AS OF JUNE 1, 1964

THE ADDRESS OF

VITRO MINERALS CORPORATION

WILL BE

90 PARK AVENUE

NEW YORK, N. Y. 10016

TELEPHONE MURRAY HILL 2-5700

PLEASE CHANGE YOUR RECORDS AS ABOVE

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 8 1964

DATE	INITIALS	CODE
		[redacted]
6/8	[illegible]	800
6/8	[illegible] Murphy	500

MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE Contract No. 14-23-2193 Docket No. MME-

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- [ ] Withdrawn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

Right Side

- [ ] Project Summary (final)
- [ ] Work Completed Analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [ ] Field Team Semiannual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [x] 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 Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [ ] Field Team Semiannual 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

52615

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	Selbrede	120
5/13	[illegible]	800
		110
		100
		220

MAY 1 3 1965

Vitro Minerals Corporation
90 Park Avenue
New York, New York 10016

Re: CMX-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Gentlemen:

Reference is made to your completed exploration contract with the Government.

We sincerely regret that the work performed did not result in a certification of possible production under the provisions of the contract. In the absence of such certification, the Government retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract. Your attention, however, is called to the provisions of the contract which require the operator to keep and preserve certain records for the periods indicated.

We appreciate your interest and participation in the CMX exploration program.

Sincerely yours,

George Turnich
Acting Director

MMerrithew/mm (5/13/65)
cc: Director's Reading File
Region I
CA&A Div.
Docket Code 500
Mr. Joseph Nordquist, 435 So. High St., Lewistown, Mont.
Mrs. Ruth Kelly Hoffman, P.O. Box 534, Lewistown, Mont.
Mr. and Mrs. Henry J. Pitt, Lewistown, Mont.
Mr. and Mrs. Granville S. Abbott, Gilt Edge Route, Lewiston, Mont.

23263

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the report of:

Vitro Minerals Corporation
50 Park Avenue
New York, N. Y. 10016

pertaining to Exploration Contract 14-23-000-2193, OME-6389, including Amendment No. 1, for July 20 to October 30, 1964, inclusive, covering a gold-silver project on the Beta-Kappa claim and other properties, Fergus County, Montana.

My review included an examination of the Monthly Voucher (IMI Form 60) and supporting documents, comparison of the claimed costs with the contract and pertinent schedules, confirmation of work performed by reference to reports and correspondence, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the reasons given in the attached schedule.

The findings of this review are stated in the following summary and the attached schedule:

Total cost billed by Operator		$15,105.64
Exceptions:		
Prior to this review	$ -0-	760.88
Herewith	760.88	
Total acceptable cost		$14,344.76

The contract calls for a 50 percent contribution of the allowable costs by the Government. Therefore, if the project is otherwise accepted as having met the terms of the contract, payments as follows are valid and proper:

Payable on audited claim	$ 7,172.38
Paid to date	-0-
Balance due	$ 7,172.38

C. E. Fisher

C. E. Fisher, OME Auditor

May 7, 1965

MME FORM 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Mr. Johnson	5/10	
2. Mr. Selfridge		
3.		
4.		220
5.		
FROM: Mr. Fisher		

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS:

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

M56300-62

Reasons for Report of Review in lieu of a final audit:

(1) a major portion ($9,741.25) of the acceptable costs covered work performed at unit rates under independent contract;
(2) the remaining portion ($4,603.51) of the acceptable costs was under a contract provision for conbtibution by the Government on the basis of fixed unit costs for work performed;
(3) the Monthly Reports were supported by documentary evidence of the acceptable actual costs under the contract;
(4) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible exceptions.

Item	Claimed Costs	Accepted Costs	
Stage I:			
Trenching D-7 Cat.-81 hours @ $16.50	$ 1,336.50	$ 1,336.50	
Samples - 740 @ $4.00	2,960.00	2,960.00	
Assays - 62 @ $2.50	155.00	90.00	(a)
Stage II:			
Grading D-7 Cat.-79.5 hours @$16.50	1,311.75	1,311.75	
Drilling - 2231'	6,308.00)	6,693.00	(b)
Do - Bits, cement, etc.	1,087.18)		
Mobilization and demobilization	400.00	400.00	
Incidental - 2231' @ $0.21	462.21	468.51	(c)
Assays - 434 @ $2.50	1,085.00	1,085.00	
Totals	$15,105.64	$14,344.76	

Exceptions:

(a) Assays taken in old pits, road cuts and tunnels deleted
Nos. 3014 - 3016, incl. 3
Nos. 2901 - 2906, incl. 6
Nos. 2908 - 2924, incl. 17
Total: 26 @ $2.50 $ 65.00

(b) Portion of costs in excess of $3.00/foot maximum allowed by contract 702.18

(c) Correct computation error (6.30)

Net exceptions $ 760.88

~~Vitro [illegible]~~

Vitro - 6349

see attached claim map

Drill Holes			Holes Completing Depth		Gold oz.
B-1A	81,370 N ✓	75,170 E	162.5'	0-15' rest	0.015° 0.005°
B-2	81,900 N ✓	76,840 E	260'	Mostly trace	some 0.002°
B-3	83,330 N ✓	76,000 E	215'	100-115' rest	≠0.010 trace
Not proposed sep. 15					
B-4	85,950 N ✓	76,215 E	285'	0-15' rest	0.010 0.002°
B-5	85,990 N	76,630 E	337'	Mostly trace	some 0.002°
B-6	86,430 N	76,[illegible] E	445'	Mostly trace	some 0.002°
Proposed sep. 85		Oct. 9 by Mack			
? B-7	87,238 N	77,[illegible] E			
Not proposed oct. 1	98,610 N	81,330 E			
	98,720 N	81,140 E			

? 5' drill hole samples as being too short
see Note on Vitro report oct. 10/61

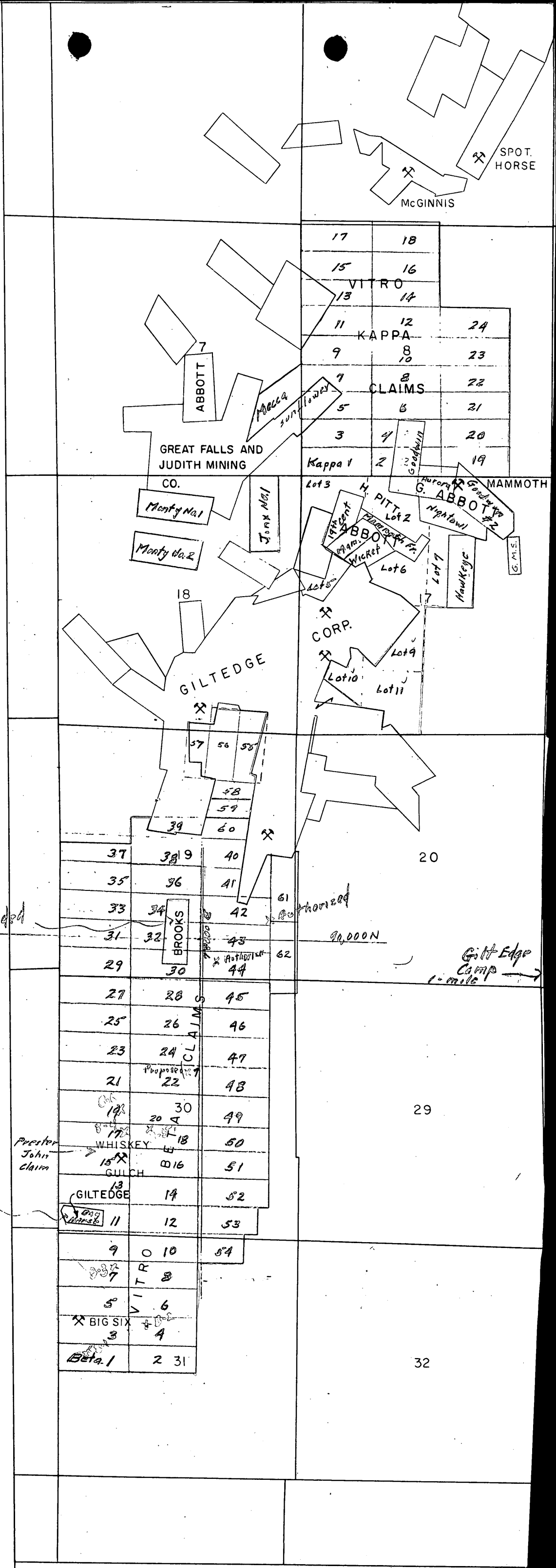


FIG-1

CLAIM OVERLAY MAP

T.16 N. R.20 E.

Fergus Co., Montana

VITRO

OME-6349

Vitro Minerals Corp

1" = 2000'

OME-6349

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 8 1964

DATE	INITIALS	CODE
	J Murphy	500

Government's Copy

EXPLORATION CONTRACT
VITRO MINERALS CORPORATION
OME-6349

AMENDMENT NO. 1

It is agreed this 15th day of September, 1964, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter referred to as the "Government," and Vitro Minerals Corporation, hereinafter referred to as the "Operator," that Contract No. 2193 (OME-6349), dated July 20, 1964, is amended effective the date of the contract as follows:

1. In Annex I the following is added:

"By means of a Quitclaim Deed dated May 18, 1964 Vitro Minerals Corporation quitclaimed all of its right, title and interest in and to Beta Nos. 1, 3, 5, 7, 9 and 11 to Joseph Nordquist.

"Under the terms of a Lease and Option, dated May 21, 1964, Joseph Nordquist granted Vitro Minerals Corporation rights to Beta Nos. 1, 3, 5, 7, 9, and 11 claims. 1/

"A Lien or Subordination Agreement, dated May 21, 1964, executed by Joseph Nordquist is attached hereto and made part hereof."

1/ In a Declaration of Abandonment, dated May 21, 1964, Joseph Nordquist, the sole owner, relinquished all right, title, and interest in Korea Nos. 1, 2, 3, and 4 claims. These claims were in conflict with the Beta Nos. 1, 3, 5, 7, 9, and 11 claims.

2. In Exhibit A, Description of the Work, Stage I, the following paragraph is added after the third paragraph:

"With prior Government approval confirmed in writing the remaining soil samples not used at the locations described in paragraphs 1 and 2 may be used to test the possible extensions of or further define anomalies found within the soil sampling areas described above, or to further trace out or define anomalies which the Operator prior to the date of the contract may have outlined or partly outlined on the land in the contract."

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

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By George C. Selfridge
Acting Director, Office of Minerals Exploration

Lang Selfridge
April 3d, 1952

VITRO MINERALS CORPORATION

By Eugene B. Hotchkiss

Title Exec V.P.

RECEIVED
AUG 7 1964
O M E
WASHINGTON

MME Form 52
June, 1961

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 OR SUBORDINATION AGREEMENT 1/

To the United States of America:

That certain land in the County of Fergus, State of Montana;

described ~~xxxxxxxxxx~~ 2/ in a MINING LEASE AND OPTION dated May 21, 1964 and recorded in Book 15, Pages 269 through 281, official records of said county

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

VITRO MINERALS CORPORATION 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 **21** day of **May**, 19 **64**.

Joseph Nordquist	(Seal)	435 So High Lewistown Mont	(Street) (City &) (State)
	(Seal)		(Street) (City &) (State)
	(Seal)		(Street) (City &) (State)
	(Seal)		(Street) (City &) (State)
	(Seal)		(Street) (City &) (State)
	(Seal)		(Street) (City &) (State)

APPLICANT SHOULD NOT SIGN

I, _____ (Name), certify that I am the _____ (Title—Secretary, etc.) of the corporation named herein; that _____ (Name), who signed this agreement was then _____ (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.

_____
(Corporate Seal)

INT.-DUP. SEC., WASH., D.C.
95181

RECEIVED
AUG 7 1964
O M E

MINING LEASE AND OPTION

This MINING LEASE AND OPTION agreement entered into as of the 31st day of May, 1964, by and between JOSEPH NORDQUIST, Lessor, and VITRO MINERALS CORPORATION, a Delaware corporation, Lessee.

W I T N E S S E T H :

WHEREAS, Lessor is the owner of the property referred to in Exhibit "A" hereto attached,

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration paid by Lessee to Lessor, receipt of which is hereby acknowledged, and of the royalties hereinafter reserved and the covenants and agreements hereinafter expressed by Lessee to be faithfully kept and performed, the parties hereto mutually and severally covenant and agree as follows:

I

RIGHTS GRANTED TO LESSEE

Lessor does hereby demise, let and grant to Lessee the exclusive right and privilege to mine and dispose of all gold, silver, lead, zinc, copper and other minerals (hereinafter referred to as the "leased deposits"), in, upon, under or belonging to the property particularly described under the caption "Leased Premises" in Exhibit "A" which is hereto attached (which said property is hereinafter referred to as the "leased premises"), together with the right to construct all such works, buildings, plants, structures and appliances as may be necessary or convenient for the mining, preparation and marketing of the leased deposits, and the exclusive right to the use of the surface of the leased premises for the exercise of the rights and privileges herein granted; and the right, at any time while this lease and option shall remain in force and effect, to use the surface of and underground workings within the leased premises for purposes incident to the mining, developing, handling and processing of ores and minerals from other properties then owned or controlled by Lessee.

Rec'd. with Field Officer's memo 8/13/64

II

PROPER OPERATION REQUIRED

Lessee shall conduct all operations on the leased premises in the manner necessary to good minerlike and economical mining so as to develop and take out leased-deposits ore with due regard to the development of the leased deposits, to the preservation of the workability of workings on the leased premises and to the special covenants herein provided.

III

ACTUAL ROYALTIES

Lessee shall pay to Lessors on all leased deposits extracted and shipped, or sold from the leased premises during the term of this lease, royalties representing five per cent (5%) of the net mint, smelter or mill returns received therefrom.

Net mint, smelter or mill returns, as used herein, shall mean the gross values as figured by the mint, smelter or mill, less all mint, smelter or mill charges or deductions and all transportation and freight charges.

If the transportation shall be conducted by Lessee or if the milling or smelting shall be performed by Lessee, the transportation, milling or smelting charges shall not exceed the amount for which similar services could be obtained from an independent responsible third party operating in the area.

Any amount due and payable to Lessors as royalties on any shipment of ores or minerals extracted and shipped and sold hereunder shall be paid by Lessee to Lessors on or before the 15th day of the month next succeeding the calendar month during which Lessee shall have received payment for such shipment.

All payments of royalties hereunder by Lessee to Lessors, or any assignee or assignees of Lessors or any of them, shall be deposited to the credit of Lessors in the following bank, to-wit: Northwestern Bank, Lewiston Mont

or in such other single depository bank as Lessors may designate from time to time by written notice to Lessee.

IV

STATEMENTS TO BE FURNISHED

Lessee shall, on or before the 15th day of each month hereof during which royalties are payable hereunder, furnish Lessors with a written report showing, as to the shipments with respect to which such royalties are so then payable, the tonnage of the leased deposits extracted and shipped or sold from the leased premises, showing the royalties payable thereon and the amounts, if any, withheld by Lessee as aforesaid on account of any outstanding mineral or royalty interest, and also showing as to shipments which were made during the preceding month but as to which Lessee shall not have received settlement during said preceding month, the total tonnage of ores and minerals shipped from the leased premises.

Lessee shall, with said statement, furnish Lessors with duplicate copies of the mill or other purchaser's receipts and settlement sheets for the shipments as to which royalties are accounted on said statement.

All such statements and duplicate copies shall be forwarded to the depository bank for Lessors.

V

BOOKS AND RECORDS

Lessee shall keep and maintain complete and accurate books of account showing the amount of leased deposits extracted from the leased premises, the amount of leased deposits shipped, sold or treated and the amount of money received or payable from the sale of such leased deposits.

Lessors and the authorized agents of Lessors shall at any and all reasonable times be permitted to inspect all books and records, including assay reports, of Lessee relating to the leased premises in order to ascertain the correct amount of royalties due Lessors or to determine whether or not the provisions of the lease are being complied with.

Upon the termination of this lease, Lessee shall furnish Lessors with copies of the then most recent mining

map or maps and with copies of the drilling logs and assay results as to any drill holes which may have been drilled by Lessee upon the leased premises.

VI

LESSORS' RIGHT OF INSPECTION

Lessee shall allow Lessors and the agents of Lessors, from time to time, to enter upon and into Lessee's workings on said leased premises for the purpose of inspection at such reasonable times as shall not interfere with the regular operation of the leased premises. It is understood and agreed that Lessee shall assume no responsibility for the safety of Lessors or the agents of Lessors when and while upon the leased premises for such purposes.

VII

TRANSFER BY LESSOR SHALL NOT IMPOSE

ADDED DUTIES UPON LESSEE

No transfer of any of the leased premises, which may hereafter occur by operation of law or otherwise, shall impose upon Lessee any obligations of segregation of production or accounting.

VIII

STATE AND FEDERAL ENACTMENTS -

INDEMNIFICATION OF LESSORS

Lessee in the operation and development of the leased premises shall be subject to all applicable Federal enactments, the laws of the State of Montana, and all Federal or state rules and regulations regarding Employers' Liability, Workmen's Compensation, Social Security and Unemployment Insurance, and said Lessee covenants and agrees to indemnify and hold harmless Lessors from and against the payment of any and all damages, claims, costs and expenses due to the existence of such enactments, and of any and all claims, costs and expenses in connection therewith under any claim of subrogation provided for by said enactments or otherwise; and Lessee shall further indemnify and hold harmless Lessors from and against any and all damages, claims, costs and expenses arising out of damages to property or injuries to or death of the employees of Lessee, or any other person whomsoever other than

Lessors and those acting under Lessors, where such injury, death or damage occurs because of or in connection with the use, operation or development in any manner of the leased premises whether such claims are based upon a right conferred by common law or by statute.

IX

PROPERTY TO BE KEPT FREE OF LIENS

Lessee shall pay and satisfy all claims for materials, supplies and labor in connection with the working of said mine and mining property, and shall keep said mine and mining property free of liens or encumbrances of any and every kind, except such as might result from state and county tax assessments not required to be paid by Lessee, or such as may result from the acts of others than Lessee, Lessee's employees or those in privity with Lessee.

X

TAXES

(a) Lessors shall pay all Federal, state and county taxes of any kind assessed against Lessors on account of the receipt of royalties by Lessors herein provided to be paid to Lessors by Lessee.

(b) Lessee shall pay all state and county property tax assessments, if any, upon said leased premises.

(c) Lessee shall pay all state and county tax assessments upon any and all structures and other improvements, machinery, equipment, tools, supplies and personal property whatsoever placed upon the leased premises by Lessee.

(d) Such state and county taxes, if any, as may be assessed because of the severance or production by Lessee of leased deposits and such state and county taxes, if any, as may be assessed against the leased premises because of additional value placed thereon by reason of the leased deposits therein, shall be prorated between and shall be paid by Lessee and Lessors in proportion to their respective participations in the proceeds thereof; PROVIDED, HOWEVER, that as to any taxes referred to in subsection (d) Lessee's obligation, in respect to the calendar year in which this lease is executed and in respect to the calendar year in which this lease is terminated, shall be limited to payment of a proportion of such taxes determined by the ratio to 365 of

the number of days in such calendar year during which this lease was in force and effect.

XI

PROTECTION AGAINST LIENS ARISING

THROUGH LESSORS' DEFAULT

In the event there are any liens or encumbrances against said leased premises, or in the event any liens or encumbrances shall hereafter accrue against the same by acts or neglect of Lessors, then Lessee may at Lessee's option pay and discharge the same, and if Lessee elects so to do then Lessors agree to repay Lessee upon demand all such sums so paid by Lessee; together with interest thereon from the date of payment of said sums at the rate of eight per cent (8%) per annum until paid. Lessee may apply any amount so becoming payable by Lessors to Lessee as a credit in payment or reduction of any amount thereafter becoming payable under Section III.

XII

TERM OF LEASE

This lease shall be and remain in force and effect for a term of ten (10) years from and after the date hereof unless sooner terminated through surrender as hereinbefore set out, or through exercise of the option hereinafter granted to Lessee or through forfeiture. Lessee may extend this lease for an additional ten (10) years by giving written notice to Lessors of its intention to do so at least ninety (90) days prior to the end of the first ten (10) year term.

XIII

LAWS AND REGULATIONS

This lease shall be subject to the laws of the State of Montana and to the rules and regulations of the regulatory bodies of such state having jurisdiction thereof, and to all other applicable state and Federal laws, rules and regulations.

XIV

FORCE MAJEURE

All obligations of Lessee shall be suspended while, but only as long as Lessee is prevented from complying with

such obligations, in whole or in part, by strikes, lockouts, acts of God, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials or services in open market, inadequate facilities for the transportation of materials, any state or Federal law, regulation or order, or other matters, exclusive of financial inabilities of Lessee, beyond the reasonable control of Lessee, whether similar to the matters herein specifically enumerated or not; PROVIDED, HOWEVER, that performance shall be resumed within a reasonable time after such cause has been removed; and PROVIDED FURTHER, that Lessee shall not be required against Lessee's will to adjust any labor dispute or to question the validity or to refrain from judicially testing the validity of any state or Federal order, regulation or law.

XV

TERMINATION

This lease is made upon condition that Lessee shall perform all of the covenants and agreements herein set forth to be performed by Lessee. If Lessee shall fail to make any payment of minimum royalty or actual royalties when due and payable or shall fail to comply with any of the other conditions or requirements of this lease, Lessors may, upon the giving of thirty (30) days' notice in writing to Lessee of the default, cancel and forfeit this lease, unless within said thirty (30) day period, Lessee shall cure the default if the default relates to the payment of royalties or unless within said thirty (30) day period, if the default relates to other than the payment of royalties, Lessee shall undertake in good faith to cure the default and shall diligently proceed to remedy the default.

XVI

LESSEE'S RIGHT OF SURRENDER

It is mutually understood and agreed that Lessee may at any time surrender and terminate this lease as to all or any portion of the leased premises upon giving to Lessors thirty (30) days' notice in writing and paying to Lessors all royalties and other sums due and payable to Lessors to the effective date of such surrender.

Lessee shall, on or before such effective date of surrender, deliver to Lessors a release and quitclaim to all rights under this Mining Lease and Option as to the so

surrendered property. No partial surrender shall operate to reduce or affect the minimum advance royalties specified herein. Upon complete surrender, Lessee shall be relieved of all obligations hereunder except as otherwise provided in the next preceding and next succeeding paragraphs hereof.

No complete surrender shall relieve Lessee from its obligation to pay any actual royalty, rental or minimum advance royalty payments which were due and payable but unpaid prior to the effective date of surrender. However, except as otherwise expressly provided in the first paragraph of this Section XVI, such complete surrender shall relieve Lessee of any obligations to pay any rental or any minimum advance royalty payments which, except for such surrender would have been payable after the effective date of surrender. Upon complete surrender, Lessee shall have no right to any reimbursement or credit for any minimum advance royalty payment or payments theretofore made, except only that any unused minimum advance royalty credit may be applied as credit in reduction of any actual royalties payable but unpaid as to ores or minerals mined and shipped or sold prior to the effective date of surrender. No surrender shall relieve Lessee from its obligation to pay any royalties as to leased deposits mined and shipped or sold prior to the effective date of surrender, or from any obligation hereunder arising out of any act or omission of Lessee prior to the effective date of surrender.

XVII

REMOVAL OF EQUIPMENT

It is mutually understood and agreed that, in case of forfeiture, surrender or expiration of this lease, all installed underground timbering, installed underground air and water lines, installed underground power lines, installed underground trackage (rails and ties), shall be and remain a part of the realty and shall revert to Lessors without further consideration or compensation.

It is further understood and agreed that all personal property of Lessee located within or upon the leased premises, and all buildings, machinery, equipment and tools (other than the fixtures to become the property of Lessors as above provided), shall, in case of forfeiture, surrender or other termination of this lease, remain upon the leased premises, and be held as a guarantee in lieu of bond until all terms of this lease with respect to payment of royalties and the preservation of the property shall have been complied with.

Upon such compliance with and performance of such conditions and obligations, Lessee shall be entitled to, and may, within ninety (90) days after such termination of this lease or within such extension of time as may be granted by Lessors, remove from the leased premises such personal property and improvements, other than those items which are to remain the property of Lessors as above provided.

XVIII

LESSER INTEREST PROVISION

If Lessors own, as to the leased premises, an interest less than the entire interest therein, then the royalties in this lease provided for shall, as to any ores or minerals produced from that particular property, be paid to Lessors only in the proportion which Lessors' interest bears to the full and entire interest therein and thereunder.

XIX

WORK REQUIREMENTS

Lessee agrees to perform the annual assessment labor which may be required under the mining laws of the United States as to the unpatented mining claims covered hereby, beginning with the year ending September 1, 1964. If this lease shall have terminated, Lessee shall have no obligation to perform annual labor for any assessment year ending sixty (60) days or more after such termination. PROVIDED, HOWEVER, that if such termination shall be pursuant to notice of surrender given by Lessee, Lessee shall have no obligation to perform annual labor for any assessment year ending sixty (60) days or more after the giving of such notice.

Lessee shall have no work or diligence obligations other than the one expressly defined herein and no covenants in this respect are intended or should be implied.

XX

MANNER OF GIVING NOTICES

Any notice required or desired to be served upon Lessee shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested and

addressed as follows:

Vitro Minerals Corporation
600 West Thirty-third South
Salt Lake City, Utah

or to such other party and at such other address as Lessee or its successor or successors in interest may, from time to time, designate by written notice to Lessors.

Any notice required or desired to be served upon Lessors shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested, and addressed as follows:

Joseph Nordquist
435-So High St
Lewistown Mont

or to such other party and at such other address as Lessors may, from time to time, designate by written notice to Lessee.

Service of notice by mail shall be deemed effective and complete upon the date of posting and mailing in accordance herewith. Personal service of notice upon the designated addressee shall be deemed sufficient service of notice and no mailing of notice shall be necessary in case of such personal service.

XXI

ASSIGNMENT

The provisions hereof shall inure to the benefit of and shall be binding upon the successors in interest, legal representatives and assigns of the respective parties hereto, but no party hereto shall be chargeable with notice of any assignment or conveyance until such party shall have been furnished with written notice thereof and with a duplicate, certified or photostat copy of the instrument of assignment or conveyance.

XXII

OPTION - ESCROW

Lessors agree that at any time after Lessee shall have paid to Lessors or to the depository bank for Lessors

(as a result of any actual royalty payments made in accordance herewith and any additional cash purchase price payment or payments which Lessee may elect to make), for Lessors an aggregate sum of Ten Thousand Dollars ($10,000.00), Lessee shall, upon giving to Lessors written notice and paying to Lessors the sum of Ten Dollars ($10.00), have the exclusive right and option to demand and receive from Lessors, their successors in interest and legal representatives or assigns, a good, sufficient and properly executed and acknowledged mining deed conveying to Lessee, or its successor or successors in interest, all of the leased premises particularly described in Exhibit "A" hereto attached as to which this lease then remains in force and effect, together with all and whatsoever the rights, titles and interest therein and thereunder.

Upon delivery of such mining deed to Lessee (grantee) or its successor or successors in interest, the lease provided for in this instrument shall cease and terminate and all rights of the Lessors with respect to the property conveyed by such mining deed and any future royalty obligations of Lessee shall terminate. Lessors agree that at any time, upon the written request of Lessee, Lessors will properly execute and acknowledge a deed in accordance with the foregoing provisions of this Section XXII and will deposit the same in escrow with: Northwestern Bank Livingston Mont

with appropriate escrow instructions to be signed by Lessors and Lessee. Such escrow instructions shall provide appropriate protection to the Lessors, the Lessee and the escrow holder; shall provide for delivery of said deed to Lessee, or its successor or successors in interest, when and if it shall be entitled to the delivery thereof; and shall provide for the return of said deed to Lessors if the hereunder granted lease shall be surrendered or otherwise terminated prior to the time when Lessee, or its successor or successors in interest, shall have become entitled to exercise the hereunder granted option to take and receive a deed to the mining claims which are the subject of this Mining Lease and Option. Escrow charges will be payable by Lessee.

XXIII

AFTER ACQUIRED INTERESTS

Any interest in and to the leased premises or the leased deposits which may be acquired by the Lessors subsequent

to the date of this lease shall be covered hereby as if such interest were owned by the Lessor on the date this lease is executed.

IN WITNESS WHEREOF, these presents are executed as of the day and year first above written.

LESSOR:

Joseph Nordquist

LESSEE:

ATTEST:

VITRO MINERALS CORPORATION

Secretary

By Exec Vice President

STATE OF Montana)
) ss.
COUNTY OF Fergus)

On this 21st day of May, in the year 1964, before me Charles W. Telak personally appeared JOSEPH NORDQUIST, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Notary Public
Residing at: Lewistown, Mont.

My commission expires:
Oct. 22-1966

STATE OF New York)
) ss.
COUNTY OF New York)

On this 27th day of May, in the year 1964, before me Jean Dion personally appeared Eugene B. Atkinson, known to me to be the Exec. Vice President of the corporation that executed the within instrument and acknowledged to me that such corporation executed the same.

Notary Public
Residing at:

My commission expires:

JEAN DION
Notary Public, State of New York
No. [illegible]
Qualified in [illegible] County
Cert. filed [illegible]
Comm. Expires [illegible] 1965

EXHIBIT "A"

LEASED PREMISES

The property covered by the attached Mining Lease and Option covers the following described unpatented lode mining claims situated in the Gilt Edge Mining District, Fergus County, Montana.

Name of Claim	Certificate of Location Recorded in the Records of Fergus County, Montana in Book	Page
Beta No. 1	15 Lode	38
Beta No. 3	15 Lode	42
Beta No. 5	15 Lode	46
Beta No. 7	15 Lode	50
Beta No. 9	15 Lode	54
Beta No. 11	15 Lode	58

19551

State of Montana
County of Fergus
Filed for Record June 12, 1964 at 10:00 o'clock a.m. and duly recorded in Volume 15 of Lodes, Page 281, Records of Fergus County, Montana
Fee Paid: $26.00

May Rathbun, County Recorder by Lois Wagner, Deputy

19347 Book 179, Page 400

RECEIVED
AUG 7 1964
O M E
HELENA, MONTANA

QUITCLAIM DEED

This QUITCLAIM DEED made and executed this 18th day of ~~June~~ MAY, 1964, by and between VITRO MINERALS CORPORATION, Grantor, a corporation organized under the laws of the State of Delaware, and JOSEPH NORDQUIST, Grantee.

W I T N E S S E T H :

FOR AND IN CONSIDERATION of the sum of Ten Dollars ($10.00) and other valuable consideration, receipt of which is hereby acknowledged, Grantor quitclaims to Grantee all of its right, title and interest in and to the following described unpatented lode mining claims situated in the Gilt Edge Mining District, Fergus County, Montana, to-wit:

Name of Claim	Certificate of Location Recorded in the Records of Fergus County, Montana in Book	Page
Beta No. 1	15 Lode	38 ?
Beta No. 3	15 Lode	42
Beta No. 5	15 Lode	46
Beta No. 7	15 Lode	50
Beta No. 9	15 Lode	54
Beta No. 11	15 Lode	58

IN WITNESS WHEREOF the Grantor has executed this instrument as of the day and year first above written.

VITRO MINERALS CORPORATION

By [signature]
Vice President

ATTEST:

[signature]
TREASURER ~~Secretary~~

Book 179, Page 401

STATE OF NEW YORK)
COUNTY OF NEW YORK) ss.

On this 18th day of May, in the year 1964, before me personally appeared Eugene B. Hotchkiss, known to me to be the Executive Vice President of the corporation that executed the within instrument and acknowledged to me that such corporation executed the same.

Helen R. Gallagher
Notary Public
Residing at: 6947 Exeter Street
Forest Hills 75, N.Y.

My commission expires:
March 30, 1966

HELEN R. GALLAGHER
Notary Public, State of New York
No. 4[illegible]
Qualified in Queens County
Commission Expires March 30, 1966

19347

State of Montana
County of Fergus
Filed for Record May 21, 1964 at 11:10 o'clock a.m. and duly recorded in Volume 179 of Deeds, Page 401 Records of Fergus County, Montana
Fee Paid: $4.00

May Rathbun, County Recorder

Vitro Minerals Corporation
Box 15437
Salt Lake City, Utah 84115

L 45 2

19346 Book 15, Page 267

RECEIVED
AUG 7 1964
O M E
SPOKANE, WASHINGTON

DECLARATION OF ABANDONMENT

Under date of March 21, 1953, the undersigned, JOSEPH NORDQUIST, and FORREST V. TINDALL and L. A. SANDMAN located the following described unpatented lode mining claims situated in the Gilt Edge Mining District, Fergus County, Montana, to-wit:

Name of Claim	Certificate of Location Recorded in the records of Fergus County, Montana in Book	Page
Korea No. 1	14 Lode	283
Korea No. 2	14 Lode	284
Korea No. 3	14 Lode	285
Korea No. 4	14 Lode	286

The undersigned, Joseph Nordquist, has succeeded to all of the right, title and interest of Forrest V. Tindall and L. A. Sandman in and to said mining claims and in and to the land covered thereby.

NOW THEREFORE, in consideration of the sum of TEN DOLLARS and other consideration, receipt of which is acknowledged, the undersigned does hereby waive, relinquish and abandon all of his right, title and interest in and to the hereinabove described unpatented lode mining claims.

IN WITNESS WHEREOF, the undersigned has executed this instrument on this 31st day of May, A. D. 1964.

Joseph Nordquist

Joseph Nordquist

Read with Field Officer's memos 8/13/64

STATE OF Montana)
) SS.
COUNTY OF Fergus)

On this 21st day of May, in the year 1964, before me Charles W. Lelek personally appeared JOSEPH NORDQUIST, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Charles W Lelek
Notary Public
Residing at: Lewistown, Montana

My Commission Expires:
Oct 22-1966

19346

State of Montana
County of Fergus
Filed for Record May 21, 1964 at 11:10 o'clock a.m. and duly recorded in Volume 15 of Lodes, Page 268, Records of Fergus County, Montana
Fee Paid: $4.00

May Rathbun, County Recorder

Vitro Minerals Corporation
Box 15437
Salt Lake City, Utah 84115

9345 BOOK 179 PAGE 398 2452

Filed for record this ..... day of MAY 21 1964 19 ..... at 11:10 o'clock A. M.

No. 14 — QUIT CLAIM DEED. STATE PUBLISHING CO., HELENA, MONT.

THIS INDENTURE, Made the 16th day of May in the year of our Lord one thousand nine hundred and Sixty Four between Forest Tindall and Edith Tindall his wife of Lewistown Montana

the parties of the first part

and Joseph Hardquist of Lewistown Montana,

the party of the SECOND PART,

WITNESSETH: That the said parties of the FIRST PART for and in consideration of the sum of One — Dollars, ($ 1.00) to them in hand paid by the said party of the SECOND PART, receipt of which is hereby acknowledged; do hereby convey, remise, release and forever quitclaim unto the said party of the second part, and to heirs, and assigns, all right, title and interest in and to the following described real estate, situated in the County of Fergus and State of Montana, to-wit:

Lode Mining Claims as follows
In the Cow Butte unorganized Mining District, Cut
Korea No. One — Korea No. Two — Korea No. Three
and Korea No. Four.
as recorded in Book 14 - Lode Locations

together with all the tenements, hereditaments, and appurtenances thereto belonging, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and also all the estate, right, title, interest property, possession, claim and demand whatsoever as well in law as in equity, of the said party of the first part, of, in or to the said premises and every part and parcel thereof.

TO HAVE AND TO HOLD, all and singular the said premises, with the appurtenances unto the said party of the second part heirs and assigns forever.

IN WITNESS WHEREOF, the said party of the first part have hereunto set hand and seal the day and year first above written.

Signed, Sealed and Delivered in the Presence of

F. V. Tindall (SEAL)

Edith V. Tindall (SEAL)

STATE OF MONTANA,
County of Fergus } ss.

On this 21st day of May nineteen hundred and sixty-four before me Marion B. Tindall, a Notary Public for the State of Montana, personally appeared F. V. Tindall and Edith V. Tindall, his wife known to me

(or proved to me on oath of) to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

RECEIVED AUG 7 1964 OMB SEATTLE, WASHINGTON

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year in this certificate first above written.

Marion B. Tindall
Notary Public for the State of Montana

Residing at Lewistown My Commission expires May 28 1967

(over)

State of Montana
County of Fergus
Filed for Record May 21, 1964 at 11:10 o'clock a.m. and duly recorded in Volume 179 of Deeds, Page 399 Records of Fergus County, Montana.
Fee Paid: $2.00

May Rathbun, County Recorder

19344

L 452

STATE OF MONTANA, } ss. BOOK 179 PAGE 398

County of Fergus

Filed for record this 21st day of May 19 64 at 11:10 o'clock A M. and Recorded in Book 179 of Deeds on Page 398 of the Records of County of Fergus State of Montana. May Rathbun, Clerk and Recorder By $2.00 pd.

No. 14 — QUIT CLAIM DEED.

STATE PUBLISHING CO., HELENA, MONT.

THIS INDENTURE, Made the 22nd day of October, in the year of our Lord one thousand nine hundred and sixty three between L. A. Sandman and Clara Sandman, his wife, of Lewistown, Montana,

the parties of the first part and Joseph Nordquist, of Lewistown, Montana,

the party of the SECOND PART,

WITNESSETH: That the said parties of the FIRST PART for and in consideration of the sum of One ——— Dollars, ($1.00) to them in hand paid by the said party of the SECOND PART, receipt of which is hereby acknowledged; do hereby convey, remise, release and forever quitclaim unto the said party of the second part, and to heirs, and assigns, all right, title and interest in and to the following described real estate, situated in the County of Fergus, and State of Montana, to-wit:

Load Mining Claims as follows:

In the Cone Butte Unorganixed Mining District, to wit:

Korea No. 1,

Korea No. 2,

Korea No. 3,

and Korea No. 4,

together with all the tenements, hereditaments, and appurtenances thereto belonging, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and also all the estate, right, title, interest, property, possession, claim and demand whatsoever as well in law as in equity, of the said parties of the first part, of, in or to the said premises and every part and parcel thereof.

TO HAVE AND TO HOLD, all and singular the said premises, with the appurtenances unto the said party of the second part his heirs and assigns forever.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered in the Presence of

L. A. Sandman (SEAL)

Clara M. Sandman (SEAL)

STATE OF MONTANA, } ss.

County of Fergus,

On this 31st day of October nineteen hundred and sixty three before me a Notary Public for the State of Montana, personally appeared L. A. Sandman and Clara Sandman, His wife, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

RECEIVED AUG 7 1964

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year in this certificate first above written.

E. M. Kenna

Notary Public for the State of Montana

Residing at Lewistown, Mont. My Commission expires June 30 1964

Vitro Minerals Corp.

Government's Copy

MME Form 50
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
(Long Form)

Docket No.	Commodity	Contract No.	County	State
OME -6349	Gold-Silver	14-23-090-2193	Fergus	Montana

It is agreed JUL 20 1964 (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Vitro Minerals Corporation, a Delaware corporation

whose mailing address is 90 Park Avenue, New York, N. Y. 10016, hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before Sept. 15, 1964 (Date), and, subject to the provisions of Article 9 and Exhibit A, shall either have completed the work within 12 months from the date of the contract or shall have incurred allowable costs (see Article 6) in a sum not less than the total cost set forth in Exhibit A.

(b) The total allowable cost of the work set forth in Exhibit A is $93,740.00. The Government will contribute 50 percent of the allowable costs as they are incurred, in a total sum not in excess of $46,870.00 in accordance with the provisions of Articles 3, 4, 5, and 6. "Costs incurred" means costs that have been paid or have become due and payable, or that the Government determines have become obligations.

(c) Interest computation.--Simple interest at the rate of 6-¼ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

See Annex I

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the lien agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

See Annex I

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 7 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Independent contracts.--To the extent that the allowable costs are estimated in Exhibit A with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed (see Article 6(a), Category (1)). Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract, the Government will participate in payments to the independent contractor only as to work performed in accordance with the provisions of this exploration contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.-- The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government; however, the original of the Operator's Monthly Voucher shall be supported by documentary evidence, such as certified copies or transcripts of payrolls and invoices, for all costs claimed under Article 6 (a) (1).)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the related costs.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of the same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Costs.--(a) Allowable costs.--The allowable costs of the work to which the Government will contribute are limited to:

(1) the necessary, reasonable, and direct actual costs that are estimated in Exhibit A by categories as specified in this article; and

(2) fixed costs for units of work to be performed (per foot, per hour, etc.) agreed upon in lieu of actual costs and set forth in Exhibit A.

The Government will not contribute to costs under any category or subcategory omitted from the estimate of costs in Exhibit A. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost; any excess over a fixed unit cost; and any excess over the total allowable cost of the work are not allowable. The Operator shall incur such excesses for his own account without contribution by the Government, but the Operator is not obligated to incur more than his agreed percentage of the total allowable cost of the work.

Any category or subcategory or element thereof not designated as a maximum in this article or in Exhibit A may be exceeded, provided that the total allowable cost of the work, which is a maximum, is not exceeded.

CATEGORY (1)--INDEPENDENT CONTRACTS.--(See Article 3(b)). The total of this category and the average unit cost estimated for each type of work to be performed under an independent contract are maximums.

CATEGORY (2)--PERSONAL SERVICES.

Subcategory (a)--Supervision and Technical Services--All elements of this subcategory (number of supervisors, technicians, outside consultants, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)--Labor.

CATEGORY (3)--OPERATING MATERIALS AND SUPPLIES.--Includes such items as drill bits and steel, explosives, fuel, pipe, power, timber, rail, and small tools costing less than $50 each.

CATEGORY (4)--OPERATING EQUIPMENT.

Subcategory (a)--Rental.--The number of each rented item [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)--Purchases.--The total of this subcategory is a maximum.

Subcategory (c)--Depreciation.--All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)--INITIAL REHABILITATION AND REPAIRS.--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

Subcategory (a)--Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).--The total of this subcategory is a maximum.

Subcategory (b)--Initial rehabilitation and repairs of operating equipment.--The total of this subcategory is a maximum.

CATEGORY (6)--NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

CATEGORY (7)--MISCELLANEOUS.--Includes requirements and costs that do not fall within any of the first six categories, such as repairs other than initial and maintenance of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, and communications.

(b) Nonallowable costs.--In addition to the limitations imposed by paragraph (a) of this Article 6 the Government will not contribute to the following costs:

(1) Costs of the land, such as rental, depreciation, depletion, or other costs of acquiring, owning, or holding possession;

(2) Indirect costs, such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) Previous work performed or costs incurred before the date of this contract; and

(4) Deferred payments.--Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods, unless the purchase agreement is approved by the Government in writing.

(c) Reductions in costs.--The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original total cost. The provision does not apply to receipts from production which are subject to the Government's royalty under the provisions of Article 7.

ARTICLE 7. Repayment by Operator.--(a) Certification.-- If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retains his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certicifation of possible production--from the date of the contract until the lapse of the time within which the government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract, or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first. **See Article 16**

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or Producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

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

(e) Lien for payment.--To secure the payment of royalty (see Article 7(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be contrued as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 8. Interests in purchased property.--(a) Title and ownership.--All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions although title thereto shall be taken in the name of the Operator.

(b) Preservation of property.--Until the final disposal of any property in which the Government has an interest, the Operator shall preserve and protect same for the best interest of the Government, and any reasonable and necessary cost thereof will be treated as an allowable cost of the exploration. After the completion of the work, termination of the Government's obligation to contribute, or when such property is not being used for the work, the Operator shall not use it elsewhere without the written consent of the Government and without paying a reasonable rental to be fixed by the Government for its proportionate interest.

(c) Disposal of property.--Upon the completion of the work, termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, sale to others, purchase by the Operator, or sale or transfer to the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government, the Operator shall not sell at any price any item of property that cost more than $500, and shall not sell at less than 25 percent of the purchase price any item of property that cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or offers. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, explosives, pipe, or rail), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item, the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the exploration.

(d) Default of the Operator re disposal.--If within 90 days after the completion of the work, termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may:

(1) in writing extend the time within which the Operator must dispose of or liquidate the property;

(2) by written notice to the Operator, place upon such property what it determines to be a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; and

(3) enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 9. Termination of the Government's obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 9 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 13.

ARTICLE 10. Notices to be given by the Government may be delivered to the Operator, or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 11. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 12. Nondiscrimination in Employment. The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961 as amended and supplemented are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 13. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 14. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for

liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 15. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 16. Changes and added provisions.--

The royalty period in Article 7(b)(2) is extended to 15 years.

Executed in quintuplicate the day and year first above written.

VITRO MINERALS CORPORATION
(Operator)

By Eugene B. Hotchkiss
Ex. V.P.

Title

THE UNITED STATES OF AMERICA

By George Turnock

Long
Ass't. Sol.

Tollett
Selfridge
Murphy
Johnson

I, William H. Denne, Jr. (Name), certify that I am the ---------- secretary of the corporation named as Operator herein; that Eugene B. Hotchkiss (Name), who signed this contract on behalf of the Operator, was then Executive Vice President (Title) of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Will H. Denne

[CORPORATE SEAL]

EXPLORATION CONTRACT
VITRO MINERALS CORPORATION
OME-6349

ANNEX I

The land referred to in Article 2 of the contract consists of nine (9) patented lode claims, ninety-one (91) unpatented lode mining claims, and seven (7) lots of fee land comprising approximately 132 acres. The unpatented claims are recorded in the Records of Fergus County, Lewistown, Montana. Data relating to all claims and fee land are as follows:

Unpatented lode claims owned by Operator by right of location

Beta Nos. 1 through 62, in secs. 18, 19, 20, 29, 30, and 31, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, pages 37 through 160.

Kappa Nos. 1 through 24, in sec. 8, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, pages 161 through 208.

Leased Claims and Fee Land

Hoffman Property

In a Mining Lease and Option dated November 16, 1963, Ruth Kelly Hoffman, individually and as natural guardian of Larry C. Hoffman, and Larry C. Hoffman in his own right granted mining rights to the Operator covering the Prester John unpatented lode mining claim in the NE$\frac{1}{4}$ of the SW$\frac{1}{4}$ of sec. 30, T. 16 N., R. 20 E., PMM. The claim which covers the old Whiskey Gulch Mine is recorded in Lode Book 14, page 517.

A Lien and Subordination Agreements executed by Ruth Kelly Hoffman and Larry C. Hoffman is attached hereto and made part hereof.

Pitt Property

In a Mining Lease and Option dated December 18, 1963, Henry J. Pitt and his wife, Florence G. Pitt, granted mining rights to the Operator covering the following four (4) unpatented lode mining claims and four (4) lots of fee land:

Jinx claim in the NE$\frac{1}{4}$ of sec. 18, T. 16 N., R. 20 E., PMM, Recorded in Lode Book 15, page 218.

Mecca claim in the SE$\frac{1}{4}$ of sec. 7, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, page 216.

Monte Nos. 1 and 2 claims in the N$\frac{1}{2}$ of sec. 18, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, pages 212 and 214, respectively.

The fee land consists of Lots 2, 3, 6, and 7 in sec. 17, T. 16 N., R. 20 E., PMM.

A Lien and Subordination Agreements executed by Henry J. Pitt and Florence G. Pitt is attached hereto and made part hereof.

Abbott Property

In a Mining Lease and Option dated October 23, 1963, as amended December 18, 1963, Granville S. Abbott and his wife, Addie Abbott, granted mining rights to the Operator covering the following nine (9) patented claims and three lots of fee land:

Patented claims in secs. 8 and 17, T. 16 N., R. 20 E., PMM:

Name of Claim	Mineral Survey Number
Goodwin	6451
Goodwin No. 2	8791 A
Aurora	8908
Night Owl	8908
Hawkeye	7410
Mammoth	7411
Mammoth Fraction	7412
Wickett	7413
19th Century	7414

The fee land consists of Lots 9, 10, and 11, in sec. 17, T. 16 N., R. 20 E., PMM, except that portion of Lots 10 and 11 described in a conveyance from Florence G. Gilmore to Gilt Edge Mining Corporation in a Warranty Deed dated June 26, 1939, recorded in Book 137 of Deeds, page 59, Document No. 17671.

A Lien and Subordination Agreements executed by Granville S. Abbott and Addie Abbott is attached hereto and made part hereof.

The outer boundaries of the claims and claim groups and fee land are shown in green on Fig. 1 entitled "Claim Overlay Map, T. 16 N., R. 20 E., Fergus Co. Montana . . .," attached hereto and made part hereof.

Claims not controlled by the Operator but which lie within the claim groups are shown in yellow.

Because of prior possession by other owners, not all of the Kappa and Beta claims contain a full 20 acres. The individual acreage of each claim controlled by the Operator is approximately indicated on Fig. 1.

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 –	2193
Contract Date	JUL 20 1964

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Fergus, State of Montana, described ~~XXXXXXXXXX~~ 2/ NOTICE OF in a MINING LEASE AND OPTION dated November 16, 1963 and recorded in Book 15, pages 221 and 222, official records of said county

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

VITRO MINERALS CORPORATION 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 ____ day of April, 1964.

Ruth Kelly Hoffman (Seal) RUTH KELLY HOFFMAN		P. O. Box 534	(Street)
		Lewistown, Montana	(City & State)
Larry C. Hoffman (Seal) LARRY C. HOFFMAN		same	(Street)
			(City & State)
(Seal)			(Street)
			(City & State)
(Seal)			(Street)
			(City & State)
(Seal)			(Street)
			(City & State)
(Seal)			(Street)
			(City & State)

I, _____ (Name), certify that I am the _____ (Title—Secretary, etc.) of the corporation named herein; that _____ (Name), who signed this agreement was then _____ (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.

_____ (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 –	6349
Contract No. 14-23-090 –	2193
Contract Date	JUL 20 1964

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Fergus, State of Montana,

described ~~as follows:~~ 2/ in a MINING LEASE AND OPTION dated December 18, 1963, and recorded in Book 15, pages 223 through 237, official records of said county

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

VITRO MINERALS CORPORATION 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 6 day of April, 1964.

Henry J Pitt	(Seal)	Lewistown, Montana	(Street) (City & State)
HENRY J. PITT			
Florence G Pitt	(Seal)	same	(Street) (City & State)
FLORENCE G. PITT			
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)

I, _____ (Name), certify that I am the _____ (Title—Secretary, etc.) of the corporation named herein; that _____ (Name), who signed this agreement was then _____ (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.

_____
(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 –	6349
Contract No. 14-23-090–	2193
Contract Date	JUL 20 1964

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of **Fergus**, State of **Montana**,

described ~~as follows~~: 2/ **in a MINING LEASE AND OPTION dated October 23, 1963 and recorded in Book 31, pages 487 through 501, official records of said county**

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

VITRO MINERALS CORPORATION 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 8 day of April, 1964.

Granville S. Abbott (Seal)	Gilt Edge Route	(Street)
GRANVILLE S. ABBOTT	Lewistown, Montana	(City & State)
Addie Abbott (Seal)	none	(Street)
ADDIE ABBOTT		(City & State)
(Seal)		(Street)
		(City & State)
(Seal)		(Street)
		(City & State)
(Seal)		(Street)
		(City & State)
(Seal)		(Street)
		(City & State)

I, _____ (Name), certify that I am the _____ (Title—Secretary, etc.) of the corporation named herein; that _____ (Name), who signed this agreement was then _____ (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.

_____
(Corporate Seal)

EXPLORATION CONTRACT
VITRO MINERALS CORPORATION
OME-6349

EXHIBIT A

The purpose of this project is to explore by soil sampling, bulldozing trenches, rotary and/or down-the-hole percussion drilling for gold and silver-bearing ore bodies occurring as breccia-filled fissure veins or as replacement deposits in limestone or porphyry at the contact or adjacent thereto, between Madison limestone of Mississippian age and syenite porphyry of Eocene age.

General Provisions

Soil samples shall be split and one split of each shall be sent to a commercial assayer to be tested for its parts per million arsenic content.

A D-8 or D-7 Caterpillar dozer or equivalent unit of any other make shall be used to bulldoze the trenches, access roads, and drill sites.

All significantly mineralized areas exposed in the trenches shall be sampled by cutting channels at intervals of not more than 10 feet. Each sample shall be split as necessary and one split assayed for gold and silver.

Holes shall have not less than a 4-inch diameter and may be drilled by either rotary or percussion methods. Holes encountering a lower-porphyry-limestone contact shall be continued, if possible, to at least 50 feet below the contact.

During rotary and/or down-the-hole percussion drilling, samples of the cuttings shall be recovered at 5-foot intervals with a cyclone sample collector. Samples showing mineralization shall be split as necessary and one split assayed for gold and silver.

The Operator shall store one split of each sample from whatever source in a suitable container properly identified as to the location where the sample was obtained. The stored samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored samples.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly reports, which shall also include maps or sketches showing the work completed during the reporting period. The maps shall show the location and p.p.m. analyses of soil samples and the geological formations and structures traversed by the trenches and drill holes and the location and values of the samples.

No work under this contract shall be performed at locations closer than 200 feet to the outer boundaries of the property under this contract.

The location, direction, and extent of each work item shall be subject to Government approval.

The Operator shall provide such supervisory and technical services as may be required to complete the work in a satisfactory manner.

The work shall be divided into three stages. The Operator shall complete all of the soil sampling in Stage I and as much of the trench work therein as is authorized by the Government and confirmed in writing. Approval of Stages II and III shall be dependent upon favorable results having been obtained in the preceding stage and shall have the prior authorization of the Government confirmed in writing. Thereafter, the Operator shall complete as much work under each stage as is approved by the Government.

Description of the Work

Stage I

On the Beta claims establish a base line not less than 200 feet north of and parallel to the south side lines of Beta 1 and Beta 2 claims. At intervals of 150 feet northerly, establish 50 parallel auxiliary base lines. Along each base line establish soil sampling stations at 100-foot intervals. The base lines are indicated in red and the stations in black on Plate 1 entitled "Claim Map . . . Locations of Recommended Soil Sampling Stations . . . Beta Claim Group," attached hereto and made a part hereof.

On the Kappa claims establish a base line about 50 feet north of and parallel to the north side lines of Kappa 5 and Kappa 6 claims. At intervals of 150 feet establish 21 parallel auxiliary base lines to the north and 22 lines to the south. Along each base line establish soil sampling stations at 100-foot intervals. The base lines are indicated in red and the stations in black on Plate 2 entitled "Claim Map . . . Locations of Recommended Soil Sampling Stations . . . Kappa et al., Claims," attached hereto and made a part hereof.

Soil samples shall be taken at each sample station. However, as work progresses, assay results may indicate areas in which soil sampling can be omitted along parts of 1 or 2 consecutive lines. In such cases these parts of lines need not be sampled.

Certain anomalous areas indicated by soil sampling shall be explored by bulldozer trenching.

Stage II

Access roads shall be bulldozed and drill sites leveled in favorable areas indicated by the Stage I work. From these sites, a maximum of 15 holes shall be drilled. It is estimated that the holes will have an average length of 300 feet or an aggregate of 4,500 feet of drilling. No hole drilled shall be closer than 200 feet to any other hole drilled under this Stage II of the contract.

Stage III

Possible ore grade holes depending on the type of deposit indicated by the Stage II drilling may be checked by drilling additional holes on not closer than 100-foot centers. Not more than 66 holes shall be drilled for an aggregate of not more than 20,000 feet of drilling under this Stage III of the contract.

Access roads may be bulldozed and drill sites leveled if necessary under this Stage III with a maximum of 50 hours of dozer work, with a D-8 or 58.8 hours with a D-7.

Estimated Costs of the Work

Stage I

Actual Costs

Category (1) Independent Contracts

Bulldozing trenches	$ 2,000.00	
D-8 Caterpillar dozer, 100 hrs. @ $20.00/hr.		
D-7 Caterpillar dozer, 117 hrs. @ $17.00/hr.		$ 2,000.00
Total Estimated Actual Costs		$ 2,000.00

Fixed Unit Costs

Grid layout, soil sampling, and analysis for arsenic, 1,425 samples @ $4.00/sample	$ 5,700.00	
200 samples assayed for gold and silver @ $2.50/sample	500.00	
Total Estimated Fixed Unit Costs		$ 6,200.00
Total Estimated Costs Stage I		$ 8,200.00

Stage II

Actual Costs

Category (1) Independent Contracts

Bulldozing access roads and drill sites	$ 1,500.00	
D-8 Caterpillar dozer, 75 hrs. @$20.00/hr.		
D-7 Caterpillar dozer, 88 hrs. @ $17.00/hr.		
Mobilization and demobilization of drilling equipment and personnel	400.00	
4,500 feet of rotary or percussion drilling @ $3.00/ft.	13,500.00	$15,400.00
Total Estimated Actual Costs		$15,400.00

Fixed Unit Costs

Incidental allowance for each foot of drill hole completed, 4,500 feet @ $0.21/ft. 1/	$ 945.00	
600 samples assayed for gold and silver @ $2.50/sample	1,500.00	
Total Estimated Fixed Unit Costs		$ 2,445.00
Total Estimated Cost Stage II		$17,845.00

Stage III

Actual Costs

Category (1) Independent Contracts

Bulldozing access roads and drill sites	$ 1,000.00	
D-8 Caterpillar dozer, 50 hrs. @ $20.00/hr.		
D-7 Caterpillar dozer, 58.8 hrs. @ $17.00/hr.		
20,000 feet of rotary or percussion drilling @ $3.00/ft.	60,000.00	$61,000.00
Total Estimated Actual Costs		$61,000.00

Fixed Unit Costs

Incidental allowance for each foot of drill hole completed, 20,000 feet @ $0.21/ft. 1/	$ 4,200.00	
1,000 samples assayed for gold and silver @ $2.50/sample	$ 2,500.00	
Total Estimated Fixed Unit Costs		$ 6,700.00
Total Estimated Cost Stage III		$67,700.00

SUMMARY

Total Estimated Cost Stage I	$ 8,200.00
Total Estimated Cost Stage II	17,845.00
Total Estimated Cost Stage III	67,700.00
Total Estimated Cost of the Work (rounded)	$93,740.00
Government Participation @ 50%	$46,870.00

1/ Includes all costs whatsoever except assaying that would otherwise be allowable costs under Categories (2) through (7).

EXHIBIT B

NONDISCRIMINATION IN EMPLOYMENT

(Section 301, Executive Order 10925, March 6, 1961, as amended)

'During the performance of this contract, the contractor agrees as follows:

'(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited, to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.

'(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

'(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

'(4) The contractor will comply with all provisions of Executive Order No. 10925 of March 6, 1961, as amended, and of the rules, regulations, and relevant orders of the President's Committee on Equal Employment Opportunity created thereby.

'(5) The contractor will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, as amended, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

'(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, as amended, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of the President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

'(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the President's Committee on Equal Employment Opportunity issued pursuant to section 303 of Executive Order No. 10925 of March 6, 1961, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.'"

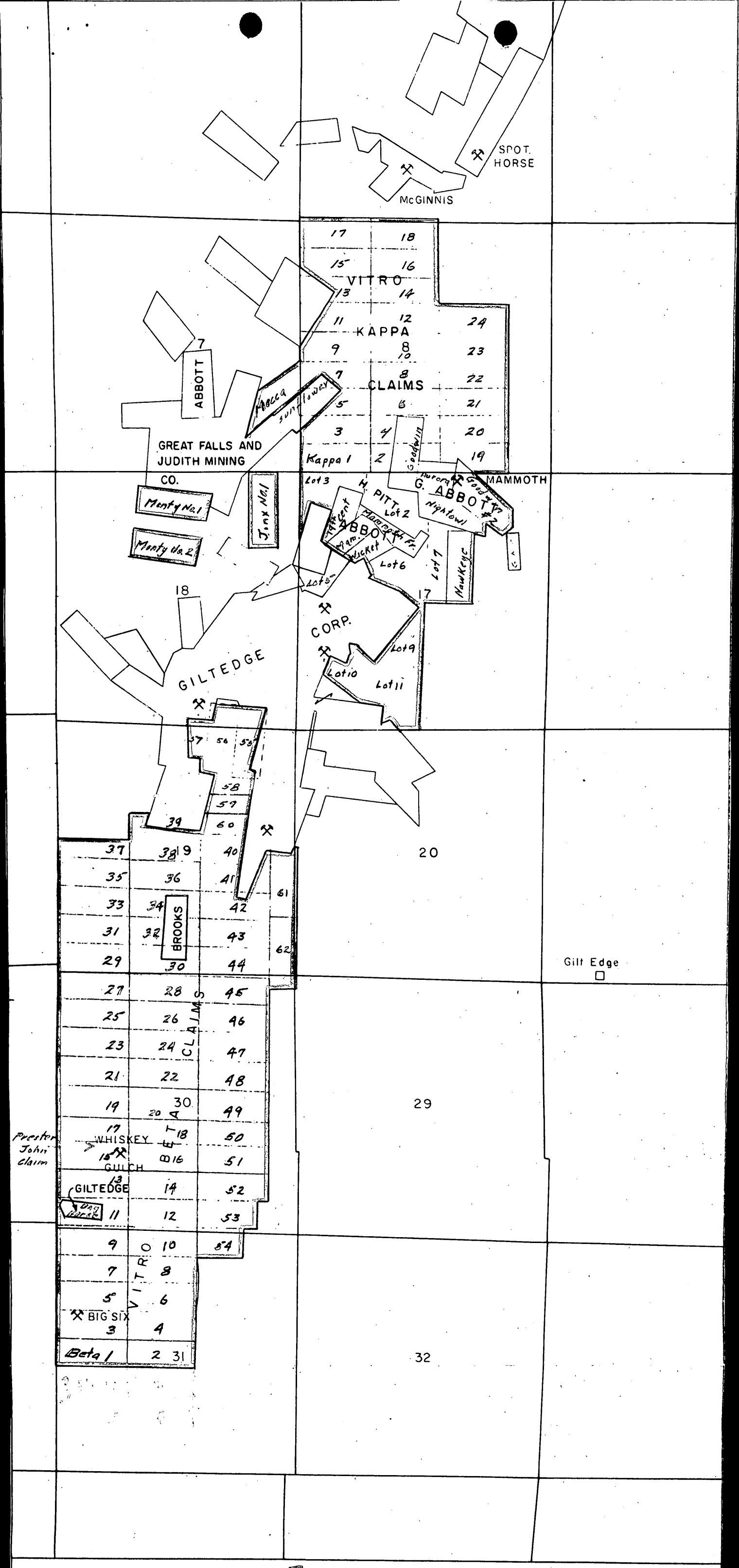


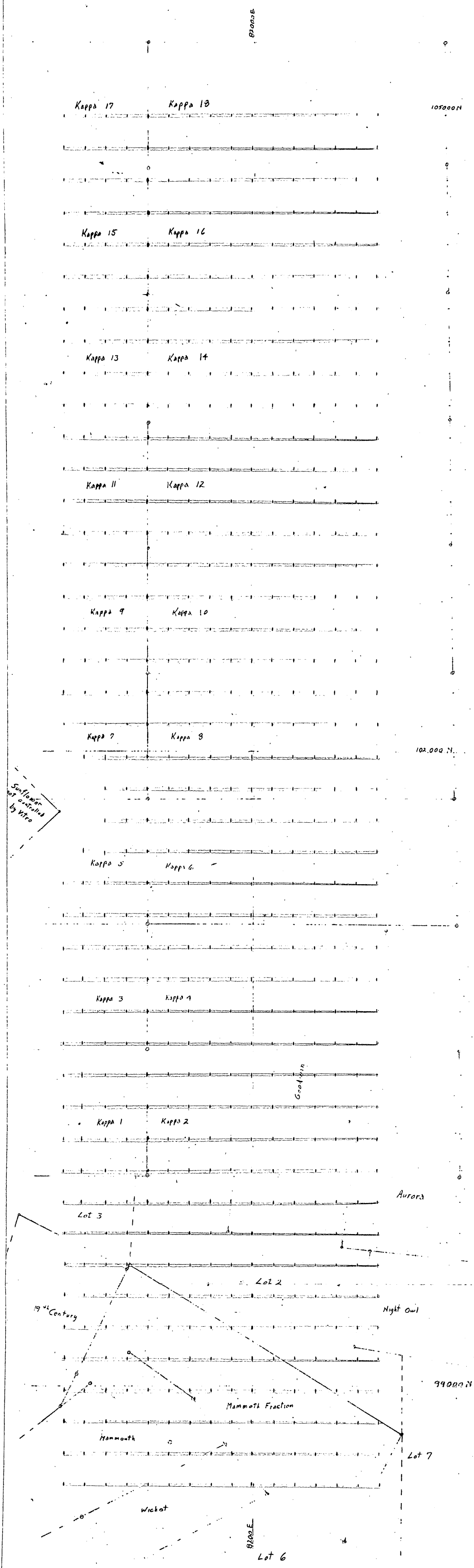
Fig-1

CLAIM OVERLAY MAP

T.16 N. R.20 E. VITRO MINERALS CORP.

Fergus Co., Montana 1"=2000'

OME-6349



Note: Compiled from Applicant's Maps GE 5 and GE 6

Claim Map

Showing Locations of Recommended Soil Sampling Stations
Vitro Minerals Corp.

Kappa et.al. Claims

Fergus County Montana

200 100 0 200 feet

Plate 2

Vitro MINERALS CORPORATION

261 MADISON AVENUE · NEW YORK 16, N.Y. · MURRAY HILL 2-5700

April 3, 1964

OFFICIAL FILE COPY
O. M. E
RECEIVED APR 8 1964

DATE	INITIALS	CODE

Mr. George Fumich, Jr.
Office of Minerals Exploration
U.S. Department of the Interior
Washington 25, D.C.

Dear Mr. Fumich:

Attached you will find two executed copies of "Application for Financial Assistance in Minerals Exploration" for exploration for precious metals in the Judith Mountain area of Fergus County, Montana.

Attached also is the latest audited financial statement of our company. In addition you will find correspondence with two banks as well as copies of letters from both of our parent organizations, all declining to furnish the funds necessary for this exploration work.

The requisite number of copies of Lien and Subordination Agreements for all land or mineral rights not owned by the applicant, will be forwarded shortly. We are submitting this information without the Subordination Agreements with the hope that it will expedite the processing of this application.

Very truly yours,

VITRO MINERALS CORPORATION

Eugene B. Hotchkiss

Eugene B. Hotchkiss
Executive Vice President

EBH/is
enc.

APPLICATION
FOR FINANCIAL ASSISTANCE IN MINERAL EXPLORATION
UNDER
UNITED STATES DEPARTMENT OF THE INTERIOR
OFFICE OF MINERAL EXPLORATION

GILT EDGE GOLD CLAIMS

GILT EDGE MINING DISTRICT

FERGUS COUNTY

MONTANA

OFFICIAL FILE COPY
O. M. E
RECEIVED APR 8 1964

DATE	INITIALS	CODE

VITRO MINERALS CORPORATION
600 West 33rd South
Salt Lake City 15, Utah
IN 7-5418

VITRO MINERALS CORPORATION

600 West 33rd South
Salt Lake City, Utah

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   (b) Name and address of parent companies
   (c) Vitro's method of furnishing their share of the exploration loan

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   (b) Interest in operations
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SELECTED REFERENCES

PLATES IN ATTACHED POCKET

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MME Form 40
July 1962

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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

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.)*

VITRO MINERALS CORPORATION
600 West 33rd South
Salt Lake City
Utah

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER 6349

DATE RECEIVED 4-8-64

REGION I

DIVISION CODE

BUSINESS ORGANIZATION *(Check one)*

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

STATE IN WHICH FIRM IS ORGANIZED Delaware

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
Charles J. Potter	Rochester & Pittsburgh Coal Company, P. O. Box 729 Indiana, Pennsylvania	President
Eugene B. Hotchkiss	Vitro Minerals Corporation 261 Madison Avenue New York 16, New York see change 6/1/68	Executive Vice President
W. B. Hall	same	Vice President
W. H. Denne, Jr.	"	Secretary
R. T. Ruder	"	Treasurer

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE
Gold-Silver

ESTIMATED COST OF PROJECT
$

PROPERTY NAME	LOCATION COUNTY	STATE
Beta - Kappa Claims and leased properties	Fergus	Montana

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.

4/3/64
DATED

Eugene B. Hotchkiss
BY *(Signature)*

Executive Vice 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 OME 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).]

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

VITRO MINERALS CORPORATION

600 West 33rd South
Salt Lake City, Utah

OME LOAN APPLICATION

1. Financial Eligibility

(a) Attached

(b) Vitro Minerals Corporation, incorporated in Delaware, is a wholly owned subsidiary of Vitro Minerals and Mining Corporation, a Delaware corporation. Vitro Minerals and Mining Corporation is jointly owned (50 - 50) by Vitro Corporation of America and Rochester and Pittsburgh Coal Company.

Vitro Corporation of America
261 Madison Avenue
New York 16, New York

Rochester and Pittsburgh Coal Company
P. O. Box 729
Indiana, Pennsylvania

(c) Vitro Minerals Corporation proposes to pay their half of the exploration costs by: cash, technical personnel, and some selected items of equipment.

2. (a) Vitro Minerals controls, by right of location, 86 unpatented claims in the area. Vitro has also leased 5 unpatented and 9 patented claims and approximately 132 acres of fee land. In addition, Vitro has applied to lease from the State of Montana, two school sections in the district. The land leased from the state will not be considered in this loan proposal.

IN 7 lots

True copies of all relevant leases are enclosed.

(b) Vitro's unpatented claims are in two groups described as follows:

Beta 1-62 covers all or parts of Sections 18, 19, 30, 31, Township 16 North, Range 20 East, PMM. Recorded in Lewistown, Montana, in lode book 15, pages 37 through 160.

Kappa 1-24 covers all or part of Section 8, Township 16 North, Range 20 East. Recorded at Lewistown, Montana, in lode book 15, pages 161 through 208.

? One leased unpatented claim (Prester John) which covers the old Whiskey Gulch Mine, is in the NE4 of SW4, Section 30, Township 16 North, Range 20 East. This location is filed in lode book 14, page 517, records of Fergus County, Montana.

Pitt Group (leased unpatented and fee land)

One leased unpatented claim (Jinx) is in the NE4 of NE4, Section 18, Township 16 North, Range 20 East. Lode book 15, page 218.

Another unpatented claim (Mecca) is in the NE4 of SE4 of Section 7, Township 16 North, Range 20 East, lode book 15, page 216.

Two others (Monte 1 and 2) are in the NE4 of NW4 of Section 18, Township 16 North, Range 20 East.

Fee Land → Lots 2, 3, 6, and 7, in Sec. 17, T. 16 N., R. 20 E.

Abbott Group (lease and option)

Patented claims in Sections 8 and 17, Township 16 North, Range 20 East.

Goodwin	#6451
Goodwin #2	#8791A
Aurora	#8908
Night Owl	#8908
Hawkeye	#7410
Mammoth	#7411
Mammoth Fraction	#7412
Wickett	#7413
19th Century	#7414

Fee Land (Abbott)

Lots 9, 10, and 11 in Sec. 17 Township 16 North, Range 20 East, except a small portion of lots 10 and 11 described in a warranty deed dated June 26, 1939, and filed in deed book 137, page 59.

(c) Lien and subordination agreements are enclosed.

3. Physical Description

(a, b, c, and d)

The area under discussion may be conveniently divided into three groups, based on past mining activity. From south to north they are: Big Six (McEvany), Whiskey Gulch, and Mammoth groups. Most of the following information is taken from USBM IC 7544.

Big Six - In NW4 of SW4 Section 31, Township 16 North, Range 20 East, about 2 miles southwest of Gilt Edge. In 1904 this property was owned by the Chicago-Montana Mining Company, which also owned the Whiskey Gulch Mine. A surface tramway was used to transport the ore to the Whiskey Gulch Mill. After being

abandoned for many years the property was relocated in 1932 by local people who constructed a small cyanide mill. Lack of water and high costs made the operation unprofitable. Except for intermittent assessment work, the property has not been actively operated since that time.

The known mine workings consist of shallow open cuts and several caved adits, one of which can be penetrated for approximately 50 feet. These workings expose a mineralized zone 300 feet long. It is estimated that the property may have produced approximately 5,000 tons of ore.

The type and extent of past exploration, if any, is not known.

Whiskey Gulch, E2 NE4 and W2 NW4 - Located on the south side of a ridge, south of Whiskey Gulch. In 1899 the Central Montana Mines Company erected a 100 tpd cyanide plant, which under various ownerships, operated intermittently until about 1905. Production figures are not available; however, estimation of the tailings dump allows us to calculate that not less than 30,000 tons were put through the mill. The ore reportedly averaged $5.50 a ton (@ $20.00) in gold.

A few semi-caved stopes, open to the surface, are the main workings; however, a haulage tunnel is partly open for a distance of approximately 700 feet. Part of the tunnel and the stopes have been geologically mapped by Vitro.

The mineralized area presently exposed at the Whiskey Gulch Mine is over 700 feet long. (See Maps).

Mammoth, NW4 Section 17, Township 16 North, Range 20 East - This property was located in the 1890's, but little work was done until a small cyanide mill was built about 1904.

Some limited development work, mostly tunneling, appears to have been done. All of this work is completely caved and obscured by a thick growth of young timber. The tunnels reportedly exposed a small tonnage of $6.00 (@ $20.00/oz) ore.

The property has had some production, but no records are available.

Scattered throughout the whole area covered by the Beta and Kappa claims are small pits, cuts, and shallow tunnels, which appear to have been abandoned for many years.

Most of these workings expose silicified and/or brecciated limestone or iron-stained porphyry.

(e) General Geology - Judith Mountains

Sedimentary rocks ranging in age from Cambrian to Cretaceous are exposed along the flanks of the Judith Mountains. These beds were intruded by a post-Cretaceous igneous series which domed the sediments. In general, the intrusive bodies are laccolithic in form, that is, they appear to have been forcibly injected along bedding planes in the sedimentary section, particularly the Mississippian-Madison limestone. However, the occurrence of numerous large xenoliths and roof pendants, and the steep irregular contacts of the intrusive rocks, which locally cut across bedding planes, indicates large scale magmatic stoping in some areas.

Numerous dikes and sills are found exposed in the sediments on the flanks of these igneous masses, and are undoubtedly related to them. These small intrusive masses appear to have more influence over the localization of the gold mineralization than the large centers.

The main intrusive masses are composed of igneous rocks that are chiefly light to dark gray, coarse-grained granitic rocks. These rocks range in composition from syenite to monzonite and contain varying amounts of quartz. They are usually unaltered even near the sedimentary rock contacts, but there are localized areas of intense iron-staining, bleaching, and pyritization. The sills and dikes which are apparently related to the ore deposits are usually alkaline in composition. Most of these rocks are porphyritic, with phenocrysts of altered feldspars, and contain little or no megascopic quartz.

The Lower Paleozoic rocks occur as xenoliths and pendants in intrusive rocks and have been tentatively assigned a Cambrian-Devonian age. These rocks are mostly limestones that exhibit various degrees of metamorphism. Some horizons have been recrystallized or marbleized, while shaly beds have been converted to argillites and hornfels. They apparently contain only rare, minor mineralization.

Upper Paleozoic rocks include the Madison limestone and the overlying Big Snowy Group, both of Mississippian age. The Madison limestone crops out over a considerable portion of the area. The lower part of this formation is not exposed, but the total thickness of the unit is probably between 1,000 and 1,500 feet. The rocks are generally massive, but occasionally thin-bedded, gray, crystalline limestone. Some thin-bedded argillaceous and arenaceous members occur in the upper third of the formation. Solution breccias and cavities have been found at the top of this formation. Most of the ore deposits of the area occur in this formation, near its top, especially in the argillaceous and arenaceous members.

Overlying the irregular erosional surface that was developed on the Madison limestone is a sequence of red to yellow calcareous sandstones, arenaceous limestones, and dolomites, and black shales that belong to the Big Snowy Group. This group usually contains three formations: the Kibbey, the Heath, and the Otter, but because of poor exposures, it has been mapped as one unit. These rocks were formed in a lagoonal environment and are lenticular because of rapid lateral facies changes. The total thickness of the group is probably around 600 feet. No known metallic mineral deposits occur in the Big Snowy Group in this area.

The Jurassic rocks lie unconformably upon the Mississippian rocks, and the intervening rocks were either not deposited or were eroded. The Jurassic rocks are reddish to gray, calcareous shales, thin-bedded limestones and greenish (glauconitic) sandstones. The Ellis Group and Morrison formations are mapped as one unit, because of poor exposures, but include the Piper, Rierdon, and Swift formations. No known ore deposits occur in these rocks. The total thickness of the Jurassic rocks is about 700 feet.

Conformably overlying the Jurassic rocks are Kootenai and Colorado formations of Cretaceous age. The Kootenai formation is chiefly composed of maroon to brown sandstones and mudstones with a characteristic conglomeratic sandstone at the base. The Colorado formation is composed of black, fissile shale. Except for a few thin coal seams, no deposits of economic importance occur in the Cretaceous rocks in the Warm Springs District.

Ore Deposits (General) - Gold metallization in the Judith Mountains is generally found in the upper portion of the Madison formation at, or near contacts with dikes, sills, or other offshoots of the main intrusive bodies.

The mineralized igneous rocks are usually bleached and iron-stained while the limy beds may be intensely altered, silicified, and/or brecciated. However, alteration does not appear to be a reliable guide to mineralization.

In the Gilt Edge area the deposits occur as extensive replacements in limestone and in the altered, contacting sills and/or dikes. At the Gilt Edge Mine, the largest producer in the area, the most extensive mineralization occurs at the lower contacts of porphyry sills and the limestone. Preliminary work indicates this may also be the rule at the Whiskey Gulch, Mammoth, and Big Six areas.

The ores contain no visible sulphides, tellurides, or free gold. Rarely, fluorite and calcite are visible to the eye. It is probable that much of the gold occurs in a colloidal form in carbonaceous or bituminous horizons in the limestone.

Preliminary geochemical exploration, using arsenic, indicates that arsenic has accompanied the mineralization. This relationship is common in certain types of gold deposits, and analysis of the arsenic distribution trends in soils overlying these deposits has proven to be a reliable exploration method in various parts of the world. (See Selected References).

Gilt Edge Property - In order to understand the potential of the Gilt Edge area, it is necessary to describe the Gilt Edge Mine in some detail.

The original claims were located in the 1880's and after considerable production trouble, mainly with milling, the property was placed in fairly large-scale production about 1899. Production was nearly continuous until 1912. During this period approximately 425,000 tons of ore were mined and milled.

In 1940-1941, the Gilt Edge Mining Company, partly owned by Newmont, did extensive exploration and development work. According to Mr. L. H. Brooks, President of the company, approximately 500,000 tons of material averaging about $9.00 a ton were developed. The onset of the active war in Europe prevented the property from being placed in production.

Newmont has since sold its share of this venture to the Sunshine Mining Company.

The ore bodies occur as large, extensive replacement bodies, commonly located near the porphyry-limestone contacts. They are mainly in soft, altered limestone and porphyry, although some of the limestone has been intensely silicified.

In some of the pits, thicknesses of more than 50 feet were mined over considerable areas. At some points the gold occurs in shaly, bituminous limestone. This type of ore was referred to as "black ore."

None of the gold is known to occur in a free state. The oxidized, but non-enriched ore, cyanided easily, with good recoveries; however, the "black ore" had to be roasted before cyanidation.

Most of the production came from open pits and/or glory holes. The relatively uniform, gently dipping (20°-25°) ore bodies appear to be ideally suited for modern, large-scale open pit methods.

(f) Vitro expects to find ore on the property it controls for the following reasons:

The same lithologic, structural, and other geologic conditions which prevail at the large past producers in the Judith Mountains, are found on Vitro's property.

The gross ore producing factor of the district, i.e., the limestone-porphyry contacts, are well covered by Vitro's claims and leases.

We know that at least three areas along these contacts have produced ore, and that by soil sampling for arsenic, we can detect extensions of these zones, and probably make new discoveries.

(g) Two copies of all data are enclosed. We do not require their return.

4. (a) The enclosed location map shows the location of the properties. The area is not accessible at the present time due to winter conditions. A Vitro representative will meet the OME Inspecting team in Lewistown, Montana and take them over the property. Notification of the pending examination should be made to our Salt Lake Office.

(b) Lewistown, Montana, is the closest shipping and supply point.

5. (a) Vitro's proposal is broken into stages and is designed to obtain maximum information from each stage before proceeding to the next.

Stage I - This portion of the exploration proposal is aimed at eliminating the less favorable ground as cheaply and reliably as possible. Thus, focusing attention on progressively smaller areas of higher potential which will be explored by more direct and costly techniques.

Past exploration and our geologic work indicates that the mineralization is related to porphyry dikes and sills which intrude the Madison limestone. These and other favorable areas will be prospected geochemically by soil sampling for arsenic. Approximately 2,000 samples will be required. Maps "C" and "D" show the results of Vitro's preliminary geochemical work and the areas we propose to soil sample.

The samples will be taken at 100-foot intervals on lines 150 feet apart. The lines should average about 1,000 feet long, or about 11 samples per line. The spacing is considered close enough to outline all worthwhile targets.

The samples will be analyzed for arsenic by a modification of the Gutzeit acid soluble method as described by E. B. Sandell in "Colometric Determination of Trace Metals" or by flame photometry. We have found these methods to be simple, rapid, and accurate enough for the purpose.

Soil sampling by Vitro in the Gilt Edge District, in conjunction with structural and lithologic interpretation of ore controls, has shown that a direct relationship exists, between gold mineralization, certain geologic conditions, and anomalous arsenic content of the soil.

Anomalous areas selected by both geochemical and geologic features will be trenched, mapped, and sampled.

A maximum of 100 hours of bulldozer time will be required to complete the prospect pitting contemplated under Stage I of this region.

Approximately 200 prospect pit and rock samples will be taken and assayed for gold and silver. The location and lithology of each sample will be described and plotted on a map.

Stage II - The more attractive localities selected in Stage I will be drilled by rotary and/or percussion methods, which appear to be eminently suited to the nature of the rock and habit of the known ore bodies. It is tentatively planned to use 4 3/4" bits; however, the size may vary according to drilling conditions. Compressed air will be the drilling medium. This proposal is considered quite suitable by Vitro's exploration staff, who have planned and supervised well over 500,000 feet of rotary drilling.

Since it is impracticable to plan the exact details until the targets' nature is more definitely known, no attempt can be made to show the exact location and depth of each hole. Spacing and depth of each hole will depend on the geologic data collected. However, the first holes should not be more than 200 to 300 feet deep. Every effort will be made to penetrate at least 50 feet below each lower porphyry-limestone contact.

Some of the mineralized rock may be extremely difficult to recognize visually, therefore, great care will have to be taken with the collection, preparation, and assaying of the samples.

The drill rigs will mount a cyclone sample collector which is extremely efficient in removing minute particles from the air stream. Samples will be collected at 2½ foot intervals and split, crushed, and pulverized for assay. The assay pulps will be prepared in duplicate, and one kept for reference.

A total of 10,000 feet of rotary drilling is proposed. This footage should be sufficient to test the known mineralized areas, and the anomalies found by the new geochemical and geologic work.

A maximum of 75 hours of bulldozer time will be required for drill roads and drill site preparation.

It is estimated that approximately 2,000 samples obtained from the drilling program, will be assayed for gold and silver

Stage III - Favorable holes drilled in Stage II will be offset and the area drilled on 100 foot centers. It is estimated that a maximum of 20,000 feet of rotary drilling will be required under Stage III of the proposal.

A maximum of 25 hours of bulldozer time will be required for drill site preparation. Only the mineralized zone in the offset holes will be sampled. A maximum of 1,000 assays will be required for the Stage III drilling program.

(b) No general access roads need to be built; however, the program contemplates access roads to drill sites.

(c) The work will start on or about May 15, 1964, if weather conditions permit, and should be completed by November 1, 1964.

6. Vitro Minerals has been in the mining business since 1954. During these ten years, Vitro has conducted a large number of exploration programs. These have been for uranium, beryllium, copper, and silver. At our Gas Hills, Wyoming operations, this exploration work lead to the production of approximately 650,000 tons of uranium ore; our beryllium exploration discovered in excess of 5,000,000 tons of beryllium ore in rhyolite tuffs at Spor Mountain, Utah.

7. Cost Estimates

(a) Independent Contractors

(1) Rotary or percussion drilling (non-core) drilling will be contracted at a rate of $18.00/hour plus bits; mud and lost circulation material will be supplied to driller at cost. It is estimated the drilling will cost $3.00 to $3.50 per foot, and take three months to complete. Holes will average about 250 feet in depth.

No. Holes	Av. Depth	Total Footage	Cost/ft.	Total Cost
120	250'	30,000'	$3.00	$90,000

(2) Pitting-trenching, road work and drill site locations.

Bulldozer - 200 hours @ $20.00	$ 4,000.00
Sub-total	$ 94,000.00

(b) Labor, supervision, consultants

(1) Senior Geologists (2)

2 x 6 months @ $800.00 per month each	$ 9,600.00

(2) Geologists' assistants (3) possibly students

3 x 6 months @ $400.00 per month each	$ 7,200.00

(3) Per diem subsistence for geologists and assistants @ $200.00 per month

5 x 6 months @ $200.00	$ 6,000.00
Sub-total	$22,800.00

(c) Furnished by Vitro

(d) Operating equipment:
Rental on two pickup trucks
6 months @ $200.00 per month — $ 1,200.00

(e) Not applicable

(f) Not applicable

(g) Miscellaneous

(1) Analytical Work
Geochemical determination for arsenic
2,000 soil samples

Preparation (drying-screening) @ $0.50 each	$ 1,000.00
Arsenic determinations @ $1.00 each	$ 2,000.00
Sub-total	$ 3,000.00

Assays for gold and silver 3,200 determinations @ $2.50	$ 8,000.00
Sub-total	$14,000.00

Payroll Overhead @ 15% of labor cost 15% x 22,800	$ 3,420.00
TOTAL PROPOSED PROGRAM	$135,420.00
GOVERNMENT'S SHARE	$ 67,710.00

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ADDEND

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CORPORATION of AMERICA
261 MADISON AVENUE · NEW YORK 16, N. Y. · MURRAY HILL 2-5700

FRANK B. JEWETT, JR.
PRESIDENT

March 18, 1964

Mr. Eugene B. Hotchkiss
Vitro Minerals Corporation
261 Madison Avenue
New York, New York 10016

Dear Mr. Hotchkiss:

I have reviewed your request for an advance of funds from Vitro Corporation of America to finance a proposed precious metal exploration program in Lewistown, Fergus County, Montana.

I am sorry to say that under existing circumstances it is impossible for Vitro Corporation of America to comply with this request.

Sincerely yours,

Frank B. Jewett, Jr.

FBJ:jd

ROCHESTER & PITTSBURGH COAL COMPANY

MINERS OF BITUMINOUS COAL AND MANUFACTURERS OF COKE

INDIANA, PENNSYLVANIA

CHARLES J. POTTER
President

March 20, 1964

Mr. Eugene B. Hotchkiss
Executive Vice President
Vitro Minerals Corporation
261 Madison Avenue
New York 16, New York

Dear Mr. Hotchkiss:

This letter is to confirm the fact that Rochester & Pittsburgh Coal Company, under current circumstances, is unwilling to furnish all or any part of the funds necessary for a precious metal exploration program in Lewistown, Fergus County, Montana.

Very truly yours,

C. J. Potter

hla

Vitro MINERALS CORPORATION

261 MADISON AVENUE · NEW YORK 16, N. Y. · MURRAY HILL 2-5700

March 17, 1964

Mr. Kenneth McGhee
Vice President
Irving Trust Company
Madison Ave. & 39th St.
New York 16, New York

Dear Mr. McGhee:

I request your consideration of the following application for a loan of $30,000, payable in 10 years, for the purpose of conducting an exploration program for precious metals on property we have staked in the Lewistown area of Montana. In our exploration operations in this area we have located some 86 lode mining claims which appear to cover a promising low-grade gold mineralization as indicated by our geological field reconnaissance and geochemical testing. We believe that this preliminary exploration indicates the possibility of commercial quantities of precious metal ore upon this group of mining claims.

If it is possible to arrange for the above loan of $30,000 we would propose to match this amount with our own funds and make use of the total of $60,000 to further our exploration work involving soil sampling, prospect pitting, drilling and assaying to evaluate the commercial potential of this property.

If there is any additional information which you would like to have in regard to this program we will be happy to furnish it to you.

Very truly yours,

VITRO MINERALS CORPORATION

Raymond T. Ruder
Treasurer

RTR/is

BANKERS TRUST COMPANY
529 FIFTH AVENUE, NEW YORK, N. Y. 10017

JOHN L. FENTON, ASSISTANT VICE PRESIDENT
TELEPHONE 692-7470

March 19, 1964

Mr. Raymond T. Ruder, Treasurer
Vitro Minerals Corporation
261 Madison Avenue
New York, New York

Dear Mr. Ruder:

This will acknowledge and thank you for your letter of March 17 in which you requested from us a loan of $30,000, payable in ten years, for the purpose of conducting an exploration program for precious metals.

As you know, we have a high regard for your company. However, this type of loan is not of interest to us both because of the term and purpose. As commercial bank lenders we prefer that loans be of short term and self-liquidating for augmenting working capital.

Sincerely yours,

John L. Fenton

VITRO CORPORATION OF AMERICA
RECEIVED
MAR 20 1964
R. T. RUDER
NEW YORK, N. Y.

Vitro MINERALS CORPORATION

261 MADISON AVENUE · NEW YORK 16, N.Y. · MURRAY HILL 2-5700

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IRVING TRUST COMPANY

THIRTY NINTH STREET AT MADISON AVENUE

NEW YORK 16, N.Y.

KENNETH M. MCGHEE
VICE PRESIDENT

TELEPHONE: LL 9-4800

March 19, 1964

Mr. Raymond T. Ruder
Treasurer
Vitro Minerals Corporation
261 Madison Avenue
New York, New York 10016

Dear Mr. Ruder:

We refer to your letter of March 17 in which you make application for a loan of $30,000 payable in ten years, to be utilized in your exploration program in the Lewistown area of Montana.

In our opinion, monies for this purpose should be provided as risk capital and bank loans confined to providing short term working capital needs represented by temporary bulges in receivables and inventory.

We do not, therefore, wish to make a loan of the type you have requested. Nevertheless, we appreciate your bringing this matter to our attention and we hope that whenever we can be helpful you will call on us.

Yours very truly

Kenneth M. McGhee

Vice President

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TELEPHONE: LL 2 4586

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Very truly yours,

VITRO MINERALS CORPORATION

Raymond T. Ruder
Treasurer

RTR/is

T. A. BEAVERS DRILLING
P. O. Box 1752
Casper, Wyoming

To: Vitro Minerals Corporation
P.O. Box 15437
Salt Lake City, Utah

Mr. Ben F. Dickerson

Gentlemen:

I would like to make the following bid for drilling on your properties near Lewistown, Montana.

$3.00 per foot for drilling 4-3/4" hole.

18.00 per hour for plug drilling. You furnish bits mud, lost circulating material and source of water.

25.00 per hour with hammer or down the hole percussion drill.

Fifty cents (50¢) per mile travel time from Casper to your properties and return, if work is done by the hour.

Yours truly,

T. A. BEAVERS DRILLING

T. A. Beavers

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

3408 East Main Street
Spokane 24, Washington
Phone KE 4-0862

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

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
ST. LOUIS
DENVER
AUBURN, CALIF.

February 17, 1964

Ben F. Dickerson, Staff Geologist
Vitro Minerals Corporation
600 W.33rd South Street
Salt Lake City, Utah

Dear MR. Dickerson:

We submit the following tentative prices for your proposed drilling program in the Lewistown, Montana area. In the event your program becomes a reality, we will be glad to examine your property and give you a firm bid at that time.

1. Mobilization & Demobilization of crews and equipment: $1200.00

2. Casing through Overburden: $12.60 per ft.

3. Drilling Rates:

	NXWL	NC
0 to 25 feet		$ 9.60 per ft.
0 to 250 feet	$8.60 per foot	
250 to 500 feet	$9.60 per foot	

4. Reaming if necessary: $4.30 per foot

5. Cementing will be at the rate of $12.60 per hour plus the cost of cement or cement substitutes, including drilling mud.

6. Setting up, tearing down, moving on site from hole to hole, laying & dismantling water lines will be at the rate of $10.60 per hour.

7. Water hauling will be at the rate of $250.00 per month plus .12½¢ per mile. Should the drill helper be unable to haul water, truck drivers wages including payroll costs will be to your account.

Thank you for calling on us.

Very truly yours,

O.C.Bouquot

O. C. Bouquot
District Manager

cc: Paul A. Park, Manager Drilling Division

Hugh M. Harris Drilling Co.

410 WALNUT • GRAND JUNCTION, COLO. • 242-7390

Combination Air and Water Drilling

February 19, 1964

Vitro Minerals Corporation
600 W. 33rd. So. St.
Salt Lake City 15, Utah

Ref: Gilt Edge exploration project, Fergus County, Montana.

Dear Sirs:

I would like to submit the following bid prices for your proposed drilling program.

Type drilling	Depth	Hourly Standby rate	Hourly Drill rate	Footage rate
air or water	0 to 400'	$12.50	$20.00	$3.50

Hourly rate:
$20.00 per hr. rate includes drill unit, water truck, low stage rig compressor, and all tools necessary for drilling such as sample system, drill collars, drill stem, Ingersoll Rand percussion hammer. A charge of 50 ¢ per ft. will be charged for use of hammer, this hammer requires a high stage compressor for which $6.00 per hr. is charged. The owner (Vitro Minerals) shall reimburse driller at his cost for all supplies and materials used such as drilling bits, muds, circulation material, casing, water, detergent for injectors andetc. The drilling rig is rated for 1000 ft. air or water, core and non-core.

Footage Rate:
Contractor furnishes all supplies and materials and necessary tools and equipment. Owner will furnish water and access to water. If water sources is in excess of 15 miles, owner will pay haulage. In the event of lost circulation after a period of 8 hrs. drilling will be based on an hourly rate.

Travel Time: A total charge of $250.00 will be charged for travel.

Sincerely,

Hugh M. Harris

Hugh M. Harris

JUSTICE CORE DRILLING CO.
Rt. 2, Wildwood St.
Boise, Idaho

Febuary 5,1964

Mr. Ben F. Dickerson 111
VITRO MINERALS CORPORATION
600 West 33rd So. St.
Salt Lake City 15, Utah

Dear Mr. Dickerson:

I am sending in this bid proposal as I feel we problely can do the drilling for this price; however prior to any drilling I would like a chance to look at the intended drill sites before being commetted to this proposal.

From talking to Mr. Snyder on the telephone I assumed that Vitro intended to start drilling as soon as the weather permits this spring. Would this be so or will you have to wait for Goverment loan?

Thanks for considering us as a prospective bidder.

Very truly yours,

Leonard S. Justice

Leonard S. Justice

JUSTICE CORE DRILLING CO.
Rt. 2, Wildwood Street
Boise, Idaho

Febuary 5,1 964

Mr. Ben F. Dickerson 111
VITRO MINERALS CORPORATI N
600W. 33rd So. St.
Salt Lake City 15, Utah

Bid proposal for your intended drill program near Lewistown, Fergus county, Montana. PRELIMINARY BID

1- Mobilization	Lump sum	$400.00
2- Drilling NX wireline		
a. 0 to 400 ft.	$6.00 Per Lin. Ft.	
b. 400 to 800 ft.	$6.50 Per Lin. Ft.	
3- Drilling "X wireline		
a. 0 to 400 ft.	$5.25 Per Lin. Ft.	
b. 400 to 800 ft.	$5/50 Per Lin. Ft.	

4. Reaming and Cementing;
   a. Reaming at $2.50 per lin. ft.
   b. Cementing at 2.25 per lin. ft.

5- Setting up;
   a. For vertical truckmount holes $50.00 per setup
   b. For angle holes $100.00 per setup

6- Any special work that may be required: $16.00 per hr.

Very truly yours,

Leonard S. Justice

Leonard S. Justice
Manager

SPRAGUE & HENWOOD, Inc.

Contract Division

REGIONAL OFFICE

2151 North Redwood Road (P.O. Box 2556)
Salt Lake City 10, Utah DAvis 8-4271

S&H SINCE 1883

DIAMOND DRILLING • MINERAL EXPLORATION • SOIL SAMPLING • PRESSURE GROUTING

EXECUTIVE OFFICES & PLANT
SCRANTON, PENNSYLVANIA

February 12, 1964

Vitro Minerals Corp.
P. O. Box 15437
South Salt Lake, Utah

Attn: Ben F. Dickerson III

Gentlemen:

In accordance with your request of February 3, 1964, we are pleased to submit the following proposal for drilling your property in Fergus County, Montana.

PROPOSAL

Item 1.	Mobilization and demobilization		L/S	- - -$600.00
Item 2.	Core Drilling	NX	BX	
	0 - 500'	$6.50/ft.	$6.25/ft.	
	750'	7.25/ft.	7.00/ft.	
Item 3.	Reaming as required			$3.80/ft.
Item 4.	Cementing and drilling cement			14.00/hr.
	PLUS - cost of cement products			
Item 5.	Standby time at customer's request			12.00/hr.
Item 6.	Casing left in place at request, or lost in hole			@ List price plus 10%

It is understood that roads and setups will be provided at no cost to Sprague & Henwood, Inc., and that water will be available at no cost to Sprague & Henwood, Inc., but that we will haul water whenever necessary, for no additional charge.

We trust this proposal will be satisfactory for your purposes and we appreciate the opportunity to quote on your work.

Very truly yours,

SPRAGUE & HENWOOD, INC.

B. B. Williams, Gen. Sup't. Western Operations

MINING LEASE AND OPTION

This MINING LEASE AND OPTION agreement entered into as of the 23rd day of October, 1963, by and between GRANVILLE S. ABBOTT and ADDIE ABBOTT, his wife, Lessors and VITRO MINERALS CORPORATION, a Delaware corporation, Lessee,

W I T N E S S E T H :

WHEREAS, Lessors are the owners of the patented mining claims and fee land described in Exhibit "A" hereto attached,

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration paid by Lessee to Lessors, receipt of which is hereby acknowledged, and of the royalties hereinafter reserved and the covenants and agreements hereinafter expressed by Lessee to be faithfully kept and performed, the parties hereto mutually and severally covenant and agree as follows:

I

RIGHTS GRANTED TO LESSEE

Lessors do hereby demise, let and grant to Lessee the exclusive right and privilege to mine and dispose of all gold, silver, lead, zinc, copper and other minerals (hereinafter referred to as the "leased deposits"), in, upon, under or belonging to the mining claims and fee land which are particularly described under the caption "Leased Premises" in Exhibit "A" which is hereto attached and which bears the signature of each party hereto (which said mining claims and fee land are hereinafter referred to as the "leased premises"), together with the right to construct all such works, building, plants, structures and appliances as may be necessary or convenient for the mining, preparation and marketing of the leased deposits, and the exclusive right to the use of the surface of the leased premises for the exercise of the rights and privileges herein granted; and the right, at any time while this lease and option shall remain in force and effect, to use the surface of and underground workings within the leased premises for purposes incident to the mining, developing, handling and processing of ores and minerals from other properties then owned or controlled by Lessee.

II

PROPER OPERATION REQUIRED

Lessee shall conduct all operations on the leased premises in the manner necessary to good minerlike and economical mining so as to develop and take out leased-deposits ore with due regard to the development of the leased premises and to the special covenants herein provided.

III

EXAMINATION OF TITLE DATA -

ACCEPTANCE OF TITLE BY LESSEE

Concurrent with the execution of this instrument, Lessors shall deliver to Lessee all instruments in the possession of Lessors pertaining to the title to the leased premises. If, within a period of thirty (30) days from the date hereof, Lessee shall not have paid to Lessors the additional sum of Four Hundred and Fifty Dollars ($450.00), Lessee shall be deemed to have rejected the title to the leased premises, whereupon this Mining Lease and Option shall terminate. If, within a period of thirty (30) days from the date hereof, Lessee shall have paid to Lessors the additional sum of Four Hundred and Fifty Dollars ($450.00), Lessee shall be deemed to have accepted the title to the leased premises and this Mining Lease and Option shall thereupon continue in effect, subject to the other provisions hereof.

IV

ACTUAL ROYALTIES

Subject to the provisions of Section XXI hereof, Lessee shall pay to Lessors on all leased deposits extracted and shipped, or sold from the leased premises during the term of this lease, royalties representing ten per cent (10%) of the net mint, smelter or mill returns received therefrom.

Net mint, smelter or mill returns, as used herein, shall mean the gross values as figured by the mint, smelter or mill, less all mint, smelter or mill charges or deductions and all transportation and freight charges.

If the transportation shall be conducted by Lessee or if the milling or smelting shall be performed by Lessee, the transportation, milling or smelting charges shall not exceed the amount for which similar services could be obtained from an independent responsible third party operating in the area.

Any amount due and payable to Lessors as royalties on any shipment of ores or minerals extracted and shipped and sold hereunder shall be paid by Lessee to Lessors on or before the 15th day of the month next succeeding the calendar month during which Lessee shall have received payment for such shipment.

All payments of royalties hereunder by Lessee to Lessors or any assignee or assignees of Lessors or any of them, shall be deposited to the credit of Lessors in the following bank, to-wit:

Northwestern Bank of Lewistown
Lewistown, Montana

or in such other single depository bank as Lessors may designate from time to time by written notice to Lessee.

V

STATEMENTS TO BE FURNISHED

Lessee shall, on or before the 15th day of each month hereof during which royalties are payable hereunder, furnish Lessors with a written report showing, as to the shipments with respect to which such royalties are so then payable, the tonnage of the leased deposits extracted and shipped or sold from the leased premises, showing the royalties payable thereon and the amounts, if any, withheld by Lessee as aforesaid on account of any outstanding mineral or royalty interest, and also showing as to shipments which were made during the preceding month but as to which Lessee shall not have received settlement during said preceding month, the total tonnage of ores and minerals shipped from the leased premises.

Lessee shall, with said statement, furnish Lessors with duplicate copies of the mill or other purchaser's receipts and settlement sheets for the shipments as to which royalties are accounted on said statement.

All such statements and duplicate copies shall be forwarded to the depository bank for Lessors.

VI

MINIMUM ROYALTY REQUIREMENTS

Subject to the provisions of Section XVIII of this lease, Lessee shall pay to Lessors minimum advance royalty as follows:

> On the 23rd day of October, 1966, and on the 23rd day of each month thereafter while this lease shall remain in force and effect, the sum of Two Hundred Dollars ($200.00).

Any minimum advance royalty payment made under this Section VI shall be applied as a credit toward actual royalties at any time thereafter becoming payable under Section IV of this lease.

No excess of actual royalties paid during any lease year over the minimum advance royalty paid for such year shall operate to reduce the minimum advance royalty payable for any subsequent lease year.

Any amounts payable to Lessors under this Section VI shall be deposited to the credit of Lessors in the depository bank in the same manner as actual royalties payable under Section IV hereof.

VII

BOOKS AND RECORDS

Lessee shall keep and maintain complete and accurate books of account showing the amount of leased deposits extracted from the leased premises, the amount of leased deposits shipped, sold or treated and the amount of money received or payable from the sale of such leased deposits.

Lessors and the authorized agents of Lessors shall at any and all reasonable times be permitted to inspect all books and records, including assay reports, of Lessee relating to the leased premises in order to ascertain the correct amount of royalties due Lessors or to determine whether or not the provisions of the lease are being complied with.

Upon the termination of this lease, other than through the exercise of the option set out in Section XXI hereof, Lessee shall furnish Lessors with copies of the then most recent mining map or maps and with copies of the drilling logs and assay results as to any drill holes which may have been drilled by Lessee upon the leased premises.

VIII

LESSORS' RIGHT OF INSPECTION

Lessee shall allow Lessors and the agents of Lessors, from time to time, to enter upon and into Lessee's workings on said leased premises for the purpose of inspection at such reasonable times as shall not interfere with the regular operation of the leased premises. It is understood and agreed that Lessee shall assume no responsibility for the safety of Lessors or the agents of Lessors when and while upon the leased premises for such purposes.

IX

TRANSFER BY LESSOR SHALL NOT IMPOSE

ADDED DUTIES UPON LESSEE

No transfer of any of the leased premises, which may hereafter occur by operation of law or otherwise, shall impose upon Lessee any obligations of segregation of production or accounting.

X

STATE AND FEDERAL ENACTMENTS -

INDEMNIFICATION OF LESSORS

Lessee in the operation and development of the leased premises shall be subject to all applicable Federal enactments, the laws of the State of Montana, and all Federal or state rules and regulations regarding Employers' Liability, Workmen's Compensation, Social Security and Unemployment Insurance, and said Lessee covenants and agrees to indemnify and hold harmless Lessors from and against the payment of any and all damages, claims, costs and expenses

due to the existence of such enactments, and of any and all claims, costs and expenses in connection therewith under any claim of subrogation provided for by said enactments or otherwise; and Lessee shall further indemnify and hold harmless Lessors from and against any and all damages, claims, costs and expenses arising out of damages to property or injuries to or death of the employees of Lessee, or any other person whomsoever other than Lessors and those acting under Lessors, where such injury, death or damage occures because of or in connection with the use, operation or development in any manner of the leased premises whether such claims are based upon a right conferred by common law or by statute.

XI

PROPERTY TO BE KEPT FREE OF LIENS

Lessee shall pay and satisfy all claims for materials, supplies and labor in connection with the working of said mine and mining property, and shall keep said mine and mining property free of liens or encumbrances of any and every kind, except such as might result from state and county tax assessments not required to be paid by Lessee, or such as may result from the acts of others than Lessee, Lessee's employees or those in privity with Lessee.

XII

TAXES

(a) Lessors shall pay all Federal, state and county taxes of any kind assessed against Lessors on account of the receipt of royalties by Lessors herein provided to be paid to Lessors by Lessee.

(b) Lessee shall pay all state and county property tax assessments, if any, upon said leased premises.

(c) Lessee shall pay all state and county tax assessments upon any and all structures and other improvements, machinery, equipment, tools, supplies and personal property whatsoever placed upon the leased premises by Lessee.

(d) Such state and county taxes, if any, as may be assessed because of the severance or production by Lessee of leased deposits and such state and county taxes, if any, as may be assessed against the leased premises because of

additional value placed thereon by reason of the leased deposits therein, shall be prorated between and shall be paid by Lessee and Lessors in proportion to their respective participations in the proceeds thereof; PROVIDED, HOWEVER, that as to any taxes referred to in subsection (d) Lessee's obligation, in respect to the calendar year in which this lease is executed and in respect to the calendar year in which this lease is terminated, shall, unless Lessee shall exercise the option referred to in Section XXI hereof, be limited to payment of a proportion of such taxes determined by the ratio to 365 of the number of days in such calendar year during which this lease was in force and effect.

XIII

PROTECTION AGAINST LIENS ARISING THROUGH LESSORS' DEFAULT

In the event there are any liens or encumbrances against said leased premises, or in the event any liens or encumbrances shall hereafter accrue against the same by acts or neglect of Lessors, then Lessee may at Lessee's option pay and discharge the same, and if Lessee elects so to do then Lessors agree to repay Lessee upon demand all such sums so paid by Lessee; together with interest thereon from the date of payment of said sums at the rate of eight per cent (8%) per annum until paid. Lessee may apply any amount so becoming payable by Lessors to Lessee as a credit in payment or reduction of any amount thereafter becoming payable under Section IV or Section VI hereof.

XIV

TERM OF LEASE

This lease shall be and remain in force and effect for a term of twenty (20) years from and after the date hereof unless sooner terminated through surrender as hereinbefore set out, or through exercise of the option hereinafter granted to Lessee or through forfeiture. Lessee may extend this lease for an additional twenty (20) years by giving written notice to Lessors of its intention to do so at least ninety (90) days prior to the end of the first twenty (20) year term.

XV

LAWS AND REGULATIONS

This lease shall be subject to the laws of the State of Montana and to the rules and regulations of the regulatory bodies of such state having jurisdiction thereof, and to all other applicable state and Federal laws, rules and regulations.

XVI

FORCE MAJEURE

All obligations of Lessee shall be suspended while, but only as long as Lessee is prevented from complying with such obligations, in whole or in part, by strikes, lockouts, acts of God, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials or services in open market, inadequate facilities for the transportation of materials, any state or Federal law, regulation or order, or other matters, exclusive of financial inabilities of Lessee, beyond the reasonable control of Lessee, whether similar to the matters herein specifically enumerated or not; PROVIDED, HOWEVER, that performance shall be resumed within a reasonable time after such cause has been removed; and PROVIDED FURTHER, that Lessee shall not be required against Lessee's will to adjust any labor dispute or to question the validity or to refrain from judicially testing the validity of any state or Federal order, regulation or law.

XVII

TE MINATION

This lease is made upon condition that Lessee shall perform all of the covenants and agreements herein set forth to be performed by Lessee. If Lessee shall fail to make any payment of minimum royalty or actual royalties when due and payable or shall fail to comply with any of the other conditions or requirements of this lease, Lessors may, upon the giving of thirty (30) days' notice in writing to Lessee of the default, cancel and forfeit this lease unless, within said thirty (30) day period, Lessee shall cure the default if the default relates to the payment of

royalties or unless within said thirty (30) day period, if the default relates to other than the payment of royalties, Lessee shall undertake in good faith to cure the default and shall diligently proceed to remedy the default.

XVIII

LESSEE'S RIGHT OF SURRENDER

It is mutually understood and agreed that Lessee may at any time surrender and terminate this lease as to all or any portion of the leased premises upon giving to Lessors thirty (30) days' notice in writing and paying to Lessors all royalties and other sums due and payable to Lessors to the effective date of such surrender.

Lessee shall, on or before such effective date of surrender, deliver to Lessors a release and quitclaim of all rights under this Mining Lease and Option as to the so surrendered property. No partial surrender shall operate to reduce or affect the minimum advance royalties specified herein. Upon complete surrender, Lessee shall be relieved of all obligations hereunder except as otherwise provided in the next preceding and next succeeding paragraph hereof.

No complete surrender shall relieve Lessee from its obligation to pay any actual royalty, rental or minimum advance royalty payments which were due and payable but unpaid prior to the effective date of surrender. However, except as otherwise expressly provided in the first paragraph of this Section XVIII, such complete surrender shall relieve Lessee of any obligation to pay any rental or any minimum advance royalty payments which, except for such surrender would have been payable after the effective date of surrender. Upon complete surrender, Lessee shall have no right to any reimbursement or credit for any minimum advance royalty payment or payments theretofore made, except only that any unused minimum advance royalty credit may be applied as credit in reduction of any actual royalties payable but unpaid as to ores or minerals mined and shipped or sold prior to the effective date of surrender. No surrender shall relieve Lessee from its obligation to pay any royalties as to leased deposits mined and shipped or sold prior to the effective date of surrender, or from any obligation hereunder arising out of any act or omission of Lessee prior to the effective date of surrender.

XIX

REMOVAL OF EQUIPMENT

It is mutually understood and agreed that, in case of forfeiture, surrender or expiration of this lease, all installed underground timbering, installed underground air and water lines, installed underground power lines, installed underground trackage (rails and ties), shall be and remain a part of the realty and shall revert to Lessors without further consideration or compensation.

It is further understood and agreed that all personal property of Lessee located within or upon the leased premises, and all buildings, machinery, equipment and tools (other than the fixtures to become the property of Lessors as above provided), shall, in case of forfeiture, surrender or other termination of this lease, remain upon the leased premises, and be held as a guarantee in lieu of bond until all terms of this lease with respect to payment of royalties and the preservation of the property shall have been complied with. Upon such compliance with and performance of such conditions and obligations, Lessee shall be entitled to and may, within ninety (90) days after such termination of this lease or within such extension of time as may be granted by Lessors, remove from the leased premises such personal property and improvements, other than those items which are to remain the property of Lessors as above provided.

XX

LESSOR INTEREST PROVISION

If Lessors own, as to the leased premises covered hereby, an interest less than the entire interest in and under such leased premises, then the royalties in this lease provided for shall, as to any ores or minerals produced from that particular property, be paid to Lessors only in the proportion which Lessors' interest bears to the full and entire interest therein and thereunder, BUT the minimum royalty requirements hereof shall not be affected or reduced.

XXI

OPTION - ESCROW

Lessors agree that at any time after Lessee shall

have paid to Lessors or to the depository bank for Lessors (as a result of any actual royalty payments or minimum royalty payments made in accordance herewith and any additional cash purchase price payment or payments which Lessee may elect to make), for Lessors an aggregate sum of Thirty Thousand Dollars ($30,000.00), Lessee shall, upon giving to Lessors written notice and paying to Lessors the sum of Ten Dollars ($10.00), have the exclusive right and option to demand and receive from Lessors, their successors in interest and legal representatives or assigns, a good, sufficient and properly executed and acknowledged mining deed conveying to Lessee, or its successor or successors in interest, all of the leased premises particularly described in Exhibit "A" hereto attached as to which this lease then remains in force and effect, together with all and whatsoever the rights, titles and interest therein and thereunder.

Upon delivery of such mining deed to Lessee (grantee) or its successor or successors in interest, the lease provided for in this instrument shall cease and terminate and all rights of the Lessors with respect to the property conveyed by such mining deed and any future royalty obligations of Lessee shall terminate. Lessors agree that at any time, upon the written request of Lessee, Lessors will properly execute and acknowledge a deed in accordance with the foregoing provisions of this Section XXI and will deposit the same in escrow with:

Northwestern Bank of Lewistown

Lewistown, Montana

with appropriate escrow instructions to be signed by Lessors and Lessee. Such escrow instructions shall provide appropriate protection to the Lessors, the Lessee and the escrow holder; shall provide for delivery of said deed to Lessee, or its successor or successors in interest, when and if it shall be entitled to the delivery thereof; and shall provide for the return of said deed to Lessors if the hereunder granted Lease shall be surrendered or otherwise terminated prior to the time when Lessee, or its successor or successors in interest, shall have become entitled to exercise the hereunder granted option to take and receive a deed to the mining claims which are the subject of this Mining Lease and Option. Escrow charges will be payable by Lessee.

XXII

MANNER OF GIVING NOTICES

Any notice required or desired to be served upon

Lessee shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested and addressed as follows:

Vitro Minerals Corporation
600 West Thirty-third South
Salt Lake City, Utah

or to such other party and at such other address as Lessee or its successor or successors in interest may, from time to time, designate by written notice to Lessors.

Any notice required or desired to be served upon Lessors shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested, and addressed as follows:

Granville S. Abbott
Addie Abbott
Gilt Edge Route
Lewistown, Montana

or to such other party and at such other address as Lessors may, from time to time, designate by written notice to Lessee.

Service of notice by mail shall be deemed effective and complete upon the date of posting and mailing in accordance herewith. Personal service of notice upon the designated addressee shall be deemed sufficient service of notice and no mailing of notice shall be necessary in case of such personal service.

XXIII

ASSIGNMENT

The provisions hereof shall inure to the benefit of and shall be binding upon the successors in interest, legal representatives and assigns of the respective parties hereto, but no party hereto shall be chargeable with notice of any assignment or conveyance until such party shall have been furnished with written notice thereof and with a duplicate, certified or photostat copy of the instrument of assignment or conveyance.

XXIV

SUBORDINATION

Lessors shall, upon the request of the Lessee, subordinate their royalty and other interests hereunder to the rights of any government agency in and to minerals produced from the leased premises in connection with any development or exploration loans negotiated by the Lessee.

IN WITNESS WHEREOF, these presents are executed as of the day and year first above written.

LESSORS:

Granville S. Abbott

Addie Abbott

LESSEE:

VITRO MINERALS CORPORATION

By Eugene B. Hollins
Exec V-President

ATTEST:

Secretary

STATE OF MONTANA)
) ss.
COUNTY OF FERGUS)

On this 23 day of October, in the year 1963, before me F. F. SCHELL personally appeared CHARLES [illegible], known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Notary Public
Residing at:

My commission expires:

STATE OF MONTANA)
) ss.
COUNTY OF)

On this day of , in the year 1963, before me personally appeared ADDIE [illegible], known to me to be the person whose name is subscribed to the within instrument, and acknowledged that she executed the same individually and as the wife of CHARLES [illegible].

Notary Public
Residing at:

My commission expires:

STATE OF ~~[illegible]~~ New York)
) ss.
COUNTY OF New York)

On this 4th day of November, in the year 1963, before me Jean Dion personally appeared [illegible], known to me to be the [illegible] of VITRO MINERALS CORPORATION, a Delaware corporation, and acknowledged to me that such corporation executed the same.

Notary Public
Residing at:

My commission expires:

EXHIBIT "A"

LEASED PREMISES

I

The following described patented lode mining claims situated in Sections 8 and 17 of Township 16 North, Range 20 East, M.P.M.:

Name of Claim	Mineral Survey Number
Goodwin	6451
Goodwin No. 2	8791A
Aurora	8908
Night Owl	8908
Hawkeye	7410
Mammoth	7411
Mammoth Fraction	7412
Wickett	7413
19th Century	7414

II

Township 16 North, Range 20 East, M.P.M.

Section 17: Lots 9, 10 and 11

EXCEPT that portion of Lots 10 and 11 described in a conveyance from Florence G. Gilmore to Gilt Edge Mining Corporation in a Warranty Deed dated June 26, 1939. Recorded in Book 137 of Deeds, page 59, Document No. 17671.

16298
State of Montana
County of Fergus.
Filed for Record November 15, 1963 at 8:10 a.m. and duly recorded in Volume 31 of Leases, Page 501 Records of Fergus County, Montana
Fee Paid: $30.00
By: May Rathbun, County Recorder

AMENDMENT TO MINING LEASE AND OPTION

This instrument entered into as of the 18th day of December, 1963, by and between GRANVILLE S. ABBOTT and ADDIE ABBOTT, his wife, Lessors, and VITRO MINERALS CORPORATION, a Delaware corporation, Lessee.

W I T N E S S E T H :

RECITALS:

A. Under date of October 23, 1963, Lessor and Lessee entered into a Mining Lease and Option covering the following described land and mining claims situated in Fergus County, Montana, to-wit:

1. Township 16 North, Range 20 East, M.P.M.

   Section 17: Lots 9, 10 and 11

   EXCEPT that portion of Lots 10 and 11 described in a conveyance from Florence G. Gilmore to Gilt Edge Mining Corporation in a Warranty Deed dated June 26, 1939. Recorded in Book 137 of Deeds, page 59, Document No. 17671.

2. The following described patented lode mining claims situated in Sections 8 and 17 of Township 16 North, Range 20 East, M.P.M.:

Name of Claim	Mineral Survey Number
Goodwin	6451
Goodwin No. 2	8791A
Aurora	8908
Night Owl	8908
Hawkeye	7410
Mammoth	7411
Mammoth Fraction	7412
Wichett	7413
19th Century	7414

B. Paragraph XII (b) of said Mining Lease and Option provides as follows:

> "Lessee shall pay all state and county property tax assessments, if any, upon said leased premises."

C. The parties desire to define and limit the duties of the Lessee under the above quoted provision of said Mining Lease and Option in the manner set out below.

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) paid to Lessor by Lessee and other good and valuable consideration, receipt of which is hereby acknowledged, it is agreed by and between the parties as follows:

1. During the term of said Mining Lease and Option, it shall be the duty of the Lessee under paragraph III (b) thereof to pay annually (a) the sum of Fifty-Five Dollars and Fifty-Four Cents ($55.54) which represents the total of the state and county property taxes assessed against the leased premises for the 1963 tax year; and in addition to pay (b) all such state and county taxes assessed against the leased premises in excess of said sum of $55.54 insofar, but only insofar as any such additional taxes are attributable to increased assessed valuation resulting from the use of said leased premises for mining purposes.

2. Commencing with the 1964 tax year, it shall be the duty of the Lessor to pay annually all such state and county taxes assessed against the leased premises in excess of said sum of $55.54 insofar, but only insofar as such additional taxes are attributable to increased assessed valuation resulting from the use of said leased premises for other than mining purposes.

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

LESSOR:

Granville J. Abbott

Arlie Abbott

LESSEE:

VIMCO MINERALS CORPORATION

By Eugene B. Hutchison
Its Vice President

ATTEST:

Secretary

STATE OF MONTANA)
) ss.
COUNTY OF FERGUS)

On this 18th day of December, in the year 1963, before me F.F. SCHELL personally appeared CARVILLE D. ALBERT, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Notary Public
Residing at:

My commission expires:

STATE OF MONTANA)
) ss.
COUNTY OF)

On this day of , in the year 1963, before me personally appeared ANNE ALBERT, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that she executed the same individually and as the wife of CARVILLE D. ALBERT.

Notary Public
Residing at:

My commission expires:

STATE OF)
) ss.
COUNTY OF)

On this 23rd day of December, in the year 1963, before me Jean Dion personally appeared , known to me to be the of VIDEO RENTALS CORPORATION, a Delaware corporation, and acknowledged to me that such corporation executed the same.

Notary Public
Residing at:

My commission expires:

17203
State of Montana
County of Fergus.
Filed for Record December 30, 1963 at 10:00 o'clock a.m. and duly recorded in Volume 15 of Leases, Page 240, Records of Fergus County, Montana.
Fee Paid: $6.00 - May Rathbun - County Recorder

MINING LEASE AND OPTION

This MINING LEASE AND OPTION agreement entered into as of the 18th day of December, 1963, by and between HENRY J. PITT and FLORENCE G. PITT, his wife, Lessors, and VITRO MINERALS CORPORATION, a Delaware corporation, Lessee,

W I T N E S S E T H :

WHEREAS, Lessors are the owners of the property referred to in Exhibit "A" hereto attached,

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration paid by Lessee to Lessors, receipt of which is hereby acknowledged, and of the royalties hereinafter reserved and the covenants and agreements hereinafter expressed by Lessee to be faithfully kept and performed, the parties hereto mutually and severally covenant and agree as follows:

I

RIGHTS GRANTED TO LESSEE

Lessors do hereby demise, let and grant to Lessee the exclusive right and privilege to mine and dispose of all gold, silver, lead, zinc, copper and other minerals (hereinafter referred to as the "leased deposits"), in, upon, under or belonging to the property particularly described under the caption "Leased Premises" in Exhibit "A" which is hereto attached and which bears the signature of each party hereto (which said property is hereinafter referred to as the "leased premises"), together with the right to construct all such works, buildings, plants, structures and appliances as may be necessary or convenient for the mining preparation and marketing of the leased deposits, and the exclusive right to the use of the surface of the leased premises for the exercise of the rights and privileges herein granted; and the right, at any time while this lease and option shall remain in force and effect, to use the surface of and underground workings within the leased premises for purposes incident to the mining, developing, handling and processing of ores and minerals from other properties then owned or controlled by Lessee.

II

PROPER OPERATION REQUIRED

Lessee shall conduct all operations on the leased premises in the manner necessary to good minerlike and economical mining so as to develop and take out leased-deposits ore with due regard to the development of the leased deposits, to the preservation of the workability of workings on the leased premises and to the special covenants herein provided.

III

EXAMINATION OF TITLE DATE -

REJECTION OR ACCEPTANCE OF TITLE BY LESSEE

Concurrent with the execution of this instrument, Lessors shall deliver to Lessee all instruments in the possession of Lessors pertaining to the title to the leased premises. If, within a period of thirty (30) days from the date hereof, Lessee shall not have paid to Lessors the additional sum of One Hundred Dollars ($100.00), Lessee shall be deemed to have rejected the title to the leased premises, whereupon this Mining Lease and Option shall terminate. If, within a period of thirty (30) days from the date hereof, Lessee shall have paid to Lessors the additional sum of One Hundred Dollars ($100.00), Lessee shall be deemed to have accepted the title to the leased premises and this Mining Lease and Option shall thereupon continue in effect, subject to the other provisions hereof.

IV

ACTUAL ROYALTIES

Lessee shall pay to Lessors on all leased deposits extracted and shipped, or sold from the leased premises during the term of this lease, royalties representing ten per cent (10%) of the net mint, smelter or mill returns received therefrom.

Net mint, smelter or mill returns, as used herein, shall mean the gross values as figured by the mint, smelter or mill, less all mint, smelter or mill charges or deductions and all transportation and freight charges.

If the transportation shall be conducted by Lessee or if the milling or smelting shall be performed by Lessee, the transportation, milling or smelting charges shall not exceed the amount for which similar services could be obtained from an independent responsible third party operating in the area.

Any amount due and payable to Lessors as royalties on any shipment of ores or minerals extracted and shipped and sold hereunder shall be paid by Lessee to Lessors on or before the 15th day of the month next succeeding the calendar month during which Lessee shall have received payment for such shipment.

All payments of royalties hereunder by Lessee to Lessors, or any assignee or assignees of Lessors or any of them, shall be deposited to the credit of Lessors in the following bank, to-wit:

Northwestern Bank of Lewistown
Lewistown, Montana

or in such other single depository bank as Lessors may designate from time to time by written notice to Lessee.

V

STATEMENTS TO BE FURNISHED

Lessee shall, on or before the 15th day of each month hereof during which royalties are payable hereunder, furnish Lessors with a written report showing, as to the shipments with respect to which such royalties are so then payable, the tonnage of the leased deposits extracted and shipped or sold from the leased premises, showing the royalties payable thereon and the amounts, if any, withheld by Lessee as aforesaid on account of any outstanding mineral or royalty interest, and also showing as to shipments which were made during the preceding month but as to which Lessee shall not have received settlement during said preceding month, the total tonnage of ores and minerals shipped from the leased premises.

Lessee shall, with said statement, furnish Lessors with duplicate copies of the mill or other purchaser's

receipts and settlement sheets for the shipments as to which royalties are accounted on said statement.

All such statements and duplicate copies shall be forwarded to the depository bank for Lessors.

VI

MINIMUM ROYALTY REQUIREMENTS

Subject to the provisions of Section XVIII of this lease, Lessee shall pay to Lessors minimum advance royalty as follows:

> On the 10th day of December, 1966, and on the 10th day of each month thereafter which this lease shall remain in force and effect, the sum of One Hundred Fifty Dollars ($150.00).

Any minimum advance royalty payment made under this Section VI shall be applied as a credit toward actual royalties at any time thereafter becoming payable under Section IV of this lease.

No excess of actual royalties paid during any lease year over the minimum advance royalty paid for such year shall operate to reduce the minimum advance royalty payable for any subsequent lease year.

Any amounts payable to Lessors under this Section VI shall be deposited to the credit of Lessors in the depository bank in the same manner as actual royalties payable under Section IV hereof.

VII

BOOKS AND RECORDS

Lessee shall keep and maintain complete and accurate books of account showing the amount of leased deposits extracted from the leased premises, the amount of leased deposits shipped, sold or treated and the amount of money received or payable from the sale of such leased deposits.

Lessors and the authorized agents of Lessors shall at any and all reasonable times be permitted to inspect all books and records, including assay reports, of Lessee relating to the leased premises in order to ascertain the correct amount of royalties due Lessors or to determine whether or not the provisions of the lease are being complied with.

Upon the termination of this lease, Lessee shall furnish Lessors with copies of the then most recent mining map or maps and with copies of the drilling logs and assay results as to any drill holes which may have been drilled by Lessee upon the leased premises.

VIII

LESSORS' RIGHT OF INSPECTION

Lessee shall allow Lessors and the agents of Lessors, from time to time, to enter upon and into Lessee's workings on said leased premises for the purpose of inspection at such reasonable times as shall not interfere with the regular operation of the leased premises. It is understood and agreed that Lessee shall assume no responsibility for the safety of Lessors or the agents of Lessors when and while upon the leased premises for such purposes.

IX

TRANSFER BY LESSOR SHALL NOT IMPOSE

ADDED DUTIES UPON LESSEE

No transfer of any of the leased premises, which may hereafter occur by operation of law or otherwise, shall impose upon Lessee any obligations of segregation of production or accounting.

X

STATE AND FEDERAL ENACTMENTS -

INDEMNIFICATION OF LESSORS

Lessee in the operation and development of the leased premises shall be subject to all applicable Federal

enactments, the laws of the State of Montana, and all Federal or state rules and regulations regarding Employers' Liability, Workmen's Compensation, Social Security and Unemployment Insurance, and said Lessee covenants and agrees to indemnify and hold harmless Lessors from and against the payment of any and all damages, claims, costs and expenses due to the existence of such enactments, and of any and all claims, costs and expenses in connection therewith under any claim of subrogation provided for by said enactments or otherwise; and Lessee shall further indemnify and hold harmless Lessors from and against any and all damages, claims, costs and expenses arising out of damages to property or injuries to or death of the employees of Lessee, or any other person whomsoever other than Lessors and those acting under Lessors, where such injury, death or damage occurs because of or in connection with the use, operation or development in any manner of the leased premises whether such claims are based upon a right conferred by common law or by statute.

XI

PROPERTY TO BE KEPT FREE OF LIENS

Lessee shall pay and satisfy all claims for materials, supplies and labor in connection with the working of said mine and mining property, and shall keep said mine and mining property free of liens or encumbrances of any and every kind, except such as might result from state and county tax assessments not required to be paid by Lessee, or such as may result from the acts of others than Lessee, Lessee's employees or those in privity with Lessee.

XII

TAXES

(a) Lessors shall pay all Federal, state and county taxes of any kind assessed against Lessors on account of the receipt of royalties by Lessors herein provided to be paid to Lessors by Lessee.

(b) Lessee shall pay all state and county property tax assessments, if any, upon said leased premises. Provided, however, that commencing with the 1964 tax year, it shall be

the duty of Lessor to pay annually all such state and county taxes assessed against the leased premises in excess of the sum of $8.46 insofar, but only insofar as such additional taxes are attributable to increased assessed valuation resulting from the use of said leased premises for other than mining purposes.

(c) Lessee shall pay all state and county tax assessments upon any and all structures and other improvements, machinery, equipment, tools, supplies and personal property whatsoever placed upon the leased premises by Lessee.

(d) Such state and county taxes, if any, as may be assessed because of the severance or production by Lessee of leased deposits and such state and county taxes, if any, as may be assessed against the leased premises because of additional value placed thereon by reason of the leased deposits therein, shall be prorated between and shall be paid by Lessee and Lessors in proportion to their respective participations in the proceeds thereof; PROVIDED, however, that as to any taxes referred to in subsection (d) Lessee's obligation, in respect to the calendar year in which this lease is executed and in respect to the calendar year in which this lease is executed and in respect to the calendar year in which this lease is terminated, shall be limited to payment of a proportion of such taxes determined by the ratio to 365 of the number of days in such calendar year during which this lease was in force and effect.

XIII

PROTECTION AGAINST LIENS ARISING THROUGH LESSORS' DEFAULT

In the event there are any liens or encumbrances against said leased premises, or in the event any liens or encumbrances shall hereafter accrue against the same by acts or neglect of Lessors, then Lessee may at Lessee's option pay and discharge the same, and if Lessee elects so to do then Lessors agree to repay Lessee upon demand all such sums so paid by Lessee; together with interest thereon from the date of payment of said sums at the rate of eight per cent (8%) per annum until paid. Lessee may apply any amount so becoming payable by Lessors to Lessee as a credit in payment or reduction of any amount thereafter becoming payable under Section IV or Section VI hereof.

XIV

TERM OF LEASE

This lease shall be and remain in force and effect for a term of twenty (20) years from and after the date hereof unless sooner terminated through surrender as hereinbefore set out, or through exercise of the option hereinafter granted to Lessee or through forfeiture. Lessee may extend this lease for an additional twenty (20) years by giving written notice to Lessors of its intention to do so at least ninety (90) days prior to the end of the first twenty (20) year term.

XV

LAWS AND REGULATIONS

This lease shall be subject to the laws of the State of Montana and to the rules and regulations of the regulatory bodies of such state having jurisdiction thereof, and to all other applicable state and Federal laws, rules and regulations.

XVI

FORCE MAJEURE

All obligations of Lessee shall be suspended while, but only as long as Lessee is prevented from complying with such obligations, in whole or in part, by strikes, lockouts, acts of God, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials or services in open market, inadequate facilities for the transportation of materials, any state or Federal law, regulation or order, or other matters, exclusive of financial inabilities of Lessee, beyond the reasonable control of Lessee, whether similar to the matters herein specifically enumerated or not; PROVIDED, however, that performance shall be resumed within a reasonable time after such cause has been removed; and PROVIDED FURTHER, that Lessee shall not be required against Lessee's will to adjust any labor dispute or to question the validity or to refrain from judicially testing the validity of any state or Federal order, regulation or law.

XVII

TERMINATION

This lease is made upon condition that Lessee shall perform all of the covenants and agreements herein set forth to be performed by Lessee. If Lessee shall fail to make any payment of minimum royalty or actual royalties when due and payable or shall fail to comply with any of the other conditions or requirements of this lease, Lessors may, upon the giving of thirty (30) days' notice in writing to Lessee of the default, cancel and forfeit this lease, unless within said thirty (30) day period, Lessee shall cure the default if the default relates to the payment of royalties or unless within said thirty (30) day period, if the default relates to other than the payment of royalties, Lessee shall undertake in good faith to cure the default and shall diligently proceed to remedy the default.

XVIII

LESSEE'S RIGHT OF SURRENDER

It is mutually understood and agreed that Lessee may at any time surrender and terminate this lease as to all or any portion of the leased premises upon giving to Lessors thirty (30) days' notice in writing and paying to Lessors all royalties and other sums due and payable to Lessors to the effective date of such surrender.

Lessee shall, on or before such effective date of surrender, deliver to Lessors a release and quitclaim to all rights under this Mining Lease and Option as to the so surrendered property. No partial surrender shall operate to reduce or affect the minimum advance royalties specified herein. Upon complete surrender, Lessee shall be relieved of all obligations hereunder except as otherwise provided in the next preceding and next succeeding paragraph hereof.

No complete surrender shall relieve Lessee from its obligation to pay any actual royalty, rental or minimum advance royalty payments which were due and payable but unpaid prior to the effective date of surrender. However, except as otherwise expressly provided in the first paragraph of this Section XVIII, such complete surrender shall relieve Lessee of any obligation to pay any rental or any minimum advance royalty payments which, except for such

surrender would have been payable after the effective date of surrender. Upon complete surrender, Lessee shall have no right to any reimbursement or credit for any minimum advance royalty payment or payments theretofore made, except only that any unused minimum advance royalty credit may be applied as credit in reduction of any actual royalties payable but unpaid as to ores or minerals mined and shipped or sold prior to the effective date of surrender. No surrender shall relieve Lessee from its obligation to pay any royalties as to leased deposits mined and shipped or sold prior to the effective date of surrender, or from any obligation hereunder arising out of any act or omission of Lessee prior to the effective date of surrender.

XIX

REMOVAL OF EQUIPMENT

It is mutually understood and agreed that, in case of forfeiture, surrender or expiration of this lease, all installed underground timbering, installed underground air and water lines, installed underground power lines, installed underground trackage (rails and ties), shall be and remain a part of the realty and shall revert to Lessors without further consideration or compensation.

It is further understood and agreed that all personal property of Lessee located within or upon the leased premises, and all buildings, machinery, equipment and tools (other than the fixtures to become the property of Lessors as above provided), shall, in case of forfeiture, surrender or other termination of this lease, remain upon the leased premises, and be held as a guarantee in lieu of bond until all terms of this lease with respect to payment of royalties and the preservation of the property shall have been complied with. Upon such compliance with and performance of such conditions and obligations, Lessee shall be entitled to, and may, within ninety (90) days after such termination of this lease or within such extension of time as may be granted by Lessors, remove from the leased premises such personal property and improvements, other than those items which are to remain the property of Lessors as above provided.

XX

LESSER INTEREST PROVISION

If Lessors own, as to the leased premises, an interest less than the entire interest therein, then the royalties in this lease provided for shall, as to any ores or minerals produced from that particular property, be paid to Lessors only in the proportion which Lessors' interest bears to the full and entire interest therein and thereunder, BUT the minimum royalty requirements hereof shall not be affected or reduced.

XXI

ANNUAL ASSESSMENT LABOR

Lessee agrees to perform the annual assessment labor which may be required under the mining laws of the United States as to the unpatented mining claims covered hereby, beginning with the year ending September 1, 1964. If this lease shall have terminated, Lessee shall have no obligation to perform annual labor for any assessment year ending ninety (90) days or more after such termination. PROVIDED, however, that if such termination shall be pursuant to notice of surrender given by Lessee, Lessee shall have no obligation to perform annual labor for any assessment year ending ninety (90) days or more after the giving of such notice.

XXII

MANNER OF GIVING NOTICES

Any notice required or desired to be served upon Lessee shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested and addressed as follows:

Vitro Minerals Corporation
600 West Thirty-third South
Salt Lake City, Utah

or to such other party and at such other address as Lessee or its successor or successors in interest may, from time to time, designate by written notice to Lessors.

Any notice required or desired to be served upon Lessors shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested, and addressed as follows:

Henry J. Pitt
Florence G. Pitt
Lewistown, Montana

or to such other party and at such other address as Lessors may, from time to time, designate by written notice to Lessee.

Service of notice by mail shall be deemed effective and complete upon the date of posting and mailing in accordance herewith. Personal service of notice upon the designated addressee shall be deemed sufficient service of notice and no mailing of notice shall be necessary in case of such personal service.

XXIII

ASSIGNMENT

The provisions hereof shall inure to the benefit of and shall be binding upon the successors in interest, legal representatives and assigns of the respective parties hereto, but no party hereto shall be chargeable with notice of any assignment or conveyance until such party shall have been furnished with written notice thereof and with a duplicate, certified or photostat copy of the instrument of assignment or conveyance.

XXIV

SUBORDINATION

Lessors shall, upon the request of the Lessee, subordinate their royalty and other interest hereunder to the rights of any government agency in and to minerals produced from the leased premises in connection with any

development or exploration loans negotiated by the Lessee.

IN WITNESS WHEREOF, these presents are executed as of the day and year first above written.

LESSORS:

Henry J. Pitt

Florence G. Pitt

LESSEE:

VITRO MINERALS CORPORATION

By Eugene B. Hotchkiss
Exec Vice-President

ATTEST:

Secretary

STATE OF MONTANA)
) ss.
COUNTY OF Yellowstone)

On this 18th day of December, in the year 1963, before me Margaret S. Jones personally appeared HENRY J. PITT, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Notary Public
Residing at: Billings, Montana

My commission expires:
[illegible]

STATE OF MONTANA)
) ss.
COUNTY OF [illegible])

On this [illegible] day of [illegible], in the year 1963, before me [illegible] personally appeared FLORENCE G. PITT, known to me to be the person whose name is subscribed to the within instrument, and acknowledged that she executed the same individually and as the wife of HENRY J. PITT.

[illegible]
Notary Public
Residing at: [illegible]

My commission expires:
[illegible]

STATE OF New York)
) ss.
COUNTY OF New York)

On this 23rd day of December, in the year 1963, before me Jean Dion personally appeared [illegible] B. Hotchkiss, known to me to be the Exec Vice President of VITRO MINERALS CORPORATION, a Delaware corporation, and acknowledged to me that such corporation executed the same.

Jean Dion
Notary Public
Residing at:

My commission expires:

EXHIBIT "A"

LEASED PREMISES

1. Township 16 North, Range 20 East, M.P.M.

   Section 17: Lots 2, 3, 6 and 7

2. The following described unpatented lode mining claims situated in Fergus County, Montana:

Name of Claim	Original Notice of Location Recorded in Book	Page
Monte No. 1	15	212
Monte No. 2	15	214
Mecca	15	216
Jinx No. 1	15	218

Henry J Pitt

17202
State of Montana
County of Fergus.
Filed for Record December 30, 1963 at 10:00 o'clock a.m. and duly recorded in Volume 15 of Lodes, Page 237 Records of Fergus County, Montana.
Fee Paid: $30.00
May Rathbun, County Recorder

MINING LEASE AND OPTION

This MINING LEASE AND OPTION agreement entered into as of the 16th day of November, 1963, by and between RUTH KELLY HOFFMAN, individually and as natural guardian of LARRY C. HOFFMAN, and LARRY C. HOFFMAN in his own right, Lessors and VITRO MINERALS CORPORATION, a Delaware corporation, Lessee,

W I T N E S S E T H :

WHEREAS, Lessors are the owners of the following described unpatented mining claim situated in Fergus County, Montana, to-wit:

> Prester John Quartz Lode Mining Claim. Located August 26, 1963, Certificate of Location filed September 23, 1963 in Book 14, page 517, Records of Fergus County, Montana.

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration paid by Lessee to Lessors, receipt of which is hereby acknowledged, and of the royalties hereinafter reserved and the covenants and agreements hereinafter expressed by Lessee to be faithfully kept and performed, the parties hereto mutually and severally covenant and agree as follows:

I

RIGHTS GRANTED TO LESSEE

Lessors do hereby demise, let and grant to Lessee the exclusive right and privilege to mine and dispose of all gold, silver, lead, zinc, copper and other minerals (hereinafter referred to as the "leased deposits"), in, upon, under or belonging to the above described unpatented mining claim (which said mining claim is hereinafter referred to as the "leased premises"), together with the right to construct all such works, building, plants, structures and appliances as may be necessary or convenient for the mining, preparation and marketing of the leased deposits, and the exclusive right to the use of the surface of the leased premises for the exercise of the rights and privileges herein granted.

II

PROPER OPERATION REQUIRED

Lessee shall conduct all operations on the leased premises in the manner necessary to good minerlike and economical mining so as to develop and take out leased deposits ore with due regard to the development of the leased premises and to the special covenants herein provided.

III

ACTUAL ROYALTIES

Subject to the provisions of Section XXI hereof, Lessee shall pay to Lessors on all leased deposits extracted and shipped, or sold from the leased premises during the term of this lease, royalties representing ten per cent (10%) of the net mint, smelter or mill returns received therefrom.

Net mint, smelter or mill returns, as used herein, shall mean the gross values as figured by the mint, smelter or mill, less all mint, smelter or mill charges or deductions and all transportation and freight charges.

If the transportation shall be conducted by Lessee or if the milling or smelting shall be performed by Lessee, the transportation, milling or smelting charges shall not exceed the amount for which similar services could be obtained from an independent responsible third party operating in the area.

Any amount due and payable to Lessors as royalties on any shipment of ores or minerals extracted and shipped and sold hereunder shall be paid by Lessee to Lessors on or before the 15th day of the month next succeeding the calendar month during which Lessee shall have received payment for such shipment.

All payments of royalties hereunder by Lessee to Lessors or any assignee or assignees of Lessors or any of them, shall be deposited to the credit of Lessors in the following bank, to-wit:

Northwestern Bank of Lewistown

Lewistown, Montana

or in such other single depository bank as Lessors may designate from time to time by written notice to Lessee.

IV

STATEMENTS TO BE FURNISHED

Lessee shall, on or before the 15th day of each month hereof during which royalties are payable hereunder, furnish Lessors with a written report showing, as to the shipments with respect to which such royalties are so then payable, the tonnage of the leased deposits extracted and shipped or sold from the leased premises, showing the royalties payable thereon and the amounts, if any, withheld by Lessee as aforesaid on account of any outstanding mineral or royalty interest, and also showing as to shipments which were made during the preceding month but as to which Lessee shall not have received settlement during said preceding month, the total tonnage of ores and minerals shipped from the leased premises.

Lessee shall, with said statement, furnish Lessors with duplicate copies of the mill or other purchaser's receipts and settlement sheets for the shipments as to which royalties are accounted on said statement.

All such statements and duplicate copies shall be forwarded to the depository bank for Lessors.

V

MINIMUM ROYALTY REQUIREMENTS

Subject to the provisions of Section XVII of this lease, Lessee shall pay to Lessors minimum advance royalty as follows:

> On the 16th day of November, 1966, and on the 16th day of each month thereafter while this lease shall remain in force and effect, the sum of One Hundred Dollars ($100.00).

Any minimum advance royalty payment made under this Section V shall be applied as a credit toward actual royalties at any time thereafter becoming payable under Section III of this lease.

No excess of actual royalties paid during any lease year over the minimum advance royalty paid for such year

shall operate to reduce the minimum advance royalty payable for any subsequent lease year.

Any amounts payable to Lessors under this Section V shall be deposited to the credit of Lessors in the depository bank in the same manner as actual royalties payable under Section III hereof.

VI

BOOKS AND RECORDS

Lessee shall keep and maintain complete and accurate books of account showing the amount of leased deposits extracted from the leased premises, the amount of leased deposits shipped, sold or treated and the amount of money received or payable from the sale of such leased deposits.

Lessors and the authorized agents of Lessors shall at any and all reasonable times be permitted to inspect all books and records, including assay reports, of Lessee relating to the leased premises in order to ascertain the correct amount of royalties due Lessors or to determine whether or not the provisions of the lease are being complied with.

Upon the termination of this lease, other than through the exercise of the option set out in Section XXI hereof, Lessee shall furnish Lessors with copies of the then most recent mining map or maps and with copies of the drilling logs and assay results as to any drill holes which may have been drilled by Lessee upon the leased premises.

VII

LESSORS' RIGHT OF INSPECTION

Lessee shall allow Lessors and the agents of Lessors, from time to time, to enter upon and into Lessee's workings on said leased premises for the purpose of inspection at such reasonable times as shall not interfere with the regular operation of the leased premises. It is understood and agreed that Lessee shall assume no responsibility for the safety of Lessors or the agents of Lessors when and while upon the leased premises for such purposes.

VIII

TRANSFER BY LESSOR SHALL NOT IMPOSE

ADDED DUTIES UPON LESSEE

No transfer of any of the leased premises, which may hereafter occur by operation of law or otherwise, shall impose upon Lessee any obligations of segregation of production or accounting.

IX

STATE AND FEDERAL ENACTMENTS -

INDEMNIFICATION OF LESSORS

Lessee in the operation and development of the leased premises shall be subject to all applicable Federal enactments, the laws of the State of Montana, and all Federal or state rules and regulations regarding Employers' Liability, Workmen's Compensation, Social Security and Unemployment Insurance, and said Lessee covenants and agrees to indemnify and hold harmless Lessors from and against the payment of any and all damages, claims, costs and expenses due to the existence of such enactments, and of any and all claims, costs and expenses in connection therewith under any claim of subrogation provided for by said enactments or otherwise; and Lessee shall further indemnify and hold harmless Lessors from and against any and all damages, claims, costs and expenses arising out of damages to property or injuries to or death of the employees of Lessee, or any other person whomsoever other than Lessors and those acting under Lessors, where such injury, death or damage occurs because of or in connection with the use, operation or development in any manner of the leased premises whether such claims are based upon a right conferred by common law or by statute.

X

PROPERTY TO BE KEPT FREE OF LIENS

Lessee shall pay and satisfy all claims for materials, supplies and labor in connection with the working of said mine and mining property, and shall keep said mine and mining property free of liens or encumbrances of any and every kind, except such as might result from state and county tax assessments not required to be paid by Lessee, or such as

may result from the acts of others than Lessee, Lessee's employees or those in privity with Lessee.

XI

TAXES

(a) Lessors shall pay all Federal, state and county taxes of any kind assessed against Lessors on account of the receipt of royalties by Lessors herein provided to be paid to Lessors by Lessee.

(b) Lessee shall pay all state and county property tax assessments, if any, upon said leased premises which pertain to the use of said premises for mining purposes hereunder. Lessors shall pay all such tax assessments which may pertain to the use of such premises for other than mining purposes hereunder.

(c) Lessee shall pay all state and county tax assessments upon any and all structures and other improvements, machinery, equipment, tools, supplies and personal property whatsoever placed upon the leased premises by Lessee.

(d) Such state and county taxes, if any, as may be assessed because of the severance or production by Lessee of leased deposits and such state and county taxes, if any, as may be assessed against the leased premises because of additional value placed thereon by reason of the leased deposits therein, shall be prorated between and shall be paid by Lessee and Lessors in proportion to their respective participations in the proceeds thereof; PROVIDED, HOWEVER, that as to any taxes referred to in subsections (b) and (d) Lessee's obligation, in respect to the calendar year in which this lease is executed and in respect to the calendar year in which this lease is terminated, shall, unless Lessee shall exercise the option referred to in Section XXI hereof, be limited to payment of a proportion of such taxes determined by the ratio to 365 of the number of days in such calendar year during which this lease was in force and effect.

XII

PROTECTION AGAINST LIENS ARISING

THROUGH LESSORS' DEFAULT

In the event there are any liens or encumbrances against said leased premises, or in the event any liens or

encumbrances shall hereafter accrue against the same by acts or neglect of Lessors, then Lessee may at Lessee's option pay and discharge the same, and if Lessee elects so to do then Lessors agree to repay Lessee upon demand all such sums so paid by Lessee; together with interest thereon from the date of payment of said sums at the rate of eight per cent (8%) per annum until paid. Lessee may apply any amount so becoming payable by Lessors to Lessee as a credit in payment or reduction of any amount thereafter becoming payable under Section III or Section V hereof.

XIII

TERM OF LEASE

This lease shall be and remain in force and effect for a term of twenty (20) years from and after the date hereof unless sooner terminated through surrender as hereinbefore set out, or through exercise of the option hereinafter granted to Lessee or through forfeiture. Lessee may extend this lease for an additional twenty (20) years by giving written notice to Lessors of its intention to do so at least ninety (90) days prior to the end of the first twenty (20) year term.

XIV

LAWS AND REGULATIONS

This lease shall be subject to the laws of the State of Montana and to the rules and regulations of the regulatory bodies of such state having jurisdiction thereof, and to all other applicable state and Federal laws, rules and regulations.

XV

FORCE MAJEURE

All obligations of Lessee shall be suspended while, but only as long as Lessee is prevented from complying with such obligations, in whole or in part, by strikes, lockouts, acts of God, unavoidable accidents, uncontrollable delays in transportation, inability to obtain necessary materials or services in open market, inadequate facilities for the transportation of materials, any state or Federal law,

regulation or order, or other matters, exclusive of financial inabilities of Lessee, beyond the reasonable control of Lessee, whether similar to the matters herein specifically enumerated or not; PROVIDED, HOWEVER, that performance shall be resumed within a reasonable time after such cause has been removed; and PROVIDED FURTHER, that Lessee shall not be required against Lessee's will to adjust any labor dispute or to question the validity or to refrain from judicially testing the validity of any state or Federal order, regulation or law.

XVI

TERMINATION

This lease is made upon condition that Lessee shall perform all of the covenants and agreements herein set forth to be performed by Lessee. If Lessee shall fail to make any payment of minimum royalty or actual royalties when due and payable or shall fail to comply with any of the other conditions or requirements of this lease, Lessors may, upon the giving of thirty (30) days' notice in writing to Lessee of the default, cancel and forfeit this lease unless, within said thirty (30) day period, Lessee shall cure the default if the default relates to the payment of royalties or unless within said thirty (30) day period, if the default relates to other than the payment of royalties, Lessee shall undertake in good faith to cure the default and shall diligently proceed to remedy the default.

XVII

LESSEE'S RIGHT OF SURRENDER

It is mutually understood and agreed that Lessee may at any time surrender and terminate this lease as to all or any portion of the leased premises upon giving to Lessors thirty (30) days' notice in writing and paying to Lessors all royalties and other sums due and payable to Lessors to the effective date of such surrender.

Lessee shall, on or before such effective date of surrender, deliver to Lessors a release and quitclaim of all rights under this Mining Lease and Option as to the so surrendered property. No partial surrender shall operate to reduce or affect the minimum advance royalties specified herein. Upon complete surrender, Lessee shall be relieved

of all obligations hereunder except as otherwise provided in the next preceding and next succeeding paragraph hereof.

No complete surrender shall relieve Lessee from its obligation to pay any actual royalty, rental or minimum advance royalty payments which were due and payable but unpaid prior to the effective date of surrender, or to perform any obligation shich may have accrued under Paragraph XX below. However, except as otherwise expressly provided in the first paragraph of this Section XVII, such complete surrender shall relieve Lessee of any obligation to pay any rental or any minimum advance royalty payments which, except for such surrender would have been payable after the effective date of surrender. Upon complete surrender, Lessee shall have no right to any reimbursement or credit for any minimum advance royalty payment or payments theretofore made, except only that any unused minimum advance royalty credit may be applied as credit in reduction of any actual royalties payable but unpaid as to ores or minerals mined and shipped or sold prior to the effective date of surrender. No surrender shall relieve Lessee from its obligation to pay any royalties as to leased deposits mined and shipped or sold prior to the effective date of surrender, or from any obligation hereunder arising out of any act or omission of Lessee prior to the effective date of surrender.

XVIII

REMOVAL OF EQUIPMENT

It is mutually understood and agreed that, in case of forfeiture, surrender or expiration of this lease, all installed underground timbering, installed underground air and water lines, installed underground power lines, installed underground trackage (rails and ties), shall be and remain a part of the realty and shall revert to Lessors without further consideration or compensation.

It is further understood and agreed that all personal property of Lessee located within or upon the leased premises, and all buildings, machinery, equipment and tools (other than the fixtures to become the property of Lessors as above provided), shall, in case of forfeiture, surrender or other termination of this lease, remain upon the leased premises, and be held as a guarantee in lieu of bond until all terms of this lease with respect to payment of royalties and the preservation of the property shall have been complied with. Upon such compliance with and performance of such

conditions and obligations, Lessee shall be entitled to, and may, within ninety (90) days after such termination of this lease or within such extension of time as may be granted by Lessors, remove from the leased premises such personal property and improvements, other than those items which are to remain the property of Lessors as above provided.

XIX

LESSER INTEREST PROVISION

If Lessors own, as to the leased premises covered hereby, an interest less than the entire interest in and under such leased premises, then the royalties in this lease provided for shall, as to any ores or minerals produced from that particular property, be paid to Lessors only in the proportion which Lessors' interest bears to the full and entire interest therein and thereunder, BUT the minimum royalty requirements hereof shall not be affected or reduced.

XX

ANNUAL ASSESSMENT LABOR

Lessee agrees to perform the annual assessment labor which may be required under the Mining Laws of the United States as to the subject unpatented mining claim beginning with the year ending September 1, 1964. If this lease shall be terminated, Lessee shall have no obligation to perform annual labor for any assessment year ending sixty (60) days or more after such termination, PROVIDED, however, that if such termination shall be pursuant to notice of surrender given by Lessee, Lessee shall have no obligation to perform annual labor for any assessment year ending sixty (60) days or more after the giving of such notice.

XXI

OPTION - ESCROW

Lessors agree that at any time after Lessee shall have paid to Lessors or to the depository bank for Lessors (as a result of any actual royalty payments or minimum royalty payments made in accordance herewith and any additional cash purchase price payment or payments which Lessee may elect to make), for Lessors an aggregate sum of Fourteen thousand dollars

($), Lessee shall, upon giving to Lessors written notice and paying to Lessors the sum of Ten Dollars ($10.00), have the exclusive right and option to demand and receive from Lessors, their successors in interest and legal representatives or assigns, a good, sufficient and properly executed and acknowledged mining deed conveying to Lessee, or its successor or successors in interest, all of the leased premises particularly described above, together with all and whatsoever the rights, titles and interest therein and thereunder.

Upon delivery of such mining deed to Lessee (grantee) or its successor or successors in interest, the lease provided for in this instrument shall cease and terminate and all rights of the Lessors with respect to the property conveyed by such mining deed and any future royalty obligations of Lessee shall terminate. Lessors agree that at any time, upon the written request of Lessee, Lessors will properly execute and acknowledge a deed in accordance with the foregoing provisions of this Section XXI and will deposit the same in escrow with:

Northwestern Bank of Lewistown
Lewistown, Montana

with appropriate escrow instructions to be signed by Lessors and Lessee. Such escrow instructions shall provide appropriate protection to the Lessors, the Lessee and the escrow holder; shall provide for delivery of said deed to Lessee, or its successor or successors in interest, when and if it shall be entitled to the delivery thereof; and shall provide for the return of said deed to Lessors if the hereunder granted lease shall be surrendered or otherwise terminated prior to the time when Lessee, or its successor or successors in interest, shall have become entitled to exercise the hereunder granted option to take and receive a deed to the mining claim which is the subject of this Mining Lease and Option. Escrow charges will be payable by Lessee.

XXII

MANNER OF GIVING NOTICES

Any notice required or desired to be served upon Lessee shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested and addressed as follows:

Vitro Minerals Corporation
600 West Thirty-third South
Salt Lake City, Utah

or to such other party and at such other address as Lessee or its successor or successors in interest may, from time to time, designate by written notice to Lessors.

Any notice required or desired to be served upon Lessors shall be in writing and shall be deemed sufficiently given if deposited in the United States mail, postage prepaid, and certified or registered, return receipt requested, and addressed as follows:

Ruth Kelly Hoffman
Larry C. Hoffman
P. O. Box 534
Lewistown, Montana

or to such other party and at such other address as Lessors may, from time to time, designate by written notice to Lessee.

Service of notice by mail shall be deemed effective and complete upon the date of posting and mailing in accordance herewith. Personal service of notice upon the designated addressee shall be deemed sufficient service of notice and no mailing of notice shall be necessary in case of such personal service.

XXIII

ASSIGNMENT

The provisions hereof shall inure to the benefit of and shall be binding upon the successors in interest, legal representatives and assigns of the respective parties hereto, but no party hereto shall be chargeable with notice of any assignment or conveyance until such party shall have been furnished with written notice thereof and with a duplicate, certified or photostat copy of the instrument of assignment or conveyance.

XXIV

SUBORDINATION

Lessors shall, upon the request of the Lessee,

subordinate their royalty and other interests hereunder to the rights of any government agency in and to minerals produced from the leased premises in connection with any development or exploration loans negotiated by the Lessee.

IN WITNESS WHEREOF, these presents are executed as of the day and year first above written.

LESSORS:

Ruth Kelly Hoffman, Individually and as Natural Guardian of Larry C. Hoffman

Larry C. Hoffman

LESSEE:

VITRO MINERALS CORPORATION

By Eugene B. Rotelline
Exec. Vice-President

ATTEST:

Secretary

STATE OF MONTANA)
) ss.
COUNTY OF Fergus)

On this 16 day of November, in the year 1963, before me F. F. Schell personally appeared RUTH KELLY HOFFMAN, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that she executed the same individually and as Natural Guardian of LARRY C. HOFFMAN.

Notary Public
Residing at:

My commission expires:

STATE OF MONTANA)
) ss.
COUNTY OF Fergus)

On this 16 day of November, in the year 1963, before me F. F. Schelle personally appeared LARRY C. HOFFMAN, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Notary Public
Residing at:

My commission expires:
[illegible]

STATE OF New York)
) ss.
COUNTY OF New York)

On this 27th day of November, in the year 1963, before me [illegible] personally appeared Eugene B. Hitchcock, known to me to be the Vice President of VITRO MINERALS CORPORATION, a Delaware corporation, and acknowledged to me that such corporation executed the same.

Notary Public
Residing at:

My commission expires:

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Office of Minerals Exploration
656 U. S. Court House
W. 920 Riverside Avenue
Spokane, Wash. 99201

COPY
O. M. E.
RECEIVED
FEB 13 1970
MINERALS CODE
Zla 130
Rsl 120 M
HK 120
222

February 5, 1970

Memorandum

To : Chief, Office of Minerals Exploration

From : Field Officer, OME, Region I

Subject: Summary final report
OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

INTRODUCTION

This report summarizes an OME exploration project for gold-silver ore in limestone adjacent to quartz monzonite in the southern part of the Judith Mountains northeast of Lewistown, Fergus County, Montana. The contract, dated July 20, 1964, was for $93,740.00 of which the Government would contribute 50 percent or $46,870.00. Work began on July 20, 1964, and ended in October 1964. Completed work included collecting 740 soil samples and assaying them for arsenic, 81.0 hours of bulldozing trenches, 79.5 hours of bulldozing access roads, 36 trench sample assays, 2,231 feet of rotary drilling, and 434 assays for gold and silver of drill hole samples. Total accepted cost of the work was $14,344.76 of which the Government contributed $7,172,38. The work was unsuccessful in finding ore and the Operator was notified in May 1965 that the Government retains no claim or lien against the property subject to the contract.

Summary Final Report

OPERATOR

Vitro Minerals Corporation
90 Park Avenue
New York, New York 10016

The exploration manager was:

Cecil H. Smith
Vitro Minerals Corporation
600 W. 33d South Street
P. O. Box 15437
Salt Lake City, Utah 84115

PROPERTY

The land subject to the contract consists of 9 patented lode claims, 91 unpatented lode mining claims, and 7 lots of fee land comprising approximately 132 acres. The unpatented claims are recorded in the Records of Fergus County, Lewistown, Montana. Data relating to all claims and fee land are as follows:

Unpatented lode claims owned by Operator by right of location

Beta Nos. 1 through 62, in secs. 18, 19, 20, 29, 30, and 31, T. 16 N., R. 20 E., PMM (fig. 1). Recorded in Lode Book 15, p. 37 through 160.

Kappa Nos. 1 through 24, in sec. 8, T. 16 N., R. 20 E., PMM (fig. 1). Recorded in Lode Book 15, p. 161 through 208.

Leased claims and fee land

Hoffman property.--In a Mining Lease and Option dated November 16, 1963, Ruth Kelly Hoffman, individually and as natural guardian of Larry C. Hoffman, and Larry C. Hoffman, in his own right, granted mining rights to the Operator covering the Prester John unpatented lode mining claim in the NE$\frac{1}{4}$ SW$\frac{1}{4}$ sec. 30, T. 16 N., R. 20 E., PMM. The claim which covers the old Whiskey Gulch mine is recorded in Lode Book 14, page 517.

Pitt property.--In a Mining Lease and Option dated December 18, 1963, Henry J. Pitt and his wife, Florence G. Pitt, granted mining rights to the Operator covering the following four unpatented lode mining claims and four lots of fee land:

Jinx claim in the NE$\frac{1}{4}$ sec. 18, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, page 218.

Mecca claim in the SE$\frac{1}{4}$ sec. 7, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, page 216.

Monte Nos. 1 and 2 claims in the N$\frac{1}{2}$ sec. 18, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, pages 212 and 214 respectively.

The fee land consists of Lots 2, 3, 6, and 7, sec. 17, T. 16 N., R. 20 E., PMM.

Abbott property.--In a Mining Lease and Option dated October 23, 1963, as amended December 18, 1963, Granville S. Abbott and his wife, Addie Abbott, granted mining rights to the Operator covering the following 9 patented claims and 3 lots of land:

Patented claims in secs. 8 and 17, T. 16 N., R. 20 E. (fig. 1):

Name of claim	Mineral Survey Number
Goodwin	6451
Goodwin No. 2	8791A
Aurora	8908
Night Owl	8908
Hawkeye	7410
Mammoth	7411
Mammoth Fraction	7412
Wickett	7413
19th Century	7414

The fee land consists of Lots 9, 10, and 11, sec. 17, T. 16 N., R. 20 E., PPM, except that portion of Lots 10 and 11 described in a conveyance from Florence G. Gilmore to Gilt Edge Mining Corporation in a Warranty Deed dated June 26, 1939, recorded in Book 137 of Deeds, page 59, Document No. 17671.

The claims are on the southeast slopes of the central part of the Judith Mountains; altitudes range from 5200 to 5900 feet. To reach the property from Lewistown, Montana, one follows U. S. Highway 87 easterly for 3 miles, turn left and proceed northeasterly for about 6.5 miles after which one takes first a left fork and then a right fork to the settlement of Giltedge.

PURPOSE OF PROJECT

The purpose of the project was to explore for gold- and silver-bearing ore bodies occurring as breccia-filled fissure veins or as replacements in limestone at or near the contact between Madison Limestone of Mississippian age and porphyritic intrusive rock of Eocene age.

GEOLOGIC JUSTIFICATION

Several gold mines have been developed in limestone adjacent to igneous intrusive bodies in the Judith Mountains. The intrusives were called laccoliths of syenite porphyry by Weed and Pirsson (1898), but later were classified as stocks of quartz monzonite by Wallace (1953). The sedimentary host rock is the upper part of the Madison Limestone of Mississippian age. Dikes and sills of rhyolite porphyry intrude the limestone and it is near these, as well as near the stocks, that many of the mines were developed. No mines are active today.

The Giltedge mine was the largest mine near the Beta-Kappa claims. Weed and Pirsson (1898, p. 594) report that the ore is on the under contact of an inclined porphyry sheet. The ore bodies (Robertson, 1950, p. 35) are mainly in altered limestone, some of which is soft and yellow whereas other is hard and siliceous; locally, the ore is in shaley limestone that has been impregnated with bituminous material.

The ore bodies were not rich. Robertson (1953, p. 35-36) reported that 377,957 tons yielded 64,480 ounces of gold and 3,000 of silver. The average precious metal content of the rock was only 0.17 ounces gold and 0.008 ounces silver per ton.

The Beta claims are south and southwest and the Kappa claims are northeast of the Giltedge mine. The geology is similar to that near the Giltedge ore bodies, and exploration for additional ore bodies seemed justified.

CONTRACT

The Contract, No. 2193 dated July 20, 1964, required that work start on or before September 15, 1964, and to be completed within 12 months from the date of the Contract. The work was to be done in three stages as follows:

Stage I.--On the Beta claims establish a base line not less than 200 feet north of and parallel to the south side lines of Beta 1 and 2 claims. At intervals of 150 feet northerly, establish 50 parallel auxiliary base lines. Along each base line establish soil sampling stations at 100-foot intervals.

On the Kappa claims establish a base line about 50 feet north of and parallel to the north side lines of Kappa 5 and Kappa 6 claims. At intervals of 150 feet, establish parallel auxiliary base lines to the north and 22 lines to the south. Along each base line establish soil sampling stations at 100-foot intervals.

Soil samples shall be taken at each sample station. However, as work progresses assay results may indicate areas in which soil sampling can be omitted along part of one or two consecutive lines. In such cases these parts of lines need not be sampled.

Stage II.--Access roads shall be bulldozed and drill sites levelled in favorable areas indicated by Stage I work. From these sites, a maximum of 15 holes shall be drilled. It is estimated that the holes will have an average length of 300 feet or an aggregate of 4,500 feet of drilling.

Stage III.--Possible ore grade holes depending on the type of deposit indicated by Stage II drilling may be checked by drilling additional holes on not closer than 100-foot centers. Not more than 66 holes shall be drilled for an aggregate of not more than 20,000 feet of drilling under this Stage II of the contract. Access roads may be bulldozed and drill sites levelled if necessary under this Stage II with a maximum of 50 hours of dozer work with a D-8 or 58.8 hours with a D-7.

Estimated costs of the work

Stage I

Actual costs		
Category (1) Independent Contracts		
Bulldozing trenches		$2,000.00
D-8 Caterpillar dozer, 100 hours at $20.00/hr		
D-7 Caterpillar dozer, 117 hours at $17.00/hr		
Fixed unit costs		
Grid layout, soil sampling, and analysis for arsenic, 1,425 samples at $4.00/sample	$5,700.00	
200 samples assayed for gold and silver at $2/50/sample	500.00	
Total estimated fixed unit costs		6,200.00
Total estimated costs Stage I		$8,200.00

Stage II

Actual costs		
Category (1) Independent Contracts		
Bulldozing access roads and drill sites	$ 1,500.00	
D-8 Caterpillar dozer, 75 hours at $20.00/hr		
D-7 Caterpillar dozer, 88 hours at $17.00/hr		
Mobilization and demobilization of drilling equipment and personnel	400.00	
4,500 feet of rotary or percussion drilling at $3.00/ft	13,500.00	
Total estimated actual costs		$15,400.00
Fixed unit costs		
Incidental allowance for each foot of drill hole completed, 4,500 feet at $0.12/ft	$ 945.00	
600 samples assayed for gold and silver at $2/50/sample	1,500.00	
Total estimated fixed unit costs		2,445.00
Total estimated cost Stage II		$17,845.00

Stage III

Actual costs		
Category (1) Independent Contracts		
Bulldozing access roads and drill sites		$ 1,000.00
D-8 Caterpillar dozer, 50 hours at $20.00/hr		
D-7 Caterpillar dozer, 58.8 hours at $17.00/hr		
20,000 feet of rotary or percussion drilling at $3.00/ft		60,000.00
Total estimated actual costs		$61,000.00
Fixed unit costs		
Incidental allowance for each foot of drill hole completed, 20,000 feet at $0.21/ft	$ 4,200.00	
1,000 samples assayed for gold and silver at $2.50/sample	2,500.00	
Total estimated fixed unit costs		$ 6,700.00
Total estimated cost Stage III		$67,700.00

SUMMARY

Total estimated cost Stage I	$ 8,200.00
Total estimated cost Stage II	17,845.00
Total estimated cost Stage III	67,700.00
Total estimated cost of the work (rounded)	$93,740.00
Government participation at 50 percent	$46,870.00

PROJECT WORK

The Operator, on his own account, and before the date of the Contract, had completed much of the soil sampling on the Beta claims that was provided for in the contract. This work disclosed an area of anomalously high arsenic values on the Beta No. 4 claim (fig. 1).

A total of 740 soil samples were collected and assayed for arsenic as part of the contract work. The northeast extension of the anomaly on Beta No. 4 claim was tested by a grid of 48 samples (fig. 1). The soil sampling on the Kappa claims (fig. 1) was along 44 parallel lines 150 feet apart that were from 1500 to 1800 feet long; 692 samples were assayed.

Twelve trenches were excavated by 81 hours of bulldozing on the Beta claims (fig. 1). Thirty-six samples from the trenches were assayed for gold and silver.

Under Stage II of the contract, 8 vertical holes were drilled with a rotary drill using a 4-3/4 inch bit. Total drilling was 2,231 feet. Site preparation and access road construction for the drilling required 79.5 hours of bulldozing with a D-7 Caterpillar. Samples were collected at 5-foot intervals in the drill holes and were assayed for gold and silver; 434 samples were assayed.

The soil sampling indicated several widely separated areas in which there are anomalously high arsenic values. Trenching and drilling failed to find high gold values near the arsenic anomalies.

No work was authorized to be done under Stage II III ? of the contract.

The accepted work and approved costs of the completed project are as follows:

Item	Costs
Stage I	
Trenching, D-7 Caterpillar, 81 hours at $16.50/hr	$ 1,336.50
Soil samples, 740 at $4.00 each	2,960.00
Trench sample assays, 36 at $2.50/sample	90.00
Stage II	
Bulldozing access roads and drill sites, D-7 Caterpillar, 79.5 hours at $16.50 hr	1,311.75
Drilling, rotary, 2231 feet at $3.00/ft	6,693.00
Incidental allowance, 2,231 feet at $0.21/ft	468.51
Mobilization and demobilization	400.00
Assays of drill hole samples, 434 at $2.50/sample	1,085.00
Total	$14,344.76
Government participation at 50 percent	7,172.38

The Government has no equity in any equipment or supplies at the property.

REPORTS

The Operator submitted an acceptable final report on February 26, 1965. A Report of Review was completed on May 7, 1965.

PROJECT RESULTS

The soil sampling was successful in defining several areas where arsenic values are as high as 100 parts per million (fig. 1). The general background value for arsenic is about 35 parts per million.

Trenching and rotary drilling failed to find promising amounts of gold-bearing rock near the high arsenic values on the Beta claims. A sample across a jasperoid bed in Pit 1 (Beta No. 1 claim), contained 0.20 to 0.33 ounces gold per ton. Other trench samples yielded lower assays.

The horseshoe-shaped anomaly south of the Kappa claims is in the area of the old Mammoth mine. Samples of the underground workings yielded assays of 0.010 to 0.345 ounces gold per ton. A sample on the surface near the portal of the upper of the Mammoth workings contained 0.465 ounce gold per ton. Two rotary drill holes on the Mammoth claim failed to find gold ore (fig. 1).

The completed work was unsuccessful in finding ore. No reserves can be assigned to the property.

The Operator was notified in a letter dated May 13, 1965, that the Government retains no claim or lien against the property subject to the contract or any future production therefrom.

GEOLOGIC SUMMARY

Gold ore near the Beta-Kappa claims formerly had been found in the upper part of the Madison Limestone that was near or adjacent to quartz monzonite porphyry intrusives. Some of the gold was extremely fine particles in bituminous shaley limestone.

Arsenic values were reported by the Operator to be high near the high gold values. Soil samples were assayed for arsenic and several areas of high arsenic values were indicated.

Although arsenic values are high near gold ore, it was learned that high arsenic values did not necessarily indicate the presence of gold ore. The only promising gold assays were found near old workings where gold ore formerly had been found. It is doubtful that soil sampling for arsenic can be considered a useful prospecting method for gold in the Judith Mountains.

REFERENCES CITED

Robertson, A. F., 1950, Mines and mineral deposits (except fuels), Fergus County, Montana: U. S. Bur. Mines Inf. Circ. 7544, 76 p.

Wallace, S. R., 1953, The petrology of the Judith Mountains, Fergus County, Montana: U. S. Geol. Survey Open-File Rept., 188 p.

Weed, W. H., and Pirsson, L. V., 1897, Geology and mineral resources of the Judith Mountains of Montana: U. S. Geol. Survey 18th Ann. Rept., pt. 3, Economic Geology, p. 437-616.

Willard P. Puffett

Willard P. Puffett

Form 7
(3)

OFFICIAL FILE COPY

Date	Surname	Code
	Fisher	500
	Kellogg	120
6/24	Johnson	110
		100
		226

JUN 2 5 1965

Mr. Eugene B. Hotchkiss
Executive Vice President
Vitro Minerals Corporation
90 Park Avenue
New York, New York 10016

Re: OMM-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. Hotchkiss:

I regret that our check in settlement of the Government's participation in exploration costs under the subject contract was for $6,979.88 instead of $7,172.38 as provided by our Report of Review referred to in your letter dated June 21, 1965.

A supplemental check for the difference, $192.50, will be forwarded to your company within a few days.

Sincerely yours,

George Fumich, Jr.

Acting Director

CKFisher:cc rewritten 6/24/65

cc: Fiscal w/c letr 6/21/65
Region I w/c letr 6/21/65
Director's reading file
CA & A Division
120M

23263

Vitro MINERALS CORPORATION

90 PARK AVENUE · NEW YORK, N. Y. 10016 · MURRAY HILL 2-5700

OFFICIAL COPY
O. M. E.
RECEIVED
JUN 23 1965
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June 21, 1965

Mr. George Fumich, Jr.
Acting Director
Office of Minerals Exploration
U.S. Dept. of the Interior
Washington 25, D.C.

Dear George:

Re: OME-6349 (Gold-Silver)
Contract 2193

On June 17th we received a check in the amount of $6,979.88 and an Administrative Suspension Statement which is attached.

Also attached is a copy of a letter received from Mr. D. R. MacLaren, Acting Field Officer, and a report of the OME auditor indicating that balance due under this contract approved by the auditor was $7,172.38.

Vitro drilled 2,231 ft. under the OME contract which allowed for a maximum of $3 per foot. In the Report of Review attached to Mr. MacLaren's letter, the $3 per foot was allowed, but in the Administrative Suspension Statement the allowance is only $2.83 per foot. The difference is $385 and the government's share would be $192.50.

We, therefore, respectfully request an additional payment in the amount of $192.50.

Very truly yours,

VITRO MINERALS CORPORATION

Eugene B. Hotchkiss

Eugene B. Hotchkiss
Executive Vice President

EBH/is
enc.
cc: Mr. C. H. Smith

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of the Secretary
Accounting Section
Washington

JUNE 2, 1965

ADMINISTRATIVE SUSPENSION STATEMENT

Name and Address of Payee: VITRO MINERALS CORPORATION
600 WEST 33RD STREET SOUTH
SALT LAKE CITY, UTAH 84115

Amount Claimed:	Differences (Explained Below)	Amount Approved
$15,105.64	$1,145.88	$13,959.76 (GOVT SHARES $6,979.88)
Bu. Voucher No.	Payee's Invoice No.	Period
1836 - 1	OME 6349 - CONT 2193	JULY 20, TO OCTOBER 30, 1964

EXPLANATION

	CLAIMED	APPROVED	DIFFERENCE
DRILLING	$7,395.18	$6,308.00	$1,087.18 *
INCEDENTIAL ALLOWANCE	462.21	468.51	6.30 CR **
ASSAYS	1,240.00	1,175.00	65.00 **
		TOTAL DISALLOWED	1,145.88

* CONTRACT STATES ACTUAL COST FOR DRILLING. THE AMOUNT OF $6,308.00 REPRESENTS ACTUAL COSTS AS BILLED BY T A BEAVERS.

** SEE REPORT OF REVIEW DATED MAY 7, 1965

Any reclaim for items deducted must be supported by the original of this statement and submitted to the office shown above.

Suspension made by:

Opal A Shelton
Signature

OPAL A SHELTON
CHIEF, ACCOUNTS BRANCH
Title

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
May 25, 1965

Vitro Minerals Corporation
90 Park Avenue
New York, N. Y. 10016

VITRO MINERALS CORPORATION
RECEIVED
MAY 26 1965
E. B. HOTCHKISS
NEW YORK, N. Y.

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and
Leased Properties
Fergus County, Montana
Contract 2193

Gentlemen:

There is enclosed one copy of a Report of Review, in lieu of a final audit, dated May 7, 1965, for July 20 to October 30, 1964, inclusive, covering a gold-silver project on the Beta-Kappa claims and other properties, Fergus County, Montana.

Payment of "Balance due" in the amount of $7,172.38 will be made by our Washington, D. C. office and should be received shortly.

Sincerely yours,

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

Enclosure

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the report of:

Vitro Minerals Corporation
90 Park Avenue
New York, N. Y. 10016

pertaining to Exploration Contract 14-23-090-2193, OME-6349, including Amendment No. 1, for July 20 to October 30, 1964, inclusive, covering a gold-silver project on the Beta-Kappa claims and other properties, Fergus County, Montana.

My review included an examination of the Monthly Voucher (MME Forms 60) and supporting documents, comparison of the claimed costs with the contract and pertinent schedules, confirmation of work performed by reference to reports and correspondence, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the reasons given in the attached schedule.

The findings of this review are stated in the following summary and the attached schedule:

Total cost billed by Operator		$15,105.64
Exceptions:		
Prior to this review	$ -0-	
Herewith	750.88	750.88
Total acceptable cost		$14,354.76

The contract calls for a 50 percent contribution of the allowable costs by the Government. Therefore, if the project is otherwise accepted as having met the terms of the contract, payments as follows are valid and proper:

Payable on audited claim	$ 7,177.38
Paid to date	[illegible]
Balance due	[illegible]

Reasons for Report of Review in lieu of a final audit:

(1) a major portion ($9,741.25) of the acceptable costs covered work performed at unit rates under independent contract;
(2) the remaining portion ($4,603.51) of the acceptable costs was under a contract provision for conbtibution by the Government on the basis of fixed unit costs for work performed;
(3) the Monthly Reports were supported by documentary evidence of the acceptable actual costs under the contract;
(4) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible exceptions.

Item	Claimed Costs	Accepted Costs	
Stage I:			
Trenching D-7 Cat.-81 hours @ $16.50	$ 1,336.50	$ 1,336.50	
Samples - 740 @ $4.00	2,960.00	2,960.00	
Assays - 62 @ $2.50	155.00	90.00	(a)
Stage II:			
Grading D-7 Cat.-79.5 hours @$16.50	1,311.75	1,311.75	
Drilling - 2231'	6,308.00)	6,693.00	(b)
Do - Bits, cement, etc.	1,087.18)		
Mobilization and demobilization	400.00	400.00	
Incidental - 2231' @ $0.21	462.21	468.51	(c)
Assays - 434 @ $2.50	1,085.00	1,085.00	
Totals	$15,105.64	$14,344.76	

Exceptions:

(a) Assays taken in old pits, road cuts and tunnels deleted
Nos. 3014 - 3016, incl. 3
Nos. 2901 - 2906, incl. 6
Nos. 2908 - 2924, incl. 17
Total: 26 @ $2.50 $ 65.00

(b) Portion of costs in excess of $3.00/foot maximum allowed by contract 702.18

(c) Correct computation error (6.30)

Net exceptions $ 760.88

Vitro MINERALS CORPORATION

90 PARK AVENUE · NEW YORK, N. Y. 10016 · MURRAY HILL 2-5700

June 1, 1965

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Mr. George Fumich, Jr.
Acting Director
U.S. Dept. of the Interior
Office of Minerals Exploration
Washington 25, D.C.

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear George:

Shortly after receiving your letter of May 13th relative to the OME exploration contract on certain precious metal claims in Montana, I received a letter from Mr. MacLaren enclosing a Report of Review in lieu of a final audit on this contract, stating that a final payment closing out this contract in the amount of $7,172.38 should be mailed out to us shortly.

We also sincerely regret that the work developed negative results - however, we wish to thank you and the others in the OME - in particular Mr. MacLaren - for the friendly cooperation and interest shown us on this project.

Very truly yours,

VITRO MINERALS CORPORATION

E. B. Hotchkiss /i.s.

Eugene B. Hotchkiss
Executive Vice President

EBH/is
cc: Mr. D. R. MacLaren -
Spokane, Wash.

No reply necessary

OFFICIAL COPY

No. 157 Howard Street
Spokane, Washington 99204
May 25, 1965

Certified Mail

Memorandum

To: Chief, Fiscal Section, Office of Management Operations
Office of the Secretary, Department of the Interior
Washington, D. C.

From: Acting Field Officer, Region I

Subject: OMS-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2895

There is enclosed the original of a Report of Review dated May 7, 1965, for July 20 to October 30, 1964, inclusive, covering a gold-silver project on the Beta-Kappa claims and other properties, Fergus County, Montana.

One copy of the report has been sent to the Operator and one copy retained in the Spokane Office files.

Also enclosed are the original and two copies of the Operator's monthly voucher and progress report for the period July 20 to October 30, 1964, together with other papers for processing.

D. R. MacLaren

Enclosures

cc: OMS
CA&A
Voucher File

Director's Reading File
Resources Research Branch Chief

MLSmelser/mlc

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So. 137 Howard Street
Spokane, Washington 99204
May 25, 1965

Air Mail

Vitro Minerals Corporation
90 Park Avenue
New York, N. Y. 10016

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Rein-Kopps Claims and
Leased Properties
Fergus County, Montana
Contract 2193

Gentlemen:

There is enclosed one copy of a Report of Review, in lieu of a final audit, dated May 7, 1965, for July 20 to October 30, 1964, inclusive, covering a gold-silver project on the Rein-Kopps claims and other properties, Fergus County, Montana.

Payment of "Balance due" in the amount of $7,172.38 will be made by our Washington, D. C. office and should be received shortly.

Sincerely yours,

D. H. Maclaren
Acting Field Officer, OME
Region I

Enclosure

cc: OME
CA&A
Voucher File

Director's Reading File
Resources Research Branch Chief

MLSmelser/mls

MME Form 7
(2/63)

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MAY 13 1965

Mr. Joseph Nordquist
435 South High Street
Lewistown, Montana

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. Nordquist:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract.

This correspondence relates to the Lien or Subordination Agreement executed by you on May 21, 1964.

Sincerely yours,

George Fumich, Jr.
Acting Director

Enclosure

MMerrithew/mm (5/13/65)
cc: Director's Reading File
Region I
Docket
120M

23263

MME Form 7
(2/63)

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MAY 13 1965

Mrs. Ruth Kelly Hoffman
P.O. Box 534
Lewistown, Montana

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear Mrs. Hoffman:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract.

This correspondence relates to the Lien and Subordination Agreements executed in April 1964 by you and Larry C. Hoffman.

Sincerely yours,

George Fumich, Jr.

Acting Director

Enclosure

MMerrithew/mm (5/13/65)
cc: Director's Reading File
Region I
Docket
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MME Form 7
(2/63)

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MAY 1 3 1965

Mr. and Mrs. Granville S. Abbott
Gilt Edge Route
Lewistown, Montana

Re: GME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. and Mrs. Abbott:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract.

This correspondence relates to the Lien and Subordination Agreements executed by you on April 8, 1964.

Sincerely yours,

George Fumich, Jr.

Acting Director

Enclosure

MMerrithew/mm (5/13/65)
cc: Director's Reading File
Region I
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MME Form 7
(2/63)

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MAY 1 0 1965

Mr. and Mrs. Henry J. Pitt

Lewistown, Montana

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. and Mrs. Pitt:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract.

This correspondence relates to the Lien and Subordination Agreements executed by you on April 6, 1964.

Sincerely yours,

George Fumich, Jr.

Acting Director

Enclosure

MMerrithew/mm (5/13/65)
cc: Director's Reading File
Region I
Docket
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MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

MAY 13 1965

Memorandum

To: Acting Field Officer, Region I

From: Contract Administration and Audit Division
/s/ C. E. Fisher

Subject: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

As requested in your March 10, 1965, memorandum, a Report of Review covering the subject contract has been prepared. The original and two copies are enclosed.

If you concur in the facts stated in this Report of Review, please make the distribution authorized by Section 4 of OME Circular 2 dated February 17, 1960. As evidence of your concurrence, a copy of your letter transmitting the Operator's copy of the Report of Review should be furnished to this Division. If for any reason you do not concur, the original and both copies should be returned to this Division with your comments.

Enclosures

C. E. Fisher:fh
5/7/65

cc: Director's reading file
Docket
CA & A Division
Fiscal Section

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
March 10, 1965

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Memorandum

To: Contract Administration & Audit Division, OME

From: Acting Field Officer, Region I

Subject: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Work under the subject contract was terminated October 30, 1964, after the completion of all work under Stage I and that authorized under Stage II.

The number of units of work completed by the Operator and accepted by the Acting Field Officer as conforming to contract specifications were:

Stage I -	Soil samples	740	
	Bulldozing trenches	81.0	hours
	Trench sample assays	36	
Stage II -	Bulldozing access roads	79.5	hours
	Mobilization and demobilization	1	job
	Rotary drilling	2,231	feet
	Drill hole sample assays	434	

An acceptable final engineering and geological report was received from the Operator on March 3, 1965.

A Report of Review, in lieu of a final audit, is in order and requested. For this purpose the original copies of the final and only (July 20 - October 30, 1965) MME 60 and MME 61, together with supporting documentation are attached.

D. R. MacLaren

D. R. MacLaren

Attachments

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
March 4, 1965

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Memorandum

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

Subject: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Enclosed are two copies of an acceptable Operator's final report on the subject project. This report was received with the final voucher which includes 4 sets of maps, 11 to a set. Because of the number of maps involved, we have not asked the Operator to provide three additional sets for the final report. The maps will accompany the voucher which will be sent in for a Report of Review, in lieu of a final audit.

not received to 3/18/65

Although the soil sampling indicated several very high arsenic anomalies, exploration of these by trenching and drilling did not discover any gold and/or silver values of further interest. It is recommended that no certification of discovery be issued.

D. R. MacLaren

D. R. MacLaren

Enclosures

Vitro MINERALS CORPORATION
600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE 84115 • TELEPHONE 467-5414

February 26, 1965

Mr. D. R. MacLaren
Acting Field Officer
United States Department of the Interior
Office of Minerals Exploration
South 157 Howard Street
Spokane, Washington 99204

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and
Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. MacLaren:

FINAL REPORT

The work performed under the contract was broken into three stages, to allow the least favorable ground to be eliminated as rapidly and cheaply as possible. Only Stage I and part of Stage II was completed under the contract, as the results of this work indicated that no commercial ore bodies were present in the subject properties.

Stage I consisted of geochemical soil sampling using arsenic as an indicator mineral and dozing of certain anomalous areas. The dozer trenches were geologically mapped and sampled for gold and silver. The contract allowed for 1,425 soil samples to be taken in the areas designated on Plate 1 and 2 attached to the original contract.

Amendment No. 1, dated September 15, 1964, added the following paragraph in Exhibit A, Description of the Work, Stage I:

> "With prior government approval confirmed in writing the remaining soil samples not used at the locations described in paragraphs 1 and 2 may be used to test the possible extensions of or further define anomalies found within the soil sampling areas described above, or to further trace out or define anomalies which the operator prior to the date of the contract may have outlined or party outlined on the land in the contract."

OPERATORS FINAL REPT

In a letter dated August 27, 1964, written government approval authorized the taking of 60 soil samples on the Beta 4 and 6 claims. These samples were to check the northeastern extension of anomalies previously outlined on the land in the contract.

Prior to approval of the contract, due to the lateness of the season, Vitro Minerals Corporation, at its own expense, soil sampled the area covered by Plate 1. None of the costs of the original work have been charged to the government.

Of the soil samples authorized by Amendment 1 to the contract and by letter dated August 27, 1964, forty-eight samples were collected and analyzed. Results of this work are shown on Vitro's Maps GE-1 and GE-2.

Soil sampling on the Beta claims outlined large arsenic anomalies on Beta 4, Beta 7, Beta 13, Beta 15, Beta 17, Beta 19, Beta 20, and Beta 22, Beta 47, Beta 48, and the Prester John claim.

The anomalies generally had a northeast elongation and seemed to be associated with altered brecciated limestones and porphyry intrusive dikes and sills. Intensity of the arsenic anomalies varied from 200 ppm. to over 1,000 ppm., with the general background for the area being approximately 35 ppm. Several of the anomalies appeared to be directly related to gold mineralization.

Stage I of the contract allowed for 117 hours of D-7 Caterpillar or equivalent dozing at a maximum of $17.00 per hour. A letter dated August 27, 1964, confirmed in writing a provisional authorization to bulldoze, geologically map, and sample twelve trenches on geochemical anomalies at the following approximate locations and as shown on Base Maps GE-1 and GE-2.

	Approx. Authorized Location		Actual Location		Detail. Geol. Map	No. Samples
Pit 1	81,380 N	75,200 E	81,360 N	75,210 E	Ins. A-Mast. 1	2
Pit 2	81,530 N	76,330 E	Not trenches (1)		-	-
Pit 3	81,680 N	76,540 E	81,730 N	76,550 E	Ins. B-Mast. 1	Sam. lost
Pit 4	81,900 N	76,820 E	81,910 N	76,830 E	Ins. B-Mast. 1	2
Pit 5	83,230 N	76,050 E	83,230 N	76,010 E	Ins. C-Mast. 1&2	2
Pit 6	85,000 N	76,525 E	85,090 N	75,500 E(2)	Ins. D-Mast. 2	1
Pit 7	85,860 N	76,150 E	85,860 N	76,190 E	Ins. E-Mast. 2	5
Pit 8	86,000 N	76,660 E	86,010 N	76,620 E	Ins. E-Mast. 2	3
Pit 9	86,280 N	76,750 E	86,280 N	76,730 E	Ins. E-Mast. 2	8
Pit 10	86,360 N	76,070 E	86,380 N	76,080 E	Ins. E-Mast. 2	6
Pit 11	86,720 N	77,000 E	86,690 N	77,020 E	Ins. F-Mast. 2	3
Pit 12	87,340 N	77,460 E	87,230 N	77,490 E(3)	Ins. F-Mast. 2	5
						37

Of the 37 pit samples taken only the two samples from Pit 1 contained significant amounts of gold or silver. These samples indicated a

jasperoid bed at least six feet thick containing from 0.20 to 0.33 oz. of gold. The only other sample of possible interest was sample "L" in Pit 8. This sample was taken in the porphyry and contained 0.05 oz. gold per ton.

On the Kappa claims in the area outlined on Plate 2, 698 soil samples were taken. Only those samples enclosed in red have been charged to the government. The following six samples were lost or damaged in transit and were not analyzed: K 9 N, 25 E; K 16 N, 11 E; K 18 N, 13 E; K 2 S, 24 E; K 2 S, 19 E; and K 14 S, 19 E. Therefore, only 692 samples are reported and charged on Maps GE-5 and GE-6.

Of the original 1,425 samples authorized by the government, only the 692 samples taken on the Kappa claims and the 48 samples authorized by Amendment I and taken on the Beta claims are subject to the OME contract and reimbursement by the government.

The only strong arsenic anomaly outlined in the Kappa area or area designated on Plate 2 to be soil sampled was on the Mammoth, Mammoth Fraction, and Abbott Fee lands. This anomaly was horseshoe-shaped and appeared to be plunging to the southwest. The highest arsenic values were found on the south arm of the anomaly. This anomaly was in the area of the old Mammoth Mine. Eight channel samples were obtained from the upper and lower adits of the mine, and 17 surface channel samples were taken from bedrock exposed in the drill access road. Underground samples B, D, and F and surface sample #2912 contained significant amounts of gold. The location and values of the samples are shown on Insert G-Master #5 map.

Under Stage I, Vitro used 81 hours of D-7 Caterpillar exploring the geochemical anomalies by 11 prospect pits and 37 pit channel samples in the Beta area, and 8 underground, and 17 road-cut samples taken in the Mammoth area.

In letters dated August 27 and September 15, 1964, written authorization was received to drill six rotary holes in the Beta area on geochemical anomalies found in the area outlined by Plate 1 attached to the original contract.

In a letter dated October 20, 1964, written confirmation was received to drill two holes that had been verbally authorized on the Mammoth group of claims in the area outlined by Plate 2 attached to the original contract.

The eight holes authorized required 79.5 hours with a D-7 Caterpillar dozer for site preparation and drill road access.

Drill holes B-1 and B-1A are considered one hole. Hole B-1 was abandoned at 50 feet because of complete loss of samples at 50 feet. No effort was made to cement this hole, as the many small cavities and especially the large cavity encountered at 46-48 feet would have required the whole hole to be cemented, and this excessive amount of

cement would have diluted the samples to such an extent as to make them worthless. Also, this was our first hole, and it was hoped that the cavities represented a local condition. Hole B-1A, the offset and continuation from B-1, also encountered difficulties. On the first set-up, collared in the very hard, red, silicified limestone, movement developed on a bedding plane parting at a depth of two feet. This movement was compounded due to the extremely heavy bit loads necessary to penetrate the rock. A slab of rock 3' x 9' in the area moved under the pressure of the bit. This type of movement imposed severe stresses on the drill rig; therefore, the drill was moved approximately five feet, so as to be off the slab of rock. After drilling on the new set-up to a depth of 2½', it became apparent that the rock was harder than at the original point and that a carbide insert, extreme hard rock bit would be required. The carbide bit had to be specially ordered and was not available until September 3, 1964.

Since the carbide bit was bigger (6 1/8" vs 4 3/4") than the rock bits normally used, the 2½' previously drilled on the second B-1A set-up had to be re-drilled.

Our drilling contract was on an hourly rate plus bits and supplies and based on a best effort. The total cost for completing this hole is included in our vouchers, but the government is charged only its share of the maximum allowable average drilling cost of the holes.

Samples were collected and assayed at 5-foot intervals, except in a few cases, when no samples were recovered, or, when a mix-up occurred in collection or labelling of samples.

Hole		Total Depth	No. Assays	Remarks
B-1	50'	224'	31	See above
B-1A	174'			
B-2		260'	53	
B-3		215'	43	
B-4		287' (2)	56 (3)	
B-5		378'	77	
B-6		445'	89 (4)	
M-1		172'	35 (5)	
M-2		250' (6)	50	
TOTALS		2,231'	434	

(1) Original log incorrect. Cuttings stopped at 162.5'. Hole continued to 170'. Four feet of first two set-ups added.

(2) No cuttings last 2 feet.

(3) No samples 97½ - 105'.

(4) No samples 92½ - 97½'.

(5) See M-2 assay sheet for 170-172½' assay.

(6) Original log in error, hole bottomed at 250'.

The assay results of this drilling were very disappointing. Every 5-foot interval assayed contained from a trace to 0.005 oz. gold per ton, but only the following intervals can be considered significant and none of the intervals contained values close to commercial grade.

Hole	Interval	Oz. Au/ton	Oz. Ag./ton	Value
B-1A	0 - 5'	0.048	0.2	$1.68/ton
M-1	165 - 170'	0.035	none	$1.22/ton
M-1	170 - 172½'	0.065	none	$2.27/ton

SUMMARY

Work under Stage I of the subject contract outlined several very interesting arsenic geochemical anomalies. Previous work in the area and historically arsenic has been a good guide to gold mineralization. Pitting and rock sampling under Stage I indicated only one significant surface value of gold. It was felt that the arsenic would migrate along the brecciated openings in the limestone and might overlie the gold values. Eight rotary drill holes were authorized under Stage II of the contract to prospect for gold at depth in the areas of high arsenic surface samples. None of these holes penetrated commercial gold values, and no ore reserves were found under this exploration project. Further work under the contract is not warranted and the exploration project has been abandoned.

The following chart summarizes the total costs incurred under this contract and the government's share of maximum allowable costs.

SUMMARY OF COST ACCOUNTS
Government's Share

STAGE I

Soil sampling	740 samples @ $4.00	$2,960.00
Pit dozing	81 hours @ $16.50	1,336.50
Pit, Road-cut, and underground samples	62 assays @ $ 2.50	155.00
Total Stage I -		$4,451.50

STAGE II

Roads and site preparation D-7 tractor	79.5 hours @ $16.50	$1,311.75
Drill mobilization and demobilization (allowable)		400.00
Direct drilling costs	2,231 feet $6,308.00	
	Plus supplies 1,087.18	
	Total drilling cost- $7,395.18	
	Per Foot- - - - - - - 3.31	

Maximum allowable 2,231 feet @ $3.00/foot	$6,693.00
Incidental allowance 2,231 feet @ $0.21/foot	462.21
434 drill sample assays @ $2.50	1,085.00
Total Stage II -	$9,951.96
TOTAL COST- -	$14,403.46
GOVERNMENT'S SHARE (50%)- - - - - - - - - - - - - - - - - - - -	$ 7,201.73

Respectfully submitted,

VITRO MINERALS CORPORATION

Cecil H. Smith

CECIL H. SMITH
Exploration Manager

CHS:bas

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cert. R.R.R.
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Spec. Delivery

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MINERALS CORPORATION

600 W. 33rd SO. ST. • P O BOX 5437 • SOUTH SALT LAKE 84115 • TELEPHONE 467 5414

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March 2, 1965

Mr. Donald R. MacLaren
Acting Field Officer
United States Department of the Interior
Office of Minerals Exploration
South 157 Howard Street
Spokane, Washington 99204

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and
Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. MacLaren:

Enclosed you will find the following reports, maps, and data outlining the results and work done under the subject OME contact.

(1) Original and 3 copies - MME Form 60, OPERATOR'S MONTHLY VOUCHER, July 20 through October 30, 1964.

(2) Original and 3 copies - MME Form 61, OPERATOR'S PROGRESS REPORT, July 20 through October 30, 1964.

(3) Original and 3 copies - MONTHLY NARRATIVE REPORT, July 20 through October 30, 1964.

(4) Original and 2 copies - FINAL REPORT dated February 26, 1965.

(5) Four copies of the following maps:

Map G-1 Soil Sample Grid, Pit and Drill Hole Location - 1" = 200'
Map G-2 " " " " " " " " " "
Map G-5 " " " " " " " " " "
Map G-6 " " " " " " " " " "
Insert A-Master #1 - Detailed Pit #1, Hole B-1 (B-1A)
Insert B-Master #1 - Detailed Pit #3 and #4, Hole B-2
Insert C-Master #1 and #2 - Detailed Pit #5, Hole B-3
Insert D-Master #2 - Detailed Pit #6
Insert E-Master #2 - Detailed Pit #7, #8, #9, and #10, Hole B-4, B-5, and B-6
Insert F-Master #2 - Detailed Pit #11 and #12
Insert G-Master #5 - Detailed Mammoth trench and underground workings, Hole M-1 and M-2

(6) Four copies of the following assay data:

Dec 2.

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So. 157 Howard Street
Spokane, Washington 99204
January 18, 1965

Air Mail - Certified
Return Receipt Requested

Mr. Cecil N. Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 334 South Street
P. O. Box 15437
Salt Lake City, Utah 84115

Re: OME-6349 (Gold-Silver)
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2195

Dear Mr. Smith:

As requested during our telephone conversation, we are enclosing the following maps:

GE-1 and GE-2 received following your letter of July 31, 1964; GE-5 and GE-6; SE Overlays 1, 2, 3, 5, and 6; South Show, Southeast Anomaly, Big Six Mine, South Extension-Whiskey Gulch, and North Area-Whiskey Gulch (all received following your letter of September 10, 1964). Apparently, no copy of GE-3 has been received.

We have also received along with GE-1 and GE-2, Overlays GE-1 and GE-2 prepared on acetate. As long as we will be receiving corrected prints of these two maps, we can return them if you wish.

All other copies of the enclosed maps have been sent to OME in Washington as they were received to accompany your narrative reports. Our files are now stripped. As there are penciled notes on the enclosed which will facilitate as well as expedite processing of your voucher, kindly return them when they have served your requirement.

Sincerely yours,

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

Enclosures

CC: OME
Director's Reading File
Resources Research Branch Chief
DRMacLaren:mls

OKe(r)

M. E.
RECEIVED 14 1964

DATE		CODE
12/15	EEG	800
12/17	FMM	120 M
		120

No. 157 Howard Street
Spokane, Washington 99202

Mr. Cecil H. Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 350 South Street
P. O. Box 15437
Salt Lake City, Utah 84115

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2195

Dear Mr. Smith:

Your vouchers for August, September, and October, relative to work done under the referenced contract have been reviewed and are returned herewith for corrections and inclusion of certain supporting documents now missing. Also returned are the three copies of the October Narrative Report and your Final Report as presently there appear to be some statistical errors which you might wish to correct. Also, the Final Report was not accompanied by the assay data, maps, and/or sketches as required under Article 5(e) of the contract.

That the following may be understood more clearly, perhaps certain points regarding Exhibit A, Amendment No. 1, and Work Authorizations dated August 27, September 15, and October 20, 1964, should be explained first.

In Exhibit A: The first paragraph on page 2 requires assay certificates of all samples (i.e., for which reimbursement is claimed) and includes those for soil sample assays as well as those for trench and drill hole samples. The fifth paragraph on the same page requires written confirmation of all work approved orally for Stages II and III. Under Description of the Work the soil sample locations are indicated on Plates 1 and 2. Except for a minor change of location as proposed at the north end of your Map OE-5, Plates 1 and 2 were prepared in accordance with locations shown in red on Maps OE-1, OE-2, OE-3, OE-5, and OE-6, which we received from you June 22, 1964. All of these soil samples as indicated are authorized by the contract. Under Costs the total for Category (1), $15,400 and the average unit cost estimated at $3 per foot for drilling are maximums and cannot be exceeded.

Amendment No. 1: In addition to adding certain claims to the land covered by the contract, this amendment provides for the relocation of sample sites indicated on Plates 1 and 2 from which samples were taken prior to the date of the contract. However, the relocation is limited to "test the possible extensions of or further define anomalies found within the soil sampling areas defined above," and requires prior Government approval confirmed in writing. Thus, the samples shown as having been taken on Map 6C-1 could not be and were not authorized as they do not effect an extension of the anomalies encountered at the north end of the area defined by Plate 1.

Work Authorization, August 27, 1964: This authorizes relocation of 60 soil samples, taken before the date of the contract, to test the extension into Beta 4 and Beta 6 Claims of certain anomalies found near the southwest corner of Beta 4 Claim. It also authorizes 12 trenches at the approximate locations shown on the base maps submitted with your letter of July 31, 1964, and the drilling of 3 holes located approximately at specified coordinates.

Work Authorization, October 20, 1964: This authorized two drill holes near Tunnel W-3.

In summary, the only work authorized for OME assistance is:

1. By the basic contract 1,425 soil samples of which 727 are approximately located on Plate 1 and 698 are approximately located on Plate 2.

2. By Amendment No. 1 and Work Authorization, 60 soil samples on Beta 4 and Beta 6 Claims.

3. By Work Authorization, 12 trenches and 8 drill holes.

With the above in mind, and referring to Article 3(b) of the contract and the instructions on the back of MME Forms 60 and 61, I will now go into the difficulties encountered in processing the Progress Reports, MME Form 61, for August, September, and October.

Soil Sampling: According to your letter of July 31, 1964, the area sampled prior to the date of the contract covers that authorized under Phase I. This is a bit ambiguous as, of course, no sampling had yet been done on the Kappa Claims. However, the August Narrative Report, dated September 10, 1964, clarifies this with the statement that prior to the contract 914 samples had been taken from 0-E to 90-E which eliminates from vouchersable soil samples all those taken on the Beta Claims as originally provided by the contract. The difference between the 727 soil samples provided in this area and the 914 mentioned in the narrative is due to samples taken outside of

Work Authorization, September 15, 1964: This authorized drilling three additional holes located approximately at specified coordinates.

the authorized area. However, the following is indicated in Overlays GE-1, GE-2, and GE-3, submitted with the Narrative Report:

Map No.	Samples taken	Samples disqualified*	Samples meeting specifications
GE-1	279	93	186
GE-2	609	152	457
GE-3	62	0	62
Total	950	245	705

*Taken within 200 feet of property line, within the area sampled before application or no value was indicated at sample station shown on map.

This is academic except that the 914 samples mentioned in the narrative cannot be reconciled with the number shown on the maps.

The September 10 Narrative Report also states that GSE work officially started in the Kappa Claim area, that 459 soil samples were taken, and that the results are shown on maps GE-5 and GE-6 overlays. However, the maps indicate:

Map No.	Samples taken	Samples disqualified	Samples meeting specifications
GE-5	387	12	375
GE-6	49	0	49
Total	436	12	424

Here again, there is a discrepancy between the number of samples mentioned in the narrative and the number shown on the map. Until the assayer's reports covering the soil samples are received not even the 424 otherwise acceptable soil samples can be approved for payment.

The September Narrative, dated October 12, 1964, states that 50 of the 60 soil samples authorized by amendment were taken from Beta Claims 4 and 6 and that a total of 704 samples, 245 additional ones, were taken from the Kappa Claims. However, no revised copies of GE-6 or other maps showing the sample locations and ppm assays have been received. The only assayer's reports for soil samples support 50 samples, 48 of which were taken on Beta Claims 4 and 6 as

authorized but for which a map is lacking. Of the other 2, 1 at 10N - 12E is in the area reported as completely sampled before the contract date; the other at 5N - 12E is in an area excluded by the contract and Amendment No. 1. Thus, of a total of 754 soil samples claimed on [illegible] Form 61, only 698 were authorized and of these only 494 could be accepted for payment on the basis of the maps submitted to date and none can be accepted until the appropriate assay certificates are received.

Trenching: The following table shows the approximate locations of the 12 trenches authorized and the approximate locations of 9 trenches the August Narrative says were completed. No trenches were excavated in September or October according to the respective narrative reports.

Authorized	N	E	Executed	N	E
1	81380	75800	1	81340	76215
2	81530	76330	2	-	-
3	81680	76540	3	-	-
4	81900	76820	4	81910	76830
5	83225	76075	5	83230	76010
6	85000	75572	6	85100	75500
7	85850	76145	7	85865	76185
8	86000	76675	8	86015	76570
9	86280	76750	9	86280	76740
10	86360	76070	10	86355	76090
11	86720	77000	11	-	-
12	87335	77045	12	87235	77475

There is another trench, on the same map as the one showing as excavated No. 12, located at approximately 86685N - 77050E. Possibly, neither of these trenches are included in the nine claimed, the ninth being at the north end of No. 8, at 86420N - 76045E, but only one trench was requested and authorized at this approximate location.

The three trenches missing from all maps submitted present no problem as they were merely authorized at your request. However, there appear to be three unauthorized trenches put in for Vitro's account and as the dozer contractor's invoice makes no distinction as to which trenches are charged to [illegible] and which to the company, this claim cannot be approved on the basis of the supporting documentation.

Drilling: Whether the Government can properly contribute to the cost of both Holes B-1 and B-1A depends upon the reason for moving from the B-1 setup. Also, we would need a hole log and engineer's report and sample location. The Daily Drilling Report for August 13, 1964, says: "Hit cavity at 46-47, Lost Air, No Samples - Moved Off." Apparently, no attempt was made to cement the hole as was done in the same hole between 16 and 18 feet. The reports for September 4 and 5 show a similar difficulty in B-1A was overcome by cementing. The August 17, 1964 Daily Drilling Report shows 2 entries for Hole B-1A; 0 to 2½ feet and 0 to 2 feet; then, for September 3, it shows 0 to 65 feet for the same hole. The August 17 Daily Drilling Report in 1 place shows 4 hours charged to B-1A and 6 hours to B-3. Which one is correct? Was 2 hours actually moving time from B-1A to B-3?

There is no Daily Drilling Report to account for 0 to 93 feet in Hole B-4. Also, there is no authorized Hole B-7. If this was intended to be charged against M-1 or M-2, then there is a double charge for the first 30 feet of 1 of those holes.

Exhibit A of the contract provides that the average cost for drilling may be less (Actual Cost) but not more than $3 per foot. Under Unit Cost an Incidental Allowance of $0.21 per foot is provided. To arrive at the cost for drilling, I can consider only those Daily Drilling Reports that show actual drilling, although even these may include in the rig time some time spent cementing, redrilling, or even moving, but for the most part the notations appear to take care of this. The following table is derived from these records:

	August		September		October	
Hole	Feet	Hours	Feet	Hours	Feet	Hours
B-1	50	14.0				
B-2	260	30.5				
B-3	214	34.5				
B-4	8	2.0	184	25.0		
B-5	220	10.0	158	15.5		
B-6			445	59.5		
B-1A			170	60.0		
M-1			172	20.5		
M-2			75	7.5	175	28.0
Total	752	91.0	1,204	188.0	175	28.0

The indicated totals for August include drilling Hole B-1 which may not be approved without stronger justification for its abandonment, and do not include the first 95 feet of Hole B-4 for which support in the form of the Drilling Reports may be forthcoming. However, compare these totals with the units claimed on the MMR Form 61's. For the respective months the latter are 1,010, an indicated overage of 258 feet, 1,042, a deficit of 162.

The totals of the supported number of feet and number of hours drilling respectively are 2151 and 307. The hourly cost indicated on the Drilling Reports is $18, so that the supported cost of drilling 2,151 feet of hole is $5,526 or an average cost of $2.59 per foot.

Assaying: Assaying of trench and drill hole samples claimed on the MMR Form 61's are not adequately supported. Assayer's reports accompanying the respective August, September, and October Narrative Reports are: 27 trench and 96 drill hole assays; 0 trench and 208 drill hole assays; 0 trench and 85 drill hole assays. These assay reports do not support the 50 trench and 190 drill hole samples claimed in the August MMR-61, the 25 trench and 209 drill hole samples claimed in the September MMR-61, nor the 35 drill hole samples claimed for October; nor do they support the total of 75 trench samples and 434 drill hole samples claimed.

In view of the above, I am sure you can see the confusion that has resulted from submitting progress reports and maps unaccompanied by vouchers. If I were to attempt to forward the vouchers now without clarification of the cited discrepancies and without receiving the missing supporting data, much of your total claim would have to be deleted in one month although some of it might be restored later.

Therefore, you are requested to prepare in quadruplicate:

1. One each of Progress Report (MMR-61) and Monthly Voucher (MMR-60) covering all the authorized GMR work done from July 20, 1964.

2. Soil sample maps to show the locations and ppm of all GMR soil samples claimed.

3. Geologic maps including thereon the locations of each of the authorized drill holes that were drilled, and each of the trenches that were excavated, including sample locations and assays.

4. Copies of bulldozer invoices to support the time claimed for excavating trenches, access trails, and drill stations.

5. Copies of Daily Drilling Records to show for each hole claimed the footage drilled and the hours spent in drilling operations,

that is, excluding moving and set-up time. In this connection, it might help if you were to include one copy of your contract with T. A. Beavers Drilling.

6. A single corrected Narrative Report covering the period from July 20, 1964.

Sincerely yours,

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

Enclosures

cc: GMX(2)
Voucher file
MacLaren

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mlm

Mr. Donald R. MacLaren [illegible] March 2, 1967

Assay Data [illegible]

Rocky Mountain Geochem [illegible] 40 arsenic soil samples
Union Assay Company for [illegible] h and nine samples, and
Union Assay Company for [illegible] assays

(7) Four copies of the following [illegible]:

B-1 and B-1A
B-2
B-3
B-4
B-5
B-6
M-1
M-2

(8) Four copies of the following vouchers:

Rocky Mountain Geochemical Laboratory, Robert Tindall,
T. A. Beavers, and Union Assay Company

The enclosed maps, assay [illegible] are submitted as supporting evidence for the work and results [illegible] both in our MONTHLY NARRATIVE REPORT and FINAL REPORT.

The enclosed data is self explanatory, but we would appreciate your letting us know as soon as possible if you find any discrepancies or errors in the reports.

We are also returning the set of maps you sent us with your letter of January 18, 1965.

Very truly yours

[illegible] MINERALS CORPORATION

CECIL H. SMITH
Exploration Manager

CHS:bas

Enclosures

One

NOV 20 1964

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Exploration Operations

Subject: OMM-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Will you please advise the name and address of the driller under the subject contract.

/S/ George C. Selfridge

N.B. In re. your question as to the name and address of the driller under this contract our records show the following:

T. A. Beavers Drilling
Box 1752
Casper, Wyoming

D. R. MacLaren

OFFICIAL FILE COPY
O. M. E
RECEIVED NOV 27 1964

DATE	INITIALS	CODE
11/27	EEJ	800
12/1	[illegible]	120m
		122

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	GCS	130
11/20	Johnson	110
	[illegible]	100
11/20	[illegible]	220
		120

NOV 2 0 1964

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Exploration Operations

Subject: GME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Will you please advise the name and address of the driller under the subject contract.

George C. Selfridge
mm

MMerrithew/mm (11/20/64)
cc: Director's Reading File
Review Committee
Docket

23263

Dme (2)

OFFICIAL FILE COPY
O. M. E
RECEIVED OCT 22 1964
DATE

120 m
120

So. 157 Howard Street
Spokane, Washington 99204
October 20, 1964

Air Mail

Mr. Cecil E. Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 3rd South Street
P. O. Box 15437
Salt Lake City, Utah 84115

Re: Work Authorization
OME-6349 (Gold-Silver)
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2195

Dear Mr. Smith:

This refers to your letter of October 1, 1964, letters from Ben F. Dickerson dated September 22 and October 12, 1964. The first two letters we discussed by telephone earlier in the month. At that time I gave oral authorization to drill the two holes as requested in your letter providing we received the logs and assays of all holes completed to date. We have received the data and this letter will confirm authorization to drill the two holes which you requested near Tunnel M-5.

The assays of samples B and D from the tunnel, the arsenic anomalies to the north (if they are to mean anything as a guide to gold) and the porphyry-limestone contacts indicated in the tunnel would appear to combine all the known or suspected elements that might relate to gold deposition. If neither of these holes indicate gold values better than those found in the first six holes, something other than arsenic anomalies and porphyry-limestone contacts will have to be hypothesized before I can justify any more work with OME assistance.

I regret the necessity of withholding approval of the three holes requested by Ben until the results of the above-authorized holes become available and sincerely hope the results will be most encouraging.

Sincerely yours,

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

cc: Ben F. Dickerson
Project Geologist
Lewistown, Montana

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls
cc: OME(2)
Voucher file
MacLaren

Vitro MINERALS CORPORATION
600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE 84115 • TELEPHONE 467-5414

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O. M. E
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October 12, 1964

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

Note.

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and
Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. MacLaren:

- NARRATIVE REPORT -
September, 1964

During the month of September, the following work was completed or results received:

Your letter of August 27, authorized up to 60 soil samples on the Beta 4 and 6 claims. Fifty of these samples were collected, and the results are enclosed.

Stage I geochemical work on the Kappa claims has been completed, and all of the 704 samples have been analysed. The results, contoured in ppm arsenic, are shown on maps GE-6 and overlay.

Drill holes B-4, B-5, and B-6, located approximately as described in your letter of authorization dated September 15, have been completed. Hole logs and assays are enclosed.

Drill hole B-1A, authorized in your letter of August 27, has also been completed. Hole log and assays accompany.

Only one drill hole (B-5) penetrated any porphyry; however, no economic mineralization was encountered.

Also, enclosed in the map tube, are 3 copies of soil sampling overlay GC-1. This map shows the area of the Beta claims north of Whiskey Gulch recently included in our OME contract. As you will note, the area contains the highest soil anomalies yet encountered. Furthermore, it is evident from our aerial photographs that these anomalies occur in the same stratigraphic horizon as the large ore bodies in the Gilt Edge Mine, which lie just to the north of the mapped area.

We would like to receive authorization to excavate four dozer cuts and to drill two holes in this area, to be located as shown on the maps.

- SUMMARY -
September, 1964

Stage I	Completed	Authorized	Allowed
Soil Samples	754	754	1,425
Stage II			
Drill Hole Footages			
B-1A	162.5		
B-2	260		
B-3	215		
B-4	285		
B-5	377.5		
B-6	445		
Totals	1,745'	1,745'	4,500'

Very truly yours,

VITRO MINERALS CORPORATION

Ben F. Dickerson III

BEN F. DICKERSON III
Staff Geologist

BFD:bas

Enclosures

RECEIVED
Via Air
OCT 13 1964
Parcel Post
OME
SPOKANE, WASHINGTON

50 Samples Beta 4[illegible]6

Sample No.	Arsenic	Sample No.	Arsenic
5N 21E	60	8N 22E	25
5N 22E	160	8N 23E	25
5N 23E	80	8N 24E	35
5N 24E	105	8N 25E	70
5N 25E	30	8N 26E	25
5N-26E	40	8N 27E	160
5N 27E	25	8N 28E	45
5N 28E	15	9N 21E	25
6N 21E	130	9N 22E	25
6N 22E	120	9N 23E	20
6N 23E	100	9N 24E	20
6N 24E	50	9N 25E	25
6N 25E	35	9N 26E	20
6N 26E	60	9N 27E	35
6N 27E	50	9N 28E	125
6N 28E	15	10N 12E	15
7N 21E	45	10N 21E	45
7N 22E	40	10N 22E	30
7N 23E	85	10N 23E	25
7N 24E	55	10N 24E	160
7N 25E	30	10N 25E	60
7N 26E	150	10N 26E	35
7N 27E	25	10N 27E	25
7N 28E	10	10N 28E	40
8N 21E	40	55N 10E	110

HOLE B-1A

OME-6349
Vitro Minerals Corporation

From	To	
0	2.5'	Limestone, reddish, extremely hard, silicified. Some calcite blebs.
2.5'	7.5'	Limestone, reddish-black, hard. Mixture of above (15%) and black, hard cherty limestone.
7.5'	12.5'	Limestone, bluish-brown, hard. Rusty, limonitic fragments, 10%. Some black chert.
12.5'	20.0'	Limestone, brownish-gray, mottled, hard. Some rusty calcite.
20.0'	50.0'	Limestone, light gray, hard. Some tan chips. Rare calcite, cavity at 30.0'.
50.0'	162.5'	Limestone, brownish-gray, mottled, hard. Less than 10% calcite and rusty alteration.
162.5'		Bottom. Cavity.

Note: Cavities at:

95.0-97.5'
102.5-105.0'
105.0-107.5'
110.0-112.5'
115.0-117.5'
132.5-135.0'
137.5-140.0'

Telephone EMpire 3-3302

Hand Sample Serial 28116-31

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals
600 West 33rd South
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 21, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-1A											
0-5	0.048	0.2									
5-10	0.025	None		.088 .036							
10-15	0.015	0.2									
15-20	0.010	None									
20-25	0.010	None									
25-30	0.010	0.3									
30-35	0.005	0.1									
35-40	0.005	None									
40-45	0.005	None									
45-50	0.005	None									
50-55	0.005	None									
55-60	0.005	None									
60-62½	Trace	None									
62½-72½	0.005	None									
72½-75	0.005	None									
75-80	Trace	None									

Remarks Lewistown, Montana samples.

$20/sample

Charges $ 40.00 = 2

W. C. Wanlass

Telephone EMpire 3-3302

Hand Sample Serial 28132-46

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals
600 West 33rd South
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 21, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-1A											
80-85	0.005	None									
85-90	0.005	None									
90-95	0.005	None									
95-100	Trace	None									
100-105	0.005	None									
105-110	Trace	None									
110-115	Trace	None									
115-122½	0.005	None									
122½-125	0.005	None									
125-130	0.005	None									
130-135	0.005	None									
135-140	Trace	0.1									
140-145	Trace	0.1									
155-160	0.005	None									
160-162½	0.005	None									

Remarks Lewistown, Montana samples.

Charges $ 37.50 = 3.50

W. C. Wanlass

HOLE B-4

OME-6349
Vitro Minerals Corporation

From	To	
0	60.0'	Limestone, bluish-gray to brownish blue, hard. Five to ten per cent rusty calcite. Chert chips 17.5-22.5'.
60.0'	70.0'	Limestone, tan to brown, soft. Possible shale. Limonitic clay alteration, with some calcite.
70.0'	97.5'	Limestone, bluish-gray, hard and massive. Small cavity at 97.5'.
97.5'	250.0'	Limestone, brownish-blue, mottled. Hard. Rare calcite. Pinkish brown cast 150.0-165.0', 187.5-197.5'. Some amber calcite, 200.0-212.5'.
250.0'	262.5'	Limestone, medium gray. Hard and massive.
262.5'	285.0'	Limestone, like 97.5-250.0', with strong rusty zone at 272.5-277.5'.
285.0'		Bottom.

HOLE B-6

OME-6349
Vitro Minerals Corporation

From	To	
0	25.0'	Limestone, brownish blue-gray, hard. Locally, up to 15% rusty calcite. 22.5-25.0', 75% rusty calcite.
25.0'	55.0'	Limestone, light gray, moderately hard. Bleached and clay altered. Limonitic alteration and rusty calcite (10-20%) common.
55.0'	117.5'	Limestone, light-gray, soft. Intensely bleached. Common limonitic alteration. Rusty calcite. Some black cherty limestone 75.0-85.0'. Cavity at 93.0', no samples 92.5-97.5'.
117.5'	160.0'	Limestone, medium blue-gray, mottled. Hard. Not as altered as zone above. Ten per cent rusty calcite 125.0-127.5'. 145.0-155.0', 75-90% rusty, altered limestone.
160.0'	170.0'	Limestone, bluish-gray, mottled, hard. Little calcite.
170.0'	187.5'	Limestone, brownish-gray, soft. Intensely altered and bleached. Thirty-five per cent plus limonitic stains and fragments. Calcite common. Varved black and white chert fragments 170.0-180.0'.
187.5'	200.0'	Limestone, light blue-gray, hard. Ten per cent calcite and rusty fragments. No chert.
200.0'	207.5'	Limestone, brownish tan, hard. Some limonite and calcite.
207.5'	235.0'	Limestone, dark blue-gray, mottled. Rusty staining near small cavities.
235.0'	237.5'	Limestone, dark black, hard and cherty.
237.5'	275.0'	Limestone, red and brown, soft. Highly altered, some calcite.
275.0'	330.0'	Limestone, brownish-gray, moderately hard. Occasional blue-gray zone. Weak limonitic staining. Little calcite. Cavity 282.0', only part sample to 290.0'. 312.5-327.5', pinkish cast. Stronger iron staining.
330.0'	400.0'	Limestone (?) tan to brown, hard. Fines fizz violently, large chips only when ground. Possibly dolomite, although rock has some appearance of fine-grained rhyolite. Iron stained, 352.5-360.0' about 40% light gray limestone (?) with some pyrite or marcasite, also at 365.0-372.5', 380.0-382.5'.

From	To	
400.0'	425.0'	Limestone, light gray, hard. Rare pyrite. Some soft greenish clay, rare calcite.
425.0'	445.0'	Like 330.0-400.0', slightly browner.
445.0'		Bottom.

Telephone EMpire 3-3302

Hand Sample Serial 26407-26426

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corporation
600 West 3300 South
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 8, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-4											
0-5	0.010	None									
5-10	0.010	None									
10-15	0.010	None									
15-20	0.005	None									
20-25	0.005	None									
25-30	Trace	None									
30-35	0.005	None									
35-40	0.005	None									
40-45	0.005	None									
45-50	0.005	None									
50-55	0.005	None									
55-60	0.005	None									
60-65	0.005	None									
65-70	0.005	None									
70-75	Trace	None									
75-80	0.005	None									
80-85	0.005	None									
85-90	Trace	None									
90-95	0.005	None									
95-97½	Trace	None									

Remarks Samples from Lewistown, Montana.

Charges $ 50.00

W. C. Wanlass

Telephone EMpire 3-2202

Assay Office Serial 20A07-2G1A5

ASSAY OFFICE

UNION ASSAY OFFICE, Inc.

J. V. SAL, Jr., President
W. C. WARREN, Vice-Pres. & Treas.
LILY M. NOTTINGER, Assistant
P. O. Box 1288
Salt Lake City 10, Utah

Name Ultra Minerals Corporation
600 West 3200 South
Salt Lake City, Utah 84115

Address this box on our envelope

Sept. 11, 1971

NUMBER	Gold Oz. per Ton	Silver Oz. per Ton	Lead Per Cent	Copper Per Cent	Nickel Per Cent	Zinc Per Cent	Sulphur Per Cent	Iron Per Cent	Lime Per Cent	Per Cent	Per Cent
Hole 5-4											
0-5	0.010	None									
5-10	0.010	None									
10-15	0.010	None									
15-20	0.005	None									
20-25	0.005	None									
25-30	Trace	None									
30-35	0.005	None									
35-40	0.005	None									
40-45	0.005	None									
45-50	0.005	None									
50-55	0.005	None									
55-60	0.005	None									
60-65	0.005	None									
65-70	0.005	None									
70-75	Trace	None									
75-80	0.005	None									
80-85	0.005	None									
85-90	Trace	None									
90-95	0.005	None									
95-97½	Trace	None									

Remarks Samples from Levi Adams, Ashburne

Charges $ 50.00

9-9-6

Telephone EMpire 3-3302

Hand Sample Serial 28650-63

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Sept. 24, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
B-4											
105-110	0.010	None									
110-115	0.005	None									
115-120	0.005	None									
120-125	0.005	None									
125-130	0.010	0.1									
220-225	0.010	None									
225-230	0.005	None									
235-240	0.005	None									
240-245	0.005	None									
245-250	Trace	None									
250-255	Trace	None									
255-260	0.005	0.1									
260-265	0.005	None									
265-270	Trace	None									

Remarks

Charges $ 35.00

Glen P. Williams

Tel ne EMpire 3-3302

Hand Sample Serial 30012-33

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

ine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Oct. 1, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
B-4											
130-135	0.005	None									
135-140	Trace	None									
140-145	Trace	0.2									
145-150	Trace	None									
150-155	Trace	None									
155-160	0.005	None									
160-165	0.005	0.5									
165-170	Trace	None									
170-175	0.010	None									
175-180	Trace	None									
180-185	0.005	None									
185-190	0.005	0.1									
190-195	0.005	None									
195-200	Trace	None									
200-205	Trace	None									
205-210	Trace	None									
210-215	Trace	None									
215-220	Trace	None									
230-235	Trace	None									
270-275	0.005	None									
275-280	Trace	None									
280-285	Trace	None									

Remarks Lewistown, Montana samples.

Charges $ 55.00

W. C. Wanlass

Phone Sunset 2-2304 Island

Sample Sent 2 JOIJ2-22

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. A. JACKSON, President
W. C. WARREN, Vice-Pres. & Treas.
GUY W. HOPKINS, Sec.-Mgr.
P.O. Box 1520
Salt Lake City, Utah

Mr. Ashton Mines Co. Corp.
500 Ker. 2700 South
Salt Lake City, Utah

Assaying and Analysis of Ore and Concentrates

Oct. 1, 1941

Number	Gold Ounces per ton	Silver Ounces per ton	Lead Per Cent	Copper Per Cent	Nickel Per Cent	Zinc Per Cent	Sulphur Per Cent	Iron Per Cent	Tungsten Per Cent	Per Cent	Per Cent
B-1											
120-135	0.005	None									
135-140	Trace	None									
140-145	Trace	0.2									
145-150	Trace	None									
150-155	Trace	None									
155-160	0.005	None									
160-165	0.005	0.5									
165-170	Trace	None									
170-175	0.010	None									
175-180	Trace	None									
180-185	0.005	None									
185-190	0.005	0.1									
190-195	0.005	None									
195-200	Trace	None									
200-205	Trace	None									
205-210	Trace	None									
210-215	Trace	None									
215-220	Trace	None									
220-225	Trace	None									
225-275	0.005	None									
275-280	Trace	None									
280-285	Trace	None									

Samples: Newspapers, Bottles, Sacks, Etc.

Charges $ 22.00

HOLE B-5

OME-6349
Vitro Minerals Corporation

From	To	
0	37.5'	Limestone, bluish-gray, hard. Fifty per cent reddish rusty calcite and somewhat clayey limestone. Weakly silicified. 25.0-35.0', 30% brownish clayey limestone.
37.5'	72.5'	Porphyry, brownish tan, soft. Altered clay and rusty feldspar. Occasional pink-white clay. 55.0-60.0', 15% bluish-gray calcitic limestone. 65.0-72.5', limonitic staining very intense.
72.5'	90.0'	Mixture, porphyry and light gray altered limestone (70 - 30). Limestone silicified, feldspar kaolinized.
90.0'	97.5'	Porphyry, light brown, soft and clayey.
97.5'	107.5'	Mixture, porphyry and white silicified limestone (50 - 50). Some limonite.
107.5'	110.0'	As above, with bluer mottled limestone.
110.0'	220.0'	Porphyry (95%) brownish-pink, soft and clayey. Limonitic staining common. Dendritic manganese stains prominent. Trace pale purple CaF_2 (?) 160.0-165.0'. 200.0-220.0' very soft and clayey, limonitic staining strong.
220.0'	227.5'	Limestone, blue-gray, moderately hard. Rusty and silicified, weakly brecciated. Scattered chert fragments.
227.5'	240.0'	Mixture as above with brown porphyry. Strong limonitic staining mottled limestone. Samples vary between 80 - 20 limestone - porphyry to 20 - 80 limestone porphyry.
240.0'	277.5'	Limestone, bluish-gray, mottled, hard. Ten to fifteen per cent brown porphyry. Limestone highly altered, up to 20% calcite locally. Minor black chert.
277.5'	300.0'	Mixture, predominantly brown porphyry, soft and clayey. Limestone, blue-gray, rusty, and cherty, up to 25% locally.
300.0'	377.5'	Limestone, blue-gray, mottled. Hard. Limonitic stains common. Ten to fifteen per cent soft brown limey clay. Some chert and calcite.
377.5'		Bottom. Cavity, water.

Telephone EMpire 3-3302

Hand Sample Serial 26427-26453

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 8, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-5											
0-5	Trace	None									
5-10	Trace	None									
10-15	0.005	None									
15-20	0.005	None									
20-25	0.010	None									
25-30	0.005	None									
30-35	0.005	None									
35-40	0.005	None									
40-45	0.005	None									
45-50	0.005	None									
50-55	Trace	None									
55-60	0.005	None									
60-65	Trace	None									
65-70	Trace	None									
70-75	Trace	None									
75-80	Trace	None									
80-85	Trace	None									
85-90	0.005	None									
90-95	Trace	None									
95-100	0.005	None									
100-105	Trace	0.1									
105-110	Trace	None									
110-115	0.015	None									
115-120	Trace	None									
120-125	Trace	None									
125-130	Trace	None									
130-135	0.010	None									

Remarks Samples from Lewistown, Montana.

Charges $ 67.50

W. C. Wanlass

Telephone Bryan 1-8301

Date

Sample Sent

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. A. SAGER, President
F. C. WATKINS, Vice-Pres. & Treas.
ELDON RICHARDS, Secretary
P.O. Box 1849
Salt Lake City 10, Utah

Assay No.

Mail to: Mr. [illegible]
[illegible] 23rd South
Salt Lake City, Utah

Assaying the Gold or Silver Bullion

NUMBER	GOLD Ounces per Ton	SILVER Ounces per Ton	LEAD %	COPPER %	NICKEL %	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
[illegible]											
[illegible]	[illegible]	[illegible]									
[illegible]	[illegible]	[illegible]									
[illegible]	[illegible]	[illegible]

Telephone EMpire 3-3302

Hand Sample Serial 26454-26480

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 W. 3300 S.
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 8, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-5											
135-140	Trace	None									
140-145	Trace	None									
145-150	Trace	None									
150-155	Trace	None									
155-160	Trace	None									
160-165	0.005	None									
165-170	Trace	None									
170-175	Trace	0.1									
175-180	Trace	None									
180-185	Trace	None									
185-190	0.005	None									
190-195	Trace	None									
195-200	Trace	None									
200-205	0.005	None									
205-210	0.005	None									
210-215	Trace	None									
215-220	Trace	None									
220-225	0.005	None									
225-230	0.005	None									
230-235	Trace	None									
235-240	0.005	None									
240-245	0.005	None									
245-250	0.005	None									
250-255	0.005	None									
250-255 (Dup)	0.005	None									
255-260	Trace	None									
260-265	0.005	None									

Remarks Lewistown, Montana samples.

Charges $ 67.50

W. C. Wanlass

Telephone EMpire 3-4202

Land

Sample Sent [illegible]

7

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WARRASS, Vice-Pres. & Treas.
LILLY M. HOTTINGER, Secretary
P. O. Box 1524
Salt Lake City, Utah

Name [illegible]
[illegible] 2000 [illegible]
Salt Lake City, Utah 8-17-65

RESULTS PER TON OF 2000 POUNDS

Sample of Rock

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	U.S. Water Oz.	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole 3-2											
135-140	Trace	None									
140-145	Trace	None									
145-150	Trace	None									
150-155	Trace	None									
155-160	Trace	None									
160-165	0.005	None									
165-170	None	None									
170-175	Trace	2.1									
175-180	Trace	None									
180-185	Trace	None									
185-190	0.005	None									
190-195	Trace	None									
195-200	Trace	None									
200-205	0.01	None									
205-210	0.005	None									
210-215	None	None									
215-220	None	None									
220-225	0.005	None									
225-230	0.005	None									
230-235	None	None									
235-240	0.005	None									
240-245	0.005	None									
245-250	0.005	None									
250-255	0.005	None									
255-260 (Cont)	0.005	None									
260-265	None	None									
265-270	0.005	None									

Remarks [illegible]

Charges $[illegible]

9-9-64

Telephone EMpire 3-3302

Hand Sample Serial 26481-26503

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 W. 3300 S.
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Sept. 8, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-5											
265-270	Trace	None									
270-275	Trace	None									
275-280	Trace	None									
280-285	Trace	None									
285-290	0.005	None									
290-295	0.005	None									
295-300	Trace	None									
300-305	Trace	None									
305-310	Trace	None									
310-315	Trace	None									
315-320	Trace	None									
320-325	Trace	None									
325-330	Trace	None									
330-335	0.005	None									
335-340	Trace	None									
340-345	Trace	None									
345-350	0.005	None									
350-355	Trace	None									
355-360	0.005	None									
360-365	0.005	None									
365-370	0.005	None									
370-375	0.005	None									
375-377½	0.005	None									

Remarks Samples from Lewistown, Montana.

Charges $ 57.50

W. C. Wanlass

9-9-64

Telephone 363-3302

Sample Serial 28147-52

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President
L. G. HALL, Vice President
G. P. WILLIAMS, Treasurer
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Sept. 21, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-6											
0-5	Trace	None									
5-10	Trace	0.1									
10-15	Trace	None									
15-20	Trace	None									
20-25	Trace	0.1									
25-30	0.005	None									

Remarks Lewistown, Montana samples.

Charges $ 15.00

W. C. Wanlass

Telephone EMpire 3-3302

Hand Sample Serial 28664-90

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Sept. 24, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
B-6											
30-35	Trace	None									
35-40	Trace	None									
40-45	Trace	None									
45-50	Trace	None									
50-55	Trace	None									
55-60	Trace	0.1									
60-65	0.005	None									
65-70	Trace	0.2									
70-75	Trace	None									
75-80	Trace	None									
80-85	0.005	None									
85-90	Trace	None									
90-92.5	Trace	None									
97.5-100	Trace	None									
100-105	Trace	None									
105-110	Trace	None									
110-115	Trace	None									
115-120	Trace	None									
120-125	Trace	None									
125-130	Trace	None									
130-135	Trace	None									
135-140	Trace	None									
140-145	Trace	None									
145-150	Trace	None									
150-155	Trace	None									
155-160	Trace	None									
160-165	Trace	None									

Remarks

Charges $ 67.50

Glen P. Williams

Telephone EMpire 3-3302

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Hand
Sample Serial

Mine

RESULTS PER TON OF 2000 POUNDS

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet or Dry	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent

Remarks

Charge $

Telephone EMpire 3-3302

Hand Sample Serial 28691-28717

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Sept. 24, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
B-6											
165-170	Trace	None									
170-175	Trace	None									
175-180	Trace	None									
180-185	Trace	None									
185-190	0.005	None									
190-195	0.005	None									
195-200	0.005	None									
200-205	Trace	None									
205-210	Trace	None									
210-215	0.005	None									
215-220	Trace	None									
220-225	Trace	None									
225-230	0.005	None									
230-235	Trace	None									
235-240	0.010	0.1									
240-245	Trace	None									
245-250	Trace	0.1									
250-255	Trace	None									
255-260	Trace	0.1									
260-265	Trace	None									
265-270	Trace	None									
270-275	Trace	None									
275-280	Trace	None									
280-285	Trace	None									
285-290	Trace	None									
290-295	Trace	None									
295-300	Trace	None									

Remarks

Charges $ 67.50

Glen P. Williams

Telephone Kolob 3-6302

Sample Series

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. N. SADLER, President
W. C. WARNOCK, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1828
Salt Lake City 10, Utah

Mine

Address

Sample from

Samples per ton of 2000 pounds

NUMBER	GOLD Ounces per Ton	SILVER Ounces per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
100-105	None	None									
105-110	None	None									
110-115	None	None									
115-120	None	None									
120-125	None	None									
125-130	None	None									
130-135	None	None									
135-140	None	None									
140-145	None	None									
145-150	None	None									
150-155	None	None									
155-160	None	None									
160-165	None	None									
165-170	None	None									
170-175	None	None									
175-180	None	None									
180-185	None	None									
185-190	None	None									
190-195	None	None									
195-200	None	None									
200-205	None	None									
205-210	None	None									
210-215	None	None									
215-220	None	None									
220-225	None	None									
225-230	None	None									
230-235	None	None									
235-240	None	None									
240-245	None	None									
245-250	None	None									
250-255	None	None									
255-260	None	None									
260-265	None	None									
265-270	None	None									
270-275	None	None									
275-280	None	None									
280-285	None	None									
285-290	None	None									
290-295	None	None									
295-300	None	None									

Remarks

Chemist

Telephone EMpire 3-3302

Hand
Sample Serial 28718-28746

ASSAY REPORT
UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Sept. 24, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
B-6											
300-305	Trace	None									
305-310	0.005	0.1									
310-315	Trace	None									
315-320	Trace	None									
320-325	Trace	None									
325-330	Trace	None									
330-335	Trace	None									
335-340	Trace	None									
340-345	Trace	None									
345-350	Trace	None									
350-355	Trace	None									
355-360-	Trace	None									
360-365	Trace	None									
365-370	Trace	None									
370-375	Trace	None									
375-380	Trace	None									
380-385	Trace	None									
385-390	Trace	0.1									
390-395	Trace	0.1									
395-400	Trace	None									
400-405	Trace	None									
405-410	Trace	None									
410-415	Trace	None									
415-420	Trace	None									
420-425	Trace	None									
425-430	Trace	None									
430-435	Trace	None									
435-440	0.005	None									
440-445	Trace	None									

Remarks

Charges $ 72.50

Glen P. Williams

ASSAY REPORT

UTAH ASSAY OFFICE, INC.

SAMPLING, Prepaid
W. S. WALKER, Mgr. & Treas.
DEVIN MOTHERAL, Secretary
P. O. Box 1226
Salt Lake City 10, Utah

Mine _____ Sampled _____ Date _____

Sample Sent _____ Received _____

Assayer _____ Date _____

Assayer's Report _____

Marks	Gold Oz. per Ton	Silver Oz. per Ton	Lead Per Cent	Copper Per Cent	Arsenic Per Cent	Zinc Per Cent	Sulphur Per Cent	Iron Per Cent	Lime Per Cent	Per Cent	Per Cent

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
October 9, 1964

OFFICIAL FILE COPY
O M. E
RECEIVED: OCT 12 1964
DATE | [redacted] | CODE
10/12 | [redacted] | 100
10/13 | on line | 120

Memorandum

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

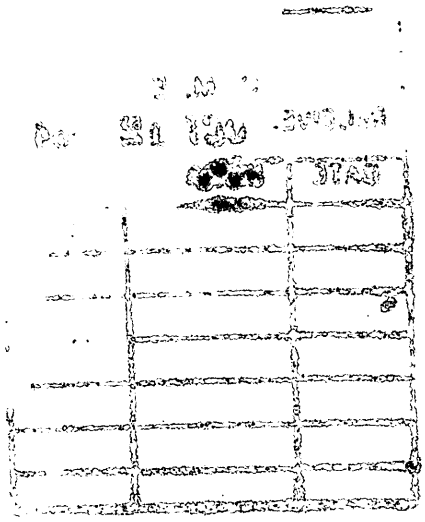
Subject: Interim Inspection Report
OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

The project was discussed with Ben F. Dickerson, III, Geologist-Supervisor, and Robert C. Barnes, his assistant, also a geologist, the afternoon of September 28, 1964, in Lewistown, Montana.

The soil sampling, trenching, and drill holes authorized to date have been completed. The logs and sample assays of the last three holes were not then available but should be in the mail by the end of this week.

Dickerson's letter of September 22, 1964, of which a copy with accompanying map is enclosed, arrived after I had left for the field. However, he told me of the request. I advised him that until we received the logs and assays relating to holes 1, 4, 5, and 6, I could not authorize any more drilling. Up to this time, the available data seemed to indicate that, although arsenic is associated with the gold, there is little, if any, evidence that gold is necessarily associated with the arsenic anomalies. He pointed out that Texas Gulf did not have any luck until they had drilled the 52d anomaly, to which I said that OME could not continue to support that much unsuccessful drilling and that in any case, this project is based on the assumption that the gold was so related to arsenic that high anomalies of the latter would serve as guides to locating trenches and favorable loci for drilling.

The only 2 holes for which data has been submitted are hole B-2 drilled in a 200 ppm plus anomaly and hole B-3 in a 300 ppm plus anomaly. Moreover, the latter hole is within 200 feet of an area in which ore has been taken from several shallow trenches. Except for a streak, 70 feet thick in hole 3 in which 15 assays ranged from 0.010 to 0.025 ounce gold per ton and averaged 0.012 ounce gold per ton, all samples from both holes were either trace or 0.005 ounce per ton. This could reasonably be considered background. The highest gold assay is thus only 5 times background and the average of the 70-foot zone is only 2.4 times background.



Also enclosed is a copy of a letter dated October 1, 1964, with map and sections in which Cecil Smith, exploration manager for the operating company, proposes two drill holes. Referring to his map, 2 of the 4 sample assays from tunnel M5 are higher in gold than any others except for 1 trench sample in the South Show area. One assay of 0.345 ounce gold per ton represents a sample from thin shaley beds underlain by brecciated limestone within a distance of about 4 to 10 feet from a porphyry contact; the other assay of 0.11 ounce gold per ton represents a sample cut across a porphyry dike (sill?) and includes limestone from both walls. The other four assays are of samples taken in limestones of various sorts in tunnel M7. Although they range in grade only from 0.01 to 0.07 ounce gold per ton, they show the presence of gold from 2 to 14 times background. The two workings are just southwesterly of an arsenic anomalous area and an outcropping area of porphyry.

I have discussed the two requests with Smith by telephone and told him that, because of the combination of a known gold-bearing area and an arsenic anomaly plus the presence of the porphyry dike (sill?), I would provisionally authorize the two holes he has proposed but that the authorization was dependent upon receiving the logs and assays of holes 1, 4, 5, and 6 and that written confirmation would be withheld until their receipt. I also told him that the hole requested by Dickerson could not be authorized at this time but could be reconsidered in the light of some definitive characteristic that might result from the two holes he has proposed.

D R MacLaren

D. R. MacLaren

Enclosures
Distribution:
OME(Orig.&1)
Docket
MacLaren

Also enclosed is a copy of a letter dated October 1, 1954, with map and sections in which Dutch Smith, exploration manager for the operating company, proposes two drill holes. Referring to his map, X of the 1 sample assays from tunnel 75 are higher in gold than any others except for 1 assay sample in the South Show area. One assay, 0.345 ounce gold per ton represents a sample from Smith's drill hole underlain by brecciated limestone within a distance of about - to 10 feet from a porphyry contact; the other assay of 0.[illegible] ounce gold per ton represents a sample cut across a porphyry dike (dike) and includes limestone from both walls. The other four assays are of samples taken in limestones of various sorts in tunnel M. Although they range in grade only from 0.01 to 0.07 ounce gold per ton, they show the presence of gold from 2 to 7[illegible] times background. The two workings are just southwesterly of an erratic mineralized area and on outcropping area of porphyry.

I have discussed the two requests with Smith by telephone and said this was, because of the combination of a known gold-bearing area and an erratic assay plus the presence of the porphyry dike (dike), I would provisionally authorize the two holes he has proposed but that the authorization was dependent upon receiving the logs and assays of holes 1, 2, and 6 and that further certification would be withheld until their receipt. I also told him that the last requested by Dickenson could not be authorized at this time but would be considered in the light of some definitive characteristic that might result from the two holes he has proposed.

D. K. Macfarlane

Enclosures
Distribution:
OMC(Orig.&1)
Hooper
Macfarlane

Done

October 1, 1964

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

Re: Work Authorization
OME-6349 (Gold-Silver)
Beta-Kappa claims & leased properties
Fergus County, Montana
Contract 2193

Dear Mr. MacLaren:

We request authorization to drill under Stage II of our Contract the two holes shown on the enclosed maps and cross sections. Previously, you have been sent geologic and arsenic overlay maps covering the Mammoth and Southern Kappa claims.

The two proposed holes, located as shown on the maps, will have three objectives:

1) They will penetrate the only arsenic anomaly in the Kappa area which can demonstrably be shown to be related to gold mineralization.

2) These holes will intersect the up and down dip projection of known mineralization.

3) They will probably intersect a porphyry body which should give us an opportunity to cut the favorable zone below such an intrusive.

The amendment to the contract will be signed as soon as Mr. Hotchkiss returns from Alaska. Upon signing of the amendment, we would like to trench, sample and drill two holes on the strong arsenic anomalies found north of Whisky Gulch. If the results of our drilling still show

only trace to 0.01 ounce gold material, it is felt the exploration project should be abandoned. On our own account, we plan to drill several short holes in areas not covered by arsenic anomalies to determine if the arsenic is directly related to the low-grade gold encountered in our drilling.

Very truly yours,

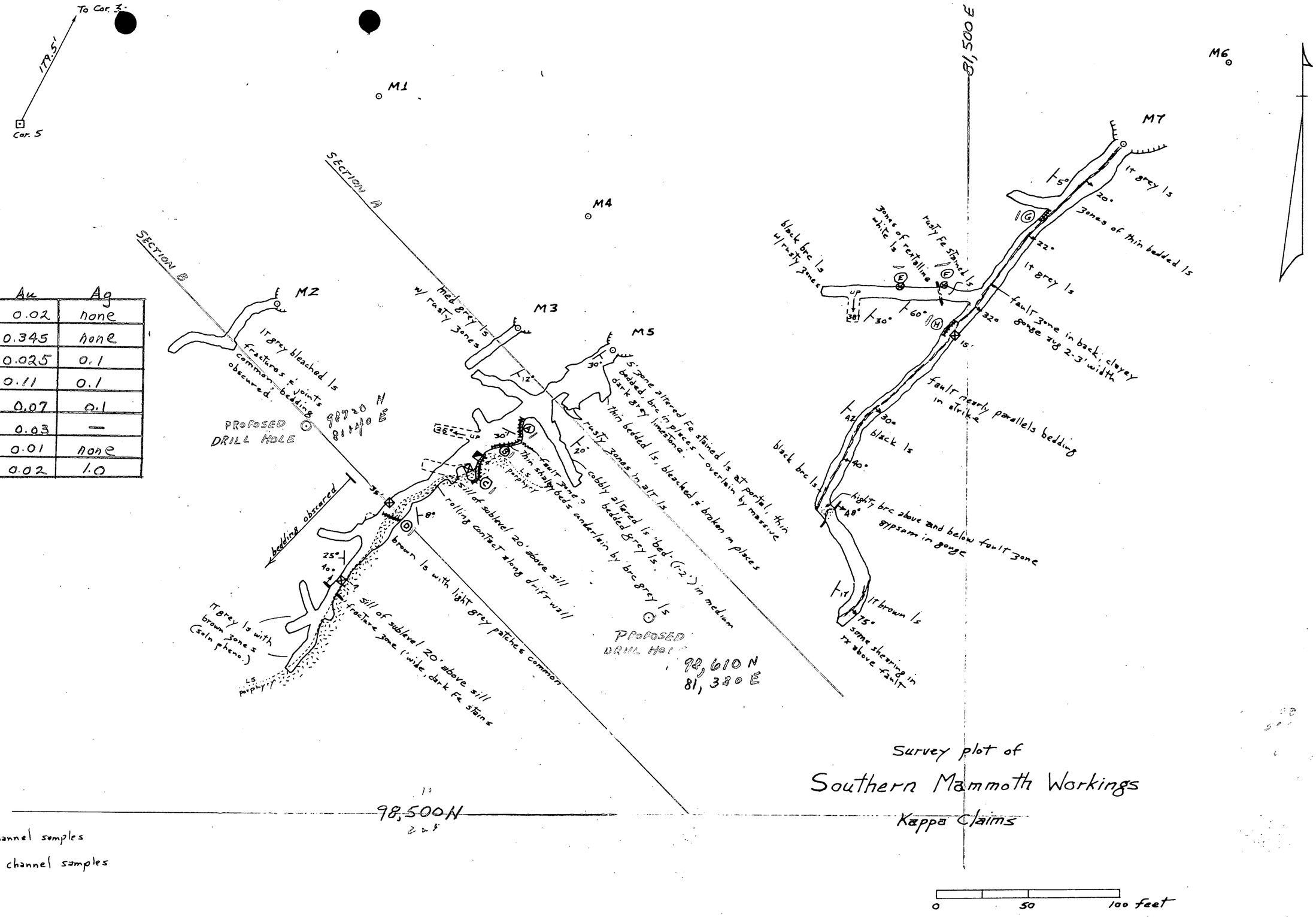
VITRO MINERALS CORPORATION

C. H. Smith by RDR

C. H. Smith
Exploration Manager

CHS:dw
Encls.

RECEIVED
OCT 2 1964
OME
SPOKANE, WASHINGTON



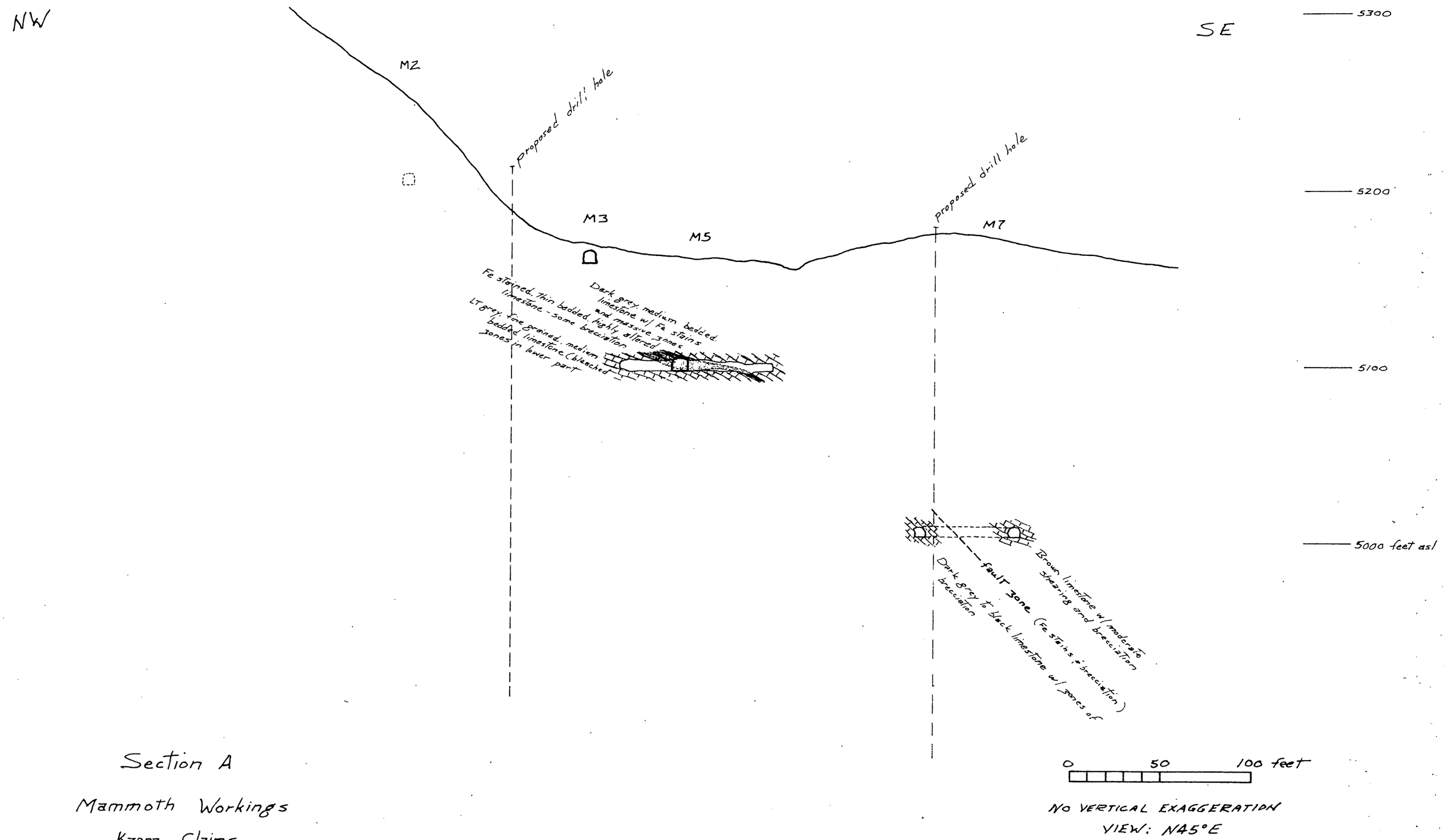
No.	Ft	Au	Ag
A	14'h	0.02	none
B	14'h	0.345	none
C	16'h	0.025	0.1
D	14'v	0.11	0.1
E	7'v.	0.07	0.1
F	6'v.	0.03	—
G	9'h	0.01	none
H	14'h	0.02	1.0

⊗ vertical channel samples

horizontal channel samples

Additional Geology plotted on detailed mine maps

TCB - 9/12/64

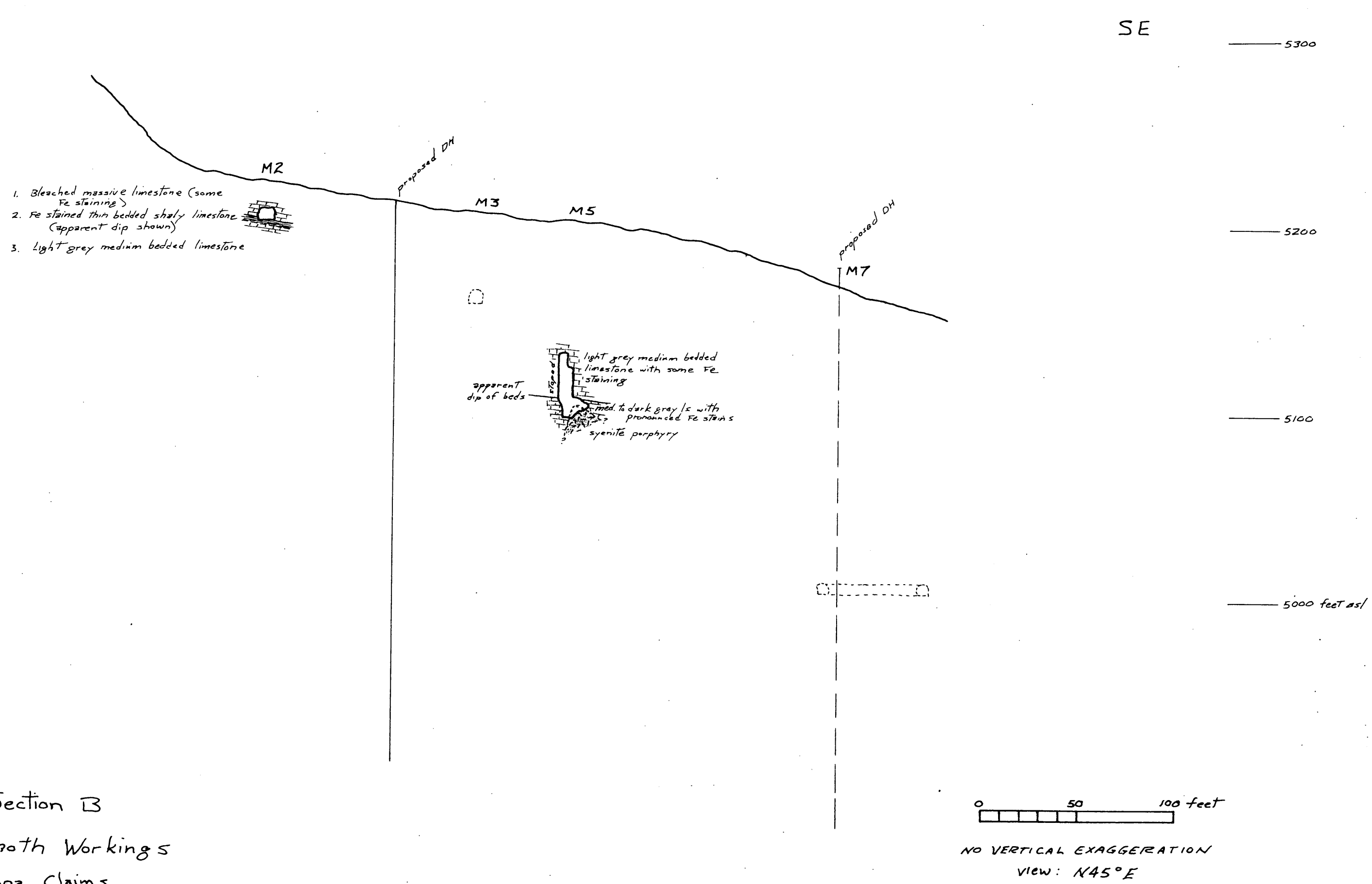


Section A

Mammoth Workings

Kappa Claims

Vitro - RCB 9/24/64



Section B

Mammoth Workings

Kappa Claims

Vitro-RCB 9/24/64

September 22, 1964

Mr. D. R. MacLaren
Acting Field Officer
United States Department of the Interior
Office of Minerals Exploration
South 157 Howard Street
Spokane, Washington 99204

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and
Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. MacLaren:

Enclosed you will find three copies of a map showing the geology and sampling results obtained from a trench at soil sample coordinates 43N-26E, in an area of high soil arsenic values. This trench is the last of our authorized dozer cuts.

Despite the apparent low gold values, we should like an authorization to drill Hole B-7 at approximately 87,238N and 77,400E. This trench has exposed the most intense brecciation and alteration of the limestone that we have yet encountered. In addition, the beds may be somewhat domed, and there are numerous old workings in the general vicinity.

If this drill hole does not encounter more substantial mineralization than the others, we will agree that a reappraisal of the method of drill siting may be in order. We are developing some ideas on this subject and will be prepared to discuss them with you on the 28th.

In your letter of September 15th, you mention a "minimum ore grade of 0.5 oz. gold per ton." "Ore," is of course, a matter of several varying economic and physical factors and will fluctuate widely from place to place. However, it is thought that 0.5 oz. Au/ton is not a realistic figure for the Judith Mountain area, where fairly large bodies of 0.20 oz. Au/ton would most probably be commercial.

We should like to call your attention to the following references:

Argall, G. O., Jr., Bethlehem's Target: Copper Production at 15¢ Per Pound, METAL MINING AND PROCESSING, March 1964, p. 29.
(The gross value of this company's copper ore is $6.39 (U.S.) per ton, of which they recover approximately 95%, or $6.07 per ton, equivalent to 0.17 oz. Au/ton).

Chamberlain, C. C., Mining Methods with Emphasis on Cost Records at Getchell Mine, MINING CONGRESS JOURNAL, October, 1963, p. 93.
(This company is mining 0.24 oz. Au/ton).

Gold Rush in Nevada's Lynn-Maggie Districts; Newmont Plans Mill, MINING WORLD, December, 1963, p. 15.
(Newmont's announced grade of ore is 0.19 oz. Au/ton).

We certainly cannot place ourselves in the forefront of modern mining experts, but we are attempting to show that under certain conditions, a minimum mining grade may be far below 0.5 oz. Au/ton; and that the picture so far obtained, while far short of being economic, is slightly better than it appears and could change rapidly with one drill hole.

Sincerely yours,

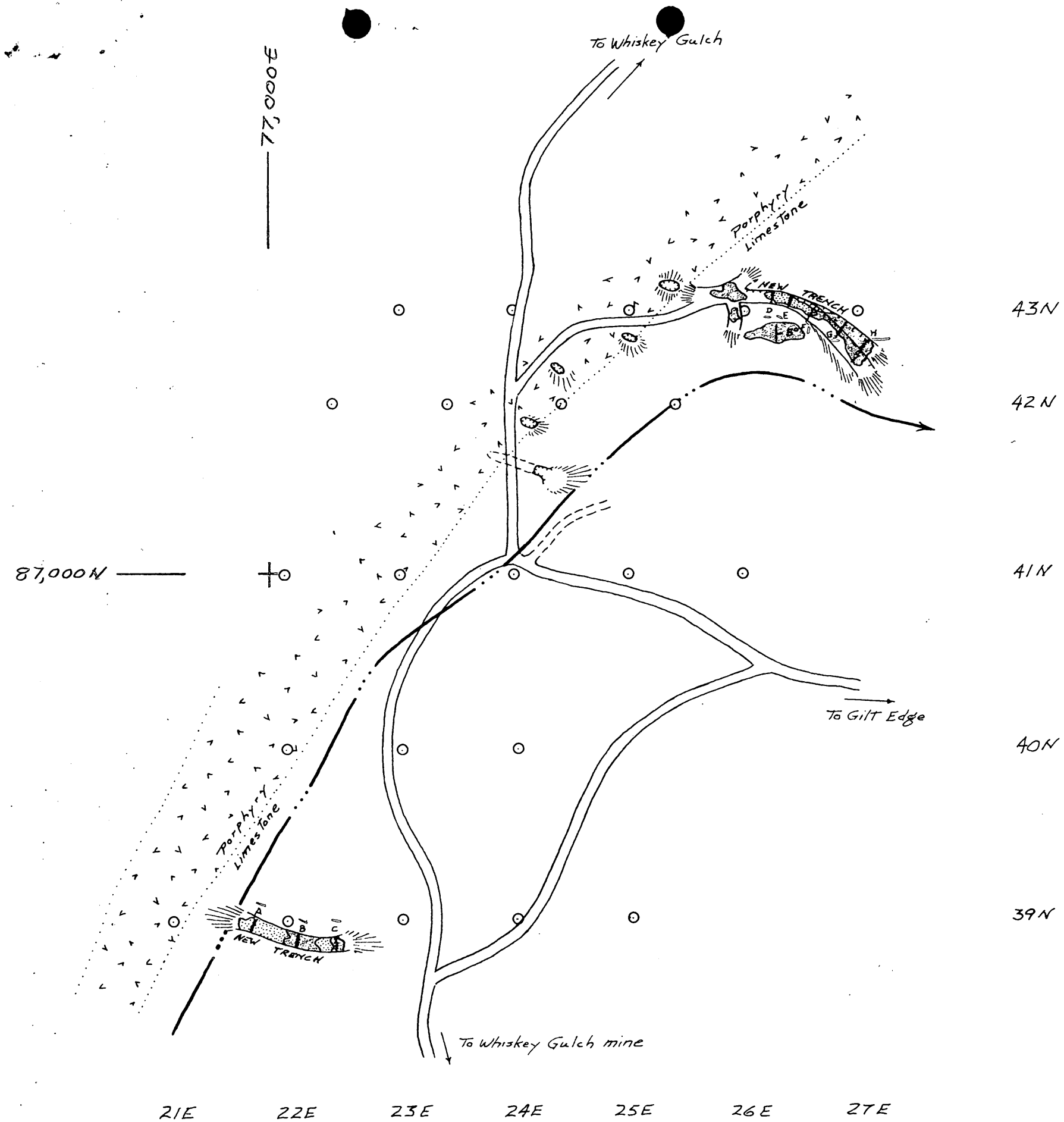
VITRO MINERALS CORPORATION

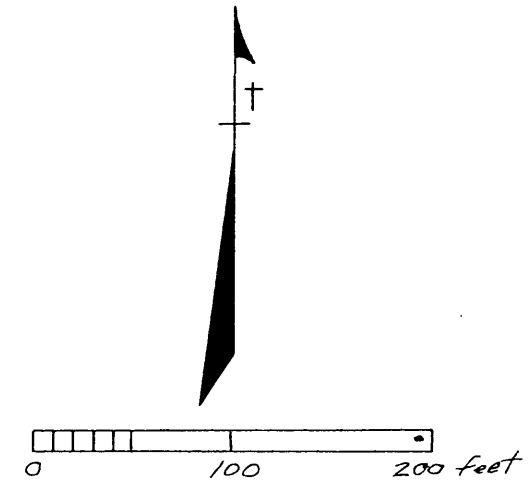
BEN F. DICKERSON III
Staff Geologist

BFD:bas

Enclosures

RECEIVED
Via
SEP 24 1964
Air Mail
OME
SPOKANE, WASHINGTON





EXPLANATION

Madison Limestone — dark grey, fine grained with some crystalline zones. Medium bedded.

Syenite porphyry — weathered, light brown to yellow, rhyolitic zones.

Altered Madison limestone — Fe stains common (crimson & ochre predominate), some intensely brecciated zones (rubble breccias noted) Calcite fracture fillings.

outcrop

prospect

adit with open cut

dump

road (2 wheel drive)

soil sampling station

attitude of rocks

contact (concealed)

channel sample

ASSAYS			
A	12'h 0.005 oz. Au	E	10'h .005 Au —
B	10'h Trace Au	F	12'h Tr —
C	10'h Trace Au	G	11'h Tr —
D	10'h Tr Au 0.1	H	15'h Tr —

No silver reported unless indicated.

Vitro Minerals Corporation — RCB

Bye
8/12

MINERALS CORPORATION

90 PARK AVENUE · NEW YORK, N. Y. 10016 · MURRAY HILL 2-8700

October 2, 1964

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 7 1964

DATE		CODE
10/1	GEF	800
10/7	on leave	120
		~~120~~

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

RE: OME - 6349
Contract 2193

Dear Mr. MacLaren:

In reply to your letter of September [illegible] enclosed please find 4 copies of the Amendment No. [illegible] contract, properly executed. We have kept the Operator's copy.

Very truly yours,

VITRO MINERALS CORPORATION

/s/ Eugene B. Hotchkiss

Eugene B. Hotchkiss
Executive Vice President

EBH/is
enc.
cc: Mr. C. H. Smith

MME FORM 6 REFERENCE SLIP

REV. 9 OFFICE OF MINERALS EXPLORATION

TO:		DATE	INITIALS
1.	Chief, Div. of Exploration Operations	10/5/64	
2.			
3.			
4.			
5.	D. R. MacLaren		

FROM: Acting Fld. Officer, Reg. I

OFFICIAL FILE COPY

O N E

RECEIVED OCT 7 1964

10/6 on leave 120 MC

120

FOR: Check items for action desired

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

REMARKS: OME-6349 (Gold-Silver)
Vitro Minerals Corp.
Beta-Kappa Claims & Leased Properties
Fergus County, Montana
Contract 2193

Transmittal of Government, Audit, and Fiscal Section's copies of Amendment No. 1.

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

OFFICIAL FILE COPY O. M. E RECEIVED OCT 8 1964		
DATE	INITIALS	CODE
		120

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204

Date: 9/28/64

Memorandum

To: Compliance Officer

From: Acting Field Officer, Region I

Subject: Equal Employment Opportunity Under Government Contracts
OML-6349 (Gold-Silver)
Operator: **Vitro Minerals Corp.**
Name of Property: **Beta-Kappa Claims & Leased Properties**
County-State: **Fergus County, Montana**
Contract No. 2193

I have obtained the following information from my visit to the operating project under the subject contract:

1. Number of all employees — 3
2. Number of women employees — 0
3. Number of Negro employees — 0
4. Number of other minority groups (Indian, Latin, Oriental, etc.) — 0
5. Was employment through a union? — **No**
6. Distance to the closest union headquarters — **8 miles**
7. Are the discrimination posters prominently displayed? — **Yes**
8. If employment was through a union, was the union furnished Standard Form 38? — --
9. If employment was not through a union, in what manner was employment made? — **Montana State ~~Employment Office~~**
10. Acts of intimidation matter has been discussed with — **Yes**

Vitro MINERALS CORPORATION
600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE 84115 • TELEPHONE 467-5414

OFFICIAL FILE COPY
O. M. E
RECEIVED SEP 28 1964

DATE	INITIALS	CODE
9/28	ama	8
9/28	on leave	120
		120

September 10, 1964

Mr. Donald R. MacLaren
Acting Field Officer
Office of Mineral Exploration
Region I
South 157 Howard Street
Spokane, Washington 99204

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and
Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. MacLaren:

- NARRATIVE REPORT -

Exploration Contract 2193 was authorized July 20, 1964, between the United States of America, acting through the Department of the Interior, Office of Mineral Exploration and Vitro Minerals Corporation.

Work under the contract was started immediately on that date with the objective of exploring by soil sampling, bulldozing trenches, and rotary drilling for gold and silver-bearing ore bodies occurring as breccia-filled fissure veins or as replacement deposits in limestone or porphyry at the contact or adjacent thereto between Madison limestone of Mississippian age and syenite porphyry of Eocene age.

Stage I work authorized the establishment of a base line not less than 200 feet north of and parallel to the south side lines of Beta 1 and Beta 2 claims. At intervals of 150 feet northerly, 50 parallel auxiliary base lines were to be established and along each base line soil sampling stations were to be established at 100-foot intervals.

Prior to the authorization of the OME Contract and at no cost to the Government, Vitro completed arsenic sample coverage over this area. A total of 914 samples were taken and extended from 0N to 50N on the geochemical grid. The results and an interpretation of the geochemical soil sampling are shown on maps (1" = 200') GE-1, GE-2, and GE-3, which I am sending under separate cover.

Stage I authorized the establishment of a base line about 50 feet north of and parallel to the north side lines of Kappa 5 and Kappa 6 claims.

MME FORM 6
REV. 2-5

REFERENCE SLIP
OFFICE OF MINERALS EXPLORATION

	DATE	INITIALS
TO: Chief, Div. of Exploration Operations	9/15/64	
1. Re: OME-6349 (Gold-Silver) Vitro Minerals Corp.		
2. Beta-Kappa Claims and Leased Properties		
3. Fergus County, Montana Contract 2193		
4. D. R. MacLaren		
5. D. R. MacLaren		
FROM: Acting Fld. Offr., Reg. I		

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: Transmittal of Operator's narrative, maps, drill logs, and assays for period--July 20 - Sept. 10, 1964. No reimbursement is claimed for the work at this time.

Roll of maps accomp. in Mr. Selfridge's closet.

M56300-62

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

At intervals of 150 feet, 21 parallel auxiliary base lines to the north and 22 base lines to the south were established. Soil sampling stations at 100-foot intervals were established along each base line.

Work under this phase of the contract was begun after the issuance of the OME Exploration Contract. A total of 459 samples were taken and extended from ON (base line) to 22S and from ON (base line) to 5N. The contract authorized 704 samples in the Kappa area, but assay results have not yet been received on 245 of the authorized samples. These last results covering the north end of the Kappa claims will be included in next period's narrative report. The results and interpretation of the soil samples on the Kappa claims are shown on maps (1" = 200') GE-5 and GE-6 overlays.

The mean arsenic content of the samples analysed is approximately 35 ppm. Using a safety factor, 3 times the mean, or about 100 ppm, will be definitely anomalous.

The anomalous areas lying on the Mammoth group of claims are obviously related to the porphyry and to the known mineralization in the Mammoth Mine. After a field examination areas for trenching and drilling will be recommended.

On July 31, 1964, Vitro requested approval to collect sixty additional soil samples between 4N and 12N and 20E and 28E on the geochemical grid. Mr. MacLaren, Acting Field Officer, OME Region I, gave authorization in writing on August 27, 1964 to take up to 60 soil samples on Beta 4 and 6 claims to test the northeasterly extension of the arsenic anomaly found on Beta 4. These samples have been collected in the field but assay results have not been received, and they will be included in next period's narrative report.

In our letter of July 31, 1964, we requested twelve prospect trenches to explore anomalous areas indicated by the soil samples. By letter of August 27, 1964, we received written authorization to bulldoze 12 trenches at the approximate locations indicated on the base maps submitted with our letter.

Nine of the 12 trenches authorized have been bulldozed, geologically mapped, and 29 channel samples taken for gold and silver assay. Details of the geology and sampling are shown on the following maps:

South Show - 1 new trench and two channel assays.

Southeast Anomaly - 1 new trench and two channel assays.

Big Six Mine - 1 new trench and two channel assays.

South Extension-Whiskey Gulch Mine - 1 new trench and one channel assay.

North Area-Whiskey Gulch Mine - 5 new trenches and 22 channel assays.

In general, the rocks exposed in the pits consist of altered, brecciated and occasionally silicified limestones. Leaching phenomena and iron staining are common. Porphyry, where exposed, is usually iron stained, soft, and altered. Samples were taken from the various types of rocks encountered.

By letter of August 27, 1964, written authorization was given to drill three holes located approximately at coordinates:

B-1	South Show	81,370 N	75,170 E
B-2	Southeast Anomaly	81,900 N	76,840 E
B-3	Big Six Mine	83,230 N	76,060 E

Holes B-2 and B-3 have been completed and drill logs and assay results are enclosed under separate cover. In drilling of Hole B-1, we experienced lost circulation due to collapse structure and solution cavities. We also encountered a hard cherty formation that required the use of a tungsten-carbide rotary bit. This hole has not been completed and will be included in next period's report.

While certainly not indicating any gold "ore," the assay results from the drill holes are encouraging. Union Assay reports amounts as low as 0.002 oz/ton. Amounts less than this, but still detectable, are reported as a trace. The assay of 0.005 oz/ton has a definite bead which can be measured and weighed.

Since 34 ppm = 1 oz (troy) per ton, 0.005 oz gold = 0.17 ppm. According to Hawkes (Geochemistry in Mineral Exploration, p. 365, Harper and Row, New York, 1962), the gold content of a limestone ranges from 0.005 to 0.009 ppm. Thus 0.17 ppm is 17 times the gold content of the highest limestone. This information is included to show that the extremely thick, widespread mineralization intersected by the drill holes could only be due to the pervasive influence of some mineralizing body.

Drill hole B-3 is particularly interesting inasmuch that 65 feet, from 110' to 175', will average 0.0125 oz/ton, strongly indicating that the drill hole might lie along the fringes of a higher grade body.

In summary, work to date under the OME Contract includes the following:

STAGE I

Actual Costs

Independent Contracts
Bulldozing trenches
D-7 Caterpillar dozer (Contract allows 117 hours) 65 hours

Fixed Unit Costs

Grid layout, soil sampling and analyses for arsenic
(Contract allows 1,425 samples) 459 samples

The following will be sent under separate cover. These items accompany the Narrative Report and are listed accordingly:

Hole B-2 - Drill logs and assays

Hole B-3 - Drill logs and assays

Other Assays - (A-V) and trench samples

Maps: GE-1 Overlay

GE-2 Overlay

GE-3 Overlay

GE-5

GE-5 Overlay

GE-6

GE-6 Overlay

South Show

Southeast Anomaly

Big Six Mine

South Extension-Whiskey Gulch

North Area-Whiskey Gulch

RECEIVED
Via airmail
SEP 14 1984
Parcel Post
OMB
SPOKANE, WASHINGTON

Samples assayed for gold and silver
(Contract allows 200 samples) 29 samples

STAGE II

Actual Costs

Independent Contracts
Bulldozing access roads and drill sites
D-7 Caterpillar dozer
(Contract allows 88 hours) 34 hours

Mobilization of drilling equipment and personnel $215.00

Rotary Drilling
(Contract allows 4,500 feet) 475 feet

Unit Costs

Incidental allowance for each foot of drill hole completed,
475 feet @ $0.21/ft.
(Contract allows 4,500 feet @ $0.21/ft.) $ 99.75

Samples assayed for gold and silver
(Contract allows 600 samples) 96 samples

In our letter of July 31, 1964, we requested authorization of seven drill holes. Three of these holes were authorized by your letter of August 27, 1964. The map labeled North Area-Whiskey Gulch Mine shows the geology and assay results of our trenching and the location of three additional drill holes. We would like to receive written authorization to drill the holes as shown on the map.

Very truly yours,

VITRO MINERALS CORPORATION

Cecil H. Smith

CECIL H. SMITH
Exploration Manager

CHS:bas

Maps, drill logs, and assays - under separate cover

e EMpire 3-3302

Hand
mple Serial 26382-26406

ASSAY REPORT
UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

rals Corporation
Vitro 3300 South
600 W City, Utah 84115
Mine
Sa

RESULTS PER TON OF 2000 POUNDS

Sept. 8, 1964

	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
22	Trace	None									
3023	0.005	None									
3024	Trace	None									
D 3025	Trace	None									
E 3026	0.005	None									
F 3027	0.005	None									
C 3028	0.005	None									
B 3029	0.005	None									
A 3030	0.005	None									
K 3031	0.005	None									
J 3032	0.005	None									
I 3033	Trace	None									
H 3034	0.005	None									
G 3035	0.005	None									
N 3036	0.010	None									
M 3037	0.005	None									
L 3038	0.053	None									
O 3039	0.010	None									
P 3040	0.005	None									
Q 3041	0.010	None									
R 3042	0.005	None									
S 3043	0.005	None									
T 3044	0.005	None									
U 3045	0.005	0.1									
V 3046	0.005	None									

Remarks Samples from Lewistown, Montana.

Charges $ 62.50

W. C. Wanlass

Telephone 363-3302

Hand Sample Serial 24263-24270

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President
L. G. HALL, Vice President
G. P. WILLIAMS, Treasurer
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

August 21, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per
C-1	0.005	None									
NA-1	0.025	0.8									
NA-2	0.255	5.5									
3017 OME	0.010	0.3	West wall of trench at drill site B-2								
3018 "	0.010	0.1	" " "	"	"	"	"				
3019 "	0.005	None	Floor of trench at drill site B-3								
3020 "	0.005	None	" " "	"		"					
3021 "	0.005	None	Trench at 85,100 N 75,500 E								

Remarks Samples from Lordstown, Montana.

Charges $ 22.50

Glenn P. Williams

HOLE B-2 OME-6349

From		To	
0	-	2.5'	Overburden.
2.5	-	32.5'	Limestone, medium brown, hard. Tiny calcite stringers. Rare scattered soft altered fragments.
32.5	-	37.5'	Limestone, blue-gray, hard. Twenty per cent large white calcite fragments.
37.5	-	45.0'	Limestone or limey shale, blue-gray, soft and clayey. Ten per cent brownish slightly rusty harder limestone. Rare calcite.
45.0	-	50.0'	Limestone, buff, moderately hard. No calcite.
50.0	-	80.0'	Limestone, medium brown, hard. Rare calcite.
80.0	-	95.0'	Limestone, medium tan, hard and fresh. Rare calcite.
95.0	-	105.0'	Limestone, medium tan, with up to 50% soft brown iron-stained clayey limestone. Ten per cent soft black limey shale.
105.0	-	122.5'	Limestone, soft, brown clayey. Iron-stained and altered 15% soft white limey clay. Calcite common.
122.5	-	142.5'	Limestone, brown to brownish blue, hard. Rare calcite.
142.5	-	165.0'	As above, but getting progressively bluer.
165.0	-	225.0'	Limestone, dark blue-gray, occasionally brownish, hard. One per cent rusty calcite chips 195-210'.
225.0	-	260.0'	Limestone, mottled brownish-gray, hard and massive. Rusty calcite fragments at 232.5-237.5' and 255-260'.
			Bottom - water, no cuttings.

Telephone EMpire 3-3302

Hand Sample Serial 25821-47

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 1, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-2											
0-5	0.005	None									
5-10	0.005	None									
10-15	0.005	None									
15-20	Trace	None									
20-25	Trace	None									
25-30	0.005	None									
30-35	Trace	None									
35-40	Trace	None									
40-45	Trace	None									
45-50	Trace	None									
50-55	Trace	None									
55-60	0.005	None									
60-62½	Trace	None									
62½-67½	Trace	None									
67½-70	0.005	None									
70-75	Trace	None									
75-80	0.005	None									
80-85	Trace	None									
85-90	Trace	None									
90-95	Trace	None									
95-100	Trace	0.1									
100-105	0.005	None									
105-110	Trace	None									
110-115	Trace	None									
115-120	Trace	None									
120-125	0.005	None									
125-130	Trace	None									

Remarks Lewistown, Montana samples.

Charges $ 67.50

W. C. Wanlass

Telephone EMpire 3-3302

Hand Sample Serial 25848-73

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 W. 3300 S.
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 1, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-2											
130-135	Trace	None									
135-140	Trace	None									
140-145	Trace	None									
145-150	Trace	None									
150-155	Trace	None									
155-160	Trace	None									
160-165	0.005	0.2									
165-170	0.005	None									
170-175	0.005	None									
175-180	0.005	None									
180-185	Trace	None									
185-190	Trace	None									
190-195	Trace	None									
195-200	0.005	None									
200-205	0.005	None									
205-210	0.005	None									
210-215	0.005	None									
215-220	0.005	None									
220-225	0.005	None									
225-230	Trace	None									
230-235	Trace	None									
235-240	Trace	None									
240-245	0.005	None									
245-250	0.005	None									
250-255	0.005	None									
255-260	0.005	None									

Remarks Lewistown, Montana samples.

Charges $ 65.00

W. C. Wanlass

HOLE B-3 OME-6349

From		To	
0	-	2.5'	Overburden
2.5	-	20.0'	Limestone, bluish-brown, hard and massive. Ten per cent rusty white calcite.
20.0	-	32.5'	As above, with up to 50% soft brown clayey fragments, limonite common. Some silicification of hard limestone. CaF_2 chips 22.5-27.5' and 30-32.5'. 30-32.5' 90% soft brown clayey limestone, with 10% rusty, boxwork calcite.
32.5	-	37.5'	Limestone, medium brown, clayey and altered. Some limonite. Ten per cent rusty calcite.
37.5	-	60.0'	Limestone, bluish-brown, hard. Ten to fifteen per cent calcite and soft altered limestone. Hard limestone possibly silicified.
60.0	-	62.5'	Limestone, pinkish-brown, moderately hard. Fifteen per cent calcite.
62.5	-	67.5'	As above, with 50% soft altered clayey brown limestone. Ten per cent rusty calcite.
67.5	-	70.0'	Limestone, blue-black, hard. Some calcite and soft altered clayey limestone.
70.0	-	87.5	Limestone, tan. Soft altered, and possibly shaley. Iron staining common. Fifteen per cent calcite. CaF_2 (?) at 75-77.5'. Pinkish cast 80-85'.
87.5	-	90.0'	Limestone, brown and gray, moderately hard. Some calcite and iron staining.
90.0	-	110.0'	Limestone, mainly blue-black, with 15% brown limestone. Moderately hard. Some calcite.
110.0	-	130.0'	Limestone, pinkish brown, some gray. Moderately hard. Iron staining common. Some mottled alteration and 10% calcite. Grayer cast towards bottom. Fifteen per cent soft clayey limonite. Section has appearance of being alternating hard and soft bands.

From	To	
130.0 -	135.0'	Limestone, brownish-blue, hard. Five per cent calcite.
135.0 -	150.0'	Limestone, gray. Hard. Small cavity 135-137.5'. Some loss of cuttings.
150.0 -	187.5'	Limestone, mottled blue-gray, hard. Rare calcite. Several small cavities.
187.5 -	215.0'	Limestone, light gray, hard. Some brownish mottling. Rare calcite.
		Bottom - water at 215'.

Telephone EMpire 3-3302

Hand Sample Serial 25874-88

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 West 3300 South
Salt Lake City, Utah

RESULTS PER TON OF 2000 POUNDS

Sept. 1, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-3											
0-5	0.010	None									
5-10	0.005	None									
10-15	0.005	None									
15-20	0.005	None									
20-25	0.005	None									
25-30	0.005	None									
30-35	0.005	None									
35-40	Trace	None									
40-45	0.005	None									
45-50	0.005	None									
50-55	0.005	None									
55-60	0.005	None									
60-65	Trace	None									
65-70	Trace	None									
70-75	0.005	None									

Remarks Lewistown, Montana samples.

Charges $ 37.50 25

W. C. Wanlass

Telephone EMpire 3-3302

Hand Sample Serial 25889-25916

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Vitro Minerals Corp.
600 W. 3300 S.
Salt Lake City, Utah 84115

RESULTS PER TON OF 2000 POUNDS

Sept. 1, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole B-3											
75-80	0.005	None									
80-85	Trace	None									
85-90	Trace	None									
90-95	0.005	None									
95-100	0.005	None									
100-105	0.005	None									
105-110	0.005	None									
111-115	0.010	None									
115-120	0.015	None									
120-125	0.025	None									
125-130	0.015	None									
130-135	0.010	None									
135-140	0.010	None									
140-145	0.010	None									
145-150	0.010	None									
150-155	0.010	None									
155-160	0.015	None									
160-165	0.015	None									
165-170	0.010	None									
170-175	0.010	None									
175-180	0.005	None									
180-185	0.010	None									
185-190	0.005	None									
190-195	0.005	None									
195-200	0.005	None									
200-205	0.005	None									
205-210	0.005	None									
210-215	0.005	None									

Remarks Lewistown, Montana samples

Charges $ 70.00

W. C. Wanlass

Telephone EMpire 3-3202

Sample Sent ____ Date ____

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. N. CAGLE, President
W. S. WARREN, Vice-Pres. & Treas.
LILY MCCONNELL, Secretary
P. O. Box 1820
Salt Lake City 10, Utah

Date Metro Minerals Corp.
600 N. 3200 S.
Salt Lake City, Utah 84115

Results for TON OF 2000 POUNDS

Sept. 1, 1961

NUMBER	GOLD Oz. per Ton	SILVER Oz. per Ton	LEAD Wet or Dry	COPPER Per Cent	NICKEL Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Hole #-3											
75-80	0.005	None									
80-85	Trace	None									
85-90	Trace	None									
90-95	0.005	None									
95-100	0.005	None									
100-105	0.005	None									
105-110	0.005	None									
111-115	0.010	None									
115-120	0.015	None									
120-125	0.025	None									
125-130	0.015	None									
130-135	0.010	None									
135-140	0.010	None									
140-145	0.010	None									
145-150	0.010	None									
150-155	0.010	None									
155-160	0.015	None									
160-165	0.015	None									
165-170	0.010	None									
170-175	0.010	None									
175-180	0.005	None									
180-185	0.010	None									
185-190	0.005	None									
190-195	0.005	None									
195-200	0.005	None									
200-205	0.005	None									
205-210	0.005	None									
210-215	0.005	None									

Remarks: Jerry Brown, Montana samples

Charges $ 20.00

9-4-64

OME

MINERALS CORPORATION

90 PARK AVENUE · NEW YORK, N. Y. 10016 · MURRAY HILL 2 3700

September 25, 1964

OFFICIAL FILE COPY
O. M. E
RECEIVED SEP 28 1964

DATE	INITIALS	CODE
9/28	on leave	120 ~~120~~

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

Re OME-6349

Dear Mr. MacLaren:

Thank you for your letter of September 21st enclosing the proposed Amendment No. 1 to our contract.

Unfortunately, Mr. Hotchkiss is out of town at the present time, and will not be back until October 5th, to review this Amendment. I hope that this delay will not inconvenience you.

Very truly yours,

VITRO MINERALS CORPORATION

(Mrs.) Irene Stecura
Secretary to Mr. E. B. Hotchkiss

cc: Mr. Cecil H. Smith

OMe

OFFICIAL FILE COPY O. M. E. RECEIVED SEP 23 1964		
DATE	INITIALS	CODE
9/23	on leave	120 m
		120

So. 157 Howard Street
Spokane, Washington 99204
September 21, 1964

Air Mail

Mr. Eugene B. Hotchkiss
Executive Vice President
Vitro Minerals Corporation
90 Park Avenue
New York, New York 10016

Re: OME-6349 (Gold-Silver)
Beta-Kappa Claims & Leased Properties
Fergus County, Montana
Contract 2195

Dear Mr. Hotchkiss:

In accordance with correspondence with Mr. Smith concerning additional work and land under the subject contract, our Washington office has prepared a proposed amendment to the contract. Enclosed are the original and four copies of a proposed Amendment No. 1, signed by the Acting Director for the Government.

If the proposed amendment is satisfactory, please sign all five copies, retain the Operator's copy, and return the other copies to this office.

If the amendment does not have the corporation's approval, please return all copies unsigned to this office with a statement of any proposed changes for consideration.

Sincerely yours,

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

Enclosures

cc: Cecil H. Smith
Exploration Manager
Vitro Minerals Corp.
Salt Lake City, Utah

Director's Reading File
Resources Research Branch Chief

cc: OME
MacLaren

MLMacLaren:mls

OFFICIAL FILE COPY
RECEIVED

DATE		

0240

OFFICIAL FILE COPY O. M. E RECEIVED SEP 17 1964		
DATE	INITIALS	CODE
9/17	ow/leave	120 m
		120

So. 157 Howard Street
Spokane, Washington 99204
September 15, 1964

Air Mail

Mr. Cecil K Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 3rd South Street
P. O Box 15437
Salt Lake City, Utah 84115

Re: Work Authorization
GMB-6319 (Gold-Silver)
Beta-Kappa Claims & Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. Smith:

As requested in a Narrative Report dated September 10, 1964, authorization is herewith given to drill three additional holes under Stage II approximately located as follows:

B-4	65500N	7619E
B-5	65900N	7650E
B-6	65400N	7650E

If the results obtained by these holes are not more encouraging than those obtained by the three already drilled, it is suggested that a reappraisal of the project be made to determine how best to locate additional holes. Hole B-1, while not in an area of particularly strong arsenic anomaly, is near the best trench showing. Holes B-2, B-3, and the three holes now authorized have tested or will test most of the better anomalous areas, near known igneous contacts and/or near areas of former production. The best showings in B-2 are 0.005 ounce per ton of gold or about 1/100th of minimum ore grade of 0.5 ounce gold per ton; in B-3 from 110 to 175 feet is a 65-foot zone with an average grade of 0.0126, say 0.013 ounce gold per ton orabout 1/38th of minimum ore grade. Holes B-4 and B-5, near known contacts, high arsenic anomalies, and areas of former production may give a clue as to what combination of factors will justify further Stage II drilling.

Possibly 1 or 2 Stage III offset holes south and west of B-5 might be justified, but it will be better to await for the results from the 3 additional holes before deciding this.

Sincerely yours,

D. R. Maclaren
Acting Field Officer, GMK

DRMaclaren:mls

cc: GMK(2)
Voucher file
Maclaren
Director's Reading File
Resources Research Branch Chief

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

TO:		DATE	INITIALS
1.	Chief, Div. of Exploration Operations	9/15/64	
2.			
3.	6349		
4.	D R MacLaren		
5.	D. R. MacLaren		
FROM:	Acting Fld. Offr., 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:

The narrative referred to in the first paragraph of this letter together with drill logs, assays and maps for period--7/20 - 9/10/64 is being sent via regular mail in a mailing tube due to bulk. (Certified)

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

OFFICIAL FILE COPY

RECEIVED SEP 14 1964

DATE	INITIALS	CODE
9/14	ovlure	120 m
		120

So. 157 Howard Street
Spokane, Washington 99204
September 10, 1964

Air Mail

Mr. Cecil H. Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 33d South Street
P. O. Box 15437
Salt Lake City, Utah 84115

Re: OME-6349 (Gold-Silver)
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. Smith:

Since talking with you on the telephone, my plans for my next swing into Montana have become more definite. I will reach Lewistown the late afternoon of Monday, September 28, make a quick inspection of the trenches and be on my way the next day.

I hope that this will fit in with your plans so we can get together and try to clarify any questions you may still have relative to the work and/or vouchering.

Sincerely yours,

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

cc: OME

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

ME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/15	Lindgren	130
"	On leave	110
"	on leave	100
9/15	Coe	220
		120 M

SEP 1 5 1964

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Exploration Operations

Subject: GMK-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

In accordance with our memorandum of September 2, 1964, enclosed are the original and four copies of a proposed Amendment No. 1, signed by the Acting Director for the Government. Also enclosed is an extra copy for field use.

If the proposed amendment is satisfactory to you and the Operator, all five copies should be signed by an authorized representative of the Operator. Thereafter, please distribute the copies in the usual manner.

If any part of the proposed amendment does not have your approval or that of the Operator and cannot be altered within your delegated authority, the original and all copies are to be returned to this office together with the proposed changes for consideration.

George C. Selfridge (glc)

Enclosures

GCSelfridge/mm (9/14/64)
cc: Director's Reading File
Review Committee
Docket

23263

EXPLORATION CONTRACT
VITRO MINERALS CORPORATION
OME-6349

AMENDMENT NO. 1

It is agreed this _____ day of _____ , 1964, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter referred to as the "Government," and Vitro Minerals Corporation, hereinafter referred to as the "Operator," that Contract No. 2193 (OME-6349), dated July 20, 1964, is amended effective the date of the contract as follows:

1. In Annex I the following is added:

"Under the terms of a Lease and Option, dated May 21, 1964, Joseph Nordquist granted Vitro Minerals Corporation rights to Beta Nos. 1, 3, 5, 7, 9, and 11 claims. 1/

"A Lien or Subordination Agreement, dated May 21, 1964, executed by Joseph Nordquist is attached hereto and made part hereof."

1/ In a Declaration of Abandonment, dated May 21, 1964, Joseph Nordquist, the sole owner, relinquished all right, title, and interest in Korea Nos. 1, 2, 3, and 4 claims. These claims were in conflict with the Beta Nos. 1, 3, 5, 7, 9, and 11 claims.

2. In Exhibit A, Description of the Work, Stage I the following paragraph is added after the third paragraph:

"With prior Government approval confirmed in writing the remaining soil samples not used at the locations described in

MME FORM 6 REFERENCE SLIP

REV. 2-5 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. ~~Docket Room 6042~~		
2. ~~Asso. Sol.~~ - ~~MR, Room 6554~~		
3. Mr. Murphy, Room 4455		
4.		
5.		
FROM: F. M. Murphy	9/4	

FOR: Check items for action desired

X Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS:

FROM SOLICITOR OME6349

SEP 1 1964

FOR SIGNATURE

INTERIOR DEPT.

SEP 8 - 1964

SOLICITOR

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

paragraphs 1 and 2 may be used to test the possible extensions of or further define anomalies found within the soil sampling areas described above, or to further trace out or define anomalies which the Operator prior to the date of the contract may have outlined or partly outlined on the land in the contract."

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

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
Acting Director, Office of Minerals Exploration

VITRO MINERALS CORPORATION

By _____

Title _____

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/2	GCS	130
9/2	Murphy	120M
9/2	Talbot	800
"	Johnson	110
	On leave	100
9/2	Cal	220
		120M

SEP 2 1964

AIRMAIL

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Exploration Operations

Subject: OMM-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

We have now reviewed your memoranda of August concerning additional work and land under the subject contract.

In the future under all contracts, we plan to stick a little more closely to the objectives first set out. In this particular case, we shall write an amendment covering additional soil sampling which will either test the possible extensions of or further define anomalies found within the soil sampling areas as originally laid out, or to further trace out or define anomalies which the Operator may have outlined or partly outlined on the land in the contract prior to the date of the contract. Otherwise, no additional soil sampling under the contract can be done in new areas. Amplification of the soil sampling to areas other than those originally designated could conceivably engender additional work under Stages II and III and thereby entail further amendments to the contract.

If the results of all of the work as now set forth in the contract warrant, some further provision for definite additional work can always be made.

We shall not be able to participate in the $1.50 cost of assaying the soil samples taken prior to the date of the contract.

George C. Selfridge gla

GCSelfridge/gla (9-2-64)
cc to: Director's Reading File
Review Committee
Mr. Selfridge
Docket

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
August 28, 1964

OFFICIAL FILE COPY
C. M. E
RECEIVED AUG 31 1964

DATE	INITIALS	CODE
8/31		800
		120 m
		120

Memorandum

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

Subject: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Enclosed is a copy of an undated letter with maps received August 18, 1964, from Ben F. Dickerson, project geologist for the subject Operator. Some of the points covered by Dickerson are answered in my letter and Work Authorization of August 27, 1964, to Cecil H. Smith, Exploration Manager, in reply to his letter of July 21, 1964, copies of which have been forwarded to you.

Before receiving the contract, the Operator had completed much of the soil sampling provided for the Beta claims and recognizes that this is to be entirely for the company's account. Base maps and overlays showing the work have been forwarded to you. This work disclosed an anomalous area of interest on the Beta 4 claim. The 60 soil samples approved in the Work Authorization are to explore the northeasterly extension of the anomaly. The authorization was given because the work is adjacent to the area defined in the contract and the required samples are simply moved from one part to another in the same area.

Dickerson's request is somewhat different in that the area tested and to be tested is not an extension of the approved soil sampling area in either the Beta or the Kappa claims. Rather it is an entirely new block between but separated from both the Beta and Kappa areas defined in the Description of the Work. Therefore, the question is referred to you with recommendation for partial approval. Incidentally, the Moonlight claim appears as Brooks on all prior maps and is not included in the contract ground; neither is the Hoosier claim. Dickerson is aware of this and does not request any work within 200 feet of either claim.

Referring to the accompanying soil sample map, there are two areas that seem to warrant additional soil samples, one in the southwest

corner of the map near the west end of Beta 30 and 32 claims, the other in the east-central part of the map in parts of Beta 41, 42, and 43 claims.

In the southwest area more definition of two anomalies is desirable and may be obtained by taking the following recommended 26 samples at stations 10E through 19E on line 55N; 10E through 14E on line 56N; and 10E through 20E on line 57N.

In the east-central area on line 66N anomalous assays of 330, 190, and 140 ppm arsenic occur at stations 34E, 35E, and 41E, respectively, and on line 68N anomalies of 90, 175, 85, 175, and 85 occur at stations 37E, 38E, 39E, 40E, and 41E, respectively. It is desirable to find out what, if any, relation there may be between these anomalous areas. This can be determined by taking the following 18 samples at stations 32E through 36E and 40E through 42E on line 65N; and 33E through 42E on line 67N. Samples at 43E through 45E on line 66N might give a clearer picture of the irregularly shaped anomaly within or near which they fall, but this is perhaps not as urgently needed as 11 samples recommended to define the southeastern extension of this anomaly. The recommended samples are at stations 45E through 48E on line 59N; 46E through 48E on line 60N; and 45E through 48E on line 61N.

The 55 recommended samples and possibly the 8 questionable ones should give ample definition to all areas of anomalous interest in this part of the property.

Lines 55 N thru 74N

The second request of Dickerson was clarified by him during a telephone conversation on August 26. The soil samples from stations shown on the accompanying map were taken prior to receipt of the contract and are for company account. However, the laboratory work was neither completed nor invoiced until after the contract was in effect. Dickerson requests authorization to claim the cost of assaying these samples at $1.50 each. There are 372 sample stations within the area 54N-76N by 15E-45E. The assays and location* samples along lines 54N and 76 N have yet to be shown. Of the 372 stations, samples at 83 were taken within 200 feet of two claims not subject to the contract and at four more stations no samples were taken. Therefore, the potential number of assays that would be involved is 285.

Not allowable; costs incurred before date of contract. See Art. 6(b)(3). Talbot 8/30/66

He was informed that this would require an amendment and that since the request to allow the cost of sampling was made after the cost had been incurred, it was doubtful that it could be approved. I do not recommend approval of this request.

Kindly advise me as to which, if any, of the soil samples requested by Dickerson and indicated in red on the map I may authorize and whether the contract will be amended to permit a claim for assaying.

*of

Regarding the authorization of Stage II drilling, it is doubtful that the trench sample assays can be considered by themselves as strong justification for nonauthorization. This is because much of the gold is found in pseudodisseminated calcite stringers that seem to be fairly closely related to instrusive bodies and do not always crop out. Referring to the enclosed four smaller maps you will note that in the South Show area trench samples assaying 0.205 and 0.33 ounces gold per ton are bounded by soil assays of only 15, 20, 35, and 50 ppm arsenic while in the Big Six area in a high anomaly of 550 ppm arsenic the trench sample assays are only 0.005 ounce gold per ton. Similarly, in the Southeast Anomaly area the trench samples assay 0.01 ounce gold per ton in a high anomaly of 220 to 230 ppm arsenic.

In the South Show area the low anomalies may be accounted for by a thicker than normal overburden, but in the other two areas where overburden is fairly light the trench sample values do not vary directly with those of the soil samples. In final analysis, about all the trench samples mean is that there is gold associated with the arsenic. Authorization or nonauthorization of Stage II drilling must depend less upon the trench samples alone and more upon a combination of soil sample anomalies, geology, and trench samples. It is hoped that when the three authorized holes are completed this relationship can be more clearly understood.

D. R. MacLaren

D. R. MacLaren

Enclosures

Regarding the authorization of Stage II drilling, it is doubtful that two ounce assays can be considered by themselves as strong justification for nonauthorization. While it because much of the gold is found in pseudomorphosed calcite stringers that seem to be fairly closely related to intensive boring and do not always crop out. Referring to the enclosed four analyses on a pro will note that in the south Show area trench samples assaying 0.055 and 0.35 ounces gold per ton are bounded by soil assays of only 10, 20, 30, and 30 ppm arsenic while in the Big Six area in a line amounts of 330 ppm arsenic the trench sample assays one only 0.05 ounce gold per ton. Similarly, in the Southeast Anomaly area the trench samples assay 0.01 ounce gold per ton in a high anomaly of 420 to 930 ppm arsenic.

In the South Show area the low anomalies may be accounted for by a thin or thicker normal overburden, but in the other two areas where overburden is fairly light the trench sample values do not vary directly with those of the soil samples. In final analysis, about all the trench samples mean is that there is gold associated with the arsenic. Authorization or nonauthorization of Stage II drilling must depend less upon the trench samples alone and more upon a combination of soil sample anomalies, geology, and trench samples. It is hoped that when the three authorized holes are completed this relationship can be more clearly understood.

G. P. Masteren

Enclosures

VITRO MINERALS CORPORATION
600 W. 33rd S.
Salt Lake City, Utah
and
B & B Motel
Lewistown, Mont.

Mr. D. R. McLaren
Office of Mineral Exploration
U.S. Geological Survey
117 S. Howard St.
Spokane, Washington

Re: OME-6349

Dear Mr. McLaren:

Enclosed you will find 3 copies of each of the maps covering our first dozer trench work. As you known, there is probably only a slim chance of exposing gold ore in a trench, for an arsenic anomaly may represent mineralization at some depth or distance. I think that these maps will satisfy the contract's requirement for results from the dozong before drilling is approved.

Also enclosed are 3 copies of a map showing the results of our geochemical work on lines 54 to 74 N. on the Beta claims. As you can see, the results are very encouraging.

We would like to request additional sampling on the intermediate lines under stage I of our program. These lines are:

Line	From	To	Samples
55N	10E	42E	33
57N	10E	45E	36
59N	10E	48E	39
61N	15E	20E	6
61N	31E	48E	18
63N	31E	48E	18
65N	32E	48E	17
67N	32E	48E	17

Total: 184

No samples covered by this amendment will be taken within 200 feet of any property not controlled by Vitro.

In addition, we would like to have authorization to include in our invoices, that portion of the geochemical sampling cost which meets the O.M.E. qualifications, i.e., within 200 feet of the boundaries, and work done after the effective date of the contract. These costs will include all, or part of, the work done on lines 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74 and 76N.

If you should have any questions, please call me (collect) at Lewistown, Montana 538~~0~~5497 Ext. 4.

Sincerely,

VITRO MINERALS CORPORATION

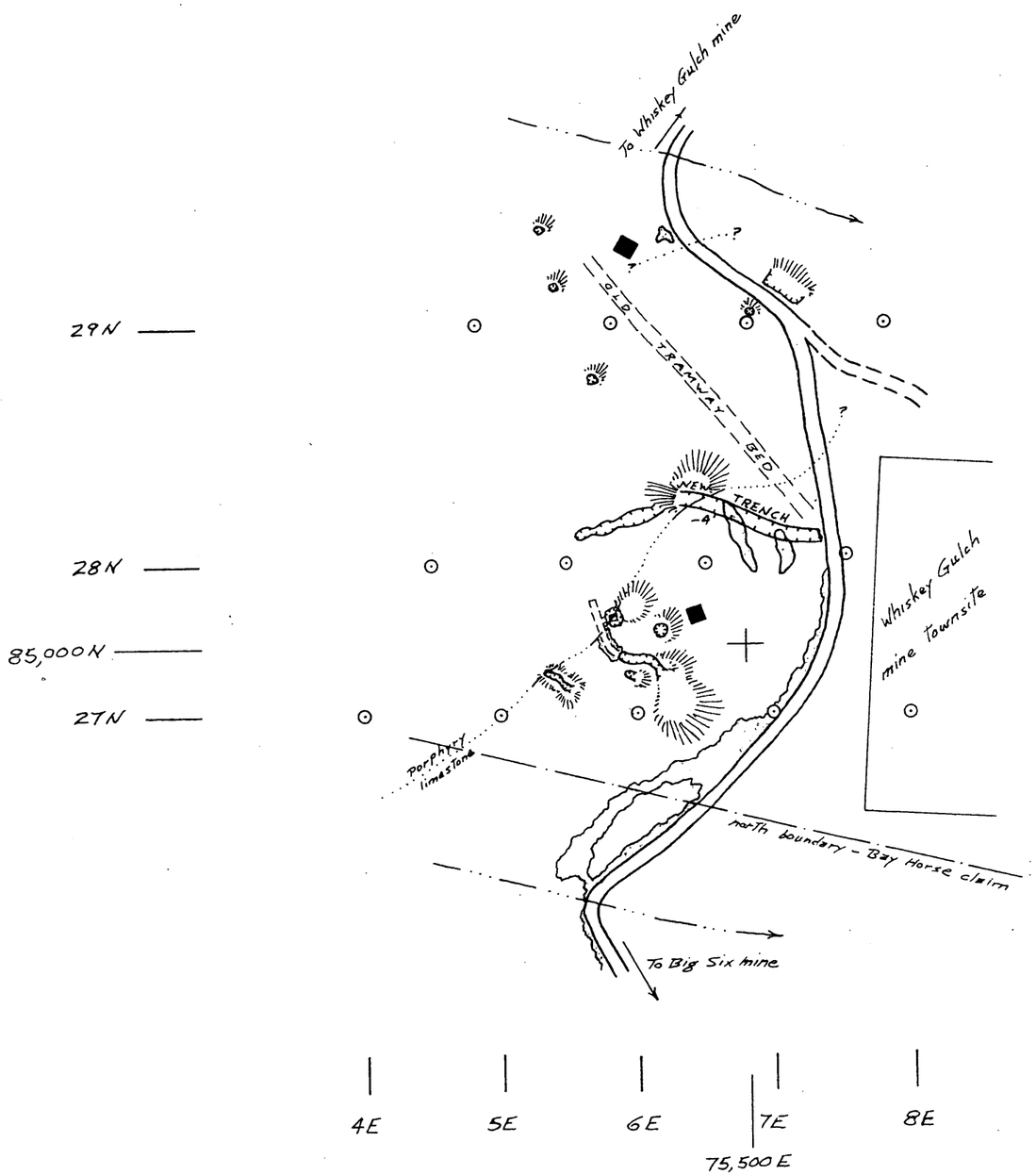
Ben F. Dickerson III

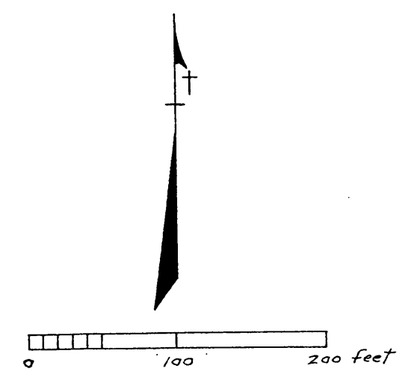
Ben F. Dickerson III

RECEIVED
Via
AUG 18 1964
Air Mail
O M E
SPOKANE, WASHINGTON

SOUTH EXTENSION—WHISKEY GULCH

Beta Claims — Fergus County, Montana





EXPLANATION

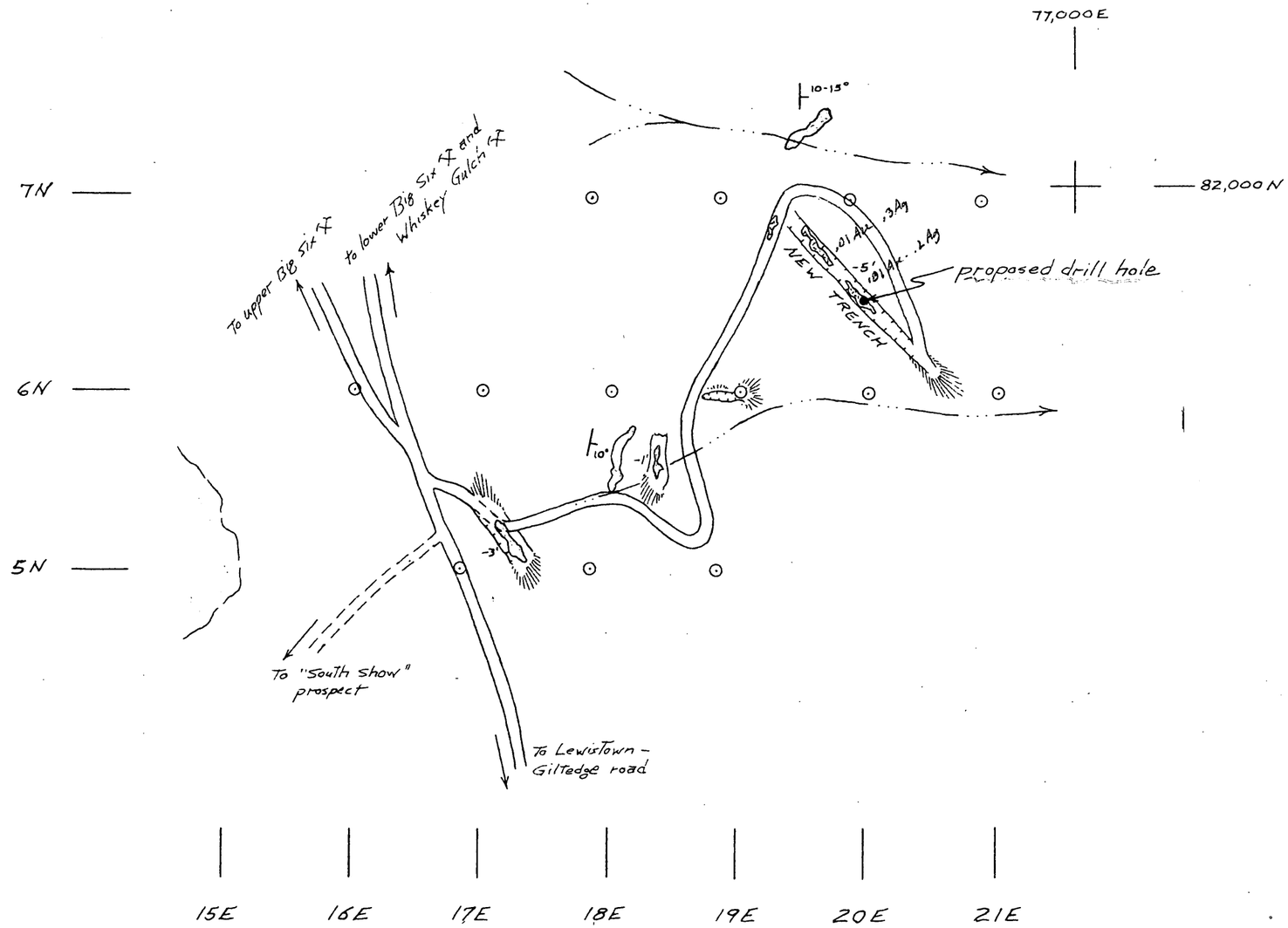
Madison Limestone — "dove" to dark grey, fine to medium grained, "eyes" common, brecciated zones.

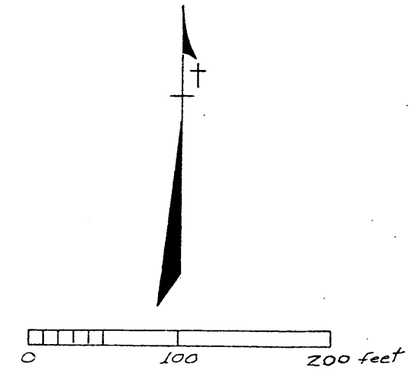
- outcrop
- geologic contact (approximate/concealed)
- prospects
- adit & open cut
- dump
- building
- road (2-wheel drive)
- soil sampling station

Vitro Minerals Corporation — RCB

SOUTHEAST ANOMALY

Beta Claims — Fergus County, Montana





EXPLANATION

Madison Limestone — light to "dove" grey, fine grained with medium grained zones, medium to thin bedded, xtalline zones, red streaks, minor brecciation, secondary calcite common.

Madison Limestone — med. to dark grey, strongly brecciated, calcite healing, medium to thick bedded, brown altered zones, most fine grained, 1-6' of brownish clay cover.

outcrop

area of outcrops

prospect

dump

road (2-wheel drive)

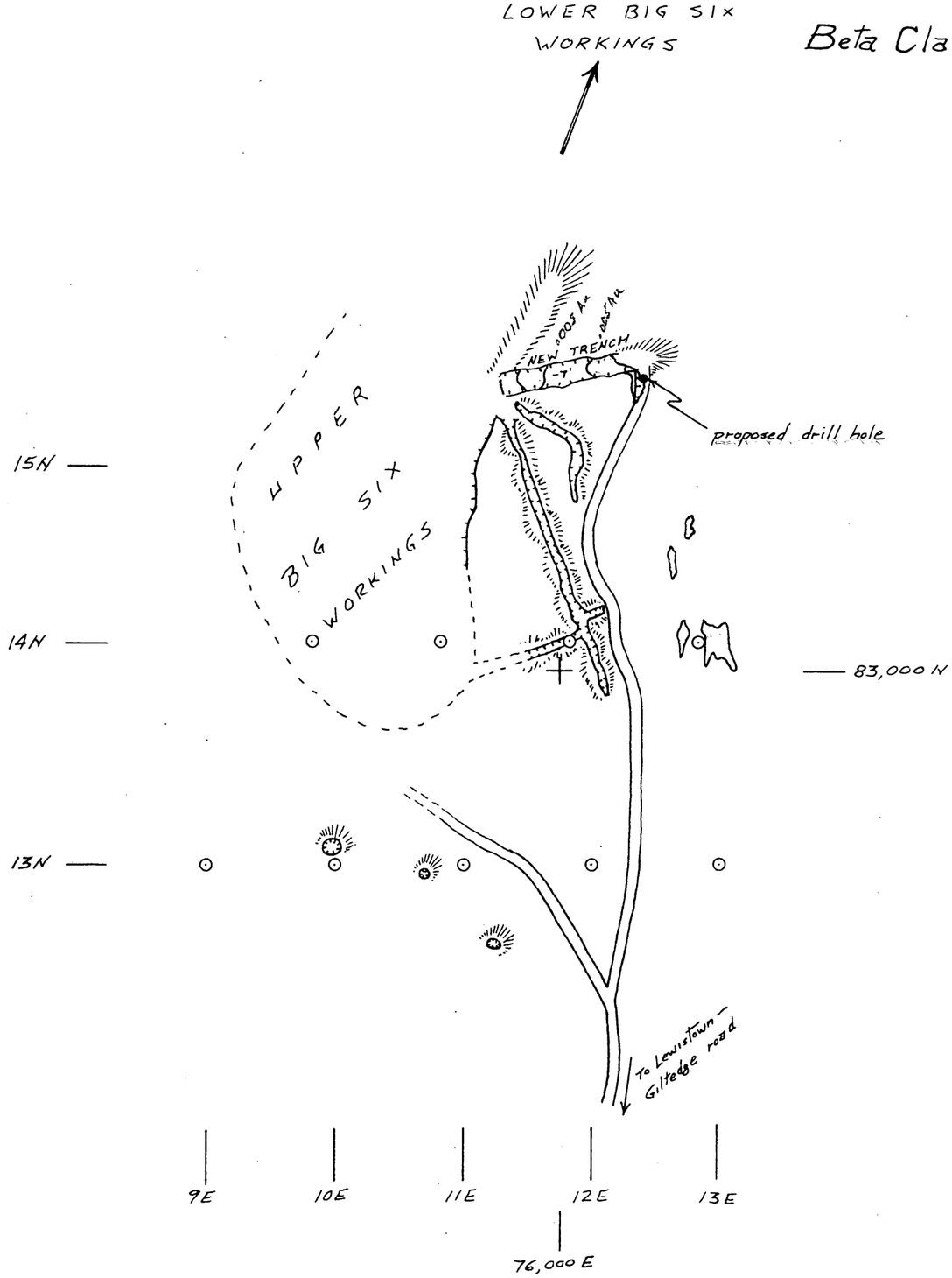
soil sampling station

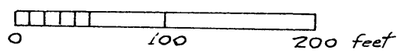
attitude of rocks

Vitro Minerals Corporation — RCB

BIG SIX MINE

Beta Claims — Fergus County, Montana





EXPLANATION

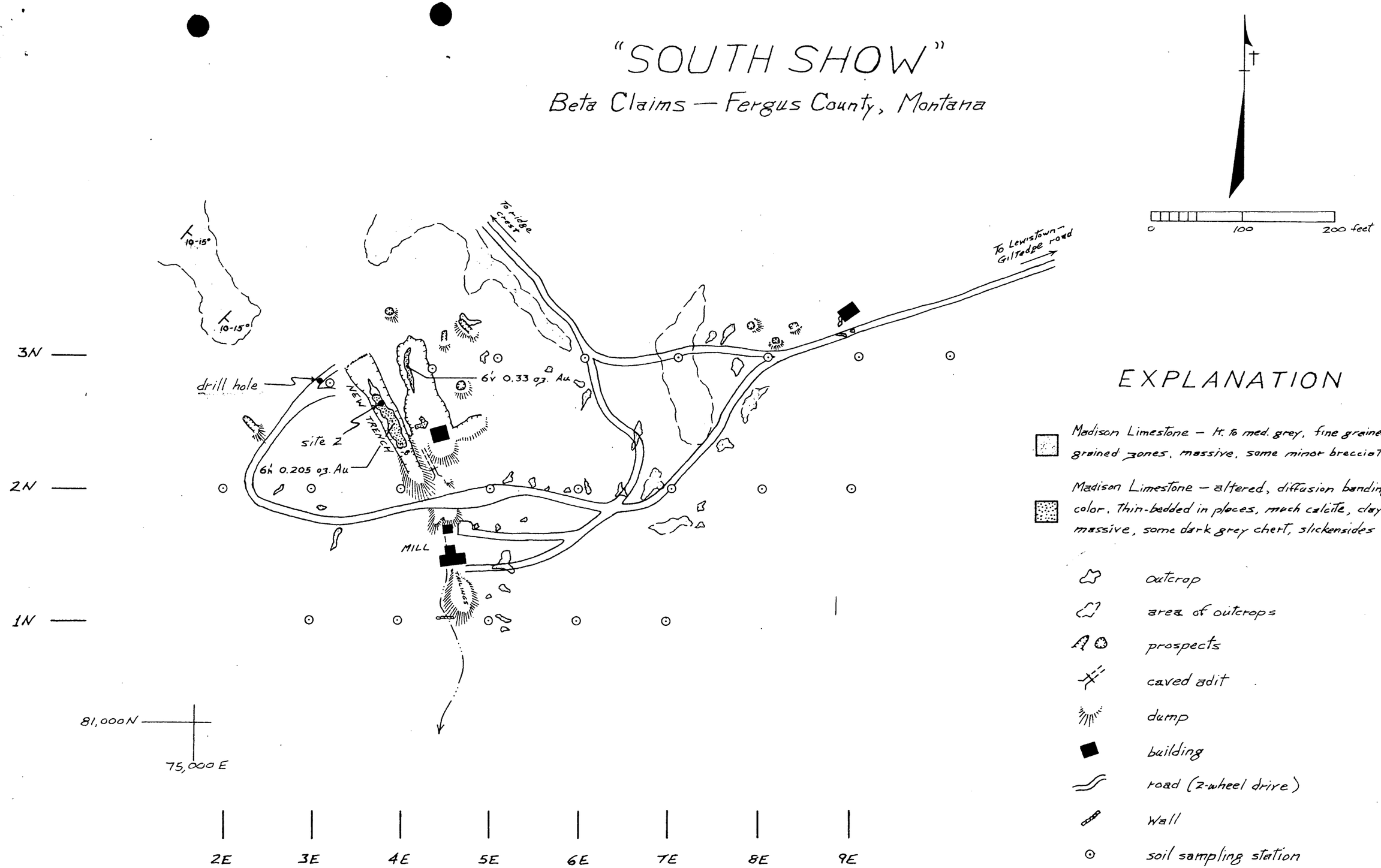
Madison Limestone — medium to "dove" grey, fine grained with crystalline zones, calcite "eyes" common, some moderate brecciation noted, in places brown stained showing alteration phenomena.

- outcrop
- prospects
- dump
- road (2-wheel drive)
- soil sampling station

Vitro Minerals Corporation — RCB

"SOUTH SHOW"

Beta Claims — Fergus County, Montana



Vitro Minerals Corporation — RCB

MINERALS CORPORATION

600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE 84115 • TELEPHONE 467-5474

FILE COPY
M. E.
JG 28 1964

TALS	CODE
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8/28
8/28

[illegible] 1964

Mr. [illegible]
Director
Office of Mineral Exploration
U. S. Geological Survey
Spokane, Washington

Dear [illegible]

[illegible] requests for more information [illegible] was [illegible] map. [illegible] and all of our [illegible] work [illegible].

[illegible] soil [illegible] claims.

Thank you for the [illegible] with you, and I am looking forward to seeing you in the near future.

Very truly yours

MINERALS CORPORATION

By Cecil

[illegible]

CHS:[illegible]

Enclosures (3) - maps

(3) - letters

Re: OMC-6349

Stip Prov. state that approval of Stage II shall be dependent upon favorable results from Stage I and shall have prior authorization, confirmed in writing.

Talbert
8/28/64

Operator completed stage I soil sampling on Beta 1 to 22 area on its own and submitted maps showing all data. This request is based on the results in favorable areas.

July 31, 1964

Mr. Donald R. MacClaren, Director
Office of Mineral Exploration
U. S. GEOLOGICAL SURVEY
Spokane, Washington

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and
leased properties
Fergus County, Montana

Dear Mr. MacClaren:

In accordance with our telephone conversation of July 27, 1964, we are sending you three copies of the geologic base map with arsenic geochemical soil sampling overlay. The map scale is 1" = 200'.

The soil sampling was done prior to the signing of our OME contract and the cost of this work will be entirely paid by Vitro. The area sampled covers that authorized under Phase I of the contract, and also the periphery areas to the south and east. Authorization is requested to take 60 samples to the east of the arsenic anomaly on Beta Nos. 2 and 4.

Requested trenching under Phase I and rotary drilling under Phase II is shown on the enclosed maps. This work is to physically explore geologically favorable areas and/or areas of arsenic anomalies.

The arsenic anomalies may reflect buried porphyry intrusives and/or gold mineralization. The depth of the mineralization may exceed trench depth and will only be reached through the drilling phase of our exploration project.

A mention should be made of the trenching and drilling proposed at 3N-5E geochemical coordinates. Our soil sampling does not indicate an anomaly in this area. This is accounted for by the five to ten feet of alluvium covering the hill slope. Rock chip samples in the trench shown on the geologic map have contained values from 0.3 to 0.5 ounces of gold per ton. A preliminary arsenic soil sample taken immediately above the outcrop gave over 300 ppm. Considering the known mineral outcrop and thick cover, this area warrants further exploration.

Summary

Work requested under OME contract 6349 is summarized below:

Stage I

Beta Claims

A. Sixty soil samples between 4N and 12N and 20E and 28E. The inclusion of this work will not exceed the allowable soil sampling as described in the contract.

B. Twelve prospect trenches to explore anomalous areas indicated by the soil sampling.

Stage II

Beta Claims

A. Access roads and drill site preparation for seven hole locations.

B. Seven drill holes to an average depth of 300 feet.

The above work is submitted for your approval and confirmation.

Very truly yours,

VITRO MINERALS CORPORATION

CECIL H. SMITH
Exploration Manager

CHS:bas

Enclosures

RECEIVED
AUG 18 1964
OME
SPOKANE, WASHINGTON

One (2)

ORIGINAL FILE COPY
O. M. E.
RECEIVED AUG 31 1964

DATE	INITIALS	CODE
8/31	[illegible]	120 M
		120

So. 157 Howard Street
Spokane, Washington 99204
August 27, 1964

Air Mail

Mr. Cecil H. Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 3rd South Street
P. O. Box 15437
Salt Lake City, Utah 84115

Re: Work Authorization
OMM-6349 (Gold-Silver)
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2195

Dear Mr. Smith:

This will confirm the provisional authorization given during our telephone conversation of August 12, 1964, to take up to 60 soil samples on Beta 4 and 6 claims to test the northwesterly extension of the arsenic anomaly found on Beta 4 claim. This authorization does not increase the number of soil samples provided for in Stage I of the contract.

Also confirmed is the provisional authorization given at that time to bulldoze 12 trenches at the approximate locations indicated on the base maps submitted with your letter of July 31, 1964.

With an undated letter, received August 18, 1964, Ben F. Dickersen, Project Geologist, enclosed four sketches on which he showed the results of the trenches completed to date. The sketches are labeled: South Extension, South Show, Southeast Anomaly, and Big Six Mine. On each of the 2 last named sketches a proposed drilling site is indicated and on the South Show, 2 proposed sites are shown about 75 feet apart. Only the South Show trench included assays. However, I have just talked to Ben on the telephone and he was able to give me assays of 2 samples from the Big Six trench and 2 from the Southeast Anomaly trench.

As Stage III provides for offset drilling dependent upon Stage II drilling and specifies that no hole be drilled closer than 100 feet to another, only one of the holes indicated in the South Show area can now be authorized.

Authorization is herewith given to drill three holes located approximately at coordinates:

South Show	81,370N	73170E
Southeast Anomaly	81,900N	76840E
Big Six Mine	83,230N	76060E

In his letter Mr. Dickerson requested authorization to do some additional soil sampling in the area Beta 28-45 to Beta 38-40, and asked that authorization be given to voucher geochemical assaying costs at $1.50 per sample for samples taken from the same area prior to receipt of the contract but not assayed until after the contract became effective. I explained to him that as this is in an area not included in the Stage I specifications the matter will have to be referred to OME in Washington, D. C., which I will do.

Sincerely yours,

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

cc: Don F. Dickerson
Project Geologist
Vitro Minerals Corp.
B & B Motel
Lewistown, Montana

OME(2)
Voucher file
MacLaren

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
August 13, 1964

ORIGINAL FILE COPY

DATE	INITIALS	CODE
8/18		800
8/19		~~120 ne~~
8/20		120

Memorandum

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

Subject: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Enclosed are a Thermo-Fax copy of a self-explanatory letter dated August 4, 1964, and enclosures 1 through 5, and five copies of a Lien or Subordination Agreement from the subject Operator.

O.K.

Apparently, the Operator owned by right of location only parts of Beta Nos. 1, 3, 5, 7, 9, and 11 and the mining lease and option now gives him full control of those claims. I presume that Annex I will have to be amended to take care of this. I have asked the Operator to send us a sketch showing the relative locations of the Beta and Korea claims and will forward them when they are received. Beta includes south of Korea 2

Regarding the new claims which will be known as Alpha Nos. 1-4, inclusive, the claims are being staked and as soon as they are recorded, the Operator will send us a sketch showing their locations and the book and page of the filing records.

Prior to the date of the contract, the Operator began soil sampling on the Beta claims and completed the area from Nos. 1 and 2 to an east-west line 200 feet north of the south boundary of Beta Nos. 24 and 47. Although the Operator is aware that none of this work can be vouchered, he has sent maps showing the results. Two copies of the maps are being forwarded to you under separate cover. see transmittal slip 8/26/64

D. R. MacLaren

D. R. MacLaren

Enclosures

Separate cover

Note Will amend the contract when all data are submitted.
8/19/64

One

MINERALS CORPORATION

600 W 33rd SO. ST. • P. O. BOX 154[illegible] • SOUTH SALT LAKE 84115 • TELEPHONE 467-5414

[illegible] 4, 1964

Mr. Donald R. MacClaren
Director
Office of Mineral Exploration
U. S. GEOLOGICAL SURVEY
Spokane, Washington

Re: [illegible]ME [illegible] (Gold-Silver)
[illegible] Minerals Corporation
[illegible] Kappa claims and
[illegible] properties
[illegible] County, Montana

Dear Mr. MacClaren:

Enclosed are three copies of the following documents:

1. Quitclaim Deed between [illegible] Sandman and Joseph Nordquist covering Korea Nos. 1 through 4 claims.

2. Quitclaim Deed between F. V. Tindall and Joseph Nordquist covering Korea Nos. 1 through 4 claims.

3. Declaration of Abandonment of Korea Nos. 1 through 4 claims signed by Joseph Nordquist.

4. Quitclaim Deed by and between Vitro Minerals Corporation and Joseph Nordquist covering the Beta Nos. 1, 3, 5, 7, 9, and 11 claims.

5. Mining Lease And Op[illegible] between Joseph Nordquist and Vitro Minerals Corporation covering the Beta Nos. 1, 3, 5, 7, 9 and 11 claims.

6. Five copies of MME Form 5[illegible] 1961, Lien or Subordination Agreement signed by Joseph Nordquist.

Messrs. Nordquist, Sandman, and Tindall located the Korea claims in 1953. They filed for the assessment years ending in 1957, 1960, and 1962. The Korea claims were in conflict with the Beta Nos. 1, 3, 5, 7, 9, and 11 but the validity of the Korea claims was very doubtful.

Left - hand side of docket

The enclosed documents are the result of our negotiation and settlement with Mr. Nordquist.

As I mentioned on the telephone the other day, Vitro Minerals Corporation has located four claims south and contiguous with the Beta Nos. 1 and 2 south side lines. Vitro Minerals Corporation is agreeable to including these claims under our OME exploration contract and expanding the possible area of exploration.

Very truly yours,

VITRO MINERALS CORPORATION

/s/ Cecil H. Smith

CECIL H. SMITH
Exploration Manager

CHS:bas

Enclosures

OMe

OFFICIAL FILE COPY
O. M. E
RECEIVED JUL 29 1964

DATE	INITIALS	CODE
7/29	[illegible]	800
		120
7/30	[illegible]	120M

No. 157 Howard Street
Spokane, Washington 99204
July 27, 1964

Air Mail

Mr. Cecil E. Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 33d South Street
P. O. Box 15437
Salt Lake City 15, Utah

Re: OME-6349 (Gold-Silver)
Beta-Kappa Claims and Leased Properties
Fergus County, Montana
Contract 2193

Dear Mr. Smith:

We are enclosing a three-month supply of Operator's Monthly Voucher and Progress Report, MME Forms 60 and 61. The original and three copies of the completed report forms, as well as the narrative, maps, assays, and all technical data, should be submitted for each month in which costs have been incurred under the contract. However, in the event that you do not wish to submit a voucher for any month, the narrative report for the work done in that month is required. Delay in processing can be avoided if reports are submitted promptly to this office.

Also enclosed are three copies of Standard Form 38, entitled "Notice to Labor Unions or Other Organizations of Workers--Nondiscrimination in Employment." In accordance with Executive Order 10925, which is Exhibit B of your contract, you should complete one copy and send it to any labor union that may be involved in your OME contract work and should post one or more copies in conspicuous places available to employees or applicants for employment. The enclosed poster should be kept exhibited in a conspicuous place available to both employees and applicants for employment.

You or whoever will be in charge of carrying out the project work under this contract are urged to read carefully all the specifications set forth in Exhibit A. Without prior Government approval subsequently confirmed in writing, the Government may refuse to contribute to the cost of any work that does not conform to these specifications.

Sincerely yours,

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

Enclosures
cc: Vitro Minerals Corp.
New York, New York

cc: OME
MacLaren
MLSmelser:mls

Director's Reading File
Resources Research Branch Chief

Vitro MINERALS CORPORATION

90 PARK AVENUE · NEW YORK, N. Y. 10016 · MURRAY HILL 2-5700

OFFICIAL FILE COPY
O. M. E
RECEIVED JUL 22 1964

DATE	INITIALS	CODE
		120

July 21, 1964

Mr. George Fumich, Jr.
Acting Director
United States Dept. of the Interior
Office of Minerals Exploration
Washington 25, D.C.

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana

Dear Mr. Fumich:

Enclosed you will find an original and 3 copies of the above contract which has been executed and are returned herewith to you in accordance with your letter of July 20, 1964.

We appreciate your expediting the handling of this matter and look forward with anticipation to further pleasant relations with your office and Mr. MacLaren in the field.

Very truly yours,

VITRO MINERALS CORPORATION

Eugene B. Hotchkiss

Eugene B. Hotchkiss
Executive Vice President

EBH/is
enc.
cc: Mr. Cecil H. Smith

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
7/20	[illegible]	120
7/21	[illegible]	120M
7/20	[illegible]	800
"	[illegible]	130
		110
7/20	[illegible]	100
7/21	[illegible]	220
		120M

JUL 20 1964

Mr. Eugene B. Hotchkiss
Executive Vice President
Vitro Minerals Corporation
90 Park Avenue
New York, New York 10016

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana

Dear Mr. Hotchkiss:

In order to save time as Mr. MacLaren will be in the field this week, enclosed are the original and four copies of a proposed contract for the subject claims and leased properties. The contract consists of MME Form 50 (seven pages), Annex I (three pages), three Lien and Subordination Agreements, Exhibit A (six pages), Exhibit B (one page), and three maps (Fig. 1 and Plates 1 and 2). All copies of the contract have been signed by me for the Government.

If the proposed contract is satisfactory to the corporation, it should be signed by an authorized representative thereof and all of the copies returned to this office with the exception of the one marked "Operator's Copy."

Interest accrues under the contract at the rate of 6¼ percent from the dates on which the individual payments are made by the Government and like the principal is repayable from royalty on production.

If any part of the proposed contract does not have the corporation's approval, the original and all copies should be returned to this office together with any proposed changes for consideration.

Sincerely yours,

George Fumich, Jr.

Acting Director

Enclosures

GCSelfridge/gla (7-20-64)
cc to: Director's Reading File
Docket
Region I w/"Extra Copy for Field Office" contract copy
Review Committee
Mr. Selfridge

23263

True copies of assay certificates of all samples shall be submitted with the Operator's monthly reports, which shall also include maps or sketches showing the work completed during the reporting period. The maps shall show the location and p.p.m. analyses of soil samples and the geological formations and structures traversed by the trenches and drill holes and the location and values of the samples.

No work under this contract shall be performed at locations closer than 200 feet to the outer boundaries of the property under this contract.

The location, direction, and extent of each work item shall be subject to Government approval.

The Operator shall provide such supervisory and technical services as may be required to complete the work in a satisfactory manner.

The work shall be divided into three stages. The Operator shall complete all of the soil sampling in Stage I and as much of the trench work therein as is authorized by the Government and confirmed in writing. Approval of Stages II and III shall be dependent upon favorable results having been obtained in the preceding stage. All work under Stages II and III shall have the prior authorization of the Government and shall be confirmed in writing. Thereafter, the Operator shall complete as much work under each stage as is approved by the Government.

Retyped

Description of the Work

Stage I

On the Beta claims establish a base line not less than 200 feet north of and parallel to the south side lines of Beta 1 and Beta 2 claims. At intervals of 150 feet northerly, establish 50 parallel auxiliary base lines. Along each base line establish soil sampling stations at 100-foot intervals. The base lines are indicated in red and the stations in black on Plate 1 entitled "Claim Map . . . Locations of Recommended Soil Sampling Stations . . . Beta Claim Group," attached hereto and made a part hereof.

Re: OME 6349

(1). Exh A, end of page 3, delete "with a maximum of 56 hours of dozer work".

(2) Exh A, center of page 5, change "58.8" hours to "59" hours.

Talbert
7/17/64

P 3 with a D-8 of 58.8 hours
with a D-7.
P. 3 Annex I - correct "Betta"
P. 1 Exhibit A remove (,)
Rewrite P. 2 Exhibit A

Utr ~~M~~ M On. E 649

(Gold-Schr)

R

Beta-Kappa Claims &
Leased Gr
Fergus Co., Mont.

Re: OME-6379

① Annex I states 9 lots of fee land are included but lists only 7. Map indicates only 7.

② In 8th par. of Genl Prov., change "claim areas" to "property under this contract".

③ In last par of Genl. Prov., it is suggested that "approved" be change to "authorized".

④ In description of work, Stage I, 1st & 2nd par., soil sampling stations are stated as being shown in "red" on Plates 1 & 2, where they are actually shown in black. Base lines are red.

~~⑤ The Genl Prov. & description of work for Stage I indicate that all soil samples are to be assayed (a total of over 1400 per Plates 1 & 2) but costs are provided for only 900 assays, including those of trench samples.~~

⑥ Under Stage I, if work of trenching can be done in 100 hrs. by D-7, lesser no. of hrs. for D-8 should be required.

⑦ Under Stages II & III the same comment as ⑥ above relative to bulldozing.

⑩ Under Stage II assaying costs for 900 samples are provided for 4500 ft of drilling, although Genl. Prov. provide that only mineralized samples shall be assayed.

⑪ Why the difference in incidental allowance in Stages II & III, 21 cents & 10 cents ??

Talbert 7/10/64

1. Bibliography - see 20 + 29? 29 not in

2. house of buildings in stages II & III in out of perspect.

DRAFT 7/9/64
FMMurphy/mm

See changes Exhibit A and Redraft of Exhibit A.

~~200~~ 120

MME Form 50
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
(Long Form)

Docket No.	Commodity	Contract No.	County	State
OME-6349	Gold-Silver	14-23-090-	Fergus	Montana

It is agreed _____ (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Vitro Minerals Corporation, a Delaware corporation

_____,

whose mailing address is **90 Park Avenue, New York, N. Y., 10016**, hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before Sept. 15, 1964 (Date), and, subject to the provisions of Article 9 and Exhibit A, shall either have completed the work within 12 months from the date of the contract or shall have incurred allowable costs (see Article 6) in a sum not less than the total cost set forth in Exhibit A.

(b) The total allowable cost of the work set forth in Exhibit A is $ 93,740. The Government will contribute 50 percent of the allowable costs as they are incurred, in a total sum not in excess of $ 46,870 in accordance with the provisions of Articles 3, 4, 5, and 6. "Costs incurred" means costs that have been paid or have become due and payable, or that the Government determines have become obligations.

(c) Interest computation.--Simple interest at the rate of _____ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

See Annex I

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the lien agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

See Annex I

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 7 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Independent contracts.--To the extent that the allowable costs are estimated in Exhibit A with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed (see Article 6(a), Category (1)). Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract, the Government will participate in payments to the independent contractor only as to work performed in accordance with the provisions of this exploration contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.-- The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government; however, the original of the Operator's Monthly Voucher shall be supported by documentary evidence, such as certified copies or transcripts of payrolls and invoices, for all costs claimed under Article 6 (a) (1).)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the related costs.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of the same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Costs.--(a) Allowable costs.--The allowable costs of the work to which the Government will contribute are limited to:

(1) the necessary, reasonable, and direct actual costs that are estimated in Exhibit A by categories as specified in this article; and

(2) fixed costs for units of work to be performed (per foot, per hour, etc.) agreed upon in lieu of actual costs and set forth in Exhibit A.

The Government will not contribute to costs under any category or subcategory omitted from the estimate of costs in Exhibit A. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost; any excess over a fixed unit cost; and any excess over the total allowable cost of the work are not allowable. The Operator shall incur such excesses for his own account without contribution by the Government, but the Operator is not obligated to incur more than his agreed percentage of the total allowable cost of the work.

Any category or subcategory or element thereof not designated as a maximum in this article or in Exhibit A may be exceeded, provided that the total allowable cost of the work, which is a maximum, is not exceeded.

CATEGORY (1)--INDEPENDENT CONTRACTS.--(See Article 3(b)). The total of this category and the average unit cost estimated for each type of work to be performed under an independent contract are maximums.

CATEGORY (2)--PERSONAL SERVICES.

Subcategory (a)--Supervision and Technical Services--All elements of this subcategory (number of supervisors, technicians, outside consultants, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)--Labor.

CATEGORY (3)--OPERATING MATERIALS AND SUPPLIES.--Includes such items as drill bits and steel, explosives, fuel, pipe, power, timber, rail, and small tools costing less than $50 each.

CATEGORY (4)--OPERATING EQUIPMENT.

Subcategory (a)--Rental.--The number of each rented item [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)--Purchases.--The total of this subcategory is a maximum.

Subcategory (c)--Depreciation.--All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)--INITIAL REHABILITATION AND REPAIRS.--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

Subcategory (a)--Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).--The total of this subcategory is a maximum.

Subcategory (b)--Initial rehabilitation and repairs of operating equipment.--The total of this subcategory is a maximum.

CATEGORY (6)--NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

CATEGORY (7)--MISCELLANEOUS.--Includes requirements and costs that do not fall within any of the first six categories, such as repairs other than initial and maintenance of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, and communications.

(b) Nonallowable costs.--In addition to the limitations imposed by paragraph (a) of this Article 6 the Government will not contribute to the following costs:

(1) Costs of the land, such as rental, depreciation, depletion, or other costs of acquiring, owning, or holding possession;

(2) Indirect costs, such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) Previous work performed or costs incurred before the date of this contract; and

(4) Deferred payments.--Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods, unless the purchase agreement is approved by the Government in writing.

(c) Reductions in costs.--The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original total cost. The provision does not apply to receipts from production which are subject to the Government's royalty under the provisions of Article 7.

ARTICLE 7. Repayment by Operator.--(a) Certification.-- If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retains his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certicifation of possible production--from the date of the contract until the lapse of the time within which the government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract, or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first. **See Article 16**

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or Producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

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

(e) Lien for payment.--To secure the payment of royalty (see Article 7(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be contrued as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 8. Interests in purchased property.--(a) Title and ownership.--All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions although title thereto shall be taken in the name of the Operator.

(b) Preservation of property.--Until the final disposal of any property in which the Government has an interest, the Operator shall preserve and protect same for the best interest of the Government, and any reasonable and necessary cost thereof will be treated as an allowable cost of the exploration. After the completion of the work, termination of the Government's obligation to contribute, or when such property is not being used for the work, the Operator shall not use it elsewhere without the written consent of the Government and without paying a reasonable rental to be fixed by the Government for its proportionate interest.

(c) Disposal of property.--Upon the completion of the work, termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, sale to others, purchase by the Operator, or sale or transfer to the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government, the Operator shall not sell at any price any item of property that cost more than $500, and shall not sell at less than 25 percent of the purchase price any item of property that cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or offers. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, explosives, pipe, or rail), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item, the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the exploration.

(d) Default of the Operator re disposal.--If within 90 days after the completion of the work, termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may:

(1) in writing extend the time within which the Operator must dispose of or liquidate the property;

(2) by written notice to the Operator, place upon such property what it determines to be a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; and

(3) enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 9. Termination of the Government's obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 9 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 13.

ARTICLE 10. Notices to be given by the Government may be delivered to the Operator, or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 11. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 12. Nondiscrimination in Employment. The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961 as amended and supplemented are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 13. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 14. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for

liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 15. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 16. Changes and added provisions.--

The royalty period in Article 7(b)(2) is extended to 15 years.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

_____
(Operator)

By_____

By_____

Title_____

I,_____, certify that I am the
(Name)

_____ secretary of the corporation named as Operator herein; that

_____, who signed this contract on behalf of the Operator, was then
(Name)

_____of said corporation; that said contract was duly signed for
(Title)

and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

_____

[CORPORATE SEAL]

DRAFT 7/9/64
FMOsupphy/mm

EXPLORATION CONTRACT
VITRO MINERALS CORPORATION
OME-6349

ANNEX I

The land referred to in Article 2 of the contract consists of ninety-one (91) unpatented lode mining claims, ~~nine~~ seven (9) lots of fee land, and (9) patented lode claims. The unpatented claims are recorded in the Records of Fergus County, Lewistown, Montana. Data relating to all claims and fee land are as follows:

Unpatented lode claims owned by Operator by right of location.

Beta Nos. 1 through 62, in secs. 18, 19, 30, and 31, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, pages 37 through 160.

Kappa Nos. 1 through 24, in sec. 8, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, pages 161 through 208.

Leased Claims and Fee Land

Hoffman Property

In a Mining Lease and Option dated November 16, 1963, Ruth Kelly Hoffman, individually and as natural guardian of Larry C. Hoffman, and Larry C. Hoffman granted mining rights to the Operator covering the Prester John unpatented lode mining claim in the NE¼ of the SW¼ of sec. 30, T. 16 N., R. 20 E., PMM. The claim which covers the old Whiskey Gulch Mine, is recorded in Lode Book 14, page 517.

A Lien and Subordination Agreements executed by Ruth Kelly Hoffman and Larry C. Hoffman is attached hereto and made part hereof.

Pitt Property

In a Mining Lease and Option dated December 18, 1963, Henry J. Pitt and his wife, Florence G. Pitt, granted mining rights to the Operator covering the following four (4) unpatented lode mining claims and four (4) lots of fee land:

Jinx claim in the NE¼ of sec. 18, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, page 218.

Mecca claim in the SE¼ of sec. 7, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, page 216.

Monte Nos. 1 and 2 claims in the N½ of sec. 18, T. 16 N., R. 20 E., PMM. Recorded in Lode Book 15, pages 212 and 214, respectively.

The fee land consists of Lots 2, 3, 6, and 7 in sec. 17, T. 16 N., R. 20 E., PMM.

A Lien and Subordination Agreements executed by Henry J. Pitt and Florence G. Pitt is attached hereto and made part hereof.

Abbott Property

In a Mining Lease and Option dated October 23, 1963, Granville S. Abbott and his wife, Addie Abbott, granted mining rights to the Operator covering the following nine (9) patented claims and three lots of fee land:

Patented claims in secs. 8 and 17, T. 16 N., R. 20 E., PMM:

Name of Claim	Mineral Survey Number
Goodwin	6451
Goodwin No. 2	8791 A
Aurora	8908
Night Owl	8908
Hawkeye	7410
Mammoth	7411
Mammoth Fraction	7412
Wickett	7413
19th Century	7414

The fee land consists of Lots 9, 10, and 11, except that portion of Lots 10 and 11 described in a conveyance from Florence G. Gilmore to Gilt Edge Mining Corporation in a Warranty Deed dated June 26, 1939, recorded in Book 137 of Deeds, page 59, Document No. 17671.

A Lien and Subordination Agreements executed by Granville S. Abbott and Addie Abbott is attached hereto and made part hereof.

The outer boundaries of the claims and claim groups and fee land are shown in green on Fig. 1 entitled "Claim Overlay Map, T. 16 N., R. 20 E., Fergus Co. Montana . . .," attached hereto and made part hereof.

Claims not controlled by the Operator but which lie within the claim groups are shown in yellow.

Because of prior possession by other owners, not all of the Kappa and Beta claims contain a full 20 acres. The individual acreage of each claim controlled by the Operator is approximately indicated on Fig. 1.

DRAFT 7/9/64
FMMurphy/mm

EXPLORATION CONTRACT
VITRO MINERALS CORPORATION
OME-6349

EXHIBIT A

The purpose of this project is to explore by soil sampling, bulldozing trenches, rotary and/or down-the-hole percussion drilling for gold and silver-bearing ore bodies occurring as breccia-filled fissure veins or as replacement deposits in limestone or porphyry at the contact, ~~and/or veins~~ adjacent ~~to the contact~~, between Madison limestone of Mississippian age and syenite porphyry of Eocene age.

General Provisions

Soil samples shall be split and one split shall be sent to a commercial assayer to be tested for its parts per million arsenic content.

All significantly mineralized areas ~~traversed~~ in the trenches shall be sampled by cutting channels ~~normal to the strike of the deposit~~ at intervals of not more than 10 feet. Each sample shall be split as necessary and one split assayed for gold and silver.

During rotary and/or down-the-hole percussion drilling, samples of the cuttings shall be recovered at 5-foot intervals with a cyclone sample collector. Samples showing mineralization shall be split as necessary and one split assayed for gold and silver.

The Operator shall store one split of each sample from whatever source in a suitable container properly identified as to the location where the sample was obtained. The stored samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored samples.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly reports, which shall also include maps or sketches showing the work completed during the reporting period. The maps shall show the location and p.p.m. analyses of soil samples and the geological formations and structures traversed by the trenches and drill holes and the location and values of the samples.

A D-8 or D-7 Caterpillar dozer or equivalent unit of any other make shall be used to bulldoze the trenches, access roads, and to level the drill sites.

The holes shall have not less than a 4-inch diameter and may be drilled by either rotary or percussion methods. Holes encountering a lower porphyry-limestone contact shall be continued, if possible, to at least 50 feet below the contact.

No work under this contract shall be performed at locations closer than 200 feet to the outer boundaries of the claim areas.

The location, direction, and extent of each work item shall be subject to Government approval.

The Operator shall provide such supervisory and technical services as may be required to complete the work in a satisfactory manner.

The work shall be divided into three stages. The Operator shall complete all the soil sampling in Stage I and as much of the trench work in Stage I and the work in Stages II and III as is approved and confirmed in writing by the Government.

Description of the Work

Stage I

On the Beta claims establish a base line not less than 200 feet north of and parallel to the south side line of Beta 1 and Beta 2

claims. At intervals of 150 feet northerly, establish 50 parallel auxiliary base lines. Along each base line establish soil sampling stations at 100-foot intervals as indicated in red on Plate 1, entitled, "Claim Map . . . Locations of Recommended Soil Sampling Stations . . . Beta Claim Group," attached hereto and made a part hereof.

On the Kappa claims establish a base line about 50 feet north of and parallel to the north side line of Kappa 5 and Kappa 6 claims. At intervals of 150 feet establish 21 parallel auxiliary base lines to the north and 22 to the south. Along each base line establish soil sampling stations at 100-foot intervals as indicated in red on Plate 2 entitled, "Claim Map . . . Locations of Recommended Soil Sampling Stations . . . Kappa et al., claims," attached hereto and made a part hereof.

Soil samples shall be taken at each sample station. However, as work progresses, assay results may indicate areas in which soil sampling can be omitted along parts of 1 or 2 consecutive lines. In such cases these parts of lines need not be sampled.

Anomalous areas indicated by soil sampling ~~and favorable geologic features~~ shall be explored by bulldozer trenching.

Stage II

Access roads shall be bulldozed and drill stations leveled in favorable areas indicated by the Stage I work. From these ~~stations~~, a maximum of 15 holes shall be drilled. It is estimated that the holes will have an average depth of 300 feet or an aggregate of 4,500 feet of drilling. No hole drilled shall be closer than 200 feet to any other hole drilled under this Stage II of the contract.

depending on type of deposit

Stage III

~~Ore~~-grade holes indicated by the Stage II drilling may be offset by drilling additional holes on not closer than 100-foot centers. ~~Ore trends may be followed by drilling holes at intervals of not less than twenty 100 feet along the trend.~~ Not more than 66 holes shall be drilled for an aggregate of not more than 20,000 feet of drilling under this Stage III of the contract.

Access roads may be bulldozed and drill stations leveled if necessary under this Stage II with a maximum of 25 hours of dozer work.

Estimated Costs of the Work

Stage I

Actual Costs

Category (1) Independent Contracts

100 hours ~~of~~ bulldozing	$2,000.00	
D-8 Caterpillar dozer @ $20.00/hr.		
D-7 " " @ $17.00/hr.		2,000.00
Total Estimated Actual Costs		$2,000.00

Fixed Unit Costs

Grid layout, soil sampling, and analysis for arsenic, 1,425 samples @ $4.00/sample	$5,700.00	
200 samples assayed for gold and silver @ $3.00/sample	600.00	
Total Estimated Fixed Unit Costs		$6,300.00
Total Estimated Costs Stage I		$8,300.00

Stage II

Actual Costs

Category (1) Independent Contracts

75 hours bulldozing access roads and drill sites $1,500.00		
D-8 Caterpillar dozer @ $20.00/hr.		
D-7 " " @ $17.00/hr.		
Mobilization and demobilization of drilling equipment and personnel	400.00	
4,500 feet of rotary or percussion drilling @ $3.00/ft.	13,500.00	$15,400.00
Total Estimated Actual Costs		$15,400.00

Fixed Unit Costs

Incidental allowance for each foot of drill hole completed, 4,500 feet @ $0.21/ft.[1]	$945.00	
900 samples assayed for gold and silver @ $3.00/sample	2,700.00	
Total Estimated Fixed Unit Costs		$3,645.00
Total Estimated Cost Stage II		$19,045.00

Stage III

Actual Costs

Category (1) Independent Contracts

25 hours bulldozing access roads and drill sites $500.00		
D-8 Caterpillar dozer @ $20.00/hr.		
D-7 " " @ $17.00/hr.		
20,000 feet of rotary or percussion drilling @ $3.00/ft.	60,000.00	$60,500.00
Total Estimated Actual Costs		$60,500.00

Fixed Unit Costs

Incidental allowance for each foot of drill hole completed, 20,000 feet @ $0.10/ft. 1/	$2,000.00	
1,000 samples assayed for gold and silver @ $3.00/sample	3,000.00	
Total Estimated Fixed Unit Costs		$5,000.00
Total Estimated Cost Stage III		$65,500.00

SUMMARY

Total Estimated Cost Stage I	$ 8,300.00
" " " " II	19,045.00
" " " " III	65,500.00
Total Estimated Cost of the Work (rounded)	$92,840.00
Government Participation @ 50% (~~rounded~~)	$46,420.00

1/ Includes all costs whatsoever except assaying that would otherwise be ~~XXX~~ allowable costs under Categories (2) through (7).

SECOND DRAFT 7/13/6
FMMurphy/mm

EXPLORATION CONTRACT
VITRO MINERALS CORPORATION
OME-6349

EXHIBIT A

The purpose of this project is to explore by soil sampling, bulldozing trenches, rotary and/or down-the-hole percussion drilling for gold and silver-bearing ore bodies occurring as breccia-filled fissure veins or as replacement deposits in limestone or porphyry at the contact or adjacent thereto, between Madison limestone of Mississippian age and syenite porphyry of Eocene age.

General Provisions

Soil samples shall be split and one split of each shall be sent to a commercial assayer to be tested for its parts per million arsenic content.

A D-8 or D-7 Caterpillar dozer or equivalent unit of any other make shall be used to bulldoze the trenches, access roads, and ~~to level the~~ drill sites.

All significantly mineralized areas exposed in the trenches shall be sampled by cutting channels at intervals of not more than 10 feet. Each sample shall be split as necessary and one split assayed for gold and silver.

Holes shall have not less than a 4-inch diameter and may be drilled by either rotary or percussion methods. Holes encountering a lower-porphyry-limestone contact shall be continued, if possible, to at least 50 feet below the contact.

During rotary and/or down-the-hole percussion drilling, samples of the cuttings shall be recovered at 5-foot intervals with a

cyclone sample collector. Samples showing mineralization shall be split as necessary and one split assayed for gold and silver.

The Operator shall store one split of each sample from whatever source in a suitable container properly identified as to the location where the sample was obtained. The stored samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored samples.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly reports, which shall also include maps or sketches showing the work completed during the reporting period. The maps shall show the location and p.p.m. analyses of soil samples and the geological formations and structures traversed by the trenches and drill holes and the location and values of the samples.

No work under this contract shall be performed at locations closer than 200 feet to the outer boundaries of the property under this contract.

The location, direction, and extent of each work item shall be subject to Government approval.

The Operator shall provide such supervisory and technical services as may be required to complete the work in a satisfactory manner.

The work shall be divided into three stages. The Operator shall complete all of the soil sampling in Stage I and as much of the trench work therein as is authorized by the Government and confirmed in writing. Approval of Stages II and III shall be dependent upon favorable results having been obtained in the preceding stage and shall have the prior authorization of the Government confirmed in writing. Thereafter, the Operator shall complete as much work under each stage as is approved by the Government.

claims. At intervals of 150 feet northerly, establish 50 parallel auxiliary base lines. Along each base line establish soil sampling stations at 100-foot intervals. The base lines are indicated in red and the stations in black on Plate 1 entitled "Claim Map . . . Locations of Recommended Soil Sampling Stations . . . Beta Claim Group," attached hereto and made a part hereof.

On the Kappa claims establish a base line about 50 feet north of and parallel to the north side lines of Kappa 5 and Kappa 6 claims. At intervals of 150 feet establish 21 parallel auxiliary base lines to the north and 22 to the south. Along each base line establish soil sampling stations at 100-foot intervals. The base lines are indicated in red and the stations in black on Plate 2 entitled "Claim Map . . . Locations of Recommended Soil Sampling Stations . . . Kappa et al., Claims," attached hereto and made a part hereof.

Soil samples shall be taken at each sample station. However, as work progresses, assay results may indicate areas in which soil sampling can be omitted along parts of 1 or 2 consecutive lines. In such cases these parts of lines need not be sampled.

Certain anomalous areas indicated by soil sampling shall be explored by bulldozer trenching.

Stage II

Access roads shall be bulldozed and drill sites leveled in favorable areas indicated by the Stage I work. From these sites, a maximum of 15 holes shall be drilled. It is estimated that the holes will have an average depth of 300 feet or an aggregate of 4,500 feet of drilling. No hole drilled shall be closer than 200 feet to any other hole drilled under this Stage II of the contract.

Description of the Work

Stage 1

On the Beta claims establish a base line not less than 200 feet north of and parallel to the south side linesof Beta 1 and Beta 2

Stage III

Possible ore grade holes, depending on the type of deposit, indicated by the Stage II drilling, may be checked by drilling additional holes on not closer than 100-foot centers. Not more than 66 holes shall be drilled for an aggregate of not more than 20,000 feet of drilling under this Stage III of the contract.

Access roads may be bulldozed and drill sites leveled if necessary under this Stage II ~~with a maximum of 50 hours of dozer work.~~

Estimated Costs of the Work

Stage I

Actual Costs

Category (1) Independent Contracts

Bulldozing trenches	~~$2,000.00~~	$2,000.00
D-8 Caterpillar dozer, 100 hrs.@ $20.00/hr.		
D-7 " " 117 hrs.@ $17.00/hr.		~~$2,000.00~~
Total Estimated Actual Costs		$2,000.00

Fixed Unit Costs

Grid layout, soil sampling, and analysis for arsenic, 1,425 samples @ $4.00/sample	$5,700.00	
200 samples assayed for gold and silver @ ~~$3.00~~/sample	500 ~~600.00~~	
Total Estimated Fixed Unit Costs		$6,~~300~~.00
Total Estimated Costs Stage I		$8,~~300~~.00

Stage II

Actual Costs

Category (1) Independent Contracts

Bulldozing access roads and drill sites	$1,500.00	
D-8 Caterpillar dozer, 75 hrs. @ $20.00/hr.		
D-7 " " 88 hrs. @ $17.00/hr.		
Mobilization and demobilization of drilling equipment and personnel	400.00	
4,500 feet of rotary or percussion drilling @ $3.00/ft.	13,500.00	$15,400.00
Total Estimated Actual Costs		$15,400.00

Fixed Unit Costs

Incidental allowance for each foot of drill hole completed, 4,500 feet @ $0.21/ft.[1]	$945.00	
600 samples assayed for gold and silver @ ~~$3.00~~/sample	1,800.00	
Total Estimated Fixed Unit Costs		$2,745.00
Total Estimated Cost Stage II		~~$18,145.00~~

Stage III

Actual Costs

Category (1) Independent Contracts

Bulldozing access roads and drill sites	$1,000.00	
D-8 Caterpillar dozer, 50 hrs. @ $20.00/hr.		
D-7 " " ~~56.8~~ hrs. @ $17.00/hr.		
20,000 feet of rotary or percussion drilling @ $3.00/ft.	60,000.00	$61,000.00
Total Estimated Actual Costs		$61,000.00

Fixed Unit Costs

Incidental allowance for each foot of drill hole completed, 20,000 feet @ $0.21/ft.[1/]	$4,200.00	
1,000 samples assayed for gold and silver @ $2.50/sample	2,500.00	
Total Estimated Fixed Unit Costs		$6,700.00
Total Estimated Cost Stage III		$67,700.00

SUMMARY

Total Estimated Cost Stage I	$8,200.00
" " " " II	17,845.00
" " " " III	67,700.00
Total Estimated Cost of the Work (rounded)	$93,740.00
Government Participation @ 50%	$46,870.00

1/ Includes all costs whatsoever except assaying that would otherwise be allowable costs under Categories (2) through (7).

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O. M. E.
RECEIVED JUL 2 1964

DATE	INITIALS	CODE
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	Memorandum	

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
June 26, 1964

(Dispatched JUN 30 1964)

cy 130

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: Examination report
OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana

The Vitro Minerals Corporation property was visited June 13, 1964, accompanied by Ben Dickerson and Bob Adamson, geologists for the applicant. The previous afternoon, during a conference with these gentlemen, the question of the acceptability of some of the claims and leased properties was raised and discussed, as were the objectives of the project and the proposed methods and costs of attaining them. About 5 hours were spent on the property inspecting 4 areas in which former operators had worked, southwest of Big Six, Big Six, Whiskey Gulch, and Storm King-Lookout areas.

Referring to the map showing the individual claims which accompanied the May 6, 1964, letter from Cecil H. Smith, the applicant's Exploration Manager, the following claims may not be acceptable for the reasons indicated:

Claim	Reason for possible unacceptability
Beta 11	Includes Ray Horse claim of Gilt Edge Co.
Beta 30, 32, 34	Brooks claim overlaps part of each
Beta 39, 40, 41, 42, 55, 56, 57, 58, 59, 60, 61	Part of each claim is overlapped by Gilt Edge property. (Beta 58, omitted from map; should be shown between 55-56 and 59.)
Kappa 3, 5, 7, 9, 11, 13, 15	Part of each are overlapped by property not controlled by applicant.

Maps, {Claim map and Plate 1 and Plate 2 in envelope kept side

FIELD EXAM. REPT.

There are other irregular areas that may or may not be acceptable. These include the claims in the Abbott group, all of which are patented, and lots 3, 6, 9, 10, and 11. For the purpose of getting this report on its way, it will be assumed that all claims are acceptable; any recommendations that may involve unacceptable claims or lots can be deleted in your office.

From the east end of Lewistown, continue easterly along U. S. Highway 87 for 3 miles and turn left on a gravel road. Proceed northerly for 6 miles beyond which the road becomes poor and is ungraded. At 6.5 miles, take the left fork for 0.2 mile to a bench mark and another road fork. The right fork continues to the settlement of Giltedge. At the second road fork, the left one leads to the old caved workings indicated on the applicant's May C by an "X" southwesterly from Big Six workings. The right fork leads to the Big Six workings and continues to the workings at Whiskey Gulch.

The geology of the area is described in the application and by various authors including:

Corry, Andrew V., 1933, Some gold deposits of Broadwater, Beaverhead, Phillips, and Fergus Counties, Montana: Montana Bur. of Mines and Geology Memoir No. 10, p. 36-41

Robertson, Alnon F., 1950, Mines and mineral deposits (except fuels), Fergus County, Mont.: U. S. Bur. of Mines, Inf. Circ. 7544, p. 9 and p. 17-39

Sedimentary rocks ranging in age from Cambrian to Cretaceous have been intruded and domed up by laccoliths and associated dikes, sills, and stocklike masses. Deposits of gold-silver ores are related to the contact, and areas adjacent to the contact, between Madison limestone of Mississippian age and syenite porphyry of Eocene age. The ore bodies fall into various classifications. Some are in breccia-filled fissure veins along contacts, some are replacement deposits in limestone, some are replacement deposits in porphyry, and some are combination of one or more of these types. Most of the limestone replacements are in the upper part of the Madison formation either in shaley bituminous beds or in thin-bedded argillaceous and arenaceous members, and many of them are on the footwall side of dikes and sills.

Gold occurs as an inclusion in pyrite or limonite and as free gold in gossans and oxidized zones although it usually is not visible even with a hand lens. Gangue minerals include quartz, calcite, fluorite, and pyrite, sometimes with small amounts of galena, sphalerite, and chalcopyrite. Argentite is sometimes present in significant amounts.

Robertson (1950) gives such production records as are available, but these are not too complete. The tonnage, grade, and recovered ounces of gold and silver from the five largest producers in the vicinity of the applicant's claims have been derived from Robertson for compilation of the following table:

Property	Ore tons	Ounces/ton Au	Ounces/ton Ag	Total ounces Au	Total ounces Ag
Gilt Edge (including Lookout, Storm King, Chieadoe, Plattsburg, Cuba)	377,937	0.17	0.008	64,480	3,000
Cumberland	40,238	0.38	0.32	15,236	12,771
Maginnis	34,883	0.53	0.69	18,674	24,255
Whiskey Gulch	30,127	0.27	--	8,134	--
Spotted Horse	17,639	0.92	0.80	16,277	14,925

Although this incomplete production record seems to indicate an average grade of only 0.24 ounce gold and 0.12 ounce silver per ton, ore shoots of unknown tonnage said to contain much higher grade material are included in these total production figures. For example, at $35 an ounce for gold and $1.29 an ounce for silver, the average value of the ore mined from the Spotted Horse is $33.39 per ton.

At the workings southwest of the Big Six mine, beds of massive limestone were exposed in a small open cut. The attitude of the beds was flat to gently dipping, suggesting a nearby subsurface intrusion. The underground workings were caved and inaccessible. At the Big Six surface workings were more extensive, but those underground were inaccessible. However, there were several large open pits, some of them representing former shallow tunnels that had been mined to the surface. Most of the workings are in an area about 250 feet wide and 600 to 800 feet long. Here also variations of dip indicate a doming and porphyry could be seen in one side of what appears to be a caved stope. At Whiskey Gulch workings were much more extensive, but the underground workings were inaccessible. Here a contact between a porphyry dike and thin-bedded shaley limestone was exposed in surface cuts and in a large stope that had caved to the surface at one end. Warping of the sedimentary beds by the intrusive dike could also be seen at these workings.

As summarized by Dickerson, the applicant proposes in Stage I to trace known intrusive bodies and search for evidence of others not

exposed at the surface by correlating the results of soil sampling for trace amounts of arsenic with the results of detailed geologic mapping now in progress. It is his expectation that this will indicate areas favorable for the exploration for large moderate- to low-grade bodies that can be mined profitably by open-pit methods or smaller higher-grade bodies that can be mined profitably by underground or open-pit methods.

After eliminating the unfavorable ground, the applicant proposes to explore the most promising areas by rotary drilling under Stage II. Under Stage III he proposes to explore in the area of favorable Stage II holes by offset drilling.

It is concluded that the chance of making one or more significant discoveries of gold-silver ore bodies by the proposed program is good and a three-stage program is recommended.

Stage I.--On the Beta claims establish a base line not less than 200 feet north of and parallel to the south side line of Beta 1 and Beta 2 claims. At intervals of 150 feet northerly, establish 30 parallel auxiliary base lines. Along each base line establish soil sampling stations at 100-foot intervals as indicated on plate 1. On the Kappa claims establish a base line about 50 feet north of and parallel to the north side line of Kappa 5 and Kappa 6 claims. At intervals of 150 feet establish 21 parallel auxiliary base lines to the north and 22 to the south. Along each base line establish soil sampling stations at 100-foot intervals as indicated on plate 2. No soil sampling station shall be located within 200 feet of exterior boundaries of the land controlled by the applicant.

Soil samples shall be taken at each sample station and shall be assayed for arsenic content in ppm. Where the soils have developed a pattern, samples are to be taken from the B or illuviation zone.

As work progresses, assay results may indicate areas in which soil samples can be omitted along parts of 1 or 2 consecutive lines; this should be permitted but not insisted upon in the contract which should provide for a total of 1,425 soil samples.

Provision should be made under Stage I for 100 hours of bulldozing so that, prior to selecting areas for Stage II drilling, some of the anticipated anomalous areas may be trenched and sampled.

Stage II.--Provision should be made for rotary drilling 2 or 3 holes for initial underground exploration at the more promising localities indicated by Stage I exploration. It is impossible at this time to estimate the number of holes that may be required for adequate exploration under this stage. However, as mineral deposits have been found below as well as above inclined intrusives, the hole should be drilled deep enough to penetrate the limestone for a distance of not less than 50 feet below the footwall contact. An

average depth of 300 feet should be ample. The area of exploration is large, 2.5 miles long by 0.29 mile wide, and therefore the applicant's estimate that 10,000 feet of hole which would permit up to 33 holes may not be too unreasonable. However, it is believed that provision for 4,500 feet of drilling or 15 holes will probably prove sufficient for this stage. This would provide for at least two 300-foot holes at each of as many as seven possibly favorable areas.

Stage III.--Provision should be made for drilling offset holes on 100-foot centers about any Stage II hole that shows ore-grade material. The specification of "ore grade" is suggested so that there will be some "built in" control against over drilling in this stage. However, it should be recognized that a Stage II hole containing marginal or even submarginal grade might be considered "ore grade" if there is a chance that the offset drilling might disclose a large body that could be mined by open-pit methods.

COSTS

Stage I

It is estimated that this stage will require a total of 143,200 lineal feet of base line and auxiliary base line, and 1,425 soil samples. One geologist and 2 helpers should be able to lay out 4,000 feet of base line per day; at 6 days per week, the total time required would be 5.9, say 6 weeks or 1.3 months. One geologist and 1 helper should be able to take 100 samples per day; at 6 days per week, the total time required would be 2.37, say 3 weeks or 0.7 month.

Because of rapid plane and/or train service, the applicant plans to send all soil samples to the Rocky Mountain Geochemical Laboratory in Missoula, Montana. The total charge of $1.50 for preparation and assay of each sample for arsenic is not out of line as Pioneer Geochemical Surveys in Spokane quoted $1.38.

OK

1. Independent Contracts

100 hrs bulldozing at $20/hr - D-8
16/hr - D-7 $2,000.00

2. Labor and Supervision

1 geologist, 2 mos at $800/mo	$1,600.00	
1 helper, 2 mos at $400/mo	800.00	
1 helper, 0.7 mo at $400/mo	240.00	
Total	$2,640.00	
FICA and other insurance at 15%	396.00	
	$3,036.00	
Grid layout and taking 1,425 soil samples		$2.13/sample

3. Operating Materials and Supplies

Gas and oil at $67.50/mo - 2 mos	$135.00	
Grid layout and taking 1,425 soil samples		$0.09/sample

4. Operating Equipment

Owner by Applicant	Value	Monthly deprec.
New 4-wheel drive	$4,800.00	$80.00
Ford pickup	for 2 mos	$160.00

Grid layout and taking 1,425 soil samples $0.11/sample

5. and 6. None

7. Analytical Work

Soil samples:

Preparation	- $0.50 per sample	
Assay for arsenic	1.00 " "	
	$1.50	$1.50/sample

(Applicant will pay transportation costs) --

Total grid layout, sampling and assaying $3.83

say $4.00/sample

7. Analytical Work (cont'd.)

Trench samples:
200 determinations for gold and silver
at $3.00 each $600.00

It is recommended that Stage I costs be set up as follows:

Fixed Unit Costs

100 hrs bulldozing at $20/hr	$2,000.00
Grid layout, soil sampling, and and analysis for arsenic - 1,425 samples at $4 each	5,700.00
Assay determinations for gold and silver 200 at $3 each from trenches	600.00
Total cost - Stage I	$8,300.00
Government participation at 50%	$4,150.00

Stage II

It is expected that straight rotary drilling will be feasible; however, Cecil H. Smith, Exploration Manager, has stated that, should down-the-hole hammer drilling be necessary at times, Vitro will assume the full additional cost. Drill rigs will be air operated and will include a cyclone sample collector as part of the standard drilling rig. At an estimated rate of advance of 200 feet per shift time required is 22.5 days, say 1 month. Because of the impossibility of recognizing visibly much of the mineralized rock careful assay control is necessary. However, a 5-foot sample should be as indicative as a sample every 2.5 feet proposed by the applicant.

How?

It should be realized that it is most difficult to estimate the drilling rate and that 200 feet per shift is purely arbitrary and may well be too optimistic.

1. Independent Contracts

75 hrs bulldozing access roads and preparation of drill stations at $20/hr			$ 1,500.00
Rotary drilling (bid by T. A. Beavers)			
Mobilization and demobilization			400.00
4,500 ft (including overburden) 4-3/4" hole at $3/ft			13,500.00

2. Labor and Supervision

1 geologist, 1 mo at $800			800.00

3. Operating Materials and Supplies

Gas and oil at $67.50/mo			67.50

4. Operating Equipment

Owned by Applicant	Value	Monthly deprec.	
New 4-wheel drive Ford pickup	$4,800.00	$80.00	80.00

5. and 6. None

7. Analytical Work

900 assays for gold and silver at $3 each	2,700.00
Total	$19,047.50

It is recommended that Stage II costs be set up as follows:

Actual Cost

Rotary drilling	
Mobilization and demobilization	$ 400.00
Rotary and/or down-the-hole hammer drilling - 4,500 ft at $3/ft	13,500.00
Total actual cost	$13,900.00

Fixed Unit Cost

75 hrs bulldozing at $20/hr	$ 1,500.00
Incidental allowance for technical supervision, sampling, etc., 4,500 ft of rotary and/or down-the-hole hammer drilling at $0.21/ft	945.00
Assay determination for gold and silver 900 at $3 each	2,700.00
Total unit cost	$ 5,145.00
Total cost - Stage II	$19,045.00
Government participation at 50%	$ 9,522.50

Stage III

It is estimated that offset drilling might be indicated at as many as 6 of the 15 Stage II holes. It is also estimated that as many as 11 offset holes might be required at each site. It is probable that some holes will be less than 200 feet deep, others will be more. At an assumed average depth of 300 feet per hole 20,000 feet of hole would be required as proposed by the applicant. Because the size of known ore bodies varies considerably, it is recommended that no specification be made regarding the number of offset holes to be drilled in any one favorable area, but there is no objection to an over-all limit of 66 holes, not to exceed an average depth of 300 feet per hole. At 200 feet per shift, time required is 100 shifts, say, 4 months. Only predetermined mineralized zones will be sampled from these holes.

1. Independent Contracts

25 hrs bulldozing access roads and preparation of drill stations at $20/hr	$ 500.00
Rotary drilling (bid by T. A. Beavers) 20,000 ft (including overburden) 4-3/4" hole at $3/ft	60,000.00

2. Labor and Supervision

1/2 geologist, 4 mos at $800/mo	1,600.00

3. Operating Materials and Supplies

Gas and oil, 1/2 time for 4 mos at $67.50/mo	135.00

4. Operating Equipment

Owned by Applicant	Value	Monthly deprec.	
New 4-wheel drive Ford pickup	$4,800.00	$80.00	
Used 1/2 time for 4 mos			160.00

5. and 6. None

7. Analytical Work

1,000 assays for gold and silver at $3 each	3,000.00
Total	$65,395.00

It is recommended that Stage III costs be set up as follows:

Actual Cost

Rotary and/or down-the-hole hammer drilling - 20,000 ft at $3/ft	$60,000.00
Total actual cost	$60,000.00

Fixed Unit Cost

25 hrs bulldozing at $20/hr	$ 500.00
Incidental allowance for technical supervision, sampling, etc., 20,000 ft of rotary and/or down-the-hole hammer drilling at $0.09½, say $0.10/ft	2,000.00
Assay determinations for gold and silver 1,000 at $3 each	3,000.00
Total fixed unit cost	$5,500.00
Total cost - Stage III	$65,500.00
Government participation at 50%	$32,750.00
Total cost of project	$92,845.00
Government participation at 50%	$46,422.50

The incidental allowances under Stages II and III seem to be very low. They are derived from the sum of items 2, 3, and 4 divided by the number of feet of hole to be drilled.

Enclosures
Distribution:
CMR(2)
USGS(SRO)
Deckot
MacLaren

VITRO MINERALS CORPORATION
600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE TELEPHONE IN 7-2414

OFFICIAL FILE COPY
O. M. E
RECEIVED JUN 1 1964
DATE IN | CODE
6/25 | 180

June 18, 1964

Mr. Donald R. McClaren
Director
Office of Mineral Exploration
U. S. GEOLOGICAL SURVEY
Spokane, Washington

Re: OME-6349 (gold-silver)
Vitro Minerals Corporation
Beta-Kappa claims and leased properties
Fergus County, Montana

Dear Mr. McClaren:

Under separate cover I am sending you six base maps at a scale of 1" = 200'. These maps cover the property included in Vitro Minerals Corporation's OME Application #6349. On the maps I have marked in red pencil the approximate location where we plan to take our arsenic geochemical soil samples. In the maps sent to you, 1,560 sites have been plotted; the remaining 440 sites will probably be located on GEOL map. They were not plotted as the topography and geology have not been checked in this area. The old patented claims in the area do indicate that intrusive dikes and sills and mineralization are present.

I am also enclosing an index map showing the area covered by the six 1" = 200' scale maps.

Two additional copies of these maps and index map will be sent you later in the week. If you have any questions concerning this matter or our OME application, please call us "Collect."

Very truly yours,

VITRO MINERALS CORPORATION

/s/ Cecil H. Smith

CECIL H. SMITH
Exploration Manager

RECEIVED

CHS:bas

Maps - under separate cover

OME

MINERALS CORPORATION

600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE • TELEPHONE IN 7-8414

OFFICIAL FILE COPY
O. M. E
RECEIVED JUN 1964

DATE	INITIALS	CODE
		500

May 27, 1964

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

Re: OME-6349

Dear Mr. MacLaren:

Thank you for your letter of May 25th in which you set the date of June 13th for examination of our property. This date is quite satisfactory and we will expect to hear from you Friday evening.

Sincerely,

VITRO MINERALS CORPORATION

BEN F. DICKERSON III
Staff Geologist

BFD:bas

OME

So. 157 Howard Street
Spokane, Washington 99204
May 25, 1964

OFFICIAL RECORD
OME
REC'D 1964
DATE
Murphy 500

Air Mail

Mr. Cecil H. Smith
Exploration Manager
Vitro Minerals Corporation
600 W. 33d South Street
P. O. Box 15437
Salt Lake City 15, Utah

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased
Properties

Dear Mr. Smith:

During our telephone conversation of May 14, 1964, a tentative date to examine the Beta-Kappa claims, etc., was set for June 10, 1964.

As there are several other jobs to be done during that trip which will start June 8, I find that the combination of distances between jobs and the jobs to be done is such that the most economical and efficient route will get me to Lewistown the afternoon of Friday, June 12, and will set the examination for Saturday, June 13.

I hope this will be satisfactory to you and Mr. Dickerson. I will call the B and B Motel upon my arrival to arrange for a time and place of meeting.

Sincerely yours,

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

cc: OME

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

[redacted] MINERALS CORPORATION
600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE • TELEPHONE HU 3-7114

OFFICIAL FILE COPY
O. M. E
RECEIVED MAY 18 1964

DATE	INITIALS	C
	Murphy	5.20

May 6, 1964

Mr. Donald R. McClaren
Director
Office Mineral Exploration
U. S. GEOLOGICAL SURVEY
Spokane, Washington

Re: OME-6349 (gold-silver)
Vitro Minerals Corporation
Beta-Kappa claims and leased properties
Fergus County, Montana

Dear Mr. McClaren:

In compliance with our phone conversation of yesterday, I have enclosed two maps showing Vitro's individual claims and leased lands. The area controlled by Vitro and included in our OME Exploration Application OME-6349 (gold-silver) has been outlined in red.

Map board to field office

The other point raised in our conversation was that we supply you two firm drilling bids based on the type drilling we contemplate. Attached to our application were bids from T. A. Beavers Drilling and Hugh M. Harris Drilling companies. Both bids were for both rotary and/or percussion (down-the-hole hammer drilling). These bids are summarized below:

T. A. Beavers

Rotary

On a per foot basis	$ 3.00/ft.
On an hourly basis with Vitro furnishing bits and supplies	$18.00/hour

Percussion (Down-the-hole Hammer Drilling)

On an hourly basis	$25.00/hour

He would require 50¢ per mile travel time from Casper to the properties and return, if work is done by the hour. ($450 ±)

Hugh M. Harris Drilling Company

Rotary

On a per foot basis	$ 3.50/ft.
On an hourly basis with Vitro furnishing drill bits, muds, circulating material, casing, water, detergent for injectors and any other supplies	$20.00/hour

Percussion (Down-the hole Hammer Drilling)

On an hourly basis:	
Drill, etc.	$20.00/hour
High stage compressor	$ 6.00/hour
	$26.00/hour plus 50¢ per foot for use of hammer.

A total charge of $250.00 will charged for travel.

The reason we had the bids based on both rotary and down-the-hole hammer drilling was we were not sure which would be the most commercial. It is believed that straight rotary drilling using thick wall drill pipe and heavy collars will give the best dollar rate on penetration. If there is any question because of the two possible drilling methods, we will limit ourselves to the rotary method and drilling costs can be based on either $3.00 per foot or $18.00 per hour plus supplies.

If our OME application should be approved, we are most anxious to get it started during the 1964 field season. If we can be of any assistance in expediting the loan application, please let us know.

Very truly yours,

VITRO MINERALS CORPORATION

/s/ Cecil H. Smith

CECIL H. SMITH
Exploration Manager

CHS:bas

Enclosures

Vitro MINERALS CORPORATION
600 W. 33rd SO. ST. • P. O. BOX 15437 • SOUTH SALT LAKE • TELEPHONE IN 7-5414

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 22 1964

DATE	INITIALS	CODE
	Murphy	500

April 20, 1964

Mr. Frank Johnson
Deputy Director
Office of Minerals Exploration
U. S. Department of the Interior
Washington 25, District of Columbia

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana

Placed in Folder No. 2

Dear Mr. Johnson:

Enclosed are five copies of the Lien and Subordination Agreement, MME Form 52, covering the claim in the Gilt Edge area of Montana, which is under lease to us from Ruth Kelly Hoffman and Larry C. Hoffman. This property is included in our application for an OME loan, dated April 3, 1964.

This Lien and Subordination Agreement, along with those sent you by Mr. Hotchkiss, covers all the leased properties included in our application.

Very truly yours,

VITRO MINERALS CORPORATION

Cecil H. Smith

CECIL H. SMITH
Exploration Manager

CHS:bas

Enclosures

cc: Messrs. E. B. Hotchkiss
E. G. Littel

Vitro MINERALS CORPORATION

261 MADISON AVENUE · NEW YORK 16, N.Y. · MURRAY HILL 2-5700

Certified mail
110053

OFFICIAL FILE COPY
O. M. E.
RECEIVED
DATE
4/20 Murphy 500

April 20, 1964

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

OME-6349

Dear Mr. Johnson:

I am attaching hereto 5 copies each of Lien and Subordination Agreements, MME Form 52, covering the properties in the Gilt Edge area of Montana which are under lease to us from Mr. & Mrs. Abbott and from Mr. & Mrs. Pitt. These properties form in part a portion of the properties involved in our application for an OME loan dated April 3, 1964.

placed in Folder No. 2

As I told you in our meeting on April 15th, we have not yet received the Lien and Subordination agreements covering the Hoffman property also involved in our application for an OME loan. We will send you this Lien and Subordination agreement as soon as we receive it. You will notice that in each of the Mining Lease and Agreements signed with these 3 property owners there is a clause (article XXIV) in which the lessor agrees to subordinate his royalty and other interests to the rights of any Government Agency in connection with any development or exploration loans negotiated by the lessee.

Very truly yours,

VITRO MINERALS CORPORATION

Eugene B. Hotchkiss

Eugene B. Hotchkiss
Executive Vice President

EBH/is
enc.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
4/13	Murphy	500
	[illegible]	500
4/13	Tallant	800
	Selfridge	130
4/13	[illegible]	110
4/14	[illegible]	100
4/14	Cole	120
		500

APR 1 4 1964

Vitro Minerals Corporation
600 West 33rd South
Salt Lake City, Utah

Re: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana

Gentlemen:

The application for assistance in exploring the subject property has been reviewed by the Division of Minerals of the Office of Minerals Exploration and referred to Mr. D. R. MacLaren, Acting Field Officer, Office of Minerals Exploration, Region I, South 157 Howard Street, Spokane, Washington, 99204.

The Regional Office will notify you in case additional information concerning the application is needed.

Sincerely yours,

George Fumich, Jr.

Acting Director

MMerrithew/mm
4/13/64
cc: Director's Reading File
Region I
Docket

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
4/13	Murphy	500
	[illegible]	500
4/13	Talbot	800
	[illegible]	190
4/13	Johnson	110
4/14	[illegible]	100
		220
		500

APR 1 4 1964

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Field Operations

Subject: OME-6349 (Gold-Silver)
Vitro Minerals Corporation
Beta-Kappa Claims and Leased Properties
Fergus County, Montana

The subject application is referred to Region I for review, a field examination, and recommendations.

The descriptions of the lands and the property map submitted are too general regarding their locations. The Applicant submitted five drilling bids; however, under the proposed Stage II work, they mention the holes will be drilled by rotary and/or percussion methods using a cyclone sample collector.

In the event you consider a project to explore the property is warranted, the Applicant should be requested to submit a map showing the individual lots of land and claims; also copies of firm bids from two contractors for the type of drilling selected should be submitted.

The Applicant's estimate for the number of geologists and assistants is considered excessive for the proposed project.

Since the Applicant states that its preliminary geochemical exploration indicates that arsenic has accompanied the mineralization in the proposed project area, it appears that the soil testing program outlined in the application has merit. The USGS has considerable new data on this type of soil testing. A Mr. Cavendar read a paper on arsenic as a trace element at the AIME meeting in New York. Possibly the USGS at Spokane has a copy of this paper.

To date, we have not received the Lien and Subordination Agreements mentioned in the application.

George C. Selfridge (gfa)

FMMurphy/mm (4/13/64
cc: Director's Reading File
Review Committee
Docket

23263

April 8, 1964

Vitro Minerals Corporation
600 West 33rd South
Salt Lake City, Utah

Subject: OME-6349

Gentlemen:

Your application for exploration assistance, dated April 3, 1964 submitted to our office at Washington, D. C. has been assigned docket number OME - 6349.

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

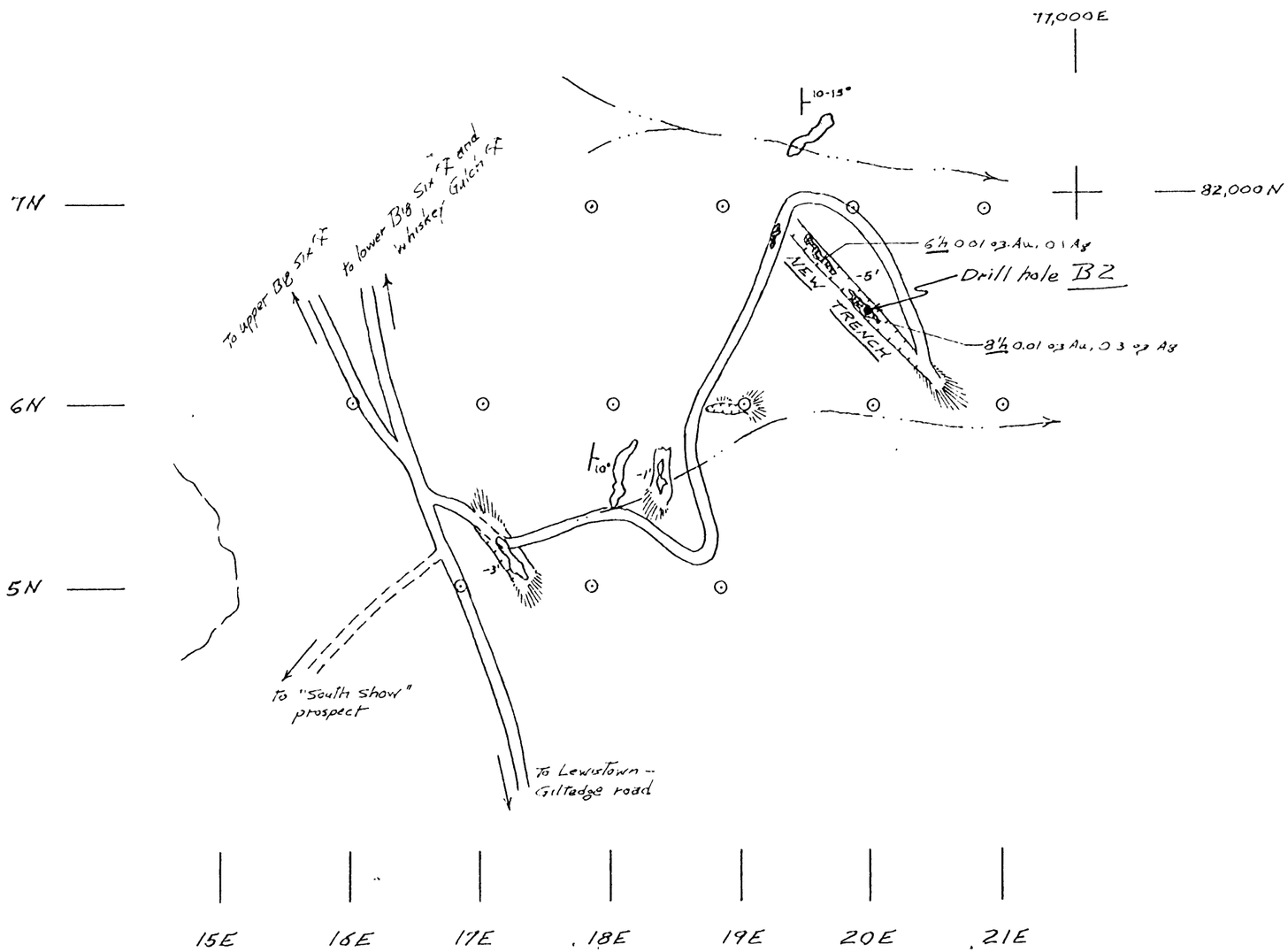
Sincerely yours,

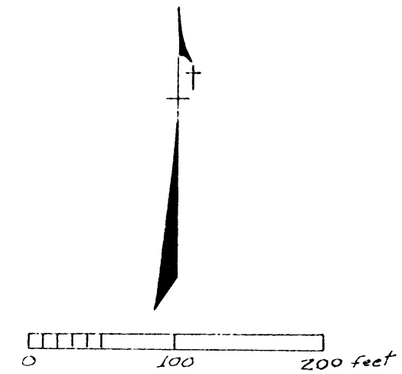
Allen S. Dakan, Chief
Division of Administrative
Management

Copy to Region I
with copy of application

SOUTHEAST ANOMALY

Beta Claims — Fergus County, Montana





EXPLANATION

Madison Limestone — light to "dove" grey, fine grained with medium grained zones, medium to thin bedded, xtalline zones, red streaks, minor brecciation, secondary calcite common.

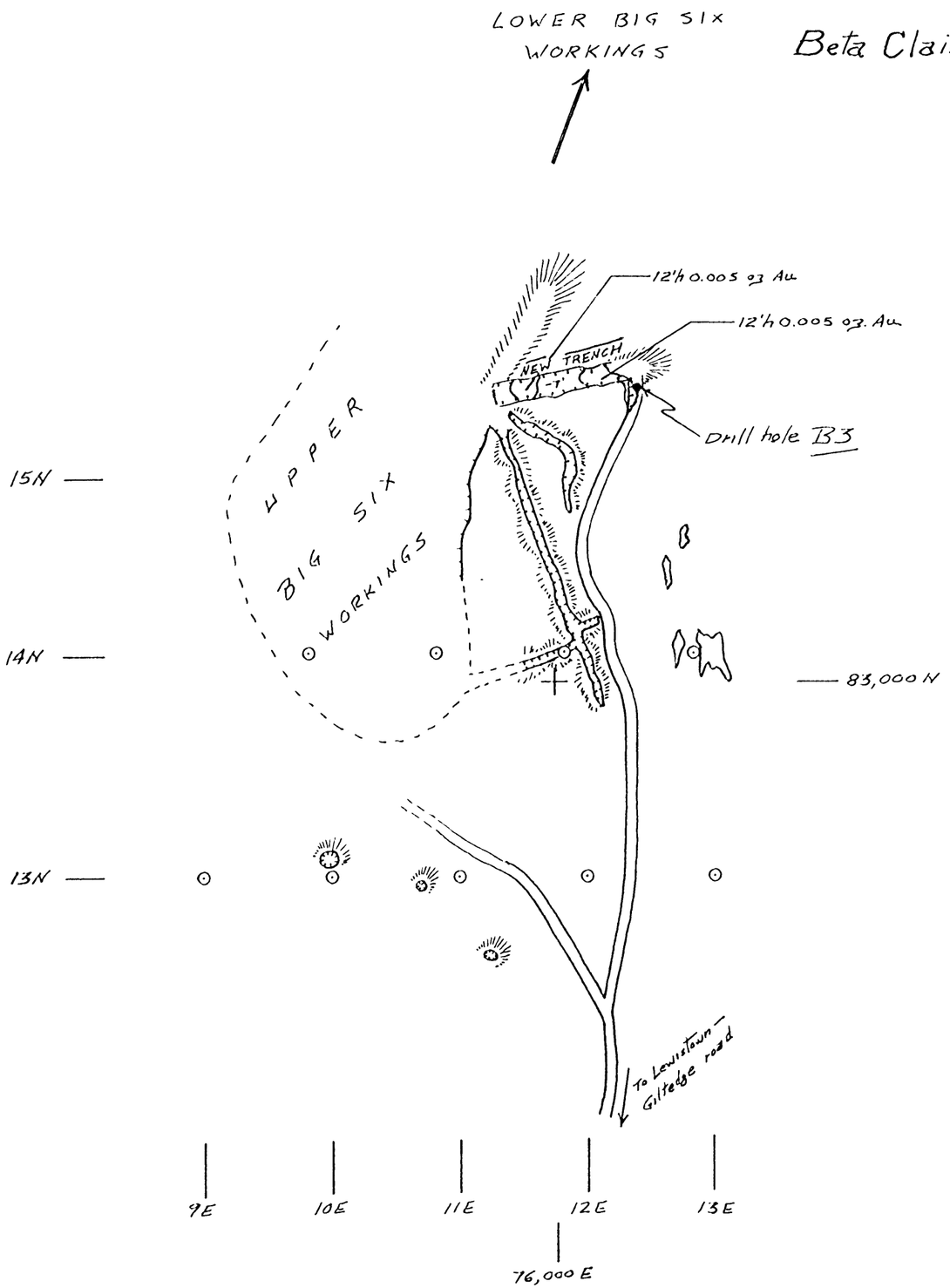
Madison Limestone — med to dark grey, strongly brecciated, calcite healing, medium to thick bedded, brown altered zones, most fine grained, 1-6' of brownish clay cover.

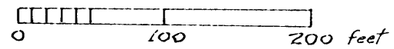
- outcrop
- area of outcrops
- prospect
- dump
- road (2-wheel drive)
- soil sampling station
- attitude of rocks

Vitro Minerals Corporation — RCB

BIG SIX MINE

Beta Claims — Fergus County, Montana.





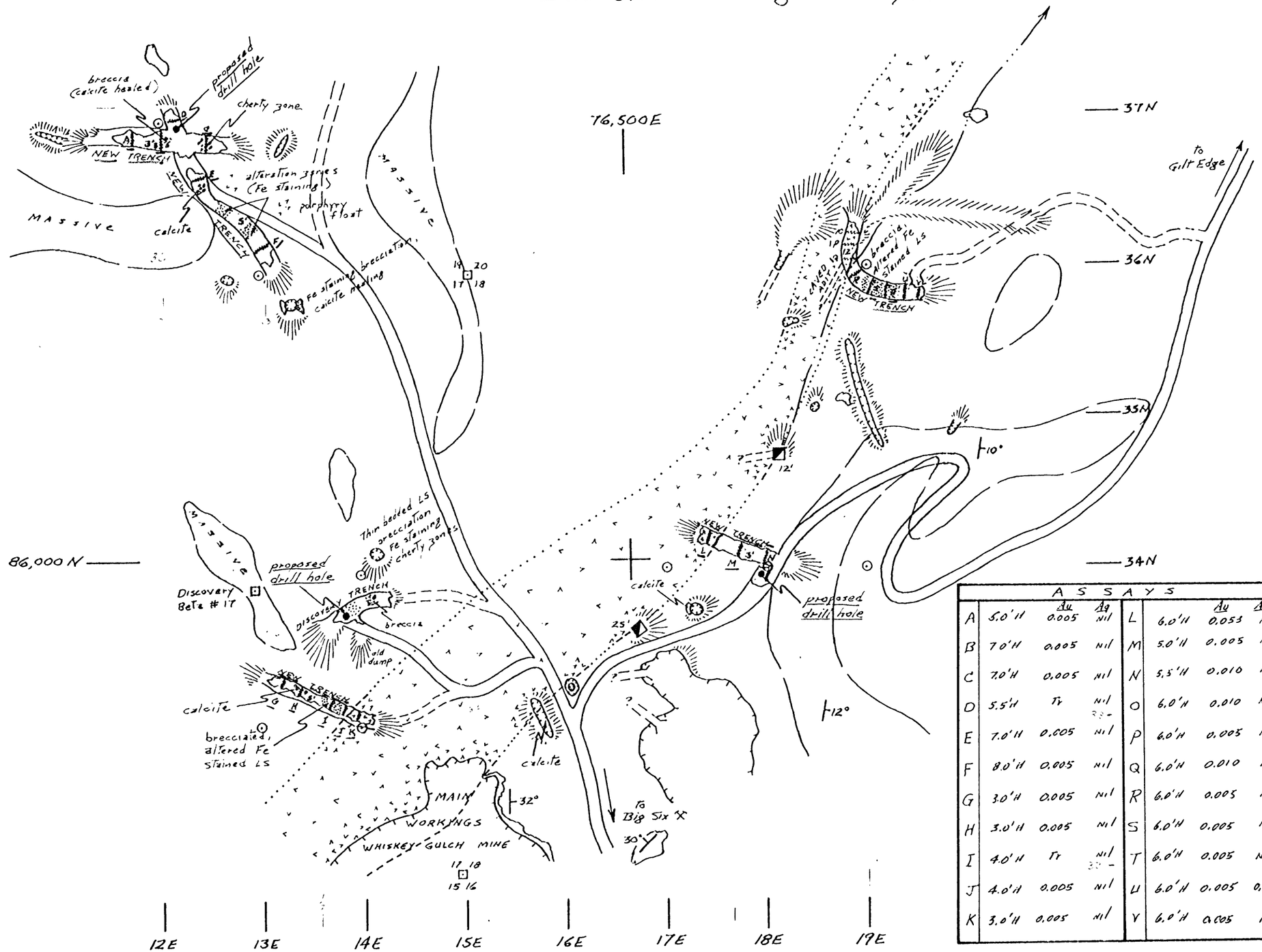
EXPLANATION

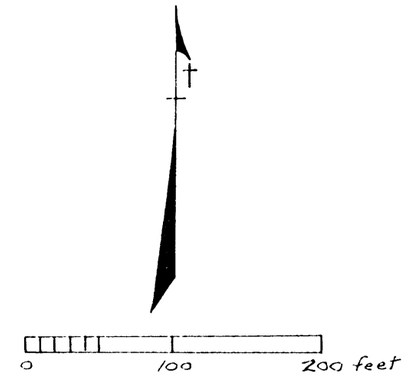
Madison Limestone — medium to "dove" grey, fine grained with crystalline zones, calcite "eyes" common, some moderate brecciation noted, in places brown stained showing alteration phenomena.

- outcrop
- prospects
- dump
- road (2-wheel drive)
- soil sampling station

Vitro Minerals Corporation — RCB

North area — Whiskey Gulch Mine
Beta Claims — Fergus County, Montana





EXPLANATION

Madison Limestone — med to dark grey, fine grained with crystalline zones, massive with some thin beds.

Syenite porphyry — weathered, light brown to yellow, rhyolitic zones.

outcrop

area of outcrops

prospects

adit with open cut

25' shaft (with depth)

dump

road (2-wheel drive)

claim corner

soil sampling station

10° attitude of rocks

contact (exposed / approximate / concealed)

channel sample

ASSAYS

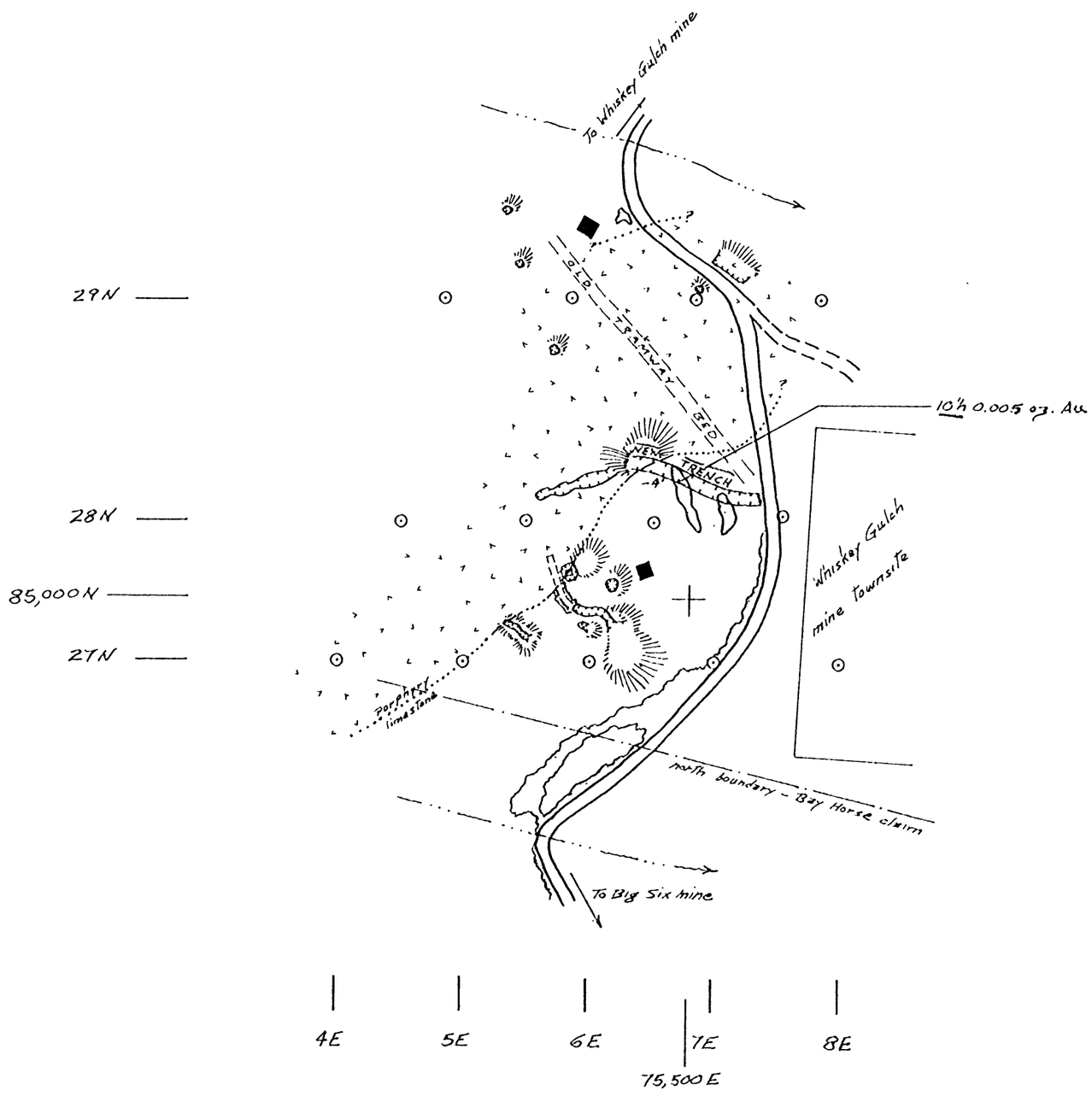
		Au	Ag			Au	Ag
A	5.0'H	0.005	Nil	L	6.0'H	0.053	Nil
B	7.0'H	0.005	Nil	M	5.0'H	0.005	Nil
C	7.0'H	0.005	Nil	N	5.5'H	0.010	Nil
D	5.5'H	Tr	Nil	O	6.0'H	0.010	Nil
E	7.0'H	0.005	Nil	P	6.0'H	0.005	Nil
F	8.0'H	0.005	Nil	Q	6.0'H	0.010	Nil
G	3.0'H	0.005	Nil	R	6.0'H	0.005	Nil
H	3.0'H	0.005	Nil	S	6.0'H	0.005	Nil
I	4.0'H	Tr	Nil	T	6.0'H	0.005	Nil
J	4.0'H	0.005	Nil	U	6.0'H	0.005	0.100
K	3.0'H	0.005	Nil	V	6.0'H	0.005	Nil

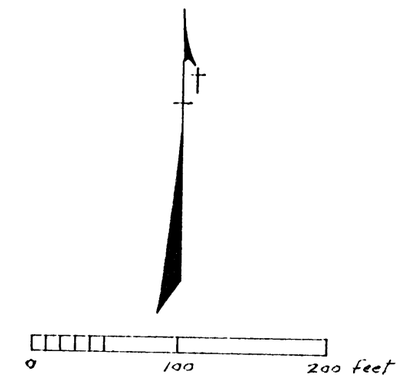
Vitro Minerals Corporation — RGB

(5) a.bred

SOUTH EXTENSION—WHISKEY GULCH

Beta Claims — Fergus County, Montana





EXPLANATION

Madison Limestone — "dove" to dark grey, fine to medium grained, "eyes" common, brecciated zones.

- outcrop
- geologic contact (approximate/concealed)
- prospects
- adit & open cut
- dump
- building
- road (2-wheel drive)
- soil sampling station

Vitco Minerals Corporation — RCB

U.S. GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OME-6349 (GOLD-SILVER)

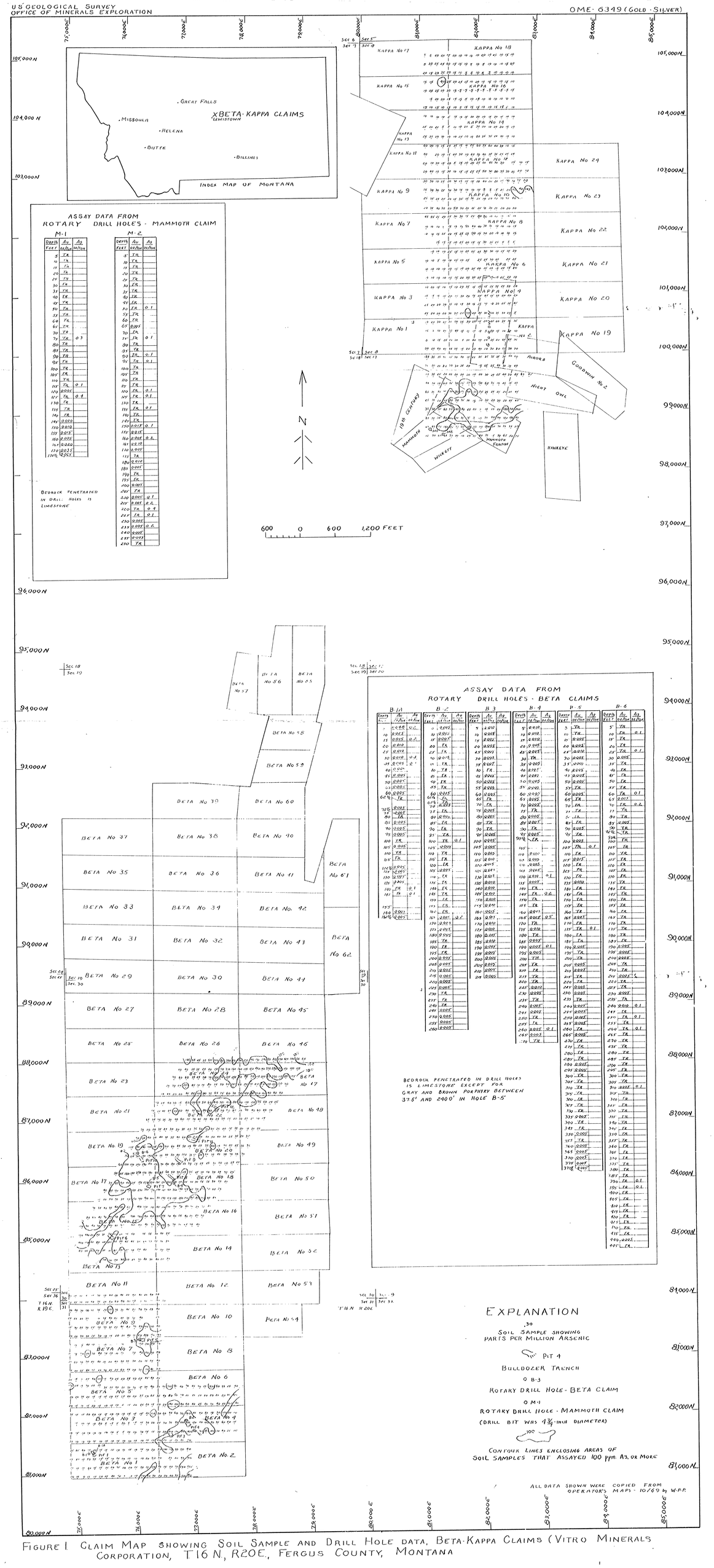
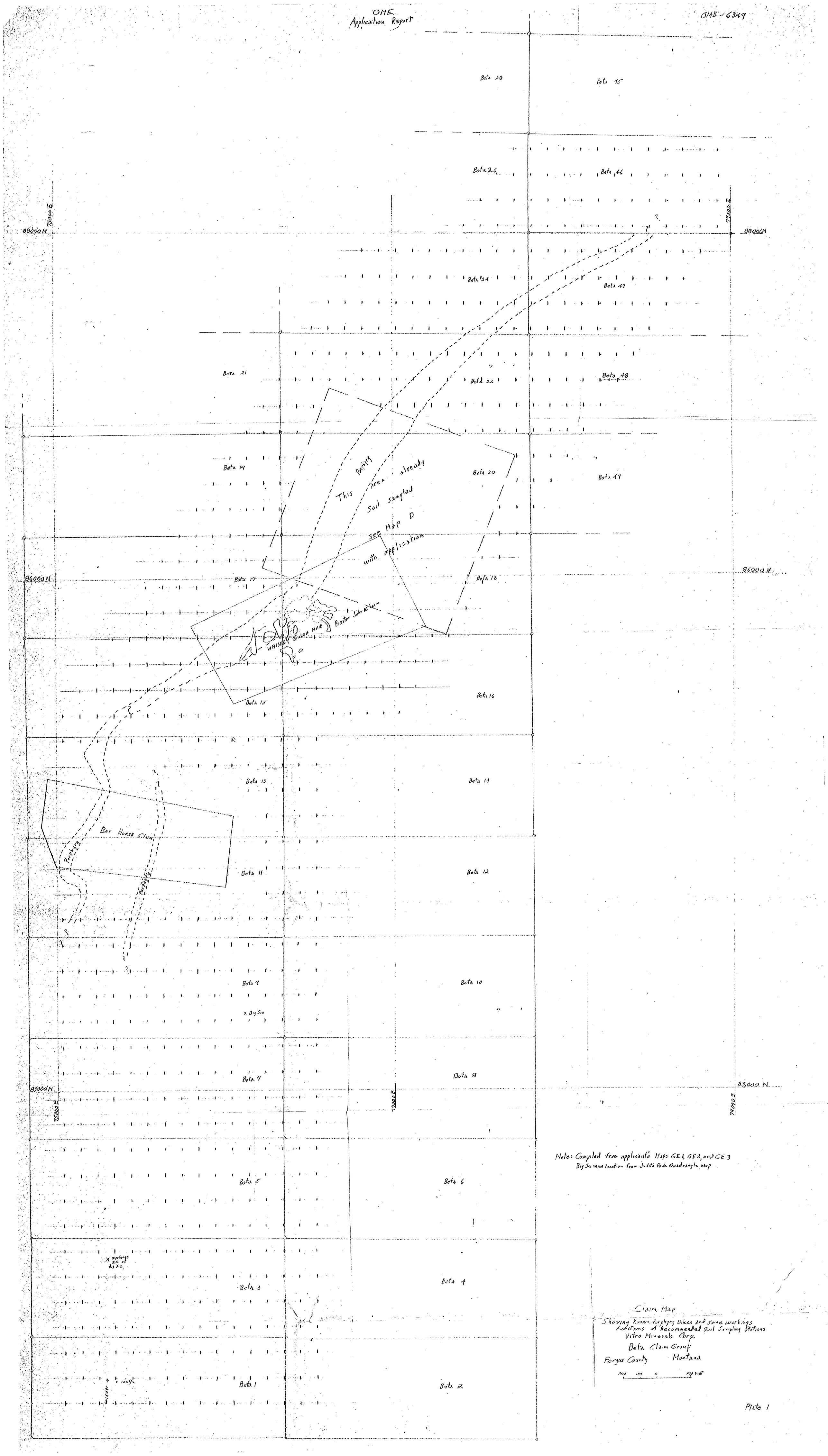


FIGURE 1. CLAIM MAP SHOWING SOIL SAMPLE AND DRILL HOLE DATA, BETA-KAPPA CLAIMS (VITRO MINERALS CORPORATION, T16N, R20E, FERGUS COUNTY, MONTANA

OME
Application Report

OME - 6319

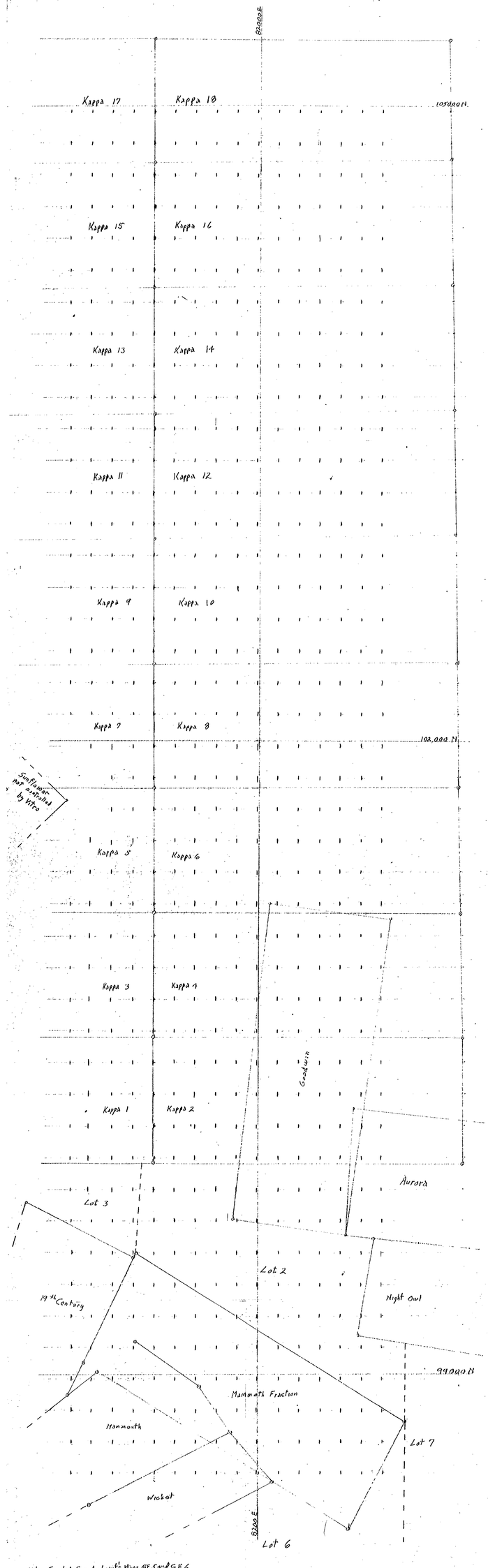


Note: Compiled from applicant's Maps GE1, GE2, and GE3
Big Six mine location from Judith Peak Quadrangle map

Claim Map
Showing Known Porphyry Dikes and some workings
Locations of Recommended Soil Sampling Stations
Vitro Minerals Corp.
Beta Claim Group
Fergus County Montana

200 100 0 200 Feet

Plate 1



Note: Compiled from Applicant's Maps GE5 and GE6

Claim Map
Showing Locations of Recommended Soil Sampling Stations
Vitro Minerals Corp.
Kappa et al, Claims
Fergus County Montana

320 100 0 320 feet

Plate 2

OME
Application Report

OME - 6349

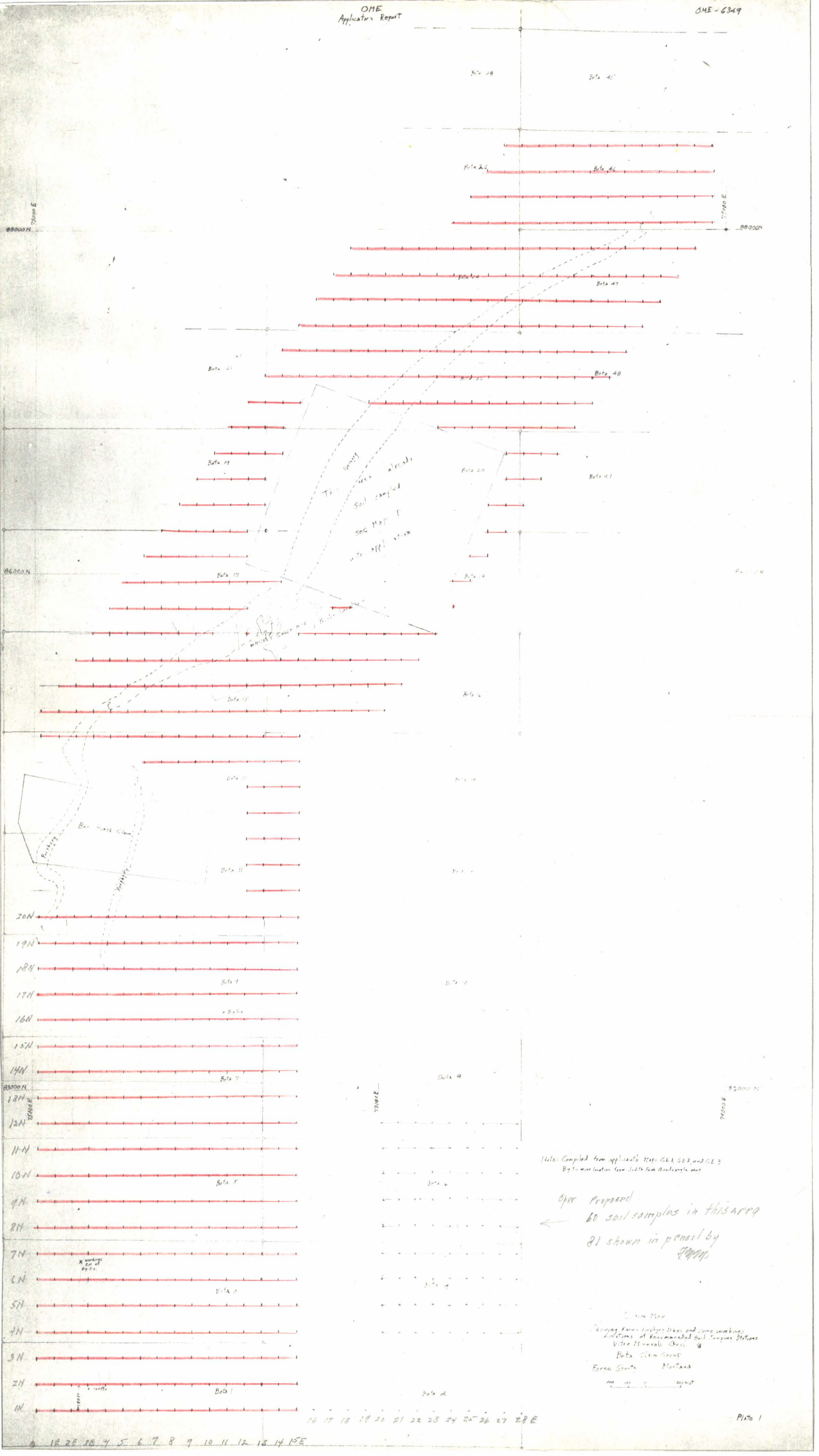
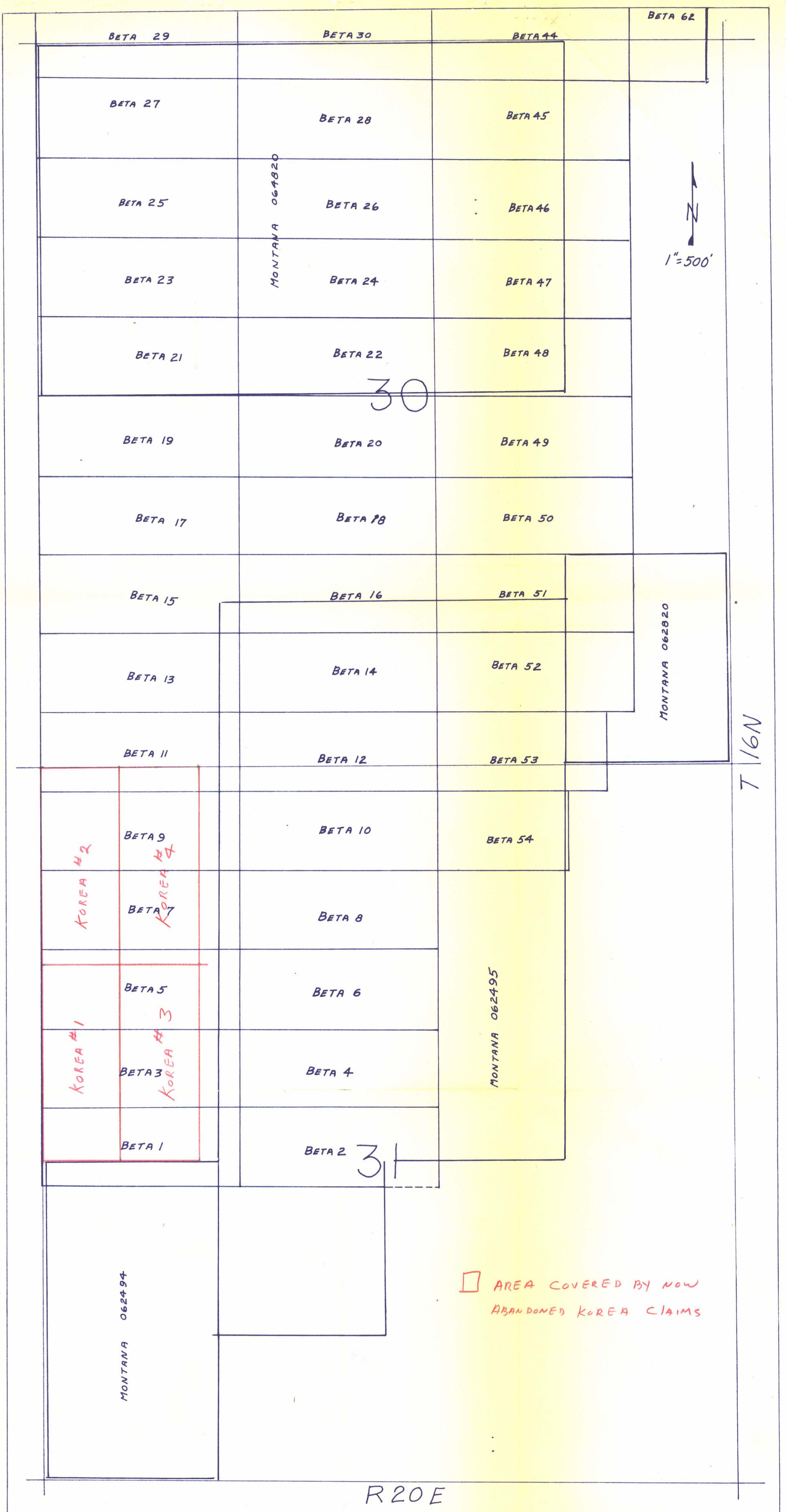


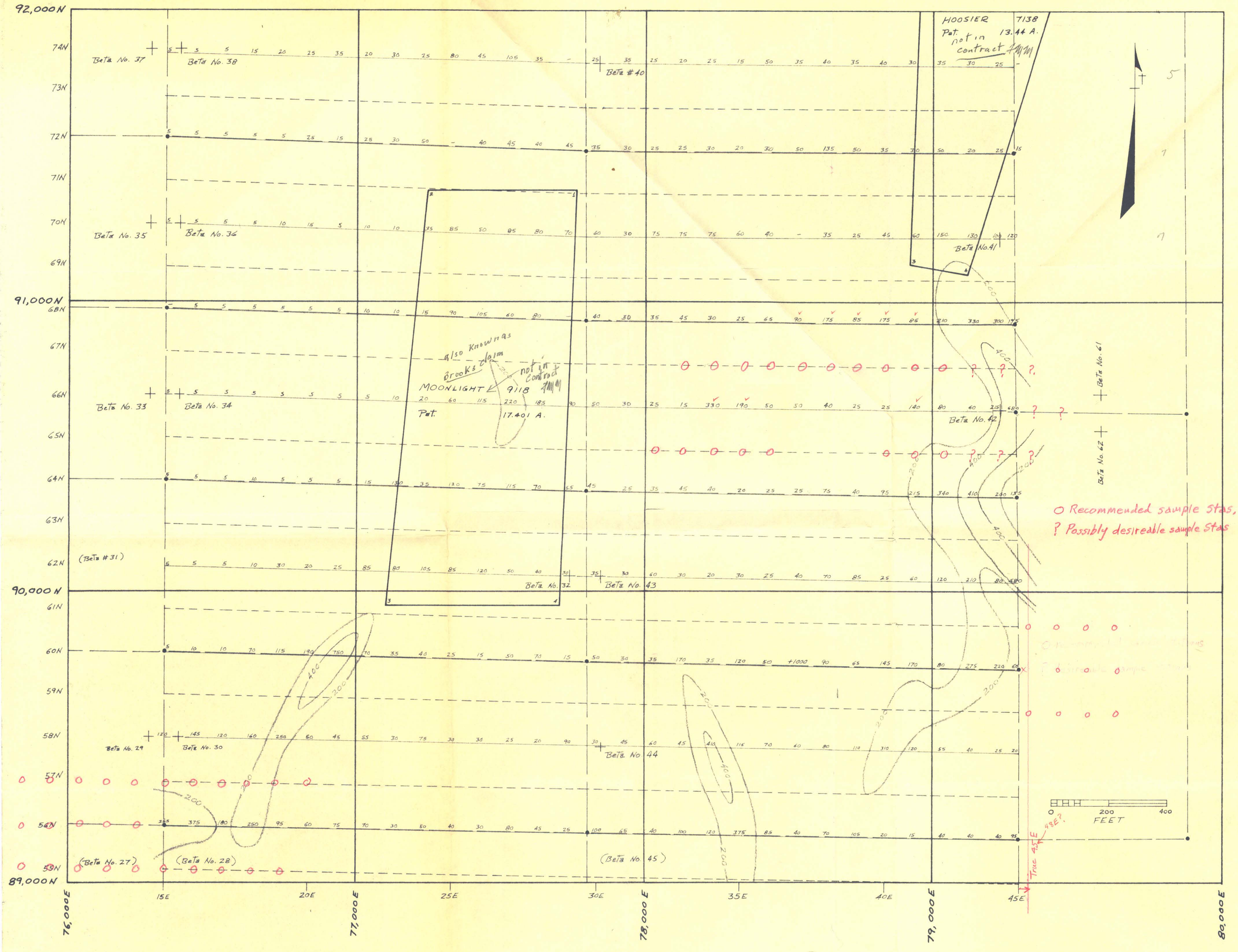
Plate 1



VITRO MINERALS CORP.

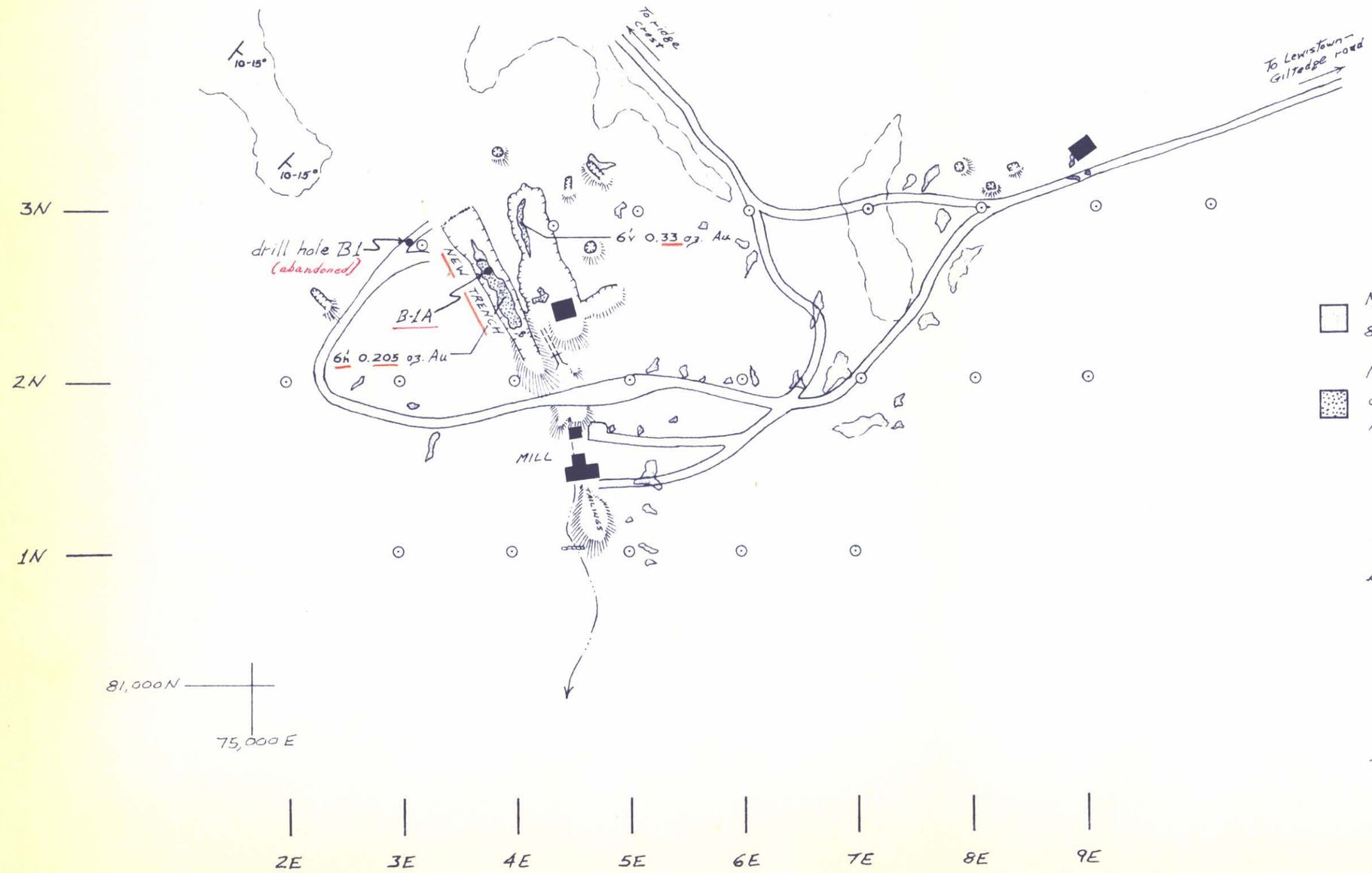
STATUS MAP

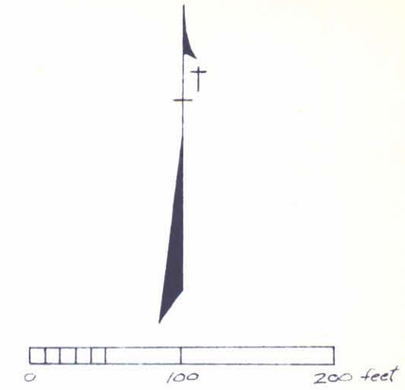
BETA LODE CLAIMS – SURFACE OWNERS
SEC. 30/31, T16N, R20E
FERGUS CO., MONTANA


92,000N
91,000N
90,000N
89,000N
76,000E
77,000E
78,000E
79,000E
80,000E
15E
20E
25E
30E
35E
40E
45E
74N
73N
72N
71N
70N
69N
68N
67N
66N
65N
64N
63N
62N
61N
60N
59N
58N
57N
56N
55N
Beta No. 37
Beta No. 38
Beta #40
Beta No. 35
Beta No. 36
Beta No. 41
Beta No. 33
Beta No. 34
Beta No. 42
Beta No. 61
Beta No. 62
(Beta #31)
Beta No. 32
Beta No. 43
Beta No. 29
Beta No. 30
Beta No. 44
(Beta No. 27)
(Beta No. 28)
(Beta No. 45)
HOOSIER 7138
Pat. 13.44 A.
not in contract
Also Known as
Brooks claim
not in contract
MOONLIGHT 9118
Pat. 17.401 A.
O Recommended sample Stas.
? Possibly desireable sample Stas
0 200 400
FEET
True 45E
48E?

"SOUTH SHOW"

Beta Claims — Fergus County, Montana





EXPLANATION

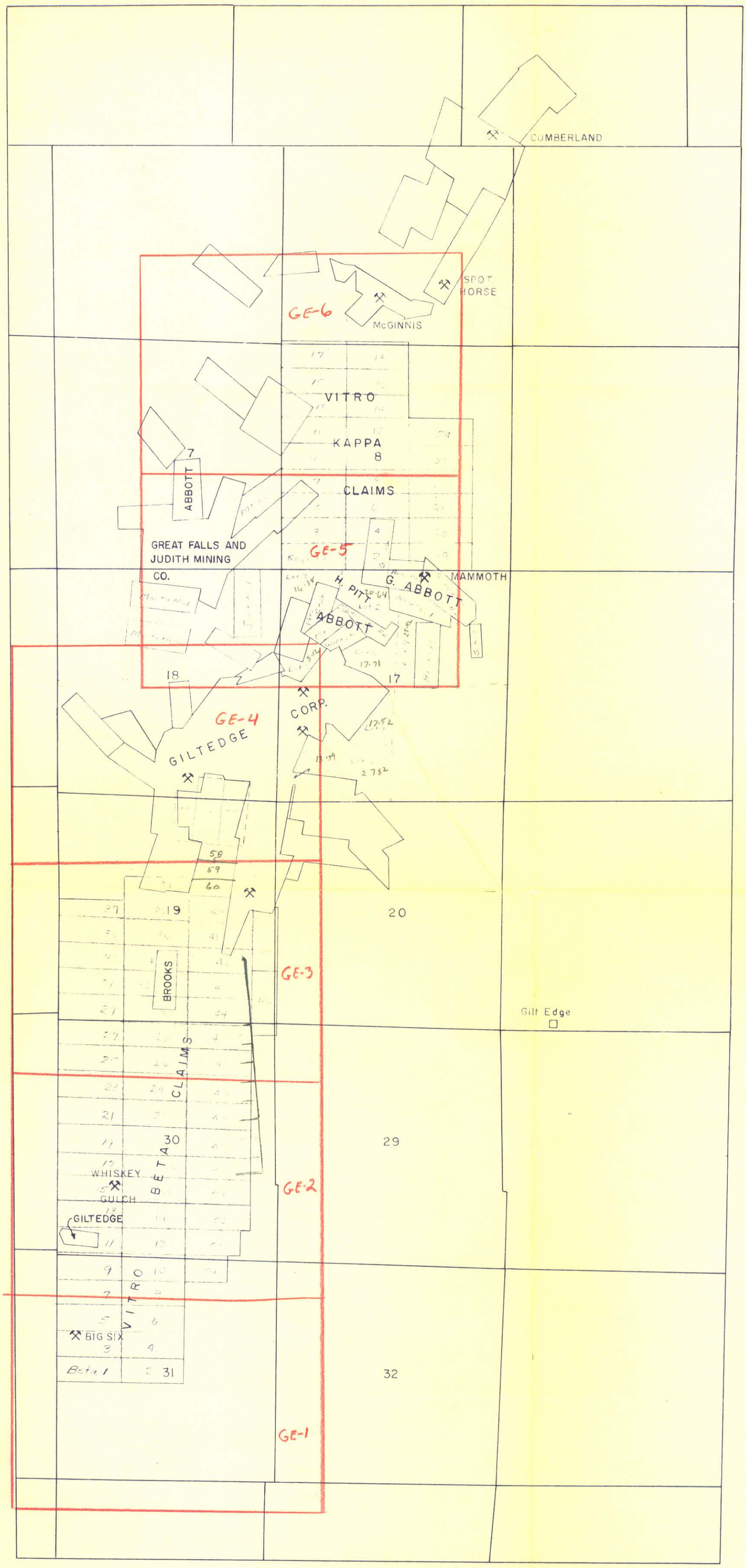
Madison Limestone — lt. to med. grey, fine grained with med. grained zones, massive, some minor brecciation

Madison Limestone — altered, diffusion banding, red-brown color. Thin-bedded in places, much calcite, clayey zones, massive, some dark grey chert, slickensides observed.

- outcrop
- area of outcrops
- prospects
- caved adit
- dump
- building
- road (2-wheel drive)
- wall
- soil sampling station
- 10-15° attitude of rocks

Vitro Minerals Corporation — RCB

1



CLAIM OVERLAY MAP

T.16 N. R.20 E.

Fergus Co., Montana

VITRO MINERALS CORP.

1"=2000'

B.F.D.