MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090 –
Contract Date

LIEN AND SUBORDINATION AGREEMENTS[1]

To the United States of America:

That certain land in the County of Custer, State of Idaho,

described as follows:[2]

name	Sur. No.	Book	Page	Co. Recorder
Unpatented Claim Iowa		14	94	Challis
" Florida		14	92	"
Patented Claim Northern Star	2604	11 map	25	"
		9 deed	490	"
" " Silver Creek	2604	1 map	25	"
		9 deed	490	"

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Northern Star Mining Co., Inc.[3]

hereinafter called the "Operator". In consideration for and as an inducement to the Government executing the Contract, the undersigned:

1. (a) Being the owner of an interest in the land, hereby grants to the Government a lien upon all of his right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of the royalty on production provided for by the Contract, and agrees if the Operator's interest should be surrendered or terminated at any time prior to the expiration of the rights of the United States under said Contract to pay royalty to the Government according to the terms of said Contract; or

(b) Being the holder of a claim, lien, or encumbrance against the land, hereby subordinates his claim, lien, or encumbrance in or against the land and in any production therefrom to the rights of the Government under the Contract with respect to royalty on production and liens to secure same.[4]

2. Undertakes and agrees that property in which the Government may acquire an interest or equity under the Contract may be dismantled, severed from the land, and removed as may be provided in the Contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned.

3. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none". Do not leave blank.)

none

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated_____, and recorded in Book_____, Page____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

6. Added provisions none (State "None" or "See Annex No. ____".)

Dated this 11 day of August, 1965.

R. C. Sargent Sargent Mines	(Seal)	Box 365-0 Challis, Idaho (Street, City & State)
		(Street, City & State)
O. J. Salisbury	(Seal)	333 Felt Bldg Salt Lake City, Utah (Street, City & State)
Bayhorse Mines, Inc.		(Street, City & State)
	(Seal)	(Street, City & State)
	(Seal)	(Street, City & State)
	(Seal)	(Street, City & State)
	(Seal)	(Street, City & State)

I, Leo Eagar (Name), certify that I am the Secretary (Title—Secretary, etc.) of the corporation named herein; that O. J. Salisbury (Name), who signed this agreement was then President (Title—Pres., Vice-Pres., etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

Leo Eagar
(Corporate Seal)

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Dated this 11 day of August, 1965.

R. C. Sargent		Box 365-O (Street)
Sargent Mines	(Seal)	Challis, Idaho (City & State)
		(Street)
O. J. Salisbury	(Seal)	373 Felt Bldg (City & State)
Baghorse Mines Inc		Salt Lake City Utah
		(Street)
	(Seal)	(City & State)
		(Street)
	(Seal)	(City & State)
		(Street)
	(Seal)	(City & State)
		(Street)
	(Seal)	(City & State)

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Dated this 11 day of August, 1965.

R. C. Swiggert Swiggert Mines (Seal)	Box 365-0 Challis, Idaho	(Street) (City & State)
		(Street) (City & State)
O. J. Salisbury Bayhorse Mines, Inc (Seal)	333 Felt Bldg Salt Lake City, Utah	
		(Street) (City & State)
(Seal)		
		(Street) (City & State)
(Seal)		
		(Street) (City & State)
(Seal)		
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(Seal)		

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Dated this 24th day of February, 1966.

UMONT MINING, INC.	1355 Foothill Blvd.	(Street)
Dooley P. Wheeler Jr.	(Seal) Salt Lake City, Utah	(City & State)
Vice President		
		(Street)
		(City & State)
	(Seal)	
		(Street)
		(City & State)
	(Seal)	
		(Street)
		(City & State)
	(Seal)	
		(Street)
		(City & State)
	(Seal)	
		(Street)
		(City & State)
	(Seal)	

I, R. H. WADHAMS (Name), certify that I am the SECRETARY (Title—Secretary, etc.) of the corporation named herein; that DOOLEY P. WHEELER, JR. (Name), who signed this agreement was then VICE PRESIDENT (Title—Pres., Vice-Pres., etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

UMONT MINING, INC.

R. H. Wadhams

Secretary (Corporate Seal)

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4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

6. Added provisions none (State "None" or "See Annex No. ____".)

Dated this 24th day of February, 1966.

UMONT MINING, INC.

Dooley P. Wheeler Jr. (Seal) — 1355 Foothill Blvd (Street), Salt Lake City, Utah (City & State)

Vice President

(Seal) ____ (Street) ____ (City & State)

(Seal) ____ (Street) ____ (City & State)

(Seal) ____ (Street) ____ (City & State)

(Seal) ____ (Street) ____ (City & State)

(Seal) ____ (Street) ____ (City & State)

I, R. H. WADHAMS (Name), certify that I am the SECRETARY (Title—Secretary, etc.) of the corporation named herein; that DOOLEY P. WHEELER, JR. (Name), who signed this agreement was then VICE PRESIDENT (Title—Pres., Vice-Pres., etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

UMONT MINING, INC.

R. H. Wadhams

Secretary (Corporate Seal)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090 –
Contract Date

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Custer, State of Idaho,

described as follows: 2/

	Name	Sur. No.	Book	Page	Co. Recorder
Unpatented Claim	Iowa		14	94	Challis
" "	Florida		14	92	"
Patented Claim	Northern Star	2604	1 map	25	"
			~~9 deed~~	~~490~~	"
" "	Silver Greek	2604	1 map	25	"
			~~9 deed~~	~~490~~	"

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Northern Star Mining Company, Inc. 3/

hereinafter called the "Operator". In consideration for and as an inducement to the Government executing the Contract, the undersigned:

1. (a) Being the owner or optionor of an interest in the land, hereby grants to the Government a lien upon all of his right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of the royalty on production provided for by the Contract, and agrees if the Operator's interest should be surrendered or terminated at any time prior to the expiration of the rights of the United States under said Contract to pay royalty to the Government according to the terms of said Contract; or

(b) Being the holder of a claim, lien, or encumbrance against the land, hereby subordinates his claim, lien, or encumbrance in or against the land and in any production therefrom to the rights of the Government under the Contract with respect to royalty on production and liens to secure same. 4/

2. Undertakes and agrees that property in which the Government may acquire an interest or equity under the Contract may be dismantled, severed from the land, and removed as may be provided in the Contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned.

3. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none". Do not leave blank.)

none

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated _____, and recorded in Book_____, Page____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

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6. Added provisions ____ none ____ (State "None" or "See Annex No.____".)

Dated this 24th day of February, 1966.

UMONT MINING, INC.

Dooley P. Wheeler Jr. (Seal) — 1355 Foothill Blvd (Street), Salt Lake City, Utah (City & State)

Vice President

(Seal) ____ (Street) ____ (City & State)

(Seal) ____ (Street) ____ (City & State)

(Seal) ____ (Street) ____ (City & State)

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(Seal) ____ (Street) ____ (City & State)

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UMONT MINING, INC.

R. H. Wadhams

Secretary (Corporate Seal)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
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Operator
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			~~9 deed~~	~~490~~	"
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Northern Star Mining Company, Inc. 3/

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Dated this 24th day of February, 1966.

UMONT MINING, INC.

Dooley P. Wheeler Jr. (Seal)
Vice President

1355 Foothill Blvd. (Street)
Salt Lake City, Utah (City & State)

(Seal) (Street) (City & State)

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UMONT MINING, INC.

R. H. Wadhams
Secretary (Corporate Seal)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
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Contract Date

LIEN AND SUBORDINATION AGREEMENTS[1]

To the United States of America:

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" "			9 deed	490	"
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UMONT MINING, INC.

Dooley P. Wheeler Jr. (Seal) — 1355 Foothill Blvd. (Street), Salt Lake City, Utah (City & State)

Vice President

(Seal) ____ (Street), ____ (City & State)

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UMONT MINING, INC.

R. H. Wadhams

Secretary (Corporate Seal)

DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
~~Defense Minerals Exploration Administration~~
GEOLOGICAL SURVEY

OFFICIAL DOCKET FILE

~~Idm-E~~ NO._____

OME
~~DMEA~~ NO. 6499

Application
- [x] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

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

Folder No. 1:

Left Side

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

Right Side

- [ ] Project summary (final)
- [ ] Work Comoleted analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports

- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

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

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

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

17963

MME FORM 6 REFERENCE SLIP
REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Chief, OME	2/28/66	
Re: OME-6499 (Silver)		
2. Northern Star Mining Co., Inc.		
Northern Star, et al., Claims		
3. Custer County, Idaho		
4. D. R. MacLaren		
5. D. R. MacLaren		
FROM: Fld. Officer, Reg. I		

OFFICIAL COPY O. M. E.

FOR: Check items for action desired

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

REMARKS:
In reply to our letter to Wheeler of 2/21/66.

INT.-DUP. SEC., WASH., D.C. M56300-62

C O P Y C O P Y

Salt Lake City, Utah
February 24, 1966

Mr. D. R. MacLaren, Field Officer
OME, Region I
Geological Survey
So. 157 Howard Street
Spokane, Washington 99204

Re: OME-6499 (Silver)

Dear Mr. MacLaren:

Enclosed is the copy of the lease (actually a Lease and Option Agreement) dated May 1, 1964, between Swigert Mines and Bayhorse relative to the Northern Star and Silver Creek patented claims. This is a Zerox copy of the original held by Bayhorse Mines, Inc., in their Salt Lake Office.

The other items requested in yours of February 21, 1966, will come from Burlington.

A property map tracing of the Beardsley area 1" = 100' will be sent to you soon, and I shall also send you more factual data concerning silver to base metal ratios in both the Beardley and Northern Star areas.

Yours very truly,

/s/ DOOLEY P. WHEELER, JR.

cc: File

P.S. The enclosed agreement has been extended to October 31, 1968, a copy of which extension document I think you already have.

D.P.W., Jr.

RECEIVED
FEB 28 1966
OME

AGREEMENT OF LEASE AND OPTION

THIS agreement of lease and option, made this 1st. day of May, 1964, between SWIGERT MINES of Challis, Idaho, hereinafter designated as Lessor, and BAYHORSE MINES, INC., an Idaho corporation, hereinafter designated as Lessee,

WITNESSETH:

THAT LESSOR, for and in consideration of the royalties to be paid or other payments to be made, and the covenants and agreements to be kept and performed by Lessee as hereinafter set forth, has demised and leased to Lessee, with an option to purchase, the following patented mining claims located in Custer County, Idaho:

The so-called Salmon River Group (12 Claims):

Keno Lode Mining Claim, U. S. Lot 47
Pacific Lode Mining Claim, U. S. Lot 48
Old Cabin Lode Mining Claim, U. S. Lot 50
Little Fellow Lode Mining Claim, U.S. Lot 49
W. T. Sherman Lode Mining Claim
Lincoln Lode Mining Claim
West Point Lode Mining Claim
Grant Lode Mining Claim
Sheridan Lode Mining Claim
Blaine Lode Mining Claim
Jefferson Lode Mining Claim
Jackson Lode Mining Claim (less 1/8 undivided interest);
(All of the eight last-named claims being included within and designated as U. S. Lot 1147)

and

The so-called McGregor Group (6 Claims):

Northern Star Lode Mining Claim, Survey No. 2604, less that portion thereof described and referred to in deed recorded in Vol. 9 of Mining Deeds, page 490, records of Custer County, Idaho
Eagle Lode Mining Claim, Survey No. 2604
Silver Creek Lode Mining Claim, Survey No. 2604
Hoosier Lode Mining Claim, Survey No. 2604
Silver Brick Lode Mining Claim, Lot No. 980
Greenland Lode Mining Claim, Survey No. 2400;

and Lessor and Lessee agree and covenant as follows:

1. The terms of this agreement shall be for one and one-half years, beginning on 1 May, 1964, and ending on 31 October, 1965. Lessee may, at its option, extend this agreement for the additional period of three years from the above stated expiration date by notifying Lessor, at least ninety (90) days before such expiration, of its intention to continue the agreement,

provided always that Lessee shall have complied with the terms of this agreement. Provisions of such extension shall be the same in all respects as those of the original term.

2. Lessee will enter into the leased property to prospect for, develop, and mine and remove ore. All work will be done in a miner-like manner, with due regard to the preservation of the leased premises. Lessee shall carry on operations hereunder at its sole cost and risk, and shall comply strictly with applicable laws concerning Workmen's Compensation or any other statutes covering operations of this nature, and does hereby promise to indemnify and hold Lessor harmless from any and all liability and responsibility for injuries or damage in any manner arising through any of the acts of Lessee, its agents, employees, or assigns. Lessee shall promptly pay for all labor and materials used by it, and for any costs or taxes accruing against it or its operations, and keep the property clear of all liens.

3. At all times during the period of this agreement, Lessee shall keep posted in a conspicuous place at each location where it may be operating, a notice to the effect that the property is being worked by Lessee under lease, and the owners of the property are not and will not be liable or responsible for any cost, expense, or other liability arising through operations or acts of Lessee or its employees or agents.

4. Lessee shall pay general property taxes upon the leased property and equipment thereon for the year 1964 and all subsequent years during which it may be in possession of the property on the due date for such taxes. Lessee shall also make any Idaho Net Proceeds tax returns required by reason of its operations hereunder, paying tax due; and shall also pay any and all social security, unemployment, or other taxes legally coming due as a result of its operations at or possession of the property, whether or not assessed against the leased property.

5. Valuable products recovered by Lessee's operations on the leased premises shall be shipped and sold to any Smelter or commercial treatment plant chosen by Lessee, but Lessee may, before such shipment and sale, process or concentrate any or all ores in any way it may desire. From the proceeds of sale of such shipments, Lessee shall promptly remit to Lessor royalties at the rate of ten percent (10%) of net smelter returns. "Net smelter returns"

shall mean the net amount remaining after deducting from the moneys paid by the smelter or treatment plant to Lessee for its shipments, all costs for transportation from the property to the treatment plant and cost of sampling, assaying, treatment, processing, and excise taxes, but not the cost of any milling or concentrating done by or for Lessee in Bayhorse Canyon.

6. At any time before the termination of this agreement or any extension thereof, Lessee shall have the right and option to purchase the leased property for the sum total of Eighty-thousand dollars ($80,000). Such purchase price will pay for and include all the mining claims herein listed, and all buildings, ore bins, track, pipe, roadways, telephone lines, or other improvements located upon or used in conjunction with the leased premises. The option to purchase may be effected by Lessee by notification to Lessor in writing of Lessee's intention to exercise the said option. Upon such notification there shall be applied to the stipulated purchase price, to reduce it, all the royalties theretofore paid under this lease. The remaining balance shall be payable on terms and conditions to be mutually agreed upon at the time such option is exercised. Upon default of any payment required hereunder, Lessor shall give Lessee sixty days written notice in which to make such payment; and if the payment is still in default at the expiration of such notice, the property shall revert to Lessor, and all preceding payments shall be forfeited as damages. Upon completion of payment for the property, Lessor agrees to furnish suitable deeds transfering title to all the leased mining claims.

7. Lessee shall be entitled to remove any mining equipment, machinery, tools, supplies, and surface buildings which may be owned, installed or placed by it; and such property shall remain its property subject to removal by it during the life of this agreement, and for a reasonable time after termination for any cause. Any pipe and/or rails installed underground shall remain on the property.

8. It is agreed that provided Lessee shall have paid all outstanding bills due and/or accrued and the leased premises are free and clear of all encumbrances, and shall have so certified in writing, Lessee may surrender this lease at any time upon sixty days' written notice to Lessor of its intention. At the expiration of such notice, this lease and Lessee's rights

hereunder shall terminate and cease, and Lessor shall be entitled to repossess the leased premises without further notice or demand.

9. Lessee shall have the right to sub-lease all or any part of the leased property, provided such sub-leases conform to the terms hereof.

10. This agreement shall extend to and in favor of and bind the Lessor, his successors and assigns, and Lessee and its successors and assigns: It is agreed that Lessee shall have the right, upon written notice to Lessor, to assign this agreement or any participation therein unto any responsible third party, provided such assignee shall agree to comply with all the terms hereof.

IN WITNESS WHEREOF, the parties hereto have set their hands this the day and year first above written.

SWIGERT MINES (Lessor)

By A. C. Swigert

BAYHORSE MINES, INC. (Lessee)

By O. G. Salisbury
Its President

MME FORM 6 REFERENCE SLIP
REV. 2-59 OFFICE OF MINERALS EXPLORATION

	DATE	INITIALS
TO: Chief, OME		
1.	2/28/66	
2. Re: OME-6495 (Silver) Beardsley Gulch Mining Co., Inc.		
3. Beardsley Claims Custer County, Idaho		
and		
4. OME-6499 (Silver) Northern Star Mining Co., Inc.		
Northern Star, et al., Claims Custer County, Idaho		
5.		
FROM: D. R. MacLaren, Fld. Offr., Reg. I		

OFFICIAL COPY O. M. E. RECEIVED MAR 2 1966

FOR: Check items for action desired

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

REMARKS:

Additional data for respective dockets. Please return settlement data which we have been unable to reproduce to this office.

U[illegible]ONT MINING, IN[illegible]

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

February 25, 1966

Mr. D. R. MacLaren, Field Officer
OME Region I
Geological Survey
So. 157 Howard Street
Spokane, Washington 99204

Re: OME - 6499 (Silver)

Dear Mr. MacLaren:

In our OME application we did not dwell upon the high silver ratio aspect of the project, but in order to guard against data that we know is unrepresentative and which appears in USGS Bulletin 877 we are herein supplying more data pertaining to the ratio of silver to base metals.

The drill holes by Shell Canadian Exploration Company in 1965, holes 40, 41 and 43 hit a blanket-like ore occurrence and The Amco drill holes in 1952 and 1953 penetrated ore that may be structurally closely related 210 and 540 feet south of hole 43. They are tabulated and averaged as follows:

DD Hole No.	Au oz. P/T	Ag oz. P/T	Cu %	Pb %	Zn %	Samples
40, 41, 43	0.02	16.4	2.66	0.52	0.57	Shell
Hole 210' So. of 43	0.013	9.5	0.63	0.0	1.1	Amco 1952
Hole 540' So. of 43	0.01	18.3	1.46	1.6	0.9	Amco 1953
Average Gross Dollar Value		$19.05	11.44	2.26	2.57	

<u>Silver value = $19.05:</u> <u>Base Metal Value = $16.27</u>

The above drill hole intersections of ore in the Northern Star area are referred to in page 3 part (8) and (9) of OME - 6499 (Silver) application. They average $19.05 gross value of silver per ton for January 1966 silver prices. The combined gross value of copper, lead, and zinc, using the average metal prices for January 1966 is $16.27 per ton. Gold averages $0.50 per ton, but it was not counted.

U[illegible]ONT MINING, INC[illegible]

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

We believe that the above ratio of silver value ($19.05) to base metal value ($16.27) is the most reliable that can be used as a measure of the silver to base metal value ratio. Certainly the one ton and 17 ton shipments of ore from the Hoosier in 1901 and 1904 (page 130, USGS Bulletin 877) are not representative. Hoosier ore is the same mineralogically, that the above drill holes intersected. Copper, on the average, far exceeds combined lead-zinc percentages, and there normally are approximately ten ounces of silver for every short ton unit (1%) of copper.

Production from the Pacific, Forest Rose, Keno, Silver Brick and River View mines has very little resemblance to Northern Star - Hoosier ore is metal ratios, for the Pacific - River View mines zone is a peripheral one ounce silver to one percent lead ratio zone far from the argentian tetrahedrite-chalcopyrite core of the district represented by the Northern Star - Hoosier area which has a high silver to base metal ratio. The peripheral zone mines generally have very little argentian tetrahedrite in them relative to galena, consequently they average about one ounce silver per per cent lead, and most of the silver, even then, is carried in the little more than trace-amount tetrahedrite. Pure galena anywhere in the Bayhouse district will probably not carry more than 1/3 ounce of silver per short ton unit of lead.

The Northern Star - Hoosier area is comparable to the Ramshorn Mine area which is two miles west up Bayhorse canyon. Both areas seem to be centers of copper mineralization, and both contain similar high silver to base metal ratios.

The enclosed "Exhibit E" shows the production record of the Ramshorn Mine for the interval from May 1882 to November 1886. During that time 12,105.7 short tons of ore averaged 5.14% lead and 70.9 ounces of silver per ton. There is no reference to copper, but we estimate that the ore had as much copper in it as it had lead. Assuming that the ore assayed 70.9 ounces silver per ton and 5% lead and 5% copper, it would have been worth, today, $91.67 per ton in silver and $52.15 in base metal, gross value. Thus the Ramshorn, the nearest parallel to the Northern Star was and is safely, predominantly, a silver mine.

Yours very truly,

Dooley P. Wheeler, Jr.

Dooley P. Wheeler, Jr.
General Manager

DPW:ja

RECEIVED
Air Mail
FEB 28 1966
Reg. R.R.C.

Ramshorn Mines

Exhibit "E"

Loaned to D.W.& by O.J. Salisbury of Ramshorn Mining Company.

Date Sampled	Mark.	Lot No.	Lot Class.	Net Weight	Assay % Lead.	Assay Ozs. Silver	Contents Pounds Lead.	Contents Ozs. Silver.
1882 May	R.H.	1	2	76092	20.	94.	15238	3576.32
"	"	2	"	42384	15.	105	6357	2225.16
"	"	3	"	41360	13.	125	5376	2585.00
"	"	4	"	41182	11	121.	4530	2491.51
June	"	5	"	44546	15	132	6682	2940.03
"	"	6	"	47589	20.	121.	9518	2879.13
"	"	7	"	42970	13.	143.	5586	3072.35
"	"	8	"	43889	21.	111.	9216	2435.83
"	"	9	"	50794	19.	128.	9651	3250.81
"	"	16	"	52952	18.	136.	9531	3600.73
"	"	11	"	51157	19.	168.	9719	4297.18
"	"	12	"	41337	17.	188	7027	3895.67
"	"	1	1	9676		658.		3183.40
"	"	13	2	44144	12.	174.	5297	3840.52
July	"	2	1	2694		822.		1107.23
"	"	14	2	43151	9.	126.	3883	2718.51
"	"	15	"	42075	10	180	4207	3849.86
"	"	16	"	42305	9.	172.	3807	3638.05
"	"	17	"	44575	12.	153.	5349	3409.98
"	"	18	"	43992	9.	150.	3959	3299.40
"	"	19	"	64313	13.	208.	8360	6688.55
"	"	20	"	49819	10	166.	4981	4134.97
"	"	21	"	50470	14.	155.	7066	3912.12
"	"	22	"	49740	11.	175.	5471	4352.25
"	"	23	"	49594	10.	234.	4959	5802.49
August	"	24	"	49764	9.	198.	4478	4926.63
"	"	25	"	49594	10.	183.	4959	4629.34

Carrie forward.....

Date Sampled.	Mark	Lot No.	Lot Class	Net Weight	Assay % Lead.	Assay Ozs. Silver	Contents Lbs. Lead	Contents Ozs. Silver
1882. Fro't from page		I		I2I2I56			I65207	96733.02
August	R.H.	3	I	I6626		728.		605I.86
"	"	A	2	30I4		I66.		250.I6
"	"	25	"	34456	I0.	I83.	3445	3I52.72
"	"	26	"	59I59	I6.	I90.	9465	5620.I0
"	"	27	"	63444	I5.	I64.	I0266	56I2.4I
"	"	28	"	50405	I4.	I57.	7056	3956.7I
"	"	29	"	49324	I3.	20I.	64I2	4957.06
"	"	30	"	5I284	I2.	203.	6I54	5205.32
"	"	I	I	I2000	I5.	8I9.	I800	49I4.00
"	"	3I	2	55602	II.	I80.	6II6	5004.I8
Septr.	"	32	"	6I377	9.	I60.	5524	49I0.I6
"	"	33	"	53260	8.	I58.	426I	4207.54
"	"	34	"	508II	I0.	I67.	503I	4242.76
"	"	35	"	538I2	9.	I68.	4843	4520.20
"	"	36	"	49583	I2.	I75.	5949	4338.5I
"	"	37	"	5I856	7.	III.	3630	2878.0I
"	"	38	"	47890	8.	I64.	383I	3926.98
"	"	39	"	4927I	9.	I50.	4434	3695.37
"	"	40	"	45753	9.	I28.	4II7	2928.I9
Octr.	"	4I	"	47700	8.	I29.	38I6	3076.65
"	"	42	"	43677	9.	I6I.	393I	35I5.99
1883 April	"	43.	"	56II	8.	268.		75I.87
May	"	I	2	67I74	8.	I78.49	5373	5994.94
"	"	I	I	24220		588.58		7I27.70
"	"	I	Galena	I0I25	44.2	84.I4	4475	425.96
"	"	3		I04580	2.	87.49	209I	4574.85
"	"	4		48876	5.2	I37.08	254I	3349.96
June	"	5		I24I40	2.	I49.33	2482	9268.9I
"	"	2	Galena	86I9	50.2	92.74	4326	399.66
				2560805	.....	.....	..286626	2I559I.75

Carried forward

Date Sample	Lot Mine	Lot No.	Class	Net Weight	Assay % Lead	Assay Ozs. Silver	Contents Lbs. Lead	Contents Ozs. Silver
1883 Brought	forward			2560805			286626	21559175
June	R.H.	6		81540	2.1	102.66	1712	4185.45
"	"	2	2	109486	6.	114.08	6569	6245.08
"	"	7		140633		113.45		7977.41
"	"	8		64457	3.	90.41	1933	2913.78
"	"	9		159923	3.4	98.41	5437	7869.01
"	"	10		140859	3.2	74.37	4507	5237.84
July	"	3	Galena	7223	49.1	102.37	3546	369.71
"	"	4		6068	48.5	93.62	2943	284.04
"	"	5	"	4155	48.5	93.62	2015	194.50
"	"	11	2	248747	4.	67.99	9949	8456.15
"	"	12	"	257752	3.8	71.46	9794	9209.47
"	"	6	Galena	6810	51.9	123.30	3534	419.83
"	P.B.	1	2	21781		23.33		254.07
"	"	1	Galena	6808	27.3	118.70	1858	404.05
August	"	2	Iron	33299		23.33		388.43
"	R.H	13	2	259.357	5.	99.75	12967	12935.43
"	"	14		112921	2.	84.00	2258	4742.68
"	"	15		24234	2.5	63.00	611	769.67
Septr.	"	16		463.934	6.	114.75	27836	26618.21
"	"	17		629.623	6.5	72.00	40925	22666.42
"	P.B.	3	Iron	32920		21.00		345.66
Octr.	R.H.	18		712233	6.5	52.50	46295	18696.11
"	"	19		264764	3.	71.25	7942	9432.21
"	"	20		426524	5.	46.50	21326	9916.68
Novr.	"	21		348103	5.	58.33	17405	10152.42
"	"	22		237391	10.	83.00	23739	9851.72
"	"	1	S	5325		337.20		897.79
"	"	2	"	11062		277.80		1536.51
"	"	3	"	22132	300.00			3319.80
Decr.	P.B.	4	Iron	2517		21.00		26.42

Date Sample	Lot Mark	Lot No.	Lot Class	Net Weight	Assay % Lead	Assay Ozs. Silver	Contents Lbs. Lead	Contents Ozs. Silver
1883 Frought forward				7403386			541727	401908.30
Decr.	P.F.	5	Iron	31396		21.00		329.65
1884 Jan'y	R.H.	23	2	130533	1.	97.30	1305	6350.43
"	"	24	"	423092	2.5	57.50	10577	12163.89
Feb'y	"	25	"	74809	6.	74.00	4488	2767.93
"	"	26	"	77026	6.7	70.57	5160	2717.86
May	"	27	"	291677	6.	89.00	17501	12979.62
"	"	28	"	55360	6.	91.00	3322	2519.24
Decr.	"	29-71	"	5396000	6.5	59.16	350740	159595.67
"	P.F.			1652000		36.36		30036.03
1885 Jan'y	R.H.	72		86410	4.2	88.00	3629	3802.04
"	"	73		110073	4.8.	98.80	5283	5437.50
"	"	74		102191	6.3	89.24	6438	4559.27
"	"	75		143054	6.1	110.83	8726	7927.33
"	"	76		132327	5.	85.45	6616	5653.37
"	"	77		125034	7.	74.66	8751	4667.51
"	"	78		147188	9.5	91.87	13982	6761.08
"	P.F.	26		17676		47.60		420.69
"	"	27		43911		29.45		646.42
"	"	6A ~~28~~		53390		42.00		112.11
"	"	7A		8213		26.40		108.41
"	"	8A		34503		35.86		618.58
"	"	9A		71286		37.91		1351.22
"	"	1	Iron	58054		11.66		338.37
"	"	2	"	71024		4.37		155.13
"	"	3	"	88380		5.24		231.55
"	"	4	"	172098		14.50		1247.71
Feb'y	"	10	A	166087		16.50		1370.21
"	"	11-12		228686		14.29		1633.96
Carried forward.....				17394872	.....		988245	678411.08

Date Sample	Lot Mark	Lot No.	Net Weight	Assay % Lead	Assay Ozs. Silver	Contents Lbs. Lead	Contents Ozs. Silver
1885. Brought forward.....			17394872			988245	678411.08
Feb'y	P.B.	13	360851		18.64		3364.34
June	"	14	111218		11.08		616.14
"	"	15	111681		12.54		700.23
"	"	16	260736		9.33		1216.33
"	"	17	137683		18.95		1304.51
Feb'y	R.H.	79	102536	6.5	65.62	6664	3364.20
"	"	80	164722	7.5	56.87	12354	4683.87
"	"	81	161295	6.9	73.78	11129 ~~12354~~	5950.17
"	"	82	141982	5.5	52.78	7809	3746.90
"	"	83	119786	6.	65.91	7187	3947.54
June	"	84	174754	6.9	55.99	12058	4892.23
"	"	85	187122	6.7	63.86	12537	5974.74
"	"	86	147006	4.5	53.36	6615	3922.12
July	"	87	149706	3.5	62.70	5240	4693.09
"	"	88	123056	4.	57.45	4922	3534.78
"	"	89	146691	4.	53.65	5868	3934.69
"	"	90	168476	2.3	65.32	3875	5502.42
"	P.B.	17	134680		16.33		1099.66
"	"	18	137304		15.16		1040.73
"	"	19	132678		15.60		1034.74
"	"	20	149095		15.45		1151.64
"	"	21	182866		35.28		3225.68
August	R.H.	91	141410	1.	67.37	1414	4763.40
"	"	92	126684	1.	48.41	1267	3066.38
"	"	93	155270	1.1	38.78	1708	3000.68
"	"	94	166995	4.	39.37	6680	3287.29
"	"	95	52906	1.6	41.70	846	1103.09
Carrird forward.....			21544061.....		.....	1096418	762532.64

Date Sample	Lot Mark	Lot No.	Class	Net Weight	Assay % Lead	Assay Ozs. Silver	Contents Lbs. Lead	Contents Ozs. Silver
1885. Brought forward				2154406			1096418	762532.64
August	R.H.	1K.		18364	3.5	50.00	643	459.10
"	"	Custer		7275	2.6	42.87	189	155.94
"	P.B.	22		107638		33.24		1788.95
"	"	1 K.		19770	3.	41.75	593	412.69
"	"	2 K.		19156		39.00		373.54
"	"	3 K.		6663		32.25		107.44
Septr.	"	23		103469	1.5	78.74	1552	4072.57
"	"	1 Lead		12394	29.5	167.11	3566	1035.58
"	"	4 K.		6994		61.50		251.06
"	"	5 K"		31436		66.50		1045.25
"	R.H.	95		106238	1.6	41.70	1700	2215.06
"	"	96		195206	3.5	37.91	6832	3700.13
Sept.& Oct. 1886.		97		151793	3.	39.07	4554	2965.27
July	"	1		196062	10.7	73.20	20978	7175.86
"	"	2		355263	4.8	87.78	17052	15592.49
August	"	3		167506	6.5	83.12	10877	6961.54
"	"	4		128036	6.3	33.54	8066	2147.16
"	"	1	Lease	196109	6.2	94.20	12158	9236.73
"	"	2	"	73910	7.2	240.62	5321	8892.11
Sept.	"	5		107617	5.	28.40	5380	1528.16
"	"	6		39815	52.5	57.45	20902	1143.68
						30.32	6533	1100.50
Octr.	"	7		72593	9.80	~~28x88~~	~~7249x~~	~~1137x09x~~
"	"	8		78801	9.2	28.86	7249	1137.09
"	"	9		143246	3.4	33.83	4870	2423.00
Novr.	"	10		123161	1.	49.87	1231	3071.01
"	"	11		110986	1.2	91.87	1331	5098.14
"	"	1	1st.	17430		622.30		5423.34
"	"	2	"	21144		430.50		4551.24
Carried forward				2416136			1237995	856597.27

Date Sample	Lot Mark	Lot No.	Net Weight	Assay % Lead	Assay Ozs. Silver	Contents Lbs. Lead	Contents Ozs. Silver
1886.							
Brought forward.		.....	241621 36	.....	.....	.1237995	856597.27
Novr.	R.H.	3 Lease	49257	9.8.	69.99	4827	1723.74
		Totals	242,11,393	.....	.....	.1242822	858321.01

12,105.7

102.7 lbs PT

70.9 oz P.T.

5,135

102.7

5.19 % Pb.

Please return to

Dooley P. Wheeler, Jr.,

Exhibit "G"
Northern Star
Production

MME FORM 6 REFERENCE SLIP
REV. 2-59 OFFICE OF MINERALS EXPLORATION

	DATE	INITIALS
TO: Chief, OME	2/21/66	
1.		
Re: OME-6499 (Silver)		
2. Northern Star Mining Co., Inc.		
Northern Star Mine		
3. Custer County, Idaho		
4.		
5. D. R. MacLaren		
FROM: Fld.Officer, Region I		

OFFICIAL COPY O. M. E. FEB 21 1966 SIGNED

FOR: Check items for action desired

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

REMARKS:
Attached is a bid from C. F. Nechanicky in connection with work at the above-cited property.

INT.-DUP. SEC., WASH., D.C. M56300-62

MONT MINING INC.
1355 NORTHWEST [illegible]
SALT LAKE CITY [illegible]

OME

Mr. D. R. McLaren
Acting Field Officer
OME, Region I
U. S. Department of the Interior
Office of Minerals Exploration
So. 157 Howard Street
Spokane, Washington 99204

Subject: OME - 6495 and 6499 - Silver

Dear Mr. McLaren:

Enclosed are bids from Peter Kiewit Sons' Company on work at Beardsley (6495) and Northern Star (6499) with one cover letter signed by W. H. McNeal of that company. Their mobilization charge per mile is ten times too high, so a decimal point must be placed wrong, but even then their charges are prohibitive.

I have asked for three or four more bids, but no response has been forthcoming. If, however, bids do come in I shall send them on to you.

Considering the poor response I judge that government and private work has already booked the other contractors solid. I hope, therefore, that the bids from Swifert and Kiewit will do insofar as excavation contractors are concerned.

Yours very truly,

Dooley P. Wheeler, Jr.
General Manager

DPW;vw
cc: L. P. Evans, Jr.
Burlington, Vermont

pme

PETER KIEWIT SONS' CO.

CONTRACTORS

ESTABLISHED 1884

MAIN OFFICE: OMAHA 31, NEBR.
1000 KIEWIT PLAZA

January 20, 1966

ADDRESS REPLY TO:
x [illegible]
[illegible]ells, Idaho

Mr. D. P. Wheeler, Jr.
General Manager
Umont Mining, Inc.
1355 Foothill Blvd.
Salt Lake City, Utah 84108

pme - 6499

Dear Sir:

In accordance with your letter of January 11, 1966, we herewith submit our bid for road work near [illegible], Idaho to be done in the Bayhorse Mining District.

Enclosed you will find five completed forms each, for work to be done for the Northern Star Mining Co., Inc. and the Beardsley Gulch Mining Co., Inc.

We have well qualified people to staff the work and our equipment is the latest models and in excellent condition.

Thank you for the opportunity to bid on this work.

Very truly Yours,

PETER KIEWIT SONS' CO.

[illegible]
[illegible] Manager

[illegible]/bw
cc: [illegible]

Air

OME Docket 6499
(Silver)

Bid For: Northern Star Mining Company, Inc., Work

Bid From: C F Nechanicky

The following are our contract prices for work in the Northern Star area for the Northern Star Mining Company, Inc., in the Bayhouse Mining District, Custer County, Idaho.

1. Bulldozer - (Description T.D. 18=18 International Cable dozer) - $17.00 per hour

2. Drilling and blasting of bedrock encountered in road construction - (Equipment description Atlas Copco gas hammer - 550 per hr. 1-I.R. 600 cuft Comp. 1- Cleveland Jack hammer with fittings, chisel + steel) - $ 16.00 / 12.50 per hour

C F Nechanicky

Name of Contractor

Date: 2-7-1966

RECEIVED
air
FEB 11 1966
OME

OME Docket 6499
(Silver)

Bid For: Northern Star Mining Company, Inc., Work

Bid From: C J Nechanicky

The following are our contract prices for work in the Northern Star area for the Northern Star Mining Company, Inc., in the Bayhorse Mining District, Custer County, Idaho.

1. Bulldozer - (Description T.D. 18-181 International Cable dozer) - $ 17.00 per hour

2. Drilling and blasting of bedrock encountered in road construction - (Equipment description Atlas Copco Gas hammer - 550 Pacha. 1- I.R. 500 cuft Comp. 1- Cleveland Jackhammer with fittings, hose & steel) - $ 16.00 / 12.50 per hour

C J Nechanicky

Name of Contractor

Date: 2-7-1966

RECEIVED
FEB 21 1966
OME

MME FORM 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

	DATE	INITIALS
TO: Chief, OME	1/27/66	
1. Re: OME-6499 (silver)		
2. Northern Star Mining Co., Inc.		
Northern Star, et al., Claims		
Custer County, Idaho		
3.		
4.		
5. D. R. MacLaren		
FROM: Field Officer, Reg. I		

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions X Your information

REMARKS: Forwarding documents received from Northern Star Mining Co., Inc.

INT.-DUP. SEC., WASH., D.C. M56300-62

NORTHERN STAR MINING CO., INC.

King Street Dock
Burlington, Vermont
05401

January 26, 1966

Mr. D. R. MacLaren
Acting Field Officer, OME, Region I
U. S. Department of the Interior
Office of Minerals Exploration
So. 157 Howard Street
Spokane, Washington 99204

Dear Mr. MacLaren:

Re: Northern Star Mining Co., Inc. (Silver)
OME-6499 Bayhorse, Idaho

We are enclosing five copies each of amendment letters to the Swigert Mines - Bayhorse Mines, Inc. agreement and the Bayhorse Mines, Inc. - Umont Mining, Inc. agreement in order to complete your file on the Northern Star Mining Co. underlying agreements.

Very truly yours,

L. P. Evans, Jr.

L. P. Evans, Jr.
President

LPE/eb
Enclosures
cc: D. P. Wheeler, Jr.

RECEIVED
Via
Air Mail

16 July 196[illegible]

Swigert Mines
Challis, Idaho

Gentlemen:

In accordance with the terms of the Lease and Option Agreement now in effect between your company and Bayhorse Mines, Inc., this will serve as notification that we hereby exercise the option granted us in said agreement to extend the term of the agreement by the three year period mentioned therein.

Very truly yours,

BAYHORSE MINES, INC.

By [illegible]

O. J. Salisbury, President

OJS/lb

c.c. D. P. Wheeler, Jr.
Bayhorse Mining, Inc.

Via
Air Mail

MONT MINING, IN

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

Mr. O. J. Salisbury, President
Bayhorse Mines, Inc.
[illegible] Felt Building Annex
Salt Lake City, Utah

Re: Option Agreement, Bayhorse-Umont Mining, Inc.

Gentlemen:

Pursuant to our discussions and negotiations concerning the above agreement of June 1, 1964, and in consideration of the additional exploration work to be done in the Bayhorse Area, it is agreed that the best interests of the parties will be served by modification of the payment provisions in the said agreement, as follows:

Article [illegible], sub-paragraph D is amended to read as follows:

"(D) Unless this option shall have been terminated in the affected year prior to the payment date, Umont shall pay to Bayhorse the following payments:

On June 1, 1968 the amount of $20,000.

On June 1, 1969 the amount of $25,000.

On June 1, 1970 the amount of $35,000.

Each such payment being decreased by the total of all royalties paid by Umont to Bayhorse hereunder during the preceding twelve-month period. If in any year the royalties paid to Bayhorse exceed the required payment for the year, the excess shall be applied and credited against the payment for the ensuing year and reduce accordingly any balance payable thereon. All payments made under this sub-paragraph (D) shall be applied and credited upon and against said purchase price and reduce the balance payable thereon accordingly."

All other provisions of said agreement are hereby reaffirmed.

If the above correctly sets forth our agreement on this matter please indicate your approval and acceptance in the space hereon provided and return two executed copies of same to this office.

Very truly yours,

UMONT MINING, INC.
BY: Dooley P. Wheeler
Duly Authorized Agent

Approved and accepted:

BAYHORSE MINES, INC.
BY: O. J. Salisbury

Date: 14 Jan. 1966

RECEIVED
Via
JAN 17 1966
Air Mail

16 July 1965

Swigert Mines
Challis, Idaho

Gentlemen:

In accordance with the terms of the Lease and Option Agreement now in effect between your company and Bayhorse Mines, Inc., this will serve as notification that we hereby exercise the option granted us in said agreement to extend the term of the agreement by the three year period mentioned therein.

Very truly yours,

BAYHORSE MINES, INC.

By O. J. Salisbury

O. J. Salisbury, President

OJS/lb

c.c. D. P. Wheeler, Jr.
[illegible], Inc.

REC'D
Uka
JUL 27 1965
Air Mail

MONT MINING, IN

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

Mr. O. J. Salisbury, President
Bayhorse Mines, Inc.
333 Felt Building Annex
Salt Lake City, Utah

Re: Option Agreement, Bayhorse-Umont Mining, Inc.

Gentlemen:

Pursuant to our discussions and negotiations concerning the above agreement of June 1, 1964, and in consideration of the additional exploration work to be done in the Bayhorse Area, it is agreed that the best interests of the parties will be served by modification of the payment provisions in the said agreement, as follows:

Article III, Subparagraph D is amended to read as follows:

"(D) Unless this option shall have been terminated in the affected year prior to the payment date, Umont shall pay to Bayhorse the following payments:

On June 1, 1968 the amount of $20,000.

On June 1, 1969 the amount of $25,000.

On June 1, 1970 the amount of $35,000.

Each such payment being decreased by the total of all royalties paid by Umont to Bayhorse hereunder during the preceding twelve-month period. If in any year the royalties paid to Bayhorse exceed the required payment for the year, the excess shall be applied and credited against the payment for the ensuing year and reduce accordingly any balance payable thereon. All payments made under this sub-paragraph (D) shall be applied and credited upon and against said purchase price and reduce the balance payable thereon accordingly."

All other provisions of said agreement are hereby reaffirmed.

If the above correctly sets forth our agreement on this matter please indicate your approval and acceptance in the space hereon provided and return two executed copies of same to this office.

Very truly yours,

UMONT MINING, INC.
BY: Dooley P. Wheeler
Duly Authorized Agent

Approved and accepted:

BAYHORSE MINES, INC.
BY: O. J. Salisbury

Date: 14 Jan. 1966

RECEIVED
Via
JAN 27 1966
Air Mail

MME FORM 6

REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO: Chief, OME

	DATE	INITIALS
1.	1/26/66	
2.		
3.		
4.		
5.		

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

D. R. MacLaren

FROM: Field Officer, Reg. I

OFFICIAL COPY
U. S. E.
JAN 28 1966

FOR: Check items for action desired

____ Action ____ Reply for signature of
____ Approval ____ Investigate
____ Comment ____ Recommendations
____ Conference ____ Rewrite
____ Instructions X Your information

____ Surname
____ Signature
____ File

REMARKS:

Enclosed are correspondence and a bid from Peter Kiewit Sons' Co., Idaho Falls, Idaho, on work at the above-cited property. I agree with Mr. Wheeler that this bid is ridiculously high.

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

M56300-62

MONT MINING IN

OME

Mr. D. L. McLaren
Acting Field Officer
OME, Region I
U. S. Department of the Interior
Office of Minerals Exploration
So. 157 Howard Street
Spokane, Washington 99204

Subject: OME - 5495 and [illegible] - Silver

Dear Mr. McLaren:

Enclosed are bids from Peter [illegible] Company on work at Beardsley (5495) and Northern [illegible] with one covering letter signed by W. H. McHeal of that [illegible]. Their mobilization charge per mile is ten times too [illegible], so a decimal point must be placed wrong, but even then their charges are prohibitive.

I have asked for three or four more bids, but no response has been forthcoming. If, however, bids do come in I shall send them on to you.

Considering the poor response I judge that government and private work has already looked the other contractors solid. I hope, therefore, that the bids from Swibert and Hewit will do insofar as excavation contractors are concerned.

Yours very truly,

Dooley P. Dwyer, Jr.
General Manager

DPW:vw
cc: L. F. Evans, Jr.
Burlington, Vermont

OME-6422-Silver

Bid For: Northern Star Mining Company, Inc., Work

Bid From: Peter Kiewit Sons' Co. - Box 2948, Idaho Falls, Idaho

The following are our contract prices for work in the Northern Star area for the Northern Star Mining Company, Inc., in the Bayhorse Mining District, Custer County, Idaho.

1. Bulldozer - (Description Caterpillar D8 - Series 46A - Power Steering, TC, Hydraulic Controls) - $45.00 per hour

2. Drilling and blasting of bedrock encountered in road construction - (Equipment description Gardner Denver 900 CF Compressor and Gardner Denver ADT 3100 Air Trac Drill) - $ 50.00 per hour

Peter Kiewit Sons' Co.

Name of Contractor

Date: January 20, 1966

RECEIVED
JAN 26 1966
OME

UMONT MINING, INC.

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

OFFICIAL
COPY
O. M. E.
RECEIVED
DEC 8 1965
INITIALS CODE
~~1209~~
1220

December 3, 1965

Mr. D. R. MacLaren
Acting Field Officer
OME, Region I
Geological Survey
South 157 Howard Street
Spokane, Washington 99204

Dear Mr. MacLaren:

Re: OME 6495 and 6499 (Silver)

Enclosed are two copies each of the Longyear bid on the drilling for the above places.

I favor either Longyear or Boyles because I know they are reliable, but you may note that one has to pay for reliability.

I have been unable to get a bidder other than Swigert on the bulldozer, loader and truck work at Bayhorse. The place is too isolated for other contractors. I shall keep trying anyway.

Yours very truly,

(S) Dooley P. Wheeler, Jr.

Dooley P. Wheeler, Jr.
General Manager

cc: Mr. L. P. Evans, Jr.

DPW:mo

RECEIVED
DEC 1965

Send copy to DC.

Longyear

E. J. LONGYEAR COMPANY
General Offices, 76 South 8th St.
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 9-7631 • CABLE LONGCO

OFFICIAL COPY
O. M. E.
RECEIVED
DEC 8 1965
INITIALS | CODE

November 30, 1965

Re: [illegible]

Umont Mining Company
2028 Kensington Avenue
Salt Lake City, Utah

Attention Mr. Dooley Wheeler

PROPOSED EXPLORATORY DRILLING PROGRAM NORTHERN STAR PROJECT NEAR CHALLIS, IDAHO

Gentlemen:

1. In response to your recent request, we are pleased to submit below our proposal for the subject drilling project.

2. We understand that the program as now planned will consist of a minimum of 3,000 feet in approximately ten vertical holes, ranging up to a maximum of 550 feet in depth; and that the material to be drilled will consist of varying amounts of slates and phyllites. It is further understood that you will provide without charge to the Longyear Company: (1) access and/or entry permits, if required; (2) cost of leveling drill sites, building and maintaining roads, if required; and (3) source of water required for the drilling operation.

3. For this project we propose to furnish one Longyear diamond core drill of suitable capacity, together with the necessary accessory equipment and tools, including Longyear "NQ" wire line core barrels as required to complete the work as now planned. We further propose to operate the drill a minimum of two shifts per day, six days per week.

core size?

4. We will carry public liability insurance covering personal injury and property damage, and Workmen's Compensation insurance, and also all-risk insurance on the drilling equipment protecting against loss by theft, fire, flood, landslides and other similar hazards. Certificates showing the coverage referred to will be furnished upon request.

5. Based upon conditions as outlined above, we are pleased to quote as follows:

a) Mobilization and demobilization of personnel and drilling equipment----------$500.00 Lump Sum

b) Overburden drilling and/or diamond drilling in vertical holes -- NQ Wire Line

0 to 600 feet in depth----------$ 7.50 per foot

c) Reaming for casing, if and when required -
All Sizes---$ 3.50/foot

d) Cementing, waiting for cement to set, and drilling out cement----------$13.50 per hour, with 2-man crew, plus cost of materials used.

e) Delays for your convenience or for which you are responsible----------$12.00 per hour, with 2-man crew.

f) Mud plus additives -- to be invoiced to you at our cost, f.o.b. jobsite.

6. Drill cores will be turned over to your representative at the individual drill hole locations in core boxes furnished by you.

7. Statements covering the work performed will be prepared as promptly as possible after the 15th and end of each month, and payment will be due within 15 days from date of invoice.

8. We appreciate very much the opportunity to consider this work. If awarded the contract, we would be prepared to commence operations in April or May, 1966, weather and ground conditions permitting, provided that satisfactory financial arrangements had been made with our Contract Drilling Division to guarantee payment of our invoices.

Sincerely,

E. J. LONGYEAR COMPANY

Allen G. Wicklund

Contract Engineer -
Contract Drilling Division

APWicklund:bal

ACCEPTED:

UMONT MINING COMPANY

By:_____

Date:_____

Longyear
E. J. LONGYEAR COMPANY
General Offices, 76 South 8th St.
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 9-7631 - CABLE LONGCO

OFFICIAL COPY
O. M. E.
RECEIVED
DEC 8
INITIALS

November 30, 1965

Re: Dmc-6799

Umont Mining Company
2028 Kensington Avenue
Salt Lake City, Utah

Attention Mr. Dooley Wheeler

PROPOSED EXPLORATORY DRILLING PROGRAM NORTHERN STAR PROJECT NEAR CHALLIS, IDAHO

Gentlemen:

1. In response to your recent request, we are pleased to submit below our proposal for the subject drilling project.

2. We understand that the program as now planned will consist of a minimum of 3,000 feet in approximately ten vertical holes, ranging up to a maximum of 550 feet in depth; and that the material to be drilled will consist of varying amounts of slates and phyllites. It is further understood that you will provide without charge to the Longyear Company: (1) access and/or entry permits, if required; (2) cost of leveling drill sites, building and maintaining roads, if required; and (3) source of water required for the drilling operation.

3. For this project we propose to furnish one Longyear diamond core drill of suitable capacity, together with the necessary accessory equipment and tools, including Longyear "NQ" wire line core barrels as required to complete the work as now planned. We further propose to operate the drill a minimum of two shifts per day, six days per week.

4. We will carry public liability insurance covering personal injury and property damage, and Workmen's Compensation insurance, and also all-risk insurance on the drilling equipment protecting against loss by theft, fire, flood, landslides and other similar hazards. Certificates showing the coverage referred to will be furnished upon request.

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All Sizes---$ 3.50/foot

d) Cementing, waiting for cement to set, and drilling out cement----------$13.50 per hour, with 2-man crew, plus cost of materials used.

e) Delays for your convenience or for which you are responsible----------$12.00 per hour, with 2-man crew.

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8. We appreciate very much the opportunity to consider this work. If awarded the contract, we would be prepared to commence operations in April or May, 1966, weather and ground conditions permitting, provided that satisfactory financial arrangements had been made with our Contract Drilling Division to guarantee payment of our invoices.

Sincerely,

E. J. LONGYEAR COMPANY

Alfred P. Wicklund

Contract Engineer
Contract Drilling Division

APWicklund:bal

ACCEPTED:

UMONT MINING COMPANY

By:_____

Date:_____

U[illegible]ONT MINING, INC[illegible]

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

OFFICIAL COPY
O. M. E.
RECEIVED
OCT 7 1965

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	~~120~~

October 5, 1965

Mr. Frank E. Johnson, Chief
Office of Minerals Exploration
U.S. Department of the Interior
Washington 25, D.C.

Dear Mr. Johnson:

Re: OME - 6499 (Silver) Northern Star Mining Co., Inc.

Enclosed are ~~six~~ five copies of MME Form 52 which are signed by R. Swigert of Swigert Mines (unincorporated) for Northern Star and Silver Greek and O. J. Salisbury, President of Bayhorse Mines, Inc., for Iowa and Florida claims.

I have no extra copies of MME Form 52, and since Swigert could have signed for all I assume it is OK to have both men sign on the same form. I happened to catch Salisbury while he was in town x so I got the President of Bayhorse to sign instead of the Vice President.

Yours very truly,

Dooley P. Wheeler, Jr.

Dooley P. Wheeler, Jr.
General Manager

cc: Mr. L. P. Evans, Jr.

x October 4, 1965. Salisbury and Eagan executed the Form October 4 at 3 P.M.
DPW Jr.

OPTION AGREEMENT

THIS AGREEMENT MADE THIS [illegible] DAY OF ~~MAY~~ June, 1964, BETWEEN BAYHORSE MINES, INC., AN IDAHO CORPORATION, HEREINAFTER CALLED BAYHORSE, AND UMONT MINING, INC., A VERMONT CORPORATION, HEREINAFTER CALLED UMONT,

WITNESSETH,

WHEREAS, BAYHORSE REPRESENTS AND WARRANTS THAT IT IS THE SOLE OWNER OF, FREE AND CLEAR OF LIENS AND ENCUMBRANCES, AND HAS THE UNQUALIFIED RIGHT TO SELL, ASSIGN AND TRANSFER:

1. THOSE CERTAIN LEASES AND OPTION AGREEMENTS (HEREINAFTER REFERRED TO AS THE "UNDERLYING LEASES") PARTICULARLY DESCRIBED IN EXHIBIT A, HERETO ATTACHED AND HEREBY MADE A PART HEREOF, AND THE RIGHT TO PROSPECT FOR, DEVELOP, MINE AND REMOVE ORES, MINERALS, AND METALS FROM AND TO PURCHASE THE THEREIN DESCRIBED CUSTER COUNTY, IDAHO, REAL PROPERTIES, AND,

2. THOSE AND EACH OF THOSE CERTAIN CUSTER COUNTY, IDAHO, UNPATENTED MINING LOCATIONS PARTICULARLY DESCRIBED IN EXHIBIT B, HERETO ATTACHED AND HEREBY MADE A PART HEREOF, AND

3. THE MACHINERY, BUILDINGS, STRUCTURES AND FACILITIES PARTICULARLY DESCRIBED IN EXHIBIT C, HERETO ATTACHED AND HEREBY MADE A PART HEREOF,

AND FURTHER REPRESENTS AND WARRANTS THAT EACH OF SAID UNDERLYING LEASES IS VALID AND SUBSISTING AND IN FULL FORCE AND EFFECT, AND THAT ALL DEFAULTS, IF ANY, ON THE PART OF ANY OF THE PARTIES THERETO HAVE BEEN WAIVED AND FORGIVEN, SUCH MUTUAL WAIVERS AND FORGIVENESS BEING PARTIAL CONSIDERATIONS FOR THE EXECUTION OF THIS AGREEMENT BY THE PARTIES HERETO, AND

WHEREAS, UPON THE TERMS AND CONDITIONS HEREINAFTER STATED, UMONT DESIRES TO OBTAIN THE ASSIGNMENT, TRANSFER AND CONVEYANCE TO IT OF ALL THE RIGHTS, TITLES AND INTERESTS OF BAYHORSE IN AND TO EACH AND ALL THE UNDERLYING LEASES AND REAL AND PERSONAL PROPERTIES AND RIGHTS DESCRIBED IN SAID EXHIBITS A, B AND C, AND IN AND TO ANY AND ALL OTHER LEASES AND OPTION AGREEMENTS HEREAFTER ENTERED INTO BETWEEN BAYHORSE, AS LESSEE OR OPTIONEE, AND THE OWNERS OF MINING CLAIMS AND PROPERTIES SITUATED IN THE BAYHORSE CANYON AREA, CUSTER COUNTY, IDAHO.

NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS AND PROMISES HEREIN CONTAINED, THE PARTIES HERETO AGREE AS FOLLOWS:

1. BAYHORSE HEREBY ASSIGNS AND TRANSFERS EACH OF SAID UNDERLYING LEASES [illegible]

ANY AND ALL OTHER LEASES AND/OR OPTION AGREEMENTS (AND ALL ITS RIGHTS, TITLES AND INTERESTS THEREIN AND THEREUNDER) HEREAFTER ENTERED INTO BETWEEN BAYHORSE, AS LESSEE OR OPTIONEE, AND THE OWNER OF MINING CLAIMS AND PROPERTIES SITUATED IN THE BAYHORSE CANYON AREA.

UMONT HEREBY ASSUMES THE PERFORMANCE OF EACH OF SAID UNDERLYING LEASES INSOFAR AS PERFORMANCE FROM AND AFTER THE DATE HEREOF IS REQUIRED BY THE TERMS OF SUCH LEASE AND AGREES TO ASSUME THE PERFORMANCE OF ANY SUCH HEREAFTER OBTAINED AND ASSIGNED LEASE OR OPTION AGREEMENT FROM AND AFTER THE DATE OF THE ASSIGNMENT THEREOF TO UMONT, BUT UPON THE UNDERSTANDING THAT UMONT SHALL HAVE THE UNRESTRICTED RIGHT, PRIVILEGE AND OPTION TO, AT ANY TIME, SURRENDER AND REASSIGN ANY OR ALL THEREOF TO BAYHORSE AND SHALL, UPON ANY TERMINATION OF THIS AGREEMENT, REASSIGN ALL THEREOF TO BAYHORSE, AND THAT UPON SUCH REASSIGNMENT UMONT SHALL BE DISCHARGED FROM ANY FURTHER OBLIGATION UNDER OR AS TO EACH LEASE SO REASSIGNED.

FOR THE PURPOSE OF THIS AGREEMENT, FUTURE REFERENCES HEREIN TO "UNDERLYING LEASES" SHALL BE CONSTRUED TO INCLUDE, AND EXHIBIT A HERETO SHALL BE CONSTRUED TO LIST AND DESCRIBE, EACH AND ALL OF SUCH HEREAFTER OBTAINED AND ASSIGNED LEASES AND OPTION AGREEMENTS, WITH THE SAME FORCE AND EFFECT AS IF THE SAME EXISTED AND WERE DESCRIBED IN SAID EXHIBIT A ON THE DATE HEREOF.

ANY SUCH REASSIGNMENT BY UMONT SHALL EITHER BE DELIVERED TO BAYHORSE OR DEPOSITED IN THE REGISTERED MAIL ADDRESSED TO BAYHORSE. SUCH REASSIGNMENT SHALL NOT BE EFFECTIVE TO RELIEVE UMONT OF ITS SAID ASSUMPTION OF THE PERFORMANCE OF THE AFFECTED LEASE OR LEASES UNTIL THIRTY DAYS (30) DAYS AFTER THE DATE OF DELIVERY TO BAYHORSE OR DEPOSIT IN THE REGISTERED MAIL, AS THE CASE MAY BE, IT BEING UNDERSTOOD THAT AFTER SUCH EFFECTIVE DATE UMONT SHALL BE LIABLE ONLY FOR OBLIGATIONS INCURRED WITH RESPECT TO THE REASSIGNED LEASE OR LEASES PRIOR TO SUCH EFFECTIVE DATE.

2. UPON REQUEST AND UPON REASONABLE NOTICE, BAYHORSE SHALL EXECUTE AND DELIVER TO THE WALKER BANK AND TRUST COMPANY AT SALT LAKE CITY GOOD AND SUFFICIENT QUITCLAIM DEEDS, BILLS OF SALE AND OTHER APPROPRIATE INSTRUMENTS OF TRANSFER, TRANSFERRING TO UMONT ALL OF THE RIGHTS, TITLES AND INTERESTS OF BAYHORSE IN AND TO THE MINING LOCATIONS DESCRIBED IN SAID EXHIBIT B AND ANY AND ALL OTHER MINING CLAIMS (HEREINAFTER CALLED ADDITIONAL LOCATIONS) OWNED BY BAYHORSE, OR ITS OFFICERS ON ITS BEHALF, IN THE BAYHORSE CANYON AREA, AND IN AND TO THE MACHINERY, BUILDINGS, STRUCTURES AND FACILITIES DESCRIBED IN SAID EXHIBIT C, SAID DEEDS, BILLS OF SALE AND OTHER INSTRUMENTS OF TRANSFER, SHALL BE ACCOMPANIED BY AN ESCROW

AGREEMENT SIGNED BY THE PARTIES HERETO, INSTRUCTING SAID ESCROW HOLDER TO DELIVER SAID DEEDS, BILLS OF SALE AND OTHER INSTRUMENTS OF TRANSFER TO UMONT, OR UMONT'S DESIGNEE, IF AND WHEN CERTAIN CONDITIONS AND TERMS THEREIN STATED HAVE BEEN KEPT AND PERFORMED BY UMONT INCLUDING THE PAYMENT OF THE PURCHASE PRICE THEREIN RECITED. IF ANY CONDITION OR PAYMENT SPECIFIED TO BE DONE OR MADE BY UMONT IS NOT MADE AS AND WITHIN THE TIME SPECIFIED IN SAID AGREEMENT, SAID ESCROW HOLDER SHALL, UPON THE REQUEST OF BAYHORSE, RETURN SAID DEEDS, BILLS OF SALE AND OTHER INSTRUMENTS OF TRANSFER TO BAYHORSE AT 333 FELT BUILDING ANNEX, SALT LAKE CITY, UTAH. [illegible]

IN THE EVENT OF TERMINATION OF THIS AGREEMENT, UMONT WILL THEN QUITCLAIM TO BAYHORSE ANY AND ALL MINING CLAIMS AND MILL SITES LOCATED BY UMONT OR ITS EMPLOYEES OR AGENTS IN THE DRAINAGE BASIN OF BAYHORSE CREEK AND TRIBUTARIES SINCE MAY 1, 1964, TO THE DATE OF SAID TERMINATION.

3. BAYHORSE HEREBY GRANTS TO UMONT, FOR THE PERIOD OF FIVE (5) YEARS FROM DATE, THE SOLE AND EXCLUSIVE OPTION TO PURCHASE ALL OF BAYHORSE'S RIGHTS, TITLES AND INTERESTS IN, TO AND UNDER THE UNDERLYING LEASES AND REAL AND PERSONAL PROPERTIES AND RIGHTS DESCRIBED IN EXHIBITS A, B AND C, AND IN AND TO SAID ADDITIONAL LOCATIONS FOR A TOTAL PURCHASE PRICE OF $80,000 PAYABLE AS FOLLOWS, VIZ.:

(A) DURING THE LIFE OF THIS OPTION (THIS IS, WHILE IT REMAINS IN FORCE AND UNTERMINATED) UMONT, ON OR BEFORE THE 15TH DAY OF EACH MONTH SHALL PAY BAYHORSE A ROYALTY AT THE RATE OF TEN PER CENT (10%) OF THE NET SMELTER RETURNS RECEIVED BY UMONT DURING THE PRECEDING MONTH FOR ORES, CONCENTRATES AND METALS EXTRACTED, REMOVED AND SHIPPED BY IT FROM THE UNPATENTED MINING CLAIMS DESCRIBED IN EXHIBIT B AND FROM THE ABOVE-MENTIONED ADDITIONAL LOCATIONS. ALL SUCH ROYALTIES SHALL BE APPLIED AND CREDITED UPON AND AGAINST SAID PURCHASE PRICE AND REDUCE THE BALANCE PAYABLE THEREON ACCORDINGLY. ALL ROYALTY PAYMENTS SHALL BE ACCOMPANIED BY A COPY OF ANY SMELTER RETURN SHEET FOR THE PRODUCT SOLD.

(B) "NET SMELTER RETURNS RECEIVED BY UMONT" SHALL MEAN THE NET AMOUNT REMAINING AFTER DEDUCTING FROM THE NET MONEYS PAID BY SUCH SMELTER TO UMONT FOR THE SAME ALL COSTS FOR TRANSPORTATION (NOT INCLUDING MINE TO MILL TRANSPORTATION), HANDLING, SAMPLING, ASSAYING, TREATMENT, PROCESSING AND EXCISE TAXES, BUT NOT THE COST OF ANY MILLING OR CONCENTRATING DONE BY OR FOR THE ACCOUNT OF

UMONT IN BAYHORSE CANYON OR ELSEWHERE.

(C) ALL ORES, CONCENTRATES, METALS OR VALUABLE PRODUCTS PRODUCED FROM ANY OF THE PROPERTIES INCLUDED IN THIS AGREEMENT AND THE UNDERLYING AGREEMENTS WHICH ARE A PART HEREOF, SHALL BE SHIPPED TO THE SMELTER OR PROCESSING PLANT OF UMONT'S CHOICE, PROVIDED THAT THE ROYALTIES RECEIVED BY THE OWNERS OF THE PROPERTIES SHALL NEVER BE LESS THAN THE ROYALTIES THE OWNERS WOULD HAVE RECEIVED HAD THE ORES, CONCENTRATES, METALS OR VALUABLE PRODUCTS BEEN SHIPPED TO A THIRD PARTY SMELTER OR PROCESSING PLANT OFFERING THE HIGHEST NET RETURN TO OWNERS CONSIDERING PRICES PAID, TREATMENT, TRANSPORTATION AND OTHER SPECIFIED DEDUCTIBLE COSTS.

(D) UNLESS THIS OPTION SHALL HAVE BEEN TERMINATED IN THE AFFECTED YEAR PRIOR TO THE PAYMENT DATE, UMONT SHALL PAY TO BAYHORSE THE FOLLOWING PAYMENTS;

ON JUNE 1, 1966 THE AMOUNT OF $20,000,

ON JUNE 1, 1967 THE AMOUNT OF $25,000,

ON JUNE 1, 1968 THE AMOUNT OF $35,000,

EACH SUCH PAYMENT BEING DECREASED BY THE TOTAL OF ALL ROYALTIES PAID BY UMONT TO BAYHORSE HEREUNDER DURING THE PRECEDING TWELVE-MONTH PERIOD. IF IN ANY YEAR THE ROYALTIES PAID TO BAYHORSE EXCEED THE REQUIRED PAYMENT FOR THE YEAR, THE EXCESS SHALL BE APPLIED AND CREDITED AGAINST THE PAYMENT FOR THE ENSUING YEAR AND REDUCE ACCORDINGLY ANY BALANCE PAYABLE THEREON. ALL PAYMENTS MADE UNDER THIS SUB-PARAGRAPH (D) SHALL BE APPLIED AND CREDITED UPON AND AGAINST SAID PURCHASE PRICE AND REDUCE THE BALANCE PAYABLE THEREON ACCORDINGLY.

(E) UMONT AGREES THAT IF, AFTER TERMINTION AND SURRENDER BY IT OF THIS OPTION, IT SHALL CONTINUE AFTER JUNE 1, 1966, TO HOLD ANY PROPERTIES IN THE DRAINAGE BASIN OF BAYHORSE CREEK AND TRIBUTARIES, WHETHER ACQUIRED FROM BAYHORSE OR FROM THIRD PARTIES, OR BY MINING LOCATION MADE BY IT, IT WILL CONTINUE TO PAY BAYHORSE THE REQUIRED ANNUAL PAYMENTS ON JUNE 1ST OF EACH YEAR UNTIL SUCH PAYMENTS PLUS ALL PAYMENTS THERETOFORE MADE BY IT TO BAYHORSE HEREUNDER SHALL TOTAL $80,000 OR UNTIL IT SHALL HAVE ENTIRELY WITHDRAWN FROM THE DRAINAGE BASIN OF BAYHORSE CREEK AND TRIBUTARIES, WHICHEVER SHALL FIRST OCCUR.

4. (A) UNTIL UMONT SHALL HAVE PAID BAYHORSE SAID $20,000 (OR BALANCE DUE THEREON) SPECIFIED TO BE PAID ON OR BEFORE JUNE 1, 1966, BAYHORSE OR SUB-LESSEES AT THEIR SOLE COST AND EXPENSE, MAY CONDUCT SUCH MINING AND DEVELOPMENT

OPERATIONS UPON ANY OF THE PROPERTIES COVERED BY THIS OPTION AS DO NOT INTERFERE WITH THE OPERATIONS OF UMONT THEREON, PROVIDED, THAT IN SO DOING BAYHORSE AND THEIR SUBLESSEES SHALL COMPLY WITH THE TERMS OF ANY AFFECTED UNDERLYING LEASE, INCLUDING PAYMENT, FOR THE ACCOUNT OF UMONT, OF ALL ROYALTIES DUE ON ORES, CONCENTRATES AND METALS REMOVED BY BAYHORSE FROM THE LEASED PROPERTY, IT BEING UNDERSTOOD, HOWEVER, THAT EXCEPT FOR PAYMENT OF SUCH ROYALTIES AND ANY COST OF OTHERWISE COMPLYING WITH THE AFFECTED UNDERLYING LEASES, BAYHORSE OR SAID SUBLESSEES SHALL RETAIN AND OWN THE PROCEEDS FROM ORES, CONCENTRATES AND METAL REMOVED BY THEM DURING THEIR SAID MINING OPERATIONS. OTHERWISE, DURING THE LIFE OF THIS OPTION, UMONT, SUBJECT TO THE PROVISIONS OF SAID UNDERLYING LEASES, SHALL BE ENTITLED TO THE SOLE AND EXCLUSIVE POSSESSION AND USE OF THE REAL PROPERTIES AFFECTED BY SAID UNDERLYING LEASES AND SAID MINING LOCATIONS DESCRIBED IN EXHIBIT B AND SAID ADDITIONAL LOCATIONS, SUBJECT ONLY TO THE RIGHT OF INSPECTION AND OTHER RIGHTS HEREIN RESERVED TO BAYHORSE, AND TO THE SOLE AND EXCLUSIVE RIGHT TO PROSPECT, TEST AND EXPLORE THE SAME AND TO MINE THE SAME AND EXTRACT, REMOVE AND SELL THE ORES, CONCENTRATES, METALS AND MINERALS THEREIN AND RETAIN THE PROCEEDS THEREOF, SUBJECT, HOWEVER, TO ITS OBLIGATION TO PAY ROYALTIES THEREON, AS HEREIN PROVIDED; IT BEING UNDERSTOOD, HOWEVER, THAT UMONT IS NOT OBLIGATED TO MINE MORE THEREOF THAN IT DEEMS ADVISABLE OR ANY THEREOF WHICH IT MAY CONSIDER UNPROFITABLE TO MINE; FURTHER, UMONT SHALL HAVE THE RIGHT TO USE THE SAME FOR ANY AND ALL PURPOSES REASONABLY NECESSARY OR INCIDENTAL TO ITS MINING AND OTHER OPERATIONS THEREON HEREUNDER, INCLUDING THE RIGHT TO CUT SUCH TIMBER AS MAY BE REQUIRED IN ITS OPERATIONS AND THE RIGHT TO EXPLORE, DEVELOP AND MINE CONTIGUOUS OR ADJACENT LANDS THROUGH THE MINE WORKINGS EXISTING OR HEREAFTER CONSTRUCTED BY IT THEREON AND SHALL ALSO HAVE THE RIGHT OF INGRESS AND EGRESS TO AND FROM THE SAME OVER ANY CONTIGUOUS OR NEARBY LANDS OF BAYHORSE AND, FOR USE IN CONNECTION WITH ITS OPERATIONS ON THE SAME, TO CONSTRUCT, MAINTAIN AND USE ON SUCH BAYHORSE LANDS WATER DITCHES, FLUMES, CONDUITS, PIPE LINES, POWER AND TELEPHONE LINES AND ROADS.

(B) ALL NEW SUB-LEASES AND RENEWALS OF EXISTING SUBLEASES AUTHORIZED HEREIN ABOVE SHALL BE SUBJECT TO APPROVAL OF UMONT, WHICH APPROVAL SHALL NOT BE UNREASONABLY WITHHELD.

5. (A) DURING THE LIFE OF THIS AGREEMENT AND OPTION, UMONT WILL ASSUME AND BE RESPONSIBLE FOR THE FOLLOWING:

(1) MAINTAINING A WATCHMAN AT BAYHORSE TOWNSITE,
(2) MAINTAINING FIRE INSURANCE ON MILL BUILDING AND EQUIPMENT EQUAL TO PRESENT COVERAGE ($50,000), AND PROVIDING FOR PAYMENT TO BAYHORSE OF THE SAME PROPORTION OF THE POLICY PROCEEDS AS THE UNPAID BALANCE OF SAID PURCHASE PRICE AT THE TIME OF LOSS BEARS TO SAID TOTAL PURCHASE PRICE AND FOR PAYMENT TO UMONT OF THE REMAINDER OF THE POLICY PROCEEDS, AND
(3) PAYMENT OF TAXES ON REAL AND PERSONAL PROPERTY INCLUDED IN THIS AGREEMENT (PATENTED CLAIMS AND MILL BUILDING AND EQUIPMENT), PRO-RATING FOR FRACTIONAL YEARS.

(B) IF DURING THE LIFE OF THIS AGREEMENT, UMONT SHALL CHOOSE TO USE ANY OF THE MACHINERY, BUILDINGS, STRUCTURES AND FACILITIES DESCRIBED IN EXHIBIT C, UMONT AT ITS SOLE COST AND EXPENSE WILL MAINTAIN THE SAME IN GOOD REPAIR AND WORKING ORDER.

6. UPON FULL PAYMENT OF SAID PURCHASE PRICE IN ACCORDANCE WITH THE TERMS HEREOF, ALL OF BAYHORSE'S RIGHTS, TITLES AND INTERESTS IN, TO AND UNDER SAID UNDERLYING LEASES (EXCEPT SUCH AS UMONT MAY HAVE THERETOFORE REASSIGNED TO BAYHORSE) AND REAL AND PERSONAL PROPERTIES AND RIGHTS DESCRIBED IN EXHIBIT A, B AND C AND IN AND TO SAID ADDITIONAL LOCATIONS SHALL VEST IRREVOCABLY IN UMONT, WHICH SHALL THEREAFTER BE THE UNQUALIFIED OWNER THEREOF.

7. ALL WORK DONE BY UMONT ON THE REAL PROPERTIES AFFECTED BY THIS AGREEMENT SHALL BE DONE IN A GOOD AND MINERLIKE MANNER AND IN ACCORDANCE WITH THE LAWS, RULES AND REGULATIONS OF THE UNITED STATES AND OF THE STATE OF IDAHO, WHICH MAY BE APPLICABLE TO ITS OPERATIONS, AND UMONT SHALL KEEP ITS EMPLOYEES INSURED IN COMPLIANCE WITH THE WORKMAN'S COMPENSATION STATUTES OF THE STATE OF IDAHO, PROVIDED THAT NOTHING HEREIN SHALL BE CONSTRUED TO REQUIRE UMONT TO COMPLY WITH ANY FEDERAL, STATE OR COUNTY LAWS, ORDINANCES, REGULATIONS OR ORDERS BELIEVED BY IT TO BE UNCONSTITUTIONAL OR FOR OTHER REASONS VOID. IF UMONT, HAVING APPLIED FOR AND BEEN REFUSED EXEMPTION FROM THE REQUIREMENTS THEREOF, SHALL INSTITUTE LEGAL PROCEEDINGS TO DETERMINE THE VALIDITY OF ANY SUCH LAW, ORDINANCE, REGULATION OR ORDER, OR THE LEGAL PROPRIETY OF ITS APPLICATION TO UMONT'S OPERATIONS HEREUNDER, THEN DURING THE PERIOD UNTIL ALL ISSUES THEREIN HAVE BEEN FINALLY DETERMINED, UMONT SHALL HAVE THE RIGHT AT ANY TIME, AND FROM TIME TO TIME, TO SUSPEND ITS MINING AND OTHER OPERATIONS HEREUNDER AND DURING THE PERIOD OR PERIODS OF SUCH SUSPENSION ALL OF UMONT'S OBLIGATIONS, EXCEPT OBLIGATIONS IMPOSED ON IT BY SUCH OF SAID UNDERLYING LEASES AS IT MAY THEN HOLD, SHALL BE SUSPENDED AND TOLLED AND THE TIME FOR THE PERFORMANCE OF SUCH OBLIGATIONS AND THE TERMS HEREOF SHALL BE EXTENDED FOR A PERIOD OF TIME EQUAL TO THAT DURING WHICH UMONT SHALL HAVE SO SUSPENDED ITS OPERATIONS. BAYHORSE, IF SO REQUESTED, BUT AT THE SOLE EXPENSE OF UMONT, WILL JOIN IN AND AFFIX ITS

WRITTEN CONSENT TO ANY APPLICATION BY UMONT FOR EXEMPTION OF THE HEREBY AFFECTED PROPERTY AND UMONT'S OPERATIONS THEREON FROM THE PROVISIONS OF ANY SUCH LAW, ORDINANCE, REGULATION OR ORDER, AND UMONT AGREES TO HOLD BAYHORSE FREE AND CLEAR OF ANY LIABILITY AND/OR DAMAGE OR CLAIMS OF DAMAGE AND/OR PENALTIES ARISING FROM BAYHORSE HAVING JOINED IN SUCH ACTION.

8. ALL WORK DONE ON AND MATERIALS FURNISHED FOR OR USED UPON SAID PROPERTY BY UMONT SHALL BE AT ITS SOLE EXPENSE AND UMONT HEREBY INDEMNIFIES BAYHORSE AGAINST AND AGREES TO HOLD IT AND THE PROPERTIES AND RIGHTS DESCRIBED IN EXHIBITS A, B AND C AND SAID ADDITIONAL LOCATIONS FREE OF AND HARMLESS FROM ANY AND ALL LIENS, CHARGES AND/OR LIABILITY ARISING BY REASON OF THE OPERATIONS OF UMONT HEREUNDER. BAYHORSE SHALL HAVE THE RIGHT TO POST ON SAID PROPERTIES, AND UMONT AGREES TO THEREAFTER KEEP POSTED, A NOTICE OR NOTICES OF THE NON-RESPONSIBILITY OF BAYHORSE FOR ANY OF THE ACTS AND DEEDS OF UMONT HEREUNDER. UMONT HEREBY INDEMNIFIES BAYHORSE AGAINST AND AGREES TO HOLD IT FREE OF AND HARMLESS FROM ANY AND ALL CLAIMS AND LIABILITY FOR INJURY OR DAMAGE TO THE PERSON OR PROPERTY OF OTHERS RESULTING FROM UMONT'S POSSESSION AND/OR OPERATION OF SAID PROPERTY.

9. UMONT SHALL PAY WHEN DUE ALL TAXES IMPOSED DURING THE LIFE OF THIS OPTION UPON SAID MINING LOCATIONS DESCRIBED IN EXHIBIT B AND SAID ADDITIONAL LOCATIONS AND UPON THE REAL PROPERTIES DESCRIBED IN SAID UNDERLYING LEASES, PROVIDED THAT TAXES FOR THE FRACTIONAL TAX YEAR REMAINING AFTER THE DATE OF THIS AGREEMENT AND TAXES FOR ANY FRACTIONAL TAX YEAR PRECEDING ANY TERMINATION AND SURRENDER HEREOF BY UMONT SHALL BE PRO RATED, AND PROVIDED FURTHER THAT IF UMONT SHALL REASSIGN ANY OF SAID UNDERLYING LEASES TO BAYHORSE, IT SHALL BE LIABLE ONLY FOR THE PRO RATA OF TAXES FOR THE FRACTIONAL TAX YEAR PRECEDING THE DATE OF SUCH REASSIGNMENT.

10. UMONT SHALL KEEP FULL, TRUE AND CORRECT BOOKS OF ACCOUNT (AND SEPARATELY WITH RESPECT TO THE PROPERTIES COVERED BY EACH OF SAID UNDERLYING LEASES) SHOWING THE AMOUNTS AND VALUE OF ALL ORES, CONCENTRATES AND METALS RECOVERED AND SOLD BY IT DURING THE LIFE OF THIS CONTRACT FROM THE REAL PROPERTIES AFFECTED BY THIS AGREEMENT, AND THE MONEYS RECEIVED BY IT THEREFOR, AND THE SAME SHALL BE OPEN TO THE INSPECTION OF BAYHORSE AND ITS AUTHORIZED AGENTS AT ALL REASONABLE TIMES. BAYHORSE AND ITS AUTHROIZED AGENTS SHALL HAVE THE RIGHT TO INSPECT THE REAL AND PERSONAL PROPERTIES HEREBY AFFECTED

AND THE OPERATIONS OF UMONT HEREUNDER AT ALL REASONABLE TIMES, BUT SHALL NOT UNWARRANTEDLY INTERFERE WITH SUCH OPERATIONS.

11. IT BEING UNDERSTOOD THAT UMONT SHALL HAVE ADEQUATE OPPORTUNITY TO RE-EXAMINE THE TITLE TO THE PROPERTIES COVERED BY SAID UNDERLYING LEASES OR THE VALIDITY OF OR TITLE TO THE UNPATENTED MINING LOCATIONS DESCRIBED IN EXHIBIT B, BAYHORSE AGREES THAT SHOULD TITLE EXAMINATION BY UMONT REVEAL CLAIMS, LIENS OR ENCUMBRANCES OR OTHER TITLE DEFECTS AFFECTING THE TITLE TO ANY OF SAID PROPERTIES, BAYHORSE, AT ITS OWN COST AND EXPENSE WILL, ON WRITTEN REQUEST FROM UMONT, FORTHWITH CAUSE THE SAME TO BE CURED AND REMOVED. SHOULD BAYHORSE FAIL TO CURE AND REMOVE SUCH TITLE DEFECTS AND SUBMIT TO UMONT FORMAL EVIDENCE THEREOF WITHIN THREE MONTHS AFTER SUCH REQUEST, UMONT MAY UNDERTAKE TO DO SO AND ITS COSTS AND OUTLAYS FOR SO DOING, INCLUDING REASONABLE ATTORNEY'S FEES, SHALL BE CREDITED AGAINST AND SHALL REDUCE SAID $80,000 PURCHASE PRICE ACCORDINGLY. AT UMONT'S OPTION, IT MAY REIMBURSE ITSELF FOR SUCH COSTS AND OUTLAYS BY DEDUCTING THE SAME FROM THE NEXT SUCCEEDING ANNUAL INSTALLMENT OR INSTALLMENTS OF PURCHASE PRICE DUE HEREUNDER.

12. UMONT SHALL PERFORM ALL ANNUAL ASSESSMENT WORK REQUIRED FOR THE ASSESSMENT YEAR SEPTEMBER 1, 1963, TO SEPTEMBER 1, 1964, WITH RESPECT TO ALL UNPATENTED MINING LOCATIONS, INCLUDING THOSE COVERED BY SAID UNDERLYING LEASES, AFFECTED BY THIS AGREEMENT. THEREAFTER, DURING THE LIFE OF THIS OPTION, UMONT SHALL PERFORM ALL ANNUAL REQUIRED ASSESSMENT WORK WITH RESPECT TO SUCH UNPATENTED MINING CLAIMS AND SHALL PREPARE AND FILE PROPER PROOFS THEREOF BEFORE AUGUST 31ST., OF EACH YEAR FOR WHICH SAID WORK IS REQUIRED, FURNISHING COPIES OF SUCH PROOFS TO BAYHORSE. SPECIFICALLY, WITH RESPECT TO ALL UNPATENTED MINING LOCATIONS COVERED BY ANY UNDERLYING LEASE WHICH UMONT SHALL REASSIGN TO BAYHORSE, UMONT SHALL PERFORM ANY REQUIRED ASSESSMENT WORK IF REASSIGNMENT IS EFFECTIVE AFTER JUNE 1ST OF SAID ASSESSMENT YEAR, AND FURTHER, SHALL PERFORM ALL ANNUAL ASSESSMENT WORK REQUIRED WITH RESPECT TO ALL UNPATENTED LOCATIONS COVERED BY THIS OPTION, FOR THE ASSESSMENT YEAR IN WHICH THIS OPTION IS TERMINATED OR FORFEITED, IF TERMINATION BECOMES EFFECTIVE AFTER JUNE 1ST. IF UMONT SHALL DESIRE THAT A PATENT OR PATENTS BE OBTAINED FOR ANY OF SUCH UNPATENTED MINING CLAIMS, BAYHORSE, BUT AT THE SOLE EXPENSE OF UMONT, SHALL FULLY ASSIST AND COOPERATE IN THE INSTITUTION AND CONDUCT OF SUCH PROCEEDINGS AS SHALL BE REQUIRED FOR THAT PURPOSE.

13. SUBJECT TO ANY CONTRARY PROVISION OF THE UNDERLYING LEASES AND WHICH, AS TO EACH LEASE, SHALL CONTROL WITH RESPECT TO THE PROPERTY THEREBY AFFECTED, IT IS AGREED THAT IF AND SO LONG AS GOVERNMENTAL RESTRICTIONS, WAR OR THE RESULTS THEREOF, LABOR DISTURBANCES, ACTS OF GOD OR THE ELEMENTS, FIRE, FLOODS, SHORTAGE OF WATER, FAILURE OR RATIONING OF ELECTRIC POWER OR VOLUNTARY SHUT-DOWNS OF MINING OPERATIONS IN COOPERATION WITH WATER OR POWER CONSERVATION PROGRAMS OR ANY CAUSE, WHETHER OR NOT LIKE THOSE ENUMERATED, BEYOND UMONT'S CONTROL, SHALL PREVENT ITS OPERATIONS ON THE REAL PROPERTIES HEREBY AFFECTED, OR WHILE LITIGATION CONTESTING BAYHORSE'S RIGHTS, TITLE OR INTERESTS TO SUCH REAL PROPERTY OR THE RIGHTS, TITLES OR INTERESTS OF THE LESSORS OF ANY UNDERLYING LEASE OR THE RIGHTS GRANTED UMONT HEREUNDER SHALL BE PENDING AND UNDETERMINED, UMONT, WITHOUT IMPAIRMENT OF ITS RIGHTS HEREUNDER, SHALL BE EXCUSED FROM PERFORMANCE AND ITS OBLIGATIONS HEREUNDER SHALL BE SUSPENDED AND TOLLED AND THE TIME FOR PERFORMANCE OF SUCH OBLIGATIONS AND THE TERM HEREOF SHALL BE EXTENDED FOR A PERIOD OF TIME EQUAL TO EACH PERIOD DURING WHICH UMONT IS SO EXCUSED. IF UMONT SHALL ELECT TO OPERATE SAID PROPERTIES DESPITE SUCH LITIGATION, THEN IT SHALL HAVE THE RIGHT TO PAY ALL ROYALTIES BECOMING DUE BAYHORSE HEREUNDER OR BECOMING DUE TO THE LESSORS OF ANY THEREBY AFFECTED UNDERLYING LEASE INTO COURT OR INTO SOME DISINTERESTED BANK, TO BE IMPOUNDED UNTIL THE FINAL DETERMINATION OF SUCH LITIGATION, AND THEN PAID TO BAYHORSE AND/OR SUCH LESSORS AND/OR THE OTHER PARTY OR PARTIES TO SUCH LITIGATION, ACCORDING TO THEIR RELATIVE RIGHTS THERETO AS THEREIN DETERMINED.

14. (A) ANYTHING HEREIN TO THE CONTRARY NOTWITHSTANDING, IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT THIS IS AN OPTIONAL AGREEMENT AS TO UMONT AND NOT A CONTRACT TO PURCHASE, AND THAT UMONT MAY AT ANY TIME TERMINATE THIS AGREEMENT AND DISCONTINUE ITS OPERATIONS HEREUNDER UPON 30 DAYS WRITTEN NOTICE TO BAYHORSE.

(B) TIME IS OF THE ESSENCE HEREOF. IF UMONT, HAVING FAILED TO MAKE ANY PAYMENT OR PERFORM ANY OTHER SUBSTANTIAL OBLIGATION HEREOF WHEN DUE, SHALL FAIL TO MAKE SUCH PAYMENT OR PERFORM SUCH OBLIGATION WITHIN 60 DAYS AFTER RECEIPT OF A WRITTEN NOTICE FROM BAYHORSE SO TO DO, THEN AT THE OPTION OF BAYHORSE, UMONT'S RIGHTS HEREUNDER AND IN AND TO THE PROPERTIES, RIGHTS AND INTERESTS HEREBY AFFECTED SHALL BECOME TERMINATED AND FORFEITED TO BAYHORSE.

(C) IN THE EVENT OF EITHER THE VOLUNTARY TERMINATION OF THIS OPTION BY UMONT OR THE FORFEITURE OF UMONT'S RIGHTS THEREIN, AS AFORESAID, UMONT SHALL IMMEDIATELY EXECUTE AND DELIVER TO BAYHORSE APPROPRIATE REASSIGNMENTS, QUITCLAIMS,

BILLS OF SALE AND RELEASES SURRENDERING AND REASSIGNING ALL UNDERLYING LEASES NOT THERETOFORE REASSIGNED AND RECONVEYING AND RETRANSFERRING TO BAYHORSE THE PROPERTIES DESCRIBED IN EXHIBITS B AND C AND SAID ADDITIONAL LOCATIONS AND QUITCLAIMING TO BAYHORSE ANY AND ALL MINING CLAIMS AND MILLSITES LOCATED BY UMONT OR ITS AGENTS OR EMPLOYEES IN THE DRAINAGE BASIN OF BAYHORSE CREEK AND TRIBUTARIES BETWEEN MAY1ST, 1964, AND THE EXECUTION OF THIS AGREEMENT AND DURING THE LIFE OF THIS AGREEMENT, AND SHALL SURRENDER POSSESSION OF SAID REAL PROPERTIES TO BAYHORSE AND SHALL REDELIVER TO BAYHORSE THE MACHINERY, BUILDINGS, STRUCTURES AND FACILITIES DESCRIBED IN EXHIBIT C, OR ANY REPLACEMENTS THEREOF, IN THEIR PRESENT CONDITION, REASONABLE WEAR AND TEAR EXCEPTED, IT BEING SPECIFICALLY UNDERSTOOD THAT THE MILL WILL BE RETURNED IN A CONDITION, AS TO WORKING ORDER AND EQUIPMENT, EQUAL TO ITS PRESENT CONDITION. FROM AND AFTER THE EFFECTIVE DATE OF SUCH REASSIGNMENTS, RETRANSFERS, TRANSFERS AND DELIVERY, UMONT SHALL NOT BE OBLIGATED TO BAYHORSE ON ACCOUNT OF SAID UNDERLYING LEASES OR THE PROPERTIES COVERED THEREBY OR OTHERWISE AFFECTED BY THIS AGREEMENT, EXCEPT AS TO OBLIGATIONS INCURRED PRIOR TO SUCH EFFECTIVE DATE.

(D) IN THE EVENT OF EITHER THE VOLUNTARY TERMINATION OF THIS OPTION BY UMONT OR THE FORFEITURE OF UMONT'S RIGHTS THEREIN, AS AFORESAID, BAYHORSE WILL RETAIN ANY AND ALL PAYMENTS THERETOFORE MADE TO IT HEREUNDER, WHICH PAYMENTS SHALL BE TREATED AS COMPENSATION FOR THE PRIVILEGE HEREBY GRANTED AND LIQUIDATED DAMAGES IN FULL, AND SHALL BE THE FULL MEASURE OF DAMAGES TO BAYHORSE BECAUSE OF ANY FAILURE, NEGLECT OR REFUSAL OF UMONT TO CARRY OUT, FULFILL OR COMPLY WITH ANY OF THE TERMS HEREOF, AND UMONT, IN EITHER OF SUCH EVENTS, SHALL THEREUPON BE RELIEVED FROM ANY AND ALL OBLIGATIONS HEREUNDER, EXCEPT AS TO ANY UNPAID ROYALTY ON ORES, CONCENTRATES OR METALS PREVIOUSLY REMOVED FROM THE PROPERTIES HEREBY AFFECTED AND LIENS, CHARGES OR ENCUMBRANCES TO WHICH BAYHORSE OR SAID PROPERTIES MAY HAVE BECOME SUBJECT BY REASON OF THE OPERATIONS OF UMONT HEREUNDER.

(E) IN THE EVENT OF EITHER SUCH VOLUNTARY TERMINATION OR FORFEITURE, UMONT WILL PROMPTLY THEREAFTER SUPPLY BAYHORSE, WITHOUT COST TO BAYHORSE, WITH A COMPLETE SET OF THE MAPS, CROSS-SECTIONS, ASSAY RETURNS, DIAMOND DRILL HOLE LOGS AND OTHER GEOLOGICAL DATA COMPILED BY UMONT DURING ITS EXAMINATION OF THE BAYHORSE DISTRICT.

15. IN THE EVENT OF EITHER THE VOLUNTARY TERMINATION OF THIS OPTION BY UMONT OR THE FORFEITURE OF ITS RIGHTS THEREIN BY BAYHORSE, AS AFORESAID, EXCEPT

AS HEREIN EXPRESSLY PROVIDED, UMONT SHALL NOT REMOVE PERMANENT BUILDINGS, MINE TIMBERS, MINE RAIL AND EMPLACED AIR PIPE LINES PLACED BY IT ON SAID PROPERTIES, NOR ANY EQUIPMENT INSTALLED BY IT AS A REPLACEMENT FOR EXISTING BAYHORSE EQUIPMENT, BUT OTHERWISE UMONT MAY REMOVE ALL TOOLS, SUPPLIES, EQUIPMENT, IMPROVEMENTS AND FIXTURES PLACED BY IT ON AND THEN REMAINING ON THE REAL PROPERTIES HEREBY AFFECTED; PROVIDED, THAT IF UMONT SHALL DESIRE TO SELL ANY OF SUCH REMOVABLE PROPERTY, BAYHORSE SHALL, FOR A PERIOD OF 30 DAYS HAVE THE FIRST OPPORTUNITY TO PURCHASE THE SAME OR ANY PART THEREOF. PREFABRICATED BUILDINGS OR STRUCTURES SHALL NOT BE DEEMED PERMANENT BUILDINGS OR STRUCTURES AND ANY SUCH BUILDINGS OR STRUCTURES PLACED BY UMONT ON SAID PROPERTIES, AND PIPE AND RAIL INSTALLED BELOW THE LEVEL OF THE WATER TABLE BY UMONT SO THAT SAME WILL BE FLOODED IF WORKINGS ARE ABANDONED, MAY BE REMOVED BY UMONT. UMONT MAY ALSO REMOVE ANY PIPE AND RAIL INSTALLED BY IT WHICH MAY BE LOST DUE TO GROUND CONDITIONS OR OTHER CAUSES. UMONT SHALL HAVE A PERIOD OF 90 DAYS FROM AND AFTER THE EXPIRATION OF ANY 30-DAY PURCHASE RIGHT PERIOD SO GIVEN BAYHORSE WITHIN WHICH TO COMPLETE SUCH REMOVAL; PROVIDED, THAT IF WEATHER, ROAD CONDITIONS, ACTS OF GOD, OR OTHER CAUSES BEYOND UMONT'S CONTROL, PREVENT OR INTERRUPT SUCH REMOVAL, THEN THE TIME PERMITTED FOR SUCH REMOVAL SHALL BE TOLLED FOR A PERIOD EQUAL TO THAT DURING WHICH SUCH CONDITIONS EXIST.

16. THIS AGREEMENT SHALL INURE TO THE BENEFIT OF AND BECOME BINDING UPON THE SUCCESSORS AND ASSIGNS OF THE RESPECTIVE PARTIES HERETO.' IT IS AGREED THAT UMONT SHALL HAVE THE RIGHT, UPON WRITTEN NOTICE TO BAYHORSE, TO ASSIGN THIS AGREEMENT OR ANY PARTICIPATION THEREIN UNTO _____, BUT OTHERWISE NEITHER BAYHORSE OR UMONT MAY ASSIGN THIS AGREEMENT OR ANY OF THEIR RIGHTS HEREUNDER WITHOUT THE PRIOR WRITTEN CONSENT OF THE OTHER, WHICH CONSENT SHALL NOT BE UNREASONABLY WITHHELD.

17. NOTICES HEREUNDER SHALL BE DELIVERED PERSONALLY OR SENT BY REGISTERED MAIL TO THE PARTIES AT THE FOLLOWING ADDRESSES, VIZ.:

TO BAYHORSE MINES, INC. AT:	333 FELT BUILDING ANNEX SALT LAKE CITY, UTAH
TO UMONT MINING, INC. AT;	KING STREET DOCK BURLINGTON, VERMONT

OR TO SUCH OTHER ADDRESS OR ADDRESSES AS THE PARTIES MAY FROM TIME TO TIME DESIGNATE IN WRITING; MAILED NOTICES TO BE CONSIDERED AS RECEIVED WITHIN 48 HOURS AFTER THEIR DEPOSIT IN THE MAIL.

IN WITNESS WHEREOF, THE PARTIES, BY THEIR PROPER OFFICERS FIRST THEREUNTO DULY AUTHORIZED, HAVE EXECUTED THESE PRESENTS THE DAY AND YEAR FIRST ABOVE WRITTEN.

BAYHORSE MINES, INC.

BY _____
PRESIDENT

_____
WITNESS

UMONT MINING, INC.

BY _____
VICE PRESIDENT & DULY AUTHORIZED AGENT

_____
WITNESS

STATE OF UTAH)
) SS
COUNTY OF SALT LAKE)

ON THIS 1st DAY OF June, 1964, BEFORE ME PERSONALLY APPEARED DOOLEY P. WHEELER, JR., WHO ACKNOWLEDGED HIMSELF TO BE THE VICE PRESIDENT OF UMONT MINING, INC., A CORPORATION, AND THAT HE, AS SUCH VICE PRESIDENT, BEING AUTHORIZED SO TO DO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED, BY SIGNING THE NAME OF THE CORPORATION BY HIMSELF AS VICE PRESIDENT.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

MY COMMISSION EXPIRES Mar. 8, 1966.

Eugene West
NOTARY PUBLIC

STATE OF UTAH)
) SS
COUNTY OF SALT LAKE)

ON THIS 1st DAY OF June, 1964, BEFORE ME PERSONALLY APPEARED O. J. Salisbury, WHO ACKNOWLEDGED HIMSELF TO BE THE President OF BAYHORSE MINES, INC. A CORPORATION, AND THAT HE, AS SUCH President, BEING AUTHORIZED SO TO DO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED, BY SIGNING THE NAME OF THE CORPORATION BY HIMSELF AS President.

IN WITNESS WHEREOF I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

MY COMMISSION EXPIRES Mar. 8, 1966.

Eugene West
NOTARY PUBLIC

Exhibit A
Bayhorse Mines, Inc. - Umont Mining, Inc. Option AGreement
May 1964

Underlying Leases, covering the therein described Custer County, Idaho real properties, assigned by Bayhorse to Umont, each lease and the property descriptions therein being hereby incorporated herein:

1. (RAMSHORN) Agreement of Lease and Option dated November 20, 1962, between Ramshorn Mining Company, Lessor, and Bayhorse Mines, Inc., Lessee. Upset price $150,000.

2. (AETNA) Agreement of Lease and Option, dated November 20, 1962, between Aetna Mining & Investment Company, Lessor, and Bayhorse Mines, Inc., Lessee. (subsequently assigned by Aetna to The Salisbury Corporation, the successor owner). Upset price $30,000.

3. (SALMON RIVER - McGREGOR) Agreement of Lease and Option, dated May 1, 1964 between Swigert Mines, Lessor, and Bayhorse Mines, Inc., Lessee. Upset price $80,000.

4. (SWIGERT PERSONAL) Agreement of Lease and Option, dated May 1, 1964 between Swigert Mines, Lessor, and Bayhorse Mines, Inc., Lessee. Upset price $10,000.

5. (SKYLARK & HOOD) Agreement of Lease and Option dated November 13, 1962, between Clayton Mining & Smelting Company, Lessor, and Bayhorse Mines, Inc., Lessee. Upset price $32,500.

And, generally, any and all other leases and option agreements hereafter entered into between Bayhorse, as Lessee or Optionee, and the owners of mining claims and properties situated in the Bayhorse Canyon Area, Custer County, Idaho.

EXHIBIT B

Bayhorse Mines, Inc. - Umont Mining, Inc. Option Agreement

May 1964

Unpatented Lode Mining Claims owned by Bayhorse Mines, Inc., situated in the Bayhorse Canyon Area, Custer County, Idaho, notices of location of which are recorded in the office of the County Recorder of Custer County, Idaho, said claims being known and designated as:

Group 1 (23)	Missouri	Washington
	Indiana	Idaho
	Ohio	Nevada
	Michigan	Wyoming
	Kansas	Montana
	Wisconsin	Utah
	Dakota	Arizona
	Texas	New Mexico
	Illinois	California
	Carolina	Oregon
	Florida	Sonora
	Iowa	
Group II (5)	Rio Negro	Rio Rico
	Rio Brave	Rio Vista II
	Rio Alto	
Group III (22)	Don	Teton
	Dennis	Latah
	Jerry	Butte
	Ray	Gem
	Austin	Clark
	Mabel	Ada
	Al	Adams
	Veral	Shoshone
	Charlotte	Carbon
	Elmo	Fremont
	Jim	Valley
Group IV (25)	Cortez & Cortez 1 through Cortez 20 (21 claims)	
	Vermont, New Jersey, New York, Delaware (4 claims)	

Exhibit C

Bayhorse Mines, Inc. - Uncut Mining, Inc. Option Agreement

May 1964

1. BUILDINGS AT BAYHORSE CAMP:

Mill and crushing plant building (includes shop areas, change room, power plant).
Old hotel building (including furnishings therein).
Six-room family residence
Three-room family residence (including furnishings therein).
Warehouse building (stone building with basement).
Single-room living quarters
Old hydro power-plant building

2. POWER PLANT AT MILL: Installed complete with controls, transformers, wiring, etc., to furnish electrical power to mill and crushing plant (including lighting) and lighting for Bayhorse Camp. Principal items:

Buda-Lanova Diesel Engine, 103 h.p., 1200 RPM, Model #6DCG844, Serial #18735, direct-connected to
Westinghouse Generator, A.C. 240/480 volt, 3-phase, 60-cycle, 226/113 ampere, 1200 RPM, Serial S59N66; direct-connected exciter, 2 KW 240 volt, Serial #1-59N664
International UD9 diesel-electric power plant, v-belt connected to 50 KVA, 440-volt, 3-phase, 60-cycle generator (used for stand-by and extra load operation)
Control panel complete for operating above units individually or in synchronization
Main diesel oil storage tank (outside building) 1500 gal.
Day tank, 300 gal.

3. CRUSHING PLANT: Capacity of 100 tons of mill feed per shift. Feed passes 8" Grizzly; plant discharges a minus 3/8" product to fine ore bins (300 ton capacity in two sections). Coarse ore bin, 100 ton capacity, in one section. Principal items:

Rogers (Wheeling type) Jaw Crusher, 10 x 18"
Symons 20" Cone Crusher (25 h.p. motor and drive available)
Waukesha-Hesselman Oil Engine, W B F H 4 V, 6 1/2 x 8", 100 h.p. Drives the crushers off a line shaft.
Diester Vibrating Screen, 30 x 48, double deck.
Dings Perma-plate magnetic separator and belt conveyor to Symons.
18' Bucket Elevator, w. dust blower, from Symons to vibrating screen.
Belt Conveyor, 18" width, approx. 80' conveyance to fine ore bin.

4. MILL: Installed complete, and having capacity of 100 tons per 24 hours. All powered units driven by electric motors. Primary circuit 440 volts; light circuit110 volts. Principal items:

Belt Feeder Conveyor.
Trommel Screen, 1/16" punched plate, 18" x 6'
Bendalari Jigs (two) 26 x 26.
Dewatering Screen, 18 x 36.
Roll Crusher, Traylor, 30 x 14
Vibrating Screen, 1/16" openings, 3' x 8'
Bucket Elevator (closing roll circuit).
Double Cone Hydraulic classifier
Settling Cones (two) 8" diam.
Wilfley Concentrating Tables (three) each fed thru Dunham Cone Classifier
Denver Agitator Conditioner, 6' x 6'
Denver Sub-A 4-cell Flotation unit, 72 cu. ft.
Denver Vertical Sand Pump, 1 1/2"
Filter Pans (three) (2-3x 3, 1-5 x 5) with G.D. vacuum pumps
Metal cons. bin, 75-ton.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
September 13, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 15 1965

INITIALS	CODE

Memorandum

To: Chief, Office of Minerals Exploration

From: Acting Field Officer, Region I

Subject: Transmittal of New Application
Northern Star Mining Co., Inc. (Silver)
Northern Star Mine
Custer County, Idaho

Enclosed is an application for OME aid to explore for silver ore at the Northern Star mine in Custer County, Idaho.

A hasty perusal indicates that the following items should be secured or clarified before the application is referred to the field.

1. Letters to both banks are missing.

2. Apparently, Swigert Mines or R. C. Swigert has leased Northern Star, No. 2604, and Silver Creek, No. 2604, to Umont, and Bay Horse Mines has leased Florida and Iowa claims also to Umont. Copies of these leases or other documents of transfer to Umont are missing.

3. R. C. Swigert has signed, as Swigert Mines, a Lien and Subordination Agreement including all four claims, two of which apparently are owned (or leased?) by Bay Horse Mines. No Agreements have been executed by either Bay Horse Mines or Umont. I believe that Swigert's Agreement is improperly executed. Not in Dispute

4. At the top of page 4, in partial answer to item 3(a) the applicant states: "(10) The northward increase of mineralization is demonstrated by holes 25, 26, 36, etc." I am unable to find the location of hole 26, but the logs and assays of holes 25 and 36, and possibly 26, are most pertinent and should be requested.

5. Costs for supervision are probably excessive; there is no breakdown of costs for shaft sinking or drifting; only one bid is submitted for diamond drilling and only one, by a claim owner, for bulldozing.

D R MacLaren
D. R. MacLaren

Enclosures

NORTHERN STAR MINING CO., INC.
King Street Dock
Burlington, Vermont
05401

September 8, 1965

Mr. D. R. MacLaren
Acting Field Officer, OME, Region I
U. S. Department of the Interior
Office of Minerals Exploration
So. 157 Howard Street
Spokane, Washington 99204

Dear Mr. MacLaren: Re: Northern Star Silver Project

Enclosed is our application for an OME loan for the Northern Star silver exploration project in Custer County, Idaho.

It is suggested that a field examination of this project might conveniently be conducted in conjunction with an examination of the Beardsley project (OME Docket No. 6495). In this connection arrangements should be made through Mr. D. P. Wheeler, Jr., Vice President, whose address is 1355 Foothill Blvd., Salt Lake City, Utah, telephone AC 801 484-1446. Mr. Wheeler's home phone number is AC 801 466-1924, Salt Lake City. Kindly send copies of all correspondence to Mr. Wheeler.

Very truly yours,

L. P. Evans, Jr.
President

LPE/eb
Enclosures
cc: D. P. Wheeler, Jr.

RECEIVED
Via
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Air Mail
OMI
SPOKANE, WASHINGTON

September 8, 1965

NORTHERN STAR MINING CO., INC.
OME Application

List of Enclosures

1. Two copies - Form 40
2. Two copies of Application Data, Items 1 through 7.
3. Two copies bank letter - Exhibit D-1.
4. Two copies bank letter - Exhibit D-2.
5. Five copies From 52
6. Two copies Swigert bulldozing quote
7. Two copies Boyles Bros. drilling quote
8. Two copies Bayhorse Mines, Inc. Assignment Exhibit A-1
9. Two copies Swigert Assignment Exhibit A-2
10. Two copies - Lease Agreement, Umont Mining, Inc.-Northern Star Mining Co., I
11. Two copies maps, Exhibit B-1
12. Two copies maps, Exhibit C-1
13. Two copies maps Exhibit C-2
14. Two copies maps, Exhibit C-3
15. Two copies maps, Exhibit C-4
16. Two copies Lithologic Symbols
17. Two copies Hole #40 Log
18. Two copies Hole #41 Log
19. Two copies Hole #42 Log
20. Two copies Hole #43 Log
21. Two copies Financial Eligibility Information

MME Form 40
July 1962

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

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

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

Northern Star Mining Co., Inc.
King Street Dock
Burlington, Vermont 05401

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6499

DATE RECEIVED: 9-15-65

REGION: I

DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*

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

STATE IN WHICH FIRM IS ORGANIZED: Vermont

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
L. P. Evans, Jr.,	King Street Dock, Burlington, Vt.	President
R. H. Wadhams,	King Street Dock, Burlington, Vt.	Vice President
D. P. Wheeler, Jr.,	1355 Foothill Blvd. Salt Lake City, Utah	Vice President

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Silver

ESTIMATED COST OF PROJECT: $ 168,407.05

PROPERTY NAME	LOCATION COUNTY	STATE
Northern Star	Custer	Idaho

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit two copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

September 7, 1965
DATED

L. P. Evans, Jr. BY *(Signature)*
President
TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

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

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

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

2. Applicant's Rights in Land:

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

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

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

3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

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

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

4. Accessibility of Property:

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

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

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

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

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

6. Experience:

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

7. Estimate of Costs:

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

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

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

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

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

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

INT.-DUP. SEC., WASH., D.C. 11879

NORTHERN STAR MINING CO., INC.

OME Loan Application September 7, 1965

1. Financial Eligibility
   a. See attached 1a.
   b. See attached 1b.
   c. See attached 1c.

2. Applicant's Right in Land

   a. Northern Star Mining Co., Inc. has a lease and option agreement with Umont Mining, Inc., dated August 2, 1965. Umont Mining, Inc., has approval for said agreement from Bayhorse Mines Inc., and Swigert Mines, owners of the Northern Star claim group. Swigert Mines executed for themselves and Bayhorse Mines, Inc. OME Form MME 52. There are no liens, mortgages or encumbrances on the property.

   Corrected to Sept. 9, 1965 by letter dated 10/8/65 HK.

   Copies of the above documents are attached as A series exhibits.

   b. The claims to be explored are in the bottom and north side of Bayhorse Canyon, one-half mile up Bayhorse Canyon, from the old mill on the west edge of the ghost town of Bayhorse. They are estimated to be in the central area of the north half of Section 3, Township 12 North, Range 18 East. The patented claims are described as follows:

Name	Survey No.	Acres	Book	Page
			1	25(map)
Northern Star	2604	20.661	9	490(deed)
			1	25(map)
Silver Creek	2604	20.661	9	490(deed)

The unpatented claims are described as follows:

Name	Acres	Book	Page
Iowa	20±	14	94
Florida	20±	14	92

The above claims are recorded in Custer County Recorder's office, Challis, Idaho.

c. Exhibit B1 shows the above claims outlined in red. The claims adjoining are outlined in green. With the exception of the Sunflower claims, which we believe have been dropped, Umont has a lease and option on all claims shown in Exhibit B1, but Bayhorse Mines, from whom Umont has the lease and option, does not want any more claims than necessary to cover a reasonably large mining operation included in the OME contract. Consequently, we have selected the four claims outlined in red which should give us approximately 2000 feet of the most promising virgin ground to exploit down the nose of Bayhorse anticline.

d. Attached are executed MME Forms 52 from Swigert Mines, owner of the claims outlined in red.

3. Physical Description

a. The general geologic setting of the Northern Star group is shown on Plate 1 of USGS Bulletin 877. The claim map on page 132 of Bulletin 877 is not accurate, and Exhibit B1 should be substituted.

Bulletin 877, pages 129 to 132 describes the McGregor group. The Hoosier, Cemetery, Guy Barton and Jarvis mines are rich but are narrow, sheet-like, manto-like, quartz-siderite-tetrahedrite-galena-sphalerite-pyrite-chalcopyrite occurrences of ore which have been mapped where accessible and explored by drilling under the supervision of the writer (D. P. Wheeler, Jr.). The exploration work established the following:

(1) The mines are in the crestal area of the highest part of Bayhorse anticline in phyllite at or near the top of a dolomite unit, herein called the Garden Creek dolomite. Said dolomite and its relation to ore and other rock units are shown in Exhibits C1, C2, C3 and C4.

(2) There is an evident increase in silver-copper mineralization in the immediate project area down the nose of Bayhorse anticline to the north of Bayhorse creek.

(3) The increase of mineralization to the north and northeast is shown on a district-wide basis, for the mines in the overlying Bayhorse dolomite are to the north, northeast and east of the project area. The mines are the Forest Rose, Keno, Democrat, Silver Brick, Pacific, Beardsley (including Hoffman and Hood) and Riverview, named from north to east. There are no mines or prospects worth mentioning in the Bayhorse anticline in Bayhorse canyon to the west or south of the project area. The Japan and Nameless mines are prospects, not mines.

(4) The Bayhorse anticline plunges eight to ten degrees northward in the Northern Star area, and the sheet-like, manto-like veins appear to plunge a little steeper to the north, thereby giving hope that they will break up the Garden Creek dolomite in the nose of the anticline and cause large and rich orebodies to form.

(5) The dolomite and underlying quartz porphyry sill-like intrusion have areas of paper-thin pyrite-tetrahedrite-chalcopyrite-galena-sphalerite seams which show pervasive, presumably ascending, mineralization that may be expected to have concentrated in the crestal area of such an anticline.

(6) The quartz porphyry is pervasively hydrothermally altered.

(7) The quartz porphyry is pre-ore and has been determined to be approximately 94 million years old by Shell Development Company's age determination tests.

(8) Drill holes 40, 41 and 43, Exhibit C4, show a sheet of mineralization 1.4 feet thick averaging 0.02 ounces gold per ton, 16.4 ounces silver per ton, 2.66 percent copper, 0.52 percent lead and 0.57 percent zinc over a width of 120 feet.

(9) Hole 42, Exhibit C4, failed to check the east flank of the anticline because of upward deflection, and in 1952 the American Metal Company drilling 210 feet south of hole 43 drilled through a 2.9-ft. thickness of quartz and siderite assaying an average 0.013 oz. Au P/T, 9.05 oz. Ag P/T, 0.63 percent Cu, 0.0 percent Pb and 1.1 percent Zn. Core recovery in the interval was 93 percent and the hole was structurally about in the same position as hole 41, Exhibit C4. The American Metal Company, in 1953, drilling 540 feet south-southwest of hole 43 and structurally about 120 feet west of hole 41, Exhibit C4, hit one foot of ore at 108 feet. This ore was 60 feet to the west of Vein 1 (Exhibit C4) and assayed 0.01 oz. Au P/T, 18.3 oz. Ag P/T, 1.46 percent Cu, 1.6 percent Pb and 0.9 percent Zn.

The above "ore" intersections were in short intervals of core recovery in a wide zone of mineralization (50-80 feet thick) where core recovery ranged from 17-100 percent and averaged about 50 percent. Recovery in the above described short "ore" intervals was 93-100 percent. The above results suggest that further drilling in the project area should explore the hanging wall side of vein 1; that the value of the mineralization is predominantly silver, and that the east and west flanks of the anticline are not adequately explored in order to determine the extent in an east-west direction of ore grade mineralization.

(10) The northward increase of mineralization is demonstrated by holes 25, 26, 36, 40, 41 and 43; underground stopes in the project area; and district-wide distribution of mines. The American Metal Company drilling on both sides of Bayhorse Creek in the project area showed erratic distribution of ore grade mineralization in a wide mineralized zone, and when compared with the hole 40, 41 and 43 results would suggest improvement to the north of the same sheet-like mineralized zone.

b. The writer, D. P. Wheeler, Jr., was in charge of all of the above drill work and geologic work which led to the drill work. Production from the mines in the project area occurred long before the writer appeared on the scene.

c. There are no reliable production records. Judging by stope sizes, pillar assays and core assays, the writer can only assume that the project area has yielded at least $250,000 in predominantly silver ore wherein ten ounces of silver were produced for every short ton unit of copper, and lead and zinc percentages, combined, did not exceed the percentage of copper. The high lead content described in bulletin 877 is from the peripheral silver-lead deposits in the Silver Brick, Forest Rose and Pacific area, in Bayhorse dolomite. The Northern Star project area is deeper and evidently closer to the copper core, zonally speaking, of the district, and since the copper mineral is principally argentian-tetrahedrite with a silver to copper ratio of 10 oz. silver for each percentage of copper, silver is the predominant mineral insofar as the dollar value of the ore is concerned.

d. There are no known ore reserves. Mineralization in DD Holes 40, 41 and 43 suggests that ore reserves might be developed with additional drilling and underground drift exploration. The logs of holes 40 to 43 are enclosed.

e. This is done in section (a) aided by Exhibits C1, C2, C3 and C4. I neglected to mention that the project area and the anticline for miles north is noted for widespread but low grade fluorspar, approximately 25 percent Ca F_2. The fluorspar may form small high grade orebodies. Consequently, in the course of exploring for silver ore, we might well be prepared to sample and assay for fluorspar. Eventually the fluorspar probably will be classed as ore.

f. The reasons for expecting to find ore are stated and illustrated under 3 a. above. Assays for holes 40, 41 and 43 are part of the drill hole logs which are enclosed. Refer to the Bayhorse Project - Hole Statistics for each hole.

g. The general reference is USGS Bulletin 877. Details are under 3 a. above and in Exhibits C1 - C4, inclusive, which need not be returned unless the project is rejected by OME.

4. Accessibility of Property

a. Dooley P. Wheeler, Jr., will meet the OME representative at the Challis Transportation Office, Challis, Idaho, on the date set for the examination of the proposed OME projects. The project area is 11 miles by US Highway 93 from Challis up the Salmon River, thence 3 miles west up Bayhorse Canyon on dirt county road, thence 3/4 mile north up Beardsley Gulch on dirt road. The first 11 miles are paved. All mine workings are easily accessible.

b. The project area is about 65 miles from the railhead at Mackay, Idaho.

Most of the supplies for small mining operations are available at Bayhorse or Challis.

5. Exploration Work

a. Drill 10 vertical drill holes ranging from 125 to 550 feet deep (see Exhibit C1), in order to explore for and define ore on nose of north plunging Bayhorse anticline north and south of DD holes 40-43 inclusive. Holes to be NX and BX wire line size.

Stage I.

Hole 44 will be 125 feet deep.	Ore expected at approx. 120 feet.
Hole 45 will be 125 feet deep.	Ore expected at about 125 feet.
Hole 46 will be 310 feet deep.	Ore expected at 280 feet.
Hole 47 will be 310 feet deep.	Ore expected at 280 feet.
Hole 48 will be 125 feet deep.	Ore expected at 110 feet.
Hole 49 will be 350 feet deep.	Ore expected at 320 feet.
Hole 50 will be 360 feet deep.	Ore expected at 330 feet.
Hole 51 will be 370 feet deep.	Ore expected at 340 feet.
Hole 52 will be 400 feet deep.	Ore expected at 350 feet.
Hole 53 will be 550 feet deep.	Ore expected at 480 feet.

Stage II. Drill six more holes in the north and south fences to better define ore, if ore discovered. Average hole depth = 325 ft.

Stage III. Sink shaft 750 feet deep along approximate crest of anticline at dolomite-phyllite contact.

Stage IV. Drift along ore, from near bottom of shaft, for 500 feet.

b. Exhibit C1 shows the approximate position of the required new road and drill bases.

c. If an OME contract is awarded, road construction can be started about April 1st, 1966 and drilling can be started about April 7th, 1966.

The drilling program would be finished about July 15, 1966, on a one-drill, two-shift per day basis. Shaft sinking would be started about August 15, 1966, and terminated about December 31, 1966.

Drifting would be started about January 1st and terminated May 1, 1967. The drill would core about 1000 feet per month. The shaft would be sunk at the rate of 150 feet per month.

The drift would be driven about 125 feet per month.

6. Experience

Dooley P. Wheeler, Jr., who will be directly in charge of the work, has had two years' experience as a miner and mill operator, seven years of engineering and geological training, culminating in a masters degree from UC Berkeley and 25 years of experience as a resident and exploration geologist.

During the last 25 years geological work in the USA, Mexico, Canada, Alaska, Peru, Venezuela, Spanish Morocco, Spain and Nigeria has occupied most of Wheeler's time, but he has been in charge of mining operations in Butte (Norwich), Montana, and Durango and Copala, Mexico.

L. P. Evans, Jr., and R. H. Wadhams, who are officers of the company, are experienced in the legal and accounting phases of mining and have far more than average experience in the general problems of mining. They were both educated at Yale in the Sheffield School of Science.

7. Estimate of Costs

a.	Stage I. - 10 holes totaling 3025 ft. will cost $8.17 per foot to drill	$24,714.25	
	Access road and drill base preparation 40.0 hours at $18 per hour	720.00	
	Stage II. - 6 followup fill-in holes to better define an orebody totaling approx. 1840 ft. 1840x$8.17	15,032.80	
	Drill base preparation 15.5 hours at $18.00 per hour	280.00	
	Stage III. 750 ft. of inclined shaft 12' x 17' in cross section at $100 per foot ?	75,000.00	
	Stage IV. 500 ft. of exploratory drifting at $50 per foot	25,000.00	
			$140,747.05
b.	Supervising geologist at $1000 per month for 13 months ?	$13,000.00	
?	Assistant for opposite shift, surveying, sampling and general direction of work at $800 per month for 13 months. Both services are available	10,400.00	23,400.00
c.	Included in contractor fees.		
d.	Included in contractor fees.		
e.	None		
f.	None		
g.	Miscellaneous		
	100 assays for Au, Ag, Cu, Pb, Zn	$ 875.00	
	100 sample sacks	10.00	
	Bookkeeping and accounting at $75 per month for 13 months	975.00	
	Payroll taxes and insurance - 10% of all salaries and wages	2,400.00	$ 4,260.00
	Total Estimated Costs		$168,407.05

Dooley P. Wheeler, Jr.
9/7/65

NORTHERN STAR MINING CO., INC.
King Street Dock
Burlington, Vermont
05401

September 7, 1965

Financial Eligibility-Information required by Par. 1 OME Form 40

a.) See attached letters from Howard National Bank and Trust Company and Merchants National Bank. Exhibits D-1 and D-2.

b.) Applicant is a closely held corporation financed by five stockholders, one of which is Umont Mining, Inc., King Street Dock, Burlington, Vermont, holder of a 40% stock interest in applicant. There are no other affiliated companies or controlling companies or organizations.

c.) Applicant can provide cash, furnished by its stockholders, for 25% of the cost of exploration work. Applicant does not have the cash available to finance more than 25% of the estimated cost of this project and therefore could not undertake the proposed work without financial aid.

L. P. Evans, Jr.
President

LEASE AGREEMENT

This agreement made and entered into this 1st day of September, 1965, by and between UMONT MINING, INC., a Vermont corporation with principal offices in Burlington, County of Chittenden, State of Vermont, herein called "UMONT", and NORTHERN STAR MINING CO., INC., a Vermont corporation with principal offices in Burlington, County of Chittenden, State of Vermont, herein called "NORTHERN",

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O. M. E.
RECEIVED
SEP 15 1965
INITIALS | CODE

W I T N E S S E T H

In consideration of Ten and more dollars, and other valuable considerations and the agreements and covenants herein contained the parties hereto agree as follows:

1. Umont hereby leases and lets unto Northern, its successors and assigns all of the patented and unpatented claims hereafter listed together with any and all right, title and interest of Umont in and to any and all veins, lodes or mineral deposits contained in said properties; and all rights-of-way, easements, water, water rights, privileges and appurtenances of every kind and nature belonging to Umont located on or appertaining to said claims.

The claims subject to this conveyance are the following:

Patented claims:

Name	Survey No.	Acres	Book	Page
Northern Star	2604	20.661	1	25(Map)
Silver Creek	2604	20.661	9	490(Deed)

Unpatented claims:

	Acres	Book	Page
Iowa	20 ±	14	94
Florida	20 ±	14	92

as recorded in Recorder's Office, Custer County, Challis, Idaho.

2. Umont grants to Northern the exclusive right and privilege during the term hereof to explore for, develop, extract, remove, mine, mill, smelt, refine, ship and sell such ores, minerals and metals as are found and contained in said properties to the extent that Northern may in its sole discretion deem profitable, together with the right to do all or any other necessary acts or things to fully exercise the rights herein granted.

3. The term of this lease shall commence on the date of this agreement and shall continue for the term to which Umont is entitled under its lease with Bayhorse Mines, Inc. or until terminated as hereinafter set forth.

4. As consideration for this lease, Northern shall deliver to Umont 4,000 shares of its capital stock which shall represent 40% of the total issued and outstanding stock of Northern.

5. Northern shall have the sole and exclusive right to operate said properties for the full period of this agreement in the free exercise of its own discretion and best judgment, without consultation with or prior approval of Umont.

6. Northern agrees to comply with and perform all of the covenants and agreements undertaken by Umont in its agreement with Bayhorse Mines, Inc. hereinbefore referred to.

7. Northern shall have the right to terminate its rights and obligations under this agreement with respect to said properties by giving Umont 90 days prior notice in writing of its intention to terminate the same. Upon such termination, Northern shall transfer and convey to Umont all of its interests in said properties.

8. Umont agrees and consents to such action as Northern may take in obtaining assistance from the Office of Minerals Exploration, Department of the Interior and further consents to the granting of lien on said property as security for repayment of any loan granted by O.M.E.

In witness whereof, the parties have executed this agreement on the day and year first above written.

UMONT MINING, INC.

BY: Richard H Wadhams
Vice President

NORTHERN STAR MINING CO., INC.

BY: Lewis V Wausch
President

STATE OF VERMONT)
) SS
COUNTY OF CHITTENDEN)

On this 8th day of September 1965, before me personally appeared R. H. Wadhams, who acknowledged himself to be the Vice President of Umont Mining, Inc., a corporation, and that he, as such Vice President, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Vice President.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.
My commission expires Feb 10 1967.

Willard B Bell
Notary Public

STATE OF VERMONT)
) SS
COUNTY OF CHITTENDEN)

On this 8th day of September 1965, before me personally appeared Lewis P. Evans Jr who acknowledged himself to be the President of Northern Star Mining Co., Inc., a corporation, and that he, as such President, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as President.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires Feb 10 1967.

Hilmard B. Bell
Notary Public

UMONT MINING, INC.
1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

Exhibit A-1

August 14, 1965

Mr. O. J. Salisbury, President
Bayhorse Mines, Inc.
33 Felt Building
Salt Lake City, Utah

Dear Mr. Salisbury:

Umont Mining, Inc., would like to have the official approval of Bayhorse Mines, Inc., to assign its rights in and to the Florida and Iowa claims under the agreement of June 1, 1964, to Northern Star Mining Company. Refer to paragraph 16.

Umont would also like to have the official approval of Bayhorse Mines, Inc., to permit a lien against the above claims of the nature required by the Office of Mineral Exploration in event a discovery is certified by OME. The official approval would need be for Umont or Northern Star Mining Company and would be in effect an amendment to paragraph 8 of the agreement of June 1, 1964.

If you approve both of the above, please sign in the space provided above your name, and date same.

Please keep one executed copy, and return three executed copies to me.

Yours very truly,

Dooley P. Wheeler Jr.

Dooley P. Wheeler, Jr.
General Manager

Approved: O. J. Salisbury
O. J. Salisbury
President, Bayhorse Mines, Inc.
August 14, 1965

UMONT MINING, INC.
1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

Exhibit A-2

August 14, 1965

Mr. R. C. Swigert
Challis, Idaho

Dear Mr. Swigert:

Umont Mining, Inc would like to have your approval to assign its rights in and to the Northern Star #2604 and Silver Greek #2604 patented claims under the Umont-Bayhorse agreement of June 1, 1964, to Northern Star Mining Company. Refer to paragraph 16 of the June 1, 1964 agreement.

Umont would also like to have your approval to permit a lien against the two above claims of the nature required by the Office of Mineral Exploration in event a discovery is certified by OME. The approval would need be for Umont Mining, Inc or Northern Star Mining Company and would be in effect an amendment to paragraph 8 of the agreement of June 1, 1964.

If you approve both of the above, please sign in the space provided below and date same.

Please keep one executed copy, and return three executed copies to me.

Yours very truly,

Dooley P. Wheeler, Jr.
General Manager

Approved: R. C. Swigert
R. C. Swigert
August 17, 1965

For Bayhorse Mines, Inc.
O. J. Salisbury

Exhibit D-1

THE HOWARD NATIONAL BANK
AND TRUST COMPANY

111 MAIN STREET
BURLINGTON, VERMONT 05402

September 7, 1965

Northern Star Mining Co. Inc.
King Street Dock
Burlington, Vermont

Gentlemen:

Concerning your application for a loan of $127,500 to be repaid over a period of five years with interest not to exceed 6 1/4% and no principal reduction in the first year, it would appear that the project is of a speculative nature and the corporation's assets do not justify this amount of unsecured credit.

We are sorry that we find it impossible to provide this financing in the circumstances.

Sincerely,

William M. Lockwood
President

Exhibit D-2

THE Merchants NATIONAL BANK

BURLINGTON, VERMONT · ESSEX JUNCTION, VERMONT

September 8, 1965

Mr. L. P. Evans, Jr., President
Northern Star Mining Company, Inc.
King Street Dock
Burlington, Vermont

Dear Mr. Evans:

Your application for a loan of $127,500.00 to finance a silver exploration project in the Bayhorse Mining District in Custer County, Idaho has been reviewed by the Bank. I understand that you have good title to claims covering this prospect and have drilled three holes which have intersected mineralization indicating a possible orebody of good grade, and that you plan to drill at least 16 diamond drill holes for a total of 5,200 feet. Then, you plan on driving a 750 foot inclined shaft and drifting 500 feet on the ore structure.

The Bank is not willing to approve the loan because the speculative nature of the venture is inconsistent with our lending policy and the term of the loan is too long.

Very truly yours,

Dudley H. Davis

Dudley H. Davis,
Executive Vice President

DHD/eb

3 zerox copies

Swigert Mines

The following are our contract prices for work in the Northern Star area for Northern Star Mining Company in Bayhorse Mining district, Custer County, Idahb:

1. Bulldozer - International Harvester

T D 142 - - - - - - --- - - - - - - - -	$12.00	per hour
T D 24 - - - - - - - - - - - - - - - -	25.00	" "

2. Drilling and Blasting of bedrock encountered in road construction - - $10.00 " "

R. C. Swigert

R. C. Swigert
August 11, 1965

3 Zerox copies

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros.
DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS
General Offices and Plant
1624 Pioneer Road P. O. Box 58 HUnter 7-7595
SALT LAKE CITY 10, UTAH

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
ST. LOUIS

August 10, 1965

Reply to:

Umont Mining Co.
1355 Foothill Blvd.
Salt Lake City, Utah 84108

Dear Sir:

As per your request the following prices are for drilling at the Bay Horse Area, Challis, Idaho. We would like to present them for your consideration.

Mobilization $300.00.

A. Overburden or NC: $7.75.

	NX	BX	AX
0 - 250 ft. @	$7.15	$6.75	$6.70
250 - 500 ft. @	7.40	7.05	7.00
500 - 750 ft. @	7.70	7.40	7.30

B. Reaming, all sizes, $3.80 per ft.

C. Survey or delay time, $14.50 per hr.

D. Cement time, $14.00 per hr., plus cost of cement or cement substitutes.

E. Mud and additives used, to be charged at list cost.

F. Casing lost or left by request, 80% of list cost.

Again let us thank you for the previous work given us, also for your fine cooperation on the job. We appreciate your calling on us for a bid on this work.

Very truly yours,

J. F. Brennan

J. F. Brennan
Field Supt., Drilling Division

JFB:gh

EXPLANATION OF DRILL LOG LITHOLOGIC SYMBOLS

Northern Star Area
Bayhorse, Idaho

* Gravel Overburden

* Breccia

* Shale

* Limy Shale

* Shaly Limestone or Shaly Marble

Limestone or Marble

Dolomite

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 15 1965

INITIALS	CODE

* Tactite (Lime-Silicate Minerals)

* Shaly Tactite

* ~~Slate or Phyllite showing cleavage~~

* Schist showing cleavage

bed
Slate or Phyllite showing cleavage
cleavage

* Quartz Monzonite & Granodiorite Porphyry

* Aplite

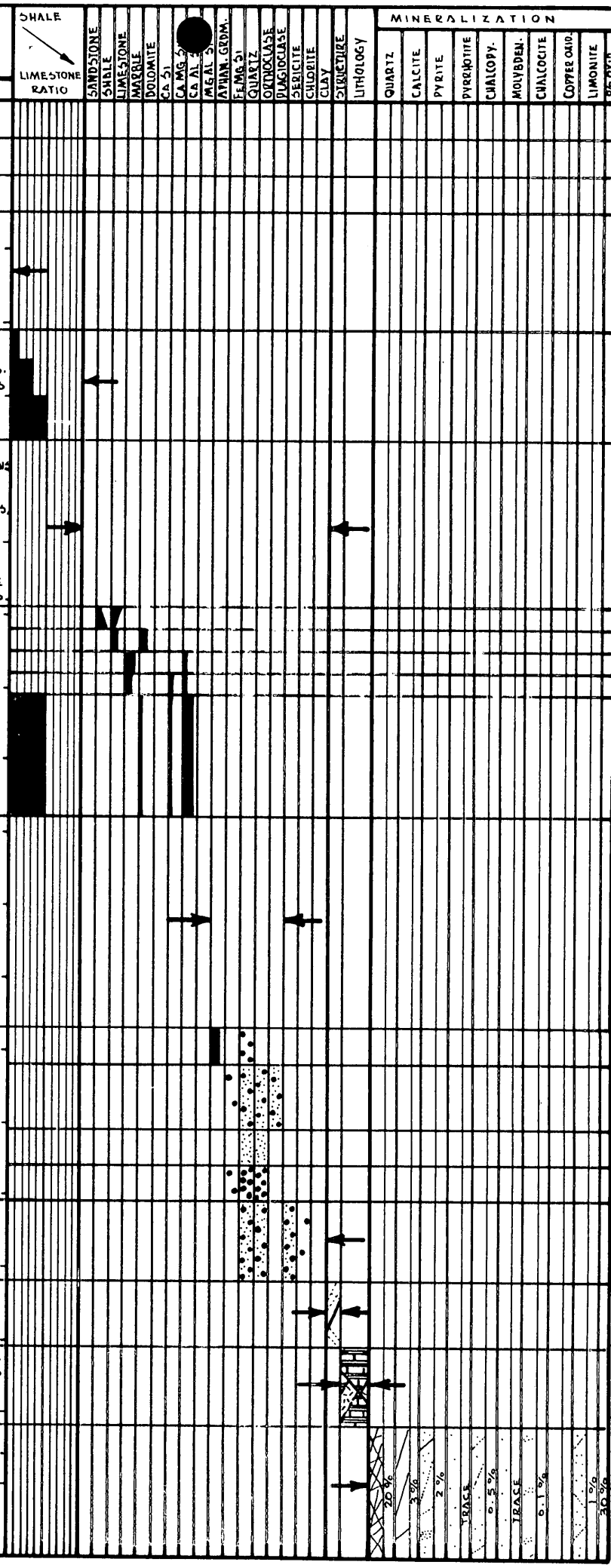
* Volcanics

Quartz Porphyry

*Symbols not used in attached log.

UMONT MINING, INC. [redacted]E NO.
EXPLANATION OF LOG FORM [redacted]GED BY:

DEPTH	RUN	CR	DESCRIPTION
			DEPTH – HOLE DEPTH IN FEET. SPACING OF NUMBERS INDICATES SCALE OF DRILL HOLE LOG.
			CORE RECOVERY – BLACK INDICATES CORE RECOVERED; WHITE INDICATES CORE LOST.
10	5.0	4.0	**RUN** – LENGTH OF INTERVAL DRILLED IN ONE RUN. **CR** – LENGTH OF CORE RECOVERED FROM THE RUN.
20			**DESCRIPTION** – A VERBAL DESCRIPTION OF THE CORE INCLUDING FEATURES NOT NOTED ELSEWHERE ON THE FORM. THESE DESCRIPTIONS WILL APPLY TO ALL OF THE CORE BETWEEN HORIZONTAL LINE "BREAKS". THIS COLUMN WILL ALSO CARRY "SPOT" DESCRIPTIONS SUCH AS: –27.0 1/2" PYRITE+, CHALCOPYRITE–.
30			± 1' STRONG FAULT GOUGE.
40			**SHALE-LIMESTONE RATIO** – GRAPHICALLY RECORDS THE ESTIMATED % SHALE & % LIMESTONE PRESENT OR ORIGINALLY PRESENT IN THE ROCK IN THE CASE OF SEDIMENTARY ROCKS. SHALE % IS BLACKED IN. EACH THIN COLUMN REPRESENTS 10%. THIS COLUMN MAY BE USED TO RECORD ANY RATIO CONSIDERED SIGNIFICANT IN A PARTICULAR HOLE OR DISTRICT.
50			**ROCK COLUMNS** – RECORD GRAPHICALLY THE MAJOR COMPONENTS OF THE ROCK & PERMIT THE RECORDING OF GRADATIONS. THE HEADINGS USED WILL VARY WITH THE DISTRICT & WITH SPECIFIC PROBLEMS BUT, IN GENERAL THEY WILL PROCEED FROM LEFT TO RIGHT FROM SEDIMENTARY ROCKS, THRU METAMORPHIC ROCKS, THRU IGNEOUS ROCKS TO HYDROTHERMAL ALTERATION PRODUCTS. THESE COLUMNS WILL NOT BE USED FOR A PARTICULAR ROCK IF THE SIGNIFICANT FEATURES OF THE ROCK CAN BE SHOWN ADEQUATELY IN THE LITHOLOGY COLUMN. FOLLOWING ARE A FEW ILLUSTRATIONS OF THE USE OF THE ROCK COLUMNS.
60			
70			SHALY LIMESTONE GRADING DOWNWARD TO LIMY SHALE
			DOLOMITIC LIMESTONE: 50% LMS; 50% DOL.
			MARBLE CONTAINING ± 20% GARNET. (CAALSi)
80			MARBLE CONTAINING TREMOLITE & GARNET
			SILICATED SHALE & TACTITE – ORIGINAL ROCK WAS COMPOSED OF 50% SHALE & 50% LIMESTONE (THIS IS SHOWN IN THE SHALE-LIMESTONE RATIO COLUMN). THE SHALE HAS BEEN CONVERTED TO ZOISITE WHICH IS SHOWN IN THE CAALSi COLUMN. ORIGINAL LIMESTONE HAS BEEN CONVERTED TO GARNET (SHOWN IN CAALSi COLUMN), DIOPSIDE & ACTINOLITE (SHOWN IN CAMGSi COLUMN), & MINOR DOLOMITE (SHOWN IN DOLOMITE COLUMN).
90			
100			**IGNEOUS ROCK COLUMNS** – MOST IGNEOUS ROCKS CAN BE THOROUGHLY CLASSIFIED IN THE 5 IGNEOUS ROCK COLUMNS AS SHOWN HERE. THE **APHANITIC GROUNDMASS** COLUMN IS USED TO SHOW WHAT PORTION OF THE ROCK, IF ANY, IS APHANITIC & THEREFORE NOT DECERNABLE BY HAND-LENS METHODS. THE OTHER 4 COLUMNS WILL DEAL WITH THAT PORTION OF THE ROCK THAT IS PHANERITIC. IN EACH CASE, PHENOCRYSTS WILL BE SHOWN AS LARGE DOTS & PHANERITIC GROUNDMASS AS FINE DOTS. FERRO-MAGNESIUM SILICATE MINERALS SUCH AS HORNBLENDE OR BIOTITE WILL BE SHOWN IN THE FEMGSi COLUMN. QUARTZ, ORTHOCLASE & PLAGIOCLASE WILL BE SHOWN IN THEIR RESPECTIVE COLUMNS. TO ILLUSTRATE:
110			
120			
130			RHYOLITE PORPHYRY WITH APHANITIC GROUNDMASS & QTZ. PHENOCRYSTS.
			QUARTZ MONZONITE PORPHYRY WITH PHENOCRYSTS OF BIOTITE, QUARTZ, ORTHOCLASE & PLAGIOCLASE IN A FINE-GRAINED PHANERITIC GROUNDMASS OF QUARTZ, ORTHOCLASE & PLAGIOCLASE.
140			APLITE COMPOSED OF FINE-GRAINED PHANERITIC QUARTZ & ORTHOCLASE.
			GRANITE COMPOSED OF COARSE-GRAINED HORNBLENDE, QUARTZ & ORTHOCLASE.
150			
160			**ALTERATION ROCK COLUMNS** – ARE REQUIRED TO SHOW TYPES & DEGREES OF ALTERATION. FOR INSTANCE IF THE PLAGIOCLASE OF THE QUARTZ MONZONITE PORPHYRY DESCRIBED ABOVE WAS ALTERED TO SERICITE & THE BIOTITE TO CHLORITE THE ALTERED ROCK WOULD BE RECORDED LIKE THIS.
170			**STRUCTURE** – FRACTURES, JOINTS, & FAULTS ARE SHOWN IN THE STRUCTURE COLUMN WITH DOTTED & DASHED LINES INDICATING WEAK STRUCTURES & SOLID LINES INDICATING STRONG STRUCTURES.
180			**LITHOLOGY** – THIS COLUMN WILL PRESENT THE CONVENTIONAL GRAPHIC GEOLOGIC LOG SHOWING GENERAL TEXTURE, FABRIC, & ROCK TYPES AS WELL AS SIGNIFICANT FAULTS, & CONTACTS. SHOWN HERE IS SHALY LIMESTONE CUT BY A MONZONITE DIKE & LATER FAULTING.
190			**MINERALIZATION** – THESE COLUMNS WILL DESCRIBE INTRODUCED MINERALIZATION. HEADINGS WILL VARY AS REQUIRED. EACH MINERAL IS DESCRIBED GRAPHICALLY IN THE LEFT PORTION OF ITS COLUMN & AS A % OF THE TOTAL ROCK IN THE RIGHT PORTION OF THE COLUMN. THE % OXIDATION COLUMN AT THE FAR RIGHT WILL NOTE THE ESTIMATED % OF OXIDATION OF THE ORIGINAL SULFIDE MINERALS WHICH HAS OCCURRED.
200			



BAYHORSE PROJECT-HOLE STATISTICS Hole # 40

Location: Bayhorse Canyon

Operator: Beus and Whiting

Section: 3, T 12 N, R 18 E

Drilling Contractor: Boyles Bros.

Claim: Northern Star #2604

Date Started: May 28, 1965

Coordinates-Collar: - N, - E

Date Terminated: June 16, 1965

Coordinates-Bottom: - N, - E

Core Logger: D.P. W. Jr.

Collar Elevation: 6330

Total Depth: 465.5

Geophysical Surveys: none

Hole Bearing: N 45° E

Status: All casing pulled and hole plugged with burlap and covered with soil.

Hole Inclination (Initial): -42.5°

Hole Inclination (Surveys): At 10'-42.5° Water Data:
Acid etch test
At 450'-42.5°
or
a little steeper

Hole Size	Interval	Casing	Interval	Cemented
NC	0 - 6'	NX-6'	0 - 6'	223-228.5
NX	6 - 465.5			

Remarks: NX casing pulled.

Acid etch test indicated a 2° steepening at bottom of hole, but etch test not reliable enough to justify showing the slight curvature indicated.

The hole had the best showing of mineralization in phyllite in the 200.5 to 207.75 foot interval 7.25 to 14.5 feet above the Garden Creek dolomite formation.

The next best showing was in the bottom 19.5 feet of the dolomite on top of the quartz porphyry.

		Au oz P.T.,	Ag oz P.T.,	Pb %,	Cu %,	Zn %,	Ca F2
Sample #1	200.5'- 202' -	0.03	17.8	0.6	3.52	0.6	-
Sample #2	202 - 203.5-	Tr.	0.4	Tr.	0.15	0.1	-
Sample #3	207 - 207.75-	0.01	4.5	0.6	0.50	0.2	-
Sample #4	323 - 329 -	Tr.	None	None	0.025	Tr.	-
Sample #5	431 - 440 -	0.005	0.1	None	0.025	Tr.	-
Sample #6	440 - 450 -	Tr.	None	None	0.012	0.1	-

UMONT MINING, INC. Bighorse Project
DD Hole #40 Custer County, Idaho
Logged by: D P Wheeler Jr.

DEPTH	RUN	CR	DESCRIPTION
NC / NX	6'	4'	**PHYLLITE**

Slate-gray, thinly bedded, abundant fine colorless sericite. Bedding + schistose cleavage parallel. 1/10" wd dolomite, calcite, pyrite veinlets parallel to cleavage. Veinlets about every foot. Veinlets probably have minor galena tetrahedrite and sphalerite.

Recovery = 100%

Both schistosity and bedding steepen downward.

Calcite, dolomite, pyrite veinlets become more abundant downward and more inclined to crosscut bedding. Still very minor, however.

Schistosity parallel to bedding down to 149 feet.

2' of white, coarsely crystalline qtz with minor disseminated dolomite.

Ditto — — — — —

Phyllite distorted, brecciated and recemented by qtz and specks and streaks of cpy, galena, sphalerite and pyrite. Minor dolomite, also.

Broken core — — <

Highly distorted beds & locally broken core

Rich 1/2" wd. veinlet. . . . . .

Phyllite → Limestone Ratio

Sandstone

Dolomite

Oxidation: 100% → 0-5% → 0% → 0%

Silicified

Earthy Dolo

STRUCTURE

LITHOLOGY

schistose cleavage

bedding

MINERALIZATION: Pyrite, Cpy, Tetrah, Sph, Galena, Fluorite, Siderite, Quartz, Dolomite

Pyrite: 1%, 2%, .5%, 2%, 2%, 3%

Cpy: 1%

Tetrah: 1%

Sph: Trace, 1-5%

Galena: 1-5%

Fluorite: 1%

Siderite: 5-10%, 10-20%, 80%

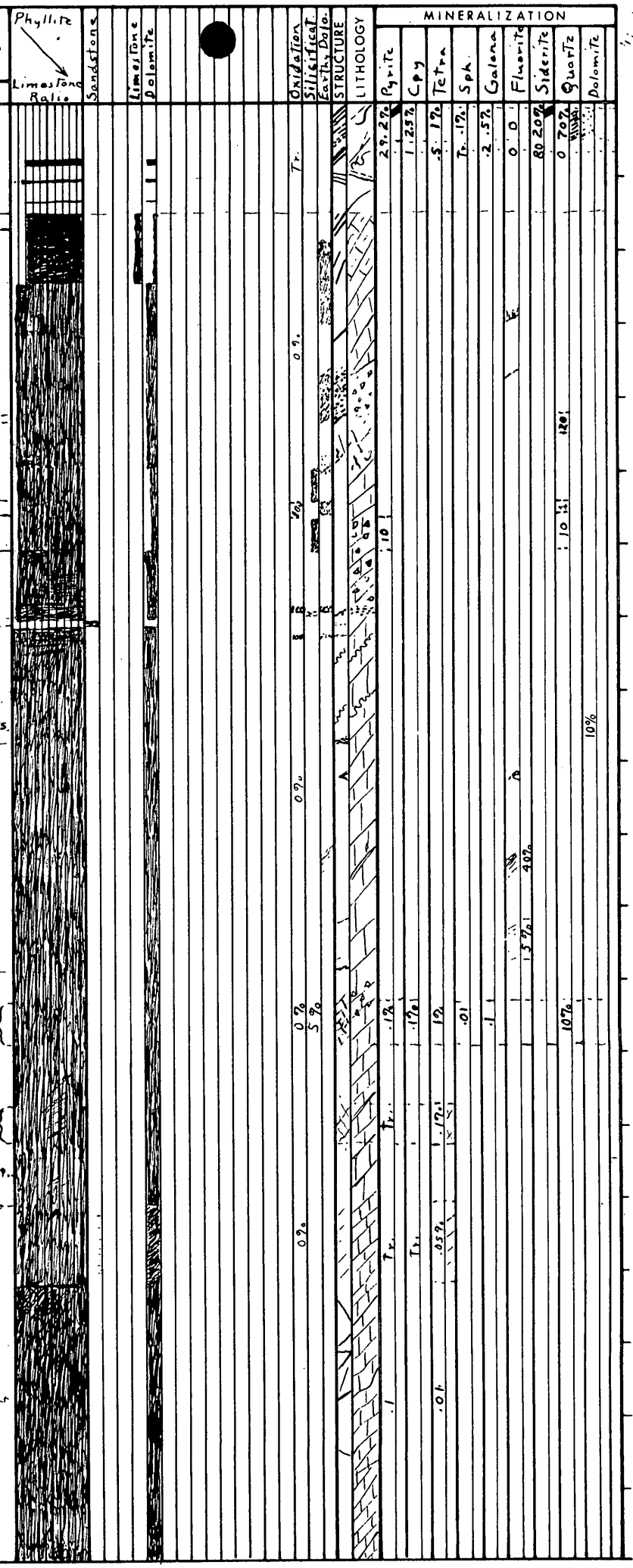
Quartz: 1%

Dolomite: 1%

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

UMONT MINING, INC. Pughorse Project
Custer County, Idaho
DD Hole #40
Logged by: DP Wheeler Jr.

DEPTH	RUN	CR	DESCRIPTION
			PHYLLITE — down to 215' in depth
			Sample #1 - 200.5' - 202.0'
			Sample #2 - 202' — 203.5'
210			Sample #3 - 207' — 207.75'
	7.5'	7.5'	MARL - Top of Garden Creek Dolomite?
	3.5	3.5	Gray marl
220	6'	1'	Buff, soft, locally earthy mass. mar
			224.5' (6-5-65) DOLOMITE
	4'	2'	
230	3'	3'	
	4.5	4.5	
240	10	10	Dark brown to rust yellow porous
			Amethyst qtz
			" "
	3	3	
250	5.5	4.5	
			Soft, brown to grayish olive
			Lt-Dk gray siliceous breccia
260	9.5	9.5	Trace Cu + Zn (tetra + Sph)
			Vuggy, druzy, some amethyst.
			Dolomite - coarse to fine crystalline light gray to buff
270	5.5	2.0	
	4	2	Sandstone - greenish
			stylolites
280			stylolite - Fine pyrite in it.
			Dolomite - med-lt gray, fine gr. mass.
			Druzy vuggy qtz
290			" - cont. Bedding vague rock was shattered and recemented with gray dolo. and minor qtz, dolo. & flu. but rock now strong and massive.
300			Fluorite - colorless, green, purple.
310			
320			5" white bull qtz - minor py & tetra
330			Shattered, brecciated & recemented dolo. Recem with wht. qtz, Tetra., py and Pb-Zn sulf.
340			Dolomite - same as above but prob. lighter gray. More distinctly bedded. .1% Tetra. in oblique cracks
350			Dolo. from here up lt-med gray f.g. - med grained.
360			Dolo. from here down f.g. dense pinkish gray, thin bedded and has 5% ± thin green siltstone beds.
370			
380			½" qtz veinlet - tight
390			Dolo - lt gray to white with pinkish shade alternating color bands ⅒ - ½" wide white to light gray.
400			



UMONT MINING, INC. [redacted]yhorse Project

DDHOLE 40

Custer County, Idaho

Logged by: D P Wheeler Jr

DEPTH	RUN	CR	DESCRIPTION
410		100%	DOLOMITE – same as above Light gray to white with pinkish shade. Alternating color bands $\frac{1}{10}$ – $\frac{1}{2}$ inch wide. sericite on bed planes.
420	5'	1.3'	cavernous. Driller reported cavity" from 420 to 429
430	5	5	
	5	4	
440	5	4.2	Pyrite is fine pyritohedra .1 – 1.0 mm xl. size.
450		100%	Quartzite 6" wd. Bedded →
			QUARTZ PORPHYRY
460			
465.5			Bottom of hole 40
470			

Phyllite / Limestone Ratio

Sandstone

Limestone Dolomite

Oxidation: 0% → 90% → 0% → 50% → 0%

Silicification

Earthy Dols

STRUCTURE

LITHOLOGY

MINERALIZATION

Pyrite	Cpy	Tetra.	Sph.	Galena	Fluorite	Siderite	Quartz	Dolomite
							1%	
1%	1%	.2%	.2%	.2%			2%	
1.2%	Tr	Tr	Tr	Tr			1%	

BAYHORSE PROJECT-HOLE STATISTICS Hole # 41

Location: Bayhorse Canyon

Operator: Beus and Whiting

Section: 3, T 12 N, R 18 E

Drilling Contractor: Boyles Bros.

Claim: Northern Star #2604

Date Started: June 17, 1965

Coordinates-Collar: - N, - E

Date Terminated: June 22, 1965

Coordinates-Bottom: - N, - E

Core Logger: D.P. Wheeler Jr.

Collar Elevation: 6330

Total Depth: 223 feet

Geophysical Surveys: none

Hole Bearing: N 45° E

Status: 6' casing left in collar of hole for possible later deepening.

Hole Inclination (Initial): -81°

Hole Inclination (Surveys): none

Water Data: Approx. 25' down hole.

Hole Size	Interval	Casing	Interval	Cemented
NC	0-6'	6'NX	0-6'	none
NX	6-223'			none

Remarks:	Au oz P. T.,	Ag oz P.T.,	Pb%	Cu%	Zn%	Ca F_2
Sample #7 144'-145'	0.005	0.1	0.0	0.05	0.2	-
Sample #8 145'-146.5'	0.015	13.1	0.0	2.268	0.6	-

OFFICIAL COPY
SEP 15 1969
INITIALS

UMONT MINING, INC. Bayhorse Project

DD HOLE 41 Cu[illegible]r County, Idaho

Logged by: D.P. Wheeler Jr.

DEPTH	RUN	CR	DESCRIPTION
NC	6	0	**PHYLLITE** - Dark slate gray with vaque thin bedding. Slaty cleavage surfaces generally graphitic and sericitic. Quartz veinlets commonly glassy colorless to white and have minor siderite ~~and~~ dolomite and pyrite and rarely galena and tetrahedrite.
10		100 %	Syngenetic pyrite tends to follow beds but is stretched out along steeper cleavage and also cuts beds.
20			
30			Both qtz + pyrite fail to bleach or alter phyllite. 1.5" qtz-py vein
40			
50			2" qtz + siderite
60			At 55.3 feet a 1/10" qtz-siderite veinlet intrudes phyllite like a viscous near solid mass and bends cleavage and bedding.
70			
80			Phyllite appears limy and brecciated + recemented with qtz + siderite. Much breccia in limy part. Recemented by quartz, mainly. Highly distorted beds.
90			
100			
110			
120			Sample #7, 144'-145' Sample #8, 145-146.5
130			
140			3" siderite, cpy, tetrahedrite. Shattered core.
150			Siderite, tetrahedrite, cpy, gn, py. " increases downward along with gn-cpy-tetra. " mixed with sheared phyllite in upper part of zone.
157.5			Phyllite contact.
160			**DOLOMITE** - Dk - med gray, fine to med. xline. Shattered and brecciated and recemented with gray dolomite then veinlets of white dolomite + minor pyrite + traces sph, cpy, tetra.
170			(Exception - From 162.5' — 173 the dolo. is phyllitic, dark gray very thin bedded and relatively unshattered or brecciated.)
180			Hole goes to 223 feet. Dolo. gets lighter gray and less veined and brecciated. Bed to core axis is 30° at 201', 95° at 216', and 85° at 220'. Qtz coats vuggy vlt. of cube fluorite. Core broken at acute angle with core axis at 216-219.5 & coated with yellow FeOx
190			
200			Thin veinlets qtz, py, tetra near parallel to core at 221-223. Trace Cu + Ag.

Phyllite / Limestone Ratio

Sandstone

Limestone / Dolomite

Oxidation → 100% ; 50 ← ; 0-5% ; 0

Silicification

Earthy Dolo

STRUCTURE

LITHOLOGY

MINERALIZATION: Pyrite, Cpy, Tetra., Sph., Galena, Fluorite, Siderite, Quartz, Dolomite

Remarked syngenetic

5% introduced

5-10 %

5-10 %

5 %

2-5 %

5-10 %

BAYHORSE PROJECT-HOLE STATISTICS Hole # 42

Location: Bayhorse Canyon

Section: 3, T 12 N, R 18 E

Claim: Northern Star #2604

Coordinates-Collar: _____ N, _____ E

Coordinates-Bottom: _____ N, _____ E

Collar Elevation: 6330

Total Depth: 319'

Hole Bearing: N 45° E

Status: Abandoned

Hole Inclination (Initial): -28°

Hole Inclination (Surveys): _____

HF etch 315'-19°

Operator: Beus and Whiting

Drilling Contractor: Boyles Bros.

Date Started: June 17, 1965

Date Terminated: June 28, 1965

Core Logger: D.P. Wheeler Jr.

Geophysical Surveys: none

Water Data: Approx. 20' down hole.

Hole Size	Interval	Casing	Interval	Cemented
NC	0-3'			
NX	3'-319'	pulled		

Remarks: No samples taken.

Hole flattened 9 or 10 degrees in 315 feet and was going up the stratigraphic column in phyllite with no obvious chance of intersecting the dolomite under the phyllite. Mineralization was uniformly nil from top to bottom of hole. Consequently hole 42 was stopped at 319 feet and hole 43 started between holes 40 and 41.

The upward deflection of hole was caused by the drill bit trying to become normal to schistose cleavage which is steeper than hole inclination.

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UMONT MINING, INC. Bayhorse Project
DD HOLE #42 Custer County, Idaho
Logged by: D. Wheeler Jr.

DEPTH	RUN	CR	DESCRIPTION
	3'	0'	PHYLLITE - Slate - gray, thin-bedded, graphitic, abundant fine colorless sericite on cleavage and bed planes.
10			
20			
30			
40			
50			
60			
70		100%	
80			
90			
100			
110			
120			
130			
140			
150			
160			
170	S.	4'	
	2.	2'	
180		100%	
190			
200			

Phyllite / Limestone Ratio

Sandstone | Dolomite | Oxidation | Silicification | Earthy Dolo | STRUCTURE | LITHOLOGY

MINERALIZATION: Pyrite | Cpy | Tetra | Sph | Galena | Fluorite | Siderite | Quartz | Dolomite

Oxidation: 100% ; 0%

STRUCTURE: bedding; schistose cleavage; 1" gouge; gouge + bx

LITHOLOGY: 170; 170; 170; 170; B; S

UMONT MINING, INC.
DD HOLE #42

Bayhorse Project
Custer County, Idaho

Logged by: D. Wheeler Jr.

DEPTH	RUN	CR	DESCRIPTION
210			**PHYLLITE** Slate-gray, thin-bedded, graphitic, abundant fine colorless sericite on cleavage and bed planes.
220		100%	
230			
240			
250	11'	10'	
260		100%	
270	3'	2'	punky phyllite
280			
290			
300		100%	
310			
319			
320			Bottom of hole still in phyllite

Phyllite → Limestone Ratio

Dolomite

Oxidation
Silicification

schistose cleavage
bedding

STRUCTURE

LITHOLOGY

MINERALIZATION: Pyrite, Cpy, Tetra, Spk, Galena, Fluorite, Siderite, Quartz, Dolo.

BAYHORSE PROJECT-HOLE STATISTICS Hole # 43

Location: Bayhorse Canyon

Section: 3, T 12 N, R 18 E

Claim: Northern Star #2604

Coordinates-Collar: _____ N, _____ E

Coordinates-Bottom: _____ N, _____ E

Collar Elevation: 6330

Total Depth: 178 feet

Hole Bearing: N 45° E

Status: Hole Capped

Hole Inclination (Initial): -60°

Hole Inclination (Surveys): none

Operator: Fred Beus and Don Whiting

Drilling Contractor: Boyles Bros.

Date Started: June 23, 1965

Date Terminated: July 1, 1965

Core Logger: R. Seklemian

Geophysical Surveys:

Water Data:

Hole Size	Interval	Casing	Interval	Cemented
NC	0-5'	5' of NX	0-5'	
NX	5'-178'			

Remarks: Sample #86 taken of interval 160.5' - 161.9'

Results: 0.025 oz Au P/T, 19.2 oz Ag P/T, 0.95% Pb, 2.167 % Cu, 0.5 % Zn.

This is the only hole that hit good mineralization at the top of the Garden Creek dolomite, but the siderite zone is the same as the zone intersected at 200.5 feet in hole 40 and 145 feet in hole 41. The zone in holes 40 and 41 were, however, 12- 14 feet above the dolomite, in phyllite.

The drill site for holes 40, 41, 42 and 43 were the same. Only the inclinations of the holes were different.

The dead-man cables for anchoring the drill were left intact for further use, if necessary.

UMONT MINING, INC., BAYHORSE PROJECT, CUSTER CO., IDAHO.
DD HOLE 43
LOGGED BY: R. SEKLEMIAN.

DEPTH	RUN	CR	DESCRIPTION
	5.0	0	NC ROCK BIT & CASED NX TO 5'. NO CORE. HOLE STARTED 6-29-65. NC
	5.0	4.3	**PHYLLITE** - WEATHERED, DARK GREY, LIMONITE-STAINED WITH MINOR THIN DOLOMITE BEDDING LAMINATIONS. LIMONITE ALONG BDDG & AS DISSEMINATED SPOTS AFTER METAMORPHIC GROWTH CRYSTALS. NX
10	5.0	4.2	
	5.0	3.9	18'
20	4.0	4.0	**PHYLLITE** - "SPOTTED", DARK GREY. WITH MINOR THIN DOLOMITE BDDG LAMINATIONS. NUMEROUS THIN PYRITE SEAMS ALONG BEDDING. SLATY CLEAVAGE STEEPER THAN BEDDING. FEW DOLOMITE-PYRITE VEINLETS.
	5.0	4.5	
30	5.0	3.7	
	1.0	0.6	
	4.0	3.7	
40	3.0	2.7	
	3.0	2.7	
	1.5	1.5	
50	4.5	4.5	
	2.0	1.5	
	3.0	3.0	
60	4.0	3.6	
	2.0	2.0	
	2.0	2.0	
	5.0	5.0	68 ± 2" BROKEN IRREGULAR WHITE QTZ. ATTITUDE UNCERTAIN.
70	1.0	1.0	
	3.5	3.2	
	5.0	3.2	75.5' 3" QTZ-DOLOMITE BDDG VEIN. V. MINOR PYRITE.
80	1.5	1.5	
	2.5	2.5	
	4.0	4.0	
	2.0	2.0	
90	3.0	3.0	
	5.0	5.0	
	.5	.5	98 ½" QTZ+ - PY- - PbS=
100	4.0	4.0	INDEFINITE ZONES OF HARDER MORE DOLOMITIC LAMINATED PHYLLITE WITH STOCKWORKS & GASH VEINS OF WHITE DOLOMITE & MINOR QUARTZ.
	4.5	4.5	
	.5	.5	106 1" QTZ+ - PY- CHALCOPYRITE=, GALENA=.
	4.0	4.0	
110	4.5	4.5	**DOLOMITIC PHYLLITE** - LIGHT & DARK GREY LAMINATED WITH VARIABLY DEVELOPED SLATY CLEAVAGE. DISS. & BDDG SEAM PYRITE.
	.5	.5	
	4.5	4.5	119' ⅛" DOLOMITE+, CPY-, PY-, PbS= ?
120	2.5	2.5	
	2.0	2.0	125' ⅛"
	5.0	5.0	
130	3.0	3.0	
	2.0	2.0	133' 1½" VEIN - QTZ, DOLOMITE, TETRAHEDRITE=, PbS=.
	5.0	5.0	
140	2.0	2.0	
	2.5	2.5	
	5.0	5.0	
150	1.0	1.0	150' ½" QTZ+, PY-, CPY-, PbS=, TETRAHEDRITE.
	4.0	4.0	
	4.5	4.5	
	.5	.5	1.4' COARSELY X-LINE SIDERITE WITH BANDS OF PYRITE.
160	4.5	4.5	160.5' GALENA, TETRAHEDRITE, AT PHYLLITE-DOLOMITE CONTACT. DEFINITELY CAVITY FILLING. SAMPLE #86 (161.9')
	5.0	5.0	**DOLOMITE** - MEDIUM GRAY, LAMINATED, BROKEN WITH WHITE QTZ-DOLOMITE STOCKWORKS. BARREN.
170	5.0	5.0	
	5.0	5.0	WHITE DOLOMITE STOCKWORKS WITH VERY MINOR PYRITE & OCCASSIONAL SPOT OF CHALCOPYRITE.
			178' HOLE TERMINATED 7-1-65
180			
190			
200			

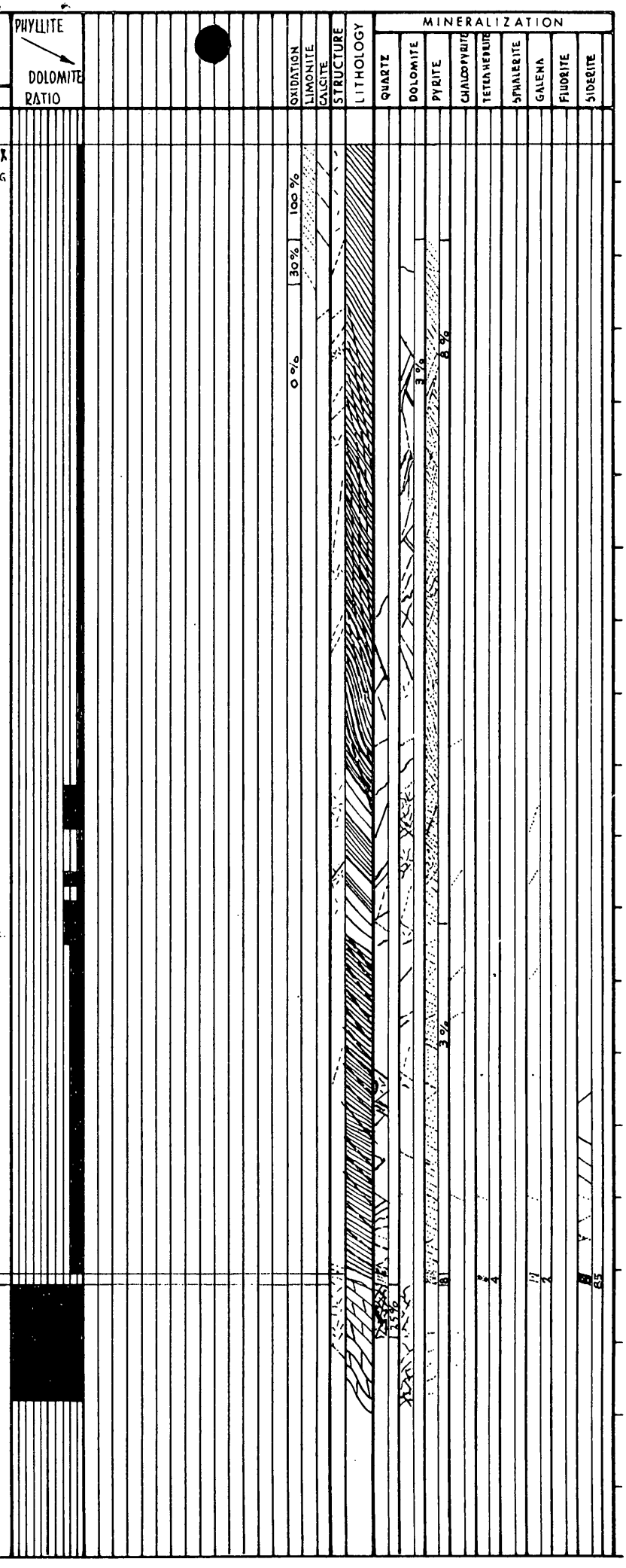
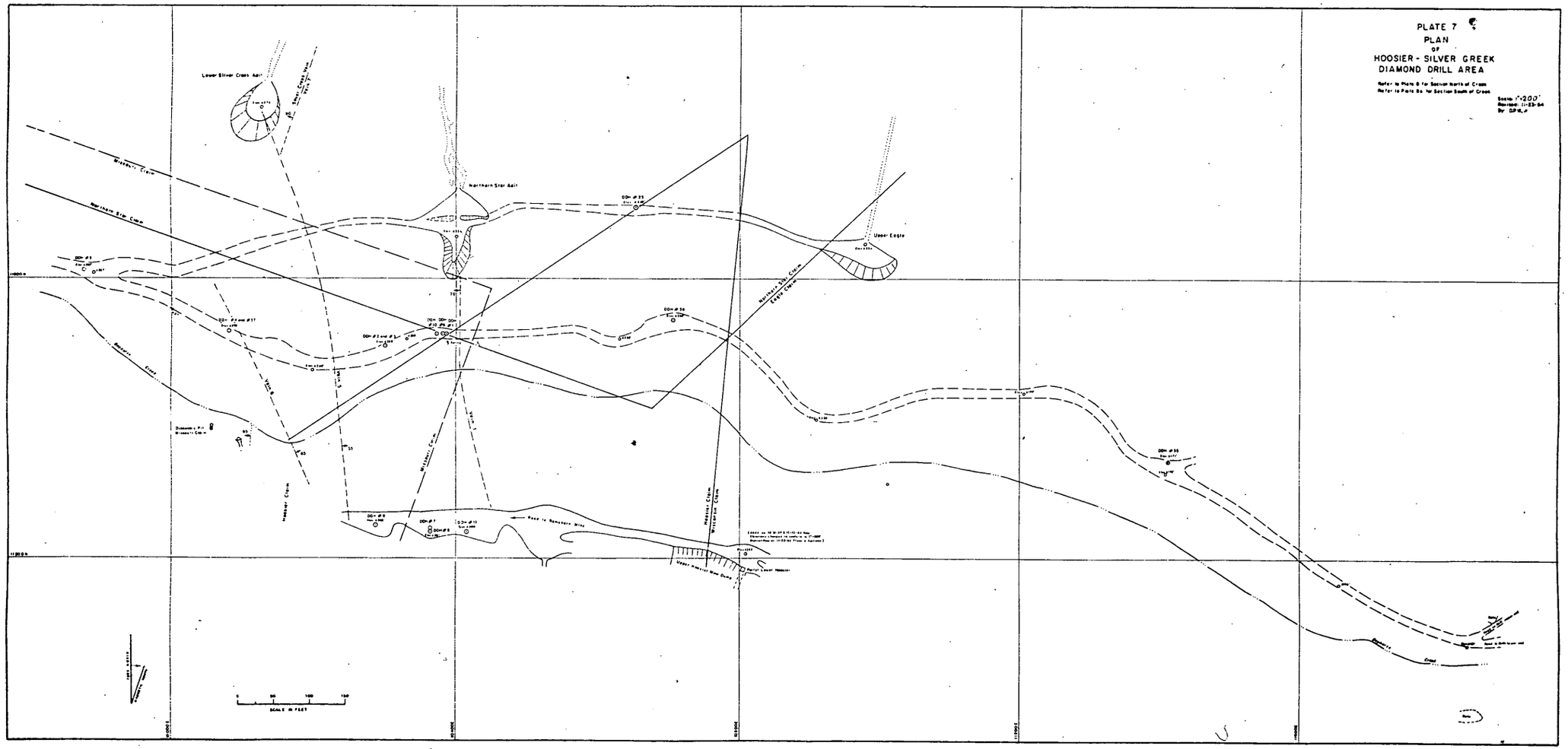


Exhibit C-3



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MME Form 7
(2/63)

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Date	Surname	Code
7/6		120
7/6/66	Kirkemo	110
		220

AIRMAIL

JUL 6 1966

Mr. Wesley F. Wheeler, Jr.
General Manager
Summit Mining, Inc.
1355 Foothill Boulevard
Salt Lake City, Utah 84108

Re: [illegible]-4499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Dear Mr. Wheeler:

We will be glad to consider new information disclosed by the work you propose on the subject property. The geological, sample, and assay data should be accompanied by information necessary to bring all pertinent information up-to-date. This includes financial eligibility requirements, cost estimates, and bids from contractors.

Any information submitted will be given prompt consideration, but submittal of new information should not be construed as a commitment by the Government that an exploration contract will be granted.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to: Northern Star Mining Co., Inc.
King Street Bank
Burlington, Vermont 05401

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
OME Region I
Mr. Kirkemo
120M

HKirkemo/gla 7-6-66

23263

UMONT MINING, INC.

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

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JUN 27 1966
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June 23, 1966

Mr. Frank E. Johnson, Chief
Office of Minerals Exploration
U. S. Geological Survey
Washington 25, D.C.

Re: OME 6499 Silver

Dear Mr. Johnson:

Thanks for the return of some of the maps of the above project.

We are sorry that you could not go along with us on this one, but we will try to check it out enough ourselves to get you back in it.

We propose to start on the most northerly and deepest fence of holes in July. If we intersect good silver ore which indicates by its grade and thickness that our idea of down-the-nose-increase-in-size-of-the-ore-body is correct, would you be in a position to promptly execute a contract for OME 6499 and help us finish our drilling and maybe take one more step out to the north down the nose?

If there are other conditions that need be met, please advise me so that we can meet them in advance and thereby be qualified for quick assistance.

Yours very truly,

Dooley P. Wheeler

DOOLEY P. WHEELER, Jr.
General Manager

DPW:pd

cc: Mr. D.R.MacLaren
cc: Mr. L.P.Evans, Jr.

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(2/63)

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Date	Surname	Code
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		110
		120

Mr. Booley P. Wheeler, Jr.
General Manager
Summit Mining, Inc.
1355 Foothill Boulevard
Salt Lake City, Utah 84108

JUN 1 3 1966

Re: OMM-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Dear Mr. Wheeler:

This is in answer to your letter of June 7, 1966, requesting return of all returnable data pertaining to the application referred to above. Please note on the OMM application form that all documents and other attachments submitted as a part of the application except those in Item 3(g) which you have marked for return become the property of the Government and will not be returned to the applicant. Since return of Exhibits C 1 - C 4, inclusive, was requested in the application in the event the application was denied, we are returning these exhibits to you. If you are in urgent need of some of the other material submitted, please identify it and we will prepare copies or return the original material to you.

We wish you success in future plans and programs involving the property.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
Kirkemo
OME Docket
Region I w/cy incoming letter
OME Reading

HKirkemo/mm

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U[illegible]ONT MINING, IN[illegible]

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

June 7, 1966

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Mr. Frank E. Johnson, Chief
Office of Minerals Exploration
U. S. Geological Survey
Washington 25, D. C.

Re: OME 6499 (Silver) Northern Star

Dear Mr. Johnson:

Judging by our telephone conversation this morning the office of minerals exploration is not going to approve OME 6499.

If this is correct, we would appreciate return of all returnable data pertaining to the application that the Washington and Spokane offices may have, for we will need the data for planning a future course of action.

Thank you.

Yours very truly,

Dooley P. Wheeler Jr.

Dooley P. Wheeler, Jr.
General Manager

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(2/63)

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Date	Surname	Code
6/10/66	Kirkemo	
"	Johnson	
6/13	Kingsland	
6/13	Heyer	

JUN 13 1966

Northern Star Mining Co., Inc.
King Street Dock
Burlington, Vermont 05401

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Gentlemen:

We have carefully studied your application for financial assistance in exploring the referenced claims and other information available to us. These data indicate that the probability of disclosing significant new reserves of silver ore is not sufficiently promising to justify Government participation in the proposed project. We regret, therefore, to inform you that your application is denied.

This decision is reached without prejudice to your property. If future work on the property or in the district reveals evidence that could justify an exploration program, we would be pleased to consider a new application.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
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6/10/66	Kirkemo	

June 10, 1966

Memorandum

To: The File

From: Harold Kirkemo

Subject: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Justification for Denial

The Applicant's prospective target is a silver-bearing deposit which is projected as a thin manto ore body across a plunging anticline. The expectation for significant ore bodies is premised on a zonal pattern of more intense sulfide mineralization northward in the direction of the proposed exploration, and on an expected brecciation of the wall rock, particularly in the crest of the anticline.

The target area occurs in the least favorable of three productive formations in the district. There has been considerable testing of the area already, and although some interesting silver-copper mineralization was disclosed, the deposits are thin, not extensive, and are not economic at the depths encountered in the drill holes.

These comments support the Field Officer's recommendation to deny the application. The denial should be without prejudice to the property because as the geology of the district becomes better understood as a result of a Geological Survey field investigation now in progress, perhaps a more promising exploration program on the Applicant's claims can be planned.

Harold Kirkemo

Harold Kirkemo

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
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HKirkemo/mm (6/9/66)

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(2/63)

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Date	Surname	Code

June 10, 1966

Memorandum

To: The File

From: Harold Kirkemo

Subject: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Review of Application and Field Examination Report

The Applicant proposes to explore the Bayhorse anticline in the Bayhorse district, Idaho, for silver-bearing manto-like deposits in the Garden Creek phyllite formation of Cambrian(?) age. The program would consist of 16 vertical diamond drill holes totalling 4,865 feet, a 750-foot inclined shaft, and 500 feet of exploratory drifting at a total estimated cost of $168,407.05. Holes spaced at 100-foot intervals in two rows, 300 feet apart, are proposed across the anticline to penetrate the phyllite and dolomite members of the formation.

Two companies, American Metal Co. in 1952-53 and Shell Development Co., in 1964(?) completed at least 13 drill holes within a distance of not more than 400 feet from the Applicant's proposed holes, and four of these were between the two rows of proposed holes. The core from five of the holes indicated mineralized material, chiefly sulfides, ranging in width from 1 to 1.7 feet, and containing 9 to 17 ounces silver per ton, about 2 percent copper and negligible values in gold, lead, and zinc. This material occurs mainly in the phyllite at depths of 150 to 200 feet near the contact between the phyllite and underlying dolomite.

Five zones or lenses of fluorite ranging in thickness from 10 to 40 feet, and in grade from 30 to 44 percent CaF_2 were cut in four other holes. The main objective of the drilling in 1952-53 was for fluorite deposits. It was concluded, however, that the lenses were not of sufficient size and grade to warrant further exploration.

The Garden Creek phyllite formation is the lease favorable of three productive formations for silver deposits in the district. The Hoosier

mine near the Applicant's Northern Star claim has a modest record of production from siderite veins in phyllite. The most productive mines in the district are in the overlying Bayhorse dolomite (Beardsley mine-manto deposit), and in the Ramshorn slate of Lower Ordovician age (Ramshorn mine-vein deposit).

The Applicant's geologist contends that there is an increase in sulfide mineralization (pyrite, tetrahedrite, chalcopyrite, galena, sphalerite, mainly in siderite gangue) northward in the district. He also states that there is evidence for a steepening in the mineralized zone along the axis of the Bayhorse anticline, and that there is a basis for expecting brecciation of the Garden Creek phyllite formation along the anticline and the occurrence of large, rich ore bodies as a consequence.

A Geological Survey investigation project of the Bayhorse district is in progress under the direction of S. Warren Hobbs. This application and the OME exploration contract on the nearby Beardsley Gulch property have been discussed with Mr. Hobbs. He knows the Applicant's geologist, Mr. D. P. Wheeler, and will be discussing the geology of the properties and of the district as the mapping and study advance northward across the district. These discussions should be mutually beneficial to both parties and perhaps, if the geological conditions warrant, a more promising program of exploration can be planned by the Applicant for the Northern Star claims.

Harold Kirkemo

Harold Kirkemo

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Kirkemo

HKirkemo/mm (6/10/66)

OME

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
April 28, 1966

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Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: Application Examination Report
OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

INTRODUCTION

Northern Star Mining Company, Inc., applied for OME assistance to explore for silver ore in the Bayhorse Mining District, Custer County, Idaho, by diamond drilling 10 holes NXWL and EXWL core size for a total of 3,025 feet along two E-W lines. If ore is discovered, it is proposed to diamond drill six holes of the same sizes along a N-S line for a total depth of 1,950 feet to better define the ore limits, to sink an inclined shaft 750 feet deep along the approximate crest of an anticline at a dolomite-phyllite contact, and to follow the ore by drifting 500 feet from near the bottom of the inclined shaft. In order to drill the second E-W line of holes it is estimated that an access road about 1,450 feet long requiring 40 hours of bulldozing work will have to be built. The applicant intends to have all work done by independent contractors and estimates that the total cost of the project will be $168,407.05, of which the Government's participation at 75 percent would be $126,305.29.

On November 1, 1965, about an hour was spent on the property accompanied by L. F. Evans, Jr., President, Dooley P. Wheeler, Jr., Vice-President, and David Crotty, representing E. J. Longyear Company. The only partly accessible underground working was a short tunnel near proposed drill hole 46. Prior holes 40, 41, 42, and 43 were drilled from one setup within about 10 feet of the tunnel portal.

The general location, property, and geology have been discussed in an Application Examination Report under Docket No. OME-6493 (Silver), Beardsley Gulch Mining Company. Therefore, only local differences and variations will here be discussed under those headings.

FIELD EXAM RPT.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Northern Star, et al., Claims are underlain by Garden Creek phyllite and dolomite and intrusive quartz porphyry. A considerable amount of tunnel exploration has been done on and near the claims and at least 13 holes have been diamond drilled on the Northern Star claim and the Hoosier, Missouri, and Cemetary claims to the south and southeast of the Northern Star. Of six mines, within a radius of 3 miles of the applicant's property, from which some production has been reported, only one mine, the Hoosier, is within the phyllite. Recorded production is limited to 18 tons but reports indicate it may have been as much as 2,000 tons.

Segments of core from only five of the drill holes were apparently considered worth sampling and assaying for metallic sulfides. The samples indicated ore-grade material ranging in width from 1 to 1.7 feet, in total value from $40.00 to $45.00 per ton with gold-silver values ranging from 50.7 percent to 61.5 percent. Five zones or lenses, apparently not always extending from one hole to the next, contained ore grade CaF_2 ranging in thickness from 10 to 39.5 feet and in grade from about 29.72 to 43.44 percent CaF_2. The applicant is not interested in exploring for fluorite.

The description by Ross (1937) of the mineral association seen on many dumps within and adjacent to the claims agrees closely with that described in the drill logs. For the most part a quartz-siderite gangue is associated with considerable pyrite and much less galena, sphalerite, chalcopyrite and occasionally some tetrahedrite.

It is concluded that the wide-spread disseminated occurrence of sulfide minerals above a quartz porphyry intrusive suggests that there might be silver-bearing ore bodies in a favorable host rock. However, it is also concluded that the evidence strongly indicates that the Garden Creek phyllite and dolomite are not favorable host rocks for the deposition of ore bodies of significant size.

It is therefore recommended that this application be denied.

PROPERTY, LOCATION, AND ACCESSIBILITY

The applicant proposes to include in the land four claims, two patented and two unpatented, which he controls by lease as follows:

Patented

Claim	Patent No.
Northern Star	294238
Silver Creek	294238

Unpatented

Claim	Book	Page
Iowa	14	94
Florida	14	92

On the claim map accompanying the application the Silver Creek claim appears as Silver Creek. This is a typographical error as the name Silver Creek appears in all pertinent documents and has been confirmed, as have the patent numbers, by the BLM office in Boise, Idaho.

There was only one short adit partly open for inspection, but dumps in the area and dotted lines on the applicant's Exhibit C1 indicate that there has been other underground work in addition to 13 diamond drill holes for which core logs and a few assays have been submitted.

The proposed locations of five holes may be reached by following a fair-to good-graded road for about 0.6 mile west and north from the mill building at the old town of Bayhorse.

GEOLOGY

The geology of the Bayhorse Mining District has been described by:

Umpleby, Joseph B., 1913, Ore deposits of northwestern Custer County, Idaho: U. S. Geol. Survey Bull. 539, p. 55-76.

Ross, Clyde P., 1937, Geology and ore deposits of the Bayhorse region, Custer County, Idaho: U. S. Geol. Survey Bull. 877, p. 116-148.

Much of those parts of the above references that pertain to the area of the Northern Star property and the Beardsley property about 2,000 to 3,000 feet to the northeast is summarized in Application Examination Report (OME-6495 - Silver).

Rocks in the area to be explored are Garden Creek phyllite of Cambrian(?) age and an intrusive quartz porphyry of Late Triassic or Jurassic age. Ross (1937, p. 11-13) describes the Garden Creek phyllite as being an intensely sheared and metamorphic argillaceous rock of which the base is not exposed but which is at least several hundred feet thick. The applicant's geologist and others who have worked in the area in recent years have all recognized at places along Bayhorse Creek a dolomitic rock, which the applicant calls the Garden Creek dolomite, that lies below the phyllite. That these exposures do not represent blocks of the younger Bayhorse dolomite that have been down faulted is evident from the logs of 13 holes, 7 of which pass through the Garden Creek dolomite and bottom in quartz porphyry. Based upon the logs of holes 7 and 10 which were drilled vertically, and on holes 25 and 40 which are plotted on Section CC' and applicant's Exhibit C4, the dolomite member ranges from 144 to 171 feet thick and appears to have an average thickness of about 150 feet. Limited data available in the drill logs suggest that the most probable locus for sulfide ore deposition is in the phyllite at or just above the phyllite-dolomite contact.

Ore Tenor

The tunnel near the proposed location of hole 46 was accessible and entered for about 50 feet where further progress was blocked by a shallow winze or underhand stope. From what could be seen the tunnel was driven in Garden Creek phyllite along a narrow shear. The back was too high for sampling and no appreciable vein filling was noted although the walls were somewhat silicified for a foot or more on either side of the main shear. Therefore, the logs of the drill holes and the descriptions of not too distant mines given by Ross (1937) furnish the only data upon which to arrive at any conclusions as to the ore potential of the area of the proposed exploration.

Data from the drill holes.--From their relative locations, the drill holes can be grouped into five areas, starting with those holes nearest the proposed area of exploration and gradually moving southerly to southeasterly. The first area includes holes 40, 41, 42, and 43 (see applicant's Exhibit C4). In this group hole 42 may be disregarded as no samples were taken although apparently spotty and insignificant amounts of chalcopyrite, tetrahedrite, sphalerite, and galena were noted.

From hole 40, samples 1 and 2, each taken over a cored width of 1.5 feet, are consecutive and for the 3-foot width have an average grade of 0.015 ounce gold and 9.10 ounces silver per ton, 1.83 percent copper, 0.35 percent zinc, and 0.30 percent lead. There is a gap of 3.5 feet between samples 2 and 3 which apparently was not sampled and for which the values of each metal can only be considered as nil if samples 1, 2, and 3 are to be averaged. The 7.25 feet of cored width thus represented has an average grade of only 0.007 ounce gold and 4.29 ounces silver per ton, 0.81 percent copper, 0.16 percent zinc, and 0.19 percent lead. This zone is at a hole depth of 200.5 to 207.75 feet and bottoms in phyllite about 2.25 feet above its contact with the underlying dolomite. Samples 4, 5, and 6, taken in the dolomite, indicate the presence of gold, silver, copper, zinc, and lead, but in too small amounts to attract much interest. From hole 41, two adjacently taken core samples representing a cored width of 2.5 feet had an average grade of 0.01 ounce gold and 7.9 ounces silver per ton, 1.38 percent copper, 0.44 percent zinc, nil lead. This zone is at a hole depth of 144 to 146.5 feet and bottoms in phyllite about 11 feet above its contact with the underlying dolomite. No other samples are reported from this hole. From hole 43 one sample representing a cored width of 1.4 feet had a grade of 0.025 ounce gold and 19.2 ounces silver per ton, 2.167 percent copper, 0.5 percent zinc and 0.95 percent lead. This sample was taken at a hole depth of 160.5 to 161.9 feet and bottoms in phyllite at its contact with the underlying dolomite. The average of the significant samples from holes 40, 41, and 43 are:

Hole	Sample no.	Cored width (ft)	Oz/T Au	Oz/T Ag	Percent Cu	Percent Zn	Percent Pb
40	1	1.5	0.03	17.8	3.52	0.6	0.6
41	8	1.5	0.015	13.1	2.268	0.6	nil
43	86	1.4	0.025	19.2	2.167	0.5	0.95
Average		1.46	0.036	16.64	2.66	0.57	0.51

Disregarding the dollar values of gold, zinc, and lead which total $4.56 per ton, the dollar value of silver and copper combined is $40.61 per ton of which silver makes up $21.46 per ton or 52.8 percent. If gold, zinc, and lead values are included, the dollar value of five metals combined is $45.13 per ton of which the combined gold and silver values makes up $22.72 per ton or 50.3 percent.

The next area includes holes 25 and 36. These holes are both shown on the applicant's Exhibit C2, Section CC', hole 25 about half way between proposed holes 44 and 48. No samples from either hole are furnished although the logs include some grade estimates, mostly of fluorite. As in most of the holes small amounts of chalcopyrite, tetrahedrite, galena and sphalerite are commonly associated with pyrite, siderite and quartz, but there are many noted occurrences of pyrite, siderite and quartz with which none of the other sulfides are mentioned. Hole 25 is in phyllite from the surface to a hole depth of 109.75 feet, in dolomite from 109.75 to 260.5 feet, and for the remaining 160 feet is in quartz porphyry. From 55 to 122 feet the occurrence of chalcopyrite, tetrahedrite, sphalerite, and galena is described as occurring in "very minor amounts," "very minor blebs and veinlets," "minor," and "locally shattered and recemented veinlets having less than 1 percent combined sulfides." From 126 to 181 feet is reported "some (recementing) quartz has pyrite and sphalerite in it," "crystals locally coated with pyrite, chalcopyrite, and tetrahedrite," "very few pyrite-tetrahedrite specks," at 171 is noted "a 1/5" fluorite seam," also at 171, "1/10" quartz, cpy, tetrahedrite." From 208 to 236 5 no sulfides are noted, but fluorite is abundant: 3 feet at 50-80 percent, 3.5 feet at 10-20 percent, 1.5 feet at 5-10 percent, and 10.5 feet at 50 percent. The entire 18.5-foot interval has an average grade of 38.8 to 46.8 percent CaF_2. From 236.5 to 260.5 "minute veinlets of chalcopyrite, pyrite, and tetrahedrite" are noted. Finally, at 163 feet mention is made of "a 1/4" qtz, sph, gn, tetra, cpy, py veinlet."

The logs of holes 40 through 43 all give the altitudes of the hole collars at 6,330 feet, but the log of hole 25 gives the collar altitude at 6,700. The applicant's Exhibit C2, Section CC', indicates the collars of holes 40-43 at 6,330 feet and the collar of hole 25 about 10 feet higher. This is a feasible difference based on the observed topography. If hole 25 is projected to the plane of the section on the applicant's Exhibit C4 using 6,340 feet as the altitude of the collar of the hole, the phyllite-dolomite contact is shown to be about 20 feet northeasterly and 45 feet higher in hole 25 than it is in hole 40, but there are only "very minor blebs and veinlets" of sulfides and "buff coarsely crystalline, siderite with minor quartz" and sulfides to indicate the continuation of the 1.5-foot vein indicated by hole 40, sample 1. In plan the vein intercept in hole 40 is 225 feet N 54° W. of the weakly mineralized corresponding intercept in hole 25. As the probable intercept in proposed hole 48 will be about 315 feet S. 65° E. of that in hole 40, even further away than hole 25, there appears to be no valid justification to consider proposed hole 48 as being anything more than a wild cat probe.

Hole 36 is plotted on the applicant's Exhibit C1 at the approximate coordinates 11742N - 10705E between two survey(?) stations each

having an indicated altitude of 6,611. The log of a hole designated as hole 36 gives no north coordinate but indicates that the east coordinate is 60300; this is some 49,600 feet or 9.39 miles to the east of its plotted location; the collar altitude is given as 6,260 feet. The log also indicates that this hole started in dolomite, cut the dolomite-quartz porphyry at a depth of 160 feet, and was drilled vertically to a depth of 1,015 feet. The applicant's Exhibit C2, Section CC', indicates that hole 36 was drilled at the approximate coordinates shown on his Exhibit C1, was collared at an altitude of about 6,250, that it started in dolomite, cut the dolomite-quartz porphyry contact at a depth of 160 feet and was drilled to a vertical depth of 515 feet. At the end of the log appears the initials D.P.W. Jr. and the date 9-28-64, and at the lower lefthand corner of Exhibit C2 appear the same initials and three dates, the last two being 11-13-64 and 7-15-65, both subsequent to the date the core log was completed. All of this is quite confusing, but assuming that the driller's error in coordinates and the complete plotting of the hole on Section CC' were overlooked by the applicant and that the results of at least two surveys of the property may be involved, it is tentatively accepted as probable that the log is for hole 36 as plotted on Exhibits C1 and C2, Section CC'. In the log the only mention of sulfide minerals in the dolomite is from 13-119 feet within which interval reference is made to "very minor pyrite, tetrahedrite, chalcopyrite." In the quartz porphyry "minor amounts of pyrite-tetrahedrite in the veinlets" were noted 264 to 270 feet. "Vuggy Fluorspar" was noted at 570 to 572 feet and a "Quartz-Pyrite-Fluorite Vein" was noted at 668.4 to 669.5 but neither of these are anywhere near the location of the "weak/fluorite(?) mineralization" shown on Section CC' from 120 to 130 feet. This hole offers little inducement to further drilling for silver ore.

A third area comprises holes 1, 6, and 10. Plotting the locations of these holes on Exhibit C1 by the coordinates given on their respective log sheets, they fall at the corners of a very small triangle the center of which is about 54 feet S. 21° W. of the locations of holes 1 and 6 on Exhibit C1 (hole 10 is not indicated on the Exhibit). Regardless of which location is correct, Figure 1, Section AA', is a vertical plane approximately parallel to the three holes and shows the relative positions of the best or most interesting findings in the core logs of each hole. Hole 1 started in phyllite, crosses the phyllite-dolomite contact at about 81 feet and ends in dolomite at 103 feet. Only two core samples, 6 and 7, were taken from this hole representing a cored width of 2.9 feet. Their locations, combined average grades and the highest grades of sample 7 are shown on Figure 1, Section AA'. The combined samples indicate a total dollar value of $20.63 of which the silver and gold combined make up 61.1 percent. The higher grade sample has an indicated total dollar value of $26.60 of which the silver and gold combined comprise 56.6 percent. Sludge samples from hole 1 representing an interval of 42

feet were assayed for fluorite only and indicated an average grade of 24.09 percent CaF_2, however, the best grade fluorite is in the 10-foot interval between 31 and 41 feet which averages 43.44 percent CaF_2.

Hole 6 started in phyllite, crosses the phyllite-dolomite contact at about 90 feet, crosses the dolomite-quartz porphyry contact at about 207 feet and ends in quartz porphyry at 240 feet. No metallic mineral assays are given, but from 90 to 207 feet their occurrence is variously noted as "Shatter veinlets cemented locally by dolomite containing pyrite and minor galena," "1/2" qtz vein with 60° core angle has coarse galena," "fine-grained pyrite in one seam," and "odd veinlet or bleb containing coarse yellow sphalerite or fine-grained pyrite and tetrahedrite." The nature of the description plus the lack of any samples suggest that metallic sulfides are in amounts no greater than might normally be expected in any receptive rock type near an acidic intrusive. The log indicates a fluorite zone from 18 to 73.8 feet. Of three core samples representing an interval of 28.1 feet, one was estimated to contain 30 to 50 percent CaF_2, and two were assayed. To arrive at an approximate average grade for this interval, which extends from 45.7 to 73.8 feet, 40 percent CaF_2 will be used for the "eyeballed" assay. The average grade is approximately 20.49 percent CaF_2, with the grade of the top 10.3 feet of the zone estimated to be 40 percent CaF_2.

Hole 10 started in phyllite, crosses the phyllite-dolomite contact at 114 feet, crosses the dolomite-quartz porphyry contact at 276.5 feet, and ends in quartz porphyry at 280 feet. There are no core assays for metallic minerals, but their presence between 47 and 63 feet is mentioned as "Siderite has minor associated pyrite, fine gr. cpy. with minor tetrahedrite and galena," "At 47-49.9 - Predom. milk qtz . . . and very minor py., cpy, tetrahedrite," "At 49.9-50.2 - Coarse gr. siderite vein with minor pyrite-chalcopyrite-tetrahedrite," "At 53-53.3 . . . siderite veinlet with minor fine gr. chalcopyrite, tetrahedrite and coarse gr. galena," and "At 53.6-54 - Minor sulfides predom. chalcopyrite, galena, with minor tetrahedrite and pyrite." At a depth of 148 feet mention is made of "coarse greenish yellow sphalerite filling in dolomite veinlet."

Five core samples from hole 10 were assayed for CaF_2 only, representing an interval of 39.5 feet (from 231 to 270.5 feet of hole); their average grade is 28.43 percent CaF_2. If the first and last of the five samples are discarded, a 30-foot interval from 235 to 265 feet has an average grade of 37.44 percent CaF_2. Assays of two sludge samples representing 20 feet of hole from 244 to 264 have an average grade of 26.15 percent CaF_2.

To summarize what these three holes appear to indicate, it is possible that the 2.9 feet of sampled core in hole 1 represents the Northern

Star vein shown on the applicant's Exhibit C4, but because of the various altitudes for hole collars as well as hole locations given on maps, sections, and logs, it is impossible to project the core segment to the plane of Exhibit C4 with any degree of confidence. Exhibit C1 shows the altitude of the collars of holes 1, 6, and 10 as 6,611 and a survey(?) station near holes 40 through 43 shows that they were collared a little below 6,691. If these altitudes are assumed to be correct with respect to each other and the collar altitudes given in the logs are considered as having been determined by different surveys based on different bases, then the collar of hole 1 would be about 75 feet below the collar of hole 41 and the ore intercept in hole 1 would be about 95 feet below and about 40 feet southwest of the vein outcrop plotted on Exhibit C4. According to the strike and dip of the vein as plotted on Exhibit C1, its position at a depth of 95 feet should be about 30 feet southwest of its outcrop. In spite of the conflicting data the 2.9 feet of core sampled from hole 1 could conceivably represent the vein. But here any further interest in this vein ceases, at least insofar as encouragement from the drill logs is concerned. Hole 6 apparently showed only weak and scattered occurrences of metallic minerals throughout the entire 119 feet it was drilled through the dolomite. If the Northern Star vein were a strongly mineralized structure, surely it would have yielded sufficiently mineralized core within say 10 feet of the phyllite-dolomite contact to have been sampled, or at least to have been mentioned in the log with more enthusiasm than it has been. In hole 10, the "greenish yellow sphalerite" mentioned in the log at 148 feet is within a very few feet of the projected location of the vein and no other sulfide occurrences are mentioned as having been noted anywhere near the approximate projected location of the Northern Star vein. Other occurrences of minor sulfides are described in the hole 10 log as occurring in the phyllite, but if they are related to either the 2.9-foot vein and/or the mineral zone in hole 41 from which core samples 7 and 8 were taken, it is difficult to understand how they were apparently obliterated by the 55.8-foot zone of moderate- to fair-grade fluorite in hole 6. Collectively, holes 1, 6, and 10 indicate two zones of fluorite mineralization; one, a bit below ore grade, in the phyllite apparently is cut by each hole and one, of low-grade ore, is cut by hole 10 in dolomite just above the dolomite-quartz porphyry contact, suggesting that this area holds more promise for finding fluorite ore bodies than it does for finding those of silver.

The fourth area includes holes 7, 8, and 9. The coordinates given in their respective logs place them within 10 to 25 feet of their plotted locations on Exhibit C1. Figure 1, Section BB', is essentially in the plane of the holes according to the data given in the logs. The collar elevations are given as 6,684 on the logs of holes 7 and 8 and as 6,685 in the log of hole 9; in Exhibit C1 the elevations of the collars are 6,681 at holes 7 and 8 and 6,685 at hole 9.

Hole 7 crossed the phyllite-dolomite contact at a depth of 260 feet apparently near a synclinal fold axis; the dolomite-quartz porphyry contact was crossed at a depth of 414 feet. This is the only hole in this group for which any sample assays are given. A core sample taken between 108 and 109 feet assayed 0.01 ounce gold and 18.3 ounces silver per ton, 1.46 percent copper, 1.6 percent lead, and 0.9 percent zinc over a width of only 1 foot and has a total value of $42.14 per ton of which gold and silver make up 56.8 percent. A series of seven samples taken between 292 and 328 feet were assayed only for CaF_2 and indicated an average grade of 35.52 percent over a thickness of 36 feet. Three samples from 264 to 292 feet averaged less than 25 percent CaF_2 and for that reason are not included in the average of the other seven samples in this zone. Two adjacent samples taken from 350 to 369 feet averaged 29.72 percent CaF_2 over a thickness of 19 feet. Mention is made in the log of many occurrences in very minor amounts of pyrite, some sphalerite, galena, and tetrahedrite, the largest at 267½ feet being described as "small pod of galena and honey-colored sphalerite." The log mentions many occurrences of fluorite but apparently the above-cited samples represent the best ones.

Hole 8 encountered some difficulty. According to the log, no core was recovered from the first 66 feet; the hole was drilled to 151 feet but was then "lost from 83', 10' deflection wedge seated about 73' began to recover core about 81' in deflected hole." Started at an inclination of 60°, bearing east, tests indicated an inclination of 65° at 70 feet and 64° at 200 feet and 315 feet; no change in bearing is indicated. On Figure 1, Section BB', hole 8 is plotted as a continuous hole at an inclination of 60°.

Before wedging, the core contained "disseminated pyrite" between 101 and 110 feet. At 120.1 feet a "1-inch stringer of siderite with pyrite and possibly some lead-silver sulfide," and at 121.3 to 122 feet a siderite "veinlet contains fine pyrite, cpy. and possibly tetrahedrite and galena" are noted. After wedging the core contained a "thin fracture lined with galena and sphalerite" from 86 to 86.1 feet, and a "few very sm. pods of sphalerite" from 96 to 97 feet. Between 120 and 121 feet "1/4" frag. of vein matter, oxidized siderite; some cpy., and possibly some lead-silver-sulfides" and a siderite vein that "contains heavy py. over 1/4" sm. in center of vein" are noted. As the two segments of holes cannot be more than 2 or 3 feet apart, these showings of sulfides, which are thin veinlets with no apparent lateral continuity to speak of, are of little interest as indicators of a nearby potential metallic ore body. The rest of the hole, except for a possible coating of galena and/or sphalerite along a fracture at 183 feet, passed through three zones of apparently low-grade to sparse fluorite from about 125 to 165 feet, at 183 to 215 feet, and at 235 to 299 feet, respectively. From the descriptions in the logs and the lack of samples, the CaF_2 in the two fluorite ore zones indicated in hole 7 appear to have

become dispersed in the vicinity of hole 8. Hole 8 crossed the phyllite-dolomite contact at 165 feet and crossed the dolomite-quartz porphyry contact at about 312 feet.

Hole 9 crossed the phyllite-dolomite contact at 175 feet and continued in the latter rock to the end of the hole at 497 feet. Except for a zone from 114 to 166 feet in which fluorite is the principal mineral encountered, there is a zone from 62 to 110 feet and another zone from 159 to 350 feet in which small amounts of pyrite, chalcopyrite, galena, sphalerite, and tetrahedrite have been fairly consistently noted, but not in sufficient amounts to lead one to conclude that a silver ore body may be nearby.

The data from these holes collectively suggest the presence of two fluorite ore bodies of limited east-west extent. Little more than the low-grade disseminated occurrence of sulfide minerals that could be reasonably expected in "background" amounts near a dolomite-quartz porphyry contact were found except for a 1-foot vein of limited east-west extent.

In the fifth area there is but one hole, 26, located south of Bayhorse Creek at coordinates 10005N - 11180E on the applicant's Exhibit C1. The hole is also shown on his Exhibit C2, near the south end of Section CC'. Hole 26 was started in phyllite, crossed the phyllite-dolomite contact at 221 feet and bottomed in dolomite at 232.5 feet. The core log indicates "minor siderite and still less pyrite, chalcopyrite, tetrahedrite and fluorspar. Would assay less than 1 percent total base metal and iron and less than 5 percent fluorspar" from 115 to 122.5 feet. At 124 feet 2 inches "of pure pale green fluorite" is noted. From 157.5 to 159 feet the log cites "Late fractures filled with fluorite but rock 1-5% fluorite." "Less than 1% combined base metals and less than 5% CaF_2" is noted between 159 and 163.5 feet, and from 163.5-164.5 "phyllite has 20-30% fluorite as veinlets" is mentioned. About 5 feet of 1 percent fluorite is estimated at 180-190 feet. Two other strooks to zones are said to contain "yellow sphalerite" and "minor pyrite, sphalerite, and galena." The latter citation refers to 3 feet of core which "would assay 0.1% base metals."

<u>Summary of drill hole data</u>.--Holes 40, 41, and 43 exposed, at or near the phyllite-dolomite contact, a zone with an average width of 1.46 feet in which the principal metals are silver at 16.64 ounces per ton and copper at 2.66 percent; gold, zinc, and lead values are negligible and the width is far from minable, although silver makes up more than 50 percent of the total dollar value. Core from hole 23, drilled about 223 feet southeasterly from the plane of holes 40, 41, and 43 and about 120 feet northeasterly from the axis of the fold, was sampled and assayed for CaF_2 only and from the log it appears that the metallic sulfide showings were what might be

expected as background for any receptive rock near an intrusive contact. Hole 1, collared about 125 feet southeasterly from the hole 40-43 plane and about 185 feet southwesterly from the axis of the fold, cut at or near the phyllite-dolomite contact a zone 2.9 feet wide worth $20.74 of which the gold-silver values comprise 61.5 percent or 1.7 feet wide worth $26.60 of which gold and silver comprise 56.6 percent. This may represent an occurrence on the west limb of the anticline that is a continuation of the zone in holes 40, 41, and 43, or it may represent Northern Star vein. That it represents either is doubtful as hole 6 which crosses the same contact only 35 feet away, although it showed the presence of pyrite and minor amounts of galena, did not bring back any core considered to be worth sampling for any sulfides. Recovery of core in this interval was 100 percent. Also, hole 10, disclosed only minor sulfides. Only one other hole, hole 7, had any sulfide assay report. Here, about 150 feet above the phyllite-dolomite contact 1 foot of core showed a total value of $42.14 per ton of which gold and silver comprised 56.8 percent. In all, the rest of the core logged from 13 holes showed only sporadic occurrence of sulfide minerals in little more than "background" amounts.

Core was assayed for CaF_2 from holes 6, 7, and 10, as was sludge from hole 1. After the Squaw Creek contract was assigned to Idaton, Inc. (Docket No. DMEA-4366) the company made some mineral dressing tests and concluded that a cutoff grade of 25 percent CaF_2 was reasonable for the purpose of calculating a reserve tonnage. In considering the value of the drill core samples from the logs presented by the applicant, this factor was used. Assays from holes 1, 6, 7, and 10 indicate 6 lenses of fluorite, 3 in the phyllite and 3 in the dolomite. Possibly, the fluorite in the phyllite cut by holes 1, 6, and 10 represents one lens but in each hole CaF_2 is below ore grade; otherwise, there are three relatively small and disconnected lenses of ore-grade fluorite. This was discussed with Dooley Wheeler during one of his telephone calls to the office. He said much of the earlier drilling was done in the hopes that a minable fluorite deposit might be found, but it was concluded that there were no fluorite bodies of minable grade and sufficient size to give the company any interest in further exploration for that commodity.

<u>Data from nearby mines</u>.--Ross (1937, p. 116-134) describes seven mines within a radius of about 3 miles of the Northern Star claims. The most productive have been the Ramshorn mine and the adjoining Skylark mine to the west, the Beardsley mine to the east, the Pacific, Silver Brick, and Forest Rose mines to the north, and the Hoosier mine to the south. In all but the Hoosier mine production came from the Ramshorn slate or the Bayhorse dolomite. Referring to mines within the phyllite, Ross says on page 132:

"The most extensive workings are those of the Hoosier mine, on the south side of Bayhorse Creek. There are more tunnels in the phyllite on the north side of the creek than are shown on plate 16. All the tunnels are either caved at the portals or in such poor condition that they were not entered during the visit in 1928. The dumps show that the principal gangue minerals were massive white quartz and coarsely crystalline siderite. There is much pyrite in these gangue minerals and as replacement lenses in the phyllite. Small amounts of malachite and azurite testify to the presence of copper."

This suggests that the character and base metal content of material found on the dumps is essentially the same as that found in the drill hole cores.

Lack of coordinates on the applicant's Exhibit B1 and a total discrepancy between the altitudes given at tunnel portals on his Exhibit C1 and those shown on his Exhibit C2, Section CC', make a positive correlation impossible. However, the adits at 10321N - 11353E (alt. 6,726), 10620N - 11097E (alt. 6,764), and 10678N - 11097E (alt. 6,739) are most probably the Hoosier mine. The distance between the intersections of Section CC' on Exhibit C1 with the first and third of these adits is approximately the same as the distance between the two adits shown south of the Section CC'-Section BB' intersection on Exhibit C2. The total recorded production from the Hoosier mine according to Ross (p. 130) is:

Year	Tons	Ounces Au	Ounces Ag	Pounds Pb
1901	1		53	
1904	17	0.48	380	3,808
Total	17	0.48		3,808
	18		433	
Av. grade		0.027/T	24/T	11.2%

In terms of dollar value at $35.00 per ounce for gold, $1.29 per ounce for silver, and $0.158 per pound for lead this reported production is worth $67.29 per ton or has a total value of $1,174.89 of which gold and silver comprise 48.8 percent. Umpleby (1913, p. 70) places the value of the total production from the Hoosier mine at $70,000, but he gives no breakdown showing recorded production by years, tonnage, and metal content. Assuming an average value of $50.00 per ton, the total production would have been about 2,000 tons of ore.

Based on the available drill hole data and the data relative to nearby mines given by Ross (1937) and Umpleby (1913), the Northern Star property would probably qualify as a silver project, but in view of the available information and the amount of prospecting that has been done since the mid-1880's, it is concluded that the Garden Creek phyllite is not too favorable for the formation of silver-bearing ore deposits of significant size.

D. R. Maclaren

Enclosure
Distribution:
ONL
USGS(SRO)
Docket
Maclaren

NORTHERN STAR MINING CO., INC.
King Street Dock
Burlington, Vermont
05401

March 1, 1966

Mr. D. R. MacLaren
Field Officer, OME
Region I
United States Dept. of Interior
Geological Survey
So. 157 Howard Street
Spokane, Washington 99204

Dear Mr. MacLaren:

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star Mine
Custer County, Idaho

Please find enclosed herewith six copies of OME Form 52, Lien and Subordination Agreements.

Please also find enclosed a copy of our letter to the Howard National Bank dated September 2, 1965 requesting a loan. We forwarded a copy of a similar letter to the Merchants Bank to Mr. Wheeler on February 24, 1966 who in turn should have sent it along to you. We hope that by now you have received all necessary letters, forms, etc.

Very truly yours,

R. H. Wadhams
Vice President

RHW/eb
Enclosures
cc: D. P. Wheeler, Jr.

RECEIVED
MAR 3 1966
DMA

NORTHERN STAR MINING CO.
KING STREET DOCK
BURLINGTON, VERMONT 05401

September 2, 1965

The Howard National Bank
and Trust Company
111 Main Street
Burlington, Vermont

Attention: Mr. William M. Lockwood, President

Gentlemen:

This will confirm our conversation with you yesterday during which we made application for a loan in the amount of $127,500. Terms of approximately six years and an interest rate of 6 1/4% were requested.

As brought out in our conversations the monies are to be used to finance a silver exploration project in the Bayhorse Mining District, Custer County, Idaho where it is proposed to perform further diamond drilling on our properties. If the diamond drilling is encouraging it will be followed by driving of an inclined shaft and drifting on the ore structure.

We understand that you will discuss this matter further with your associates and advise us in writing as to whether or not your bank will approve the loan. We wish to mention that title to all the claims involved are in good standing.

Thank you for your assistance.

Very truly yours,

P. H. Wadhams
Vice President

PHW/eb

RECEIVED
MAR 3 1966
OHE

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
2/24/66	Kirkemo	120
	Selfridge	120
		110
2/24	C.L.E.	220
		120

AIRMAIL

FEB 24 1966

Memorandum

To: Field Officer, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

This is to confirm Mr. Kirkemo's conversation with you February 21 regarding your proposed request to Mr. Wheeler for additional information to complete the subject application.

The enclosed copies of correspondence to us from Mr. Wheeler on October 5, 1963, and Mr. Evans, on October 6, 1963, show that some of the material was received. Unfortunately, copies of this correspondence were not sent to you previously but they are enclosed with this letter.

In order to complete the application, copies of the Applicant's letters to the banks are needed, or in lieu of them, a recent financial statement of Northern Star Mining Co. Also required is a true copy of the underlying lease dated May 1, 1964, from Evigert Mines to Bayhorse Mines, Inc. which is referred to in the option agreement between Bayhorse and Unont dated June 1, 1964.

We are uncertain whether the patented claim is Silver Creek or Silver Creek. The application and lease agreement show the first name; the Lien and Subordination Agreements show the latter.

Article 8 of the Unont-Northern Star lease agreement September 1, 1964, may be adequate protection for the Government in the event the agreement is terminated and an OME contract or rights to royalties are in effect. However, if you have already requested Lien and Subordination Agreements, we will be certain that the Government's interests are protected.

(Signed) FRANK E. JOHNSON

Frank E. Johnson

Enclosures

HKirkemo/mm (2/24/66)
cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading
Mr. Selfridge
Mr. Kirkemo

23263

OME

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 24 1966
MINERALS CODE
110
120 M
120 A
Kirkend

GEOLOGICAL SURVEY
So 157 Howard Street
Spokane, Washington 99204
February 21, 1966

Air Mail

Mr. Dooley P. Wheeler, Jr.
General Manager
Umont Mining, Inc.
1355 Foothill Boulevard
Salt Lake City, Utah 84108

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star Mine
Custer County, Idaho

Dear Mr. Wheeler:

In reference to the third paragraph of a letter dated September 22, 1965, from the Chief, Office of Minerals Exploration, we have not yet received a copy of the lease dated May 1, 1964, between Swigert Mines and Bayhorse relative to Northern Star and Silver Creek patented claims.

? We have not received any Lien and Subordination Agreements executed by Umont Mines, Inc., from the claims it has leased to Northern Star.

Although we have received copies of letters from two banks declining to lend Northern Star Mining Co., Inc., the required funds, we have not received copies of letters to the banks requesting the loan If copies of the letters were not kept, a recent Northern Star financial statement should be submitted.

This request should not be construed as in any way assuring that a contract will be forthcoming, but by submitting the documents now, further delay might be avoided should a contract be offered.

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

DRMacLaren/mls

cc: OME
Director's Reading File

cc: Mr. L. P. Evans w/one set MME Form 52
President
Northern Star Mining Co., Inc.
King Street Dock
Burlington, Vermont

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
February 15, 1966

Air Mail

Mr. Dooley P. Wheeler, Jr.
General Manager
Umont Mining, Inc.
1355 Foothill Boulevard
Salt Lake City, Utah 84108

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star Mine
Custer County, Idaho

Dear Mr. Wheeler:

This refers to a letter dated September 22, 1965, from the Chief, Office of Minerals Exploration, to the Northern Star Mining Co., Inc., and to your letter of September 28, 1965, to Frank E. Johnson, Chief, OME.

I can find nothing in our field files to indicate that any of the documents requested in the second and third paragraphs of the September 22d letter have been received, except a copy of an Option Agreement dated June 1, 1964, between Bayhorse Mines, Inc., and Umont Mining, Inc., and a Lease Agreement dated September 1, 1965, between Umont Mining, Inc., and Northern Star Mining Co., Inc.

Still to be received are:

Lease and Option dated August 2, 1965, between Northern Star Mining Company, Inc., and Umont Mining, Inc., which is mentioned on page 1 of the application. wrong date.

True copies of all other documents that would form the chain between the owners and Northern Star Mining Company.

We have received no copies of documents between Swigert Mines and Bayhorse (or Umont?).

The fourth paragraph of the September 22d letter refers to MME Form 52 executed by Mr. Swigert which was returned because, seemingly he is not the owner of the unpatented claims. The second paragraph of

your September 28th letter indicates that Mr. Swigert, or Swigert Mines, is the owner of Northern Star and Silver Creek patented claims and that the unpatented Iowa and Florida claims are owned by Bayhorse Mines, Inc. The returned MME Form 52 was executed by "R. G. Swigert, Swigert Mines," who cannot execute Lien and Subordination Agreements for the claims the company does not control. For that reason, two sets of MME Form 52 were enclosed, one to be executed by Bayhorse Mines, Inc., for the two unpatented claims, and the other to be executed by Mr. Swigert or by Swigert Mines, whichever is the owner, for the two patented claims.

If Mr. Swigert is an officer of Swigert Mines and Bayhorse Mines, Inc., he can execute both sets of the Agreements but the Certificate at the bottom should also be executed and the Corporate Seal attached. If Mr. Swigert as an individual owns the patented claims, the Certificate and Corporate Seal are not pertinent. In the latter case, the signature should be the same as it appears on the lease or other document conveying the property rights to Bayhorse (or to Umont). Without copies of the leases I cannot be more specific.

I can find no Lien and Subordination Agreements executed by Umont Mines, Inc., for the claims it has leased to Northern Star. These may have been sent to Washington, but in order to save time if they have not, I will enclose a set of MME Form 52 with the company's copy of this letter.

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

cc: Mr. L. P. Evans w/one set MME Form 52
President
Northern Star Mining Co., Inc.
King Street Dock
Burlington, Vermont

NORTHERN STAR MINING CO., INC.
King Street Dock
Burlington, Vermont
05401

October 6, 1965

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Office of Minerals Exploration
Department of Interior
Washington 25, D. C.

Attention: Mr. Frank E. Johnson, Chief

Gentlemen:

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.

In answer to your letter of September 22, Paragraph 2, we wish to state that we unfortunately put an incorrect date and description on Page 1, Item 2a of our application, since there is only one lease agreement between Umont and Northern Star. The correct date as reflected on the agreement is September 1, 1965.

In answer to Paragraph 3 of reference letter, we are enclosing a copy of the agreement between Bayhorse Mines and Umont as requested. left side of docket.

Regarding Paragraphs 4, 5 and 6, we believe that the information required is being taken care of by Mr. Wheeler from our Salt Lake City office.

Very truly yours,

L. P. Evans, Jr.
President

LPE/eb

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
10/4	Selfridge	130
10/5	Johnson	110
		220
		120M

OCT 5 1965

Northern Star Mining Co., Inc.
King Street Dock
Burlington, Vermont 05401

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Gentlemen:

We have now received the requested drill hole data from Mr. D. P. Wheeler, Jr. Although we have not received certain legal documents, because of the lateness of the season we are referring the application to Mr. D. R. MacLaren, Field Officer, Region I, South 157 Howard Street, Spokane, Washington 99204, for further consideration. Should he require additional information, he will so inform you.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to: Mr. D. P. Wheeler, Jr.
Vice President
Northern Star Mining Co., Inc.
1355 Foothill Blvd.
Salt Lake City, Utah 84108

GCSelfridge/gla (10-4-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
OME Region I
Mr. Selfridge

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
10/4	Selfridge	130
10/5	Johnson	110
		220
		120M

OCT 5 1965

Memorandum

To: Field Officer, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Enclosed are copies of the logs of Holes Nos. 1, 6, 7, 10, 25, and 26. Although we have not received the legal documents, we are referring the subject application to you for a field examination if warranted, and a report thereon.

It might be well to learn what results were obtained from diamond drill Holes Nos. 7, 8, and 9 shown on cross section AA', Exhibit C-2. Possibly consideration should be given to drilling the line of Holes Nos. 49 to 53, inclusive, before drilling the line of Holes 44 to 48, inclusive, which is between holes drilled both to the north and to the south. Judging from the available information, potential at this property seems limited and it probably does not warrant more than drilling at the most without any shaft sinking or drifting.

If a contract is recommended here and under OME-6495, Beardsley Gulch Mining Co., Inc., possibly the supervisory and technical costs of full-time personnel could be divided between the two properties.

(signed) FRANK E. JOHNSON

Frank E. Johnson

Enclosures

P.S. Also enclosed is a copy of Joy Manufacturing Company's bid dated September 29, 1965.

GCSelfridge/gla (10-4-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Selfridge (2)

23263

September 28, 1965

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Mr. Frank E. Johnson, Chief
Office of Minerals Exploration
U.S. Department of the Interior
Washington 25, D.C.

Dear Mr. Johnson:

Re: OME - 6499 (Silver) Northern Star Mining Co., Inc.

The second and third paragraphs of your letter of September 22, 1965, can best be handled by the Burlington office.

The fourth paragraph, dealing with MME Form 52 executed by Swigert, can best be handled by me if a new Form 52 is required. Swigert owns the patented claims and is an officer (Vice President) of Bayhorse Mines, who own the ~~patented~~ unpatented claims. Consequently, we assumed that his signature would suffice since he is closest to the project. If the signature will not suffice, we will get proof of his authority to sign or get a signature from O. J. Salisbury, who is President of Bayhorse Mines. ← corrected

~~Under separate cover I shall send~~ Enclosed please find logs and assays of holes 25, 26, 36, 1, 6, 7 and 10.

I cannot get other bids on the bulldozer work that will be competitive with Swigert, principally because of excessive mobilization for anyone else, but if you need the bids anyway I shall get them. Joy and Longyear are being asked to bid on the job and their bids will be sent on when they arrive.

Yours very truly,

DPWh

Dooley P. Wheeler, Jr.
General Manager

DPW:mo

(219) 872-7221

JOY MANUFACTURING COMPANY
900 WOODLAND AVENUE • MICHIGAN CITY, INDIANA 46360

OME-6499

September 29, 1965

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OCT 5 1965
INITIALS | CODE

Northern Star Mining Co., Inc.
1355 Foothill Blvd.
Salt Lake City, Utah

Attn: Mr. D. P. Wheeler

Gentlemen:

Mr. K. A. Lehner has requested that we submit a proposal to you on your drilling project near Bayhorse Mine, Idaho. Mr. Lehner informed us that approximately 3000 feet of NX wireline drilling will be drilled out in holes ranging from three to five hundred feet depth. Water is available from a flume close by. The terrain is such, that a truck mounted rig can be used. Based on the above information we submit the following prices for your consideration:

	NX Wireline
From surface to 500 ft.	@ $5.25 per ft.
Reaming for casing, if necessary	@ 3.00 per ft.
Casing lost, ordered left in place	@ 3.00 per ft.
Plugging, and or cementing of drill holes for lost circulation, if necessary -	@ 12.00 per hr.
Drilling mud used -	@ 1.40 per 50 lb. bag
Cardboard Core Boxes	@ 1.25 Ea.
Acid Surveys -	@ 12.00 per hr.
Standby for your convenience -	@ 10.00 per hr.

Owner to furnish access roads and level setups.

Mobilization charge - lump sum 450.00

September 29, 1965

We understand you wish to begin drilling on this project, the early part of April, 1966. We will be in a position to furnish a drill and the necessary equipment at that time. We will operate the drill on a two shift basis, six days per week.

Thank you for asking us to submit a quotation.

Yours truly,

JOY MANUFACTURING COMPANY

J. M. Murray, Manager
Contract Drill Division

JMM/gk

UMONT MINING, INC

1355 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

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	~~120~~

September 28, 1965

Mr. Frank E. Johnson, Chief
Office of Minerals Exploration
U.S. Department of the Interior
Washington 25, D.C.

Dear Mr. Johnson:

Re: OME - 6499 (Silver) Northern Star
Mining Co., Inc.

The second and third paragraphs of your letter of September 22, 1965, can best be handled by the Burlington office.

The fourth paragraph, dealing with MME Form 52 executed by Swigert, can best be handled by me if a new Form 52 is required. Swigert owns the patented claims and is an officer (Vice President) of Bayhorse Mines, who own the patented claims. Consequently, we assumed that his signature would suffice since he is closest to the project. If the signature will not suffice, we will get proof of his authority to sign or get a signature from O. J. Salisbury, who is President of Bayhorse Mines.

corrected to "unpatented" [illegible]

Enclosed please find ~~Under separate cover I shall send~~ logs and assays of holes 25, 26, 36, 1, 6, 7 and 10.

I cannot get other bids on the bulldozer work that will be competitive with Swigert, principally because of excessive mobilization for anyone else, but if you need the bids anyway I shall get them. Joy and Longyear are being asked to bid on the job and their bids will be sent on when they arrive.

Yours very truly,

Dooley P. Wheeler

Dooley P. Wheeler, Jr.
General Manager

DPW:mo

Bayhorse
Drill logs(2)

Drill Log

Amendment #2 Drilling, Bayhorse Project

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Hole #25

Exploration of Garden Creek Phyllite, Garden Creek Dolomite and Quartz Porphyry in crestal area of Bayhorse anticline between Northern Star and Upper Eagle Adits north of Bayhorse Creek.

For plotted location refer to Geologic Map of Hoosier Area 1" = 100' by DPW, Jr. 10-15-59

Elevation--6700 feet
Depth of Hole--420 feet 4 inches
Started April 21, 1960 - Stopped May 18, 1960
Driller--R. V. Campbell
Core Size--Nx to 135 feet Bx 135 - 420'4"
Hole vertical

From	To	Recovery	Description
0	- 20	Fair	Phyllite Talus
20	- 27.5	Fair	River boulders from Ramshorn area
27.5	- 55	80 ±	Phyllite - buff and pyritic. Locally rusty. Bed angle to core axis 73 - 80°. Very minor galena, sphalerite blebs & veinlets.
55	-108'6"	100%	Phyllite - dark gray with light gray thin sandy beds. Pyrite 1-10% with most pyrite tending to be in sandy beds. Bed angle to core axis 75 - 85°. Schistosity 65° to core axis. Very minor blebs and narrow veinlets of quartz, siderite, pyrite, chalcopyrite, tetrahedrite, sphalerite and galena specifically recorded at 68.5', 85.5', 97'.
108'6"	-109'9"	100%	Fault Zone with 75 - 90° angle with core axis. Crushed, sericitized and pyritized. Bottom 3" is buff coarsely crystalline, siderite with minor quartz, cpy, tetra, and galena. Siderite vein has 80 - 85° angle with core axis.
109'9"	-114'	100%	Dolomitic phyllite - light gray and thin bedded. Very finely crystalline.
114	-122	100%	Dolomite - light gray, massive, faintly laminated. Finely crystalline (FC). Locally shattered and recemented with quartz, pyrite, chalcopyrite, tetrahedrite and sphalerite but such zones have less than 1% combined sulfides. One such shatter zone at 118' has 60° angle with core axis. This zone has ½" wide milk quartz, yellow sphalerite veinlet cutting it.
122	-126	100%	Phyllitic Dolomite - a very dense intraformational breccia.

From	To	Recovery	Description
126	-156'6"	100%	Dolomite - light to medium gray, massive finely crystalline. Locally faintly laminated. Appears to have been shattered or brecciated mildly and recemented. Recemented in most cases completely by coarsely crystalline dolomite and quartz. Some quartz ha s pyrite and sphalerite in it. Some breaks incompletely recemented with quartz and dolomite. Crystals locally coated with pyrite chalcopyrite and tetrahedrite. Bed angle to core axis - 80°±. Bottom 2 feet has black thread-like seams 20 - 25° to core axis which are probably pyrite and tetrahedrite.
156'6"	-181'	100%	Dolomite - light gray, massive bedded finely crystalline, dense. Vague bedding at 70° - 75° to core axis. Very few pyrite-tetrahedrite specks. At 158 - 158.5 dolomite shattered and recemented with fluorite. Fluorite seams have 10-30° angle with core axis. At 171' a 1/5" Fluorite seam has 5 - 10° to core axis. Also at 171 is 1/10" quartz, cpy, tetrahedrite seam with 45° angle to core axis.
181	-208'	90%	Dolomite - finely crystalline, light gray. Locally buff and veined with quartz and limonite. Quartz veinlets have 50-90° angle with core axis.
208	-218	20%	Buff, rust brown, soft fluoritic dolomite. Possibly a sand.
218	-221	90%	Fluorite - 50 - 85% CaF_2.
221	-224.5	70%	Dolomite - buff, shattered veined with fluorite. Core 10-20% CaF_2
224.5	-226	100%	Dolomite - lithographic, very pale greenish gray. Veined with fluorite. Core 5 - 10% CaF_2.
226	-236.5	100%	Fluorite vein - 50%± CaF_2 over 10.5 foot length. Angle of vein with core axis - 45°±.
236.5	-260'6"	100%	Dolomite - very light gray, pinkish, dense, very finely crystalline. Minute veinlets of chalcopyrite, pyrite and tetrahedrite. Bottom 9" is siliceous and pyritic.
260'6"	-420'4"	98%	Quartz Porphyry. Probably a sill in the crest of the Bayhorse anticline but a dike on the west flank of the anticline. Contact of Q.P. with dolomite has 80° angle with core axis and upper 5/8" of sill is chilled to dense pale greenish rock. At 163' a ¼" qtz, sph, gn, tetra, cpy, py veinlet has 45° angle to core axis in Quartz Porphyry. This ¼" veinlet is in turn cut by irregular seam of dark sulfides with 10° angle to core axis and near 75° angle difference in strike to ¼" vein.

260'6" - 283' the Quartz Porphyry is light greenish gray with round 1/8" in diameter brownish glassy quartz phenocrysts and ¼" diameter white blotches having green cores, locally. Greenish cores to phenocrysts are assumed to be chloritic centers of sericitized feldspar

phenocrysts. Ground mass is dense very finely crystalline material, probably silica.

283 - 335 - Quartz Porphyry - same as above but minor feldspar cleavage showing up on rims of white blotches and as isolated small crystals of feldspar. 1/8" - 4" wide quartz - siderite veinlets and limonite seams having 45° angle with core axis common but not abundant. Veinlets and seams show no base metal minerals.

335 - 374 - Quartz Porphyry - Same as above but rock darker green and locally purplish and feldspar crystals less altered as indicated by cleavages on white rims around chloritic centers and a few well formed feldspar crystals completely unaltered.
In this interval there is a moderate amount of fresh feldspar and the rock was easier drilling (not so hard) than above the 335' depth. Green cores to feldspar abundant and dark.

374 - 420'4" - Quartz Porphyry - Greenish gray locally purplish or maroon. Quartz phenocrysts colorless rounded and 1/8" in diameter. Feldspar phenocrysts (probably orthoclase) $\frac{1}{4}$" - $\frac{1}{2}$" across. Fresh feldspar in maroon parts as well as greenish parts. Green cores still common in feldspars. Rock drilled firm but not as hard as above the 335 foot depth. Rock in this interval has many small specks of yellow mineral in both green and maroon parts. The 335 - 420'4" interval, especially in zones of white clay lined vertical cracks, has the feldspar altered to a soft chalky material. Vertical cracks most abundant from 385 - 405 feet.

Dooley P. Wheeler Jr.

Dooley P. Wheeler, Jr.
May 23, 1960

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Drill Log

Amendment #2 Drilling, Bayhorse Project

Hole #26

Exploration of Garden Creek Phyllite and upper contact of Garden Creek dolomite in crestal area of Bayhorse anticline in Snowslide Gulch

For plotted location refer to Geologic Map and Section CC' of Hoosier Area, 1" - 100' scale, by DPW, Jr., 10-15-59

Elevation - 6811 feet

Depth of Hole - 232'6"

Started May 20, 1960 and stopped May 31, 1960

Driller - R. V. Campbell

Core Size - Nx to 105 feet, Bx 105 feet to 232 feet 6 inches

Hole Vertical

From	To	Recovery	Description
0'	16.5'	25%	Recent Talus - slate phyllite limestone, dolomite and acid igneous rocks.
16.5	48.5	25%	Older Talus - mostly phyllite but some limestone and dolomite. Talus locally cemented by druzy calcite.
48.5	115	95%	Phyllite - dark gray to black, locally oxidized to buff or rust color. Local medium gray limy and sandy beds. Beds highly folded in detail but average bed attitude 70° to 80° to core axis. Schistosity 45° to core axis. At 76.5 a barren light walled milk quartz vein has 75 - 80° angle with core axis.
115	122.5	98%	Milk Quartz vein with minor siderite and still less pyrite, chalcopyrite, tetrahedrite and fluorspar. Would assay less than 1% total base metal and iron and less than 5% fluorspar. Black phyllite common in quartz probably as breccia fragments. Top part of quartz vein has thin black shear planes giving ribbon structure. Quartz and shear planes are parallel to bedding which is at 70 - 80° to core axis.
122.5	141.5	98%	Phyllite - dark gray. Local thin limey beds. At 124 feet is 4" wide siderite-fluorite vein with 20° angle to core axis. Hanging wall is 2" width of pure siderite. Footwall is 2" width of pure pale green fluorite.
141.5	146.5	98%	Milk Quartz - Phyllite zone - From 141,5 - 144 quartz increased downward. 144 - 145' phyllite bed approx. 90° to core axis. 145 - 146.5 half milk quartz and half phyllite. Top of Milk Quartz - Phyllite zone has 90° angle with core axis. Bottom of zone at 146.5' has striae at 85° to core axis.

From	TO	Recovery	Description
146.5	156.5	98%	Phyllite, dark gray beds finely folded but average perhaps 80° to core axis. Schistosity 45° to core axis. At 155' is 6" wide rusty recemented quartz breccia zone.
156.5	157.5	95%	Phyllite - Sheared, brecciated and distorted.
157.5	159	100%	Sill or Dike - light gray fine grained volcanic ? rock. A breccia similar to but finer than the Anomaly A volc. breccia. Late fractures filled with fluorite, but rock 1-5% fluorite. Upper igneous contact has 80° angle with core axis. Lower igneous contact has 60° angle with core axis.
159	163.5	98%	50% Milk Quartz and 50% Phyllite. A quartz cemented shatter zone. Minor pyrite, cpy, sphalerite and late fluorite. Less than 1% combined base metals and less than 5% CaF_2.
163.5	172.5	100%	Phyllite - dark gray, slightly shattered and then cemented by fine white-pinkish quartz, dolomite, rhodochrosite ? veinlets. Minor tetrahedrite in pink parts. 163.5 - 164.5 - phyllite has 20 - 30% fluorite as veinlets at 10 to 30° to core axis. At 166.5 feet is 9" wide light gray fine grained volcanic dike or sill with 30° angle to core axis. General bed attitude = 85° to core axis. General schistosity attitude = 45° to core axis.
172.5	173.5	50%	Oxidized recemented siliceous breccia. No base metal sulfides. Breccia zone angle with core axis near 90°.
173.5	190	100%	Phyllite - dark gray beds uniformly thin and 90° to core axis. 1% fluorite in lower 1/3rd of interval.
190	199	100%	Phyllite - dark gray shistose beds distorted and locally brecciated but recemented with phyllite. Basal beds 1' thick is dark dense dolomite.
199	212	100%	Phyllite - dark gray, a few thin pyrite beds and light gray silty beds. Schistosity obscure or absent. Evidence of intraformational bed scouring. At 210' and 210.5' Milk Quartz veinlets ½ to 1/10" wide have yellow sphalerite. Veinlets typically tight walled and phyllite unbleached along veinlets.
212	221	100%	Phyllite - dark gray same as above but locally a breccia that appears to be an intraformational breccia for the breccia is very firm and the matric is phyllite. One tight milk quartz veinlet ¼" wide. Where beds unbrecciated they have 80° to core axis.
221	224	100%	Dolomite - light to medium gray, dense, finely crystalline, laminated but massive. Slightly shattered and recemented with quartz and cream colored dolomite containing minor pyrite, sphalerite and galena. Core would assay approximately 0.1% base metal.
224	232.5	100%	Dolomite - light gray, finely crystalline, massive, Locally brecciated and sheared but recemented with finely crystalline light gray dolomite. Probably an intraformational breccia. Very few seams and they are filled with barren white dolomite and quartz with very minor pyrite. The seams are predominately at an acute angle to the core axis.

June 1, 1960

Dooley P. Wheeler, Jr.

UMONT MINING, INC.

Drill Record

Hole no.- 36

Type of Drill- Core

Location- Bayhorse District, Custer County, Idaho
Sec. 3 ,T 12 N ,R 18 E
Local Coordinates N , E 60300
Claim Overlap area of Northern Star and Hoosier, Survey No. 2604
Elevation 6260
Other Northeedge of road on north side of creek.
Direction Vertical Inclination -90°
Started August 14, 1964, Completed
Depth 1015 ft , 0 - 568 NX, -1015 BX, AX.

Project Name: Bayhurse
Drill Contractor: Boyles Bros. Drilling Co.
Logged by: D. P. Wheeler, Jr.
Etch test: at 500 feet intervals
Deflection Survey: to be done if needed.
Geophysical Survey: to be done; Heat Flow by Harvard
Water Table: 100 feet more or less

Footage	% Recovery	Description- lithology, mineralogy, alteration, oxidation, sample description and assays
0 - 13	15	Gravel - glacial?
13 - 119	100	Dolomite - light gray, dense, finely crystalline. Bed angle with core 75°± Minor coarse greenish fluorspar. Also very minor pyrite, tetrahedrite chalcopyrite.
119 - 121	0	Void
121 - 122.5	100	Brown dense dolomite
122.5- 126.5	0	Void
126.5- 127	100	Brown dense dolomite
127 - 160	100	Dolomite - light gray, dense, finely crystalline. Bed angle to core = 80°
160 - 187	100	Quartz Porphyry - highly sericitized, eyes and veinlets of limonite common. Specimen from 181'.
187 - 245.5	100	Quartz-Orthoclase Porphyry - Gray and greenish gray with white orthoclase eyes ½" long or across. Some orthoclase is mealy. 208-225' = Pits, blebs & veinlets of limonite after pyrite or siderite. 225-245.5' = Reaction rims of white, ring green cores of orthoclase.
245.5- 246	100?	Gouge - appears to have streaks parallel to core.

UMONT MINING, INC.
Drill Record

Hole no.- 36
Type of Drill- core

Location- Bayhorse District, Custer County, Idaho Project Name Bayhorse

Footage	% Recovery	Description- lithology, mineralogy, alteration, oxidation, sample description and assays
246 - 264	40	Siliceous Quartz Porphyry - dense quartz. Has many specks (10-20%) of limonite after pyrite and siderite.
264 - 270	100	Quartz-Porphyry - Light gray, highly sericitized and minor pyrite-tetrahedrite in thin veinlets.
270 - 370	100	Quartz-Orthoclase Porphyry - Light greenish gray. Some soft white orthoclase among hard white with local or uncommon reaction rims around rare green core. Some red stained quartz.
370 - 382	100	Qtz.-Orthoclase Porphyry - Light greenish gray, some soft white orthoclase among hard white with local or uncommon reaction rims around rare green core. Some red qtz.
370 - 382	100	Qtz.-Orthoclase Porphyry - Rusty more hydrothermally altered and siliceous. At 377' - 377.5' qtz limonite vein with 30° angle to core axis. (60° dip)
382 - 570.5	100	Qtz.-Orthoclase Porphyry - Locally shattered and rust coated but otherwise like 270' - 370' internal. Many breaks appear parallel or near parallel to core. Chalky orthoclase increases downward in last 30'. (500' - etch test shows hole inclined-89°)
570 - 572	100	Vuggy Fluorspar - Marble and dark banded shale - Shale ~~has~~ beds 60°-90° angle with core axis. Shale bleached to dense greenish buff in most parts.
572 - 591	100	Qtz.-Orthoclase Porphyry - Chalky orthoclase
591 - 668.4	100	Qtz.-Orthoclase Porphyry - 382 - 570.5 type.
668.4 - 669.5	100	Quartz-Pyrite-Fluorite Vein - Vein angle to core axis = 30°.
669.5 - 783	100	Qtz.-Orthoclase Porphyry - 382 -570.5 type but poss. more altered.
783 - 786.5	100	Yellowise, Soft, Altered - Qtz. Porphyry. At 784 a 1¼" massive pyrytohedral pyrite vein (vuggy) cuts 10° to core axis. Sample taken.
786.5 - 930	100	Qtz.-Orthoclase Porphyry - Fresh except for local rusty streaks 786.3-800' parallel to 784 vein.
930 - 959	100	Qtz.-Orthoclase Porphyry - Phenocrysts of Orthoclase are chalky and rock is crumbly. Cores poorly.
959 - 1015	100	Qtz.-Orthoclase Porphyry - Fresh at bottom. No chalky orthoclase at bottom. (hole 5° off vertical at bottom = 85° hole.) Local pyrite blebs. Oxide zone 4" wide 976. Grades from chalky orthoclase downward to hard orthoclase at bottom.

DPW
9-28-64

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AMCO EXPLORATION INC.

THE AMERICAN METAL COMPANY OF COLORADO

DIAMOND DRILL HOLE LOG

PROJECT BYNHORSE STATE IDAHO COUNTY CUSTER

HOLE NO. 1

Location: Northern Star Claim Sec. 3 T12N R 10E Coordinates 111,515
110,365

Elevation: At Collar 6630 At Bottom _____ Total Depth 103

Inclination: At Collar -30° At Bottom not surveyed Bearing N 80° E

Size of Core: NX 0 To 30, BX 30 To 76, AZ 76 To 103 EX _____ To _____

Core Recovery: NX 25 % BX 35.0 % AX 90 % EX _____ %(not drilling EX)

Date: Hole Started October 30, 1952 Hole Completed [illegible]ber 1, 1952

Samples Assayed:

CORE SAMPLES

No.	INT	FROM	TO	AU	AG	CU	PB	ZN			
6	[illegible]	[illegible]	96	0015	6.7	0.10	0.0	0.[illegible]			
7	[illegible]	76.6	83	0010	11.4	1.16	0.0	1.1			

SLUDGE SAMPLES

INT	FROM	TO	AU	AG	CU	PB	ZN			
10	31	41				0.0	0.5	[illegible]		
17	41	58.7					0.2	23.22		
03	58.7	62					0.6	27.[illegible]3		
11	62	73					[illegible].0	[illegible]		
11	[illegible]	87		1.	[illegible]00	0.	.1			

Special Tests: None

~~THE AMERICAN MEXALX COMPANY OF COLORADO~~

DIAMOND DRILL LOG

PROJECT BAYHORSE HOLE NO. 1 DATE Nov. 2, 1952

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
0	22	22	0	0	Rockslide
22	24	2	0.5	25	Qtz. breccia - Milk qtz. fragments cemented by gray silica.
24	29	5	1.0	20	Phyllite breccia with qtz. and limonite fragments in it = first 4" core. Phyllite breccia shattered and partly cemented by f.g. fluorite - core 5% flu.
24	29	Ia[illegible] 3" core.		or	Qtz. breccia-same as 22-24 interval but breccia cemented by fine grained white fluorite and some quartz quite massive.
29	30	1	[illegible].5	50	Qtz. breccia - first 3" core)Both fluoritic Phyllite breccia - last 3" core)
30	33	3	[illegible].0	66	Phyllite - has brown limonite laminae parallel to bedding. Bed or laminae (gray) core angle = 5°. Local cracks and bx. cemented by fluorite
33	38	5	1.0	20	Phyllite breccia - Gray to brown, contains minor qtz. fragments. Cracks and breccia cemented by vuggy, cube, colorless, f.g. fluorite. 10-15% CaF_2.
38	40	2	1.5	75	" " " " "
40	42.5	2.5	1.7	80	" " " " "
42.5	46.5	4.3	1.0	22	" " " " "
46.5	50.0	3.5	1.5	43	" " " " "
50.0	[illegible]	12.[illegible]	2.0	17	Qtz. breccia-milk qtz. fragments cemented by cube fluorite and gray fine grained qtz.
62.0	[illegible]	1.0	1.0	100	Milk qtz. - coarse grained, massive, barren
63.0	[illegible].0	5.0	1.1	21	Milk qtz. recovered for first 6" of recovered core. Phyllite recovered for last 8" of recovered core. Core angle = 60°
68.0	[illegible]	5.0	1.5	30	Qtz. milk to gray with limonite and pyrite 10% of core, and 1-5% siderite first 12" recovered core. Last 6" core massive gray to brown phyllite. (swivel barrel).
73.0	75.0	2.0	1.5	75	Milk qtz. - has 5% + limonite as stringers and irregular patches.
75	78	3.0	.6	20	" " " " "
78	78.4	.4	.3	75	Shattered phyllite - cemented by quartz and minor pyrite.
78.4	79.6	1.2	1.1	91	Siderite shattered and cemented by pyrite, chalcopyrite and traces of tetrahederite.

Siderite xls 1" + in length.

AMERICAN EXPLORATION INC.

THE AMERICAN METAL COMPANY OF COLORADO

DIAMOND DRILL LOG

PROJECT DAYHORSE HOLE NO. 1 DATE Nov. 2, 1952

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
79.6	81.3	1.7	1.6	94	Laminated, sheared smeared and brecciated phyllitic dolomite. Cemented by quartz, pyrite, siderite and minor chalcopyrite.
81.3	83.5	2.2	1.0	45	Milk Quartz - Contact with sulfides has 60° angle to axis of core. One crack in qtz. has fl. cubes.
83.5	90.5	7.0	7.0	100	Dolomite cemented by stockwork of milk qtz. veins and recrystallized coarse dolomite. Dolomite rock f.g. med. gray.
90.5	103.0	12.5	12.5	100	Dolomite - light gray, fine grained massive. Paint scarce, bedding laminations have 45° angle with core axis. Veinlets of coarse milk quartz and coarse dolomite scarce but present and have local clusters of pyritehedral pyrite.

Dorley P. Wheeler

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AMCO EXPLORATION, INC.

THE AMERICAN METAL COMPANY OF COLORADO

DIAMOND DRILL HOLE LOG

PROJECT BAYHORSE STATE IDAHO COUNTY CUSTER

HOLE NO. 6

Location: Northern Star Claim Sec. 3 T12N R 10E Coordinates N 11512 E 10353

Elevation: At Collar 6630 At Bottom _____ Total Depth 240

Inclination: At Collar -55 At Bottom _____ Bearing N 83° E

Size of Core: NX 0 To 33, BX 33 To 113, AX 113 To 240, ~~EX To~~

Core Recovery: NX 20 % BX 85 % AX 97 % EX ____ %

Date: Hole Started December 7 Hole Completed December 11, 1952

Samples Assayed:

CORE SAMPLES

No.	Feet INT	FROM	TO	AU	AG	CU	PB	ZN	CaF_2		
26	10.3	45.7	56						30-50%	estimated	
27	7	56	63						4.01	(5% est.)	
28	10.5	63	73.5						12.58	(10% est.)	

SLUDGE SAMPLES

No.	INT	FROM	TO	AU	AG	CU	PB	ZN	CaF_2		
25	12	38.5	50.5						29.68		

Special Tests: Over all recovery 87% 55.25

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DIAMOND DRILL LOG

PROJECT Bayhorse HOLE NO. 6 DATE December 11, 1952

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
0	15	15			Regolith
15	18	3	2.5	85	Quartz - milk quartz and brecciated and cemented by gray quartz.
18	38.5	20.5	2.0	10	Shattered phyllite - dark gray and iron stained. Cores as fragments. The larger fragments and short cores from 29 feet on down have 5% + CaF_2 cubes cutting vuggy cracks.
38.5	45.7	7.0	3.5	50	Shattered milk quartz - Cores as fragments which have veinlets of fluorite. Core recovered has 5 - 15% CaF_2.
45.7	56	10.3	10.3	100	Fluorite and phyllite - Fluorite cements cracks of highly shattered black to brown phyllite. Rock 25-50% CaF_2.
56	73.8	17.8	17.8	100	Shattered vuggy phyllite - Cemented by 5-10% CaF_2. Basal 2' has fragments of milk quartz CaF_2 lines vugs and fills cracks in phyllite and quartz. Local minor pyrite seams.
73.8	74.0	0.2	0.2	100	Siderite - pyrite vein - has 80-85° angle with core.
74.0	74.4	0.4	0.4	100	Sheared and smeared phyllite - has minor pyrite in compressed matrix.
74.4	79.0	4.6	1.5	33	Gouge and hydrothermal alteration zone. Light gray and soft. Greenish gray clayey part of core next to light gray part. Contact of color change has 0° angle.
79	82	3.0	3.0	100	Fissile phyllite - black and sheared. Schistosity has 80° angle with core.
82	90	8	7	88	Phyllite - black, laminated locally dolomitic. Bed angle with core - 70° - 75°. At 89' is 1" wide black phyllite. shear zone with 70° core angle parallel to bedding and some pyrite and dolomite in zone.
90	95	5	5	100	Dolomite - dark gray, phyllitic, fine grained locally sheared and shattered. Shatter veinlets cemented locally by dolomite containing pyrite and minor galena.
95	104.5	9.5	9.5	100	Sheared and brecciated phyllite - Black, compressed, hard, phyllite breccia. Has few angular med. gray dolomite fragments. At 95.3' a 1/2" qtz. vein with 60° core angle has coarse galena in it. Core angle of sheared quartz at 104.5 - 20°.
104.5	108	3.5	3.5	100	Shattered and recemented dolomite breccia - fine grained pyrite in one seam with 30° angle to core.

THE AMERICAN METAL COMPANY OF COLORADO

DIAMOND DRILL LOG

PROJECT Bayhorse Project HOLE NO. 6 DATE Dec.11,1952

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
108	207.5	99.5	95	97	Dolomite - light gray, fine grained, massive. Has the odd veinlet or bleb containing coarse yellow sphalerite or fine grained pyrite and tetrahederite. Faint bedding has 80°- 90° angle with core. Angle nearer 90° at approach to 207 feet in depth.
					AT - 110.5 ft. a 4" wide CaF_2 vein with 50° angle to core.
					FROM - 108-120 ft. dolomite grades downward from medium gray to light gray.
					FROM - 180-207.5 ft. several limonite stained zones.
					AT - 207 ft. a pyrite-quartz. vein 4" wide has 80° core angle.
207.5	240	32.5	30	94	Quartz Porphyry - Light greenish gray with round 1 - 3 mm phenocrysts of quartz. Dolomite-igneous contact has 80-90° core angle. One or two tight white qtz. veinlets in first 12 feet.
					To depth of 230 ft. feldspar altered beyond recognition. From 230 to 240 ft. rock fresh and hard with feldspar phenocrysts unaltered, but no mafics visible. Rock probably a chilled granodiorite or quartz monzonite. Could be a rhyolite.
					Dooley P. Wheeler, Jr.

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DIAMOND DRILL HOLE LOG

PROJECT [illegible] STATE IDAHO COUNTY [illegible]

HOLE NO. [illegible] F.D. 47 (Claybrook 47)

Location: [illegible] (2604) Claim Sec. 3 T 12N R 10E Coordinates [illegible]

Elevation: At Collar 6604 At Bottom 6261 Total Depth 423

Inclination: At Collar 90° At Bottom 87° Bearing ?

Size of Core: NX 0 To 56, BX 56 To 276, AX 276 To 423, EX ____ To ____

Core Recovery: NX 25 % BX 79.3% AX 74.7% EX [illegible] 77.41 total recovery including overburden

Date: Hole Started 4-25-53 Hole Completed 5-10-53

Samples Assayed:

CORE SAMPLES

No.	INT	FROM	TO	AU	AG	CU	PB	ZN	[illegible]	[illegible]	
49	1	108	109	0.01	10.3	1.4	1.0	0.9			
35	11	177	188						21.44	1.9	
[illegible]	0.5	[illegible]	249						20.03	1.9	
33	5.5	204.3	209.8						25.00	1.1	
[illegible]	13.7	209.8	223.5						23.23	2.0	
31	3.5	223.5	292						22.[illegible]	2.9	
46	2	292	294						14.20		
30	7	294	303						[illegible]	1.3	
29	5.5	303	308.5						[illegible]	0.1	
47	3.5	308	316.5						25.71		
[illegible]	2.5	316.5	319						[illegible]	1.4	
[illegible]	2	319	321						30.71		
[illegible]	7	321	328						[illegible]	1.0	
[illegible]	12	330	342						37.03	0.1	
[illegible]	6	363	369						20.07	1.1	

SLUDGE SAMPLES
Core Samples Cont'd.

	INT	FROM	TO	AU	AG	CU	PB	ZN			
40	2	370.5	372.5						17.24	1.2	
41	15	372.5	387.5						[illegible]	0.2	
42	8.5	387.5	396						[illegible]	1.7	
43	10	396	406						[illegible]	0.[illegible]	

Special Tests: [illegible] OF THE HOLE ABANDONED BECAUSE 10-14-53 - 53' OF casing left in [illegible]; AX, BX all pulled; pipe pulled - collar pin [illegible]

AMCO EXPLORATION, INC.

DIAMOND DRILL LOG

PROJECT Raymond HOLE NO. 7 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
0	56	56	14	25	Overburden (XX to 24, XX to 56)
56	59	3	6"	12	Phyllite - 56-59. Some Py. partly altered to limonite along fracture planes, locally fracture with silvery sheen.
59	64	5	3	60	Phyllite - Black to dark gray phyllite with few thin qtz. stringers, carrying small amt. of pyrite. Fine laminae representing bedding. 50° bedding core angle slaty cleavage at 30° core angle striking approx. parallel to bedding. Pyrite occurs as cores in qtz. veinlets. Qtz. stringers often follow bedding laminae. Thin limey zone at 62' contains disseminated pyrite. Few thin quartz filled pockets at 63½'.
64	65	1	1	100	Phyllite - Minor crumpling of laminae. Crumpled white qtz. veinlets have thin, fine-grained pyritic cores.
65	74	9	2½	27	Phyllite - Minor crumpling, few blebs and stringers of milky qtz. mostly following laminae, occasional cross-cutting relationship when following phyllo-silty. Laminae essentially vertical, slaty cleavage or schistosity at 30° core angle. Heavy milky white qtz. pod at 71' contains some pyrite and a very small amount of tetrahedrite. Massive white qtz. pods 73' to 74'.
74	84	10	2	20	Phyllite - 74-77 disseminated and massive white qtz. containing very small amts. of pyrite and tetrahedrite and possibly some galena. Fractures have incrustation of carbonates, probably calcite which with pyrite forms small boxworks. Fragments of phyllite enclosed in qtz. to 84'.
84	87	3	1	30	Phyllite and Quartz - Fragments of phyllite enclosed in massive milky qtz., considerable pyrite gone to limonite.
87	91	4	1	25	Quartz and Phyllite - considerable pyrite disseminated in cores of qtz. veinlets. Few thin carbonate stringers. Fragments of crumpled phyllite appear partially "digested" by quartz.
91	94	3.	2	66	Quartz - Massive milky bull qtz; few fragments of enclosed phyllite; few cavities show final qtz. incrustations; few into cracks filled with clear qtz. Few thin stringers of pink feldspar (?) One very thin bleb of what may be sphalerite. One very thin crack filled with pale green fluorite.
94	101	7	1½	21	Quartz - Massive milky qtz; fracture surfaces covered with drusy qtz. Few fragments of phyllite enclosed in quartz.
101	104	3	2	66	Quartz - few very small scattered blebs of tetrahedrite. Few enclosed fragments of phyllite, very small amt. of pyrite. Dendritic pat-

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DIAMOND DRILL LOG

PROJECT Harbarco HOLE NO. 7 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
					turn on few fracture surfaces suggests presence of manganese.
104	106	2	1½	75	Quartz - same as above. At 105 to 105½ bym. graphitic siliceous phyllite. Few very thin secondary veinlets may be fluorite. One fracture surface coated with fine grained steel galena, may have small amount of associated sphalerite.
106	110	4	4	100	Quartz - White, massive, vuggy. Interval 106-108 contains thin stringers of brown to tan siderite, quite coarse grained and associated with pyrite and some disseminated galena. Few fragments of phyllite enclosed. 108-109 vein of siderite very coarse grained. Center 2 inches has concentration of pyrite and galena, mostly fine grained associated with fragments of phyllite. Vein makes about 60° core angle. 109-110 massive qtz. with very some disseminated pyrite.
110	113	3	3	100	Mixed quartz and phyllite - Few blebs white carbonate; few very thin stringers fluorite. One fine bleb of galena associated with very minor pyrite and fluorite. Some very fine dusty pyrite in intimate association with mixed qtz. and phyllite. Phyllite fragments near 113 somewhat limy.
113	114	1	1	100	Quartz - few small frag. phyllite. Few small blebs pale green fluorite. Minor pyrite associated with fluorite.
114	121	7	7	100	Inch and a. the phyllite - Few minor stringers of coarse grained tan siderite. Very minor galena in siderite, some pyrite. Major cleavage on phyllite at 45° core angle. Few very thin stringers of fluorite associated with tetrahedrite on fracture surfaces not sealed by secondary qtz. Few dusty concentrations of pyrite pulverized in phyllite. Few sm. blebs calcite. 119-121 massive milky qtz. Slightly vuggy. Very sm. shine tetrahedrite (?) on fracture surfaces. Very minor galena associated with fine pyrite also on fracture surfaces.
121	127	6	6	100	Quartz. Massive milky qtz. Few vuggy fractures; one thin fracture filled with calcite and fine pyrite. Few thin blebs carbonate. Few very small blebs pale green fluorite. Few scattered fragments phyllite 125-127. Some pyrite, fine grained assoc. with carbonate, quartz and phyllite.
127	131	4	4	100	Quartz. Thin fragments phyllite scattered throughout sec. Few small blebs pale green fluorite. Qtz. vuggy in fractures. Few scattered tropl. blebs fluorite.
131	137	6	6	100	Phyllite. 131-132 mixed bull qtz. and phyllite fragments. 132-133 phyllite - thin laminae

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DIAMOND DRILL LOG

PROJECT Lathorse HOLE NO. 7 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
					dipping 20° schistosity parallels bedding. Most pyrite concentrated in thin qtz. stringers which cross-cut bedding at various angles. 133-135½ mixed qtz and phyllite. 133½-134½ phyllite, minor dusty pyrite following laminae. Concentration of pale green fluorite on fracture at 13[illegible]. Fluorite coarsely crystalline. Fluorite stringers continue to 137.
137	140.5	3.5	3	87	137-137½ mixed qtz. and phyllite. 137½-140½ qtz. sm. amt. disseminated fluorite.
140.5	145	4½	4½	100	140.5-141.5 [illegible] qtz. Few thin stringers phyllite; one thin stringer pale green fluorite. 141.5-145 Phyllite, slightly sandy phase at bottom.
145	147	2	2	100	Phyllite. Schistosity flat. 146½ 3" flat veinlet of pale green fluorite.
147	148	1	1	100	Phyllite. Fairly flat laminae and cleavage; minor concentrations of dusty pyrite in certain favorable strata. 149 cleavage and laminae at 60° angle to core. Pyrite concen. in qtz. stringer at 149.
149.5	154	4	4	100	Phyllite. 150 - 2" zone very fine lacework of fluorite cementing breccia. Schistosity in bedding at 45° angle to core. Dusty pyrite concentrated in certain favorable beds.
154	159	5	5	100	Phyllite. Very thin pale green fluorite in veins normal to bedding at 156.
159	173	14	10	71	Phyllite. 159-162 does not have good slatey cleavage; may have some dolomitic beds; bedding 40° angle to core. Quite vuggy; many vugs sealed with qtz, some lace-like structures contain fl. Fine pyrite occ. assoc. with fl. at 165 lightly speckled band of very fine galena or cerrusite in very sm. "spherules" of fluorite; this band quite dolomitic. 167 - parallelic structures developing again. At 171 schistosity at 45° core angle at right angles to 45° core angle bedding laminae. At 173 qtz. minor replacement of favorable beds with disseminated fluorite and minor pyrite; occasionally secondary quartz stringers.
173	176	3	3	100	Phyllite. Schistosity at 40° to 20° core angle; [illegible] 30° to 10° zone angle; crystalline argillic material at 175-176; minor pyrite along certain favorable bedding planes; few thin stringers and splits of colorless to white fluorite; vuggy.
176	184	8	6	75	Phyllite. At 177 begin to get brecciated material containing disseminated blebs of fluorite and minor dusty pyrite. At 177.5 breccia appears to

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DIAMOND DRILL LOG

PROJECT Bayhorse HOLE NO. 7 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
					be sealed by fluorite material, this continues to 194. Material fairly well sealed, but few vugs remain. Minor dusty pyrite disseminated along certain favorable bedding planes. Heavy concentration of coarsely crystalline pale green fluorite at 193.5'
194	199	5	2½	50	Phyllite. Breccia with fluorite lacework to 196; few minor stringers light carbonate cut by fluorite. Note that the breccia contains fragments of argillic material. 198-199 vuggy, cavities lined with fluorite crystals.
199	196	7	7	100	Phyllite. Bedding laminae at 30° core angle. Still have minor lace-work of fluorite; still have considerable crystalline fl. concentration of fluorite at 193. At 195 get with coating of fine pyrite on fracture surfaces. Few veins pale green fluorite at 196.
196	198	2	2	100	Phyllite. Thin bedded laminae show various shades of gray; at 60° core angle; minor dusty pyrite along favorable bedding planes; vuggy; few very thin breccia zones; partially healed with fluorite, which also occurs in sm. repl. pods.
198	201	3	3	100	Phyllite. Dk. gray appears to be transitional from black phyllite, siltstone texture, bedding steepens to 45° core angle, minor lace-work of fluorite healing thin fractures; vugs lined with small fluorite crystals; disseminated pyrite along thin bedding planes.
201	206	5	4½	90	Phyllite. At 201.5 get 2" stringer pale green and purple fluorite; minor fractures healed with fluorite. Very tight sealed breccia zone 202-206 - self sealed. Thin seams filled with fluorite small qtz. pod has pyrite core.
206	210	4	5	80	Phyllite - Vuggy, bedding dips 45°, minor fractures sealed with fluorite; transitional from phyllite. 1/4" seams of green fluorite at 209. Same as above. Repl. zone of pale pr. fluorite from 211-211½. Dusty pyrite along favorable bedding planes. Fluorite cementing breccia at 214.
210	214	4.4	4.4	100	Phyllite. Has mixed dk. gray and lt. gray fragments. Breccia zone begins at 214 (see above) continues to 216; abundant fluorite as sealing agent. Minor fluorite seams 217-218 sm. breccia zn. at 219 and at 220-221 sealed with fluorite. Another breccia zone from 221½ to 224 sealed with fluorite.
214	233	9.6	9.6	100	Phyllite - Vuggy but generally steep 70-80° bedding core angle; phyllitic fracture not well developed, minor zn. of fl. at 225; ½" vein of fl. at 226; minor fractures sealed with fl. to 233.

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DIAMOND DRILL LOG

PROJECT Bethorse HOLE NO. 7 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
232	242	9	9½	100	Phyllite - poor slaty cleavage, siltstone texture. Minor brecciation to 234-241, fractures healed with fluorite; vuggy, most vugs lined with fluorite crystals; minor breccia 235 - sealed with fluorite. Bedding at various angles generally 40° -30° with core. Thin breccia zn. at 238 - 239, self-sealed; minor pyrite along favorable bedding planes; minor breccia zn 240-242 with sealing and repl. fluorite present.
242	251½	9	9	100	Phyllite. Lt. and dk. gray. Breccia zone mentioned above continues to 251½. Most intense brecciation from 243-248, abundant fluorite in fractures and as sealing agent. Fluorite decreases from 248; however, fractures still lined and sealed with it. Minor pyrite noted as encrustation on fluorite in one fracture.
251½	260.8	9.3	9.3	100	Phyllite - siltstone texture. Breccia zn. to 253; healed and filled with fluorite. Lesser breccia to 256; some fluorite, occasional frac. filled with fluorite. 256½-260.8 minor breccia zone, self-sealed but does have some fluorite. Few thin limy beds and fragments in breccia.
260.8	269.8	9	9	100	Phyllite. Dolomite. Only a vestige of phyllitic fracture remains. Breccia zone from 260.8-265; mostly self-sealed, does contain some fluorite. Breccia zn. from 265-269 much more intense, contains much more fluorite. Very vuggy. 266 -267 brecciation lesser. 267-268 more intense brecciation, fluorite again lining vugs and sealing breccia, pyritohedral pyrite crystals on surface of crust fluorite. Small pod of galena and honey-colored sphalerite at 267½. Iron stain on fluorite at 268½.
264	Phyllite Dolomite				
269.8	276	6.2	3.1	50	Dolomite - breccia zone 269-276 healed with fluorite; iron stain abundant from 271-275, may be allied with alteration.
276	278	2	1	50	Dolomite - Iron stain in alteration zone, minor brecciation partially sealed with fluorite; sm. amount of pyrite.
278	279	1	2	16	Dolomite - Very broken brecciated, may represent fault zone.
279	281½	2½	1½	60	Dolomite. Brecciated, shows iron stained alteration effects to 281; minor fluorite.
281½	283½	2	1½	75	Dolomite - Minor brecciation, mostly healed with white fluorite; minor disseminated pyrite.
283½	284	6"	6"	100	Dolomite - very broken, considerable iron stain, possibly allied with alteration; very minor fl.

This zone may represent a fault.

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DIAMOND DRILL LOG

PROJECT Amborco HOLE NO. 7 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
284	289	5	5	100	Dolomite - minor brecciation, mostly sealed with colorless or white fluorite. 287 core intense brecciation well sealed with fluorite. Few fractures sealed with fl. Few dirty pyrite in octahedral and distorted cubic form.
289	292	3	2½	83	Dolomite - very minor brecciation with very little fluorite as sealing agent; few veinlets up to ¼" thick of fluorite. Good fluorite 291-292 in breccia zone.
292	295	3	2½	83	Dolomite. Breccia zone sealed with fl. white, some of larger veins in breccia show banding on outside walls.
295	303	8	7	87	Dolomite. Brecciated, some of fragments appear to have undergone alteration; all sealed with fluorite, somewhat vuggy; very minor pods of pyrite.
303	305	2	2	100	Dolomite - Brecciated; some brownish alteration, breccia sealed with fluorite.
305	310	5	5	100	Dolomite - Breccia zone sealed with fluorite, mostly colorless, considerable disseminated pyrite; vuggy; very rare blebs and flecks of galena in fluorite at 308.
310-312.2	312	2.2	2.2	100	Dolomite - minor brecciation sealed with colorless and white fluorite; colorless fluorite seems to be later age than white fluorite.
312.2	317	4.8	4.4	92	Dolomite - pale gray, fairly fine grained, considerable iron stain, vuggy, shattered, many small seams and open spaces filled and sealed with fluorite; occasional specks pyrite. Shatter zone at 316.5-317 shows considerable fluoritization. Much iron stain, possibly allied with an alteration phase.
317	321	4	3.7	92	Dolomite - shatter zone continues to 319 with considerable fluoritization, small cracks and seams filled with fluorite to 321.
321	328	7	5.5	78	Dolomite - lace work of fluorite filling and lining seams and vugs; brown iron stain to 322; 322.2-323 high grade zone; 324.5-325 extremely high grade band of white to colorless fluorite.
328	332	4	3.8	95	Dolomite - minor shattering, seams filled with fluorite.
332	341	9	9	100	Dolomite - 1" vein of fluorite at 332, small pod of fluorite from 333.5-334; minor fractures and seams filled with fl. throughout interval, over all fl. may be in neighborhood of 5-7%. At 337 ½" color band which may represent bedding slip at 45° angle to core.
341	352	11	9.5	86	Dolomite - vugs and seams lined and filled with fluorite, minor shattering throughout interval. Zone of extreme shattering at 351-353.5; well fluoritized.

AMCO EXPLORATION, INC.

DIAMOND DRILL LOG

PROJECT Bayhorse HOLE NO. 7 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
352	362	10	9.5	95	Dolomite - varies on pinkish cast at 358-362; color banding which may repr. bedding at 358. Dipping at 45° angle to core; this may also be a plane of weakness as there are many thin fluorite seams essentially parallel to the color banding. Fluorite abundant in seams and veins. Colors from green to pale purple.
363	370.5	7.5	7.5	100	Dolomite - shattering and filling by fluorite 363-365; thin zone of extreme brecciation 364.5-365.5; pale green color bands at 365.5 dipping at 40° angle to core. Color banding may repr. bedding, dipping at 35° angle to core at 367.5. Small amount of sedg3.
370.5	382	11.5	9.5	83	Dolomite - pale pinkish dolomite shattered, filled and replaced by fluorite to 375, very varied; overall content may be 10-15%. Core often to brecciation from 375-379.5. At 379.5 got thick fluorite vein dipping at 60 degrees angle to core, extending to 382, veins may repr. a fault zone. This is a very high grade fluorite vein with only minor foreign matter.
382	396	14	8.5	61	Solid fluorite vein continues to 389.5. Brecciated zone picks up at 389.5 to 393. Core recovery poor 393-396, appears to have considerable fluorite, may repr. fault zone, brecciated material picks up 396-399; seams and fract. see still filled with green and purple fluorite.
396	406	10	6.5	65	Dolomite - pale grey, much brecciation, all veins and seams filled with fluorite; plane of weakness normal to direction of drill hole, probably represents healing. Solid veins of fluorite 398-399. 399-406 considerably brecciation, much filling and replacement by fluorite.
406	411	5	2"	3	Dolomite - much brecciation; appears to have much fluorite as healing and replacing agent.
411	414	3	0	0	
414	423	9	1.5	17	Igneous - qtz. porphyry, very fractured, minor alteration although many of feldspars are quite fresh; med. to coarse grained (3-mm). Very sm. veins show occasional pyrite. Overall greenish appearance suggests some chloritization.
					T. D. 423

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AMCO EXPLORATION, INC.

DIAMOND DRILL HOLE LOG

PROJECT [illegible] STATE IDAHO COUNTY [illegible]

HOLE NO. [illegible] (IE-53-C)

Location: Missouri Claim Sec. 3 T 12 N R 19E Coordinates N 11,510

E 10,300

Elevation: At Collar 6630 At Bottom 6350 Total Depth 200'

Inclination: At Collar 90° At Bottom _____ Bearing _____

Size of Core: NX 19 To 70, BX 70 To 193, AX 193 To 200, EX ____ To ____

Core Recovery: NX 77 % BX 75 % AX 77 % EX ____ % Overall recovery 76%

Date: Hole Started July 16, 1953 Hole Completed July 2[illegible], 1953

Samples Assayed:

CORE SAMPLES

No.	INT	FROM	TO	AU	AG	CU	PB	ZN	CaF_2		
60	6	251	257						1[illegible]		
61	10	255	265						3[illegible]		
62	10	265	275						[illegible]		
63	10	275	285						2[illegible]		
64	10	285	295						1[illegible]		

SLUDGE SAMPLES

No.	INT	FROM	TO	AU	AG	CU	PB	ZN	CaF_2		
58	10	244	254						[illegible]		
59	10	254	264						[illegible]		

Special Tests: Total cost of hole $1500.25 or $6.82 per foot.
~~No casing or drive pipe left in hole.~~

AMCO EXPLORATION, INC.

DIAMOND DRILL LOG

PROJECT [illegible] HOLE NO. Geosler 10 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
0	19				Overburden
19	47	28	27½	97	Garden Creek Phyllite - black, laminated, cut by few transverse and parallel veinlets of qtz. containing minor py (total pb content of core interval assay 0.1%). Core angle at least qtz.-py. veinlets, 90°-45°. Bedding core angle generally 50°, local crinkles give wide variation. Pyritization common in zones of press or distortion.
					At 20.2' - ¼" qtz.-py veinlet at 85° angle to core.
					At 23' - 1" qtz-py-limonitic vein at 70° angle to core.
					At 26.6' - ½" qtz.-limonite veinlet at 70° angle to core.
					At 26-26.5' - ½" vertical qtz. veinlet.
					At 28.7' - ¼" qtz-py veinlet at 120° angle to core.
					At 29.3' - 1" qtz. limonite veinlet at 30° angle to core.
47	63	16	5	31	Qtz.-siderite zone - contains included fragments of phyllite and recemented phyllitic ex zones.
					General vein core angle - 85°. Siderite has minor associated pyrite, fine gr. cpy. with minor tetrahedrite and galena.
					At 47-49.9 - Predom. milk qtz. with inclusions of phyllitic and very minor py.-cpy. tetrahedrite ?. 60% recovery.
					At 49.9-50.2 coarse gr. siderite vein with minor pyrite-chalcopyrite-tetrahedrite vein core angle 85°
					At 50.2-51 - milk qtz. with streaks and inclusions of phyllite and very minor pyrite. 25% recovery.
					At 51-52.5 - 5" recovered - recemented qtz-phyllite ex zone, some of late gouge was white satiny fluorite. 25% recovery.
					At 52.5-53 - crushed phyllite cemented by very white qtz. qtz. veinlets have core angle of 50°, recovery extremely good.
					At 53-53.3 - pyritic-quartz, siderite veinlet with minor fine gr. chalcopyrite, tetrahedrite and coarse gr. galena. (53-53.1 - predom. greyish pyritic qtz., 53.1-53.3 predom. coarse gr. siderite) core angle of vein 50°. Core recovery extremely good.

AMCO EXPLORATION, INC.

DIAMOND DRILL LOG

PROJECT Tarboro HOLE NO. Hoosier No.16 DATE

FROM	TO	INT.	RECOVERED FT.	%	DESCRIPTION
					At 53.3-53.6 - Sheared, slightly chloritized phyllite. Core recovery evidently good.
					At 53.6-54.0 - Coarse gr. chlorite with phyllite inclusions cut by vertical white fluorite veinlets. Minor amounts of predom. chalcopyrite, galena with minor tetrahedrite and pyrite. Core recovery evidently good.
					At 54 - 63 White massive quartz with inclusions of phyllite. Fracture most of core loss in 58.[illegible] - 63 interval occurred in thin qtz. zone, giving recovery in this zone of 20 - 25%.
62	65	2	2	100	Breccia and crush zone - phyllite zone and recemented qtz-phyllite br. Cement probably qtz. or silica.
65	86.5	21.5	25	95	Recemented phyllite-qtz. br zone. Minor amts. of very grassy fluorite and qtz. constitutes the latest cement zone of which is very fine-grained. May contain 5% fluorite mostly very fine over 71.5 interval.
86.5	93	6.5	3.5	54	Crush-breccia zone - Crk. gray to very light greenish gray, very soft, with minor frags. qtz.
93	95	2	2	100	Shear zone - brecciated, sheared, crushed and compressed, minor frags. of qtz., predominantly dolomite-phyllite.
95	114	19	11	57	Laminated zone. Gray dolomitic phyllite. (Transition zone). Bedding core angle 60°. At 99' - slickenline along qtz. carbonate veinlet with 10° core angle.
114	135	21	20	95	Dolomite - thin bedded, light gray, sugary tex. 114 - 135 bedding core angle. 117-120 - shattered dolomite fluoritized 5 vol. 134 - core angle appears to become larger downward, here is 75°. Entire unit locally shattered but commonly uncemented. Very minor local steep veinlets in very recrystallized dolomite.
135	172	37	305	84	Dolomite - lt. gray, fine-grained, faintly bedded. Generally slightly shattered with minor pertorite along shatter planes. Local veinlets of coarse recrystallized dolomite. 135-144 - 3' core recovery, bedding core angle 55° 140 - Coarse greenish yellow sphalerite filling vug in dolomite veinlet. 157 - bedding core angle 35 degrees. 153-155 - very broken core.

AMCO EXPLORATION, INC.

DIAMOND DRILL LOG

PROJECT Daytorso HOLE NO. Hoosier No.10 DATE

FROM	TO	INT.	RECOVERED FT.	RECOVERED %	DESCRIPTION
					166 - bedding core angle 75°
					167-172 - very broken core
					167-167.5 - fluorite fills minor cracks at 10° angle to core.
172	102.5	10.5	0.7	7	Dolomite - shattered - with chalky core at bottom of interval (prob. fault).
102.5	109	6.5	5.4	83	Dolomite - lt. gray, fine grained, massive incipient silicification, minor sericite and pyrite along shatter planes. Few very thin qtz. veinlets.
109	216	27	22½	83	Dolomite - lt. gray, fine-grained, massive core recov. generally good but core very broken. 172.5-214.5 - .5' recovery 196 - bedding core angle 75°
216	231	15	12	80	Dolomite - very light gray to flesh colored. bedding exemplified by color banding ranging from very light gray to pinkish gray. Some of bedding planes are sericitic. At 221 bedding core angle 60° At 226.5 bedding core angle 75° At 230 bedding core angle 75°
231	270.5	39.5	27	68	Buff, shattered, considerably altered, fluoritized dolomite (probably same rock type as above interval before alteration). Fluorite most pronounced 235-265, averaging 1-2% for this 30' interval. Qtz. which is associated with alteration both qtz. and qtz-fluorite veinlets tend to have acute angle with core. Locally very fine veinlets of fine gr. pyrite, some of which is oxidized. At 255.5-265 - 3.5 core recovered - seems to have higher average fluorite content than rest of core, possibly age gap.
270.5	275	4.5	4.0	89	Dolomite - dense fine grained light gray dolomite shattered near bottom of interval with minor fluorite content. Also local limonite indicates pyrite in smoke. 271.5 - 65° bedding core angle.
275	276.5	1.5	1.5	100	Quartzite - light gray - fine to med. grained, dense - has obscure 65° bedding core angle.
276.5	280	3.5	3.5	100	Quartz tourmaline - greenish, slightly calcitized and sericitized with limonitic crusts after py. or marlac.

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SEP 27 1965

INITIALS	CODE
	120 M
	120

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
September 23, 1965

Air Mail

Mr. Dooley F. Wheeler, Jr.
General Manager
Umont Mining Company
1355 Foothill Boulevard
Salt Lake City, Utah 84108

Re: OME-6495 (Silver)
Beardsley Gulch Mining Co., Inc.
Beardsley Claims
Custer County, Idaho
and
OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star Mine
Custer County, Idaho

Dear Mr. Wheeler:

The Beardsley Gulch application, OME-6495, was received August 30, 1965, while I was in the field, and was forwarded the same day to our Washington office. On September 17, 1965, the Chief, Office of Minerals Exploration, wrote to Mr. Wadhams requesting information. I doubt that the application will be referred to the field until the requested information is received.

The Northern Star application, OME-6499, was received September 9, 1965, and was forwarded September 13, 1965, with my comments. It is most probable that additional information will be required before this application will be referred to the field.

It is therefore impossible for me to guess if or when an examination of these properties can be scheduled. In view of a heavy work load comprising properties scattered throughout the four northwest states, it is to be hoped, should an examination be requested, that both properties can be examined during the same trip. I shall give you as much advance notice of a possible inspection when I can be more specific as to a date.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

cc: OME(2) w/cys incoming
Director's Reading File

DRMacLaren/mls

MONT MINING INC.

1338 FOOTHILL BOULEVARD
SALT LAKE CITY, UTAH 84108

MLS
9/23/65

September 20, 1965

Mr. D. R. McLaren
Acting Field Officer
OME, Region 1
U. S. Department of the Interior
Office of Minerals Exploration
So. 157 Howard Street
Spokane, Washington 99204

Dear Mr. McLaren:

Subject: OME - 6495 and 6499 - Silver

If it is possible for you to schedule field examinations to the above project areas soon, we will be able to meet about any schedule you set up.

If you are, as I suspect, swamped with applications for OME assistance and cannot schedule a trip soon, I would suggest sometime in the third week in October or very early in November. I will probably not have much flexibility of scheduling in the last week of October.

We have not heard yet whether OME 6495 and 6499 are considered silver prospects. We assume that they meet the qualifications for silver prospects, but if there are doubts I think they will vanish when the field examination is made.

Yours very truly,

Dooley P. Wheeler, Jr.
General Manager

cc: Mr. L. P. Evans, Jr.

DPW:mo

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/21	Selfridge	120
9/22	Johnson	110
9/22	cac	220
		120M

SEP 2 2 1965

Northern Star Mining Co., Inc.
King Street Dock
Burlington, Vermont 05401

Re: OME-6499 (Silver)
Northern Star Mining Co., Inc.
Northern Star, et al., Claims
Custer County, Idaho

Gentlemen:

Preliminary review of the subject application indicates that additional material is needed in order to continue with its processing.

On page 1 of the application mention is made of a lease and option agreement, dated August 2, 1965, between Northern Star Mining Company, Inc., and Umont Mining, Inc. The application contains only a Lease Agreement, dated September 1, 1965. If there is a second one, we should have a true copy of it.

We also need a true copy of all other documents that would form the chain between the owners and Northern Star Mining Company. This would at least include the agreement between Bayhorse Mines and Umont and what other agreements there may be between Swigert and/or Bayhorse Mines and Umont.

We are returning MME Form 52 executed by Mr. Swigert as, seemingly, he is not the owner of the unpatented claims. Enclosed are two sets of the form to be used to secure the signatures of each owner.

We would also like to have the logs and assays of Holes 25, 26, and 36; also of Holes 1, 6, and 10 which were drilled south of the drill site where Holes 40, 41, 42, and 43 were drilled.

Please secure at least one more bid, preferably two, for the bulldozing and for the diamond drilling.

Submittal of the requested information should not be construed as committing the Government to an exploration contract.

Copy to: Mr. D. P. Wheeler, Jr.
Vice President
Northern Star Mining Co., Inc.
1355 Foothill Blvd., Salt Lake City, Utah

GCSelfridge/gla (9-21-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
OME Region I
Mr. Selfridge

Enclosures

Sincerely yours,

(Signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

23263

September 15, 1965

Northern Star Mining Co., Inc.
King Street Dock
Burlington, Vermont 05401

Subject: OME - 6499

Gentlemen:

Your application for exploration assistance, dated September 7, 1965, submitted to our office at Spokane, Washington, has been assigned Docket Number OME-6499.

Please identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to Region I

Exhibit C+

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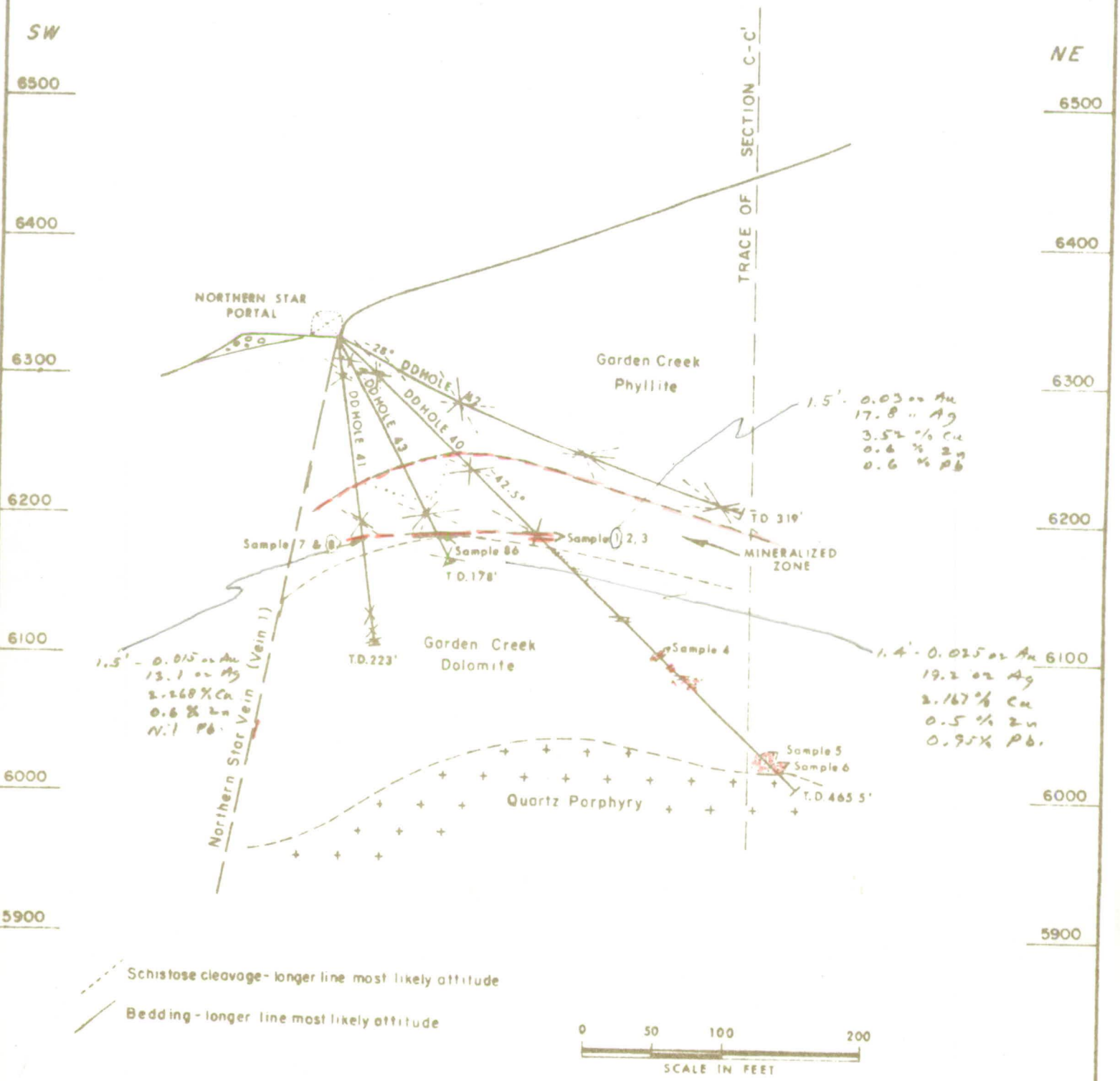
BAYHORSE ANTICLINE

Custer County, Idaho

DRILL TARGETS 1965

By: D.P.W. Jr
Revised: 7-8-65

Refer to: 1"=100' Plan by D.P.W Jr 10-15-59, 11-15-64
1"=100' Section C-C' by D.P.W Jr



U.S. Geol. Survey

OME-649

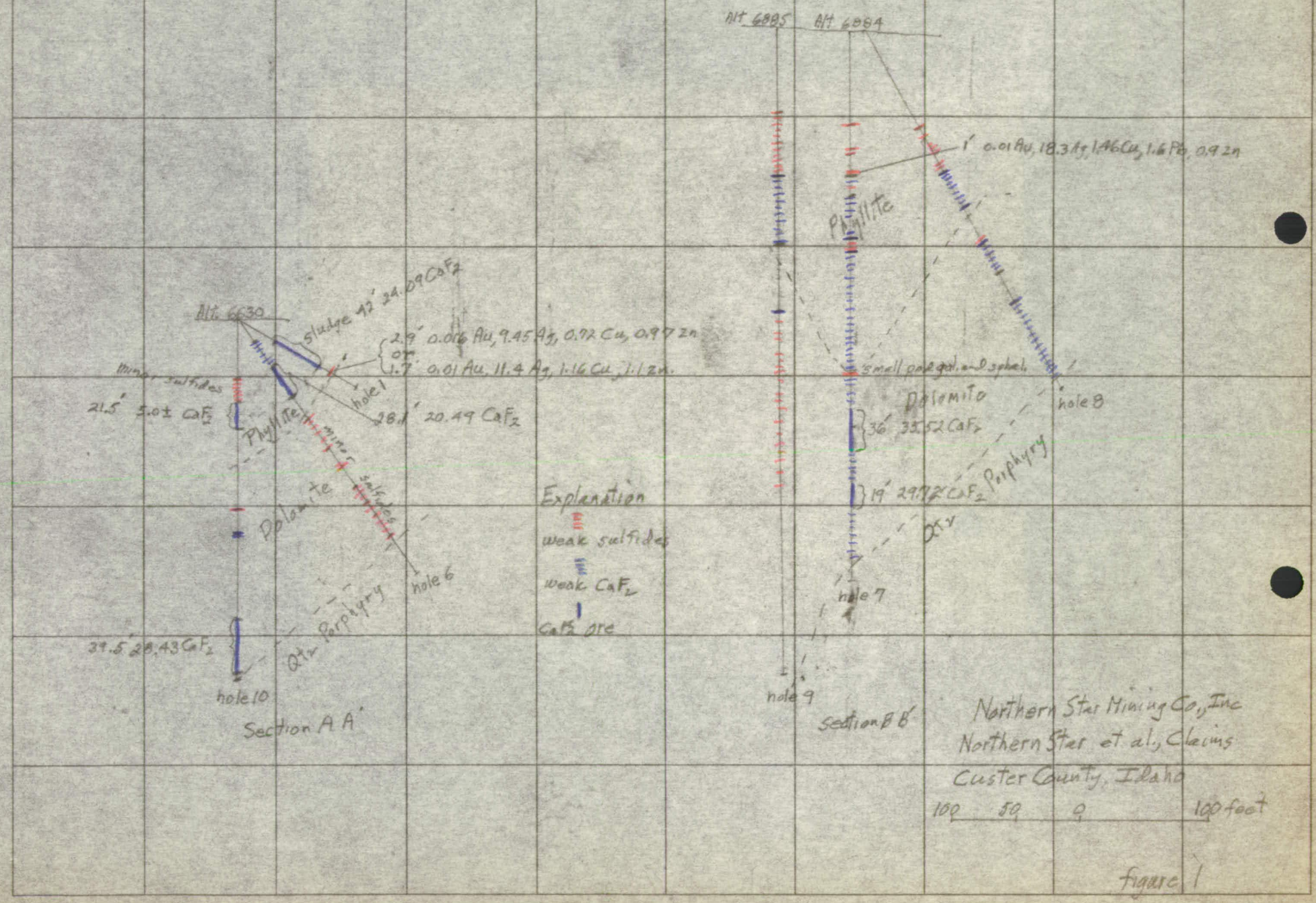


figure 1

K+E - ALBANENE 195M TRACING PAPER

J. A. Gendron Co., Spokane

MME FORM 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO: Chief, OME	DATE	INITIALS
1.	3/2/66	
Re: OME-6499 (Silver)		
2. Northern Star Mining Co., Inc.		
Northern Star Mine		
3. Custer County, Idaho		
4.		
D R MacLaren		
5. D. R. MacLaren		
FROM: Field Officer, Reg. I		

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FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions X Your information

REMARKS:

I have again gone through our files and find no copy of a letter from the Applicant to the Merchants Bank. In view of the enclosed is it still necessary?

INT.-DUP. SEC., WASH., D.C. M56300-62

Exhibit C 3

Dolomite

Phyllite

Quartz porphyry

Quartz

Fluorite-limonite in shattered country rock or quartz

Siderite vein with associated sulfides

Trace of vein with considerable fault movement; also gouge and shear zone not associated with any known fault or vein

Angle of beds, vein or fault with zone. Black is bedding. This symbol indicates maximum possible dip range in plane of this S-N section. If dip is north or south the zone of the line would be correct and horizontal

PLATE 8

VERTICAL LONGITUDINAL PROJECTION

OF

HOOSIER-SILVER GREEK DIAMOND DRILL HOLES

Illustrating Drill Holes of AMCO Exploration Inc.

Drill program of Oct., Nov., and Dec 1962

Scale 1 inch =200 feet

Refer to Plate 7 for plan

Observer looking north or section

Geology remapping and logging by D.P.Wheeler 12-16-52

Drilling by Baylis Bros., S.L.C., Utah

Assays by Immaculate Office, S.L.C., Utah

Revised 11-23-64 by D.P.W.Jr to conform to

Holes 35, 36 and 37 Data of 1964

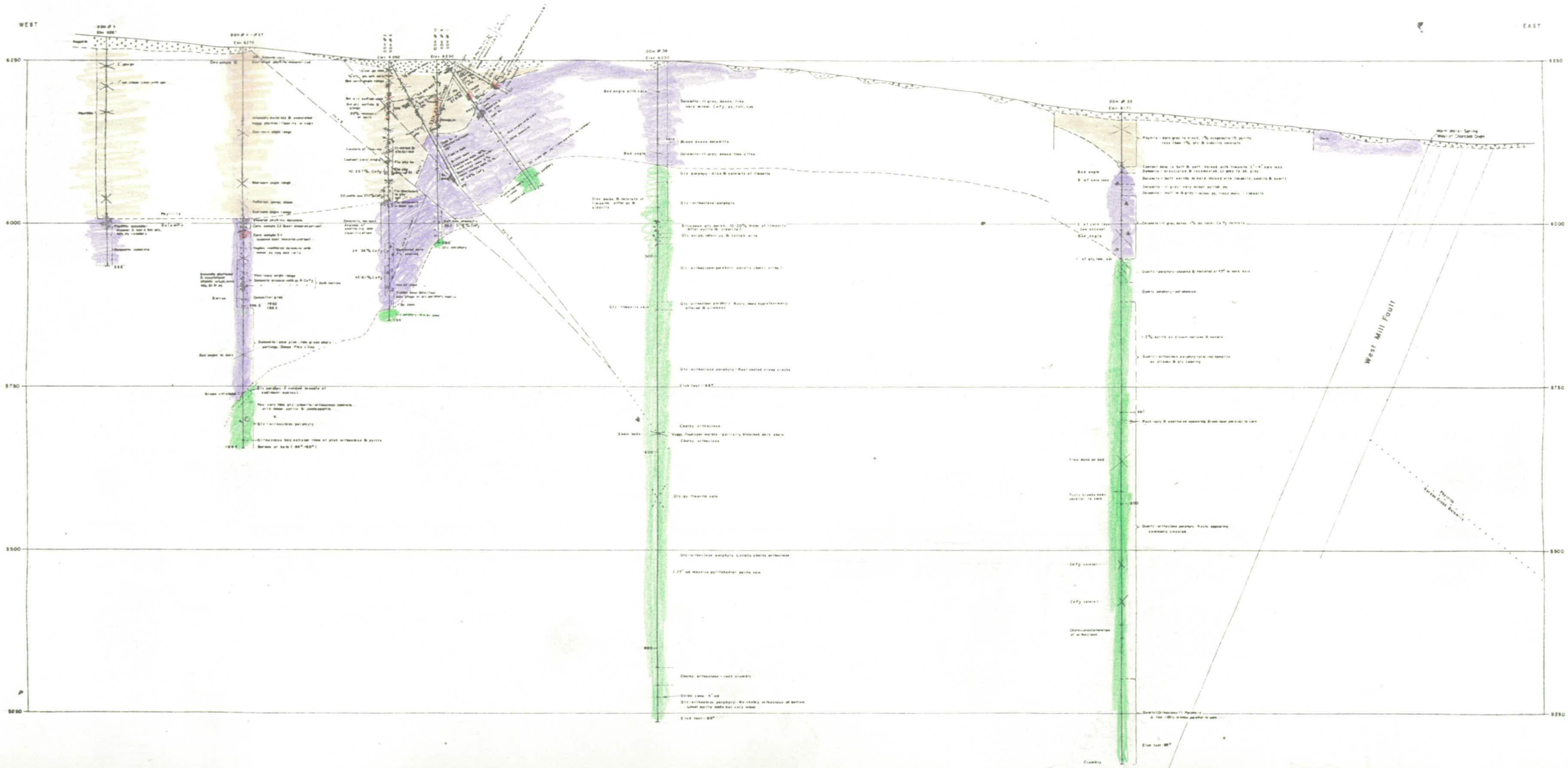


Exhibit B 1

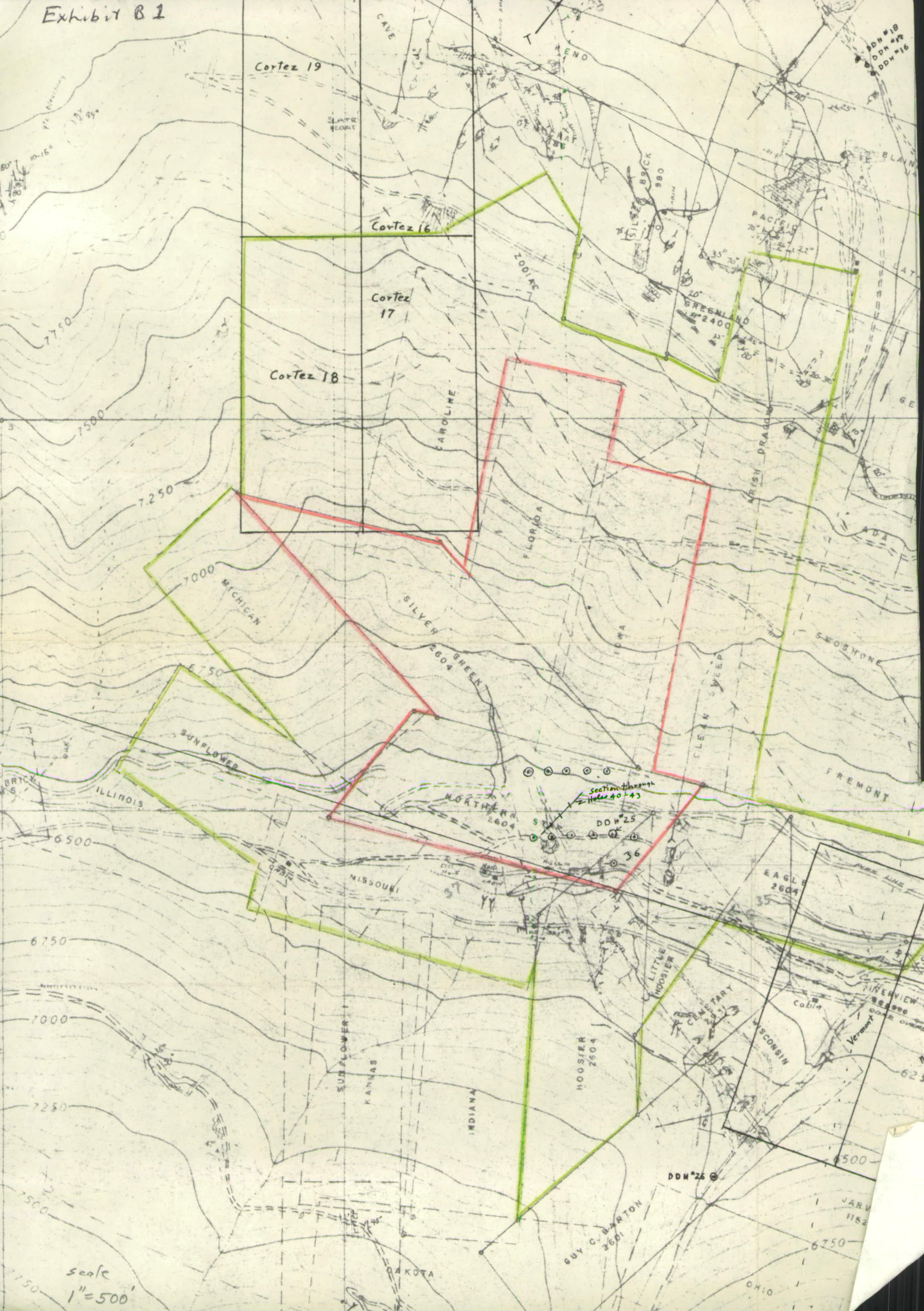
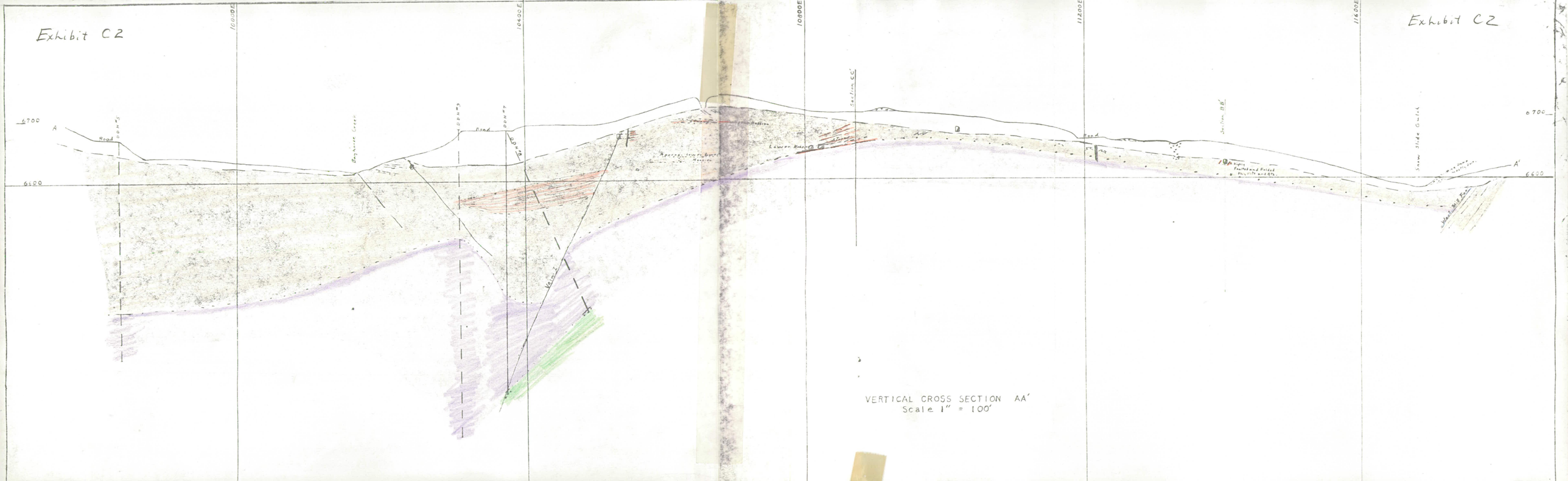

Cortez 19
Cortez 16
Cortez 17
Cortez 18
CAVE
HENO
SLATE FLOAT
ZODIAC
CAROLINE
FLORIDA
MICHIGAN
SILVER
SHEEK
SUNFLOWER
ILLINOIS
NORTHERN
2604
MISSOURI
SUNFLOWER
KANSAS
INDIANA
HOOSIER
2604
LITTLE HOOSIER
CEMETARY
GUY C. BARTON
2601
DAKOTA
OHIO
EAGLE
2604
WISCONSIN
Cabin
INTERVIEW N.S.
Vermont
New Jersey
New York
RAMS HORN
FREMONT
STONE
CLEAN SWEEP
PACIFIC
GREENLAND
SILVER BRICK
980
DDH #25
DDH #26
DDH #18
DDH #17
DDH #16
Section through Holes 40-43
7750
7500
7250
7000
6750
6500
6250
scale
1"=500'

Exhibit C2



VERTICAL CROSS SECTION AA'
Scale 1" = 100'

Exhibit C2

Exhibit C-2

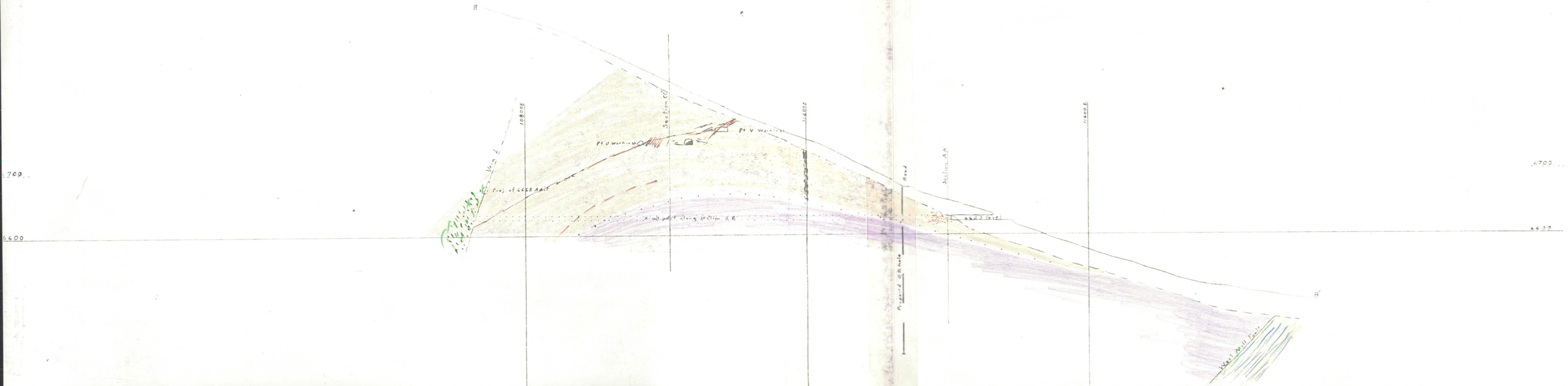
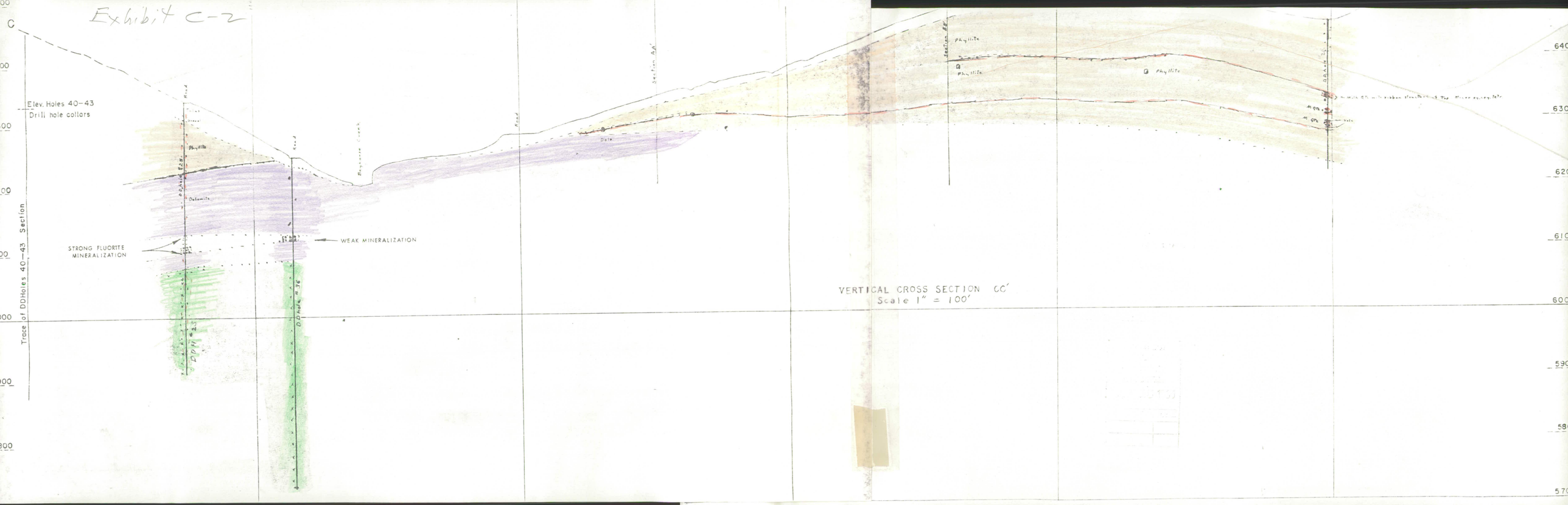

B
B'
10800E
11600E
Section CC'
Section AA'
Vein Z
Pt U workings
Pt V workings
Proj. of CCCB Adit
X-cut point along section BB'
Road
Proposed DD hole
Adit Will Exit
6700
6600

Exhibit C-2



VERTICAL CROSS SECTION CC'
Scale 1" = 100'

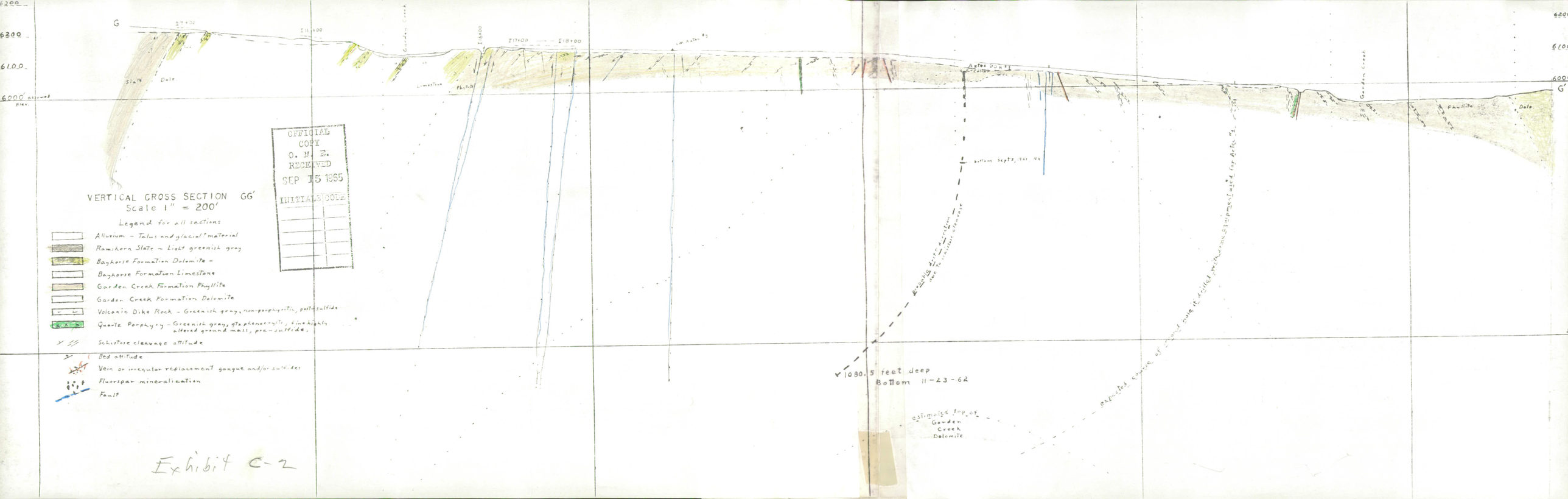


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Exhibit C-2

Exhibit C-1

Proposed Drill Holes
Schistose cleavage attitude
Bed attitude
Flat bedding
Approx. Position of New Road
Old Road Approx.
Approx. Crest of Anti.
Bottom of Hole 40
Bottom of Hole 42
Bottom of Hole 43
Bottom of Hole 41
DDH 40, 41, 42, 43 (Collars are 8ft below DDH 25)
DDH 25
Bayhorse Anticline Nose
DDH #35
Sample 138
Sample 141
Closure Cross
12,000 N
11,200 N
10,800 N
10,400 N