

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 1-14-53 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

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)

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 the [illegible]al phases which may need to be reported for a particular project. It will be ne[illegible] 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 83-38475

NORTHFIELD MINES, INC.

STEVENSON PROPERTY - IDAHO

PROGRESS REPORT #7

December 1952

Docket No. DMEA 2436
Contract No. Idm-E334

ADIT 7000

Total advance this month is 40.8 feet; the adit heading is now at 212.5 feet. Delay was experienced due to bad ground, necessitating driving spiling and placing breast boards to hold the ground. On December 11, the left side of the lead set (at 194.5') settled approximately 10 inches and the preceding five sets were pushed out of alignment. The sets were re-aligned and a false set was put in ahead of the set that had settled. In general the ground at the face is much firmer, but the left side of the adit continues to give some trouble with caving.

The intensely sheared zone that has been troublesome is the projected ore zone as shown in drill hole #D2 and surface trench #5, apparently offset a little to the west by a post mineral (?) fault. Car samples of the area between 190 and 195 assayed slightly in excess of 0.25% cobalt and was all sulphide.

When the present face has been advanced another 30 to 40 feet, it is planned to turn off a drift both north and south to follow the ore zone on each side of the 7000 Adit. The adit will also be continued through the mineralized intersection shown in drill hole #D2 to a point about 75 feet west of the present face.

The log of the north wall of the adit is as follows:

172' to 187.5'	Mineralized schist, intensely sheared, shows some native copper and sulphides.
187.5' to 192'	Mineralized schist, intensely sheared, some iron stain, small stringers of native copper, and sulphides.
192' to 196.5'	Mineralized schist, intensely sheared, some iron stain, native copper, sulphides and quartz pods. Strike N80E, dip 57W.
196.5' to 201.5'	Mineralized schist, intensely sheared, stringers of sulphides from 2" to 6" wide, some iron stain. Strike N23E, dip 82W.
201.5' to 206'	Mineralized schist, intensely sheared, stringers of sulphides up to 2" wide, some iron stain. Strike N23E, dip 71W.
206' to 212.5'	Mineralized schist, strongly sheared, stringers of sulphides, some iron stain.

GENERAL

All labor spent building office-staff house.

LABOR

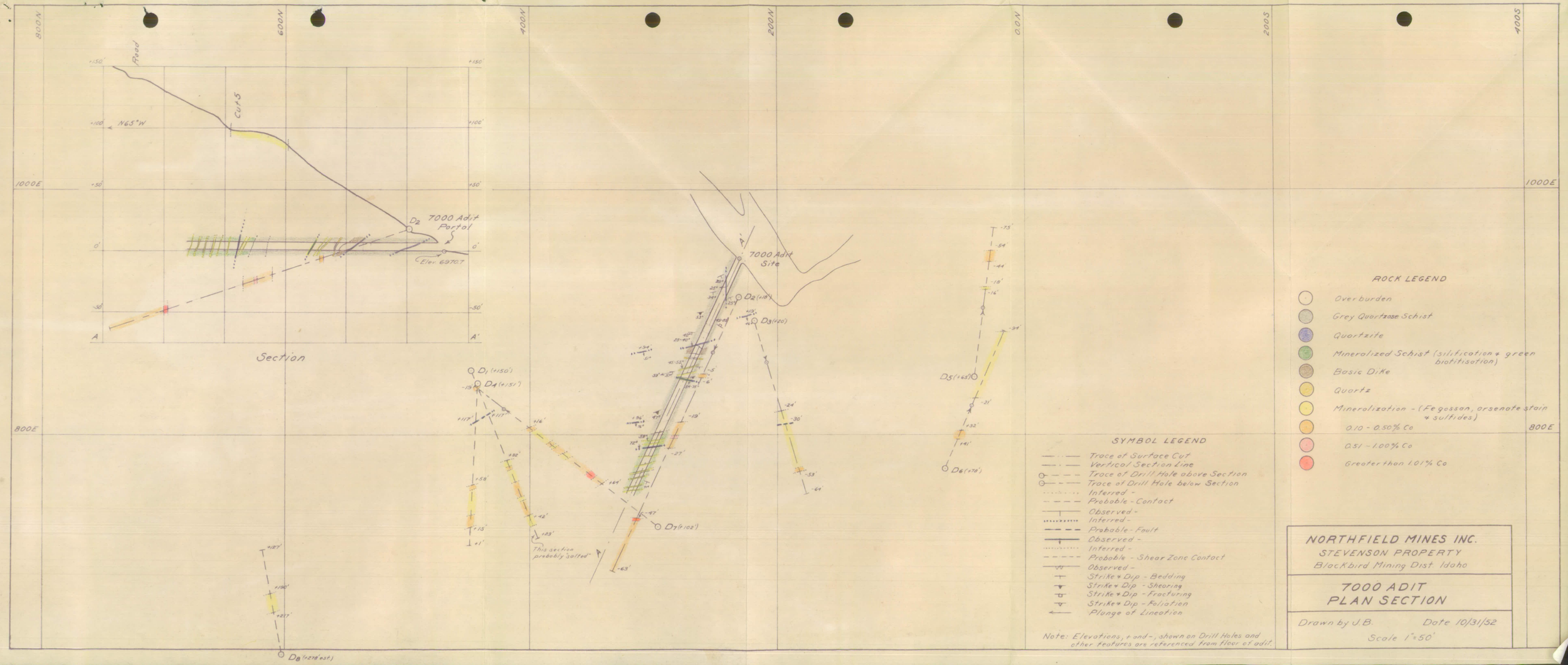
21 shifts.

ADIT 7000

40.8 feet advance.

Respectfully submitted,

George W. Mitchell


800N
600N
400N
200N
0.0N
200S
400S
1000E
800E
Road
Cut-5
N65°W
D2
7000 Adit Portal
Elev. 6970.7
A
A'
Section
7000 Adit Site
D2(+18')
D3(+20')
D1(+150')
D4(+151')
This section probably "salted"
D7(+102')
D5(+165')
D6(+176')
D8(+276' est.)
SYMBOL LEGEND
Trace of Surface Cut
Vertical Section Line
Trace of Drill Hole above Section
Trace of Drill Hole below Section
Inferred -
Probable - Contact
Observed -
Inferred -
Probable - Fault
Observed -
Inferred -
Probable - Shear Zone Contact
Observed -
Strike & Dip - Bedding
Strike & Dip - Shearing
Strike & Dip - Fracturing
Strike & Dip - Foliation
Plunge of Lineation
Note: Elevations, + and -, shown on Drill Holes and other features are referenced from floor of adit.
ROCK LEGEND
Overburden
Grey Quartzose Schist
Quartzite
Mineralized Schist (silificatio & green biotitisation)
Basic Dike
Quartz
Mineralization - (Fe gossan, arsenate stain & sulfides)
0.10 - 0.50% Co
0.51 - 1.00% Co
Greater than 1.01% Co
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist. Idaho
7000 ADIT
PLAN SECTION
Drawn by J.B.
Date 10/31/52
Scale 1"=50'

2436

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WASHINGTON 25, D. C.

1201 North Division St.
Spokane 2, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 23 1952

December 11, 1952

MEMORANDUM

To: DMEA Field Team, Region II

From: V. Z. Johnson, Mining Engineer, Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho, Contract Idm-E334, DMEA Docket No. 2436 (cobalt-copper)

The inspection was made November 11, 1952, with Mr. Corrigan, tunnel contractor.

The 7000 adit (elev. 6970.7) had been driven to a 165 feet total with 132 feet of advance since the inspection of October 23, 1952. The soft schist required timbering in 6 x 9 cross section except for 40 feet of 5 x 7 cross section which may eventually require timber.

There has been no trenching or diamond drilling during the past month.

The following buildings are now complete: cook house - 14 x 26 feet; bunkhouse - 14 x 16 feet; and shop-compressor house - 16 x 30 feet.

From the timber on the property, 100 tunnel sets and 400 13-foot pieces of plus 3-inch pole lagging have been corded up.

Total units completed to date are as follows: adit - 165 feet; diamond drilling - 3028 feet; trenching - 425 hours; roads, trails and sites - 150 hours.

The adit has encountered at 165 feet the first significant mineralized shear zone that was logged in Hole No. 2 which appears to strike NE-SW across the adit dipping parallel to the schistocity in a northeastward direction. The material is broken and shattered, quite heavy and apparently contains an appreciable percentage of sulfides. A two-foot sample, No. V.J. 13, was taken from the footwall of this zone.

The camp personnel was experiencing the first cold-snap, minus 10 degrees, with freeze-ups of equipment and water lines at a time when camp preparation was not entirely complete.

The schistocity and the above mentioned shear zone dipping down tunnel had caused a breast board and forepoling problem at the face. Schistocity is ordinarily substituted for cut-holes, i.e., there would be three lifters and two relievers as the only holes drilled per 5 - 6 ft. round. At the shear zone these holes broke ahead allowing the broken schist to run at the tunnel floor but left a footwall shell in the back to obstruct forepoling or other means of catching the back.

Mr. Corrigan is attempting to organize on a two shift basis round in, round out per shift with personnel as follows: one camp handy man, one compressor operator - shop attendant, one timber rustler, 2 women (cook and assistant), one superintendent, 2 miners and 2 helpers. Fifteen feet in two shifts has been accomplished but cycles can not be made routine because of installation and camp service requirements.

Ventilating fan is at the camp but its power unit remained to be brought in and mounted. Mucking is done with a 12B EIMCO into 3/4 ton cars.

Workmanship is satisfactory. It appears that considerable more timbering will be required than was anticipated and the subcontract to tunnel for $18 per foot will not be profitable.

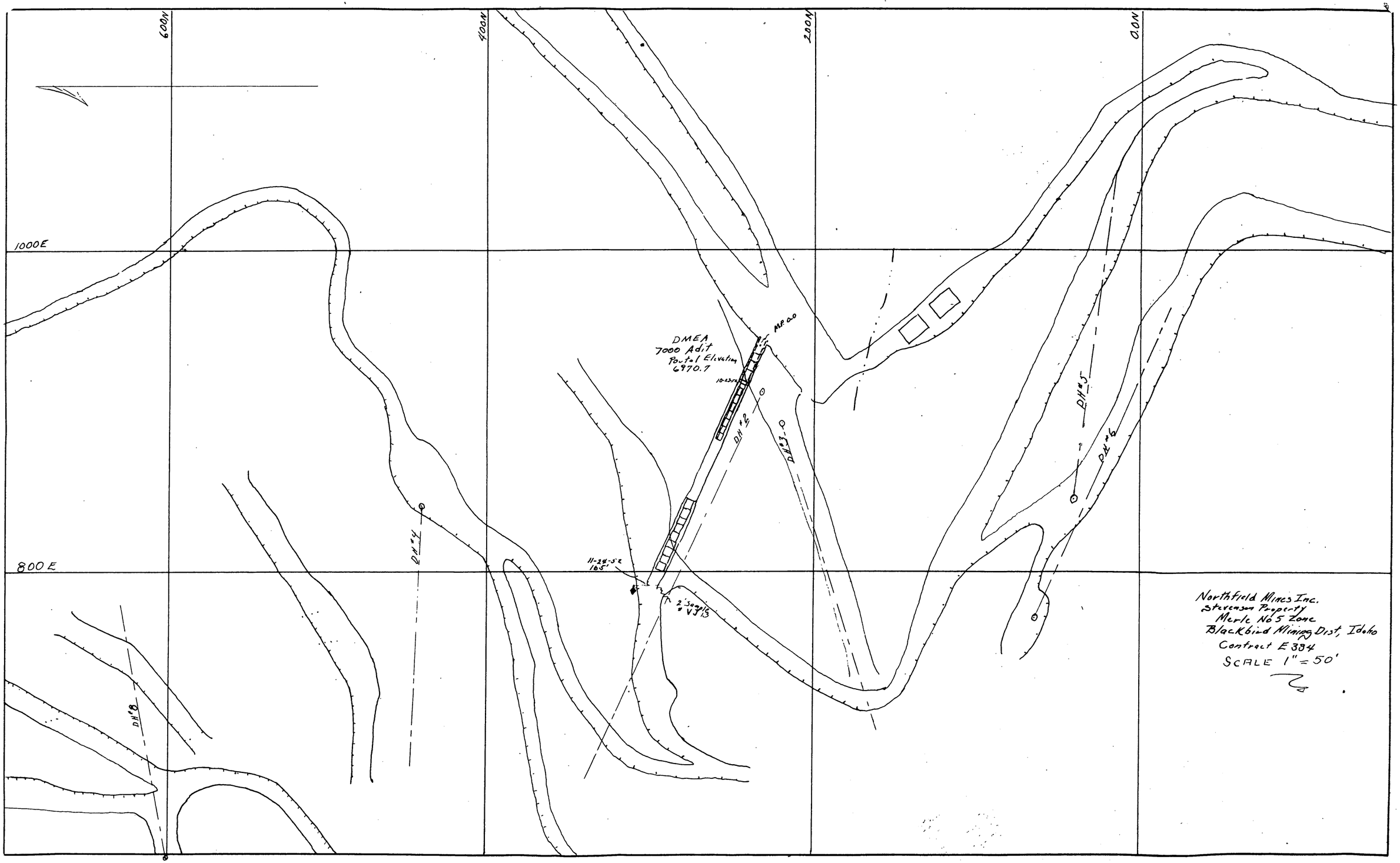
V Z Johnson

V. Z. Johnson

Orig. & 3 - Wash.
USGS - 2
DMEA
M/D
VZJ/vf

NORTHFIELD PROJECT 7000-FOOT LEVEL ADIT
LOOKING SOUTH

No. 2 diamond-drill hole was collared in bulldozer trench near upper right corner. Shop-Compressor house and two other buildings were not entirely complete before 10-below zero weather. The timber on the property is used for tunnel sets, spilling and pole logging. Falling, skiding and framing of timbers breaks up regular tunneling routines.


600N
400N
200N
0.0N
1000E
800E
DMEA
7000 Adit
Portal Elevation
6970.7
M.P. 0.0
DH #2
DH #3
DH #4
DH #5
DH #6
DH #8
11-28-5 E
165'
2' Sample
VJ13
Northfield Mines Inc.
Stevenson Property
Merle No 5 Zone
Blackbird Mining Dist, Idaho
Contract E 384
SCALE 1" = 50'

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

Budget Bureau No. 42-R1038.8
Approval expires 8-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Defense Minerals Administration
RECEIVED
JAN 6 1953

1/14/53

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November 1952 Docket No. DMEA 2436 Contract No. Idm-2334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada
Contract Amount, $ 102,900.00 Government Participation: 70 % Amount, $ 70,300.00

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) [illegible]						
[illegible]					19[illegible].60	[illegible]
[illegible]					7644.00	7539.00
[illegible]				1905.85	621.00	[illegible]
[illegible]				1138.69	3281.34	3679.99
[illegible]				600.00	900.00	3600.00
[illegible]				1590.00	930.00	2500.00
[illegible]						
[illegible]				[illegible]	146.10	835.09
[illegible]				11.85	638.26	[illegible]
[illegible]					129.22	129.22
[illegible]						
[illegible]				217.60	340.66	558.26
[illegible]					941.41	941.41
[illegible]				46.47	1020.30	1066.77
[illegible]					180.93	180.93
[illegible]					19.42	19.42
[illegible]				38.15	318.30	356.45
[illegible]				14.58	370.28	384.86
[illegible]				87.93	541.91	629.84
[illegible]					488.65	488.65
[illegible]				3.00		3.00
[illegible]				1356.60	3119.35	4325.95
[illegible]				450.11	449.99	900.10
[illegible]				390.86	1884.15	2275.01
[illegible]				39.74	482.84	[illegible]
[illegible]				137.84	58.56	196.40
[illegible]					495.18	495.18
[illegible]				109.10	488.28	597.38
(8) Conti.				34.85	244.69	279.92
[illegible]					325.00	325.00
[illegible]				150.00	934.81	1084.81
[illegible]				201.20	635.90	837.10
[illegible]				100.00	200.00	300.00
TOTALS	8,936.34	49,786.49	58,722.83	[illegible]	49786.49	57138.17

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

Date 12-15-52 *Payee Northfield Mines, Inc.

Per [signature] Title Accountant

*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:

$ 5146.18

Signature [signature]
(Authorized Certifying Officer)

Date 1/6/53 Vou. No.
(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. E 334 in accordance with the terms of the contract.

Signature Wendel J. Johnston Title Mining Engineer Date 12-23-52

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature (S) Thomas E Howard Title Mining Engr. Date 12/24/52

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.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1952 Docket No. DMEA 2436 Contract No. Idm-2334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada

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	Ft.	2,060.85	109.7	2,701.85	144.2	18.74	1000'	18,000.00
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.			19,805.60	3028	6.54	2080	61.29
Churn								
Auger								
Stripping								
Trenching	Hrs.			5,700.50	425½	13.40	435	13.00
Test Pits								
Roads and Trails & Sites	Hrs.			1,943.50	149½	13.00	171	13.00
Other Allowable		5,959.22		25,578.17				
TOTAL DISTRIBUTED COSTS		8,020.07		55,727.62				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		480.11		574.90				1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		436.16		2,420.31				7,500.00
Other Allowable								93,560.00
TOTAL COSTS		8,936.34		58,722.83				102,900.00

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 12-15-52 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

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:
DRIFTING TO DATE
INCLUDING CAMP COSTS ETC
$50.98 PER FT.
TLC

(Instructions on reverse)

(For Government use only)

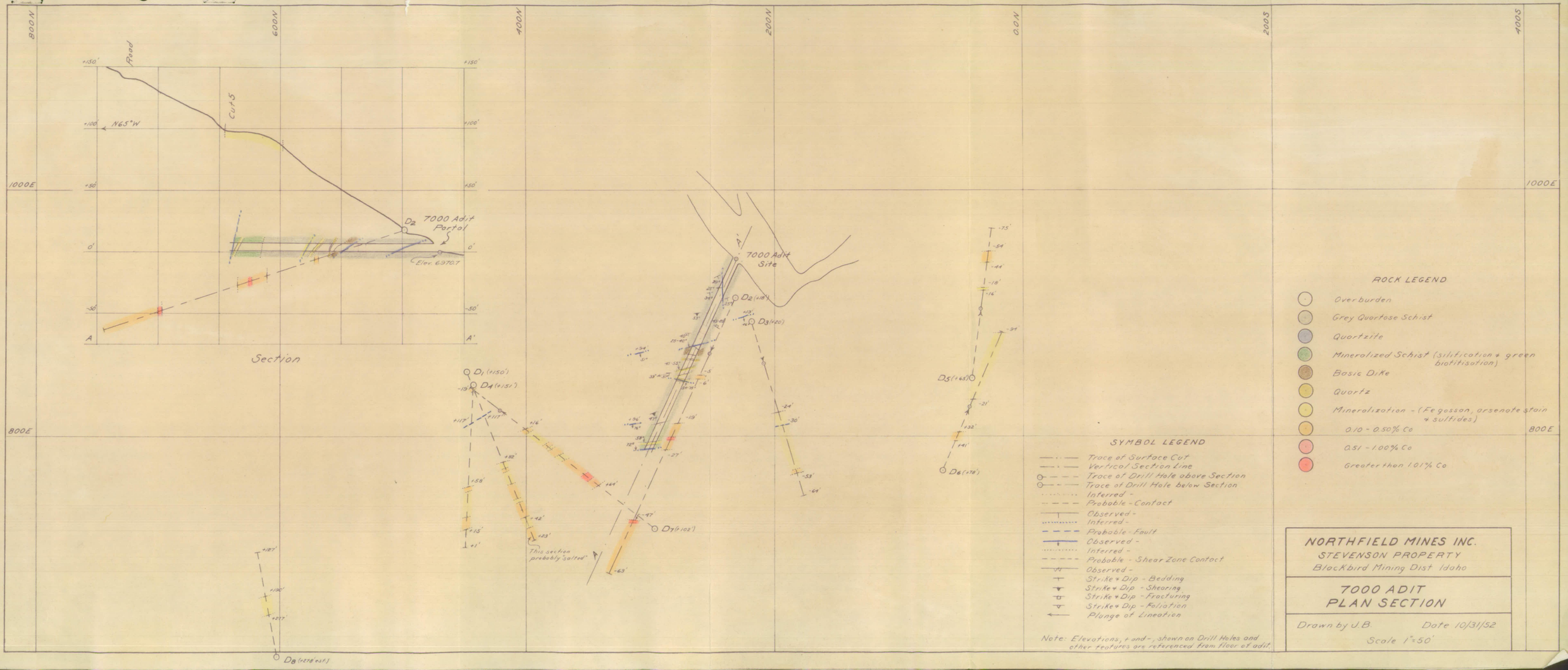
INSTRUCTIONS

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 83-38475


800N
600N
400N
200N
0.0N
200S
400S
1000E
800E
Road
Cut 5
N65°W
D2
7000 Adit Portal
Elev. 6970.7
A
A'
Section
7000 Adit Site
D1 (+150')
D4 (+151')
D2 (+18')
D3 (+20')
D5 (+65')
D6 (+78')
D7 (-102')
D8 (+238' est.)
This section probably "salted"
ROCK LEGEND
Overburden
Grey Quartose Schist
Quartzite
Mineralized Schist (silificatio + green biotitisation)
Basic Dike
Quartz
Mineralization - (Fe gosson, arsenate stain + sulfides)
0.10 - 0.50% Co
0.51 - 1.00% Co
Greater than 1.01% Co
SYMBOL LEGEND
Trace of Surface Cut
Vertical Section Line
Trace of Drill Hole above Section
Trace of Drill Hole below Section
Interred -
Probable - Contact
Observed -
Interred -
Probable - Fault
Observed -
Interred -
Probable - Shear Zone Contact
Observed -
Strike + Dip - Bedding
Strike + Dip - Shearing
Strike + Dip - Fracturing
Strike + Dip - Foliation
Plunge of Lineation
Note: Elevations, + and -, shown on Drill Holes and other features are referenced from floor of adit.
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist Idaho
7000 ADIT
PLAN SECTION
Drawn by J.B.
Date 10/31/52
Scale 1"=50'

14. Exhibit E (question 23-c)*

a) Is it applicable?_____

b) Sufficient data?_____

c) Reasonable?_____

d) Field check needed?_____

15. In your judgment, can the proposed work be done in the proposed time?_____

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question?_____

Reviewed by:_____

Date_____

NORTHFIELD MINES, INC.

STEVENSON PROPERTY - IDAHO

PROGRESS REPORT #6

November 1952

Docket No, DMEA 2436
Contract No. Idm-E334

ADIT 7000

Total advance for this month is 105.7'; the adit heading is now in 171.7'. Considerable delay was experienced due to bad ground, neccessitating driving spiling and placing breast boards to hold ground. The log of the North wall of adit, as submitted by the engineer is as follows:

0' to 20' - Grey schist, some iron staining, average bedding strike N25°E, dip 42°NW.

20' - Flat fault, strike N90°E, dip 25°N.

20' to 50' - Grey schist, slightly sheared, strike and dip of shearing appears to be N6°W, 53°SW.

50' to 78' - Grey schist, bedding strike N3°E, dip 40°W, in places rock shows iron and yellow arsenate staining in cracks.

78' - Flat fault, strike N20-30°W, dip 25-45°SW.

78' to 87' - Basic dike rock, iron stained with occasional quartz pods.

87' to 100'- Grey schist, schist next to basic dike somewhat silicified.

100' - 2" to 6" sulphide stringer, mostly covellite and iron oxide.

100'to 104'- Grey schist.

104'to 108' Mixture of grey schist and some mineralized schist, occasional small stringers, less than 2", of sulphides.

108' - Fault, strike N13°E, dip 54-75°W. There are small stringers of sulphides on both the hanging wall and footwall.

108'to 147'- Grey schist for most part, locally shows moderate shearing action, strike N20°W, dip 47°SW.

147' to 150' - Mixture of grey schist and some mineralized schist, occasional small stringers, less than 2", of sulphides.

150' to 171' - Mineralized schist, with numerous small stringers of sulphides.

171' - Fault contact with intensely sheared mineralized schist, strike N8°W, dip 72°W.

171' to 172' - Intensely sheared mineralized schist, shows some native copper and sulphides.

Engineering Note: There was a 5-7° northerly deviation in bearing on the adit centerline, taken at the portal, as compared to a bearing taken inside adit. Strikes on the geology log will not be corrected until adit centerline bearing is checked with transit.

GENERAL

All labor spent for benefit of driving Adit 7000.

LABOR

9 shifts.

ADIT 7000

105.7 feet advance.

Respectfully submitted,

George W. Mitchell

GWM/m

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
NOV 28 1952

November 19, 1952

Memorandum

To: DMEA Field Team, Region II

From: Wayne A. Roberts, Geologist, U. S. Geological Survey

Subject: Interim Report, Docket No. DMEA-2436, (Cobalt-Copper), Northfield Mines, Inc., Merle, et al. claims, Lemhi County, Idaho, Exploration Project Contract Idm-E334.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The underground crosscut work was begun in October 1952. As of November 8, 1952 about 95 feet of crosscutting had been completed. The diamond drilling contract was terminated on October 21, 1952. A total of 3028 feet of diamond drilling had been done; 718 feet of diamond drilling was done during October.

The tungsten assay reported in the last interim report has been proved erroneous. Check assays of the core split from drill hole 9 failed to show more than 0.05 percent WO_3. The check assay on the section of core reported to contain 2.40 percent WO_3 showed a content of 0.03 percent WO_3.

It is recommended that exploration be continued under DMEA Contract Idm-E334.

WORK COMPLETED

The following work was completed between the first of October 1952 and November 8, 1952:

(1) 718 feet of diamond drilling.
(2) About 95 feet of crosscutting, 66 feet of which were done during October.
(3) The following buildings were completed: one cookhouse, 14 feet by 26 feet; one bunkhouse, 14 feet by 16 feet; ore compressor house (rough lumber), 16 feet by 30 feet.

PROGRESS AND GEOLOGY

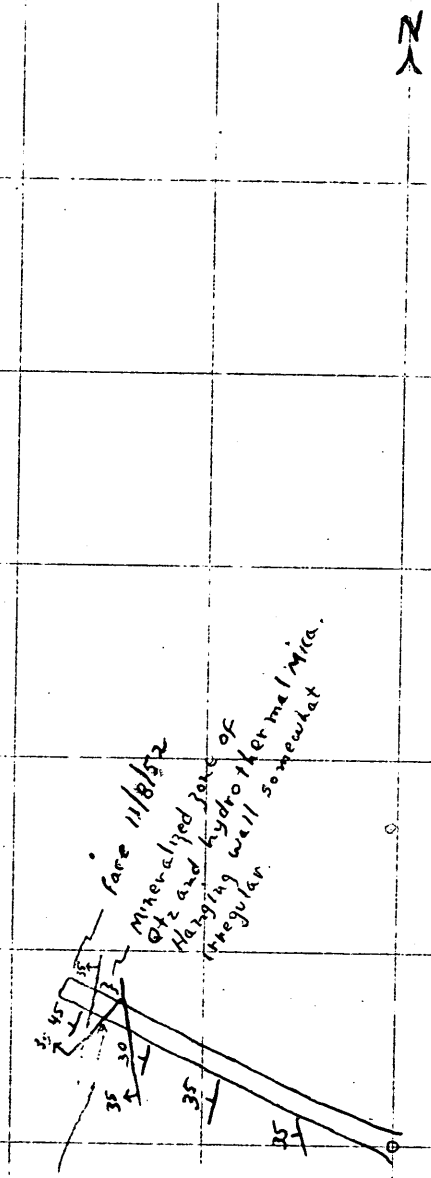
Progress since the last report has been satisfactory.

The drilling done during October intersected mineralized rock at the distance expected. Assays of core splits of the mineralized zones showed the cobalt content at this point in the zones to be below ore grade.

The underground work is all in the schists and quartzites of the Yellowjacket formation of the pre-Cambrian Belt Series. A mineralized zone of quartz and hydrothermal mica between two faults was intersected about 81 feet from the portal (see enclosed map).

Attachment
Dist:
Orig. & 3 - DMEA
USBM (2)
Docket
Roberts

Docket # DMEA 2436



Explanation

35

fault, showing dip

30

Bedding, showing dip

Northfield Mines, Inc. Adit
Merle, et al. claims
Lemhi County, Idaho
Contract # Idm-E 334

Scale: 1" = 50'

"ALBANENE" NO. 1050M K&E CO., N.Y.
REG. U.S. PAT. OFF.

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

1201 North Division Street
Spokane 2, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 1 1952

November 7, 1952

MEMORANDUM

To: DMEA Field Team, Region II

From: V. Z. Johnson, Mining Engineer, Bureau of Mines

Subject: Inspection, Northfield Mines, Inc., Lemhi County, Idaho
Contract Idm-E334, DMEA Docket No. 2436 (cobalt-copper)

The inspection was made October 23, 1952, with Mr. Sharp, Northfield Mines geologist, and Mr. Corrigan, tunnel contractor. Mr. Sharp was removing cores from the No. 13 diamond drill hole site. Hole No. 13 was drilled 342 feet - 60° S. 60° W. through oxidized material to 282 feet, thereafter scattered sulfides including chalcopyrite in weak stringers.

The disposal of drill cores was discussed. The company intends to store the cores at Eureka, Nevada after Mr. Vhay, Cobalt Commodity geologist has logged them.

Portal preparation has been completed at the adit and the face is at 33 feet in soft shattered schist. Five underground and one snow-shed timber sets have been placed. The adit has started on a bearing of about N. 65° W., paralleling diamond drill hole No. 2.

Two 14 x 16 cabins have been nearly completed at the winter camp near the portal. The tool shop - compressor house (16' x 30') has about half of the sheathing placed on the frame.

Workmanship is generally satisfactory and it appears that the subcontractor will press adit progress during the winter season.

V. Z. Johnson

V. Z. Johnson

Orig. & 3 - Wash.
USGS - 2
DMEA
M/D
VZJ/vf

(Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

Defense Minerals Administration
DEC 4 1952

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October 1952 Docket No. DMEA 2436 Contract No. Idm-E334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada
Contract Amount, $ 102,900.00 Government Participation: ____% Amount, $ 70,300.00

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) Contracts:						
Drilling	4,498.90	15,304.70	19,803.60			
Bulldozing		7,644.00	7,644.00			
Drifting	621.00		621.00			28,068.60
(2) Labor	1,185.21	2,296.13	3,481.34			
Supervision	600.00	2,400.00	3,000.00			
Technical Services	186.00	744.00	930.00			7,411.34
(3) Op. Mat'ls. & Sup:						
Core Boxes		146.10	146.10			
Geology Supplies	35.56	655.50	691.06			
Small Tools		129.22	129.22			
Drill Steel		340.66	340.66			
Mine Rail	686.67	254.74	941.41			
Pipe & Fittings		1,020.30	1,020.30			
Cook House Furn.	1.94	178.99	180.93			
Medical Supplies		19.42	19.42			
Gasoline	58.50	262.80	321.30			
Bunkhouse Furn.		370.28	370.28			
Fuel, Oil & Tires	16.32	525.59	541.91			
Ventube		488.65	488.65			5,141.24
(4) Operating Equipment:						
Rental	727.40	2,391.93	3,119.33			
Purchase	12.23	82.56	94.79			3,214.12
(6) New Bldgs., Improve.	1,188.85	795.30	1,984.15			1,984.15
(7) Misc.: Drill Repairs		482.84	482.84			
Repairs to Equip. Auto		58.56	58.56			
Sampling & Analysis	114.00	681.18	795.18			
Payroll Taxes	146.88	339.45	486.33	146.88		
Telephone	30.94	218.93	249.87			
Freight on Drill		325.00	325.00			
Accounting	150.00	589.81	739.81			
Engineer Travel	90.20	545.10	635.30			
Cabin Rent		200.00	200.00			3,972.84
Totals	$10,350.60	$39,491.74	$49,842.34	10350.55	39491.74	49842.29

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

Date 11-12-52 *Payee Northfield Mines, Inc.

Per [signature] Title Accountant

*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:

$____

Signature R J H
(Authorized Certifying Officer)

Date 11/28/52 Vou. No. ____
(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. E-334 in accordance with the terms of the contract.

Signature /s/ Verde Z. Johnson Title Mining Engineer Date 11/17/52

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Thomas E. Howard Title Mining Engineer Date 11/17/52

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 4 1952

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

Month of October 1952 Docket No. DMEA 2436 Contract No. Idm-5334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada

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	Ft.	621.00	34½	621.00	34½	18.00	1,000	18.00
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	4,498.90	687	19,803.60	3,028	6.54	2,980	6.49
Churn								
Auger								
Stripping								
Trenching	Hrs.			5,700.50	435½	13.40	435	13.00
Test Pits								
Roads and Trails & Sites	Hrs.	57		1,943.50	149½	13.00	171	23.00
Other Allowable		4,029.62		19,694.60				
TOTAL DISTRIBUTED COSTS		9,149.52		47,763.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		12.23		94.79				1,240.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		1,188.85		1,984.15				7,500.00
Other Allowable								93,560.00
TOTAL COSTS		$10,350.60		$49,842.34				102,950.00

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 11-12-52 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

REMARKS:

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)

(For Government use only)

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.

U. S. GOVERNMENT PRINTING OFFICE 205676

Docket No. DMEA 2436
Contract No. Idm-5334

NORTHFIELD MINES, INC.

Stevenson Property - Idaho

PROGRESS REPORT #5

October 1952

DIAMOND DRILLING

Drill Hole #D11

Footage 254'. At 223' October 1st shown on last month's report as not completed. Location 489N 86W - Elevation 7420.7- Bearing S23W - Incl. -33°. 0 to 16 grey mica schist. 16 to 21 vein quartz and mica schist and gouge. 21 to 68 quartzite schist. 68 to 158 quartzite schist with occasional quartz seams and iron oxide stains, somewhat vuggy at 109 to 110. 158 to 167 basic dike and iron oxide. 167 to 208 quartzite schist with some silicification and iron oxide. 208 to 211 vuggy iron stained mica schist. 211 to 254 quartzite - mica schist with quartz, iron oxide, a little residual pyrite and at 223 cobaltite.

Drill Hole #D12

Footage 345'. Location 544N 103W - Elevation 7392 - Bearing S60W - Incl. -50°. 0 to 146 quartzite schist with intercalated mica schist and with occasional quartz streaks and iron oxide stain. 146 to 156 basic dike with iron oxide. 156 to 186 quartzite schist, with some quartz seams and iron oxide stain. 186 to 191 basic dike and quartz. 191 to 242 quartzite schist lightly mineralized with quartz and iron oxide and arsenate stain. 242 top of sulphide zone. 242 to 296 ore zone. 296 to 345 lightly mineralized in the end. A little oxidation continued thru the sulphides but is probably old residual iron oxide in the belt series.

Drill Hole #D13

Footage 342' Location 177.1N 27.4E - Elevation 7428 - Bearing S60W - Incl. -67°. 0 to 32 grey quartzite schist with a few quartz seams. 32 to 47 quartzite schist very lightly mineralized. 47 to 180 quartzite schist with occasional iron oxide stained quartz and a little arsenate stain. 180 to 190 basic dike mixed with quartzite schist and quartz. 190 to 280 quartzite schist very lightly mineralized. 280 to 298 quartz streak with iron oxide and a remnant of pyrite. 298 to 323 8" quartz streak with pyrite, slightly oxidized. 323 to 342 12" streak of quartz and sulphide, quartzite schist. D13 entered the sulphide zone at 282 feet but partial oxidation has taken place to the bottom of the hole and a 12" streak of quartz heavily impregnated with sulphide at 323' showed vuggy leaching of the sulphide with iron oxide stains on sides of voids. Sulphide mostly pyrite.

Ending of Diamond Drilling Contract October 21, 1952, total footage 3028 feet.

ADIT 7000

Total footage 66'. The ground is not very solid and required timber up to the face. We are in a mineralized zone, mostly grey fissle schist with arsenate stains on the seams. At 50 feet a quartz pod. Strike of the shears N14W and dipping 42W.

GENERAL

Completed the following buildings:

One cookhouse - 14' x 26'
One bunkhouse - 14' x 16'
One compressor house - 16' x 30' rough lumber

All labor spent on buildings and starting the Adit 7000.

LABOR - 74 Shifts

DIAMOND DRILLING - 718 feet

ADIT 7000 - 66 feet

NORTHFIELD MINES, INC.

Stevenson Property - Idaho

ENGINEERING NOTES

With the submission of Paul Bronken's final coordinates to us and the running of a transit stadia check survey the reported "scaled" coordinates for the drill holes on the Merle 5 zone have been changed as follows:

Note: The conversion factor to 0.0N 0.0E,(Stevenson) coordinates was set last year at 225'S and 646'W; this has now been changed to 240'S and 646'W.

PLACE	NEW COORDINATES & ELEVATIONS			OLD COORDINATES & ELEVATIONS		
Drill Hole D_1	446±N	853±E	7121 ±	464±N	852±E	7141.9
Drill Hole D_2	231±N	913±E	6989±	247±N	914±E	7010
Drill Hole D_3	218±N	893±E	6991 ±	236±N	899±E	7013
Drill Hole D_4	441±N	841±E	7122 ±	456±N	841±E	7143.1
Drill Hole D_5	41±N	846±E	7036 ±	58±N	844±E	7063.2
Drill Hole D_6	65±N	772±E	7043 ±	86±N	770±E	7076.6
Drill Hole D_7	296±N	725±E	7073 ±	300±N	720±E	7098
Drill Hole D_8	601±N	622±E	?	598±N	623±E	7270

Docket # DMEA 2436
Idm - E334
(Cobalt)

NORTHFIELD MINES, INC.

Stevenson Property - Idaho

CHECK SAMPLES

Sample No.	Interval	Type of Sample	Core Recovery	Bureau of Mines Returns	Union Assay Returns	Remarks
D_1 - 20b	112 - 116	Core Split	90%	0.18	0.132	
D_1 - 24b	130 - 138	" "	50%	0.16	0.117	Soft fine schist taken from core barrel
D_1 - 27b	150 - 155	" "	50%	0.16	0.161	
D_1 - 31b	175 - 180	" "	54%	0.16	0.146	
D_2 - 2b	212 - 215	" "	47%	0.28	0.66	
D_2 - 7b	230 - 233	" "	70%	0.22	0.46	
D_2 - 14b	131½ - 134	" "	44%	0.43	0.52	
D_3 - 35b	146 - 150	Sludge	15%	0.21	0.102	
D_3 - 41b	144 - 148	Core Split	47%	0.38	0.249	
D_4 - 42b	124½ - 131	" "	80%	0.15	0.073	
D_4 - 50b	164 - 174	" "	30%	0.37	0.322	
D_4 - 51b	174 - 181	" "	36%	0.16	0.190	
D_4 - 46b	151 - 157	Sludge	0%	0.13	0.073	
D_5 - 54b	144 - 151	Core Split	33%	0.16	0.088	
D_5 - 55b	151 - 156½	" "	49%	0.16	0.117	

Docket No. DMEA 2436
Contract No. Idm-E334

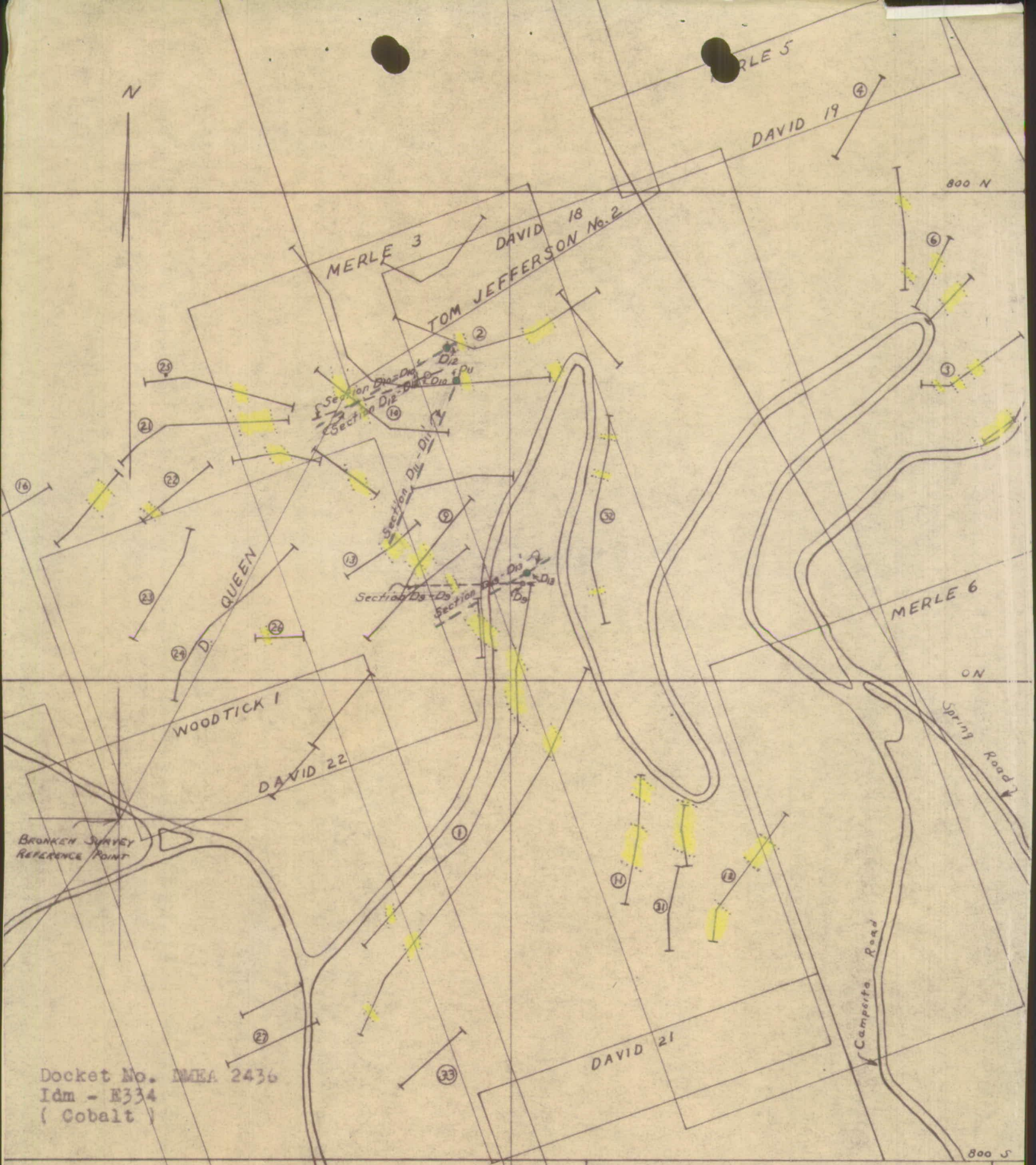
NORTHFIELD MINES, INC.

Stevenson Property - Idaho

PROGRESS REPORT #5

October 1952

Sample No.	Interval	Type of Sample	Core Recovery	Returns $\%WO_3$	Remarks
D_9 - 1A	167 - 172	Core	88%	0.05	Check run for WO_3
D_9 - 2A	172 - 183.5	"	30%	0.03	"
D_9 - 3A	183.5 - 188	"	24%	0.03	"
D_9 - 4A	193.5 - 195.5	"	40%	0.04	"
D_9 - 5A	195.5 - 198	"	100%	0.02	"



Docket No. DMEA 2436
Idm - E334
(Cobalt)

Note:

Cut (Cuts done last year not numbered)

Period 10/1-11/4/52

Work done this period shown in green

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho

FIELD SHEET

--- Section

Mineralized Zone (not necessarily ore bearing)

Scale 1" = 200'

Sheet No. ONOE

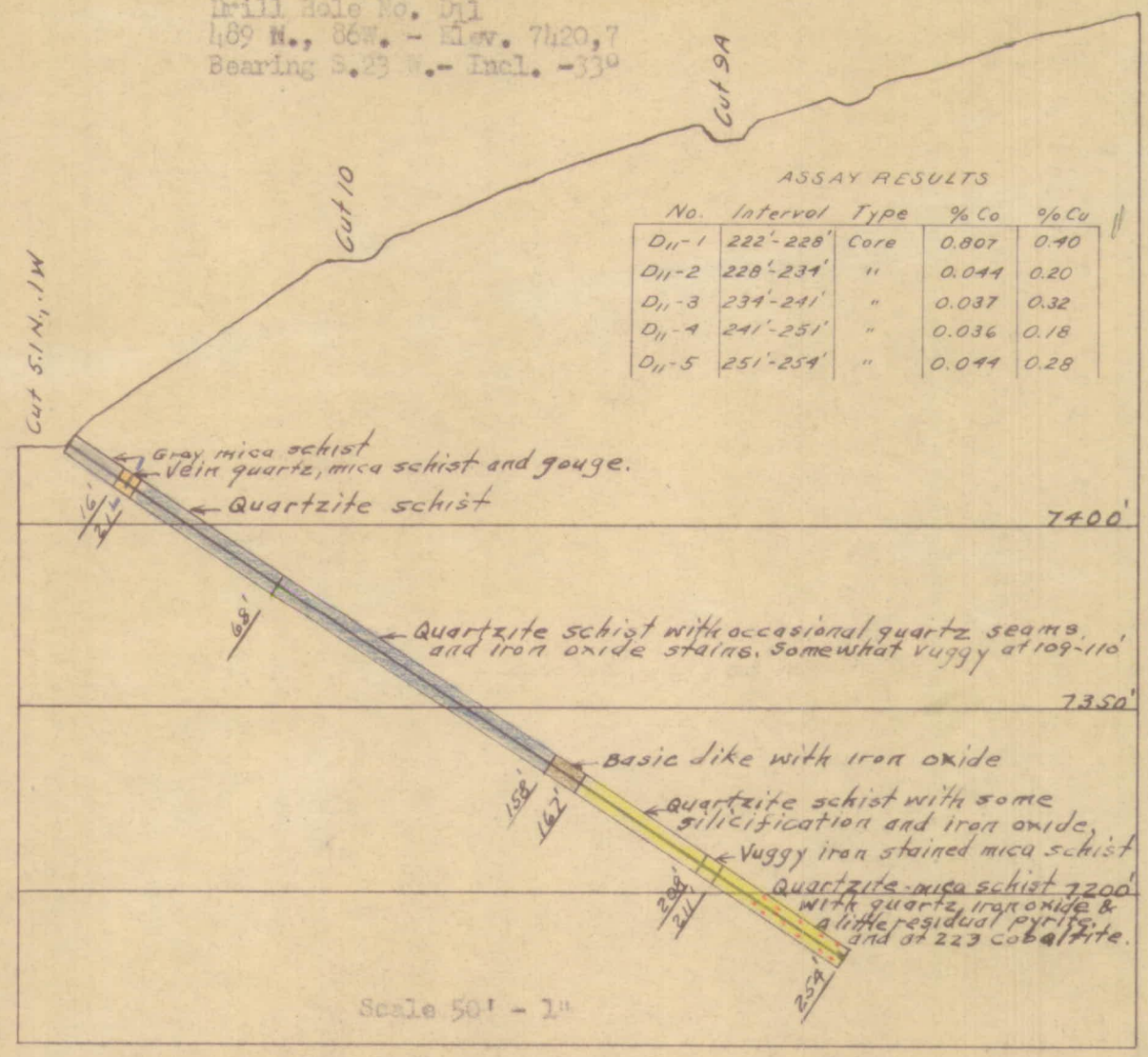
NORTHFIELD MINES, INC.

Stevenson Property
Idaho

Docket No. DMEA 2436
Idm- E334
(Cobalt)

SECTION D_{11} - D_{11}

Drill Hole No. D_{11}
489 N., 86W. - Elev. 7420,7
Bearing S.23 W.- Incl. -33°



ASSAY RESULTS

No.	Interval	Type	% Co	% Cu
D_{11}-1	222'-228'	Core	0.807	0.40
D_{11}-2	228'-234'	"	0.044	0.20
D_{11}-3	234'-241'	"	0.037	0.32
D_{11}-4	241'-251'	"	0.036	0.18
D_{11}-5	251'-254'	"	0.044	0.28

LEGEND

- Gray Schist
- Quartzite
- Mineralized Schist (Silicification, green biotite)
- Basic Dike
- Quartz
- Mineralized (Pyrite, chalcopyrite and cobaltite)
- — — — Fault
- - - - Shearing

NORTHFIELD MINES, INC.

Stevenson Property
Idaho

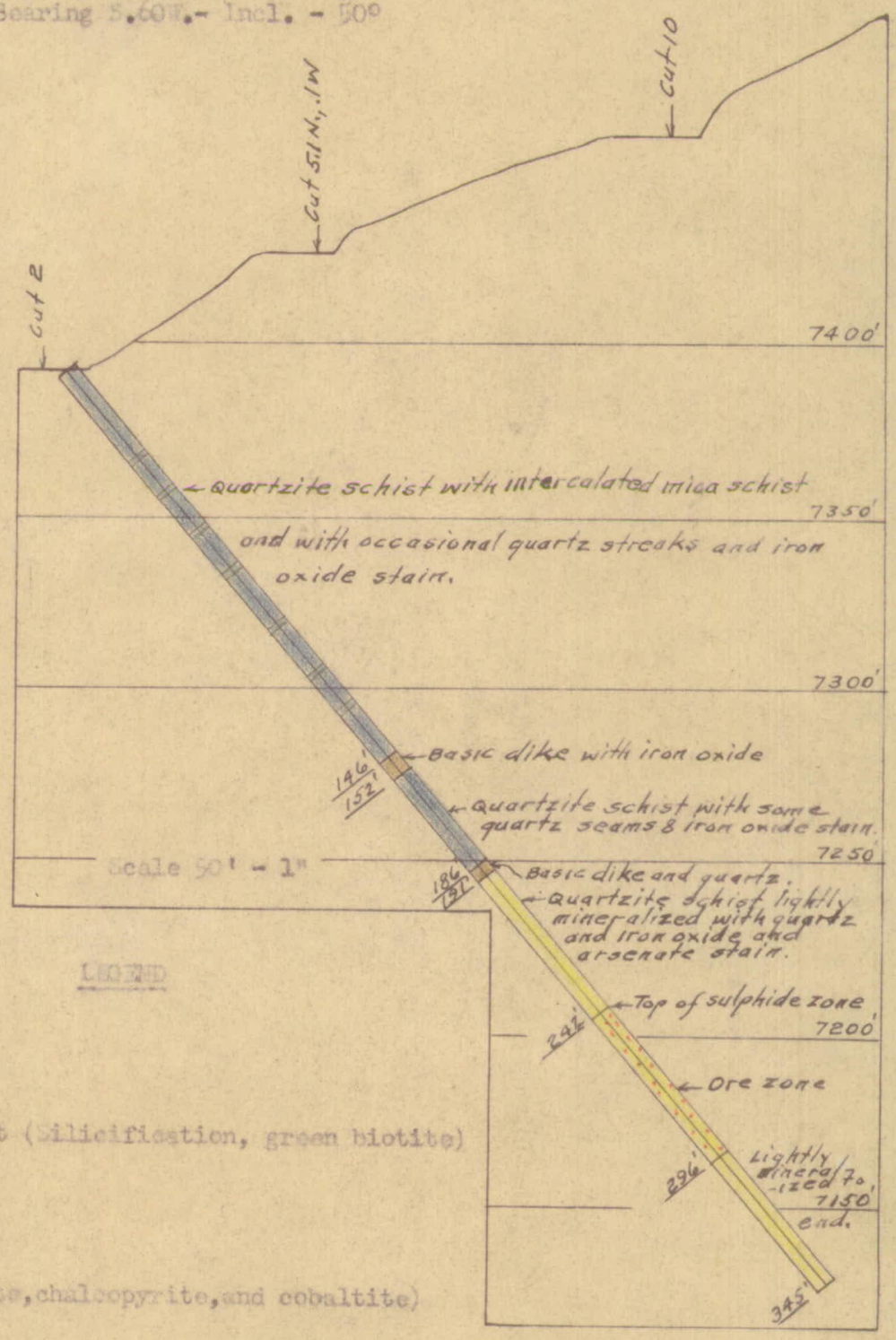
Docket No. DMEA 2436
Idm - E334
(Cobalt)

SECTION D12 - D12

Drill Hole No. D12
544 N., 103 W. - Elev. 7392
Bearing S.60W.- Incl. - 50°

ASSAY RESULTS

No.	Interval	Type	% Co	% Cu
D12-1	188'-198'	Core	0.102	0.02
D12-2	221'-231'	"	0.073	0.07
D12-3	252'-258'	"	0.073	0.07
D12-4	258'-269.5'	"	0.088	0.02
D12-5	269.5'-276'	"	0.044	0.05
D12-6	276'-284'	"	0.058	0.05
D12-7	284'-292'	"	0.044	0.07
D12-8	293'-293.5'	"	0.051	0.20
D12-9	335'-340'	"	0.058	Nil



LEGEND

- Gray Schist
- Quartzite
- Mineralized Schist (Silicification, green biotite)
- Basic Dike
- Quartz
- Mineralized (Pyrite, chalcopyrite, and cobaltite)
- Fault
- Shearing

NORTHFIELD MINES, INC.

Stevenson Property
Idaho

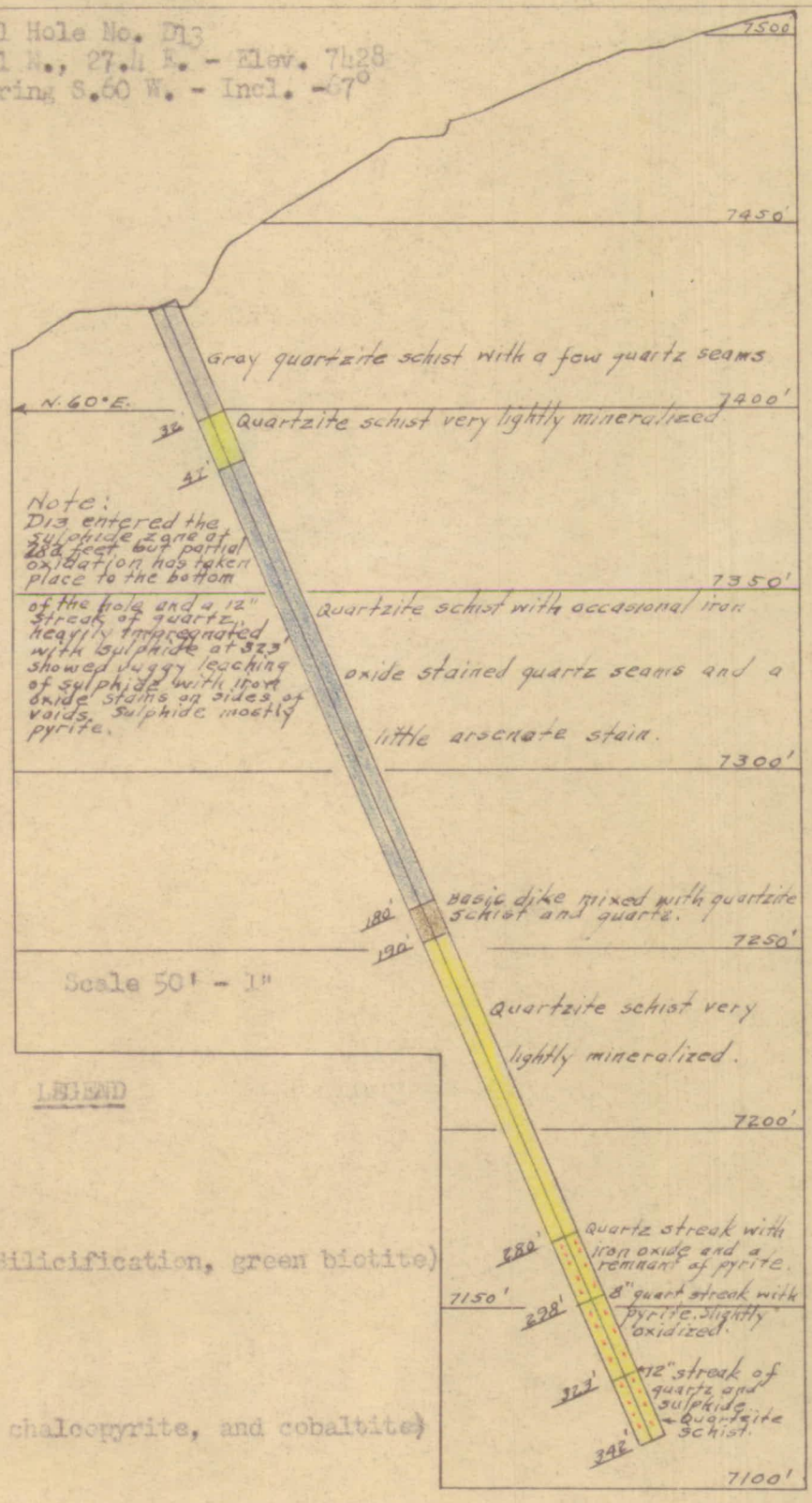
Docket No. DMEA 2436
Idm - K334
(Cobalt)

SECTION D13 - D13

Drill Hole No. D13
177.1 N., 27.4 E. - Elev. 7428
Bearing S.60 W. - Incl. -67°

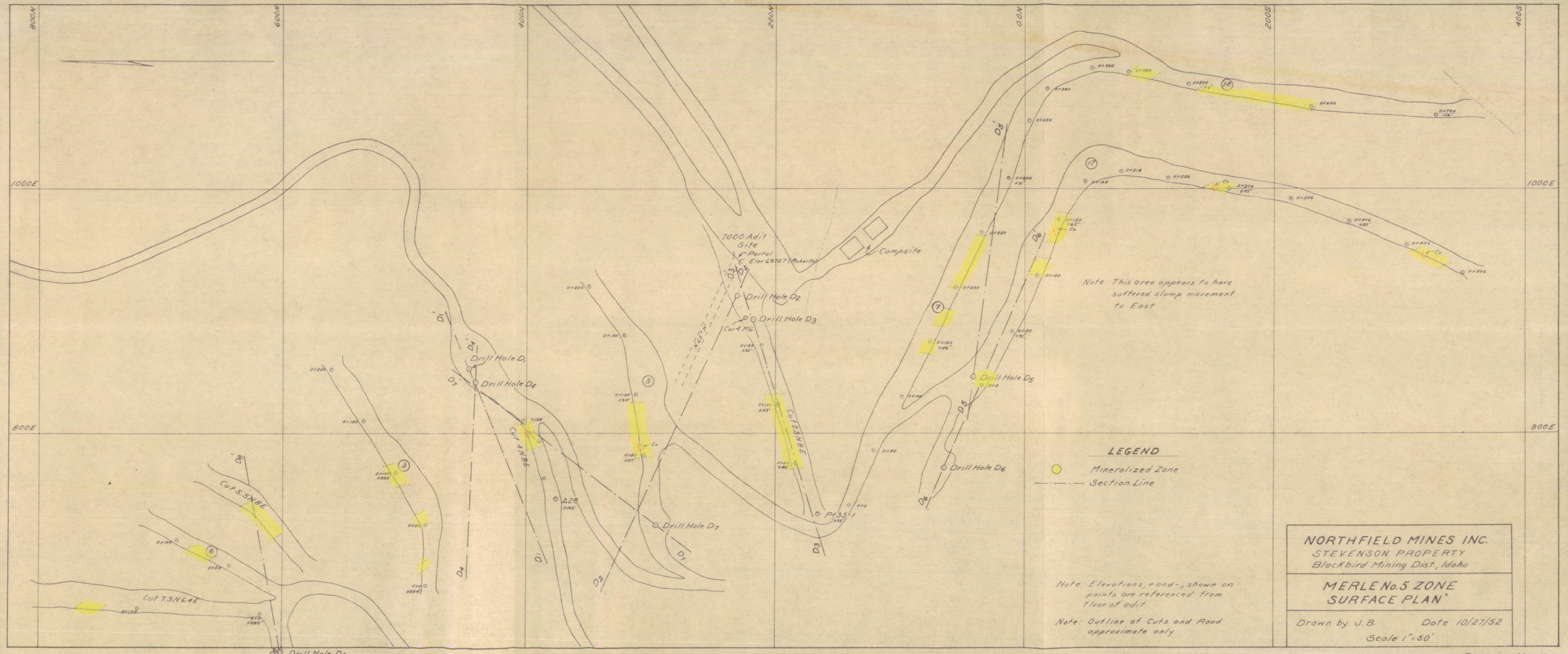
ASSAY RESULTS

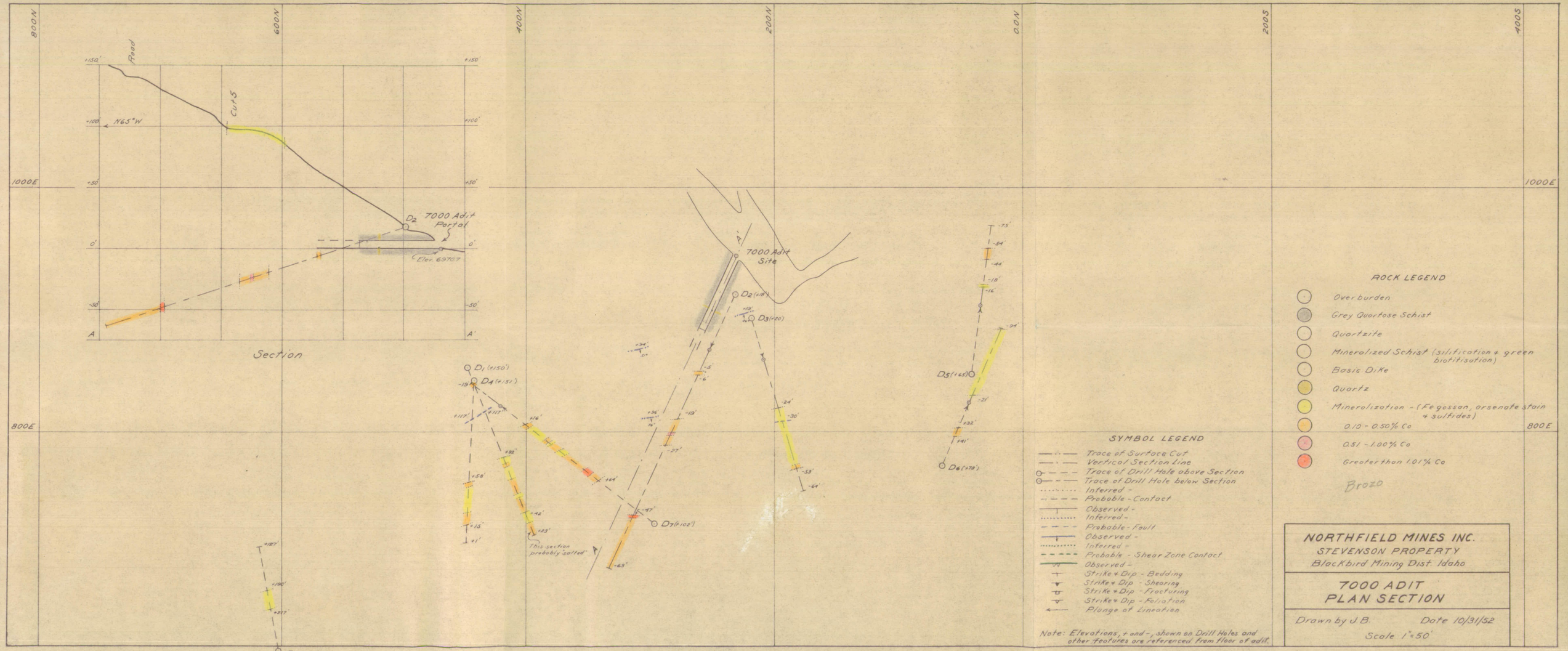
No	Interval	Type	% Co	% Cu
D_{13}-1	298'-298'	Core	0.051	0.32
D_{13}-2	323'-324'	"	0.161	1.97



LEGEND

- Gray Schist
- Quartzite
- Mineralized Schist (Silicification, green biotite)
- Basic Dike
- Quartz
- Mineralized (Pyrite, chalcopyrite, and cobaltite)
- Fault
- Shearing


800N
600N
400N
200N
0N
200S
400S
1000E
800E
7000 Adit Site
Portal
Elev 6970.7 (Roberts)
Composite
Drill Hole D2
Drill Hole D3
Cor 4 M6
Drill Hole D1
Drill Hole D4
Drill Hole D5
Drill Hole D6
Drill Hole D7
Drill Hole D8
Cut 4 N 86
Cut 2.5 N 8 E
Cut 5.5 N 8 E
Cut 7.3 N 64 E
Pt 35-1
Note: This area appears to have suffered slump movement to East
LEGEND
Mineralized Zone
Section Line
Note: Elevations, + and -, shown on points are referenced from floor of adit
Note: Outline of Cuts and Road approximate only
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho
MERLE No. 5 ZONE
SURFACE PLAN
Drawn by J.B.
Date 10/27/52
Scale 1" = 50'
Drawing No.


800N
600N
400N
200N
0.0N
200S
400S
1000E
800E
Road
Cut 5
N65°W
D2
7000 Adit Portal
Elev. 6970'
A
A'
Section
7000 Adit Site
D2(+18')
D3(+20')
D1(+150')
D4(+151')
D5(+165')
D6(+178')
D7(+102')
D8(+278' est)
This section probably "salted"
ROCK LEGEND
Overburden
Grey Quartose Schist
Quartzite
Mineralized Schist (silification + green biotitisation)
Basic Dike
Quartz
Mineralization - (Fegossan, arsenate stain + sulfides)
0.10 - 0.50% Co
0.51 - 1.00% Co
Greater than 1.01% Co
Brozo
SYMBOL LEGEND
Trace of Surface Cut
Vertical Section Line
Trace of Drill Hole above Section
Trace of Drill Hole below Section
Inferred -
Probable - Contact
Observed -
Inferred -
Probable - Fault
Observed -
Inferred -
Probable - Shear Zone Contact
Observed -
Strike + Dip - Bedding
Strike + Dip - Shearing
Strike + Dip - Fracturing
Strike + Dip - Foliation
Plunge of Lineation
Note: Elevations, + and -, shown on Drill Holes and other features are referenced from floor of adit.
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist. Idaho
7000 ADIT
PLAN SECTION
Drawn by J.B.
Date 10/31/52
Scale 1" = 50'

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
1201 N. Division St.
Spokane 2, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 27 1952

October 8, 1952

MEMORANDUM

To: DMEA Field Team, Region II

From: E. W. Buel, Mining Engineer, Bureau of Mines

Subject: Routine inspection, Northfield Mines, Inc., Lemhi County, Idaho, Contract Idm-E334, Docket No. 2436 (cobalt-copper)

The inspection was made October 3, 1952 in company with John Brozo, company engineer. Mr. Brozo requested information relating to the disposal of the sludge and core material. I informed him I would take the matter up with the Spokane office.

Herein is a list submitted by Milo Manz, company official, showing the work units completed during the past month. I was informed that the Operator was withholding 100 hours of the bulldozing contract. The purpose is to utilize any remaining time needed for unanticipated exploration work.

Five drill holes were completed during the interim of inspections. Total footage for these holes is 1120 feet. Eleven holes have been drilled to date, bringing the overall footage to 2341 feet. Hole D-12 was being collared at the time of inspection.

The work appears to be efficiently conducted.

Edward W. Buel

E. W. Buel

Orig. & 3—Wash.
USGS (2)
DMEA
M/D
EWB

Docket 2436
Contract Idm-E334

TOTAL FOOTAGE ON NEW TRENCHES

Sept. 1st to Oct. 1st

TRENCHES

No. 33 - 140'

Total footage for Sept. 1952 140 feet

Distribution as follows:

Trenching	Total	hours	4
Road Maintenance	"	"	41½
New Roads	"	"	0
Drillsites	"	"	6
Tunnelsite	"	"	16

Total Cat hours to date 575 @ $13.00 per hour $7475.00
Total footage to date (trenching) 7173'

Distribution as follows on total hours to date:

Trenching	Total	hours	397½
Drillsites	"	"	23
Roads (New)	"	"	66½
Roads (main.)	"	"	72
Tunnelsite	"	"	16

Ending contract with C. F. Nechanicky for Cat work

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 27 1952

So. 157 Howard Street
Spokane 4, Washington

October 3, 1952

Memorandum

To: DMEA Field Team, Region II

From: Wayne A. Roberts, Geologist, U. S. Geological Survey

Subject: Interim Report, Docket No. DMEA-2436, Cobalt-Copper, Northfield Mines, Inc., Merle, et al claims, Lemhi County, Idaho, Exploration Project Contract Idm-2334

Summary, Conclusions and Recommendations

Exploration bulldozing work was completed in the month of September. The diamond drilling of the Merle No. 2 zone was completed and diamond drilling of the Merle No. 3 zone commenced. The exploration work on the Merle et al claims has progressed satisfactorily. At least four mineralized shear zones were disclosed by bulldozing. Two of these zones were exposed at intervals for about 600 feet. Assays of the diamond drill core were low. The core from most of the holes were partially oxidized near the bottom. Low assays on this type of deposit (both diamond drill core and sludge) were expected and only underground exploration of these shear zones will disclose the grade and size of the mineralized rock. A tunnel site, near the Merle No. 5 zone, was chosen and underground exploration of the Merle No. 5 zone is almost ready to begin.

It is recommended that exploration under DMEA contract Idm-2334 be continued.

Work Completed

The work done during the month of September is as follows: (1) 4 hours, or 300 linear feet, of exploration bulldozing; (2) 41.5 hrs. of road maintenance by bulldozer; (3) 6 hrs. of diamond drill site preparation by bulldozer; (4) 16 hrs. of tunnel site preparation by bulldozer; (5) construction of the camp at the tunnel site was begun; (6) 852 feet of diamond drilling.

Total exploration work done since June 1, 1952 is as follows:

(1) 39.5 hrs., or 7173 linear feet, of exploration bulldozing; (2) road rehabilitation and maintenance by bulldozer, 72 hrs.; (3) new road construction by bulldozer, 66.5 hrs.; (4) drill site preparation by bulldozer; (5) tunnel site preparation by bulldozer, 16 hrs.; (6) 2305 feet of diamond drilling; (7) erection of frames, floors, and siding of two tent houses; (8) construction of the camp at the tunnel site was begun.

Progress and Geology

Progress of the exploration work has been done satisfactorily. Bulldozing has exposed four mineralized shear zones, two of which (the Merle No. 3 and the Merle No. 5) are at least 600 feet long. Eight diamond drill holes intersect the Merle No. 5 zone and indicate that this zone extends to the depth reached by the drill holes and is oxidized partially up to 200 feet below the surface. Three diamond drill holes have intersected the Merle No. 3 zone and indicate that this zone also extends to a shallow depth at least and that the sulfides have been oxidized, locally completely, to almost 200 feet beneath the surface.

These deposits are in rocks of the pre-Cambrian Belt Series that have been metamorphosed to schists. The deposits of mineralized rock appear to be similar to those at the Calera mine. The Merle No. 3 and No. 5 zones appear to be continuous but the ore grade material will probably occur as pods plunging about north. Exploration to date has indicated depth and continuity of mineralized rock. Assays of diamond drill core and sludge have generally been of a grade lower than necessary to constitute ore; however, only underground exploration work can disclose the grade and size of the body of mineralized rock.

The Union Assay Office of Salt Lake City, Utah, reported 2.40 percent WO_3 in a sample from diamond drill hole 9. This assay has not been checked yet. No tungsten mineral was recognized in this sample by the writer.

The attached table contains assays of the samples taken from the core of diamond drill holes 1 to 9.

Wayne A. Roberts

Enclosure

cc: DMEA (4)
USBM (2)
Roberts

Union Assay Office, Salt Lake City, Utah

No.	% Cu	% Co	Core Interval	Type
D-1-19	0.08	0.058	106-112	Core
D-1-20	0.52	0.132	112-116	"
D-1-21	0.74	0.088	116-120	"
D-1-22	0.15	0.073	120-125	"
D-1-23	0.18	0.073	125-130	Sludge
D-1-24	0.75	0.117	130-138	Core barrel Sludge & core
D-1-25	0.35	0.102	138-145	Core
D-1-26-	0.43	0.088	145-150	"
D-1-27	0.20	0.161	150-155	"
D-1-28	0.25	0.117	155-160	"
D-1-29	0.25	0.102	160-165	"
D-1-30	0.18	0.088	165-175	"
D-1-31	0.60	0.146	175-180	"
D-1-32	0.18	0.088	180-185	"
D-1-33	0.24	0.117	185-190	"
D-1-34	0.20	0.110	190-195	Sludge
D-2-1	1.17	2.64	209-212	Core
D-2-2	0.35	0.66	212-215	"
D-2-3	0.03	0.17	215-218	"
D-2-4	0.30	0.17	218-221	"
D-2-5	0.30	0.17	221-224	"
D-2-6	0.13	0.14	224-229	Sludge
D-2-7	0.46	0.46	230-233	Core
D-2-8	0.39	0.23	236-239	"
D-2-9	1.22	0.17	119-121	"
D-2-10	0.09	0.10	121-124	"
D-2-11	0.06	0.11	124-126.5	"
D-2-12	0.27	0.11	126.5-129	"
D-2-13	0.27	0.20	124-134	Sludge
D-2--14	0.44	0.52	131.5-134	Core
D-2-15	0.36	0.32	134-139	"
D-2-16	0.10	0.22	139-144	"
D-2-17	0.44	0.20	74-77	"
D-2-18	0.28	0.19	254-259	"
D-3-35	0.15	0.102	46-50	"
D-3-36	1.15	0.073	97-102	"
D-3-37	0.32	0.088	107-108.2	"
D-3-38	0.27	0.044	109-199	"
D-3-39	0.35	0.058	119-128	"
D-3-40	0.32	0.088	128-134	"
D-3-41	0.63	0.249	144-148	"
D-4-42	0.90	0.073	124.5-131	Core
D-4-43	0.25	0.088	131-136	"
D-4-44	0.12	0.044	136-141	Sludge
D-4-45	0.12	0.044	141-149	Core

No.	°/• Cu	°/• Co	Core Interval	Type
D-4-46	0.55	0.073	151-157	Core
D-4-47	0.22	0.058	141-149	Sludge
D-4-48	0.20	0.044	149-157	"
D-4-49	0.45	0.073	157-164	Core
D-4-50	1.18	0.322	164-174	"
D-4-51	0.50	0.190	174-181	"
D-4-52	0.42	0.029	181-191	"
D-5-53	0.05	0.073	71-76	"
D-5-54	0.07	0.088	144-151	"
D-5-55	1.54	0.117	151-156.5	"
D-6-1	0.13	0.051	121-131	"
D-6-2	0.55	0.037	131-141	"
D-6-3	0.27	0.044	141-151	Soft ground core
D-6-4	0.37	0.029	151-161	"
D-6-5	0.17	0.044	161-171	"
D-6-6	0.15	0.029	171-181	Core
D-6-7	0.15	0.029	181-191	"
D-6-8	0.83	0.088	200-204.5	"
D-6-9	0.07	0.066	204.5-211	"
D-6-10	0.10	0.264	45.56	"
D-7-1	0.48	0.301	69-79	"
D-7-2	0.98	1.292	79-86	"
D-7-3	0.73	0.426	86-96.5	"
D-7-4	0.73	0.279	86-96.5	Sludge
D-7-5	0.27	0.110	96.5-104	Core
D-7-6	0.25	0.169	104-109	"
D-7-7	0.37	0.095	109-115.5	"
D-7-8	0.20	0.161	115.5-122.5	"
D-7-9	2.22	0.315	122.5-126.5	"
D-7-10	0.45	0.081	126.5-129	"
D-7-11	0.25	0.147	129-134	Sludge
D-7-12	0.12	0.073	134-144	Core
D-7-13	0.50	0.081	144-152.5	"
D-7-14	0.30	0.147	152.5-158	"
D-7-15	0.12	0.088	173-183	"
D-7-16	0.32	0.301	219-224	"
D-8-1	0.28	0.037	72-82	"
D-8-2	0.28	0.045	82-92	"
D-8-3	0.13	0.029	92-102	"
D-9-1	0.10	0.015	167-172	"
*D-9-2	0.12	0.015	172-183.5	"
D-9-3	0.55	0.022	183.5-188	Core
D-9-4	1.29	0.029	193.5-195.5	Core
D-9-5	None	0.015	195.5-198	"

* In addition D-9-2, 2.40 °/• WO_3

Sample Splits Assayed by Ledoux Co., New York

D-1-20A	--	0.09
D-1-27A	--	0.11
D-1-31A	--	0.13
D-3-35A	--	0.10
D-3-41A	--	0.21
D-4-42A	--	0.07
D-4-50A	--	0.44
D-4-51A	--	0.16

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 44-R1036.3.
Approval expires 6-30-53.

Defense Minerals Administration
RECEIVED
NOV 21 1952

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September 195 2 Docket No. DMEA 2436 Contract No. Idm-2334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o J. J. O'Connell - Eureka, Nevada
Contract Amount, $ 102,900.00 Government Participation: 70 % Amount, $ 70,030.00

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:						
Drilling	5,873.50	9,431.20	15,304.70			
Bulldozing	1,046.50	6,597.50	7,644.00			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	1,288.96	1,007.17	2,296.13			
Supervision	1,200.00	1,200.00	2,400.00			
Technical Services	372.00	372.00	744.00			
(3) Operating Costs and Supplies:						
Geology Supplies	153.73	146.10	146.10			
Timber	44.45	541.77	625.50	100.93		
Drill Steel	32.68	83.77	520.66			
Explosives	354.74		347.46			
Pipe & Fittings	292.34	728.24	1,020.30			
Track	5.38	173.24	178.62			
Gasoline	142.26	129.96	272.22			
Muck House Furn.	12.3	353.98	366.28	139.26		
Oil & Tires	180.29	345.30	525.59			
Ventube	488.65		488.65			
(4) Operating Equipment:						
Rental	1,550.93	841.00	2,391.93			
Purchase		82.56	82.56			
Depreciation						
(5) Initial Rehabilitation and Repairs	230.66	564.64	795.30			
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Drill Repairs	482.84		482.84			
Auto	23.61	34.95	58.56			
Repairs to Equipment	351.18	330.00	681.18			
Sampling and Analysis	193.15	146.30	339.45			
Payroll Tax	70.69	148.24	218.93			
Tel and Tel		325.00	325.00			
Drill Insurance	150.00	239.81	389.81			
Accounting	395.10	150.00	545.10			
Engineer Travel	50.00	150.00	200.00			
Cabin Rent						
(8) Contingencies (specify):						
TOTALS	$15,268.31	$24,223.43	$39,491.74	15,268.31	24,223.43	39,491.74

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

Date 10-14-52 *Payee Northfield Mines, Inc.

Per [signature] Title Accountant

*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:

$ 10,648.76

Signature [signature]
(Authorized Certifying Officer)

Date Vou. No.
(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. ..... in accordance with the terms of the contract.

Signature ..... Title ..... Date .....

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ..... Date .....

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.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 21 1952

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1952 Docket No. DMEA 2436 Contract No. Idm-E334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Eureka, Nevada

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								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	5,873.50	896	15,304.70 ✓	2,341	6.54	2000'	8.00
Churn								
Auger								
Stripping								
Trenching	Hrs.	221.00	4	5,700.50 ✓	425½	13.40	500	15.00
Test Pits								
Roads and Trails & Sites	Hrs.	825.50	63½	1,943.50 ✓	149½	13.00	270	15.00
Other Allowable		8,117.65		15,747.74				
TOTAL DISTRIBUTED COSTS		15,037.65		38,696.44				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		230.66		795.30 ✓				7,500.00
Other Allowable								93,560.00
TOTAL COSTS		$15,268.31		$39,491.74				$102,900.00

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 10-14-52 Operator Northfield Mines, Inc.

Per [signature] Title Accountant

REMARKS:

→ 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)

(For Government use only)

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 83-38475

[illegible], INC.

[illegible] - [illegible]

[illegible]

September 1952

Trenching

[illegible] new trench was dug in September. Trenching operations have been stopped as sufficient continuous structure has been exposed and diamond drilling on the Merle No. 3 zone was started September 11th.

Trench #33 Footage 140' located about 114' [illegible] of the Woodties No. 1 location [illegible]ment. At [illegible] to 70 black schist on the hanging wall of iron stain quartz vein at 70 to 72 striking N25W and dipping 75 degrees east. At 10 feet 6" of iron stain quartz stringers striking [illegible] and dipping about 50 degrees west with a little shearing between the two. Rating poor.

Diamond Drilling

Drill Hole #37 Footage 324'. At 134' September 1st [illegible] as shown on last month's report. Location [illegible] - Elev. [illegible] - Bearing [illegible] - Incl. [illegible] degrees. Overburden to 14 feet and medium hard light black schist to 21 feet. 21 to 44 soft and broken grey schist and starting to pan a little at 44 feet. 44 to 73 dark grey soft broken schist with some quartz at 74 feet and showing nothing in panning. 73 to 95 quartz stringers, sulphides, iron pyrites and dark schist panning very good. 95 to 134 soft black green schist, iron pyrites and sulphides panning good. 134 to 156 medium hard black green schist, some iron pyrites and sulphides, panning. 156 to 224 medium hard grey schist panning a little.

Drill Hole #38 Footage 177'. Location [illegible] - Elev. [illegible] - Bearing [illegible] - Incl. -[illegible] degrees. 0 to [illegible] overburden. [illegible] to 16 light grey schist. 16 to [illegible] broken quartzite and grey schist. [illegible] to 62 soft light brown to black schist. 62 to 72 very soft dark brown to black schist. 72 to 106 soft grey schist oxidized - panning a little. 106 to 116 soft grey and brown schist oxidized - also panning a little. 116 to 136 light black and grey schist. 136 to 146 yellow brown and light grey schist oxidized. 146 to 152 soft and broken light black schist. 152 to 177 medium hard grey schist.

Drill Hole #39 Footage 241'. Location [illegible] - Elev. [illegible] - Bearing [illegible] - Incl. -[illegible] degrees. 0 to 21 medium hard grey schist. 21 to 26 grey schist with arsenate and iron stained quartz. 26 to 172 grey schist with gouge. 172 to 176 arsenate stains and also some gouge. Starting to get some quartz. 17[illegible] to 17[illegible] slight mineralization quartz with iron oxide strongly oxidized. 17[illegible] to 1[illegible] arsenate

stained schist with some quartz - strongly oxidized. 183 to 185 iron stained quartz with some arsenate stain and a little remaining chalcopyrite and covellite. 185 to 205 grey schist with quartz seams. 205 to 215 strongly oxidized iron stained quartz. 215 to 241 grey schist with occasional seams of quartz.

Drill hole #2A0 — Footage 224'. Location [illegible] 1354 - Elev. 74[illegible] - Bearing [illegible] - Incl. -[illegible] degrees. 0 to 56 grey quartzite schist with occasional iron stain on the face of fractures. 56 to 61 same with more iron stain somewhat vuggy. 61 to 66 soft mica schist and gouge - doesn't pan. 66 to 120 is grey quartzite schist with somewhat more iron stain and occasional iron stain stringers thru Merle #2 vein, thoroughly oxidized - no sulphides. 120 to 144 grey quartzite schist. 144 to 154 is the same with some dark mica schist. 154 to 171 grey quartzite with occasional arsenate stains in seams from 160 to 171. 171 to 201 grey quartzite schist with occasional seams of iron stained quartz - all oxidized. 201 to 216 darker mica schist and showing a little in panning. 216 to 224 grey quartzite schist occasional iron stained quartz seams.

Drill Hole #2A1 — Footage 223', not finished. Location 4738 89[illegible] - Elev. 743[illegible] - Bearing 5235 - Incl. - 33 degrees. This hole has not been logged and will give a complete report next week. Mostly quartzite showing a basic dike at 166. 205 to stained probably dike material, more mineralization and found a little cobaltite at about 223 and still drilling.

Drill hole #2A2 — To be started soon. Approximately [illegible], 55 feet from drill hole #210, Bearing 5554, -5[illegible] degrees. To cut the formation from 100 to 150 feet deeper and expect to be in the sulphides.

GENERAL

Dozer work on road repair and preparing tunnel site.

Labor spent on laying pipe to Merle #3 drill sites, drying samples and moving test houses to the tunnel site and getting them ready for the winter.

DIT [illegible]

67½ hours

LABOR

42½ shifts

[illegible]

555 feet.

TUNNEL SITE

A site for an adit (called 7000 Adit) has been selected and prepared on the Merle #5 shear at a location just below the D2 and D3 drill sites at elevation 6984. (See plan map) It will crosscut the shear zone paralleling drill hole D2 for approximately 200 feet through the main Merle #5 shear. An adit drift will be turned from it to follow the shear north, using the drill hole intersections ahead as well as the indications disclosed by the adit work as directional guides. The back under the arsenate showing in trench #5 will be approximately 80 feet, increasing rapidly in a northerly direction well below the oxide zone as indicated in the diamond drill holes. The best drill holes, D2 and D7 are in this immediate area.

The area south of the adit crosscut may be too shallow to be explored below the oxide zone but some exploration will be done in that direction under trenches #7, #17 and #18.

A thousand feet of adit has been planned and it is expected that this work can be carried on through the winter by the contractor to whom the adit work has been let. One of our geologists will remain and supervise the work.

DIAMOND DRILLING

Most of the drilling done on the Merle #5 shear reached the sulphide zone at about 60 to 75 feet below the surface. So far the sulphide zone has been considerably deeper on the Merle #3 shear. The reason for this seems to be that the Merle #5 mineral occurs in soft black schist while that on the Merle #3 is usually in alternate beds of quartzite and a harder schist. Percolating waters appear to penetrate the latter more rapidly and thus have carried oxidization deeper.

It seems likely that it will be necessary, because of deep oxidation on Merle #3, to carry on underground exploration from the same adit crosscut (7000 Adit) now being started on Merle #5. 7000 Adit will give in excess of 400 feet of back on the Merle #3 but about 800 feet of crosscut will be necessary from Merle #5 to Merle #3. Some of this crosscut will be in favorable ground.

Respectfully submitted,

George W. Mitchell

GWM/m

Docket No. DMEA 2436
Idm - E334
(Cobalt)

NORTHFIELD MINES, INC.

Stevenson Property - Idaho

ENGINEERING NOTES

At the start of the diamond drilling program the reference elevation for Drill Hole D_2 was set at 7010.0 by altimeter and all reported elevation shown on Progress Reports have been based on this elevation. Recently Mr. Wayne Roberts, of the U.S.G.S., ran a plane table survey of these reported elevation points from a known bench mark and it was found that the previously reported elevations were 21' to 26' too high. Starting with this report all elevations will be based on Mr. Roberts' elevations and the changes will be as follows:-

Place	Old Elevation	New Elevation	Remarks
Drill Hole D_1	7141.9	7121	
Drill Hole D_2	7010.0	6989	Base elevation
Drill Hole D_3	7013.0	6991	
Drill Hole D_4	7143.1	7122	
Drill Hole D_5	7063.2	7036	
Drill Hole D_6	7076.6	7049	
Drill Hole D_7	7098	7073	
Drill Hole D_8	7270	——	
Drill Hole D_9		7428	
Drill Hole D_{10}		7420	

NORTHFIELD MINES, INC.

Stevenson Property
Idaho

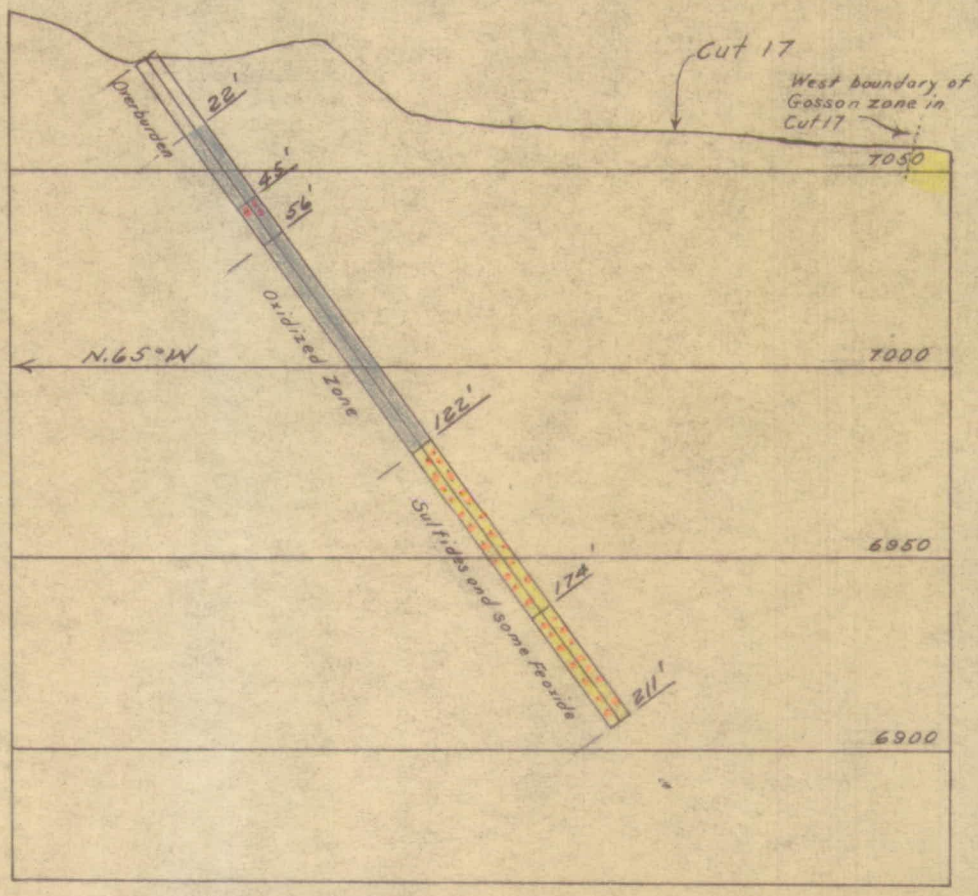
Docket No. DMEA 2436
Idm-E334
(Cobalt)

SECTION D_6 - D_6'

Drill Hole No. D_6 7049'
86 N.,770 E. - Elev. ~~[illegible]~~
Bearing S.65°E. - Incl. -54°

ASSAY RESULTS

No.	Interval	Type	%Co.	%Cu
D_6- 10	45- 56	Core	0.264	0.10
D_6- 1	121-131	"	0.051	0.15
D_6- 2	131-141	"	0.037	0.55
D_6- 3	141-151	"	0.044	0.27
D_6- 4	151-161	"	0.029	0.37
D_6- 5	161-171	"	0.044	0.17
D_6- 6	171-181	"	0.029	0.15
D_6- 7	181-191	"	0.029	0.15
D_6- 8	200-204½	"	0.088	0.83
D_6- 9	204½-211	"	0.066	0.07



Scale 50' - 1"

LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silification, green biotitization)
- Basic Dike
- Mineralization (Pyrite,chalcopyrite and cobaltite)
- Fault
- Shearing

NORTHFIELD MINES, INC.

Stevenson Property
Idaho

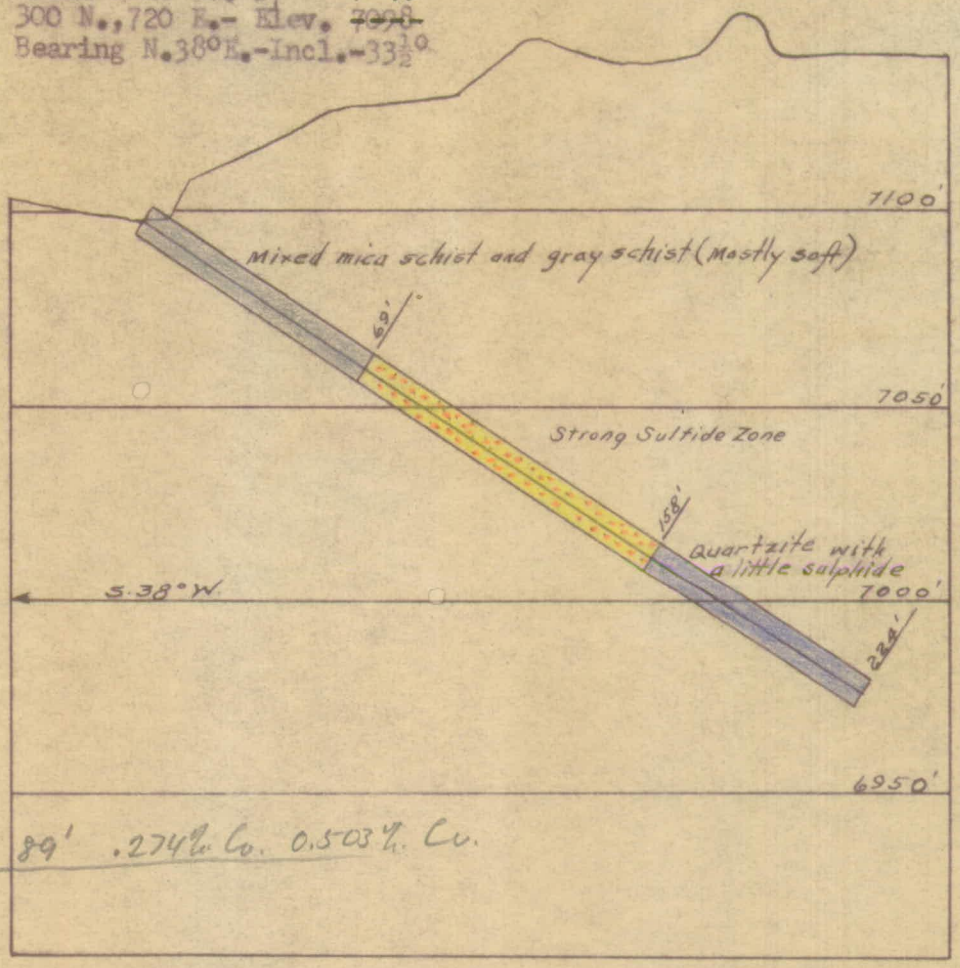
Docket No. IMEA 2436
Idm-E334
(Cobalt)

SECTION D7 - D7

ASSAY RESULTS

No.	Interval	Type	Co.%	Cu.%
D7- 1	- 69- 79	Core	0.301	0.48
D7- 2	- 79- 86	"	1.291	0.98
D7- 3	- 86-96½	"	0.426	0.73
D7- 4	- 86-96½	Sludge	0.279	0.73
D7- 5	-96½-104	Core	0.110	0.27
D7- 6	-104-109	"	0.169	0.25
D7- 7	-109-115½	"	0.095	0.37
D7- 8	-115½-122½	"	0.161	0.20
D7- 9	-122½-126½	"	0.315	2.22
D7- 10	-126½-129	"	0.081	0.45
D7- 11	- 129-134	Sludge	0.147	0.25
D7- 12	- 134-144	Core	0.073	0.12
D7- 13	- 144-152½	"	0.081	0.50
D7- 14	-152½-158	"	0.147	0.30
D7-15	-173 -183	"	0.088	0.12
D7- 16	-219 -224	"	0.301	0.32

Drill Hole No. D7 7073'
300 N.,720 E.- Elev. ~~7098~~
Bearing N.38°E.-Incl.-33½°



Scale 50' - 1"

LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silicification, green biotization)
- Basic Dike
- Quartz
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

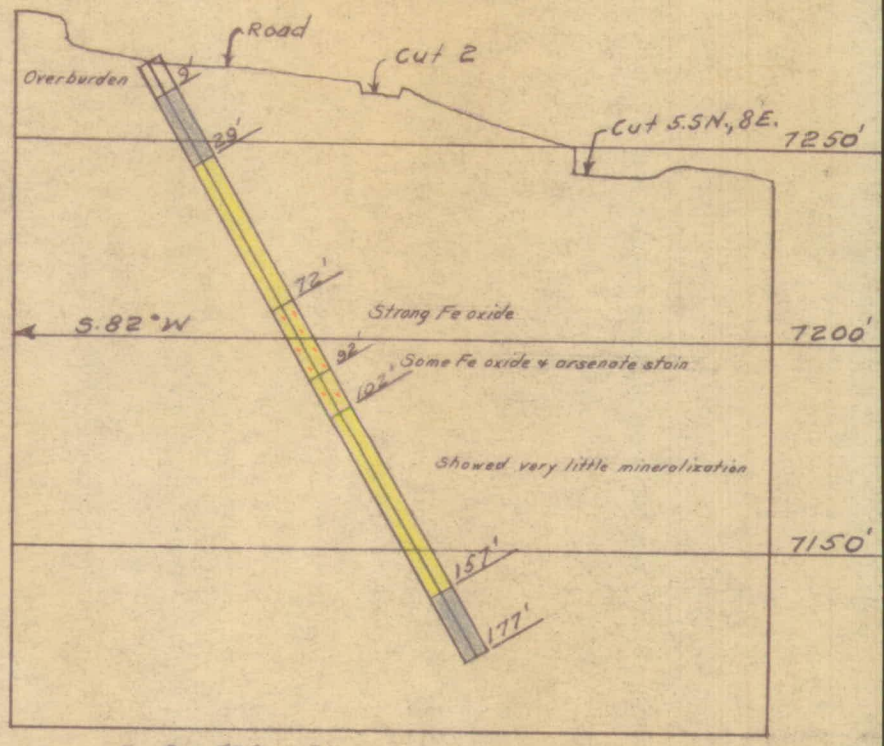
NORTHFIELD MINES, INC.

Stevenson Property
Idaho

Docket No. DMEA 2436
Idm- E334
(Cobalt)

SECTION D8 - D8'

Drill Hole No. D8 7247'
598 N., 623 E. - Elev. ~~7272'~~
Bearing N.82°E. - Incl. -60°



Scale 50' - 1"

ASSAY RESULTS

No.	Interval	Type	%Co	%Cu
Dg-1	72'-82'	Core	.037	.28
Dg-2	82'-92'	Core	.045	.28
Dg-3	92'-102'	Core	.029	.13

LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silicification, green biotitation)
- Basic Dike
- Quartz
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

NORTHFIELD MINES, INC.

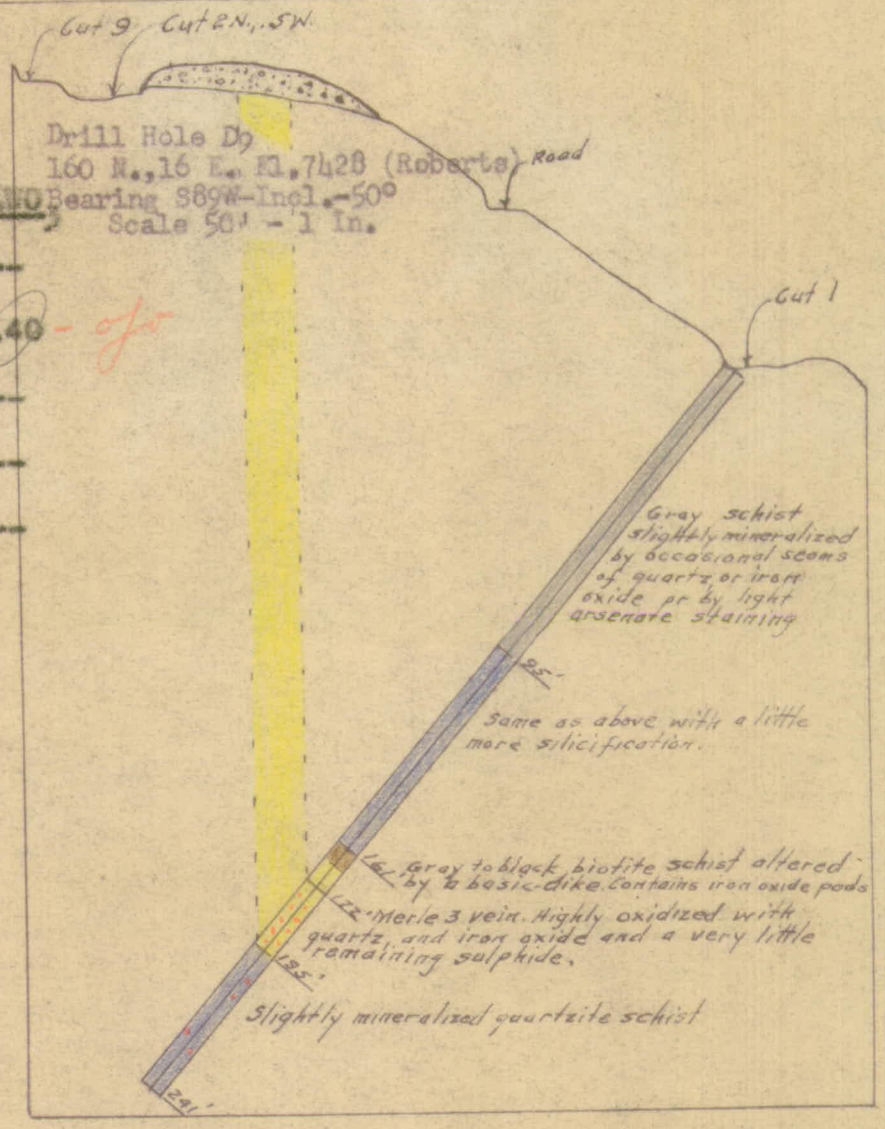
Stevenson Property
Idaho

Docket No. DMEA 2436
Ida - E334
(Cobalt)

SECTION D_9 - D_9

ASSAY RESULTS

No.	Interval	Type	%Co	%Cu	%NiO
D_9-1	167'-172'	Core	.015	.10	--
D_9-2	172'-183.5'	"	.015	.12	2.40
D_9-3	183.5'-188'	"	.022	.53	--
D_9-4	193.5'-195.5'	"	.029	1.29	--
D_9-5	195.5'-198'	"	.015	0.00	--



LEGEND

- Gray Schist
- Quartzite
- Mineralized Schist (Silicification, green biotization)
- Basic Dike
- Quartz
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

NORTHWIELD MINES, INC.

Stevenson Property
Idaho

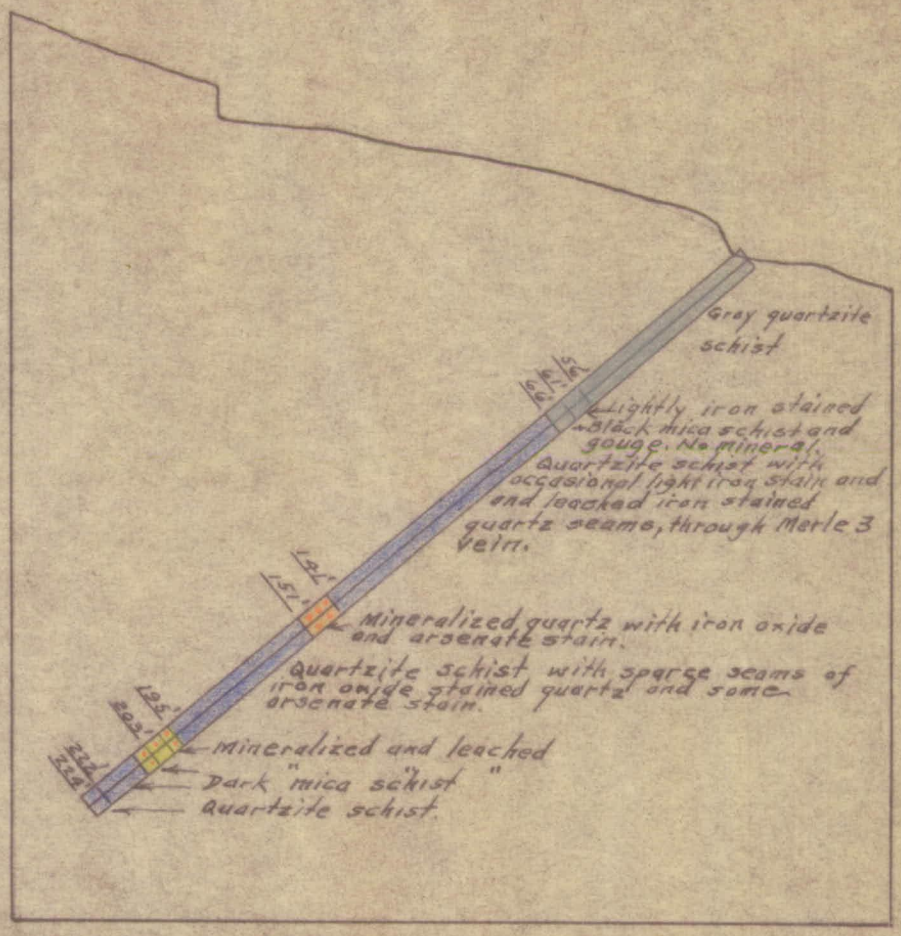
Docket No. DMEA 2436
Ida-E334
(Cobalt)

SECTION D_{10} - D_{10}

Drill Hole No. D10
507 N., 136 W. - Elev. 7420'
Bearing S. 70° W. - Incl. -40°

ASSAY RESULTS

No.	Interval	Type	%Co	%Cu
D_{10}-1	141'-151'	Core	.073	0.00
D_{10}-2	195'-197'	"	.058	0.00
D_{10}-3	203'-206'	"	.051	0.00



Scale 50' = 1"

LEGEND

- Gray Schist
- Quartzite
- Mineralized Schist (Silicification, green biotite)
- Basic Dike
- Quartz
- Mineralized (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

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

Spo

So. 157 Howard Street
Spokane 4, Washington

September 2, 1952

Memorandum

To: A. L. Goldenberg, Executive Officer, DMA Field Team, Region II

From: L. L. Roberts, Geologist, U. S. Geological Survey

Subject: Interim Report, Docket No. DMA-2136, Cobalt-Copper, Northfield Mines, Inc., Room 1441, 230 Park Avenue, New York 17, N. Y., Merle et al claims, Lemhi County, Idaho, Exploration Project Contract IDM-334.

Summary, Conclusions and Recommendations

The exploration work on the Merle et al claims has progressed rapidly and efficiently and has disclosed at least four mineralized shear zones. Surface bulldozing has shown that two of these mineralized zones have length and continuity. Diamond drilling has been done only on the Merle #5 zone and has shown that the mineralized zone is continuous at least to a shallow depth. Assays received so far have been rather low but the assays on both core and sludge were expected in this type of deposit. Only underground work in these deposits will disclose the grade and extents of the mineralized rock.

It is recommended that exploration under the contract IDM-334 be continued.

Work completed

The total work completed as of September 2, 1952, is as follows: 1. 323.5 hours, or 1573 linear feet of exploration bulldozing; 2. 66.5 hours of road building by bulldozer; 3. 33.5 hours of road rehabilitation by bulldozer; 4. 17 hours of diamond drill site preparation (5 diamond drill sites); 5. 1453 feet of diamond drilling; 6. erecting of frame, floors, and siding of two tent houses.

Progress and Geology

Exploration to date has been entirely satisfactory. Bulldozing has uncovered two zones (Merle 3 and Merle 5) at least six hundred feet long. The seven diamond holes intersecting the Merle 5 zone indicate that the zone is probably similar to the deposit at the Salem

mine; i.e., the ore occurs as pods. The exploration on this deposit has been encouraging; however, only underground exploration work beneath the oxidized zone can disclose the grade, continuity, and width of the ore, and it is recommended that exploration of this property be continued under RFC Exploration Contract No-.134.

. A. Roberts

cc: DMA (4)
WBM (2)
Roberts

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
So. Washington 5, Street
Spokane 4, Washington

September 1, 1952

Memorandum

To: DMEA Field Team, Region II

From: Wayne Roberts, Geologist, U. S. Geological Survey

Subject: Routine Inspection, Docket No. DMEA-2436, Cobalt-Copper Northfield Mines, Inc., Stevenson Property (Merle et al claims), Blackbird Mining District, Lemhi County, Idaho, Contract Idm-E334

Summary, Conclusions, and Recommendations

The exploration work under DMEA Contract No. Idm-E334 has progressed rapidly and satisfactorily and has been done well and efficiently. Exploration of the Merle No. 5 zone from the surface has been almost completed. At least three mineralized zones have been exposed by the bulldozing.

The exploration work on these mineralized shear zones should be continued. Bulldozing on the surface is delimiting the mineralized zones within the limits of the claims owned by the operator. Underground work and diamond drilling will aid in determining the economic value of these deposits.

It is recommended that the maximum allowable footage for diamond drilling be increased.

Work Completed

The work completed allowed under the DMEA contract to August 15, 1952 consisted of erecting the frames, floors and siding of two tent houses; 350.5 hours and 5835 linear feet of exploration bulldozing; 62.5 hours of new road building (by bulldozer); 30.5 hours of road rehabilitation (by bulldozer); 9.0 hours of diamond drill site preparation by bulldozer (3 diamond drill sites); and 815 feet of diamond drilling (4 holes).

Progress and Geology

The progress of the exploration of the mineralized zones on the Merle, et al claims has been entirely satisfactory. The exploration has been efficiently done.

Bulldozing has exposed at least three mineralized shear zones: (1) The probable extension of the Hawkeye zone on the Little Queen claim; (2) the Merle No. 3 zone on the Merle No. 3 claim; and (3) the Merle No. 5 zone on the Merle No. 5 claim. A bulldozer cut through the Merle No. 4 zone on the Merle No. 4 claim exposes some mineralized rock.

Surface exploration of the Merle No. 5 zone by bulldozing and diamond drilling was almost complete by August 15, 1952. Some more diamond drilling is planned to extend the zone.

Cobaltite is present only locally in the surface exposures, but iron arsenates (believed to be the weathered indications of cobaltite) are present in all three zones and in nearly all the bulldozer trenches. At the surface, the sulfides and arsenides are generally completely leached. For this reason no surface samples have been taken since the low values would be misleading. All the bulldozer trenches that intersect the mineralized shear zones expose some iron oxide and iron arsenate gossan.

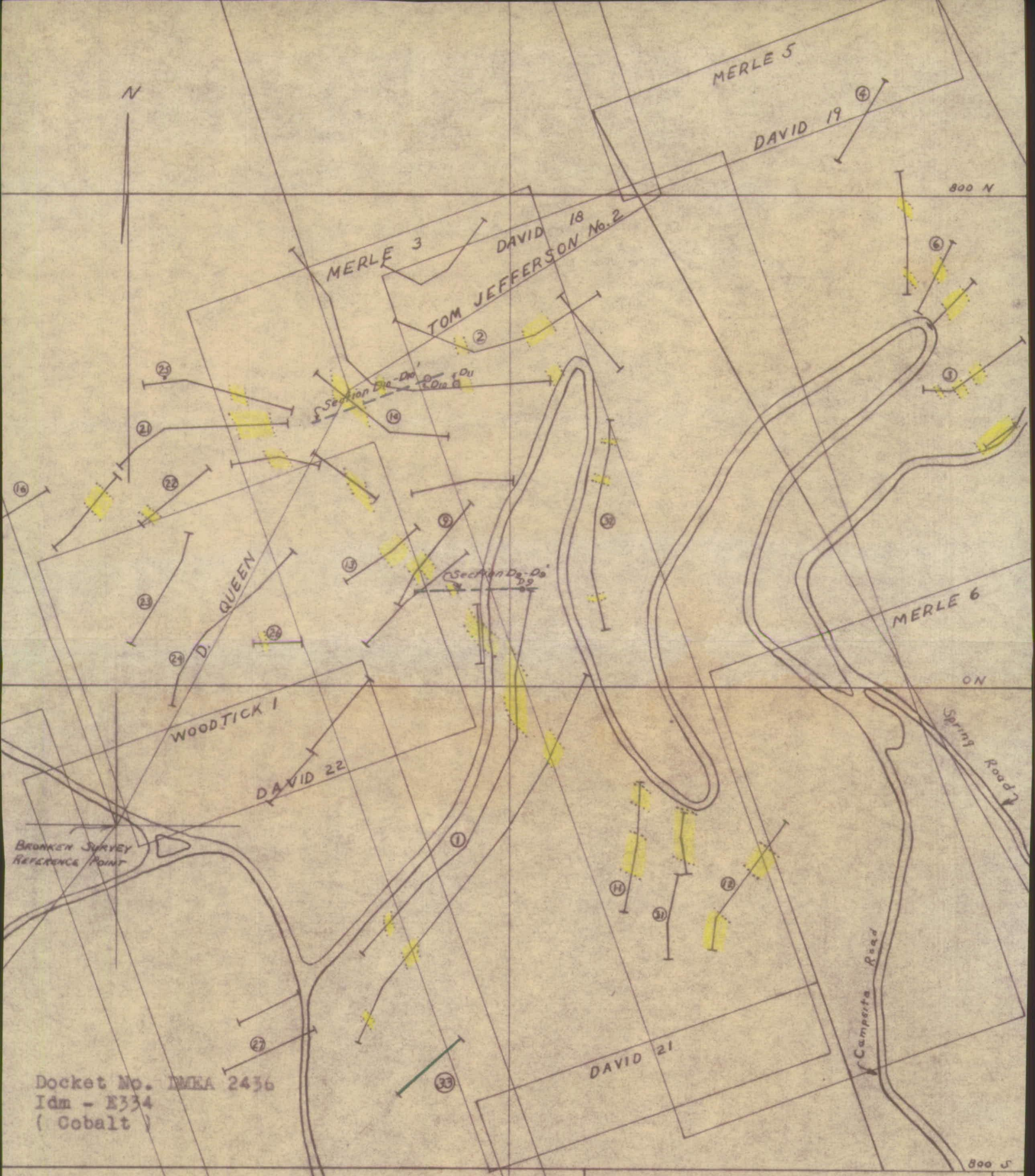
Some of the mineralized rock, especially in the zone exposed on the Little Queen Claim, occurs as pods plunging about parallel to the intersection of the schistosity and the bedding. Other mineralized zones within the shear zones are not clearly pods but are probably lenticular in shape.

Assays of one diamond drill hole have been received by the operator. These assays indicate that at least one 6' zone is of minable grade. Detailed assays for this hole have presumably been reported by the operator.

The value of the metals contained in these shear zones and the continuity of these values will be better understood when the underground tunnel exploration work has been completed. Enough mineralized rock has been exposed by the bulldozing and diamond drilling to warrant continuance of the DMEA exploration contract.

Wayne A. Roberts

cc: DMEA (4)
USBM (2)
Roberts



Docket No. IMEA 2436
Idm - E334
(Cobalt)

Note :

Cut (Cuts done last year not numbered)

Period 9/1-10/1/82

Work done this period shown in green

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho

FIELD SHEET

Section

Mineralized Zone (not necessarily ore bearing)

Scale 1" = 200'

Sheet No. ONOE

Docket No. DMEA 2436
Idm- E334
(Cobalt)

MERLE 4
1000N
DAVID 16
500N
DAVID 17
DAVID 23
MERLE 6
0N
MERLE 5
500S
DAVID 21
MERLE 3
DAVID 18
MERLE 1
1000S
500E
1000E
1500E

Section D8-D8'
Section D4-D4'
Section D1-D1'
Section D7-D7'
Section D2-D2'
Section D3-D3'
Section D6-D6'
Section D5-D5'
Tunnel Site
spring
Composite

Note:

Cut (Cuts done last year not numbered)

Period 9/1 – 10/14/52

Work done this period shown in green

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist., Idaho

Field Sheet

Section

Mineralized Zone (not necessarily ore bearing)

Scale 1" = 200'

Sheet No. 0N10E

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

Wash.

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

DEPARTMENT OF THE INTERIOR
Budget Bureau No. 42-R1035.3.
Defense Approval expires 6-30-53.
RECEIVED
OCT 1 '52 10/9/52

Month of August 195 2 Docket No. DMEA 2496 Contract No. [illegible]
Operator's Name Fortuna Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Lovelock, Nevada
Contract Amount, $[illegible] Government Participation: 70 % Amount, $[illegible]

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:		adjusted				
Drilling	5,492.55	3,938.65	9,431.20	5,492.55	3,938.65	9,431.20
Bulldozing	3,679.00	2,918.50	6,597.50	3,679.00	2,918.50	6,597.50
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	[illegible]	1,007.17	1,[illegible].44	-0-	1,007.17	1,007.17
Supervision	[illegible]	1,[illegible].00	1,[illegible]	-0-	1,700.00	1,700.00
Technical Services	[illegible]	372.00	55[illegible]	-0-	372.00	372.00
(3) Operating Mat'ls. and Supplies:	[illegible]		[illegible]	146.10	-0-	146.10
Timber	[illegible]	379.99	[illegible]	121.78	379.99	501.77
Explosives		83.77	83.77		83.77	83.77
Pipe		778.24	778.24		778.24	778.24
Track	78.29	25.65	1[illegible]	78.29	25.65	103.94
[illegible]	[illegible]	[illegible]	[illegible]	-0-	19.42	19.42
[illegible]	[illegible]	[illegible]	[illegible]	-0-	120.54	120.54
[illegible]	121.89	232.13	[illegible]	141.28	212.73	353.98
[illegible]	6.34	338.96	345.30	6.34	338.96	345.30
(4) Operating Equipment:						
Rental	347.00	494.00	[illegible]	347.00	494.00	841.00
Purchase		82.56	82.56		82.56	82.56
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.	330.88	233.76	564.64	330.88	233.76	564.64
(7) Miscellaneous:						
Repairs to Equipment auto		34.95	34.95		34.95	34.95
Sampling and Analysis	330.00		330.00	330.00	-0-	330.00
Payroll Taxes	[illegible]	146.30	[illegible]	-0-	146.30	146.30
Liability Insurance	65.73	102.51	[illegible]	45.73	102.51	148.24
[illegible]	[illegible]	325.00	[illegible]	150.00	325.00	325.00
[illegible] travel	350.00	350.00	25[illegible]	-0-	259.81	439.81
[illegible]	150.00		150.00	150.00	150.00	150.00
(8) Contingencies (specify):				150.00	-0-	150.00
TOTALS	[illegible]	13,204.51	[illegible]	11018.92	13204.51	24223.43

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

Date 5-12-52 *Payee Fortunate Mines, Inc.

Per [signature] Title Office 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:

$ 7713.24

Signature [signature]
(Authorized Certifying Officer)

Date 10.2.52 Vou. No.
(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. E 334 in accordance with the terms of the contract.

Signature /s/ Dean C. Holt Title Mining Engineer Date 9/16/52

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature /s/ Thomas E. Howard Title Mining Engineer Date 9/16/52

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

DEPARTMENT OF THE INTERIOR
Budget Bureau No. 42-R1151
Approval expires 6-30-53

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1952 Docket No. DMEA 2836 Contract No. 1Cm-2324
Operator's Name Fortfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell - Carson, Nevada

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								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	ft.	5,452.99	671	9,491.20	1445	6.53	2000'	6.00
Churn								
Auger								
Stripping								
Trenching	Cu.	2,317.00	259	5,470.50	422	49.00	90	25.00
Test Pits								
Roads and Trails	Mile	912.00	24	1,110.00	86	10.00	270	15.00
Other Allowable		3,454.37		9,567.97				
TOTAL DISTRIBUTED COSTS		22,083.92		55,560.67				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								1,000.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		230.00		906.04				7,500.00
								22,500.00
TOTAL COSTS		22,993.00		56,191.31				102,000.00

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 9-22-52 Operator Fort Field Mines, Inc.

Per [signature] Title Office Manager

REMARKS: This report has been adjusted to reflect the following amounts not allowed on July 1952 claim as per letter Mr. R. H. Hull, Auditor, dated 8-29-52.
A. Deducted surface labor 1.00
B. Deducted Miner Travel 150.00
C. Deducted Payroll Tax [illegible]
[illegible]

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)

(For Government use only)

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.

U. S. GOVERNMENT PRINTING OFFICE 205676

NORTHFIELD MINES, INC.

STEVENSON PROPERTY - IDAHO

PROGRESS REPORT #3

August 1952

Docket No. DMEA 2436
Contract No. Idm -E334

TRENCHING

Listed below are the new trenches dug this month, giving length, general location and rating. Total footage for this month was 2383.

Trench #11 Shown on last month's report as caved and unable to log. It was cleaned out showing mostly quartzite. One sheared zone 22' to 150' showed some iron stained quartz. Trench is located in S.E. part of Merle #3, footage 300'. Rating poor.

Trench #20 Footage 133' located below Merle #4 Location Monument. At zero slight Fe stain; 0 to 12 little yellow stain (cobalt ?); 67 to 87 is a shear zone striking N8W dipping 53°. Wall in quartzite. Rating poor.

Trench #21 Footage 300' located about center of south end on D Queen claim. Shows shearing from 47 to 67 striking N8E dipping 65° SE - some mineralization. Shearing zone 150 to 238 striking roughly N15W dipping 65 to 75 degrees W. - some mineralization throughout, probably cobalt stains at 175 and 250. Rating fair.

Trench #22 Footage 150' located about 100 feet S.W. of Trench #21. Shear zone striking about N20W. From 0 to 12' there is 15 inches of gouge with some mineral and yellow stain striking S56W and dipping 75° SE and on the north side of cut from 25 to 75 degrees. Rating fair.

Trench #23 Footage 200' located about 75' S.W. of Trench #22. At northeast end shear zone 0 to 15 striking S74W dipping 80° S.E. with heavy mica and some mineral and cut by beds striking N17E dipping 10° to 20° E; also shearing at 0 plus 27 striking S74W dipping 80° SE - cuts beds then at 27 to 50 - flat beds of grey to blue quartzite with 1 foot of black mica schist and some mineral - at 50 shears strike N72E dipping 72W cutting flat beds to 75 - then flat beds of grey to blue quartzite containing some black mica schist and small amount of mineral. Rating poor to fair.

Trench #24 Footage 175' East - 125' west - Total 300'. Located on the south end of D Queen claim. At 0 of east trench shears strike N66E dipping 53° SE and at surface flat beds of grey quartzite dipping 17° NE containing from 1ft. to 2 ft of black mica schist with some mineral and yellow stain. At 80 shear zone striking N15W to NOW and dipping 70° SW to vertical beds and contains black

mica schist with much mica and considerable mineral which continues to near end of cut. Same zone as cut in "A" Trench. Rating fair to good. Southwest end slight mineralization with gouge in quartzite beds at 60. Rating poor.

Trench #25 Footage 250' located north of Trench #21 about 75'. Showing a shear zone striking N20W dipping 50° W that projects to Trench #21 and Trench "A". Rating fair.

Trench #26 Footage 65' about center of David #22 claim. Shear zone striking N27W dipping 50° E not quite in line with shear in Trench #24. Rating fair.

Trench #27 Footage 150' to the south of Trench 5.4S 4.5W made last year. 6 inches of quartz vein shows some copper stain, shear zone and a basic porphyry intrusion. Rating fair.

Trench #28 Footage 50'. An extension of Trench #17 on the north end showing quartzite and some mineralization. Rating fair.

Trench #29 Footage 300', near Merle#6 Location Monument. 0 to 74 was grey schist with weak shearing 39 to 71, small basic dike at 46 to 49. Rest of trench was in quartzite, 250 to 200 was Fe stained. Rating poor.

Trench #30 Footage 110', about 140' below Trench #29 to the north. 0 to 42 was grey schist, start of shear zone at 42 ending at 106. Zone contains grey schist, some mineralized schist, Fe gossan and quartz, weakly mineralized. Rating poor.

Trench #31 Footage 150', extension of Trench 2S 2.4E. Greater portion of cut still in overburden after cutting 10 to 12 foot bank. 80 to 115 showed shearing action and some mineralization; very little Fe gossan or yellow arsenate, mostly quartz and green biotite. Rating fair.

Trench #32 Footage 350, south of Trench 5.8W 1.1E parallel to road. Slightly mineralized overburden to 48, overburden to 119, schist and quartzite slightly mineralized to 180 - also from 190 to 203 and from 270 to 287. Rating fair.

Trench #25A Trench started last year but not finished near Bronken' Station 251. Dug deeper for about 100'. Cut quartzite beds striking N23E dipping 38 degrees SE with slight mineralization at 60 to 80 in beds. Rating poor.

DIAMOND DRILLING

Drill Hole #D_1 Footage 195' (140' on last month's Progress Report). 140 to 150 showing soft black schist and panning in mineral. 150 to 153 showing quartz sand and medium hard black schist. 153 to 160 medium soft black schist panning good in mineral. 160 to 175 showing medium hard dark schist sometimes a greenish cast and pyrites. 175 to 180 grey quartzite. 180 to 195 quartzite and occasional soft black schist stringers panning a little in mineral.

Drill Hole #D4 — Footage 200'. 0 to 31 showing mostly grey quartzite with a little white quartz at 24 to 28. 31 to 36 turning to a darker color with some yellow stain at 33. 36 to 56 showing dark grey schist 56 to 81 medium hard grey schist with oxidized areas between 66 to 71. 71 to 81 medium hard grey schist turning to darker color at 81 and hitting small quartz seams at 91. 91 to 121 dark grey schist and quartz seams at 121. Panning a little in mineral. 121 to 141 dark grey schist and panning very good. 149 to 167 dark grey schist fairly soft and panning good. 167 to 181 dark grey schist with some white quartz panning fair. 181 to 191 medium hard dark grey schist panning a little. 191 to 200 mostly quartzite and not panning.

Drill Hole #D5 — Footage 186'. 0 to 16 overburden and 16 to 51 broken grey schist with quartzite seams. 51 to 76 broken light grey schist with some very soft at 71. At 76 it started to pan a little. 76 to 106 brown schist with a few places showing black schist and panning a little. 106 to 118 very soft broken light grey schist panning fair. 118 to 141 medium hard light brown with some blue and grey schist. Panning good at 128 to 131 and also at 141 to 144. At 144 to 158 grey schist with mica some quartz with iron oxide and sulphides panning fair. 158 to 186 grey quartzite panning no mineral.

Drill Hole #D6 — Footage 211'. 0 to 22 overburden, 22 to 40 changing from a light brown sandy schist to a light grey sandy schist. 40 to 61 changing from a soft grey schist to a medium hard grey schist. We found some cobaltite in the core at 46 but didn't show in panning. 61 to101 soft light grey and brown schist some badly broken and panning very little. 101 to 121 soft grey schist badly broken and unable to pan due to no water return. 121 to 144 soft dark schist panning good. 144 to 181 very soft dark schist still panning good. 181 to 198 dark grey schist panning. 198 to 211 very soft broken dark schist panning. Due to cave section we were unable to drill deeper.

GENERAL

Five drill sites were prepared. Four on Merle #5 and one on Merle #3.

One portable shower house was erected and at present located near the "Y".

Balance of labor spent on drying samples, cleaning out trenches and laying pipe lines.

CAT WORK

160 hours.

LABOR

47½ shifts.

DIAMOND DRILLING

652 feet.

Evan Teleen

NORTHFIELD MINES INC.

Stevenson Property
Idaho

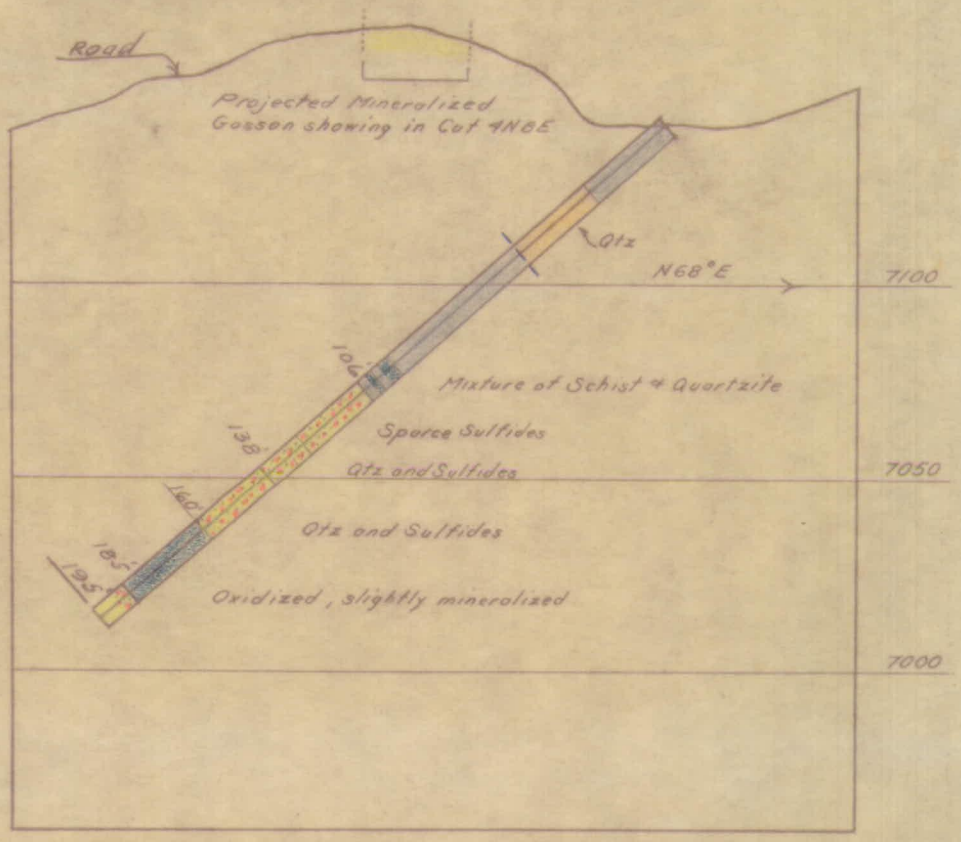
Docket No. DMEA 2436
Idm - E334
(Cobalt)

SECTION D_1 - D_1'

ASSAY RESULTS

No.	Interval	Type	%Co.	%Cu.
D_1-19	-106-112	Core	0.058-	0.08
D_1-20	-112-116	"	0.132-	0.52
D_1-21	-116-120	"	0.088-	0.74
D_1-22	-120-125	"	0.073-	0.15
D_1-23	- 125-130	Sludge	0.073-	0.18
D_1-24	-130-138	Core	0.117-	0.75
D_1-25	-138-145	"	0.102-	0.35
D_1-26	-145-150	"	0.088-	0.43
D_1-27	-150-155	"	0.161-	0.20
D_1-28	-155-160	"	0.117-	0.25
D_1-29	-160-165	"	0.102-	0.25
D_1-30	-165-175	"	0.088-	0.18
D_1-31	-175-180	"	0.146-	0.60
D_1-32	-180-185	"	0.088-	0.18
D_1-33	-185-190	"	0.117-	0.24
D_1-34	-190-195	Sludge	0.110-	0.20

Drill Hole No. D_1
464 N., 852 E. - Elev. 7141.9'
Bearing S.68°W. - Incl. -41°



Scale 50' - 1"

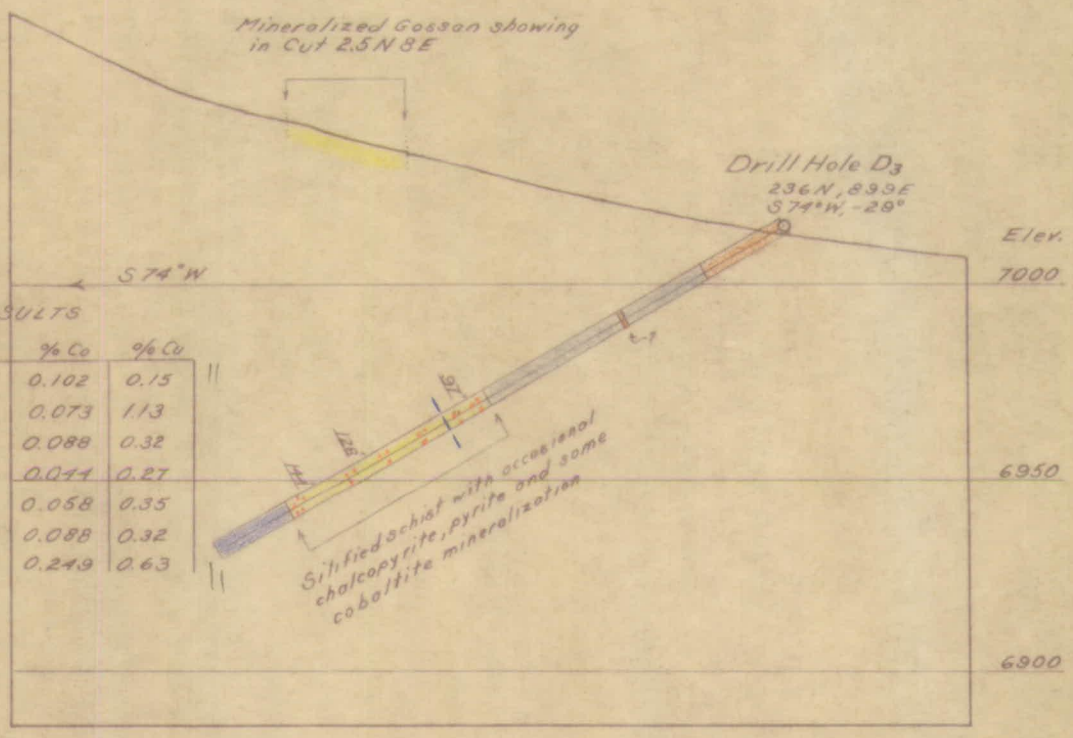
LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silification, green biotitization)
- Basic Dike
- Quartz
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

NORTHFIELD MINES INC.

Stevenson Property
Idaho

SECTION D_3 - D_3'



ASSAY RESULTS

No.	Interval	Type	% Co	% Cu
D3-35	146'-150'	Core	0.102	0.15
D3-36	97'-102'	"	0.073	1.13
D3-37	107'-108.2'	"	0.088	0.32
D3-38	109'-119'	"	0.044	0.27
D3-39	119'-128	"	0.058	0.35
D3-40	128'-134'	"	0.088	0.32
D3-41	144'-148'	"	0.249	0.63

Scale 1"=50'

LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silification , green biotitization)
- Basic Dike
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

NORTHFIELD MINES INC.

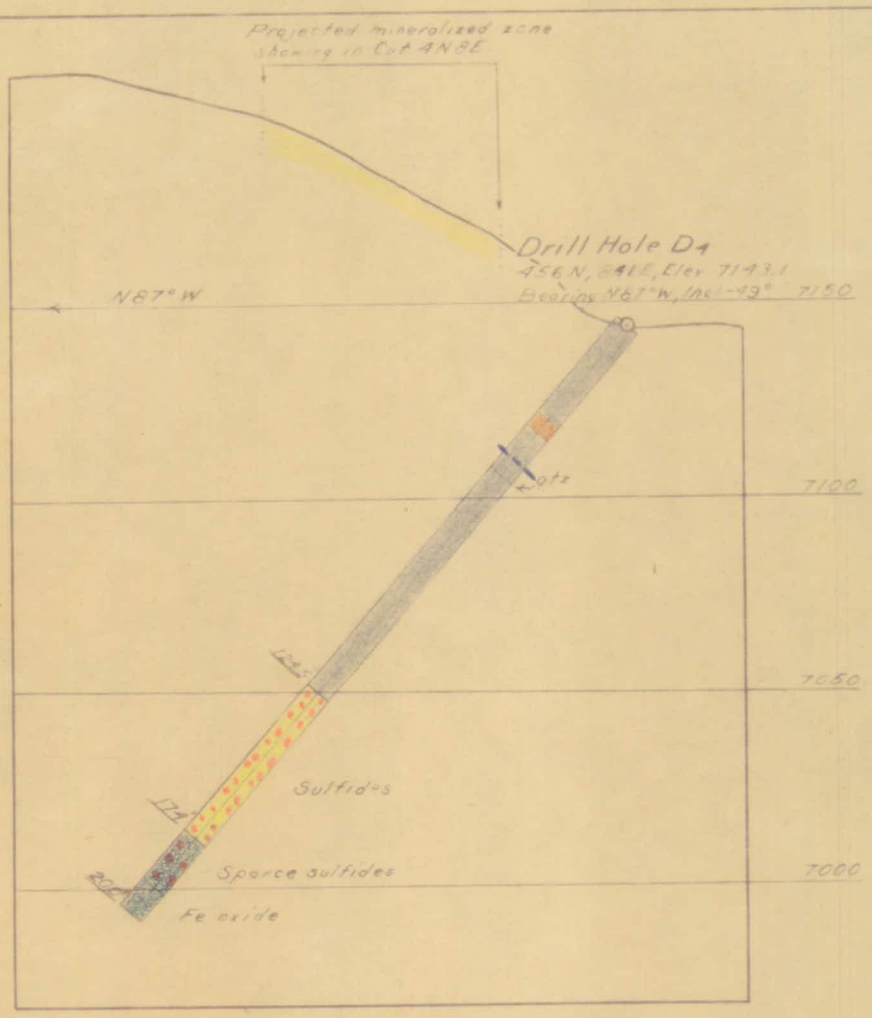
Stevenson Property
Idaho

Docket No. IMEA 2436
Idm-2334
(Cobalt)

SECTION D_4 - D_4'

ASSAY RESULTS

No.	From	To	%Co	%Cu
D_4-42	124.5'	131'	0.073	0.90
D_4-43	131'	136'	0.088	0.25
D_4-44	136'	141'	0.044	0.12
D_4-45	141'	149'	0.044	0.12
D_4-46	151'	157'	0.073	0.55
D_4-47	141'	149'	0.058	0.22
D_4-48	149'	157'	0.044	0.20
D_4-49	157'	164'	0.073	0.45
D_4-50	164'	174'	0.122	1.18
D_4-51	174'	181'	0.190	0.50
D_4-52	181'	191'	0.029	0.42



LEGEND

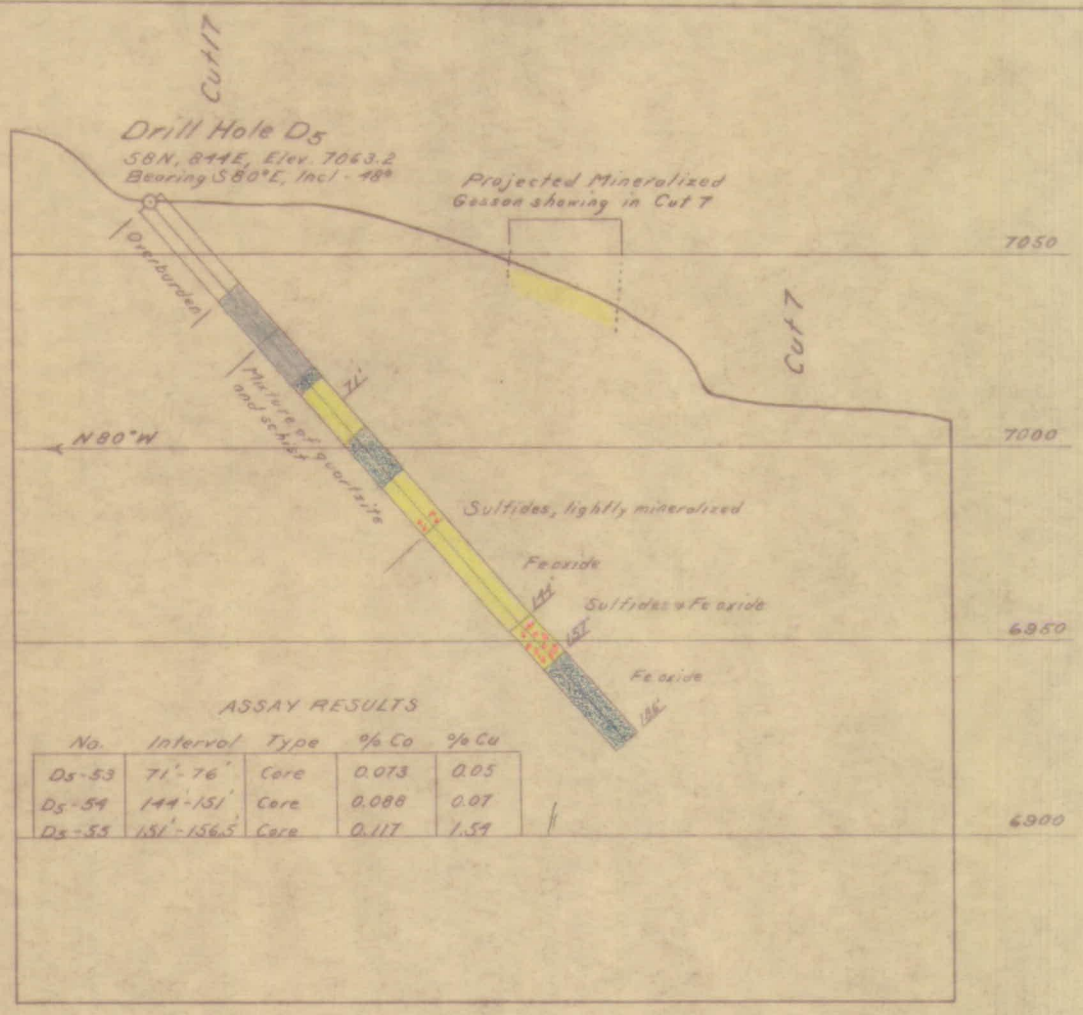
- Grey Schist
- Quartzite
- Mineralized Schist (Silification, green biotitization)
- Basic Dike
- Quartz
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

NORTHFIELD MINES INC.

Stevenson Property
Idaho

Docket No. DMEA 2436
Idm-5334
(Cobalt)

SECTION D_5 - D_5'



ASSAY RESULTS

No.	Interval	Type	% Co	% Cu
Ds-53	71'-76'	Core	0.073	0.05
Ds-54	144'-151'	Core	0.088	0.07
Ds-55	151'-156.5'	Core	0.117	1.59

LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silification, green biotitization)
- Basic Dike
- Quartz
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- --- Fault
- --- Shearing

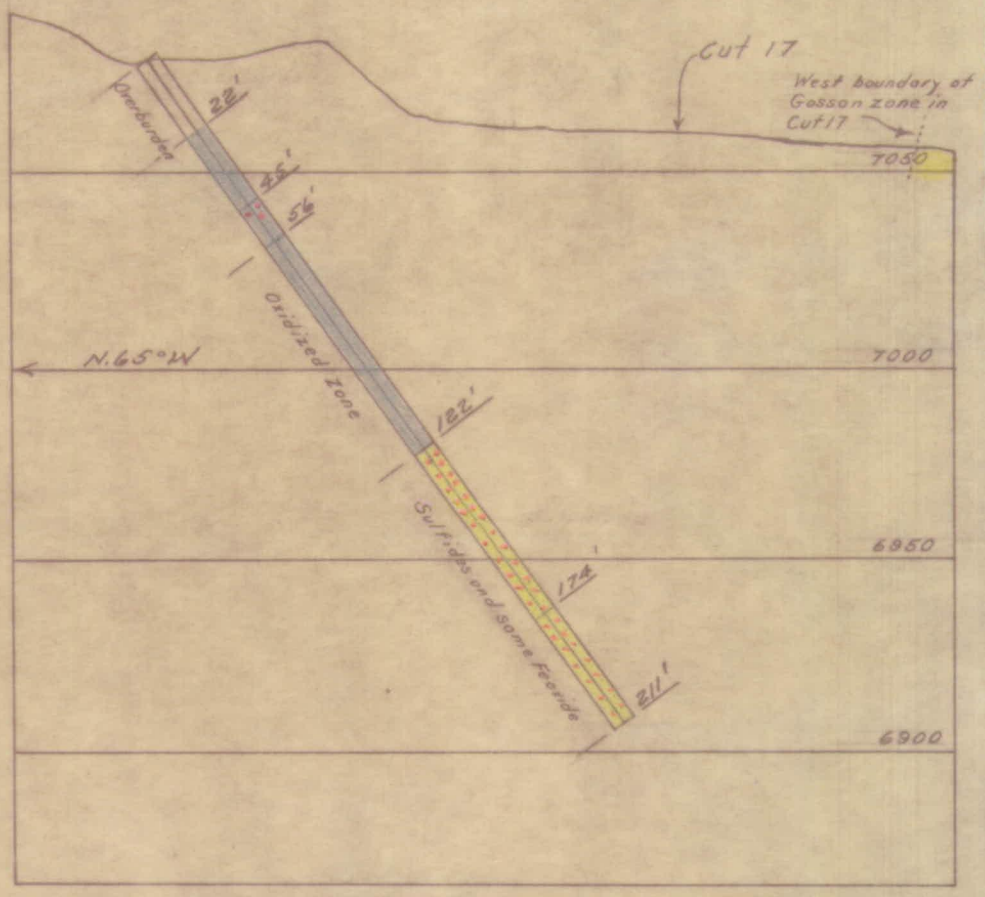
NORTHFIELD MINES, INC.

Stevenson Property
Idaho

Docket No. DMEA 2436
Idm-E334
(Cobalt)

SECTION D6 - D6'

Drill Hole No. D6
86 N.,770 E. - Elev. 7076.6
Bearing S.65°E. - Incl. -54°

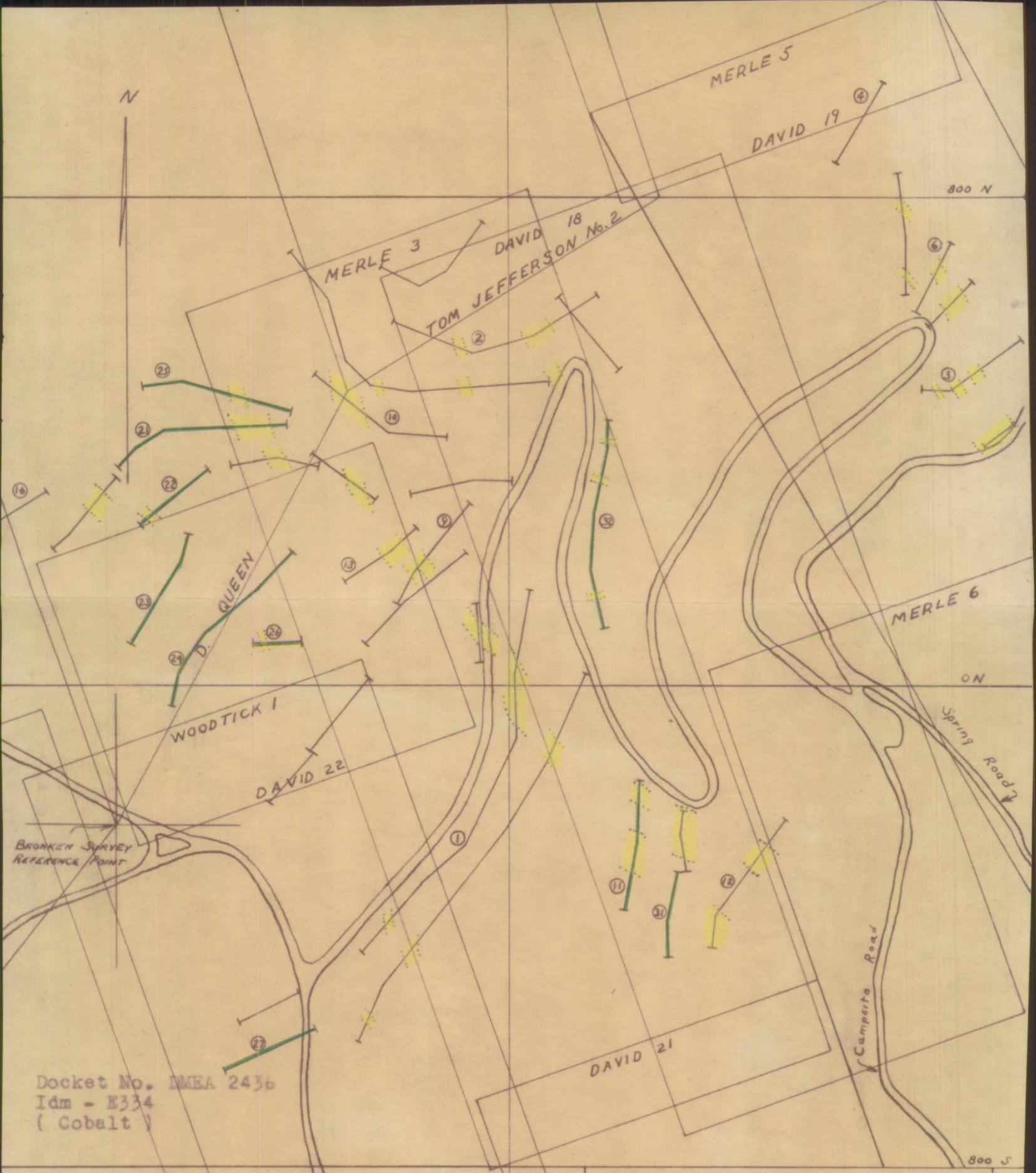


Scale 50' - 1"

LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silification, green biotitization)
- Basic Dike
- Mineralization (Pyrite,chalcopyrite and cobaltite)
- --- Fault
- --- Shearing

1000N
Docket No. DMEA 2436
Idm - E334
(Cobalt)
LITTLE QUEEN
MERLE 3
500N
QUEEN
DAVID 22
QUEEN
ON
WOODTICK No.1
WOODTICK
Bronken Survey
Reference Point
500S
1000S
1000W
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho
Field Sheet
Section
Scale 1" = 200'
Mineralized Zone
(not necessarily ore bearing)
Sheet No. 0N10W
Note:
Cut (Cuts done last year, 1951, not numbered)
Period 8/1-9/1/52
this period shown in green



Docket No. DMEA 2436
Idm - E334
(Cobalt)

Note :

Cut (Cuts done last year not numbered)

Period 8/1 - 9/1/52

Work done this period shown in green

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho

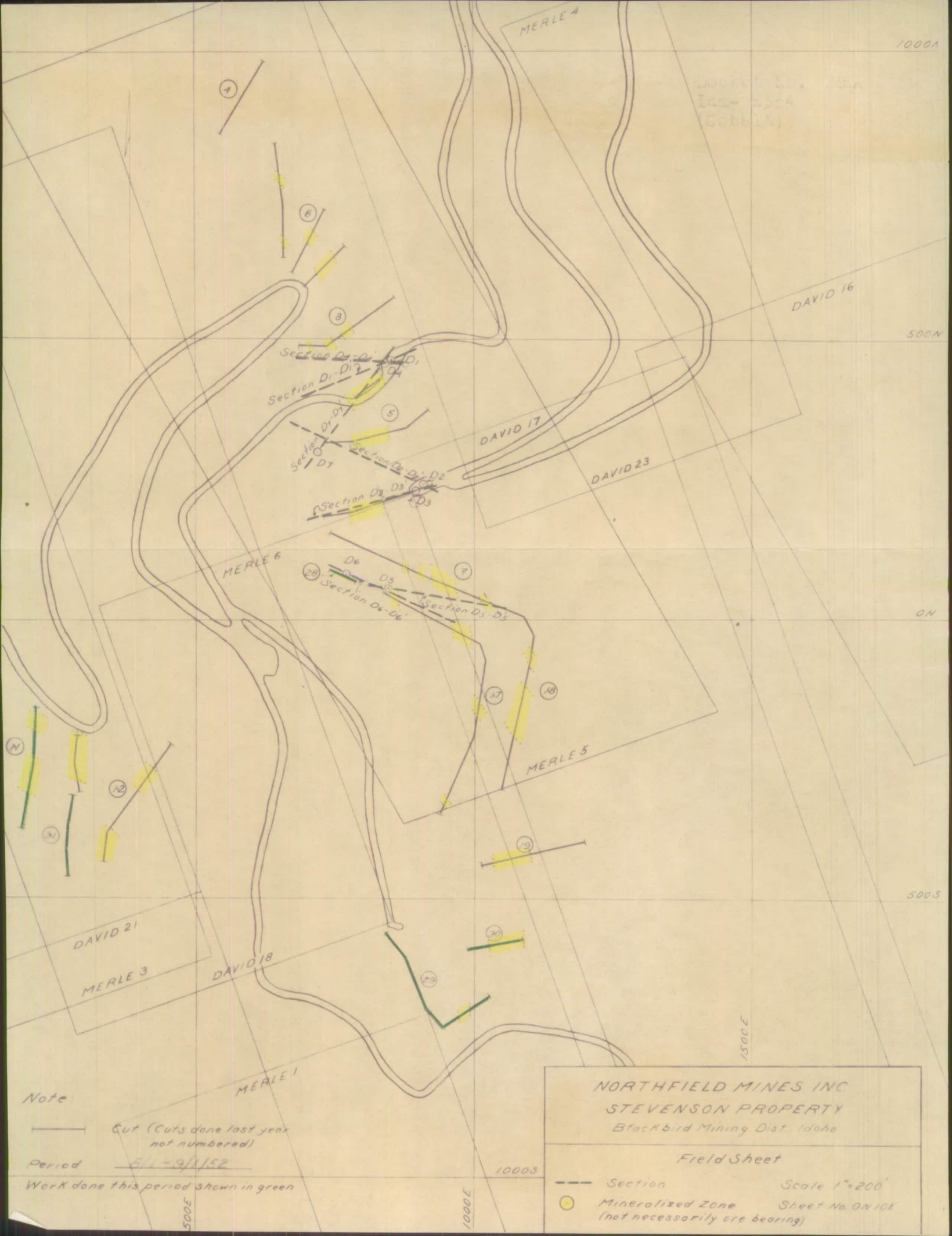
FIELD SHEET

Section

Mineralized Zone (not necessarily ore bearing)

Scale 1" = 200'

Sheet No. ONOE



Note:

Cut (Cuts done last year not numbered)

Period 6/1-9/1/52

Work done this period shown in green

NORTHFIELD MINES INC
STEVENSON PROPERTY
Blackbird Mining Dist. Idaho

Field Sheet

Section

Mineralized Zone (not necessarily ore bearing)

Scale 1" = 200'

Sheet No. 0N 10E

M. E. Volin, Member, DMEA Field Team, Region II Aug. 11, 1952

T. E. Howard, Mining Engineer, Mining Division, Region II

Initial inspection, Northfield Mines, Inc., DMEA 2436, Contract Idm-E334 (Co - Cu)

The subject inspection was made July 29, 1952, in company with Dean Holt, Bureau of Mines, Bob Jensen, Geological Survey, and John Brozo, company engineer. In the evening on the same date I met with George B. Mitchell, General Manager, and Milo Manz, Superintendent, to discuss invoicing procedure and interpretation of some of the terms of the contract about which they were uncertain.

Work was in progress on both the bulldozer trenching and diamond drilling specified in the contract. Eighteen bulldozer trenches aggregating about 3000 feet in length had been completed. Though gossan has been exposed in the majority of them the structure is still obscure. The Operator believes that at least three continuous north-trending mineralized shear zones are indicated. The trenching is well supervised. Brozo lays out the trenches and maps them immediately after they are completed. Wayne Roberts and Bob Jensen of the Geological Survey also are mapping the trenches and closely following the progress of the work in connection with their project of mapping the Blackbird district.

Two diamond drill holes had been completed, one for 259 feet and one for 170 feet, and the third was being started on the date of the inspection. They were drilled to test at depth mineralization exposed in some of the early cuts. Assay returns from the first hole indicated 50 feet of cobalt mineralization, about 9 feet of which was of a grade high enough to be considered ore. Core recovery to date has been poor. Brozo estimated that it had been between 50 and 60 percent.

Other work accomplished prior to the date of the inspection included road building and partial construction of the camp facilities specified in the contract.

The discussion with Mr. Mitchell and Mr. Manz revealed some fairly serious limitations in the contract, the most important of which is the limitation on diamond drilling. The footage to be drilled, the unit price per foot and the total cost of drilling are all specified as allowable maximums. The Operator now believes, and

Jack Vhay of the Geological Survey concurs, that the 2000 feet of drilling specified in the contract will be insufficient to properly locate the underground work. Mitchell stated that it appears possible that the drilling might be done for less than the unit price specified. Also the trenching is being accomplished for a lower unit price and with less tractor time than was estimated. Therefore it seems probable that the additional drilling can be done without increasing the total amount of the contract. It is recommended that the Washington Office of DMEA be requested to amend the contract to allow additional drilling. This could be done simply by removing the limitations on the amount of drilling and the total cost of drilling. Then any saving made in the cost of drilling and bulldozing could be diverted to provide for additional drilling.

Engineering requirements also are greater than was anticipated. The Operator originally estimated that one-third of Mr. Brozo's time would be required on the project. However, Brozo has stayed on the job almost constantly since the trenching was started. In addition some geochemical work which will require the services of another man is planned. I informed Mr. Mitchell that an amendment to provide for additional technical services would have to be made by the Washington Office and advised him to make new estimates of the cost of engineering and drilling and submit them with a request for such an amendment which would be forwarded to Washington for consideration.

Mr. Mitchell asked if the amount specified for boarding house loss could be used for the living and other expenses of the Superintendent. He now believes it might not be necessary to build the boarding house or hire a cook. He stated that living expenses for a superintendent are specified in another DMEA contract his company has for a project in Nevada and, therefore, they should be allowable under this one. Part of the expense is rental on a cabin near Cobalt, Idaho, used for an office and living quarters by members of the staff and is considered a necessary expense of the project. An amendment to the contract to provide for this rental by diverting the necessary funds from the boarding house loss item is attached for your consideration. However, though the Superintendent's living expenses are being paid by the company and, therefore, are a cost of the project, it is recommended that this part of the request by denied. Living expenses for the staff are not allowable under other contracts in force in the region and I believe we should be consistent.

T. E. Howard

CC: 2-Wash.
2-USGS
D/F

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July 1952 Docket No. DMEA 2436 Contract No. Idm-E334

Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper

Address c/o A. J. O'Connell - Eureka, Nevada

Contract Amount, $ 102,900.00 Government Participation: 70 % Amount, $ 70,030.00

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:						
Drilling	3,938.65		3,938.65			
Bulldozing	1,066.00	1,852.50	2,918.50			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	813.74	194.43	1,008.17	812.74	194.43	1007.17
Supervision	600.00	600.00	1,200.00			
Technical Services	186.00	186.00	372.00			
(3) Operating Mat'ls. and Supplies:						
Timber Geology Supplies	376.95	3.04	379.99			
Explosives Small Tools	47.62	36.15	83.77			
Pipe & Fittings	706.68	21.56	728.24			
Track Cook House Furn.	24.55	1.10	25.65			
Medical Supplies	17.13	2.29	19.42			
Gasoline	118.78	2.06	120.84			
Bunkhouse Furn.	167.65	45.08	212.73			
Oil & Tires	338.96		338.96			
(4) Operating Equipment:						
Rental	222.00	272.00	494.00			
Purchase	82.56		82.56			
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.	90.65	143.11	233.76			
(7) Miscellaneous:						
Repairs to Equipment Auto	34.95		34.95			
Sampling and Analysis Telephone	58.52	43.99	102.51			
Payroll Taxes	137.10	56.26	193.36	90.04	56.26	146.30
Liability Insurance Freight on Drill	325.00		325.00			
Accounting	150.00	139.81	289.81			
Travelling Engineer	150.00	150.00	300.00	—	150.00	150.00
(8) Contingencies (specify):						
TOTALS	$9,653.19	$3,749.38	$13,402.57	9455.13	3749.38	13204.51

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

Date 8-15-52 *Payee Northfield Mines, Inc.

Per [signature] Title Office 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:

$ 6618.59

Signature [signature]
(Authorized Certifying Officer)

Date 9/18/52 Vou. No.
(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. 334 in accordance with the terms of the contract.

Signature Thomas E. Howard Title Mining Engr Date 8/19/52

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Glenn C. Reed Title Mng. Engr. Date 8/19

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1952 Docket No. DMEA 2436 Contract No. Idm-E334

Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper

Address c/o A. J. O'Connell - Eureka, Nevada

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	3,938.65	624	3,938.65	624	6.31	2000	8.00
Churn								
Auger								
Stripping								
Trenching	Hrs.	1,066.00	82	2,112.50	162½	13.00	500	15.00
Test Pits								
Roads and Trails & Sites				806.00	62	13.00	270	15.00
Other Allowable		4,475.33		6,229.10				75,350.00
TOTAL DISTRIBUTED COSTS		9,479.98		13,086.25				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased		82.56		82.56				
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		90.65		233.76				
TOTAL COSTS		$9,653.19		$13,402.57				

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 8-15-52 Operator Northfield Mines, Inc.

Per [signature] Title Office Manager

REMARKS:

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)

(For Government use only)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
SEP 25 1952

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.

U. S. GOVERNMENT PRINTING OFFICE 205676

Docket No. DMEA 2436
Idm- E334
(Cobalt)

NORTHFIELD MINES, INC.

STEVENSON PROPERTY - IDAHO

DRILL HOLE D_2 SAMPLES

Sample No.	Interval	Type of Sample	Core Recovery	Results %Cu	%Co	Remarks
D_2 - 1	209'-212'	Core Split	53%	1.17	2.64	
D_2 - 2	212'-215'	"	47%	0.35	0.66	
D_2 - 3	215'-218'	"	20%	0.03	0.17	
D_2 - 4	218'-221'	"	23%	0.30	0.17	
D_2 - 5	221'-224'	"	63%	0.30	0.17	
D_2 - 6	224'-229'	Sludge Split	0%	0.13	0.14	Cave section 224'-230'.
D_2 - 7	230'-233'	Core Split	70%	0.46	0.46	Some of the core material may be salted from 230' to 239' section.
D_2 - 8	236'-239'	"	66%	0.39	0.23	
D_2 - 9	119'-121'	"	60%	1.22	0.17	
D_2 - 10	121'-124'	"	53%	0.09	0.10	
D_2 - 11	124'-126½'	"	64%	0.06	0.11	
D_2 - 12	126½'-129'	"	40%	0.27	0.11	
D_2 - 13	124'-134'	Sludge Split	0%	0.27	0.20	
D_2 - 14	131½'-134'	Core Split	44%	0.44	0.52	
D_2 - 15	134'-139'	"	66%	0.36	0.32	
D_2 -16	139'-144'	"	42%	0.10	0.22	
D_2- 17	74'-77'	"	73%	0.44	0.20	(Part of core oxidized)
D_2 - 18	254'-259'	Sludge Split	0%	0.28	0.19	Possibility of salting.

DOCKET NO. DMEA 2436
Idm - E334
(Cobalt)

NORTHFIELD MINES, INC.

STEVENSON OPERATIONS * IDAHO

PROGRESS REPORT #2

JULY 1952

TRENCHING

Fourteen new trenches were dug this month approximately 3340 feet. The trenches are listed below giving the length, general location and rating.

Trench #1EX — Footage 550' and located below the Merle #5 location monument. This is an extension of the #1 trench. Two "mineralized" zones intersected; one between 0 to 479' - 0 to 586' and the other at 0 to 678' - 0 to 701'. Mineralization consisted of hydrothermal mica, silification, Fe gossan and yellow arsenate stain. Rating fair.

Trench #7 — Two sheared zones 107 to 266 and 287 to 312 with strong mineralization in the central part of first zone. Rating good. Footage 350' and located lower end Merle #5.

Trench #8 — This number was omitted through an error.

Trench #9 — Footage 200' and located south of 3.7N .8W trench made last year. Two sheared zones at 0 to 100 and 117 to 153. Mineralization in first zone with Cobalt at 62' and less mineralized in second zone. Rating good.

Trench #10 — Footage 250' and located north of 3.7N .8W trench made last year. Slight shearing 0 to 40 then mineralized sheared zone to 67'. Also shearing in zone 112' to 225' with slight mineralization and some Cobalt at 212'. Rating fair.

Trench #11 — Footage 200' and located in S. E. part of Merle #3. Sheared zone 22' to 150' with some iron stained quartz. This trench caved before we could log it. The rating is poor but will clean out and check again.

Trench #12 — Footage 250' and located S. E. part of Merle #3. Two "mineralized" zones intersected; 66' to 84' and 144' to 160'. First is poor and the second is fair. Second zone showed hydrothermal mica, silification, Fe gossan and Cu staining.

Trench #13 — Footage 150' and located near "A" extension trench made last year. One mineralized zone, 25' to 85' showed good gossan and strong yellow arsenate staining. Rating good.

Trench #14 Footage 100' and located near 1.9N 8.5W trench made last year. North wall had good mineralization whereas south wall did not; mineralization in this area seems to be very spotty. Rating poor. This area should have more work done on it to prove or disprove the above statement.

Trench #15 Footage 250' located south of 1.9N 8.5W trench made last year. Two small zones, one at 100' to 115' and the other at 160' to 163'. Rating poor.

Trench #16 Footage 150' and located north of 1.9N 8.5W trench made last year. No mineralization showing in this trench.

Trench #17 Footage 380' and located south of #2 and #3 drill sites. 0 to 30', 130' to 175', 285' to 305' and 467' to 475'. The 130' to 175' zone was the best of the three of this particular horizon. Very strong yellow arsenate staining and 3' wide yellow arsenate stained quartz gossan. Rating very good.

Trench #18 Footage 320' and located south of #2 and #3 drill sites. Two mineralized zones; 445' to 473' and 509' to 700'. The last zone is broad partly because of the intrusive basic dike which has caused, due to oxidization, considerable Fe staining. Rating fair.

Trench #19 Footage 190' located south of #18 trench. Sheared zone 100' to 170'. This trench is not deep enough and might show mineralization if cut deeper. So far the rating is poor.

Listed below are the trenches made last year. These were cleaned out and some were cut considerably deeper.

Trench #7A	5.1N .1W	Rating	fair
Trench #8A	6.9N .8W	"	"
Trench #9A	3.7N .8W	"	"
Trench #12A	2 S 2.4E	"	"
Trench #14A	1.9N 8.5W	"	good
Trench #17A	3.2N 6.8W	"	fair

DIAMOND DRILLING

5 days?
32'/day

Drill hole #D2 was started July 8th and finished July 15th. 0' to 74' hole showed soft gray schist, some sugar quartz and at 77' a medium soft dark schist. 77' to 119' at times a very soft black schist with poor core recovery. 119' to 144' changing from medium soft schist to a very soft black schist and at 134' showed good in mineral. 144' to 209' changing to a medium hard schist with a poor showing in mineral. 209' to 259' changing to soft black schist and in places very good showing in mineral. Due to cave section around 240' there is a possibility of salting below this area. Ground was caving badly at 259' and hole was stopped. Samples were sent in for assay and returns will be shown on a separate sheet.

4 days
42.5'/day

Drill hole #D3 was started July 23rd and finished July 26th at a depth of 170 feet. 0' to 9' showed white quartz and schist and continued with a light black schist to 99'. At this point it started showing a little mineral. 99' to 146' changing from a light black schist to quartz and then to a gray quartzsite. 146' to 148' panned fair in mineral showing light black schist. 152' to 170' mostly gray quartzsite and hole was stopped.

4 days
35'/day

Drill hole #D1 was started July 28th and is not finished. 0' to 7' mostly overburden with some schist. 7' to 30' broken schist and quartzsite. 30' to 44' broken white quartz. 44' to 70' changing from quartz to gray schist. 70' to 95' white quartz and schist with a light brown water return in quartz region. 95' to 140' medium hard to very soft black schist. At 113' it started to pan fair in mineral and around 120' it looked very good and also at 135'. Hole 140' feet july 31st. We were still in the soft black schist and panning fair.

U. S. GEOLOGICAL SURVEY

Two men started July 23rd checking trenches we have dug so far and also mapping the area.

CAMPSITE AND GENERAL

Three 14' x 16' tents were set up with wood floors and 3 foot walls. Also built two outdoor toilets and one 4' x 8' shack for drying sludge samples at the drill site.

Two drill sites, #1 and #3, were prepared located on the south end of the Marle #5 showing.

The lower spring did not supply enough water for drilling and a pipe line was put in from the upper spring. It required about 900 feet of pipe, part of this being used for return from drill site to settling pond.

Balance of labor was spent on cleaning trenches for logging and drying samples.

CAT WORK

Total hours	204

LABOR

Shifts	54

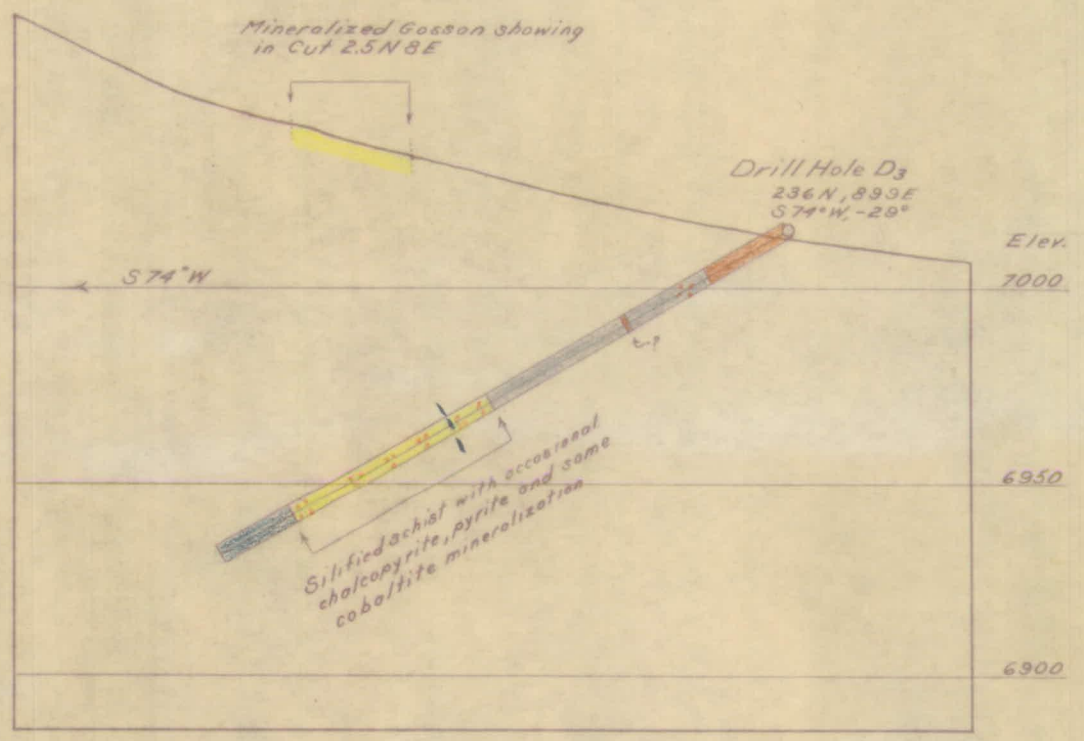
DIAMOND DRILLING

Total Footage	569

NORTHFIELD MINES INC.

Stevenson Property
Idaho

SECTION $D_3 - D_3'$



Scale 1"=50'

LEGEND

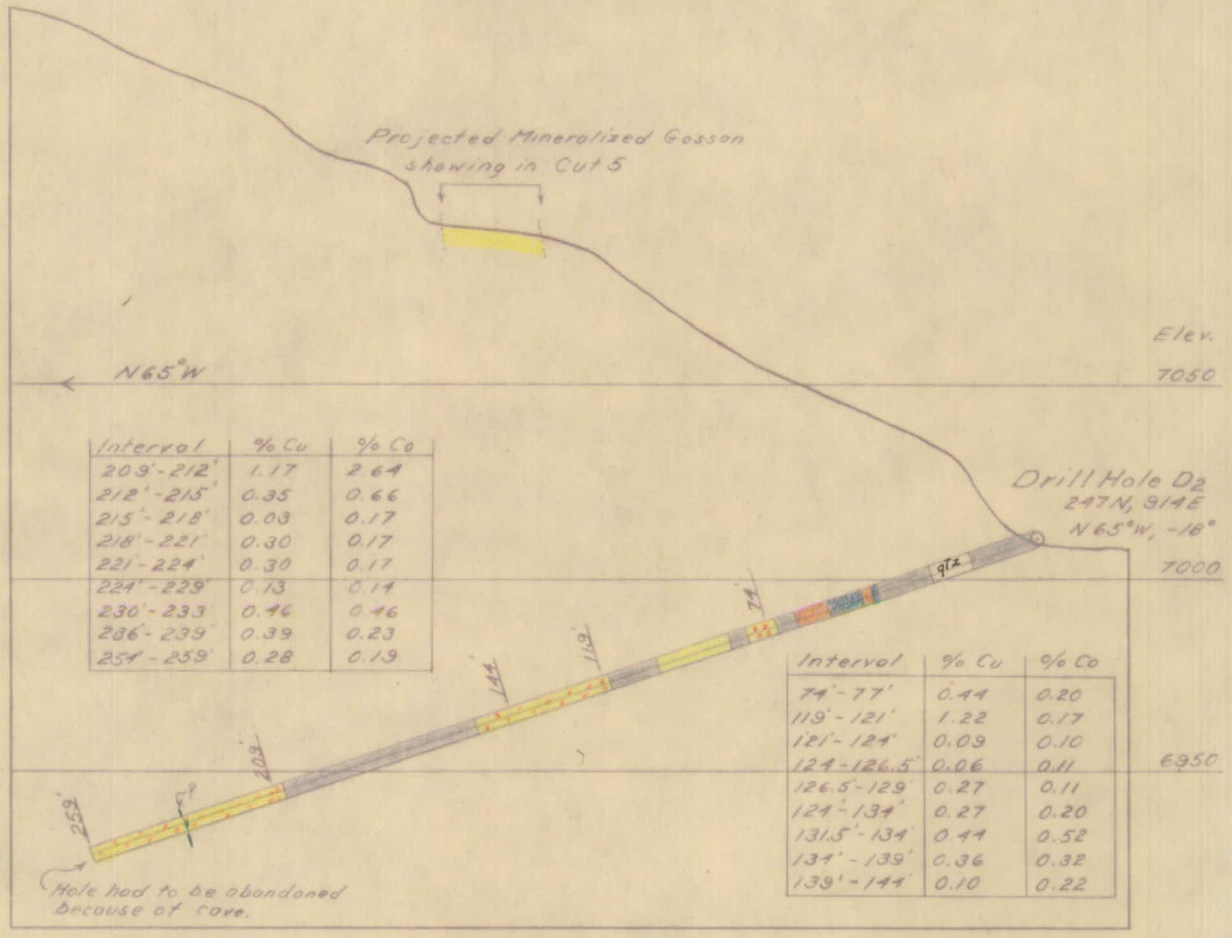
- Grey Schist
- Quartzite
- Mineralized Schist (Silification , green biotitization)
- Basic Dike
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

NORTHFIELD MINES INC.

Stevenson Property
Idaho

Docket No. DMEA 2436
Idm-E334
(Cobalt)

SECTION $D_2 - D_2'$



Interval	% Cu	% Co
209'-212'	1.17	2.64
212'-215'	0.35	0.66
215'-218'	0.03	0.17
218'-221'	0.30	0.17
221'-224'	0.30	0.17
224'-229'	0.13	0.14
230'-233'	0.46	0.46
236'-239'	0.39	0.23
254'-259'	0.28	0.13

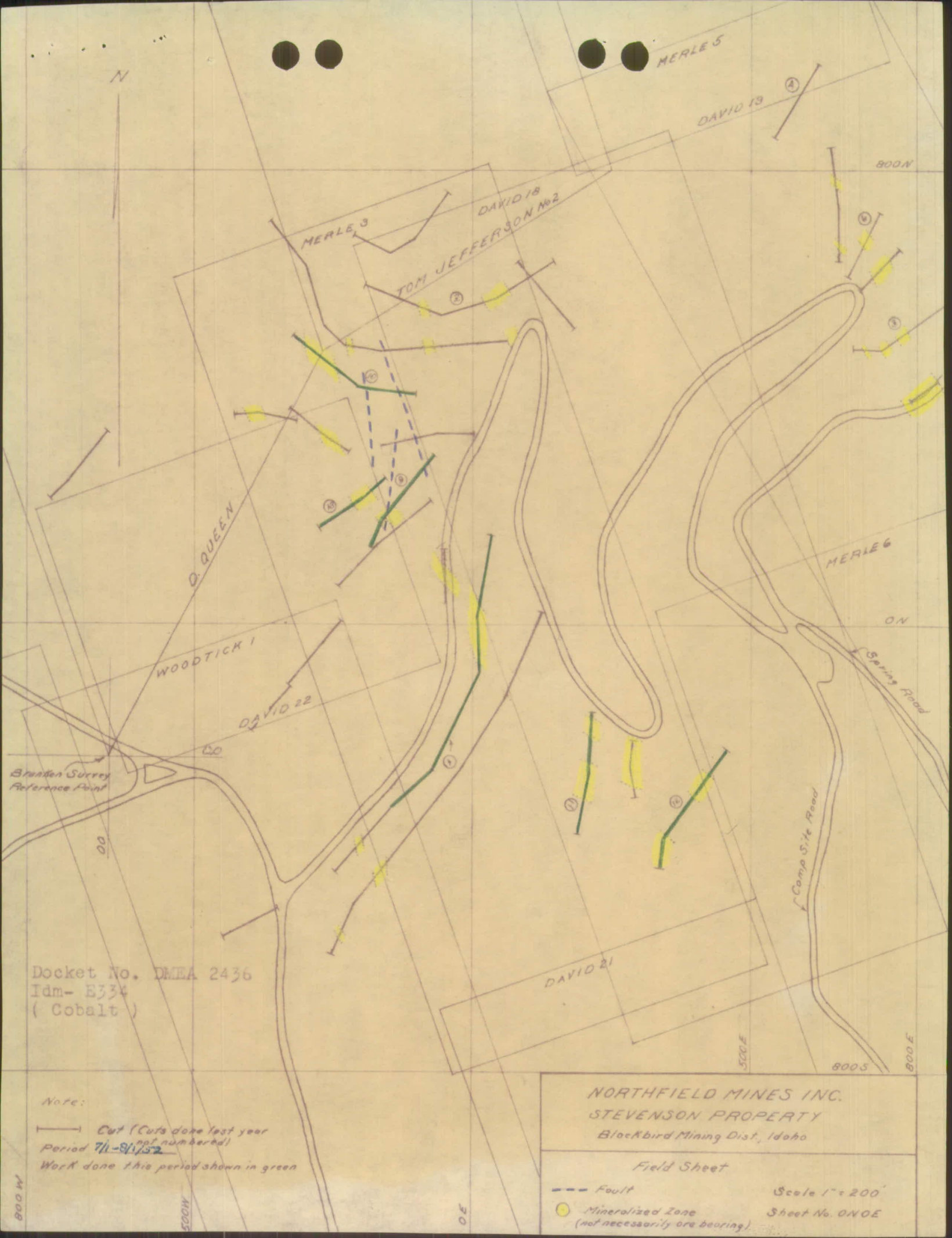
Interval	% Cu	% Co
74'-77'	0.44	0.20
119'-121'	1.22	0.17
121'-124'	0.03	0.10
124-126.5'	0.06	0.11
126.5'-129'	0.27	0.11
124'-134'	0.27	0.20
131.5'-134'	0.44	0.52
134'-139'	0.36	0.32
139'-144'	0.10	0.22

Scale 1"=50'

LEGEND

- Grey Schist
- Quartzite
- Mineralized Schist (Silification , green biotitization)
- Basic Dike
- Mineralization (Pyrite, chalcopyrite and cobaltite)
- Fault
- Shearing

MERLE 4
1000N
Docket No. DMA 2436
Idm- 2334
(Cobalt)
DAVID 16
500N
D1
DAVID 17
Section D2-D2'
D2
DAVID 23
Section D3-D3'
D3
MERLE 6
0N
MERLE 5
500S
DAVID 21
MERLE 3
DAVID 18
1500E
MERLE 1
1000S
500E
1000E
Note:
Cut (Cuts done last year not numbered)
Period 7/1 - 8/1/52
Work done this period shown in green
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist., Idaho
Field Sheet
Section
Scale 1" = 200'
Mineralized Zone (not necessarily ore bearing)
Sheet No. ON 1CE


N
MERLE 5
DAVID 19
800N
DAVID 18
MERLE 3
TOM JEFFERSON No 2
D. QUEEN
MERLE 6
0N
WOODTICK 1
DAVID 22
Spring Road
Brunton Survey Reference Point
00
Camp Site Road
DAVID 21
500E
800S
800E
Docket No. DMEA 2436
Idm- E334
(Cobalt)
Note:
Cut (Cuts done last year not numbered)
Period 7/1-8/1/52
Work done this period shown in green
800W
500W
0E
NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho
Field Sheet
Fault
Mineralized Zone (not necessarily ore bearing)
Scale 1" = 200'
Sheet No. 0N0E

Docket No. DMEA 2436
Idm - E334
(Cobalt)

1000N

LITTLE QUEEN

MERLE 3

500N

QUEEN

DAVID 22

D QUEEN

0N

WOODTICK No. 1

WOODTICK

Bronken Survey
Reference Point

500S

500W

1000S

1500W

1000W

Note:

Cut (Cuts done last year, 1951, not numbered)

Period 7/1 - 8/1/52

Work done this period shown in green

NORTHFIELD MINES INC.
STEVENSON PROPERTY
Blackbird Mining Dist, Idaho

Field Sheet

--- Section

Mineralized Zone
(not necessarily ore bearing)

Scale 1" = 200'

Sheet No. 0N10W

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 1952 Docket No. DMEA 2436 Contract No. Idm-5334

Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper

Address c/o A. J. O'Connell

Contract Amount, $ 102,900.00 Government Participation: 70 % Amount, $ 70,030.00

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:						
Drilling						
Bulldozing	1,852.50		1,852.50			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	194.43		194.43			
Supervision	600.00		600.00			
Technical Services	186.00		186.00			
(3) Operating Mat'ls. and Supplies:						
Timber Geology Supplies	3.04		3.04			
Explosives Small Tools	36.15		36.15			
Pipe & Fittings	21.56		21.56			
Track Cook House Fur.	1.10		1.10			
Medical Supplies	2.29		2.29			
Gasoline	2.06		2.06			
Bunkhouse Fur.	45.08		45.08			
(4) Operating Equipment:						
Rental	272.00		272.00			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.	143.11		143.11			
(7) Miscellaneous:						
Repairs to Equipment						
Telephone Sampling and Analysis	43.99		43.99			
Payroll Taxes	56.26		56.26			
Liability Insurance						
Accounting & Fees	139.81		139.81			
Travelling Engineer	150.00		150.00			
(8) Contingencies (specify):						
TOTALS	3,749.38		3,749.38	3749.38		3749.38

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

Date 8-7-52 *Payee Northfield Mines, Inc.

Per [signature] Title Office 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:

$ 2624.57

Signature WR [signature]
(Authorized Certifying Officer)

Date 8/25/52 Vou. No.
(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. 1dm-E334 in accordance with the terms of the contract.

Signature Thomas E Howard Title Mining Engr Date 8-12-52

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Glenn A Reed Title Mng. Engr Date 8/20

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1952 Docket No. DMEA 2436 Contract No. Idm-5334
Operator's Name Northfield Mines, Inc. Minerals Cobalt - Copper
Address c/o A. J. O'Connell Eureka, Nevada

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								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching	Hours	1,046.50	80½	1,046.50	80½	13.00	500 Hrs	15.00
Test Pits								
Roads and Trails & Sites	Hours	806.00	62	806.00	62	13.00	270 Hrs	15.00
Other Allowable		1,753.77		1,753.77				75,350.00
TOTAL DISTRIBUTED COSTS		3,606.27		3,606.27				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								1,840.00
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.		143.11		143.11				7,500.00
								93,560.00
TOTAL COSTS		3,749.38		3,749.38				$102,900.00

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 8-7-52 Operator Northfield Mines, Inc.

Per A. J. O'Connell Title Office 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)

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.

U. S. GOVERNMENT PRINTING OFFICE 205676

July 30, 1952

Northfield Mines, Inc.
Stevenson Property
Cobalt, Idaho

Agreement Memo #1

Dear Sirs:-

We agree to rent the following equipment to Northfield Mines, Inc. Stevenson Operation at the following rental fees.

1 - Willys Jeep	$ 50.00 per mo.
1 - 2 ton Chevrolet Dump Truck	100.00 per mo.
1 - Peerless Turbine Pump and Gasoline Engine	72.00 per mo.
2 - 16 cu. ft. Mine Cars	52.00 per mo. — ? mg

Rentals start when the equipment is turned over to you and ceases when returned to us. Rentals are due and payable on the 1st of each month following work period. Maintenance of the equipment during use will be your responsibility. It shall be returned to us in as good condition as delivered to you, normal wear excepted. The equipment shall be covered by suitable insurance, the premiums for which shall be Northfield's expense. Freight to and from our base point will be at Northfield's expense.

Yours truly,

EUREKA CORPORATION LIMITED

A. J. O'Connell
Chief Accountant

AJO'C:ej

Approved

Northfield Mines, Inc.

G. W. Mitchell
Gen. Mgr.

BUREAU OF
Received
AUG 22 '62

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE ELECTRIC POWER ADMINISTRATION
WASHINGTON 25, D. C.

NORTHFIELD MINES, INC.
COBALT EXPLORATION
EUREKA, NEVADA

July 30, 1952

Defense Minerals Exploration
Administration
North 1201 Division Street
Spokane, Washington

Dear Sirs:-

Docket #DMEA 2436
Contract Idm-E334

This is to certify that the "Cobalt Exploration Syndicate", name which appears on some of our invoices for June and July 1952, is the name used for the property designated as Northfield Mines, Inc., Stevenson Operation, in Contract Idm-E334. The two names are for one and the same property under the same management and interest.

In the future all invoices will be under the name Northfield Mines, Inc.

Very truly yours,

NORTHFIELD MINES, INC.

G. W. Mitchell
General Manager

GWM:ej

NORTHFIELD MINES, INC.

COBALT EXPLORATION SYNDICATE

PROGRESS REPORT #1

JUNE 1952

Docket No. DMEA 2436
Contract No. Idm-E334

TRENCHING

Work was started June 10. At month's end 1200 feet of new trench was dug mainly in the area of the Merle #5 claim. The "break" exposed last fall in four trenches was exposed in five of the new trenches. Though accurate mapping has not yet been completed, the structure appears to be continuous for some 700 feet. Some cobaltite has been seen but no samples have been taken because of the oxidized, leached condition of the exposed structure.

Sufficient continuous structure has been exposed to warrant diamond drilling. Drilling on the Merle #5 structure will be started during July.

Trenching on the Merle #3 claim will be carried on during July. Two long trenches were dug in the area in June but the showings have not yet been correlated.

ROADS, CAMPSITE & GENERAL

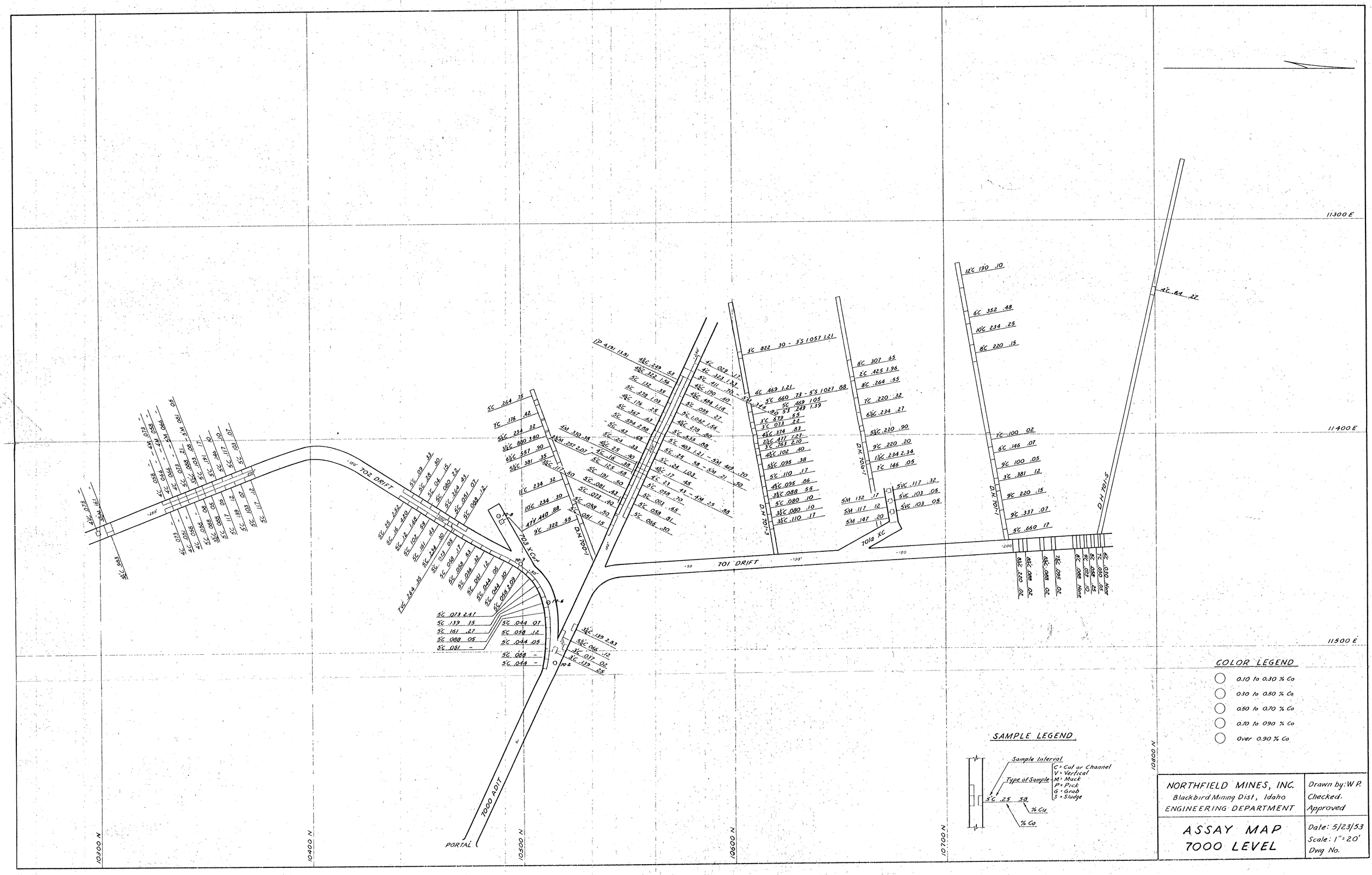
A trail was built to a fair sized spring about 1500 feet from the location of the temporary camp near Stevenson's cabin on the Merle #2 claim. The spring will supply water for both domestic and diamond drill use. A pump and supply lines will be placed in July.

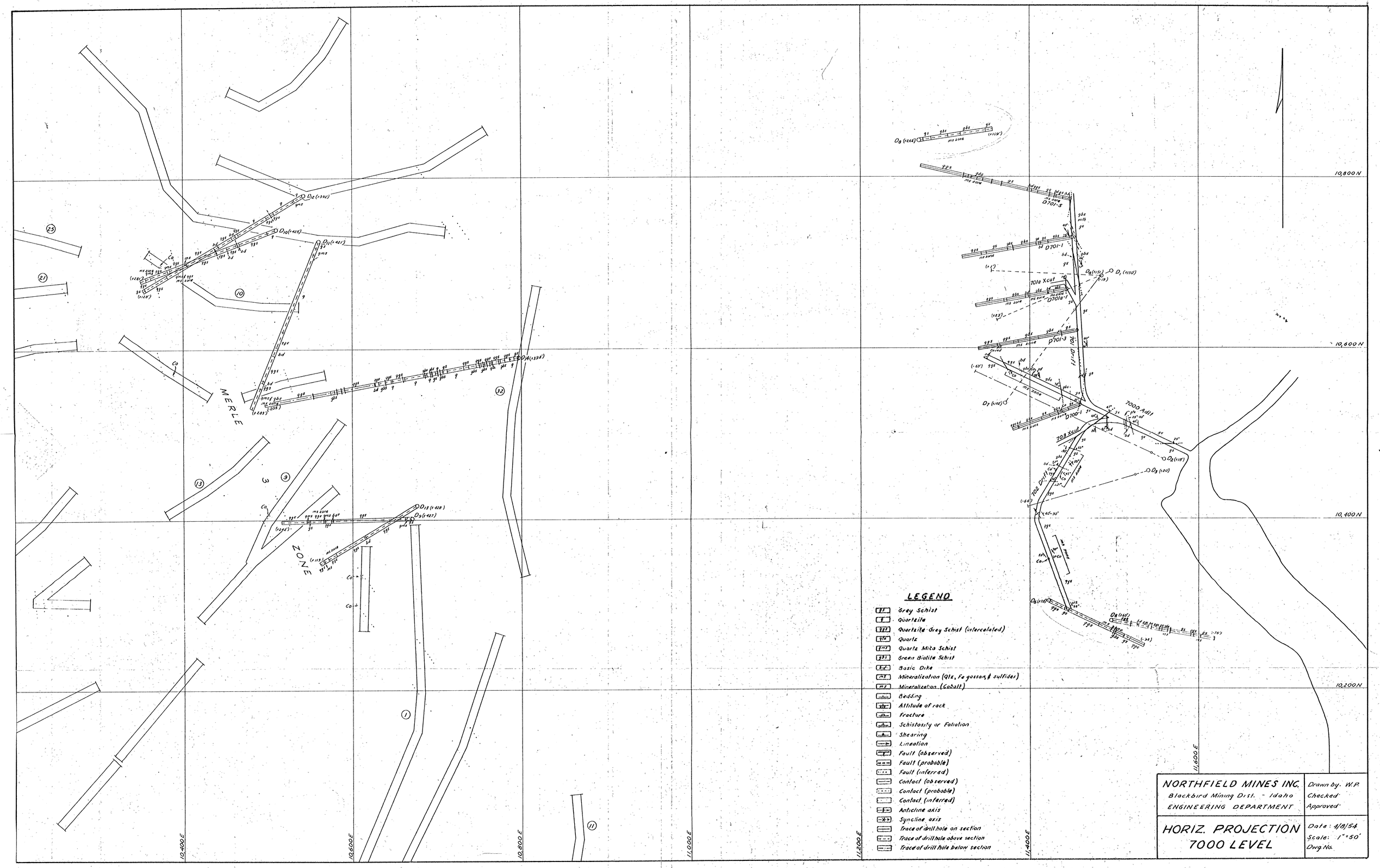
An "escape trail" from the campsite to the power line road was constructed to provide a second exit from the campsite in the event of a bad forest fire.

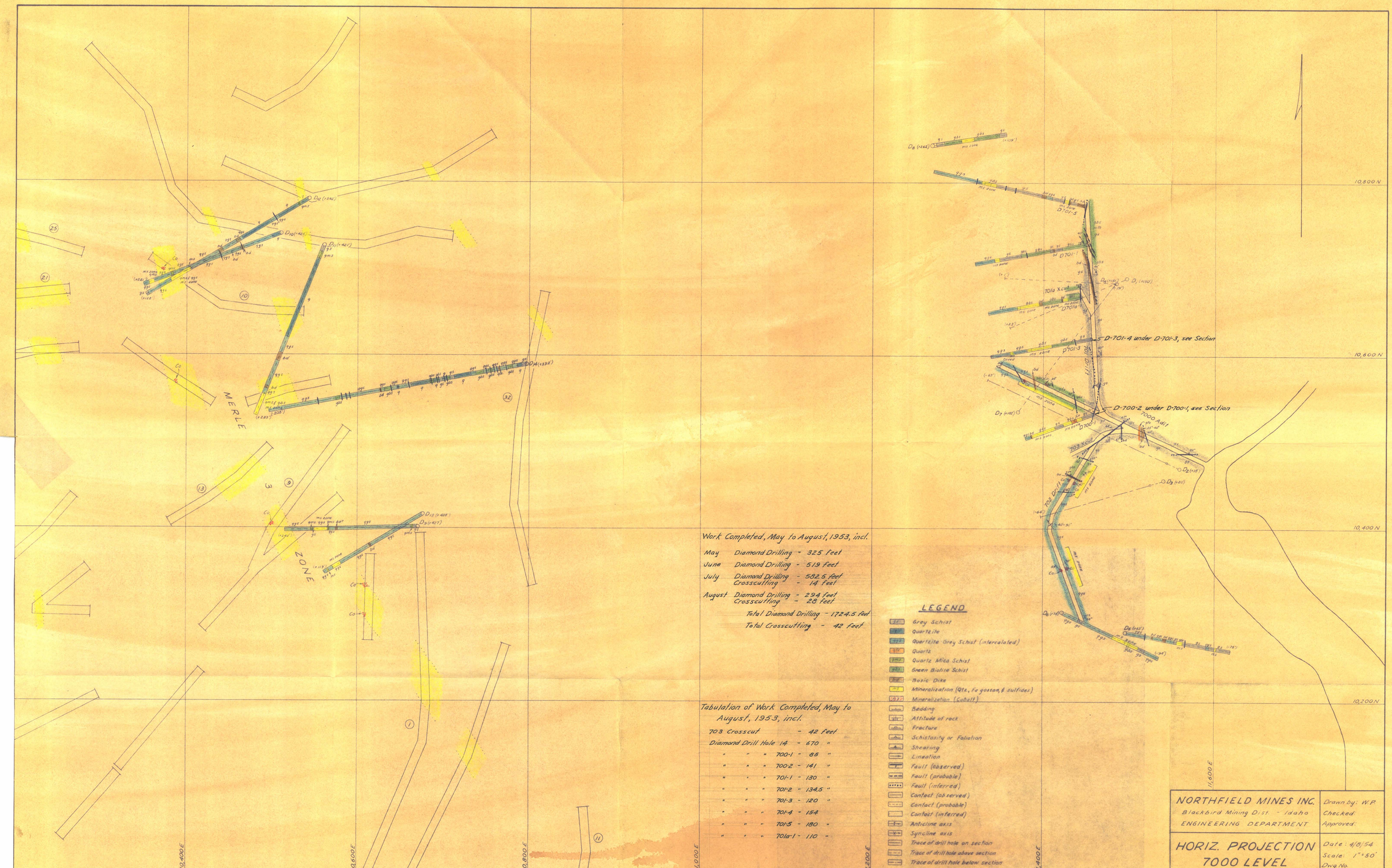
A means of access was built to #2 drill site and the site prepared for drilling. The hole is spotted at the south end of the Merle #5 showing.

Heavy rains during the last week of the month hampered operations.

Progress maps are being prepared to accompany the report for July.


11300 E
11400 E
11500 E
10300 N
10400 N
10500 N
10600 N
10700 N
702 DRIFT
703 Y Cut
7000 ADIT
PORTAL
701 DRIFT
701a XC
D.H. 700-1
D.H. 701-1
D.H. 701-5
COLOR LEGEND
0.10 to 0.30 % Co
0.30 to 0.50 % Co
0.50 to 0.70 % Co
0.70 to 0.90 % Co
Over 0.90 % Co
SAMPLE LEGEND
Sample Interval
Type of Sample
C = Cut or Channel
V = Vertical
M = Muck
P = Pick
G = Grab
S = Sludge
% Cu
% Co
NORTHFIELD MINES, INC.
Blackbird Mining Dist, Idaho
ENGINEERING DEPARTMENT
ASSAY MAP
7000 LEVEL
Drawn by: W.P.
Checked.
Approved
Date: 5/23/53
Scale: 1" = 20'
Dwg No.


10,800 N
10,600 N
10,400 N
10,200 N
10,400 E
10,600 E
10,800 E
11,000 E
11,200 E
11,400 E
11,600 E
MERLE
ZONE
7000 Adit
7012 Xcut
7014 Xcut
7012 Drift
LEGEND
Grey Schist
Quartzite
Quartzite-Grey Schist (intercalated)
Quartz
Quartz Mica Schist
Green Biotite Schist
Basic Dike
Mineralization (Qtz, Fe gossan, & sulfides)
Mineralization (Cobalt)
Bedding
Attitude of rock
Fracture
Schistosity or Foliation
Shearing
Lineation
Fault (observed)
Fault (probable)
Fault (inferred)
Contact (observed)
Contact (probable)
Contact (inferred)
Anticline axis
Syncline axis
Trace of drill hole on section
Trace of drill hole above section
Trace of drill hole below section
NORTHFIELD MINES INC.
Blackbird Mining Dist. - Idaho
ENGINEERING DEPARTMENT
Drawn by. W.P.
Checked
Approved
HORIZ. PROJECTION
7000 LEVEL
Date: 4/8/54
Scale: 1" = 50'
Dwg. No.



Work Completed, May to August, 1953, incl.

May	Diamond Drilling	- 325 feet
June	Diamond Drilling	- 519 feet
July	Diamond Drilling	- 582.5 feet
	Crosscutting	- 14 feet
August	Diamond Drilling	- 294 feet
	Crosscutting	- 28 feet
	Total Diamond Drilling	- 1724.5 feet
	Total Crosscutting	- 42 feet

Tabulation of Work Completed, May to August, 1953, incl.

703 Crosscut	- 42 feet
Diamond Drill Hole 14	- 670 "
" " " 700-1	- 85 "
" " " 700-2	- 141 "
" " " 701-1	- 130 "
" " " 701-2	- 134.5 "
" " " 701-3	- 120 "
" " " 701-4	- 154
" " " 701-5	- 180 "
" " " 701a-1	- 110 "

NORTHFIELD MINES INC.
Blackbird Mining Dist. - Idaho
ENGINEERING DEPARTMENT

Drawn by: W.P.
Checked:
Approved:

HORIZ. PROJECTION
7000 LEVEL

Date: 4/8/54
Scale: 1" = 50'
Dwg. No.

11300 E
11400 E
11500 E
10300 N
10400 N
10500 N
10600 N
10700 N
10800 N
702 DRIFT
703 X Cut
701 DRIFT
701a XC
D.H. 700-1
D.H. 701-3
D.H. 701-1
D.H. 701-5
7000 ADIT
PORTAL
COLOR LEGEND
0.10 to 0.30 % Co
0.30 to 0.50 % Co
0.50 to 0.70 % Co
0.70 to 0.90 % Co
Over 0.90 % Co
SAMPLE LEGEND
Sample Interval
Type of Sample
C = Cut or Channel
V = Vertical
M = Muck
P = Pick
G = Grab
S = Sludge
% Cu
% Co
NORTHFIELD MINES, INC.
Blackbird Mining Dist., Idaho
ENGINEERING DEPARTMENT
ASSAY MAP
7000 LEVEL
Drawn by: W.P.
Checked:
Approved:
Date: 5/23/53
Scale: 1" = 20'
Dwg. No.