MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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

ITEM 2

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Jefferson, State of Montana, described as follows: 2/ Mining Claims No. 1 through No. 13 Rock & Roll (Maupin Creek) in Township No. 8, Range 2, West, Maupin Creek Mining district, Section 17, Jefferson County, Montana

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

A ssociated Mining & Metals, Inc. 3/

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

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

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

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

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

An undivided 1/100 th interest, held by Theodore J. Caron, in the herein described property.

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 _____ (State "None" or "See Annex No. ____".)

Dated this 18th day of July, 1967.

R D Potter (Seal)	Box 95 (Street) Choney Montana (City & State)	
Harold Tubaksman (Seal)	456 Mulberry Lane (Street) Racine, Wis. (City & State)	
Anthony S. DeRose (Seal)	1136 Valley View Drive (Street) Racine, Wisconsin (City & State)	
_____ (Seal)	_____ (Street) _____ (City & State)	
_____ (Seal)	_____ (Street) _____ (City & State)	
_____ (Seal)	_____ (Street) _____ (City & State)	

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

_____ (Corporate Seal)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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Operator
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ITEM 2

LIEN AND SUBORDINATION AGREEMENTS[1]

To the United States of America:

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described as follows:[2] Mining Claims No. 1 through No. 13 Rock & ROll (Maupin Creek) in Township No. 8, Range 2, West, Maupin Creek Mining district, Section 17, Jefferson County, Montana

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Associated Mining & Metals, Inc.[3]

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

Dated this 18th day of July, 1967.

R D Potter	(Seal)	Box 95	(Street)
		Clancy Montana	(City & State)
Harold Tubaberman	(Seal)	456 Mulberry Lane	(Street)
		Racine, Wis.	(City & State)
Anthony DeRosa	(Seal)	1136 Valley View Drive	(Street)
		Racine, Wisconsin	(City & State)
	(Seal)		(Street)
			(City & State)
	(Seal)		(Street)
			(City & State)
	(Seal)		(Street)
			(City & State)

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

_____
(Corporate Seal)

MME Form 9
Rev. Nov. 65

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey

OFFICIAL DOCKET FILE

Contract No. _____ Docket No. 6637

Application
- [x] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [ ] 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
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam. Report (Tab) 12-7-67
- [ ] 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

72195-65

ASSOCIATED MINING and METALS INC.

456 Mulberry Lane

Phone (414) 633-8989

Racine, Wisconsin 53402

8 August 1967

OFFICIAL COPY
O. M. E.
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Mr. Frank E. Johnson

Chief, Office of Minerals Exploration

United States Department of Interior

Washington 25, D C

OME-637

Dear Mr. Johnson:

Transmitted herewith is the additional information that you requested as a result of our meeting with you on 22 June 1967.

Delay was experienced in both obtaining the additional ore samplings and awaiting the printed assay results. Overall better results were evident using the wider and deeper channel and sample retrieval method that you described during our meeting.

Included in this transmittal are:

Item 1. Claim map showing the present location of claims and workings. Open-cut dozer work is shown, and results of various samplings from or near these cuts have been included. Also included here are results of special neutron activation and magnetic seperation studies. These tests were made only to study the general make-up of the ore rather than to study its mineral content.

Item 2. Lien and Subordination Agreement

Item 3. Operating contract with the claim locators mentioned in Paragraph2, Applicant's Rights in Land on Page 2 of our application.

Item 4. Copies of location notices with supporting proof of registration. (Referenced as Attachment B in our application)

Item 5. Two additional bids from independent contractors for proposed drilling.

Item 6. Assay results from samplings taken from No. 3 drift.

ASSOCIATED MINING and METALS INC.

456 Mulberry Lane

Phone (414) 633-8989 Racine, Wisconsin 53402

Your cooperation and assistance in expediting final action on our application will be deeply appreciated.

Sincerely yours,

Anthony S. DeRose, Pres.
Associated Mining & Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin 53405

PHONE
(509) FA 8-9795

Vivian Bros., Inc.

DIAMOND CORE DRILLING CONTRACTORS

OFFICE AND SHOP
~~1201 WEST WHITEDOW~~
~~KELLOGG, IDAHO~~

MAILING ADDRESS
~~P.O. BOX 780~~
~~KELLOGG, IDAHO~~

Attachment G

West 2929 Wellesley
Spokane, Washington 99205
June 13, 1967

Associated Mining & Metals, Inc.
456 Mulberry Lane
Racine, Wisconsin

Dear Sirs:

The following quotations are for drilling BXWL-size holes at the Good Cheer Property located about 9 miles east of Alhambra, Jefferson County, Montana.

One hole, 895 feet deep, drilled from the surface at an angle of minus 60 degrees	$ 7,528.00
Three holes, each 652 feet deep, drilled from the surface at an angle of minus 60 degrees	20,278.00
Three holes, each 517 feet deep, drilled from the surface at an angle of minus 60 degrees	15,027.00
Two holes, each 200 feet deep, drilled horizontally underground	3,000.00
Mobilization and transportation	300.00
195 wooden core boxes	980.00
TOTAL	$ 47,113.00

Very truly yours,

H.H. Vivian

H.H. Vivian

ASSAY REPORT:

Samples of field trip of May 28th- June 4th 1965,
Taken at Clancy, Montana area.

Control Numbers:- 85192-85211- Sites 1-20 inclusive.
85449-85260- Sites 21-32 inclusive.

All values expressed in 2000 lb. Ton- in ounces.

	AG.	AU.	GA.	IN.	RE.	TE.	CO.	PLATINUM METALS	RARE EARTHS CONCENTRATE
1.	none	0.45	none	none	none	none	none	0.02	0.85
2.	none	0.48	none	none	none	none	none	0.04	0.98
3.	0.45	0.34	0.20	0.22	0.12	0.22	0.22	0.08	1.15
4.	0.03	0.04	0.12	0.10	0.02	0.07	0.04	0.03	0.56
5.	0.28	0.30	0.10	0.08	0.06	0.04	0.02	0.01	0.32
6.	0.64	0.48	0.22	0.24	0.18	0.18	0.20	0.09	0.94
7.	1.02	0.94	0.40	0.34	0.28	0.26	0.26	0.10	1.06
8.	1.08	1.00	0.50	0.40	0.38	0.30	0.28	0.12	1.22
9.	0.28	0.32	0.12	0.11	0.05	0.03	0.02	0.01	0.24
10.	0.29	0.33	0.14	0.05	0.06	0.04	0.03	0.01	0.22
11.	0.30	0.28	0.12	0.07	0.05	0.05	0.02	none	0.20
12.	0.85	0.75	0.30	0.28	0.28	0.26	0.28	0.12	1.08
13.	0.72	0.80	0.26	0.24	0.26	0.24	0.25	0.08	0.78
14.	0.95	0.24	0.22	0.12	0.12	0.16	0.12	0.05	0.50
15.	0.90	0.25	0.20	0.10	0.12	0.14	0.10	0.07	0.45
16.	0.50	0.25	0.12	0.10	0.10	0.10	0.10	0.08	0.24
17.	4.48	0.02	0.01	0.12	0.04	0.12	0.10	0.04	0.12
18.	4.14	0.08	0.02	0.10	0.08	0.10	0.08	0.05	0.19
19.	0.28	0.30	0.12	0.08	0.06	0.04	0.02	0.09	0.32
20.	0.38	0.32	0.12	0.09	0.07	0.05	0.02	0.07	0.30
21.	0.26	0.30	0.10	0.10	0.08	0.04	0.03	0.04	0.25
22.	0.24	0.25	0.08	0.08	0.04	0.02	0.04	0.01	0.34
23.	0.25	0.36	0.12	0.10	0.12	0.10	0.10	0.03	0.35
24.	0.26	0.38	0.12	0.11	0.10	0.09	0.09	0.02	0.36
25.	0.26	0.39	0.12	0.10	0.11	0.10	0.08	0.05	0.29
26.	0.34	0.44	0.18	0.16	0.12	0.12	0.10	0.06	0.44
27.	0.63	0.39	0.18	0.17	0.10	0.10	0.09	0.08	0.56
28.	0.10	1.15	none	none	none	0.14	0.04	0.12	0.46
29.	0.44	0.55	0.15	0.16	0.20	0.22	0.20	0.07	0.88
30.	0.28	0.24	0.19	0.18	0.10	0.24	0.24	0.07	0.84
31.	0.24	0.22	0.18	0.16	0.15	0.26	0.28	0.09	0.45
32.	0.68	0.58	0.02	0.02	0.19	0.34	0.39	0.16	0.98

ASSAY REPORT:

Samples taken on field trip of May 28-June 4, 1965:

LOCATION & DESCRIPTION OF SAMPLES:

1.	(100)	Panning from stream near trailor camp.	Weight.... 10 oz.
2.	(101)	Same as 1- only further up stream.	Weight.... 10 oz.
3.	(102)	Metallic material from crush-box.	Weight.... 18 oz.
4.	(103)	Dust from dump pile pulverization.	Wight..... 2 oz.
5.	(104)	Current excavation from behind Brinkley.	Weight.... 6 lbs.
6.	(105)	Crushed sulphides from tunnel.	Weight 91lbs.10 oz.
7.	(106)	Coarse Crushings from dump pile.	Weight...257 lbs.
8.	(107)	Fine crushings 125 minus mesh-D.P.	Weight...125 lbs.
9.	(1)	At new excavation 30' from Brinkley	Weight.... 17 oz.
10.	(2)	More of material as 9 only to right.	Weight.... 24 oz.
11.	(3)	More of same as 9 only to left.	Weight.... 20 oz.
12.	(4)	From dump pile at 250 foot shaft.	Weight.... 24 oz.
13.	(5)	From same area as 12-brown material.	Weight.... 28 oz.
14.	(6)	From dump pile-Tony sample-gray.	Weight.... 16 oz.
15.	(7)	From dump pile- brown buff material.	Weight.... 10 oz.
16.	(8)	Dump pile-bottom ledge material.	Weight.... 20 oz.
17.	(9)	Dump pile- Ag bearing material ??.	Weight.... 12 oz.
18.	(10)	From steel drum-material assayed for $50.00 a ton for Ag-Potee statement.	Weight.... 20 oz.
19.	(11)	Excavation Left of Brinkley (FV).	Weight.... 20 oz.
20.	(12)	Same as 19-only to right.	Weight.... 22 oz.
21.	(13)	Same as 19-only to more right.	Weight.... 24 oz.
22.	(14)	Same as 19-only still more right.	Weight.... 26 oz.
23.	(15)	Same as 19-only to slight left.	Weight.... 23 oz.
24.	(16)	Same as 19-only to more left.	Weight.... 22 oz.
25.	(17)	Same as 19-only still more to left.	Weight.... 22 oz.
26.	(18)	From behind top of Brinkley.	Weight.... 26 oz.
27.	(19)	Still more-so behind Brinkley.	Weight.... 26 oz.
28.	(31)	One hour panning from creek.	Weight.... 23 oz.
29.	XP.	Multi-colored with metallic incrustration ooo. frequently in quartz- varied brown to buff. Up-stream beyond dump pile.	Weight.... 4 lbs.
30.	XXP	Black-peppered material in quartz with silver-white metallics from up creek behind dump pile.	Weight.... 4 lbs.
31.	(3)	Same area as 30-buff colored.	Weight.....13 oz.
32.	(4)	Siltstone-clay-sandstone with metallics high above dump pile at creek.	Weight..... 8 lbs.

Total Weight of assaying material was: 443.5 lbs.

Assay Control Numbers 85192-85211. Samples 1-20 inclusive.
85449-85460. Samples 21-32 inclusive.

Page A:- Completed.

PRECISION LABORATORIES
6036 IRVING PARK ROAD
5057 N. TRIPP AVENUE
CHICAGO, ILLINOIS

BY A S Michaelson
Research & Technical Director
May 28-June 4, 1965

Associated Mining Metals, Inc.
456 Mulberry Lane
Racine, Wisconsin

Controls 85333-85336
85341-85342
85345-85346

NEUTRON ACTIVATION STUDIES:

This required a reactor neutron source and the technique is useful in analytical procedures as well as measuring trace impurities. The material under examination and a pure carrier metal standard are irradiated together and subsequently dissolved, the solution of the latter being diluted up to 10 to the 5th power times. Portions of both solutions, after the addition of a copper carrier, are precipitated. The two precipitates are dried by induction heat and weighed and their activities are compared. This method enables metallics and impurities to be assessed with an accuracy greater than one part per million without recourse to micro methods. However, care must be exercised in its application, for in a high neutron flux spurious impurities may arise. The sensitivities used in these studies are based on a neutron flux of 10'neutrons cm. -2, seconds -1, 10 hours irradiation time, and a thirty minute decay period during chemical separation. From studies conduction, the impurities present in our ore bearing material appears to be assembled in such a state that separations should be not too difficult. The freeing of the metals from none metals and silica should not present concentration problems.

REPORT:

Preparations of the samples:

Sample A: Samples received from Bob Potee on 6-13-65 marked 1-5, report 85212-85216 dated 7-25-65 were combined and thoroughly mixed with a portion taken for an assay.

Sample B: Samples received from Bob Potee on 6-25-65 marked 6-7, report 85326-85327 dated 7-25-65 were combined and thoroughly mixed with a portion taken for assay.

Sample C: Samples reported by A.S.Michaelson, report of 7-25-65 sample numbers 85331-85332, brought back from Clancy, Montana by A.S.Michaelson of field trip of 6-30-65. These samples were combined and thoroughly mixed with portion taken for assays.

\#

The samples from above, remaining after portions were taken for assays, were equally divided, using one part for neutron activation studies and the other part for magnetic separation studies.

Weights:

Total weight of Sample A................85 pounds.
Weight of assay sample from A.......... 5 pounds.
Weight Sample A-Neutron studies.......40 pounds.
Weight Sample A-Separation studies....40 pounds.

Total weight of Sample B................26 pounds.
Weight of assay sample from B.......... 2 pounds.
Weight Sample B-Neutron Studies.......12 pounds.
Weight Sample B-Separation studies....12 pounds.

Total weight of Sample C................16 pounds.
Weight of assay sample from C.......... 2 pounds.
Weight Sample C-Neutron studies....... 7 pounds.
Weight Sample C-Separation studies.... 7 pounds.

SAMPLES ASSAY REPORT: (Values in ounces per 2000 lb. Ton)

A. ....Control Number 85466
B. ....Control Number 85467
C. ....Control Number 85468

ASSAY OF COMPOSITES: A-B-C.

	AG.	AU.	GA.	IN.	RE.	TE.	COL. Cb.	PT. METALS	RARE EARTH CONCENTRATE
A.	0.636	0.450	0.202	0.178	0.138	0.162	0.148	0.108	0.654
B.	0.410	0.265	0.165	0.160	0.130	0.130	0.130	0.065	0.950
C.	0.470	0.375	0.175	0.130	0.130	0.110	0.135	0.030	0.980

NEUTRON ACTIVATION STUDIES:

Neutron Cross Section (scattering)

All values expressed in Barnes

Metals sought:-

Silver.....6.0
Gold.....6.5
Gallium.....16.0
Indium.....2.0
Rhenium.....13.0
Tellurium.....5.0
Columbium.....7.0
Platinum Metals:
Iridium-14; Rhodium-6; Ruthenium-6;
Palladium-4.5; Platinum-6.
Composite being.....7.3.

Neutron Cross Section Absportion.

All values expressed in Barnes

Metals sought:-

Silver.....60
Gold.....95
Gallium.....152
Indium.....190
Rhenium.....85
Tellurium.....3
Columbium.....1.2
Platinum Metals:
Iridium-450; Rhodium-149; Ruthenium-3;
Palladium-6; Platinum-8.
Composite being...123.2

Neutron activation studies on the rare earth was not possible due an intricate make-up of the complex concentrate. This can be done only if the rare earths are individually separated which is possible, but not practical due to cost and time consumption. However, a composite had to be separated before any of the above studies could be done.

ASSAYS OF PRODUCTS OF NEUTRON ACTIVATION:

(All assay values are expressed in ounzes per 2000 pound Ton)

	AG.	AU.	GA.	IN.	RE.	TE.	CB.	PT. METALS
A.	0.640	0.454	0.210	0.180	0.140	0.168	~~xxx~~ 0.150	0.118
B.	0.412	0.28	0.180	0.166	0.134	0.138	0.138	0.095
C.	0.580	*.440	0.190	0.140	0.140	0.130	0.140	0.045

85469
↓
85471.

SUMMARY:

1. Products for neutron activation studies prepared.
2. Assay studies done on all samples prior to neutron activation.
3. Assays done on all samples that were neutron activated.

CONCLUSIONS:

Values of pre-neutron samples agree 100 percent with individual assays of same as reported in report of the 25th of July 1965. Assay of neutron activated products are somewhat higher than those of the original assays. Correlation of rare earth concentrate was not possible but assumed to be near assay values based on studies on found metals as reported.

7-28-65 By A S Michaelson PRECISION LABORATORIES
Director

MAGNETIC SEPARATION STUDIES:

	SAMPLE A.	SAMPLE B.	SAMPLE C.
Total Weight	40 lbs.	12 lbs.	7 lbs.
Magnetic Fraction	1 lb.	4 ozs.	1 lb.
Non-Magnetic Fraction	31 lbs.	9 lbs.	3 lbs.
Middling Fraction	4 lbs.	2 lbs.	2 lbs.
Tailing Fraction	4 lbs.	12 ozs.	1 lb.

ASSAYS OF FRACTIONS: (Values in ounces/2000 lb. Ton)

85472 ↓ 85474

	GOLD	SILVER	GALLIUM	INDIUM	RHENIUM
Total Before Separ.					
A.	0.450	0.636	0.202	0.178	0.138
B.	0.265	0.410	0.165	0.160	0.130
C.	0.375	0.470	0.175	0.130	0.130
Magnetic Fraction(ABC)	0.000	0.000	0.000	0.000	0.000
Non-Magnetic Fraction					
A.	0.400	0.606	0.200	0.170	0.130
B.	0.260	0.390	0.160	0.154	0.122
C.	0.325	0.410	0.165	0.122	0.123
Middling Fraction					
A.	0.050	0.030	0.002	0.008	0.008
B.	0.005	0.020	0.005	0.006	0.008
C.	0.050	0.060	0.010	0.008	0.007
Tailing Fraction A.B.C.	0.000	0.000	0.000	0.000	0.000

	TELLURIUM	COLUMBIUM	PT. METALS	RARE EARTHS
Total Before Separ. A.	0.162	0.148	0.108	0.654
B.	0.130	0.130	0.065	0.950
C.	0.110	0.135	0.030	0.980
Magnetic Fraction	0.002	0.003	0.002	0.000
A.	0.004	0.004	0.055	0.000
B.				
C.	0.002	0.005	0.025	0.000
Non-Magnetic Fraction A.	0.158	0.138	0.000	0.654
B.	0.125	0.125	0.000	0.950
C.	0.100	0.125	0.000	0.980
Middling Fraction				
A.	0.002	0.002	0.006	0.000
B.	0.001	0.001	0.010	0.000
C.	0.008	0.005	0.005	0.000
Tail. Fraction A,B,C.	0.000	0.000	0.000	0.000

SUMMARY:

1. All samples studied in the neutron activation series plus the rare earth material herein reported.
2. Assay were made on all fractions as reported above.

CONCLUSIONS:

There is no doubt that the ideal method for the separations of metals found in samples studied, that the magnetic method of separation is one without equal. The addition of an electrostatic separator will probably clean the material to a very high degree of separation-almost to isolation degree. However, the selection of such equipment should be thoroughly studied.

Respectfully submitted:- By A. J. Michaelson
Research & Technical Director

Precision Laboratories
Chicago, Illinois

28th July 1965

Report concluded. Total pages being 3.

ITEM 3

THIS AGREEMENT entered into this 7th day of September, 1966, by and between ASSOCIATED MINING & METALS, Inc., party of the first part, hereinafter referred to as the Corporation, and ROBERT POTEE, HAROLD TABAKSMAN andANTHONY DeROSE, parties of the second part, hereinafter referred to as the Claimants.

IN CONSIDERATION of the mutual promises of the parties to each other, it is agreed as follows:

FIRST: That the Claimants are the owners of the following described mining claims:

Mining Claims No. 1 through No. 13 Rock & Roll Mining Claims (Maupin Creek) in Township No. 8, Range 2, West, Maupin Creek Mining District, Section 17, Jefferson County, Montana.

SECOND: It is agreed that the Corporation shall have the right to enter into the above described property and prospect and explore, test and develop said mining claims. All equipment, tools, machinery and structures for use in said work are to be considered as part of the costs of operation.

THIRD: The Claimants agree to pay to the Corporation all costs of the mining operations detailed in the paragraph above, and in addition, the Corporation is to receive cost plus ten per cent (10%) of cost of operation at the time that the operation is producing at a profit.

FOURTH: All ores extracted by the Corporation shall be the property of the Claimants.

FIFTH: This agreement is in full force for a period of ten (10) years, or until such times as agreed upon by mutual agreement of the participating parties.

SIXTH: The expenses of mining and milling shall include but not be limited to all labor, machinery operation and maintenance, hauling expense, administrative expense and all other expenses normally associated with and expended in connection with removal of the ore from the ground and transforming it into a product suitable for smelting.

SEVENTH: It is agreed between the parties that nothing herein contained shall be construed to require the parties of the second part to continue to expend monies in the development of the above mentioned premises or continue to

mine and operate said premises, if it shall appear to the parties of the second part in their sole and uncontrolled discretion that it would not be economically feasible to continue to develop or mine such property.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals this 7th day of September, A. D., 1966

ATTEST:

_____
Secretary

(corporate seal)

ASSOCIATED MINING & METALS, Inc.

By Anthony DeRose
President

Party of the First Part

Robert Potee (SEAL)
Robert Potee

Harold Tabaksman (SEAL)
Harold Tabaksman

Anthony DeRose (SEAL)
Anthony DeRose

Claimants and Parties of the Second Part

ITEM 4

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location, "Rock and Roll No. 1" as found on record, Book 51 Lodes, Page 160. Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location, " Rock and Roll No. 2" as found on record, Book 51 of Lodes, Page 162. Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate ofLocation, "Rock and Roll No. 3" as found on record, Book 51 Lodes, Page 164". Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location (Rock and Roll No. 4) as found in Book 51 of Lodes at Page 184 Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location, "Rock and Roll No. 5" as found on record, Book 51 Lodes, Page 166. Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 1967.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location, "Rock and Roll No. 6" as found on record, Book 51 of Lodes, Page 168. Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 1967.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location, "Rock and Roll No. 7". as found on record, Book 51 Lodes, Page 170. Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 1967.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location, "Rock and Roll No. 8" as found on record, Book 51 Lodes, Page 172. Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 1967.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA, }
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate ofLocation, "Rock and Roll No. 9" as found on record, Book 51 Lodes, Page 174. Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67.

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA, }
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location (Rock and Roll No. 10) as found in Book 51 of Lodes Page 176 Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA, }
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location (Rock and Roll No. II) as found on Record at Page 178 in Book 51 of Lodes Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA, }
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location (Rock and Roll No. 12) as found in Book 51 of Lodes Page 180 Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

OFFICE OF COUNTY CLERK AND RECORDER

STATE OF MONTANA,
County of Jefferson. } ss.

I, Alta M. Dawson, County Clerk and Ex-Officio Recorder in and for said County and State, DO HEREBY CERTIFY, That the above and foregoing which is hereto attached is a true, full and correct copy of Certificate of Location (Rock and Roll No. 13) as found in Book 51 of Lodes Page 182 Records of said County.

In witness whereof, I hereunto affix my hand and the seal of said County this 19th day of June, 19 67

By Alta M. Dawson
County Clerk and Ex-Officio Recorder.

Deputy.

BOOK 51 Lodes Page 160

FORMERLY WOMANS PRIDE NO.I* R.D. POTEE
FORMERLY R.D. POTEE INC. R.D. POTEE
FORMERLY P.P.I3 R.D. POTEE

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2WEST SECTION I7

OF THE ROCK AND ROLL NO.I QUARTZ LODE MINING CLAIM

I, R.D. POTEE,BOX 95. CLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER IO,I9I9

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the IST JUNE day of A.D. 1955 THRU I8 th APRIL 1964 ROCK AND ROLL NO. I*** Quartz Lode Mining Claim, situated in Mc CLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S. distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the No.East Corner No. 1 of this claim which is a 8" tree blazedon 4 sides in in open side hill.apex claim.N.W. ¼OFN.E. ¼ SECTION I7

Marked N.E. (P-P I3) cor.no I Cor. No. 1, of the ROCK AND ROLL NO.I Lode,

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a TREE BLAZED ON 4 SIDES,ON HIGH MEADOWS.

Marked S.E. (P.P I3) cor no 2 Cor. No. 2, of the ROCK AND ROLL NO.I Lode,

Thence Second Course WESTERLY A distance of I500 feet to the S.W.

Cor. No. 3 of this claim, which is a 4X4 POST PAINTED YELLOW,ALSO(PATENTED KI IOI64)

Marked S.W. (P.P. I3) cor no 3 Cor. No. 3, of the ROCK AND ROLL NO.I Lode,

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a 4X4 POST AND MOUND,20 FT EAST OF BEAVERDAM(MAUPIN CR)

Marked N.W. (P.P.I3) cor.no 4 Cor. No. 4, of the ROCK AND ROLL NO.I Lode,

Thence Fourth Course EASTERLY A distance of I500 feet to the N.E.

Cor. No. 1, the place of beginning;

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location;

~~X. X~~ ~~XXXXXXXX~~ named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 20 feet wide by 40 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said OPEN CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim 50 feet in a WESTERLY direction, and I450 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by I500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:—LOCATED IN THE NO.WEST QUARTER OF THE NO.EAST QUARTER SECTION 17 SOUTH WEST CORNER NO3 THREE IS ON CENTER LINE OF THE KATY PATENTED MINING CLAIM NO. K.I. 10164. found directly on MAURIN CREEK AT THE CONFLUENCE OF EAST DRAINAGE FROM HILL 6163. ALL CLAIMS RUN IN A EASTERLY DIRECTION FROM AND PARALLEL TO EACH OTHER.
THE MINERALIZATION IN THIS GROUP OF CLAIMS ARE OPEN PIT IN NATURE AND CUT WITH FISURES OF HIGHER GRADE ORES OF A PRIMARY ORIGIN VALUABLE IN BRINGING SAID LOW GRADES INTO PRODUCTION.

That the following claims adjoin this claim, to-wit:— On the North the NONE- WESTERN TIP OF P.P.14 quartz lode mining claim. On the South the ROCK AND ROLL NO.2 quartz lode mining claim. On the East the NONE quartz lode mining claim. On the West the KATY PATENTED NO.K.I. 10164 quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO.I quartz lode mining claim and is situated in McClellan Creek (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator S and claimant S follows, to wit:—

R.D. POTEE (BOX 95 CLANCY MONTANA)
TONY DE ROSE (1136 VALLEY VIEW DR. RACINE WISCONSIN)
HAROLD TABAKSMAN @ (1136 VALLEY VIEW DR. RACINE WISCONSIN)
THEODORE JOSEPH CARON 1% (BUTTE MONTANA)

Locator S and Claimant S

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA (IN AND FOR THE ABOVE NAMED CLAIMANTS)

being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimant S of the ROCK AND ROLL NO.I Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge I R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE ******

R.D. Potee
R.D. Potee

Subscribed and sworn to before me this 3rd day of August, A. D. 19 04

Allen G. Maurin
Notary Public in and for the State of Montana, residing at Boulder, Montana

My Commission expires April 4, 1906.

64117
PRIMARY NUMBER
T 8 R 2 W SEC. 17
CERTIFICATE OF LOCATION
Of the ROCK AND ROLL NO. I
Quartz Lode Mining Claim. McCLELLAN UN-ORGANIZED
Mining District, Jefferson County State of Montana

STATE OF MONTANA } SS.
County of Jefferson }
Filed for Record on the 10 day of August A. D. 19 04 at 11 o'clock A M., and Recorded in Book 51 of Lode Locations, at page 160
By Allen M. Maurin County Clerk.
Deputy.
Fee $2.00
Indexed M.S.F.

BOOK 51 Lodes Page 162

FORMERLY P.P.I2

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST OF SECTION 17

OF THE ROCK AND ROLL NO 2 QUARTZ LODE MINING CLAIM

I, R.D. POTEE, BOX 95 CLANCY MONTANA. a citizen of the United States

BORN BLUFFTON OHIO SEPT IO I9I9

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 1st ~~18th~~ DAY OF JUNE ~~APRIL~~ 1955 thru 1964 the ROCK AND ROLL NO 2 Quartz Lode Mining Claim, situated in Mc Clellan Cr. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered:

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated.

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the N.E. (P.P.I2) Corner No. 1 of this claim which is a 8" BLAZED TREE, IN FALLEN TIMBER. 20% GRADE FROM NO. I. N.E.¼ OF N.E.¼ SECTION I7

Marked N.E. (P.P I2) cor no I Cor. No. 1, of the ROCK AND ROLL NO.2 Lode,

Thence First Course SOUTHERLY (DOWNHILL) A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a TREE BLAZED ON FOUR SIDES. DRIFT FENCE, HIGH POINT.

Marked S.E. (P.P.I2) cor no 2 Cor. No. 2, of the ROCK AND ROLL NO.2 Lode,

Thence Second Course WESTERLY(DOWN) A distance of I500 feet to the S.W.

Cor. No. 3 of this claim, which is a 4X4 post and mound on acess road and creek.

Marked S.W. (P.PI2) cor no.3 Cor. No. 3, of the ROCK AND ROLL NO.2 Lode,

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is 4X4 yellow post and mound. I50 ft to creek and ford.

Marked N.W. (P.P.I2) cor no.4 Cor. No. 4, of the ROCK AND ROLL NO.2 Lode,

Thence Fourth Course EASTERLY (UP) A distance of I500 feet to the N.E.

Cor. No. 1, the place of beginning.

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

~~XXXXXXXXXXXX~~ named herein sunk a discovery shaft on said claim at the point of discovery ..... feet by ..... feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 20 feet wide by 20 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery ..... feet wide by ..... feet in height and ..... feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said open cut (Shaft, Cut or tunnel) at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim 50 feet in a WESTERLY direction, and I450 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by I500 feet in length;

BOOK 51 Lodes Page 161
FORMERLY P.P. 9

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE ROCK AND ROLL NO.3 (P.P.9) QUARTZ LODE MINING CLAIM

I, R.L. POTEE BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the ~~13th~~ 1ST ~~APRIL~~ 2 JUNE thru 1955 ~~1967~~ to the

ROCK AND ROLL NO. 3 Quartz Lode Mining Claim, situated in

McClellan Gr. ~~(unorganized)~~ Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:— SOUTH EAST QUARTER OF THE NORTHEAST QUARTER SECTION 17

Beginning at the N.E. Corner No. 1 of this claim, which is a TREE BLAZED ON FOUR SIDES 100 FEET OVER BROW OF HILL EASTERLY FROM CATTLE DRIFT FENCE. THICK FALLEN TIMBER AND SECOND GROWTH THREE INCH

Marked N.E. (P.P. 9) cor no 1 Cor. No. 1, of the ROCK AND ROLL NO.3 Lode,

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a 4X4 POST 100 FT EASTERLY OF DRIFT FENCE

Marked S.E. (P.P.9) COR NO-2 Cor. No. 2, of the ROCK AND ROLL NO. 3 Lode,

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a 4X4 POST WITH MOUND, 30 FT. NORTHERLY OF CREEK FORDE

Marked S.W. (P.P.9) COR.NO 3 Cor. No. 3, of the ROCK AND ROLL NO. 3 Lode,

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a 4X4 POST YELLOW WITH MOUND ON ACESS ROAD AND CREEK

Marked N.W. (P.P.9) COR NO. 4 Cor. No. 4, of the ROCK A D ROLL NO. 3 Lode,

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning;

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

~~XXXXXXXXXXXX~~ ~~The locator~~ named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 12 feet wide by 25 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said OPEN CUT (Shaft, Cut or tunnel) at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator, S claim S 50 feet in a WESTERLY direction, and 1450 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:— SITUATE MAINLY IN THE SOUTH EAST QUARTER OF THE NORTH EAST QUARTER SECTION 17

IN CONJUNCTION WITH ~~XXX~~ AND NO OUTSTANDING MONUMENTS.

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO.2 quartz lode mining claim. On the South the ROCK AnD ROLL NO.4 quartz lode mining claim. On the East the NONE quartz lode mining claim. On the West the ROCK AnD ROLL NO.12 quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO.3 quartz lode mining claim and is situated in McClellan Creek (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locators and claimants follows, to wit:—

R.D. POTEE BOX 95 CLANCY MONTANA ( )
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
HAROLD THEISMAN @ 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
THEODORE JOSEPH CARON -1%- BUTTE MONTANA ( )
( ) ( )

Locators and Claimants

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA (IN AND FOR THE ABOVE NAMED CLAIMANTS) being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locators and claimants of the ROCK AND ROLL NO. 3 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislatative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge I R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE

R.D. Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 1994

Allan L. Thomas

Notary Public in and for the State of Montana, residing at Boulder, Montana

My Commission expires April 4, 1966.

84119

CERTIFICATE OF LOCATION
T 8 R 2 W SEC. 17

Of the ROCK AND ROLL NO 3
Quartz Lode Mining Claim McClellan Un-Organized
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } SS.
County of Jefferson.

Filed for Record on the 10 day of August A. D. 1964 at 11 18 o'clock A.M. and Recorded in Book 51 of Lode Locations, at page 164

Alta M. Shanton
County Clerk.

By Deputy.

Fee. $4.00

Indexed

BOOK 51 Lodes Page 184

FORMERLY P.P. 7

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE ROCK AND ROLL NO.4 QUARTZ LODE MINING CLAIM

I, R.D. POTEE BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 1ST ----------JUNE---------- 1955 thru 18TH ----------day of APRIL----------A.D. 1964, the

ROCK AND ROLL NO. 4 Quartz Lode Mining Claim, situated in

McClellan Cr. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a TREE BLAZED ON FOUR SIDES ON MC CLELLAN SIDE SOUTH EAST QUARTER OF NORTH EAST QUARTER SECTION 17 ROCK PROTRUTORY AT THE CENTERLINE

Marked N.E. (P.P7) COR NO.1 Cor. No. 1, of the ROCK AND ROLL NO.4 Lode.

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a 20 INCH PONDEROSA BLAZED ON FOUR SIDES.DIS.6X6X8

Marked S.E. (P.P.7) COR NO. 2 Cor. No. 2, of the ROCK AND ROLL NO.4 Lode.

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a 4X4 POST YELLOW ON HIGH ROAD

Marked S.W. (PP 7) COR NO 3 Cor. No. 3, of the ROCK AND ROLL NO.4 Lode.

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a 4X4 POST YELLOW AND MOUND.30 FT NO. OF BORDE

Marked N.W. (P.P.7) COR NO. 4 Cor. No. 4 of the ROCK AND ROLL NO. 4 Lode.

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning:

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

~~XXXXXXXXXXXX~~ named herein sank a discovery shaft on said claim at the point of discovery ..... feet by ..... feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 15 feet wide by 125 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXXXXXXX~~ 3. The locator ..... named herein excavated a tunnel on said claim at the point of discovery ..... feet wide by ..... feet in height and ..... feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said OPEN CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim 50 feet in a WESTERLY direction, and 1450 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:—

SOUTH EAST QUARTER OF THE NORTH EAST QUARTER OF SECTION 17
EXTREEM AMOUNT TO SHOW THE MINERIZATION IN THE AREA WORK PLEATIFUL
ALLONG THE ROAD.

IN CONJUNTION WITH ENTRY AND APEX

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO.3 quartz lode mining claim. On the South the ROCK AND ROLL NO. 5 quartz lode mining claim.
On the East the XXXXXXXXXXXXXXXXX quartz lode mining claim.
On the West the ROCK AND ROLLNO II quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO. 4 quartz lode mining claim and is situated in McClellan Creek (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator S and claimant S follows, to wit:—

R.D. POTEE BOX 95 CLANCY MONTANA ( )
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
HAROLD TABAKSMAN @ 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
THEODORE JOSEPH CARON 114 AGATE BUTTE MONTANA -1%- ( )
( ) ( )

Locator S and Claimant S

STATE OF MONTANA }
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA(IN AND FOR THE ABOVE XXXXXXXX NAMED CLAIMANTS)

being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimant S of the ROCK AND ROLL NO.4 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislatative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge. I R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE

R.D. Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 19 64

Allen L. Mills

Notary Public in and for the State of Montana, residing at Boulder, Montana

My Commission expires April 4, 1966.

OPEN PIT 84129

T 8 R 2 W SEC. 17

CERTIFICATE OF LOCATION

Of the ROCK AND ROLL NO.4
Quartz Lode Mining Claim McCLELLAN UN-ORGANIZED
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } ss.
County of Jefferson, }

Filed for Record, on the 10 day of August A. D. 1964 at 11:28 o'clock A.M., and Recorded in Book 51 of Lode Locations, at page 184

Alta M. Sanson
County Clerk.

By Deputy.

Indexed M.A.S.

Fee, $4.00

BOOK 51 Lodes Page 166

FORMERLY P.P. 3

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE ROCK AND ROLL NO 5 QUARTZ LODE MINING CLAIM

I, R.D. POTTS BOX 95 BLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:

That on the 18TH day of APRIL A.D. 1954 the 1ST. JUNE 1955 THRU

ROCK AND ROLL NO.5 Quartz Lode Mining Claim, situated in

McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:--

Beginning at the N.E. Corner No. 1 of this claim which is a TREE BLAZED ON FOUR SIDES 50 FT FROM INTORY, CENTERLINE THRU SADDLE, SO. EAST QUARTER OF SO. EAST QUARTER SECTION 17

Marked N.E. (P.P. 3) COR NO. I Cor. No. 1, of the ROCK AND ROLL NO. 5 Lode.

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a BOULDER 18 INCH PAINT LETTERS 2FT. HIGH. DONY FIXED.

Marked S.E. (P.P.3) COR NO. 2 Cor. No. 2, of the ROCK AND ROLL NO. 5 Lode.

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is A TON BOULDER, 18INCH LETTERING, 3" WIDE STRIPE X5FT.

Marked S.W. (P.P.3) COR. NO. 3 Cor. No. 3, of the ROCK AND ROLL NO.5 Lode.

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is TREE BLAZED ON FOUR SIDES, TRIMM BRUSH CUT 12X30

Marked N.W. (P.P.3) COR NO. 4 Cor. No. 4, of the ROCK AND ROLL NO.5 Lode.

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning;

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

~~XXXXXXXXXX~~ named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 12 feet wide by 30 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said OPEN CUT (Shaft, Cut or tunnel) at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claims 500 feet in a WESTERLY direction, and 1000 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:— SOUTH EAST QUARTER OF THE SOUTH EAST QUARTER SECTION 17 cor no.4 ON THE NEW ROAD AND VISIBLE FROM A DISTANCE. NO.3 COR. ALSO ON THE ROAD TO OLD ROCK #1

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO. 4 quartz lode mining claim. On the South the OLD ROCK #6 quartz lode mining claim. On the East the ~~XXXXXXXXXXXXXXXX~~ NONE quartz lode mining claim. On the West the ROCK AND ROLL NO 10 quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO.5 quartz lode mining claim and is situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator S and claimant S follows, to wit:—

R.D. POTEE BOX 95 CLANCY MONTANA ( )
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN
HAROLD TABAKSMAN 1136 VALLEY VIEW DR. RACINE WISCONSIN
THEODORE JOSEPH CARON -1%- 114 AGATE BUTTE MONTANA ( )

Locator S and Claimant S

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA IN AND FOR THE ABOVE NAMED CLAIMANTS. being first duly sworn, on his oath, says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimant S of the ROCK AND ROLL NO.5 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge I R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE.

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 1964

Notary Public in and for the State of Montana residing at Boulder, Montana

My Commission expires April 4, 1966.

84120

OPEN PIT

T 8 R 2 W SEC. 17

CERTIFICATE OF LOCATION

Of the ROCK AND ROLL NO 5

Quartz Lode Mining Claim, Mc CLELLAN UN-ORGANIZED

Mining District, Jefferson County State of Montana

STATE OF MONTANA } SS.
County of Jefferson,

Filed for Record on the 10 day of August A. D. 1964 at 11 o'clock A.M. and Recorded in Book 51 of Lode Locations, at page 166

Alta M. Clawson
County Clerk

By Deputy.

Indexed

Fee, $10.00

BOOK 51 Lodes Page 168

APEX

FORMERLY P.P. 2

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE OLD ROCK NO. 6 QUARTZ LODE MINING CLAIM

I R.D. POTEET BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 1ST JUNE 1955 thru 18th day of APRIL A. D. 1954, the

OLD ROCK NO. 6 Quartz Lode Mining Claim, situated in

McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated:

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a ROCKY POINT YELLOW PAINT IDENT. APEX. NEARLY TO DRIFT FENCE,

Marked N.E. (P.P.2) COR NO.I Cor. No. 1, of the OLD ROCK NO.6 Lode.

Thence First Course southerly A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a HIGH POINT ON RIDGE, YELLOW PAINT ON ROCK I2Pto2'

Marked ~~N.E.~~ S.E.(P.P.2) COR NO. 2 Cor. No. 2, of the OLD ROCK NO.6 Lode.

Thence Second Course WESTERLY A distance of I500 feet to the S.W.

Cor. No. 3 of this claim, which is a 8" TREE BLAZED ON ~~XXXX~~ 4 SIDES, HEAVY BRUSH.

Marked S.W. (P.P.2) COR NO. 3 Cor. No. 3, of the OLD ROCK NO.6 Lode.

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a SQUARED TREE, IN HEAVY BRUSH BETWEEN ROADS.

Marked N.W. (P.P. 2) COR NO. 4 Cor. No. 4, of the OLD ROCK NO. 6. Lode.

Thence Fourth Course EASTERLY A distance of I500 feet to the N.E.

Cor. No. 1, the place of beginning:

That each tree so marked was at least eight inches in diameter, and blazed on four sides, that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

~~XXXXXXXXXXXX~~ named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery I5 feet wide by 30 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said OPEN CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim 50 feet in a WESTERLY direction, and I450 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by I500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:—

N.W. COR NO 4 LOCATED IN THE BRUSH MIDWAY BETWEEN THE HIGH ROAD AND THE LOW RO
LOW ROAD LARGE GRANITE DONY'S AT THE ROAD SIDE. MAIN SHAFT AT
CENTER LINE WEST END. 400' TO LOW RD,
75' TO HIGH RD.
DRIFT TUNNEL INTO MTN. 150' AT WEST END.

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO. 5 quartz lode mining claim. On the South the ROCK AND ROLL NO.7 quartz lode mining claim. On the East the NONE quartz lode mining claim. On the West the ROCK AND ROLL NO. 9 quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the OLD ROCK NO. 6 quartz lode mining claim and is situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator S and claimant S follows, to wit:—

R.D. POTEE BOX 95 CLANCY MONTANA
TONY DE ROSE 1156 VALLEY VIEW DRIVE RACINE WISCONSIN
HAROLD THOMSON 1156 VALLEY VIEW DRIVE RACINE WISCONSIN
THEODORE JOSEPH CARON -13- 114 AGATE BUTTE MONTANA

Locator S and Claimant S

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA(IN AND FOR THE ABOVE NAMED CLAIMANTS) being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimant S of the OLD ROCK NO.6 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge. I.R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 19 64

Alta M Alison

Notary Public in and for the State of Montana, residing at Boulder, Montana
My Commission expires April 4, 1966.

84121

APEX OPEN PIT

T 8 R 2 W SEC. 17

CERTIFICATE OF LOCATION

Of the OLD ROCK NO 6

Quartz Lode Mining claim.
UN-ORGANIZED McCLELLAN CR.
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } ss.
County of Jefferson }

Filed for Record on the 10 day of August A. D. 1964 at 11:20 o'clock A. M. and Recorded in Book 51 of Lode Locations, at page 168

Alta M. Alison
County Clerk.

By _____ Deputy.

Indexed 7h 8 5
Fee, $6.00

BOOK 51 Lodes Page 170 FORMERLY P.P.5

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION17

OF THE ROCK AND ROLL NO 7 QUARTZ LODE MINING CLAIM

I, R. J. POTER BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLIFFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 1ST ----------JUNE ---------- 1955 thru 18TH ---------- day of APRIL ---------- A. D. 19 64, the

ROCK AND ROLL NO. 7 Quartz Lode Mining Claim, situated in

McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a ROCK FACE YELLOW PAINT IDENT.50' VERTICAL FROM 1/2 CORNER.S.E.1/4 OF THE S.E.1/4 SEC.17

Marked N.E. (P.P.5) COR NO. 1 Cor. No. 1 of the ROCK AND ROLL NO.7 Lode,

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a GRANITE DONY 2' LETTERS IN YELLOW PAINT.

Marked S.E. (P.P.5) COR NO. 2 Cor. No. 2, of the ROCK AND ROLL NO.7 Lode,

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a 40 FON BOULDER,18" LETTERING YELLOW PAINT.

Marked S.W. (P.P.5) COR NO.3 Cor. No. 3, of the ROCK AND ROLL NO.7 Lode,

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a TREE BLAZED ON FOUR SIDES. THICK BRUSH.

Marked N.W. (P.P.5) COR NO. 4 Cor. No. 4, of the ROCK AND ROLL NO.7 Lode,

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning.

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location,

~~XXXXXXXXXXXXXXXXXXXX~~ herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 12 feet wide by 30 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located:

That said locator S claim 500 feet in a WESTERLY direction, and 1000 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:—
SOUTH EAST QUARTER OF THE SOUTH EAST QUARTER SECTION 17
OLD HELENS PRIDE 42 SIDE LINE (POTEE 1955)
ON 6163 SIDE NEAR TOP.
CARRIES AN APEX TO AN FISSURE VEIN PROVEN IN EARLY DAYS AND HAS SHIPPING RECORD.

That the following claims adjoin this claim, to-wit:— On the North the OLD ROCK NO.6 quartz lode mining claim. On the South the NONE quartz lode mining claim. On the East the ~~XXXXXXXXXXXXXXXXXX~~ NONE quartz lode mining claim. On the West the ROCK AND ROLL NO. 8 quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the Rock and Roll No.7 quartz lode mining claim and is situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator S and claimant S follows, to wit:—

R.D. POTEE BOX 95 CLANCY MONTANA
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN
HAROLD TABANSMAN @ 1136 VALLEY VIEW DR. RACINE WISCONSIN
THEODORE JOSEPH CAREN—1% —114 AGATE BUTTE MONTANA.

Locator and Claimant

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA (IN AND FOR THE ABOVE NAMED CLAIMANTS) being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimant S of the ROCK AND ROLL NO.7 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 13, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge. I R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 1964

Allen L. Merrill
Notary Public in and for the State of Montana, residing at Boulder, Montana

My Commission expires April 4, 1966.

APEX 61122
T 6 R 2 W SEC. 17
CERTIFICATE OF LOCATION

Of the ROCK AND ROLL NO. 7
Quartz Lode Mining Claim, McCLELLAN CR.
UNORGANIZED
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } SS.
County of Jefferson, }

Filed for Record on the 16 day of August A. D. 1964 at 11:21 o'clock A.M. and Recorded in Book 51 of Lode Locations, at page 170

Ella M. Alderson
County Clerk
By Deputy.

Fee, $4.00

Indexed MBF

BOOK 51 Lodes Page 172

FORMERLY P.P.6

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE ROCK AND ROLL NO.8 QUARTZ LODE MINING CLAIM

I, R.D. POTTER BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLUFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 1ST ----------JUNE---------- 15TH ---------- day of APRIL ---------- A. D. 1955 THRU 1964 the

ROCK AND ROLL NO. 8 Quartz Lode Mining Claim, situated in

McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator, S the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a 8" TREE BLAZED ON FOUR SID SIDES SIDE HILL AND HEAVY BRUSH. S.W. ¼ OF S.E.¼ SEC 17

Marked N.E. (P.P.6) COR NO I Cor. No. 1, of the ROCK AND ROLL NO.8 Lode

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a TREE STUMP FIVE FT TALL AND TAGGED, ROCK CARN.

Marked S.E. (P.P.6) COR NO.2 Cor. No. 2 of the ROCK AND ROLL NO.8 Lode

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a YELLOW PAINTED ROCK FACE,

Marked S.W. (P.P. 6) COR NO 3 Cor. No. 3, of the ROCK AND ROLL NO 8 Lode

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a 20 TON BOULDER YELLOW IDENT. NEW GRANITE

Marked N.W. (P.P. 6) COR NO. 4 Cor. No. 4 of the ROCK AND ROLL NO.8 Lode

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning:

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

~~1. The locator~~ named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet. (If you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 15 feet wide by 30 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~3. The locator~~ named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim 50 feet in a EASTERLY direction, and 1450 feet in a WESTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

BOOK 51 Lodes Page 174

FORMERLY HELENE PRIDE NO.3
FORMERLY P.P. NO.I

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2WEST SECTION 17

OF THE OLD ROCK NO.9 QUARTZ LODE MINING CLAIM

I, ~~XXXXXXXXX~~ R.D. POTEE BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER TO 1919

of lawful age, do hereby certify and declare as follows, to wit:—

That on the 1ST. JUNE 1955 AND RD
18TH day of APRIL A.D. 19 64

OLD ROCK NO. 9 Quartz Lode Mining Claim situated in

McCLELLAN CREEK (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders designated as follows to wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a 8" TREE STUMP 5' TALL N.W. ½ OF THE S.W. ¼ SECTION 17, located on a south tributary of dublin creek at 1,000 ft northerly of 6163 B1.

Marked N.E. (P.P. I) COR.NO.I Cor. No.1 of the OLD ROCK NO.9 Lode.

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a 8" BLAZED TREE, IN SECOND GROWTH PINE.

Marked S.E. (P.P.9) COR NO. 2 Cor. No. 2, of the OLD ROCK NO.9 Lode.

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a 20TON BOULDER YELLOW PAINT. IN 80 TON DONY FIELD.

Marked S.W. (P.P.I) COR NO.3 Cor. No. 3, of the OLD ROCK NO. 9 Lode.

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a 10 TON BOULDER YELLOW PAINT IDENT. ROCKY AND STEEP.

Marked N.W. (P.P.I) COR NO. 4 Cor. No. 4, of the OLD ROCK NO.9 Lode.

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning:

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in such cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

1. ~~XXXXXXXXXXX~~ named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 20 feet wide by 25 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.) ALSO TUNNEL WORK ON VEIN

3. ~~XXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said CUT & TUNNEL (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim 50 feet in a EASTERLY direction, and 1450 feet in a WESTERLY direction along the course of the vein each way from the discovery shaft 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:— PRIMARY IN THE NORTH-WEST QUARTER OF THE SOUTH WEST QUARTER SECTION 17, has "EEEX 200S FT SHAFT WITH 1800 YARD OF ORE AVERAGE BY SECTION ASSAY AT $50.00 PR TON .THE ASSUMPTION BY TEST IS THE COUNTRY ROCK IN AN AREA 450 FT WIDTH IS ENRICHED AND THE BALLANCE OF COUNTRY INTRUSIVE BETWEEN CONTACTS OR RICH ENOUGH TO MILL PROFITTABLY,DRY TYPE UPGRADING HAS BEEN DONE ON THE PROPERTY BY THE CLAIMNANT AND FOUND TO BE SUCESSFULL IN INEXPENSIVE UPGRADING,NO WET WASTE DAMS ECT.

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO.IO quartz lode mining claim. On the South the ROCK AND ROLL NO. 8 quartz lode mining claim. On the East the OLD ROCK NO. 6 quartz lode mining claim. On the West the NONE quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the OLD ROCK NO.9 quartz lode mining claim and is situated in McCLELLAN CREEK (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator S and claimanS follows, to wit:—

R.D. POTEE BOX 95CLANCY MONTANA
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
HAROLD TABAKSMAN 6 (11 36 VALLEY VIEW DRIVE RACINE WISCONSIN)
THEODORE JOSEPH CARON-I%-114 AGATE BUTTE MONTANA. ( )
( ) ( )

Locator S and Claimant S

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA(IN AND FOR THE ABOVE NAMED CLAIMNANTS) being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimanS of the OLD ROCK NO.9 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge. I R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMNANTS DO HEAR-BY CERTIFY BY SIGNATURE

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 19 64

Allan L. McNaney
Notary Public in and for the State of Montana, residing at Boulder, Montana
My Commission expires April 4, 1966.

1800 YD MILL
200 FT SHAFT
MILL SITE
+ 8

Filed for Record on the 10 day of August A. D. 1964 at 11:37 o'clock A.M., and Recorded in Book 51 of Lode Locations, at page 174

Kathleen Shanahan
County Clerk. By M.S. Deputy.

Indexed M.S. Fee $4.00

BOOK 51 Lodes Page 176

FORMERLY P.P.4

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE ROCK AND ROLL NO.10 QUARTZ LODE MINING CLAIM

I, R.D. POTEE BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 18TH day of JUNE 1957 APRIL A. D. 1955 thru 64, the

ROCK AND ROLL NO.10 Quartz Lode Mining Claim, situated in

McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered;

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a TREE AT CONFLUENCE OF ROAD FORKS, HIGH AND LOW AT OLD HELENS PRIDE TUNNEL. S.E.X, S.E.X SEC.17

Marked N.E. (P.P.4) COR NO.1 Cor. No. 1, of the ROCK AND ROLL NO.10 Lode

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a BOULDER YELLOW IDENT. VERTICAL 50 FT. FACE.

Marked S.E. (P.P.NO.4) COR NO. 2 Cor. No. 2, of the ROCK AND ROLL NO. 10 Lode

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a 40 TON BOULDER 18" LETTERING

Marked S.W. (P.P.4) COR NO. 3 Cor. No. 3, of the ROCK AND ROLL NO.10 Lode

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a TREE BLAZED ON FOUR SIDES

Marked N.W. (P.P.4) COR NO. 4 Cor. No. 4, of the ROCK AND ROLL NO. 10 Lode

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning;

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length; set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

XXXXXXXXXXXX named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 12 feet wide by 30 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

3. XXXXXXXXXXXX named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and, feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2).

That said locator S did there, in the bottom of said OPEN CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S, claim 500 feet in a WESTERLY direction, and 1000 feet in a EASTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

BOOK 51 Lodes Page 177

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit: SOUTH EAST QUARTER OF THE SOUTH EAST QUARTER OF SECTION 17
HEAVY BOULDER FIELD ON S.E. CORNER
SIDE LINES PARALLEL MINE ROAD IN SIGHT OF ROAD.

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO.II quartz lode mining claim. On the South the OLD ROCK NO.9 quartz lode mining claim. On the East the ROCK AND ROLL NO.5 quartz lode mining claim. On the West the NONE quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO 10 quartz lode mining claim and is situated in McCLELLAN CREEK (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator S and claimant S follows, to wit:—

R.D. POTEE (BOX 95 CLANCY MONTANA)
TONY DE ROSE (1136 VALLEY VIEW DR. RACINE WISCONSIN)
HAROLD TABARSMAN (1136 VALLEY VIEW DR. RACINE WISCONSIN)
THEODORE JOSEPH CARON 114 AGATE BUTTE MONTANA a 1% INTREST

( ), ( ) Locator S and Claimant S

STATE OF MONTANA } ss.
County of JEFFERSON

R.D. POTEE IN AND FOR THE ABOVE NAMED CLAIMANTS being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimant S of the ROCK AND ROLL NO.10 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislatative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge I,R.D. POTEE ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HERE-BY CERTIFY BY SIGNATURE

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 19 64

Allen B. Wheeler
Notary Public in and for the State of Montana, residing at Boulder, Montana
My Commission expires April 4, 1966.

8125
CORRECTION AREA

CERTIFICATE OF LOCATION
T 5 N R 2 W SEC. 17
Of the ROCK AND ROLL NO 10
Quartz Lode Mining Claim McCLELLAN CR.
UNORGANIZED
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } SS.
County of Jefferson.

Filed for Record on the 10 day of August A. D. 1964 at 11:30 o'clock A. M. and Recorded in Book 51 of Lode Locations, at page 176

Alta M. Anderson
County Clerk.
By Deputy
Indexed
Fee, $4.00

BOOK 51 Lodes Page 178

FORMERLY P.P.8

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE ROCK AND ROLL NO.II QUARTZ LODE MINING CLAIM

I, R.D. POTRE. BOX 95 . CLANCY MONTANA citizen of the United States

BORN BLUFFTON, OHIO SEPT 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 1ST JUNE day of 1955 and the 18TH APRIL day of 1954 the ROCK AND ROLL NOII (ELEVEN) Quartz Lode Mining claim situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana was duly discovered.

That on said day a written or printed Notice of Location of said claim was duly posted on said ground at the point of discovery on said claim, which said notice contained the name of the locator S. the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S. distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a 4X4 POST YELLOW PAINTED 50 FEET NORTHERLY FROM FORD, S.W.¼ OF N.W. ¼ SECTION 17 FACING ROAD AND CREEK

Marked N.E. (P.P.8) COR NO I. Cor. No. 1, of the ROCK AND ROLL NOII Lode.

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a 14" TREE BLAZED ON FOUR SIDES, AT JUNCTION OF HIGH AND LOW STREAM

Marked S.E (P.P.8) COR NO.2 Cor. No. 2, of the ROCK AND ROLL NO.II Lode.

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a ROCK FACE YELLOW PAINT IDENT. FALLEN TIMBER, BOULDERS.

Marked S.W. (P.P.8) COR NO. 3 Cor. No. 3, of the ROCK AND ROLL NO.II Lode.

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a 20 FOT DONY YELLOW IDENT.

Marked N.W. (P.P.8) COR NO.4 Cor. No. 4, of the ROCK AND ROLL NO.II Lode.

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning.

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

1. ~~The locator~~ named herein sunk a discovery shaft on said claim at the point of discovery ..... feet by ..... feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S. named herein excavated an open cut on said claim at the point of discovery 12 feet wide by 25 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~The locator~~ named herein excavated a tunnel on said claim at the point of discovery ..... feet wide by ..... feet in height and ..... feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S. did there, in the bottom of said CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located.

That said locator S. claim 50 feet in a EASTERLY direction, and 1450 feet in a WESTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the ..... 600 feet wide by 1500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:— LAYING IN THE SOUTH WEST QUARTER OF THE NORTH WEST QUARTER OF SECTION 17
BOTH NO.1 AND NO. 2 CORNERS VISIBLE FROM THE CREEK AND THE HIGH AND LOW ROADS TO THE OLD ROCK SHAFT AND TUNNEL.

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO.12 quartz lode mining claim. On the South the ROCK AND ROLL NO.10 quartz lode mining claim. On the East the ROCK AND ROLL NO. 4 quartz lode mining claim. On the West the NONE quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO.II quartz lode mining claim and is situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locators and claimants follows, to wit:—

R.D. POTEE BOX 95 CLANCY MONTANA ( )
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
HAROLD TABAKSMAN @ 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
THEODORE JOSEPH CARON 1%- 114 AGATE BUTTE MONTANA ( )
( ) ( )
Locators and Claimants

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE BOX 95 CLANCY MONTANA (IN AND FOR THE ABOVE NAMED CLAIMANTS) being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locators and claimants of the ROCK AND ROLL NO.II Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge I, R.D. POTEE, ACTING IN AND FOR THE ABOVE NAMED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 19 64

Allen L. Wheeler

Notary Public in and for the State of Montana, residing at Boulder, Montana

My Commission expires April 4, 1966

GENERAL LOW GR.
T 8 R 2 W SEC. 17
CERTIFICATE OF LOCATION
of the ROCK AND ROLL NO. II
Quartz Lode Mining Claim
McCLELLAN GR.
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } SS.
County of Jefferson.

Filed for Record on the 10 day of August A. D. 19 64 at 1:25 o'clock A. M. and Recorded in Book 51 of Lode. Locations at page 179

Alice M. Hamilton
County Clerk.

By Deputy.

Indexed M.B.C.
Fee. $4.00

S1126

BOOK 51 Lodes Page 180

FORMERLY P.P.10

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

OF THE ROCK AND ROLL NO.12 QUARTZ LODE MINING CLAIM

I, E.D. POTEE BOX 95 CLANCY MONTANA a citizen of the United States

BORN BLUFFTON OHIO SEPTEMBER 10 1919

of lawful age, do hereby certify and declare as follows, to-wit:—

That on the 18TH day of JUNE A. D. 1955 thru APRIL 1964, the ROCK AND ROLL NO. 12 Quartz Lode Mining Claim, situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered.

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated.

That thereafter and within thirty days after the posting of said notice of location, the locator S distinctly marked the location of said claim on the ground so that its boundaries could be readily traced by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to-wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a 4X4 YELLOW POST, ON LOW ROAD AND THE CREEK. S.W.1/4 OF THE N.E.1/4 SECTION 17

Marked N.E. (P.P.10) COR NO. 1 Cor. No. 1, of the ROCK AND ROLL NO.12 Lode,

Thence First Course SOUTHERLY A distance of 660 feet to the S.E.

Cor. No. 2 of this claim, which is a 4X4 YELLOW POST.30 FT NORTHERLY OF CREEK FORDE

Marked S.E. (P.P.10) COR NO.2 Cor. No. 2, of the ROCK AND ROLL NO.12 Lode,

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a 10 TON BOULDER YELLOW IDENT. IN BOULDER FIELD.

Marked S.W. (P.P.10) COR NO. 3 Cor. No. 3, of the ROCK AND ROLL NO.12 Lode,

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a BOULDER YELLOW IDENT.

Marked N.W. (P.P.10) COR NO. 4 Cor. No. 4, of the ROCK AND ROLL NO.12 Lode,

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning.

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

~~XXXXXXXXXXXXXXXXXXXXXX~~ named herein sunk a discovery shaft on said claim at the point of discovery ..... feet by ..... feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (if you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 20 feet wide by 50 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one hundred and fifty cubic feet of excavations; (if you include an open cut cancel all of paragraphs 1 and 3.)

~~XXXXXXXXXXXXXXXXXXXXXX~~ named herein excavated a tunnel on said claim at the point of discovery ..... feet wide by ..... feet in height and ..... feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (if you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said CUT (Shaft, Cut or tunnel) at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim 50 feet in a EASTERLY direction, and 1450 feet in a WESTERLY direction along the course of the vein each way from the discovery shaft, and 300 feet on each side of the center of the vein, the same being 600 feet wide by 1500 feet in length;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to-wit:— LAYING IN THE SOUTH WEST QUARTER OF THE NORTH EAST QUARTER SECTION 17 NO.I AND NO. 2 CORNERS LAYING ON THE ACESS ROAD AND THE CREEK. EASILY LOCATED AND IDENTIFIED.

That the following claims adjoin this claim, to-wit:— On the North the ROCK AND ROLL NO.13 quartz lode mining claim. On the South the ROCK AND ROLL NO.II quartz lode mining claim. On the East the ROCK AND ROLL NO. 3 quartz lode mining claim. On the West the NONE quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO. I2 quartz lode mining claim and is situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locator and claimant follows, to wit:—

R.D. POTEE BOX 95 CLANCY MONTANA ( )
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
HAROLD TYBAKSMAN @ 1136 VALLEY VIEW DR. RACINE WISCONSIN ( )
THEODORE JOSEPH CARON 1% 114 AGATE BUTTE MONTANA ( )
( ) ( )

Locator S and Claimant S

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE IN AND FOR THE ABOVE NAMED CLAIMANTS being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locator S and claimant S of the ROCK AND ROLL NO.I2 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislatative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge I,R.D. POTEE ACTING IN AND FOR THE ABOVE ATED CLAIMANTS DO HEAR-BY CERTIFY BY SIGNATURE

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 19 64

Allen L. Mooney
Notary Public in and for the State of Montana, residing at Boulder, Montana
My Commission expires April 4, 1966.

84127

T 8 R 2 W SEC. 17

CERTIFICATE OF LOCATION

Of the ROCK AND ROLL NO.I2
Quartz Lode Mining Claim.
McCLELLAN CR. UN-
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } ss.
County of Jefferson.

Filed for Record at the request
day of August A. D. 19 64
at 11:26 o'clock A. M., and
Recorded in Book 51 of Lode
Locations, at page 180

Ella M. Harrison
County Clerk.
By Deputy.
Indexed Th D F
Fee, $4.00

BOOK 51 Lodes Page 182

FORMERLY P.P. II

CERTIFICATE OF LOCATION

TOWNSHIP 8 RANGE 2 WEST SECTION 17

QUARTZ LODE MINING CLAIM

OF THE ROCK AND ROLL NO.13 a citizen of the United States

L.R.B. ROTHE BOX 95 CLANCY MONTANA

BORN BLUFFTON OHIO SEPTEMBER 10 1919

of lawful age do hereby certify and declare as follows, to wit:—

That on the, 13TH day of APRIL A. D. 1954 the 1955thru 137

ROCK AND ROLL NO. 13 Quartz Lode Mining Claim, situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana, was duly discovered:

That on said day a written or printed Notice of Location of said claim was duly posted, conspicuously, at the point of discovery on said claim, which said notice contained the name of the locator S, the date of location (which said date of location was the date of posting of such notice) and the approximate area of the claim intended to be appropriated;

That thereafter and within thirty days after the posting of said notice of location, the locator S, distinctly marked the location of said claim on the ground so that its boundaries could be readily traced, by placing monuments at each corner and angle of said claim, which said monuments consists of trees, posts, stumps, stones and boulders described as follows to wit:—

Beginning at the N.E. Corner No. 1 of this claim which is a 4X4 POST PAINTED YELLOW N.E. ¼ OF N.W. ¼ SECTION 17, AT JUNCTION OF OLD AND NEW ROADS TANGLED UNDERBRUSH AND FALLEN TIMBER.

Marked N.E. (P.P.II) COR NO.1 Cor. No. 1, of the ROCK AND ROLL NO.13 Lode,

Thence First Course SOUTHERLY A distance of 600 feet to the S.E.

Cor. No. 2 of this claim, which is a 4X4 POST PAINTED YELLOW, ON ACCESS ROAD AND CREEK.

Marked S.E. (P.P.II) COR NO. 2 Cor. No. 2, of the ROCK AND ROLL NO.13 Lode,

Thence Second Course WESTERLY A distance of 1500 feet to the S.W.

Cor. No. 3 of this claim, which is a BOULDER YELLOW IDENT. IN BOULDER FIELD.

Marked S.W.(P.P.II) COR NO. 3 Cor. No. 3, of the ROCK AND ROLL NO.13 Lode,

Thence Third Course NORTHERLY A distance of 600 feet to the N.W.

Cor. No. 4 of this claim, which is a 4X4 POST PAINTED YELLOW, OVER LAP ON KATY.

Marked N.W. (P.P.II) COR NO.4 Cor. No. 4, of the ROCK AND ROLL NO.13 Lode,

Thence Fourth Course EASTERLY A distance of 1500 feet to the N.E.

Cor. No. 1, the place of beginning;

That each tree so marked was at least eight inches in diameter, and blazed on four sides; that each post so marked was at least four inches square by four feet and six inches in length, set one foot in the ground, except where solid rock occurred at a less depth, in which case the post was set upon such rock, and in all cases such posts were surrounded by a mound of earth and stone at least four feet in diameter by two feet in height; that each stump so marked was squared and was at least eight inches in diameter by four feet in height and was surrounded by a mound of earth and stone four feet in diameter by two feet in height; that each stone so marked was at least six inches square by eighteen inches in length, set two-thirds of its length in the ground, with a mound of earth and stone alongside at least four feet in diameter by two feet in height; that each boulder so marked was at least three feet above the natural surface of the ground on the upper side of said boulder.

That within sixty days after the date of posting of said notice of location:

1. The locator named herein sunk a discovery shaft on said claim at the point of discovery feet by feet, to the depth of at least ten feet, vertically, below the lowest part of the rim of such shaft at the surface, and that the cubical contents of said shaft excavated is not less than one hundred and fifty cubic feet; (If you sink a discovery shaft cancel all of paragraphs 2 and 3.)

2. The locator S named herein excavated an open cut on said claim at the point of discovery 12 feet wide by 20 feet long and to the depth of at least ten feet, vertically, below the natural surface of the ground, and which said cut consists of at least one-hundred and fifty cubic feet of excavations; (If you include an open cut cancel all of paragraphs 1 and 3.)

3. The locator named herein excavated a tunnel on said claim at the point of discovery feet wide by feet in height and feet in length, and to the depth of at least ten feet vertically, below the natural surface of the ground, and which said tunnel consists of at least one hundred and fifty cubic feet of excavation; (If you excavate a tunnel cancel all paragraphs 1 and 2.)

That said locator S did there, in the bottom of said CUT (Shaft, Cut or tunnel)

at the lowest vertical depth thereof, disclose the vein, lode or deposit so located;

That said locator S claim feet in a direction, and feet in a direction along the course of the vein each way from the discovery shaft, and 600 300 feet on each side of the center of the vein, the same being feet wide by 1500 feet in lehgth;

That the following reference is hereby made to natural objects and permanent monuments so as to identify said claim to wit:— LOCATED IN THE NORTH EAST QUARTER OF THE NORTH WEST QUARTER SECTION 17,- primarily ON THE MAUPIN CREEK AND THE 6163 DRAINAGE CREEK, AND INGRESS AND EGRESS WITH VEIN WORKINGS AT THE HIGH ELEV. AS THE OVERBURDEN IN THE LOW IS 10 FT.

That the following claims adjoin this claim, to-wit:— On the North the KATY PATENTED LODE quartz lode mining claim. On the South the ROCK AND ROLL NO.12 quartz lode mining claim. On the East the ROCK AND ROLL NO.2 quartz lode mining claim. On the West the NONE quartz lode mining claim.

That the claim so located, marked and designated as aforesaid is named and known as the ROCK AND ROLL NO.13 quartz lode mining claim and is situated in McCLELLAN CR. (unorganized) Mining District, County of Jefferson, State of Montana.

That the name of the locators and claimants follows, to wit:—

R.D. POTEE BOX 95 CLANCY, MONTANA
TONY DE ROSE 1136 VALLEY VIEW DR. RACINE WISCONSIN
HAROLD TABRISHAN 1136 VALLEY VIEW DR. RACINE WISCONSIN
THEODORE JOSEPH CARON 113- 114 AGATE BUTTE MONTANA

Locators and Claimants

STATE OF MONTANA
County of JEFFERSON } ss.

R.D. POTEE IN AND FOR THE ABOVE NAMED CLAIMANTS.

being first duly sworn, on his oath says: That he is a citizen of the United States, and that he is of lawful age; that he is the locators and claimants of the ROCK AND ROLL NO.13 Quartz Lode Mining Claim; that said location is made in good faith; that this "Certificate of Location" is made in good faith and for the purpose of securing and enjoying all the rights and benefits of Chapter 16 of the laws of 1907 passed by the Legislative Assembly of the State of Montana, entitled "An Act governing the manner of locating, recording and holding Possession of Mining Claims Upon the Public Domain of the United States Within the State of Montana," approved February 18, 1907; and that the matters and things stated in the foregoing "Certificate of Location" are true of his own knowledge I, R.D. POTEE.
BC NEARBY CERTIFY BY SIGNATURE

R D Potee
R.D. POTEE

Subscribed and sworn to before me this 3rd day of August A. D. 19 84

Allen L. Wheeler
Notary Public in and for the State of Montana, residing at Boulder, Montana
My Commission expires April 4, 1966.

84128
T 8 R 2 W. SEC. 17

CERTIFICATE OF LOCATION

of the ROCK AND ROLL NO.13
Quartz Lode Mining Claim.
McCLELLAN UN-ORGANIZED
Mining District, Jefferson County
State of Montana

STATE OF MONTANA } SS.
County of Jefferson. }

Filed for Record on the 10 day of August A. D. 19 84 at 11:27 o'clock A. M. and Recorded in Book 51 of Lode Locations at page 183

Allen M. Wheeler
County Clerk.
By Deputy.

Indexed
Fee $4.00

PHONE
Fa 6401 82-9795

Vivian Bros., Inc.

DIAMOND CORE DRILLING CONTRACTORS

OFFICE AND SHOP
209 WEST CAMERON
KELLOGG, IDAHO

MAILING ADDRESS
P. O. BOX 780
KELLOGG, IDAHO

ITEM 5

West 2929 Wellesley
Spokane, Washington
99502
June 10, 1967

Associated Mining and Metals, Inc.
401 North Park
Helena, Montana

Dear Sirs:

The following quotations are for drilling approximately 4000 feet at the Good Cheer Property located about 9 miles east of Alhambra, Jefferson County, Montana.

Mobilization and transportation	$300.00
Overburden drilling 0 to 50 feet	9.00 per ft.
Core drilling 0 to 250 feet BXWL	7.50 per ft.
250 to 500 feet BXWL	8.00 per ft.
500 to 750 feet BXWL	8.50 per ft.
750 to 1000 feet BXWL	9.00 per ft.

Reaming for casing, 50% of coring price.

Casing Placement and Removal 12.00 per hr.

Cementing and drilling out cement, $12.00 per hour plus cost of cement.

Waiting for cement to set if during regular shift hours, $8.00 per hr.

If no caving ground is encountered, no reaming or casing or cementing would be required.

Very truly yours,

H. H. Vivian

H. H. Vivian
VIVIAN BROS., INC.

JOHN O. LEAF

PHONE WA 6-9484

Leaf Drilling Co.

DIAMOND DRILL CONTRACTOR

E. 8205 UPRIVER DRIVE - SPOKANE 61, WASH.

10 June 1967

Associatted Mining& metals Inc.
Mr. Robert Carravetta
401 No. Park
Missoula, Montana.

Dear Sir:

In regards to the phone conversation I had with Mr. Silver~~ton~~man last week, I am submitting the following qoutations on the drilling you plan on the Good Cheer Mine property on Moppin Creek.

Mob & Demob	L.S.	$ 500.00
Overburden drilling	per ft.	10.00
Core drilling BX W/L 0 to 250 ft.	" "	7.25
250 " 500 "	" "	7.75
500 " 750 "	" "	8.50
Reaming casing	" "	4.00
Landing and pulling casing	per hr.	12.00
Cementing hole	" "	12.00
Drilling cement	" "	15.00
Waiting for cement to set on shift hours	" "	10.00

Core boxes and cement to be furnished by Mining Co. or will be furnished by Contractor at cost.

Compressed air for underground drilling to be furnished by Mining Co. or by Contractor at prevailing rental rate.

We have available AX wire line that the core size is 3/16 inch smaller than the standard BX W/L core so if bad ground is encountered reducing hole size would save on reaming casing and cementing.

Mr. Silver~~ton~~man wanted to know how long it would take to drill the job. He estimated that there w ould be 3holes approx. 600 ft deep, two at 500 ft.and two at 400 ft. on the surface. I would plan on using two drills, two shifts and would estimate the drilling to be completed in three months, access to the job and weather permitting.

Estimates to be monthly.

I will be glad to answer any questions you have on the above proposal.

Yours truly,

John O Leaf

2114 CURTIS STREET

TELEPHONE 623-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

ITEM 6

Folio 8883

Date July 24, 1967.

Associated Mining & Metals Co.,
Attention: Mr. H. Tabakman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
Sample No. 1	0.03	3.67						
2	0.04	3.46						
3	0.01	1.02						
4	0.015	1.48						

Y
A
E

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Preparation $5.00
Assays $10.00
Charge $ ~~$15.00~~

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE 623-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8887

Date August 1, 1967

Associated Mining & Metals Co.,
Attention: Mr. H. Tabakman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
C Sample No. 1	0.01	0.39						
B 2	0.015	2.89						
X 3	0.04	4.43						

Samples from this property are substantially vein quartz, pyrite, chalcopyrite, galena and sphalerite. Appearance would indicate a mineralized zone could quite possibly occur in veins of this type. COP

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Preparation: $5.00
Assays 7.50
Charge $ ~~$12.50~~

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE 623-1852

[redacted]

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8890

Date August 5, 1967

Associated Mining &Metals,Co.,
Attention: Mr. H. Tabaksman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

	DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
D	Sample No. 4:	0.05	1.97	0					

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 2.50
1.50 preparation
4.00 total.

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

Application - MME Form 40

MME Form 40
Jan. 65

Budget Bureau No. 42-R1306
Approval expires Dec. 31, 1968

OFFICIAL COPY
U.M.E.
RECEIVED
JUN 20 1967
INITIALS | CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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.)*

Associated Mining & Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER 6637

DATE RECEIVED 6·20·67

REGION 1

DIVISION CODE

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL	
CORPORATION	X
PARTNERSHIP	
OTHER *(Specify)*	

STATE IN WHICH FIRM IS ORGANIZED Wisconsin

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
Anthony S. DeRose	1136 Valley View Drive	Pres.
Anthony Domanik	425 Mulberry Lane	Vice-pres.
Harry Kwenski	2807 No. Main St.	Vice-pres.
Vannio Salerno	4913 Tanglewood Ave.	Sec.

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE
Silver

ESTIMATED COST OF PROJECT
$ 118,065

PROPERTY NAME	LOCATION COUNTY	STATE
Rock and Roll (formally Good Cheer)	Jefferson	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.~~ Washington, D. C., 20242, 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.

15 June 1967
DATED

Anthony S. DeRose
BY *(Signature)*

Pres.
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).]

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

1. FINANCIAL ELIGIBILITY

a. Efforts to Obtain Credit

Requests for funds to be used for exploration work were submitted to the West Racine Bank and the North Side Bank, both of Racine, Wisconsin. As per requirements, the date of loan request, the amount requested, and the proposed use of loan funds are evidenced in the letters included as Attachment A. Also included in Attachment A are the replies from the above-named banking institutions.

Associated Mining and Metals, Incorporated has already performed much preliminary exploration work to establish the presence of mineralization sufficient to satisfy justification of further expenditure.

This work consisted of:

- Extensive open cutting dozer work,
- Dewatering and reconstructing a former mine shaft,
- Exploring of exposed ore leads.

At this time, a diamond-core drilling program has been recommended by geologists Dr. Fred S. Honkala and Dr. Arnold J. Silverman.

Associated Mining and Metals would not ordinarily undertake the proposed exploration under current conditions and circumstances at its sole expense. It is felt that further exploration work is warranted with OME assistance under the OME program.

b. Affiliated, Parent, or Controlling Companies

Affiliated with Associated Mining and Metals, Incorporated are Harold Tabaksman, Anthony DeRose, and Robert Potee as original registered claim holders.

c. Applicants Share of Cost

If an OME contract is executed, Associated Mining and Metals will furnish its

share of the cost of exploration work through additional funds provided by the existing members of the organization and, if necessary, through the further sale of equity.

2. APPLICANT'S RIGHTS IN LAND

a. Interest in Land and Mineral Rights

The land on which the exploration work is being conducted is not owned by Associated Mining and Metals. The right of possession and the mineral rights are provided by unpatented claims registered by Tabaksman, DeRose, and Potee. Associated Mining and Metals, Incorporated has partial control and operates the properties under operating contract with above-named registered claim holders. No liens, mortgages, or other encumbrances are known to exist on the land.

b. Description of the Land

The land consists of Claims 1 through 13 Rock and Roll Mining Claims (Maupin Creek) in Township 8, Range 2, West, Maupin Creek Mining District, Section 17, Jefferson County, Montana.

Notices of location for these claims have been recorded at the Jefferson County seat at Boulder, Montana. Copies of each location notice containing a description of the claims and the book and page numbers where recorded are included as Attachment B.

A search into the area's history revealed prior mining activity in the area in the late 1890's and early 1900's under the name of the Good Cheer group.

c. Land or Mineral Rights Encumbered or Not Owned

Not applicable.

3. PHYSICAL DESCRIPTION

a. Description of Previous and Present Mining or Exploration Operations

The Good Cheer Mine is located in the southeast quarter of Section 17, Township 8 North, Range 2 West, Jefferson County, Montana, (Figure 1). It is

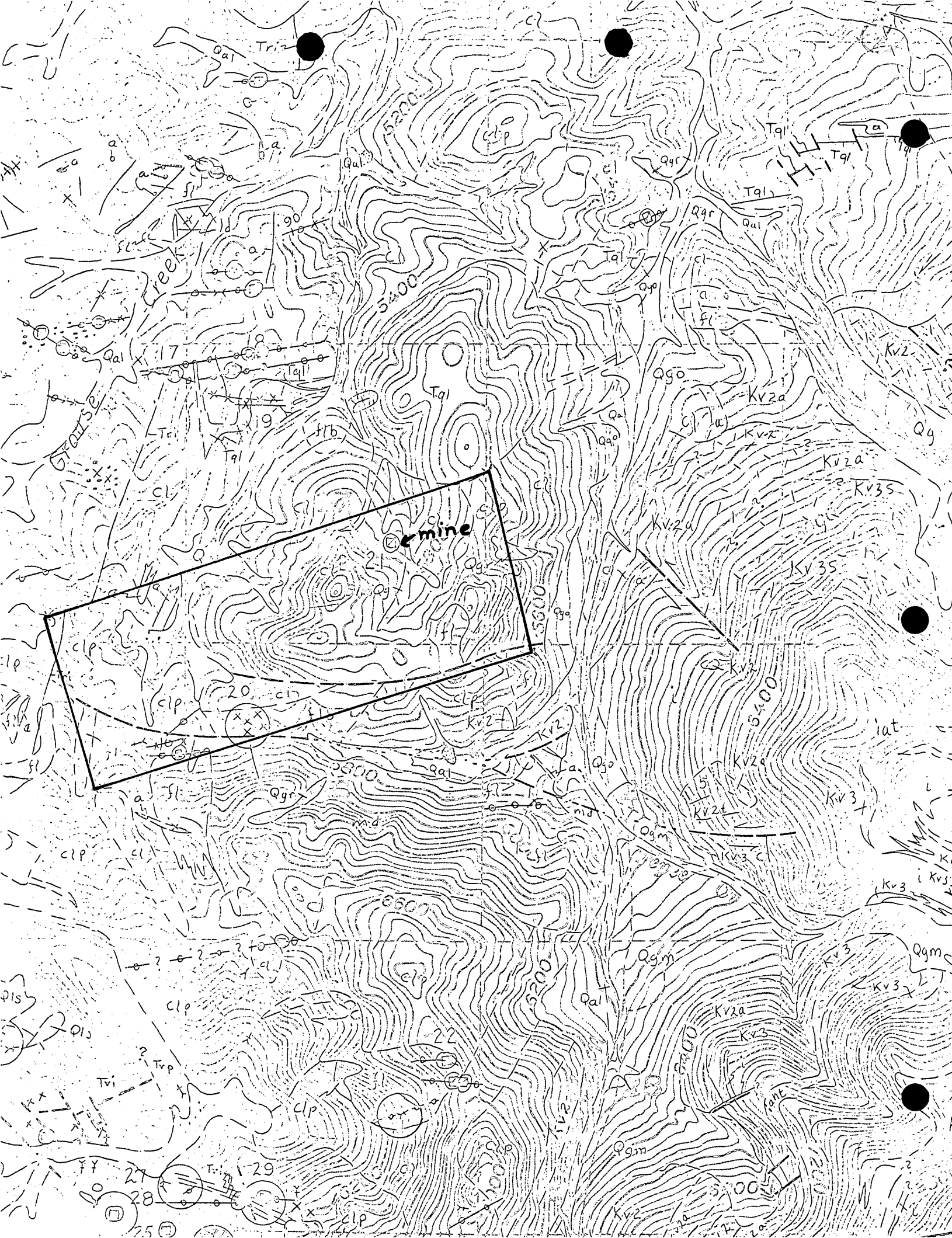
10

Preliminary Geologic Map

of the

Northern Elkhorn Mountains,
Jefferson and Broadwater Counties, Montana

Figure 1


Qal
Tri
5200
Tql
Qgr
Qgo
Qg
Qgm
Kv2
Kv2a
Kv3
Kv3s
Kv2t
5400
5600
5800
6000
6200
6400
6600
Creek
Grouse
mine
17
19
20
21
22
27
28
29
25
clp
fl
fb
cin
nid
fant
iat
Tvi
Tvp
Qls

EXPLANATION OF MAP ON OPPOSITE PAGE

This map is a Xerox copy of part of "Preliminary Geologic Map of the Northern Elkhorn Mountains, Jefferson and Broadwater Counties, Montana" by Harry W. Smedes, published in 1962 as Mineral Investigations Field Studies Map MF-243 by the U. S. Geological Survey.

On this map has been traced the approximate outline of the claims held by AMM, Inc., including the location of the Good Cheer Mine indicated by the number 21, located in the SE 1/4, T8N, R2W, Jefferson County, Montana.

Though many different rock types are noted by Smedes on this map, they can be classed into several broad categories, starting with the youngest.

4. Units labelled Qal, Qg, etc. are Quaternary alluvium - glacial deposits, etc.

3. Units labelled Tri, etc. are Tertiary age volcanic rocks.

2. Units labelled c, cl, clp, ml, mlp, md, fl, flb, etc. are all various aspects of the Upper Cretaceous or Paleocene Butte quartz monzonite. This makes up most of the map.

1. Units labelled Kv_1, Kv_2, Kv_3, etc. are all aspects of the Upper Cretaceous Elkhorn Mountains volcanics.

Some additional symbols include:

metalliferous quartz vein

chalcedony vein or vein zone ("reef")

silicified rock

shaft

adit

trench

prospect

fault

described briefly in U.S. Geological Survey Bulletin 470 by R.W. Stone, published in 1911, as follows:

> "The Good Cheer Mine is at the head of Maupin Creek in the southeast quarter, Section 17, Township 8 North, Range 2 West, has a shaft 165 feet deep and 400 feet of levels. It is on a 4-1/2 foot vertical east-west quartz vein on or near the contact between granite and granite porphry or acidic granite. Quartz carries pyrite, chalcopyrite and galena. In 1910 Mr. Garneau, the owner, was shipping a little first class sorted ore carrying over $15 a ton and said that up to that time the mine, which is still in the development state, had produced about $8,000.
>
> The Black Bear claim in the hilltop a quarter of a mile south of the Good Cheer Mine in on an east-west quartz vein in granite and is reported by Mr. Garneau to carry twelve ounces of silver and $1.70 in gold to the ton. Short black crystals of tourmaline were found in the ore in the dump."

A diagram of the present mine workings and a claim map of the Associated Mining and Metals Company are shown in Figures 1 and 2. An approximation of the volume of the stopes is 28,000 cubic feet, which is roughly about 2,600 tons of ore. Using Mr. Garneau's figures of $15 values per ton he shipped, we conclude he shipped 530 tons in order to earn $8,000. If he shipped this amount, the balance of the 2,600 tons, or 2,070 tons, represents the mine dump. The present workings coincide with Mr. Stone's description, implying that no more ore has been mined since then.

b. Interest in Mining Operations

The applicants are officers in the Associated Mining and Metals Company of Racine, Wisconsin. Specific offices held are as follows:

- President -- Anthony S. DeRose
- Vice President -- Anthony Domanik
- Vice President ---Harry Kwenski
- Secretary -- Vannio Salerno

c. Past and Current Production

The only records of production available are those shown in the foregoing

quote from R. W. Stone and in the Xerox copies of records obtained as a result of a search at the historical library in Helena, Montana. These copies are included as Attachment C. At present the Good Cheer Mine, although being kept dewatered, is not operating.

d. Known Ore Reserves

At the present time the geologic investigations at the Good Cheer Mine do not indicate any known reserves of proven ore. The amount of earlier stoping exposed by dewatering the workings is quite limited.

Channel samples were taken at the ends of the east-west drifts at the three levels developed by previous operators of the mine. The thickness of the vein ranges from 2 to 4 feet and averages 3 feet. The thickest development of the vein is on the lowest level.

Assay reports of samples collected in the mine workings are shown in Tables 1 and 2; the locations of the samples are shown in the sketch of the workings. The grade of ore appears to be increasing with depth with silver analyses on the first and second level averaging about 1 ounce of silver per ton of ore whereas on the lowest level the silver values average slightly over 2 ounces per ton. It should be noted that these channel samples were collected from a 5 foot working face and include wall-rock gangue.

The thickness of the vein increases with depth from 1 to 1.5 feet at the upper levels to over 4 feet on the lower level.

e. Geologic Features of the Property

The Good Cheer ore body is an east-west striking quartz vein localized in coarse-grained quartz monzonite in an area of extensive east-west fracturing; the immediate region has an extensive historical record of ore production. The vein intermittently distinguishable on the ground surface for a distance

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8739

Date Jan. 9, 1967.

Associated Mining & Metals Co.,
Mr. H. Takaksman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
						Arsenic (As)	Antimony (Sb)	
1-F-1	0.16	0.54	0.073	0.40	0.25	0.13%	0.003%	
1-F-2	0.18	1.98	0.094	0.36	0.20	0.12%	0.002%	
2-F-1	0.04	0.66	0.26	0.40	0.20	0.13%	0.004%	
2-F-2	0.04	0.74	0.083	0.38	0.62	0.58%	0.008%	
1-S-1	0.04	0.76	0.038	0.10	0.30	0.31%	0.009%	

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 85.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

Table 1

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8810

Date April 29, 1967.

H. Tabakman,
Associated M. & M. Co.,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT		VALUE PER TON
							Arsenic	Antimony	Bismuth
Sample No. 1	0.03	1.73	0.103	0.10	TRACE	4.0	0.077%	0.002%	0.024%
2	0.04	2.84	0.166	0.24	1.60	4.40	0.030%	0.006%	0.020%
3	0.03	2.03	0.145	0.36	TRACE	4.0	0.031%	0.013%	0.014%

Iron, Arsenic, antimony and bismuth by X-ray.

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit

Charge $ 51.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

Table 2

of about 370 yards. Surface oxidation primarily in the form of iron oxides marks the trace of the structure. The vein dips nearly vertically and appears to widen at the lowest level, which is 165 feet below the collar.

The vein mineralogy includes quartz which is the most abundant mineral. Also present are pyrite, sphalerite, galena, arsenopyrite and one or more copper minerals which probably contain the silver values. Hand specimen and binocular microscope investigations of the ore do not indicate the presence of a unique silver mineral, however, polished section studies planned for the future may show the presence of a separate silver phase.

The host rock of the Good Cheer vein is the Clancy granodiorite of Upper Cretaceons to Paleocene Age; this rock unit is part of the Boulder Batholith complex. It is intimately related in time, textually, mineralogically, and spatially to the Butte quartz monzonite, host rock to the great Butte deposits about 30 miles to the south. A copy of a geologic map modified after Smedes is shown in Figure 1.

f. Reasons for Expecting to Find Ore

Perhaps the main reason for expecting to find ore in the Good Cheer area is that it is located in the center of an area of extensive mineralization, even though a major producer has not yet been developed in the area.

Secondly, as mentioned previously, the width of the vein is increasing with depth and the mineral values in the assays are increasing as well. low value

Samplings were taken from the exposed veins during the open cut dozer work and during reconstruction of the old mine shaft and its workings. Copies of assay certificates and explanations of findings are included as Attachment D.

g. Geologic or Engineering Reports, Assay Maps, and Technologic Information

Copies of all our geologist's reports are included as Attachment E. Excerpts from the latest report have been used throughout this application.

4. Accessibility of Property

a. Instructions and Directions for Locating and Examining Property

To aid the OME representative who may examine the property, Mr. Robert Carravetta of 403 No. Park, Apartment 33 will meet him and excort him to the property.

The property can be reached by driving south from Helena, Montana on U.S. 91 and Interstate 15, fifteen miles to the settlement of Alhambra and then turning east at Alhambra Rest Home onto a dirt road which parallels Warm Springs Creek. From there one follows the Warm Springs Creek Road to its confluence with Maupin Creek Road which leads directly to the mine. The distance from the paved highway to the mine is about seven miles.

The Alhambra turn-off can also be reached by traveling north from Butte, Montana for a distance of approximately fifty miles on U.S. 91 and Interstate 15.

The mine property is readily accessible throughout the year though road-plowing may be necessary during the winter after heavy snowfalls.

b. Shipping and Supply Points

Shipping points are available on a Northern Pacific Railroad line from Helena to Butte which passes through Alhambra and nearby Clancy.

Mining supplies are available from Helena or Butte, and also from Missoula and Great Falls.

5. EXPLORATION WORK

a. Proposed Exploration Work

The proposed exploration work consists of nine diamond drill core wireline holes of 1-7/16" size. Three of these holes would be drilled at angles of 45° to the vertical vein so as to intersect the vein at a depth of 365 feet and three would be drilled at an angle of 60° to the vein so as to intersect it at 565

feet, the two intersections being 200 and 400 feet respectively below the lowest level. In addition, two horizontal drillholes, each 200 feet in length, would be drilled, one in each direction normal to the vein, from the lowest level of the mine shaft. Finally, one deep hole would be drilled from the surface at an angle of 60° to intersect the vein at a depth of 765 feet or 600 feet below the lowest level. The nine holes represent a total of about 4,800 feet of core drilling. (See Figures 3 and 4 for diagrams showing details of the proposed exploration).

b. Access Road

Not applicable.

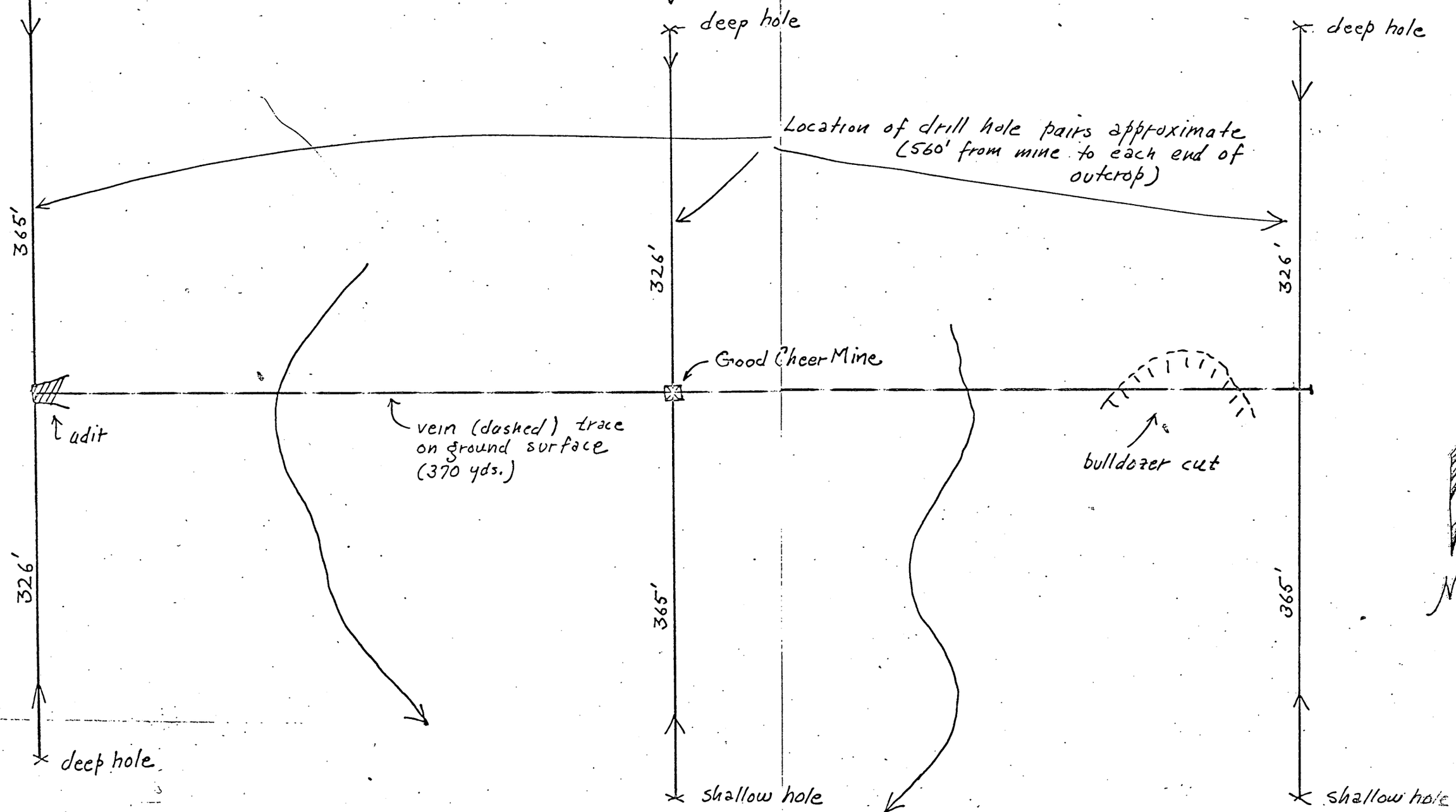
c. Milestones

If an OME contract is executed, work will be started immediately. Dewatering, which is now in progress, will continue in preparation for drilling to be accomplished at the bottom level of the present workings. Normal drilling should progress at the rate of 20 to 30 feet per 8 hour day. Total drilling, using this 25 feet per day average, would require 40 five-day weeks.

If no caving ground is encountered during the drilling operation, no reaming, casing, or cementing would be required; however, if caving is encountered, additional time would be necessary to overcome these difficulties. A factor of 25 percent is anticipated to be feasible for this problem.

6. EXPERIENCE

Technical supervision of the exploration work will be under Fred S. Honkala and Arnold J. Silverman, consultants to the Associated Mining and Metals Co. Honkala and Silverman have had twenty-one and thirteen years respectively of experience in consulting and in western geology. Both men hold the Ph. D. degree in geology. A résumé for Dr. Fred S. Honkala is included as Attachment F.

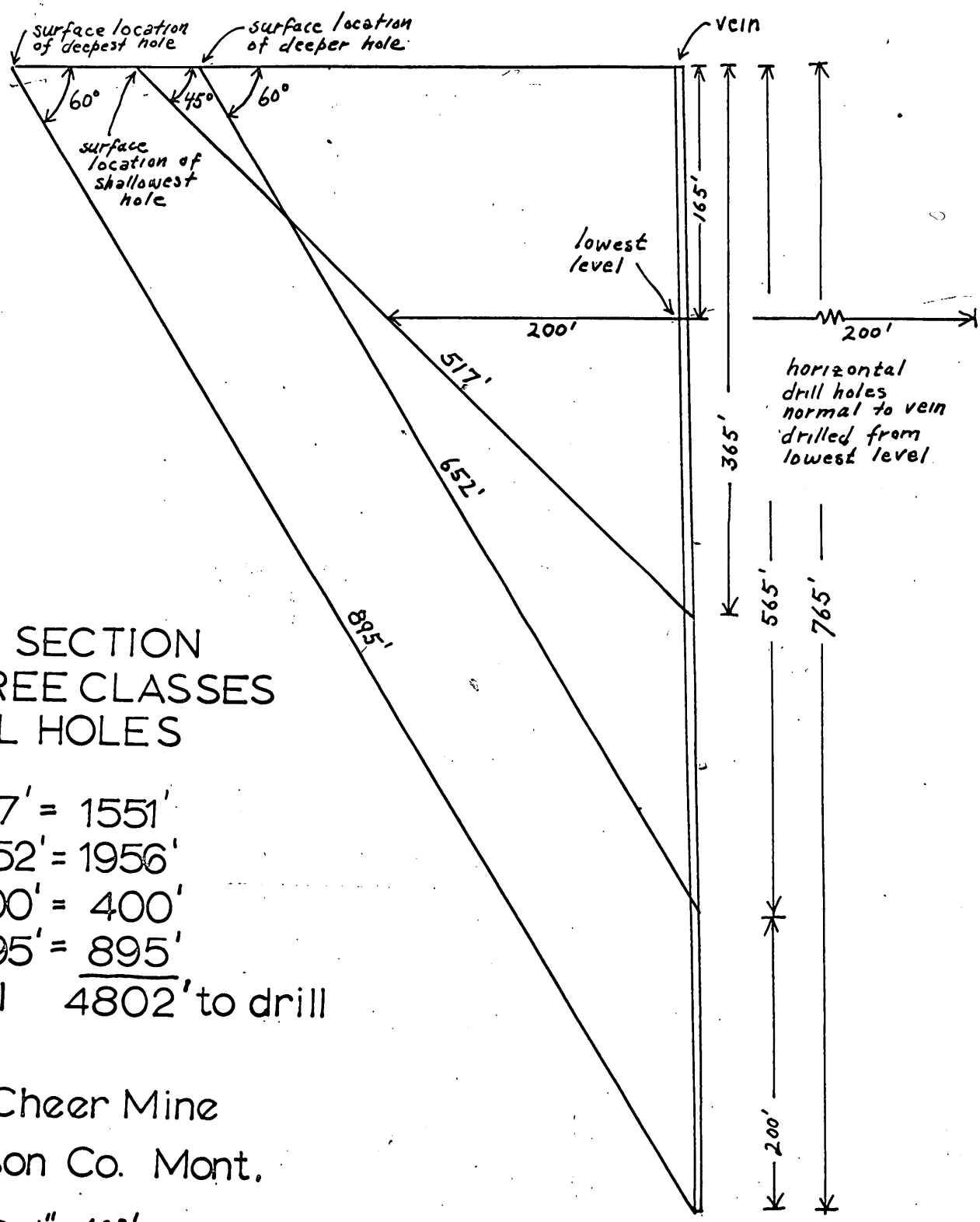


GROUND PLAN SKETCH

for location of core drill holes
at Good Cheer Mine, Jeff. Co. Mont.

scale 1" = 100'

Figure 3



CROSS SECTION
OF THREE CLASSES
OF DRILL HOLES

3 × 517' = 1551'
3 × 652' = 1956'
2 × 200' = 400'
1 × 895' = 895'
total 4802' to drill

Good Cheer Mine
Jefferson Co. Mont.

scale 1" = 100'

Figure 4

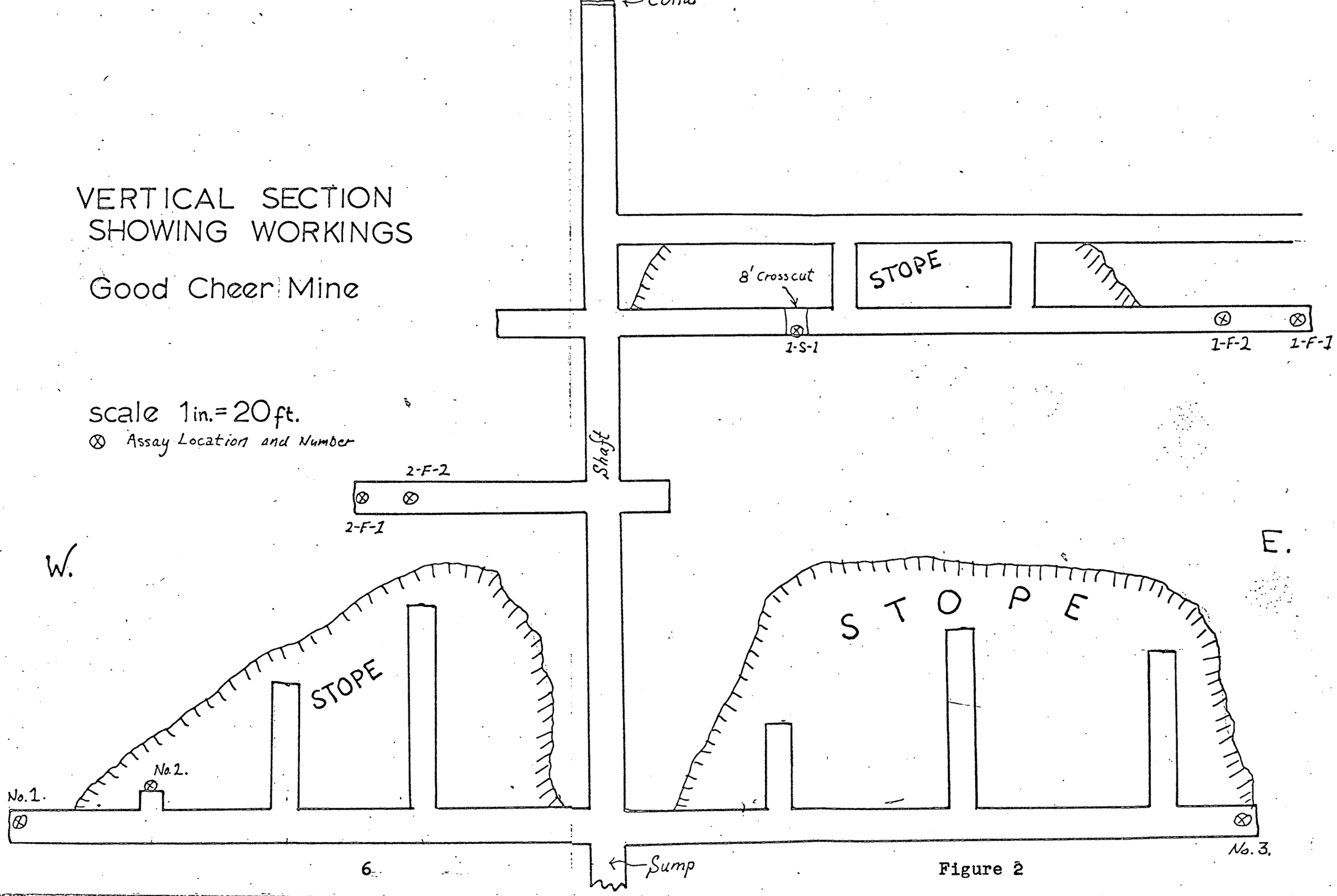

VERTICAL SECTION
SHOWING WORKINGS
Good Cheer Mine
scale 1in.=20ft.
⊗ Assay Location and Number
8' Crosscut
STOPE
1-S-1
1-F-2
1-F-1
Shaft
2-F-2
2-F-1
W.
E.
STOPE
STOPE
No.2.
No.1.
No.3.
Sump

Figure 2

Diamond core drilling will be conducted by experienced personnel working under contract.

7. ESTIMATE OF COSTS

a. Independent Contracts

Work to be conducted by independent contractors will consist of diamond-core drilling in accordance with the program described by geologist's Dr. Honkala and Dr. Silverman in Section 5a of this application.

Detailed breakdown of the per foot cost of drilling is given in copies of quotations submitted by independent diamond-core drilling contractors. These quotations are included as Attachment G.

Notes about possible contracts at the Good Cheer Mine

The first type of contract possible is a so-called turn-key contract, in which all costs are furnished by the contractor for the work that we want done. The second type of contract is the unit price, in which a price is furnished at so much per foot for the diamond drilling and also so much per foot for the other operations including reaming, casing, cementing, inclination tests, and core boxes. In general we should try to keep it as simple as possible and to have them do the whole job. We should have inclination tests, however, and also core boxes.

b. Personal Services

Geological services will consist of logging drill core, preparing and analyzing samples and a written report to Associated Mining and Metals Company for a total of 25 man days at $100 per day plus an estimated $500 for travel and other expenses for a total of $3,000.

While core drilling is being conducted at the lower level of the mine, the cost of maintaining and dewatering the shaft will include the salaries of an operations

manager, a caretaker-utility man, a hoist operator, and one miner.

Wages will be paid as follows:

- Operations Manager -- $225.00 per week
- Caretaker-utility man -- $120.00 per week
- Hoist operator -- $140.00 per week
- Miner -- $160.00 per week

These men will be required throughout the length of the drilling contract representing a total cost of $22,000.00 for these services.

c. Operating Materials and Supplies

Items of materials and supplies are listed as follows:

- Fuel for operating Power Generator --
  $30.00 per day for 40 weeks -- $8,400.00
- Fuel for trucks used in operation --
  $7.00 per day for 40 weeks -- $1,960.00
- LP gas used for heating dry room, etc.
  $5.00 per day for 40 weeks -- $1,400.00
- Small miscellaneous tools
  less than $50.00 each -- $600.00

d. Operating Equipment

Items of equipment and tools costing more than $50.00 per unit are listed as follows: (Amounts shown are based on 3-year depreciation or 25% of value for the 40-week operating period)

- 6 x 6 Dump Truck used in hauling materials (Furnished by applicant, in good condition)
  $4,500.00 Value -- $1,100.00

- Dodge Power Wagon (Furnished by applicant -- excellent condition)

  $3,000.00 Value -- $ 750.00

- Generator (Rented by applicant -- good condition)

  Monthly Rental Cost -- $1,700.00

- Standby Generator (to be acquired by applicant)

  Monthly Rental Cost -- $1,700.00

- Hoist and Cable and associated Electrical Equipment (Furnished by applicant -- good condition)

  $4,500.00 Value $1,100.00

- Three submersible pumps and piping with associated electrical equipment (Furnished by applicant - excellent condition)

  $2,600.00 Value $ 650.00

- TD-9 Front End Loader (Furnished by applicant - good condition)

  $3,600.00 Value $ 900.00

- TD-18 Dozer (Furnished by applicant - fair condition

  $6,000.00 $1,500.00

- DC Welder (Furnished by applicant - good condition

  $500.00 Value $ 125.00

- Gas Welder (Furnished by applicant - good condition

  $300.00 Value $ 75.00

e. Initial Rehabilitation and Repairs

Existing buildings, fixtures, installations, and movable operating equipment, initial rehabilitation and repairs are listed as follows:

- Access Road

  Initial Rehabilitation $2,000.00

  Future maintenance

  $200.00 per month for 40 weeks $2,000.00

- Existing Buildings and Trailers

  Initial Rehabilitation $ 500.00

  Future maintenance

  $60.00 per month for 40 weeks $ 600.00 X

5,100

f. New Buildings, Fixtures, and Installations

No new buildings, fixtures, or installations will be necessary.

g. Miscellaneous

Cost of repairs and maintenance of operating equipment listed in 7(d)

- 6 x 6 Dump Truck

  $80.00 per month for 40 weeks $ 800.00

- Dodge Power Wagon

  $25.00 per month for 40 weeks $ 250.00

- Generator (Rental does not include repairs)

  $120.00 per month for 40 weeks $1,200.00

- Hoist and related equipment

  $50.00 per month for 40 weeks $ 500.00

- Pumps and related equipment

  $40.00 per month for 40 weeks $ 400.00

- Front End Loader

  $50.00 per month for 40 weeks $ 500.00

- Bull dozer

  $80.00 per month for 40 weeks $ 800.00

7,450

Costs of other services related to the exploration program are listed as follows:

- Analytical Work -- assay reports to be performed by Charles Parker and Co. in Denver, Colorado

	120 assays and 15 spectrographs See Attachment G	$ 940.00
o	Accounting and Bookkeeping	
	$60.00 per week for 40 weeks	2,400.00
o	Workmen's Compensation	
	2.7% of total payroll of $22,000.00 for 40 weeks	594.00
o	Employee's Liability Insurance	
	12% of total payroll of $22,000.00 for 40 weeks	2,640.00
o	Payroll taxes	
	Old Age Benefits based on 4.4% of total payroll for 40 weeks	968.00
o	Costs incurred during fulfillment of OME contract	?
	$250.00 per week for 40 weeks	10,000.00
		17542
		72,452

I will bid only 1 year round,

ASSOCIATED MINING and METALS INC.

456 Mulberry Lane

Phone (414) 633-8989

Racine, Wisconsin 53402

June 1, 1967

West Racine Bank

1201 West Blvd.

Racine, Wisconsin

Gentlemen:

Associated Mining & Metals, Inc., a Wisconsin corporation, herewith makes application for a loan from the West Racine Bank in the sum of Ninety Thousand ($90,000.00) Dollars.

Associated Mining & Metals, Inc. proposes to use the proceeds of said loan for the purpose of conducting core drilling in mining exploration on 13 mining claims known as the Maupin Creek claims situated in Jefferson County, Montana.

Very truly yours,

Associated Mining & Metals, Inc.

by A. S. DeRose

A. S. DeRose

West Racine Bank
WASHINGTON AVENUE AT WEST BOULEVARD
RACINE, WISCONSIN 53403

June 16, 1967

Associated Mining and Metals, Inc.
456 Mulberry Lane
Racine, Wisconsin 53402

Gentlemen:

Reference is made to your loan application dated June 1, 1967 in the amount of $90,000.00 for drilling and exploration of thirteen mining claims in Maupin Creek in Montana.

We are sorry to advise you that we must decline your application.

The speculative nature of your business and, more specifically, the proposed use of loan proceeds, does not fall within our credit function and loan policy.

Very truly yours,

Melvin C. Murrack
Vice-President

MCM/dn

ASSOCIATED MINING and METALS INC.

456 Mulberry Lane

Phone (414) 633-8989

Racine, Wisconsin 53402

June 1, 1967

North Side Bank

1700 Milwaukee Avenue

Racine, Wisconsin

Gentlemen:

Associated Mining & Metals, Inc., a Wisconsin corporation, herewith makes application for a loan from the North Side Bank in the sum of Ninety Thousand ($90,000.00) Dollars.

Associated Mining & Metals, Inc. proposes to use the proceeds of this loan for the purpose of conducting core drilling in mining exploration on 13 mining claims known as the Maupin Creek claims situated in Jefferson County, Montana.

Very truly yours,

Associated Mining & Metals, Inc.

by Anthony S. DeRose

Anthony S. DeRose

NORTH SIDE BANK

RACINE, WISCONSIN

June 19, 1967

Associated Mining & Metals, Inc.
456 Mulberry Lane
Racine, Wisconsin, 53402

Gentlemen:

Your application dated June 1, 1967 to our bank for a loan in the sum of Ninety Thousand ($90,000.00) for the purpose of conducting diamond-core drilling in mining exploration on various claims in the Maupin Creek area of Jefferson County, Montana has been received and studied.

Because of the speculative nature of the business in which your corporation is engaged, our loan policy does not warrant such a loan, and your request has been rejected by our loan committee.

Very truly yours,

T. J. Losinski
Sr. Vice President

U.S. Geol. Survey Bulletin 470. 1911.

The Cynosure mine has a 180-foot tunnel and an 80 foot raise to the surface and was being worked in 1910. Ore from this mine is pyritiferous quartz said to carry gold and a little copper and lead, netting $ a ton.

The Emil II. is on the same lode as the Little Olga, on an adjoining claim. It has about 800 feet of workings and yielded about $20,00 mostly in gold, according to verbal report.

The Little Olga shaft is 125 feet deep and the vein was followed fo 100 feet. The ore is largely argentiferous galena and yielded 5 pound of lead to each ounce of silver. The ore assayed about 0.7 per cent c copper and $2 a ton in gold. The mine produced about $25,000 i gold and silver.

The Champion mines are on a quartz vein carrying limonit pyrite, and a little malachite and galena. The values are principall in gold. After several hundred feet of shafts and tunnels had bee opened the work was abandoned, and the property has been idle fo several years.

McCLELLAN CREEK.

On the north branch of Jackson Creek, half a mile above the fork in the northern part of sec. 11, T. 8 N., R. 2 W., there is a tunnel i very light colored fine-grained granite close to the contact with ande ite. The ore on the dump seems to be mineralized country ro with small bunches of quartz carrying chalcopyrite, pyrite, and molyb denite. Some of the coarser granite is highly pyritized. Molybdenit of which only a few square inches was seen, occurs as a thin incrusta tion on a joint plane.

On the ridge south of Crystal Creek, in secs. 3 and 4, T. 8 N., R. 2 W there are several prospects on quartz veins carrying pyrite. One c these, the Christmas Gift, is on a N. 60° E. vein dipping 50° S., whic has been developed by three slopes and two pits. The ore is pyrit arsenopyrite, and chalcopyrite. An assay made by the United Stat assay office at Helena, Mont., shows 0.10 ounce of gold and 1.2 ounc of silver to the ton. A 130-foot tunnel on the property of Mr. Weste in the bank of Crystal Creek is on a vertical quartz vein, in places 2 3 feet wide, which is said to assay from $2.50 to $27 in gold to the to The ore mineral is mostly iron pyrite. In the immediate vicini there are several other claims on similar ore, including the Lone Tr which has a 50-foot shaft.

In the northwest quarter of T. 8 N., R. 2 W., mostly in secs. 8 a 17, there is an irregular area of granite porphyry, aplite, and s rhyolite surrounded by granite. In this area there are many pr pects and a few small mines, located on quartz lodes trending nea east and west and standing vertical. The principal lode has be developed for over a mile and on it are located the Pilot, Euclid, Golden Gate mines. The ore mineral is mostly iron pyrite, or

principal value is in gold. The Pilot mine is said to have a 330-foot shaft and a 1,200-foot tunnel. At the Euclid mine there are nine shafts and a crosscut. The main shaft is 200 feet deep. It is said that some shipments from this mine carried over $80 a ton in gold. The vein is on or near the contact between normal granite and a granite porphyry intrusion. This mine has been shut down since 1894.

The Golden Gate mine, located in 1884, is reported by the owner, Joseph Garneau, to have a shaft 200 feet deep and 500 feet of levels on a quartz vein 70 feet wide bearing N. 88° W. and pitching south at a very high angle. A 30-ton mill and concentrator operated here were burned several years ago, and the mine is now full of water. Mr. Garneau says that the mine produced about $31,000 gross, mostly in gold, and that the bulk of the ore averages about $23 a ton.

The Good Cheer mine, at the head of Maupin Creek, in the SE. ¼ sec. 17, T. 8 N., R. 2 W., has a shaft 165 feet deep and 400 feet of levels. It is on a 4½-foot vertical east-west quartz vein on or near the contact between granite and granite porphyry or acidic granite. The quartz carries pyrite, chalcopyrite, and galena. In 1910 Mr. Garneau, the owner, was shipping a little first-class sorted ore carrying over $15 a ton and said that up to that time the mine, which is still in the development stage, had produced about $8,000.

The Black Bear claim, on the hilltop, a quarter of a mile southeast of the Good Cheer mine, is on an east-west quartz vein in granite and is reported by Mr. Garneau to carry 12 ounces in silver and $1.70 in gold to the ton. Short black crystals of tourmaline were found in the ore on the dump.

The Skookum lode, near the Euclid mine, has an 18-foot shaft on a quartz vein between a granite hanging wall and granite porphyry footwall. The vein is 20 inches wide and has an 8-inch stringer carrying galena, chalcopyrite, azurite, and malacite. No ore has been shipped, but it is said to carry gold, silver, lead, and copper.

In the hill back of a cabin on the bank of McClellan Creek in the southern part of sec. 16, T. 8 N., R. 2 W., is the Ironside claim. It is on a 3-foot vein of quartz striking N. 87° W. and dipping 85° N. The drusy quartz gangue carries iron pyrite and limonite, and an assay of selected specimens made by the United States assay office at Helena, Mont., shows 0.30 ounce of gold and 5 ounces of silver to the ton.

WARM SPRING CREEK.

The mines in the Warm Spring Creek district are mainly at the head of the middle fork, and are easily reached from Alhambra, on the Great Northern Railway. They are in an area of granite just south of the mass of rhyolite and obsidian on Lava Mountain. The mines are all on vertical east-west quartz veins carrying galena, chalcopyrite, arsenopyrite, and iron pyrite. The Carbonate Chief

Knob Hill.

This property is operated by the Knob Hill Mining Co., and is situated in the Clancy Mining District. Operations are by an incline shaft which has reached a depth of 200 feet. Drifting east and west on the vein a length of 300 feet has been done to determine the extent of the values contained, which are silver and lead. The property has been equipped with a steam plant. Wm. Steuwe is superintendent.

The Drake.

This group of claims, operated by Col. Lloyd, is situated in the Corbin district southeast of the old Alta mine. A tunnel has been driven a length of 300 feet on the strike opening several well defined ore chutes carrying silver and lead showing commercial values, several small shipments having been made.

Colorado Mine.

The Colorado mine, situated four miles south of Whitehall, conducts operations through a shaft 200 feet in depth. It is equipped with steam hoist and cage with all safety appliances. The vein has been developed to a length of 400 feet. Several bodies of high grade ore have been developed of a free milling character. The mine is maintained in a safe condition.

Alta Extension.

The group of claims comprising the Alta Extension is operated by the Chicago & Alta Mining Co., and is situated in the Corbin mining district, under the management of J. K. Harris. A tunnel has been driven in the property to a length of 1,000 feet which will be connected by a shaft which is being sunk to a depth of 350 feet, providing a connection to surface and for ventilation as well. The ore is characteristic of the camp, gold, silver and copper.

The Abe Mine.

This claim is situated in the Bluebird district and has been opened by a tunnel 450 feet in length on the strike of the vein which will be extended until the 1,000 foot mark has been reached. The work is in the nature of developing the country to ascertain the continuity of the ore bodies. The work has been under the management of R. A. Graham.

The Good Cheer Mine.

The Good Cheer Mining Co. is operating a group of claims seven miles south of Clancy. They have been closed for a

short period but work has been resumed and the mine unwatered and put in shape for future operations. A two compartment shaft has been sunk to a depth of 200 feet, equipped with a steam boiler and hoist. The workings will be repaired and further development carried on to ascertain the future of the property before the erection of a concentrator. The property is under the management of Joseph Garnier.

The Rose Mine.

This property, operated by the Progress Mining Co., is situated in the Clancy mining district. F. J. McCormack is the superintendent in charge. Operations consist of a shaft 150 feet deep, at which point the vein has been developed to a length of 500 feet showing ore of commercial value, silver and lead. The property is equipped with a gasoline plant for developing purposes.

The Daphne Group.

The Daphne group of claims, situated in the Corbin district, is operated by the South Butte Mining Co. A shaft has been put down to a depth of 165 feet, a tunnel having been driven on the vein a distance of 400 feet and connections are made at that point, which affords ventilation and exit to surface in case of necessity. The formation is a porphyritic granite, carrying silver and lead in the vein filling. R. H. Sheafer is the manager in charge.

The Robert Emmett.

The Robert Emmett Copper Mining Co. is operating in the Amazon district. A perpendicular shaft has been sunk to a depth of 500 feet, 150 feet of which has been sunk during the past year. A tunnel 600 feet in length has been connected with the shaft at a depth of 170 feet, the same being used for drainage and ventilation. Developing the vein on the 500 foot level east and west has been continuous during the year, some 800 feet having been accomplished since the resumption of operations. The entire plant is electrically driven, additional power having been added during the year. An Ingersoll compressor has been installed furnishing the power for drilling and pumping. The ore is a sulphide carrying copper, silver and lead. The property is under the supervision of J. W. Johns, Daniel Macginness being foreman, and employs 30 men.

in gold and 13 ounces of silver. The principal deep-mine production came from the Magone & Anderson property, yielding gold and silver oxidized and sulphide ore, with a little copper. The oxidized ores are reported found to a depth of 900 feet on the dip of the vein. The Shamrock, the Nancy Hanks, the International, and the Grant & Hartford mines were also producers. Nearly all of the properties were operated by lessees.

Flint Creek district.—The output of 14 deep mines in 1910 aggregated 4,396 tons of ore, containing $11,341 in gold, 305,728 ounces of silver, 15,894 pounds of copper, and 26,321 pounds of lead, valued in all at $179,610, with an average value of $40.86 per ton. All of the ore produced was of shipping grade, with the exception of 2 tons, which was treated at a milling plant and produced gold bullion. The mill of the Hope mine was idle and all the ore mined was shipped directly to smelters. The Granite-Bimetallic was the principal producer of ore, and others with important yield were the Hobo group, the Pearl, the Little Bee, and the Good Luck.

Red Lion district.—The production made by 3 deep mines in 1910 aggregated 411 tons. The larger part of the output, or 382 tons, consisting of oxidized ore, was treated at two mills, recovering gold and silver bullion by amalgamation and cyanidation. The remainder, 29 tons, was shipped directly to the smelter. The total product aggregated in value $5,185. The producers were the American Flag, the Red Lion, and the Hidden Lake mines.

South Boulder district.—The yield made by 3 deep mine operators aggregated 460 tons of milling ore, producing gold and silver bullion, and 17 tons of ore, containing gold and silver, shipped directly to the smelter. The placer output was the most important and was $9,262 in gold and 136 ounces of silver, against a placer output reported in 1909 of $11,246 in gold and 167 ounces of silver.

JEFFERSON COUNTY.

Mine production of gold, silver, copper, and lead in Jefferson County, Mont., in 1909 and 1910.

Metal.	1909		1910		Increase (+) or decrease (−).	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Gold ..... fine ounces..	5,342.54	$110,410	6,468.17	$133,709	+1,125.63	+$23,299
Silver ..... do....	1,034,146	536,196	1,022,579	555,972	− 1,567	+ 19,776
Copper ..... pounds..	211,655	31,415	122,169	15,508	− 119,546	− 15,907
Lead ..... do....	1,568,696	67,454	1,975,492	86,922	+ 406,796	+ 19,468
Total	.....	745,535	.....	792,111	.....	+ 46,636

Reports from 53 deep mines in 1910, against 56 in 1909, gave a yield of 57,271 tons of ore, 316 tons less than in 1909. The total value of this ore per ton increased from $12.84 in 1909 to $13.75 in 1910, and the average value of the gold and silver content increased from $11.12 in 1909 to $11.96 in 1910. The bulk of the ore, aggregating 30,800 tons, was treated at concentration mills and yielded 1,662 tons of concentrate, which contained $5,958 in gold, 174,593 ounces of silver, 15,719 pounds of copper, and 154,920 pounds of lead,

having a total value of $122,252 and an average value of $73.56 per ton. There was very little change in the quantity of ore treated at concentration mills and its content and total value in 1910 as compared with the output treated in 1909. Smelters received 24,514 tons in 1909, as against 26,387 tons in 1910, and the content, which corresponds very closely to the production of 1909, yielded $122,359 in gold, 854,928 ounces of silver, 106,302 pounds of copper, and 1,520,572 pounds of lead, having a total value of $664,437 and an average value of $25.18 per ton. The bullion output from milling plants was very small. The placer production was valued at $4,526 in 1910, as against $5,966 in 1909 and $1,617 in 1908.

Amazon district.—The tonnage of ore reported by 2 operators aggregated 56 tons, which contained $204 in gold, 553 ounces of silver, 951 pounds of copper, and 8,456 pounds of lead, valued at $996, an average value of $17.78 per ton. In 1909 the average value of 74 tons of ore was $26.59 per ton. The producers were the Silver Star and the Emma May properties.

Boulder district.—Production of ore made by 2 deep mines aggregated 165 tons, which contained $1,163 in gold, 2,949 ounces of silver, 1,935 pounds of copper, and 25,483 pounds of lead, valued in all at $4,122, an average value of $24.98 per ton. This ore was shipped directly to the smelters. The placers operated by 3 producers yielded $619 in gold and 8 ounces of silver.

Cataract district.—The total ore produced in 1910 aggregated 1,719 tons, containing $53,928 in gold, 44,112 ounces of silver, 5,272 pounds of copper, and 55,093 pounds of lead, valued in all at $80,841, an average value of $47.03 per ton. All of this ore, with the exception of 20 tons, which produced gold and silver bullion, was shipped to smelters. The placer output amounted to $686 in gold and 8 ounces of silver. In 1909 the yield from placers was $602 in gold and 6 ounces of silver. Among the principal deep mines producing were the Ruby, the Gray Eagle, the Comet, and the Minneapolis. Most of the production from smaller properties was made by lessees.

Colorado district.—Deep mine operators reporting in 1910 produced 1,401 tons of ore from 9 properties. This ore contained $6,482 in gold, 26,537 ounces of silver, 47,304 pounds of copper, and 172,684 pounds of lead, valued in all at $34,418, and averaging $24.56 per ton. All but 64 tons, which produced gold and silver bullion at a milling plant, was shipped to smelters. The placer production reported by 2 operators aggregated $393 in gold and 4 ounces of silver. In 1909 the placer output was $306 in gold and 9 ounces of silver.

Elkhorn district.—Reports were received from 7 deep mines, aggregating a yield of 53,429 tons of ore, which contained $59,059 in gold, 950,519 ounces of silver, 64,145 pounds of copper, and 1,642,105 pounds of lead, with a total value of $652,738, and an average value of $12.22 per ton. This was an increase in production over that made in 1909, which was 52,082 tons, with a total value of $584,119. About half the ore produced was milled at the plant connected with the Elkhorn mine, yielding concentrate, which contained gold, silver, lead, and a small amount of copper. The remainder of the ore produced was shipped directly to the smelters.

Lump Gulch district.—Six deep mines produced 120 tons of ore, containing $1,514 in gold, 3,415 ounces of silver, 2,220 pounds of copper, and 21,600 pounds of lead, valued in all at $4,590, and having

an average value of $38.25 per ton. All of this ore was shipped directly to smelters. The producers were the B. & G., the Good Cheer, the Queen of May, the Little Nell, the Eagle's Nest, and the Rachael claims.

Mitchell district.—The shipment to smelters of 161 tons of ore by 2 deep mine operators contained gold, silver, and a little copper. Two producing placers brought the total value of the output of the district to $6,109 in 1910.

Whitehall district.—All of the ore produced in 1910 by 3 operators, aggregating 166 tons, was shipped directly to the smelters, and contained $1,842 in gold, 855 ounces of silver, and 50,071 pounds of lead, with a total value of $4,507. The placer production was $195 in gold and 1 ounce of silver.

LEWIS AND CLARK COUNTY.

Mine production of gold, silver, copper, and lead in Lewis and Clark County, Mont., in 1909 and 1910.

Metal.	1909		1910		Increase (+) or decrease (−).	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
PLACERS.						
Gold.....fine ounces..	821.74	$16,987	632.89	$13,053	− 188.85	− $3,934
Silver.....do....	185	96	99	53	− 86	− 43
DEEP MINES.						
Gold.....fine ounces..	5,759.62	119,062	8,602.04	177,820	+2,842.42	+58,758
Silver.....do....	33,566	17,455	58,894	31,803	+ 25,328	+14,348
Copper.....pounds..	5,798	754	4,306	547	− 1,492	− 207
Lead.....do....	293,285	12,611	196,883	3,663	− 96,402	− 3,948
Total.....	.....	166,965	.....	231,969	.....	+65,004

Ore and old tailings were treated and reported by 62 operators in 1910, against 64 in 1909. The total tonnage treated aggregated 45,510 tons, which was 21,794 tons greater than in 1909. The total average value per ton of the material treated decreased from $6.32 in 1909 to $4.81 in 1910, and the average value of the gold and silver content decreased from $5.76 to $4.61 per ton. The bulk of the ore treated at mills was siliceous in character, aggregating 32,392 tons, which produced some concentrate and bullion containing $148,071 in gold and 30,598 ounces of silver. Old tailings, estimated at 11,704 tons, yielded additional gold and silver bullion. The ore shipped directly to smelters aggregated 1,414 tons, which contained $19,999 in gold, 17,463 ounces of silver, 3,886 pounds of copper, and 196,883 pounds of lead, having a total value of $38,586 and an average value of $27.29 per ton. Forty placer operators reported in 1910, as against 37 in 1909. The output from this source aggregated $13,053 in gold and 99 ounces of silver, against $16,987 in gold and 185 ounces of silver in 1909.

Bald Butte district.—Included in the production of this district is an estimate for a large tonnage of old tailings re-treated by lessees using the cyanide process. The Strawberry mine was the principal producer of gold-silver ore, which was treated at its milling plant, and a small lot of ore was shipped to the smelter from the Bald Butte property. The total output of the district aggregated $4,646 in value in 1910.

Dry Gulch district.—Lead ore was shipped from the district by 1 deep mine operator. In addition to this production, the placer output aggregated $5,477 in gold and 38 ounces of silver. In 1909 the placer output was $5,442 in gold and 38 ounces of silver.

Gould district.—Two deep mines were operated during the year and the production reported aggregated $37,565 in gold and 2,667 ounces of silver.

Grass Valley district.—Only 1 deep mine operator reported production of ore, containing gold and silver, in 1910.

Greenhorn district.—The Bessie mine produced lead ore, containing gold and silver, which, with the placer output of 2 operators, was valued at $1,095.

Helena district.—Eleven deep mines and 12 placers yielded $9,891 in gold and 385 ounces of silver in 1910, as against an output valued at $13,525 in 1909. The larger part of the ore produced was shipped directly to the smelters and the remainder was treated at a small amalgamation mill on the Old Dominion & Arrowhead property. A quantity of ore was shipped from the McIntyre property.

Lincoln district.—The placer yield reported by 6 operators aggregated $1,485 in gold and 7 ounces of silver, as against a production of $1,551 in gold and 6 ounces of silver in 1909.

Ottawa district.—In 1910 ore and old tailings re-treated aggregating 34,683 tons were reported by 30 deep mine operators. Of the total output, 27,243 tons, yielding gold and silver bullion and some concentrates, were treated at milling plants, and 186 tons of crude ore, containing lead and a little copper, were shipped directly to smelters. It is estimated that 7,254 tons of old tailings were treated. The gold and silver produced is included in the district total of $116,305 in gold, 41,445 ounces of silver, 2,392 pounds of copper, and 30,128 pounds of lead. With a placer production of $102 in gold, the total yield of the district was valued at $140,417, which is over double the total value of $65,885 in 1909. The principal deep mine producers were the Bald Mountain, the Drumlummon, the Towsley & Nile, and the Honey-comb properties. A large number of lessees of deep mines reported production. The Canyon Creek tailings continue to be a source of profit to several operators of cyanide plants.

Poorman district.—Three placer operators in 1910 produced $740 in gold and 5 ounces of silver, against a production of $340 in gold and silver in 1909.

Stemple district.—The Klondyke, a lode claim, and 4 placers yielded gold and silver valued at $1,202.

Springhill and Unionville districts.—The output of 3 deep mines and 2 placers, valued in 1910 at $5,417, was a decrease from the output of 1909, which was valued at $35,480, mainly in gold. This decrease was caused by the decreased operations of several important properties and the idleness of the Spring Hill mine.

Vaughn district.—In 1910 the district was credited with a production of 782 tons of ore from deep mines, yielding $5[illegible] in gold, 11,670 ounces of silver, 927 pounds of copper, and 120,[illegible] pounds of lead, in all valued at $1[illegible], an average value per ton of $23.47. All but 3 tons of ore, which were treated by amalgamation, was

day, the ore being of a concentration character carrying copper, lead and silver.

The Daphaney Mine.

The Daphaney group of claims, situated in the Corbin district, is operated by the South Butte Copper Mining Company. A shaft has been put down to a depth of 165 feet, a tunnel having been driven on the vein a distance of 400 feet and connections are made at that depth which afford ventilation and exit to the surface in case of necessity. The ore is a sulphide carrying copper. The formation is a porphyritic granite. R. H. Sheafer is the manager.

The Surprise Mine.

This is being developed by the Chicago and Corbin extension Mining Company, who are developing a group of claims in the Corbin district through a series of tunnels, the lower tunnel having reached a length of 700 feet on the strike of the vein. The tunnel has been extended 400 feet during the year. A small compressor has been installed for the purpose of furnishing air to the machine drills, the power being produced by a gasoline engine. The principal values contained in the veins are copper, silver and gold, which shows permanency in the developed portion of the mine. J. K Harris is the superintendent, employing six men in the development.

The Rose Mine.

The Rose Group of claims is situated in the Golconda Mining District five miles south of Jefferson city. Operations are conducted through a series of tunnels having been driven a length 400 and 600 feet cutting some very high grade ore of a free milling character thus opening large ore reserves which will increase materially the ore extraction. John Montgomery is the Superintendent in charge.

The Good Cheer Mine.

The Good Cheer Group of claims situated 7 miles South of Clancy are operated by the Good Cheer Mining Company. The property had been closed for a short epriod but are again resumed at the mine which was unwatered and put in shape for future operations. The development consists of a two compartment shaft 200 feet in depth equipped with a steam boiler and hoist. The workings will be repaired and further development carried on to ascertain the future of the property.

The company is contemplating the erection of a concentrator the ore being of a concentrating character. The property is under the management of Joseph Garnieu employing 9 men.

The Corbin Copper Company.

This group of claims is situated at the head of Clancy creek in the Corbin Mining district where extensive development work has been carried on through tunnels, several of them ranging in length from 300 to 1200 feet. The principal portion of the work has been confined to the Dewey and Bonanza claims, the ore bodies being more extensive and carrying the greatest amount in copper and silver, in the group. A concentrator of 100 tons capacity has been constructed for the reduction of the present output which can be enlarged from time to time as the property may require. The openings have been properly secured as far as developed under the management of Frank E. Richards. Quinn Crowley is acting foreman. It employs 40 men.

Silver King Mine.

The Silver King Group of Mines is operated by the Corbin Copper Metal Company under the management of John Hay and Jerry Murphy being the foreman. The development consists of a two compartment shaft put down 500 feet on an incline of fifty degrees, a skip being used in the operation equipped with all safety appliances. The plant is operated by electricity procured from the Jefferson Power Company a short distance from the mine. The vein has been extensively developed at the 500 foot level to ascertain the continuity and the values contained in the ore bodies which have been developed at that depth. The vein is a persistent fissure in granite showing good values in copper, lead and silver with a small percentage of zinc. There are 20 men employed by the company.

The Bertha Mines.

This group is operated by the Boston and Corbin Copper Mining company which has been under the management of Homer Emerson, Martin Backston the acting foreman. Thirty men are employed by the company in developing the property. A tunnel 1400 feet long comprises the upper workings with additional openings, cross cuts and raises to the surface. Several openings have been made through the ore bodies to connect with the upper workings to ascertain the continuity of

Mining World v. 20, no. 9 Feb. 27, 1904 p. 35

the dump 750 tons of it. [illegible] stamp mill, with concentrator, will be installed and the expense of working the mine greatly reduced. The Copper Queen shows up well, but operators in that section are working to a disadvantage because of the lack of transportation facilities. The copper ledges of the district are said to excel in producing rich by-products.

From THE MINING WORLD'S Staff Correspondent.

Helena, Mont.

Indications multiply that show that the coming season will be the most active in the mining districts around Helena that has obtained for many years. A large number of new enterprises are in progress by which extensive operations will be carried on on old or new properties in this vicinity, while those who are already operating are preparing to extend their work on a still larger scale. The most important new enterprise in this section is the organization of a strong company to develop and work the famous Whitlach-Union, four miles south of Helena. Work has already commenced and it is expected that at least $100,000 will be expended in development work, and putting the property in shape to be operated on a large scale.

Another new enterprise is the taking over by the Standard Ore company of the famous Jay Gould group near this city, which were famous old-time producers and dividend payers, and are now turning out several thousand dollars a month with the 20-stamp mill, which is being increased in size.

Development work is being pushed with the utmost vigor on the famous Big Indian mines, four miles south of the city. Mining operations are not interfered with by this new development, the 60 stamps dropping continuously, with good profits. Returns from the assay office show that this mine produced over $95,000 in five months, while the cost of operating was very light, only 26 men being employed in the mine and mill. Contracts have been let for 10,000 feet of tunnel, and 3,000 feet will be run, with a 500-foot shaft, from the present workings, to thoroughly develop the property "to the deep." Electric drills and compressors are being put in to push the work, the mill being run by electric power. One of the beneficial results already secured by this new work is a splendid increase of the water supply.

The Gold Bond Mining company has just been organized and its articles filed, to operate two groups of claims, one situated 2½ miles south of Helena and the other 15 miles from the city. The capital of the company is $2,000,000, with James Winscott, of Helena, as president and general manager, and G. D. McKay, of Aurora, Ill., vice president, and E. S. Hobbs, of the same city, as secretary and treasurer. The properties acquired by the company consist of 15 full claims. The main group is located in Maupin Gulch, 15 miles from Helena, known as the Good Cheer group, upon which considerable work has been done and ore shipped. There is a pay streak from three to five feet wide which has assayed as high as $30 per ton. There is a shaft on this property 60 feet deep, which will be immediately sunk to 200 feet, and other development works will be pushed. The other properties are the Tunnel lode mines, 2½ miles south of Helena, a short distance from the Whitlach-Union and adjoining the McClellan. From this property a large amount of profitable ore was shipped in early days and several thousand tons of iron. The vein is from eight to twenty feet in width. The company will be financed on the bonding plan, instead of through stock.

A syndicate of Helena business men, consisting of Maj. R. C. Wallace, F. S. P. Lindsay, J. H. Freezer and Z. T. Vinson, has secured a bond on the Elkhorn Queen, near Elkhorn. The new company will proceed to vigorously develop this once famous property, which in early days was a good producer. The bond is for $20,000 and a ten per cent. royalty. The vein is lead and silver.

The Basin-Comstock Mining company, composed of G. W. Banndon, president; C. Sturtevant, vice president; W. A. Kidney, secretary and treasurer, and A. S. Ray, general manager, has been quiet- [illegible] company intends in the near future to install heavy machinery and sink the main shaft 300 feet [illegible]ther, and upon the completion of that work a mill for the concentration of the ores will be erected at a point convenient to the mine which, when completed, will place this property on the list with the large producers of the state.

On January 30 the Black Hawk Mining company, operating in Madison county, opened in its No. 2 tunnel a three-foot body of ore of an average value of $13.58 per ton, but with streaks on the foot and hanging wall running respectively $18.70 and $68.75 per ton. Last week an average sample from foot to hanging wall went $152.40 per ton in gold and $5.05 in silver. Five Iowa bankers are interested with Mr. Mason, of the Big Indian, in this property, which promises to be one of the best mines in that county.

The Liverpool, nine miles from Helena, near Clancy, has made another new strike, this time in the 500-foot level, with a pay streak of eight inches, which will assay several hundred ounces of silver per ton. The mine is shipping regularly to the East Helena smelter at the rate of about six cars a month, giving splendid returns.

The Gold Mountain Mining & Milling company has just been incorporated under the laws of Arizona and articles filed in this state. The capitalization is $2,500,000 and the company is composed of New York and Denver capitalists. It will operate the Beale properties in German gulch.

Some idea of the activity of prospectors in this section may be gained from the fact that since October last 1,200 location notices have been filed with the clerk of this county. The winter has been unusually favorable for prospectors, there being no days too cold for their work, while the snow has not been deep.

Koch Brothers, who have been working their properties at Silver Camp, on the Little Blackfoot river, have struck a lead at the end of the 400-foot tunnel with a pay streak two feet wide, which assays 400 ounces of silver and 70 per cent. copper per ton. It is said the other 11 feet of the lead averages $24 per ton. The Koch Brothers have been working these properties for several years, and it was supposed at the start that they were gold properties. This splendid strike has caused considerable excitement in that vicinity and many additional claims are being located.

NEVADA.

From THE MINING WORLD'S Staff Correspondent.

Silver Park, which several years ago was quite an active camp, and had two quartz mills in operation, will take on new life again this spring. The property owned by Mr. P. Knight, consisting of the Summit, Roadside and Samuel Tilden, has been taken over by Mr. Jesse Knight and interests at Provo, and a company formed last week to be known as the Nevada-Park, with a capital of $500,000. The officers of this company are Jesse Knight, president; J. J. Knight, vice president, and R. S. Allen, secretary-treasurer, who, with S. A. King and L. Holbrook form the board of directors. This group of mining men never do things by halves and will push operations, landing, as soon as possible, the necessary machinery for rapid work at the property. There are sunk on the various claims between 130 to 140 prospect holes, varying in depth, and 4,000 to 5,000 tons of ore is on the various dumps that will run 40 ounces in silver to the ton. The ore about this old camp runs high in silver values.

Adjoining the claims of the Nevada-Park is the Climax group of 11 claims, the Salt Lake & San Pedro group of five and a fraction claims, and the Bradshaw group of six claims, which belong to W. H. Monahan, John Smithson, R. M. Clay and J. H. Carpenter, of State Line. Mr. J. H. Carpenter is in charge of the development work on the properties. Mr. Monahan came into State Line from a visit to the properties last week and brought some very fine specimens of native silver, taken from the Salt Lake & San Pedro group. Ore so far taken from this group averages better than 40 ounces of silver and that from the Bradshaw group better than 25 ounces. Later in the spring it is intended to add to the development force and equipment and larger results are to follow.

reporter:

White Pine steadily with Giroux Co tory progress.

Chainman pling mine a a prosperous New York examination arranged on Sapho Mini a view to w Outlook excel McKinley M ing report of pany, which lars a share, at 50 cents, stockholders for the shrinl very shortly.

Messrs. Ed. the work of testing the ro in which they past, and it will reach th night thereaf passing inter portant questi add its quota season, or con camp. It is t lard were un workings beca as on this a of ore in sig otherwise wou that the repor can be saved, seem that the possible and proposition th course to purs condition to f shortage may developing the ing the mill a little more th thereof.

The resumpti will bring back presence under During the p placed upon th document cove be a first mor Hubert C. Man Y., as trustee of the same pl man Mining & payment of the the company's ized at a meet Denver on Mar a meeting held

It is underst shortly make ore from his t Lake smelters. property was re the showing is of development

From THE M

The Morning sold this week associates, of exact amount i known, but is Both Mr. Boggs make a statemen Morning was ori Simmons, Fran people were mo means to proper done remarkably tions, equipping

Montana Bureau of Mines and Geology · Bulletin 16
Mines and Mineral Deposits, Jefferson County; by N. Roby 1960.

p. 106

TABLE 35.—Mine production of gold, silver, copper, lead, and zinc, 1902-57, by mines, in terms of recoverable metals, continued.

CLANCY AND LUMP GULCH DISTRICT (Con.)

Year	Ore (tons)	Gold (oz.)	Silver (oz.)	Copper (lb.)	Lead (lb.)	Zinc (lb.)
CARBONATE CHIEF						
1905	1,162	1,508	10,794	—	91,340	—
1906	1,280	1,210	11,053	12,818	121,702	—
1907	2,812	3,724	35,070	49,752	173,281	—
1912	1,191	1,485	7,610	12,470	—	—
1913	130	128	1,510	1,324	17,261	—
Total	6,575	8,055	66,037	76,364	403,584	—
DAN TUCKER						
1918	16	—	2,296	—	3,441	—
1920	18	—	401	81	2,634	—
Total	34	—	2,697	81	6,075	—
EAGLE'S NEST						
1910	6	9	133	133	1,583	—
1939	21	14	101	34	253	—
Total	27	23	234	147	1,836	—
FREE COINAGE						
1909	6	—	894	—	1,558	—
1918	127	1	11,854	—	14,722	—
1910	468	8	36,908	—	5,521	—
1920	235	1	9,854	—	13,681	—
1921	79	1	5,566	—	4,660	—
1927	11	—	448	18	558	—
1944 (Dump)	11	—	72	—	—	—
1948 do.	64	—	433	109	884	522
1949 do.	389	3	2,582	546	4,632	6,992
Total	1,390	14	68,611	673	46,216	7,514
FROHNER						
1928	22	11	690	321	18,119	—
1929	18	8	686	86	16,254	—
1939	150	5	178	78	2,871	—
1940	15	12	301	23	2,366	—
1941	132	10	211	—	1,628	—
1942	7	4	84	57	1,296	—
1949 (Dump)	12	3	130	40	1,469	800
1954	1,361	108	5,046	1,700	52,500	25,200
Total	1,917	161	7,329	2,305	91,503	26,000
GOLD CROWN						
1909	12	—	314	634	892	—
1949	4	—	12	13	40	—
Total	16	—	326	647	932	—
GOOD CHEER						
1909	11	1	401	—	735	—
1910	32	6	574	299	1,495	—
Total	43	7	975	299	1,495	1,230 —
			2%	0.35%		1.43%
HAYNES						
1906	60	2	548	2,225	51,022	—
KATIE						
1934	13	—	644	9	81	—
KING SOLOMON						
1908	18	—	1,307	—	2,274	—
1909	107	2	6,837	154	5,602	—
1912	111	4	7,851	461	11,076	—
1916	14	1	905	—	2,783	—
1920	10	—	433	—	1,159	—
1936	24	—	693	—	1,630	—
Total	287	7	18,026	615	24,524	—
LEGAL TENDER						
1909	1	—	77	—	95	—
1918	13	—	832	—	1,061	—
1919	281	3	24,457	—	3,300	—
1920	120	1	10,079	—	2,493	—
1927	35	—	3,026	77	4,270	11,833
Total	450	4	38,471	77	11,312	11,833

Year	Ore (tons)	Gold (oz.)	Silver (oz.)	Copper (lb.)	Lead (lb.)	Zinc (lb.)
LITTLE NELL						
1902	36	—	5,800	—	—	—
1906	53	—	4,735	—	2,431	—
1907	841	—	89,932	—	36,699	—
1908	43	—	3,249	—	1,674	—
1910	11	—	1,170	—	1,105	—
1911	107	—	2,912	—	2,802	—
1912	9	—	467	—	449	—
1920	307	2	27,269	—	19,910	—
1921	36	—	2,066	—	1,606	—
1922	6	—	985	—	816	—
1923	1	—	40	—	26	—
1924	1	—	129	—	124	—
1925	8	—	402	—	286	—
1928	2	—	113	—	101	—
1929	2	—	126	—	102	—
1936	571	6	4,949	—	—	—
1937	3	—	62	—	85	—
1953 (Dmp)	1,479	2	11,642	985	—	20,670
1954 do.	2,289	—	13,94*	2,000	7,300	38,000
1956 do.	1,759	—	9,222	1,300	—	31,000
Total	7,064	10	120,214	4,285	75,606	99,570
LIVERPOOL						
1904	1,617	—	163,344	—	238,377	—
1905	2,671	—	187,965	—	198,530	—
1906	964	—	49,022	—	65,960	—
1907	135	—	3,431	—	3,079	—
1908	83	—	1,061	—	1,358	—
1912	49	—	1,241	—	1,263	—
1913 (Dump)	35	—	2,284	—	3,970	—
1914	24	—	1,650	—	2,326	—
1915 (Dump)	14	—	993	—	1,564	—
1916 do.	53	—	4,602	—	6,816	—
1919	8	—	249	—	—	—
1920	3,730	39	130,060	62	237,253	—
1921	250	2	13,249	—	25,558	—
1939	1	—	40	4	68	—
1940 (Dump)	1	—	15	—	32	—
1949 do.	826	1	1,876	378	2,116	7,959
1950	8)	—	8,299	1,109	10,125	37,736
(Dump)	1,695)					
1951 do.	129	—	697	154	1,269	3,123
Total	11,743	42	570,078	1,707	799,994	49,115
LOEBER						
1957	60	16	855	100	19,000	500
MAMMOTH						
1905	132	1	1,146	—	8,000	—
1906	76	—	5,468	—	500	—
1908	18	—	951	13	131	—
1909	22	—	417	—	—	—
1921	12	—	2,100	—	1,535	—
1934*	2	1	18	—	535	—
1937*	12	3	30	—	515	—
1955	26	—	186	—	500	900
1958 (Clngs)	93	232	294	500	—	400
Total	392	237	10,610	513	11,716	1,300
MEADOW OR HAAB RANCH						
1949	7	—	934	—	370	1,165
1950	81	—	13,479	134	5,623	10,610
1951	99	—	9,477	96	3,798	10,774
Total	187	—	23,890	230	9,791	22,549

* 1934 and 1937 Mammoth production included in Warm Springs district.

Year	Ore (tons)	Gold (oz.)	Silver (oz.)	Copper (lb.)	Lead (lb.)	Zinc (lb.)
MOCKING BIRD						
1907	900	900	9,990	—	—	—
1908	57	66	335	686	—	—
Total	957	966	10,325	686	—	—
NELLIE GRANT						
1948*	119	36	1,026	551	18,358	4,535
1949	61	12	351	143	6,799	901
1951	26	8	116	22	2,108	211
1952	33	8	215	65	3,477	4,275
1954	61	19	810	200	18,100	2,200
1955	82	28	1,067	200	23,400	3,300
1956	186	60	2,361	400	60,800	7,300
1957	483	132	4,333	1,000	83,200	24,300
Total	1,057	293	10,279	3,481	216,242	47,166

7

Mining and Scientific Press V. 88 p. 291 Apr. 23, 1904

will begin the erection of a boarding and bunk house, blacksmith shop, etc., and operations will be confined to sinking shaft now down 100 feet.

Another new mill will be built in the Rapid River district this season for the Weyant Milling Co., which is operating near Pollock, says E. L. Hollingshead, manager. Mr. Hollingshead says the mines are showing up well.

The Seven Devils copper district is to be reopened, says the Weiser Signal, by F. Powell and J. C. Sutherland.

MONTANA.

Carbon County.

As a result of disagreement between the Miners' Union and officials of the Northwestern Improvement Co. at Red Lodge over the selection of a weighman, 600 men are out on strike. While the real matter at issue is not great, the miners maintain that a principle is at stake, and that their rights have been invaded. The company claims that under existing conditions they have no way of protecting themselves. The weighman, an official who weighs the coal as it comes up out of the mines, is elected by the union from among its members. The company asked that a regular employe of the company be selected, and when N. Smethurst was elected by the miners Manager Pettigrew objected to his serving and ordered him to leave. The miners refused a suggestion made by the officials that the matter be referred to the higher officials before action was taken and the strike declared. The Northwestern Improvement Co. is controlled by the Northern Pacific Railway, and the officers of that railway have been notified of the trouble.

Fergus County.

In the Judith mountains, near Lewiston, the Townsend M. Co., of which L. H. Mershon is president, owns the Big Horn mine. The Big Horn tunnel is being driven into the northern base of Crystal mountain and is in 300 feet, and has cut a vein of ore 40 feet in width which carries values in gold, and it is estimated that there is enough ore now in sight to justify the erection of a mill. The ore is one adapted to treatment by the cyanide process.

Flathead County.

Operations at the Snowshoe mine are well under way, says the Libby News. Twelve carpenters are making the necessary alterations and additions to the mill, getting ready for the additional machinery which will be installed. There are two carloads of additional machinery for the mill. This car consisted of a Huntington mill, a crusher, much larger than the old one, and a compressed air receiver. The latter will be placed in the 200 level of the mine and from this the air drills will be supplied. With the proposed additions the management anticipates a large increase in production.

Granite County.

The Heverin-Houle M. Co. is moving a 56-ton steam shovel from Bearmouth to its properties on Harvey creek. The shovel grades its own way up the gulch, the track on which it runs being moved forward as the machine progresses. Two and a half miles were covered in the first two weeks, and within a week or more it will reach its destination.

Jefferson County.

Men have been at work on the Rose Gold properties at the head of Golconda creek, near Jefferson City, all winter and a large amount of ore has been extracted. The crosscut is still being run across the large vein of the Yellow Jacket, and it is said that the vein is solid ore for 95 feet. The company is preparing to erect a large mill the coming season, using electric power from the lines of the Missouri River P. Co., which runs near the property.

The Copper Mountain & Milling Co. owns forty claims in the Wickes-Corbin. In the south tunnel a new vein of ore has been crosscut for 30 feet and no sign of the opposite wall. In the west tunnel a number of small rich veins have been struck, all leading in the direction of the main workings. It is the intention of the company to thoroughly develop this property. In the regular working of the mine they are taking out and milling 300 tons a day.

Lewis and Clarke County.

The crosscut on the vein in the Copper Hill mine of the Red Bird Co. at Austin has been run 25 feet, and there is no opposite wall. The ore is copper and iron and the company has a contract for a car a day as soon as the spur from the railway at Austin is completed. The company has placed steam hoisting machinery at its Reliance group in High Ore gulch, and is taking out a large amount of high-grade smelting ore from development work. New and improved machinery is being placed on the Red Bird, near Austin, and the production will be increased.

The Liverpool, in Lump gulch, continues shipments from development work, shipping six cars in March to the East Helena smelter, which netted several hundred dollars to the ton, principally in silver. Assays of the new vein in the 700 level run from 224 to 1230 ounces of silver per ton from large samples of 125 pounds.

President Winscott of the Gold Bond Co., owning the Good Cheer group in Maupin gulch, and the Tunnel property, 4 miles from Helena, says preparations are being made to start development on the Good Cheer group, 15 miles from Helena. There is a 60-foot shaft, which will be sunk to 200 feet and levels run, and stoping commenced. A tunnel will also be run on the vein, which carries 6 feet of ore at the surface, and this will give a depth of 1000 feet before reaching the shaft. The tunnel will be run 700 feet. The ore runs a smelter average of $30 per ton. A new vein has been discovered in the White Pine properties, owned by Schmidt and associates of Helena. The claims are in Warm Springs gulch, 9 miles from Helena. The new strike is the richest that has been made in these properties.

Ravalli County.

The Wood Placer Co. has taken possession of the diggings at Hughes creek, near Hamilton, which were operated last year by J. A. Nelson of Indianapolis, under contract with the Wood Co. The Wood Co. will resume operations soon, employing fifty men.

Silver Bow County.

The annual report of the Alice G. & S. M. Co. of Butte has been published, in which President M. H. Walker shows that expenditures exceeded receipts during the past year to the amount of $5303.03. The report of Superintendent Buzzo states that considerable attention was given during the past three years to the treatment of the complex zinciferous ores in the Alice and other mines belonging to the company. These ores commence at about 300 feet from the surface and on the 400 level of the Alice mine average 17% zinc, 8% lead, 9% iron, 1% copper, 30.4% silica, 8 ounces silver and $1.60 per ton in gold. Various methods of treatment have been tried, particularly wet concentration and magnetic separation, but the losses attending thereto have thus far interfered with satisfactory results. In addition to the working tests, 200 tons were sent to the mills in Colorado and Utah, where it was treated with care. From all tests made it is manifest that if the ore carried a higher percentage of lead the outcome would have shown a profit. Recent prospecting on the 600 level of the Alice mine shows the average per cent of lead in the vein to be 13½, as against 8%, and zinc 20%, as against 17% on the 400 level. When desirable the 60-stamp mill, which has remained intact since closing down, October 1, 1899, can be used for a concentrating plant.

The discovery of coal is reported 30 miles southeast of Sodaville, near the railroad building to Tonopah. The vein is said to be 12 feet thick, at a depth of [illegible] feet.

Lincoln County.

(Special Correspondence).—Work was commenced April 6th on the new crosscut tunnel of the Empire Con. M. Co.'s property at Empire Camp. It will be 488 feet in length and will crosscut the Empire lead at a depth of 500 feet, or about 700 feet on dip of vein. Drifts will be run east and west 2000 feet each way. The mill will be erected on the millsite adjoining this tunnel.

The Searchlight M. & M. Co. at a depth of 250 feet have encountered a 15-foot body of quartz, averaging from $20 to $25 in gold. They have a good milling ore all the way down.

One of the near and interesting probabilities of this section is a railroad from Ibex, on the Santa Fe, to a connection with the new Salt Lake road, via Searchlight.

Searchlight, April 16.

F. Gardner reports a new find in the Pioche-Nevada Con. mine, near Pioche, in the shaft at depth of 45 feet. The entire bottom of the shaft is in ore.

Nye County.

(Special Correspondence).—The Goldfield M. Co., at Goldfield, represented by J. R. Duffield, is the owner among six others of the January claim, which is one of the important producers in the camp. This claim was leased to Patrick, Kendall, Jones & Reilly on February 5th, and the first shipment made February 16th of 100 sacks of ore. Since that time there has been shipped by the lessees 275 tons of ore which will net $150 per ton. There is also on the dump from 1200 to 1500 tons of mill ore which will average $30. There are two shafts on the property, one an incline to a depth of 112 feet and the other a vertical 100 feet deep about 75 feet west of the inclined shaft. These are connected at the 50-foot level and drifts are being run in the bottom to connect. The vein has been crosscut at the bottom, showing 35 feet of ore, with the foot wall not yet in sight. The Combination claim, adjoining the January on the east, which is also a large producer, has another ledge at 165 feet in depth, showing high values.

Goldfield, April 18.

The ore in the shaft of the Combination, at Goldfield, is changing from oxides to sulphides. The values of the sulphides in the Combination assay $300 per ton.

J. P. Harvey, local representative of P. Clark, started to develop two springs and a few days ago struck a flow of 3 to 5 miner's inches. The shaft on the Combination is down 170 feet and they are drifting both ways on the 130-foot level. Stoping has been started on a 4-foot streak of ore in the 80-foot level. This is the first stoping done in the Combination, the ore heretofore coming from development work.

A gold discovery was made on Gold reef 2½ miles southeast of Gold mountain, says the Tonopah Bonanza. The discoverers are G. Gordon and T. Ahern. They came upon the top of a ledge carrying mineral 2 feet from the surface.

The rock has the appearance of porphyry and carries a black mineral resembling manganese oxide. Samples of the rock have been assayed. The highest return given is $370 in gold, and other assays running from $8 to $40, all in gold. Neither wall of the ledge has been found. The gold belt, according to Mr. Gordon, is 3600 feet wide by 6000 feet long as far as prospected.

It is out on the open desert. Back of it some distance is a range of mountains. By the wagon road it is 9 miles from Tonopah, but on a bee line not over 6 miles. The group is known as the Rattler. The claims are Rattler, Montana, Compromise and Dawn. The owners are G. Gordon,

claim of Attorney A. J. Campbell, of Butte, who has not been paid for his services in the legal battle fought several months ago by which a receiver was procured for the Bear gulch property, and whom the present company eventually placed in control of the properties. The attorney refuses, however, to accept a settlement unless the claim of the receiver is paid as well. Mr. Campbell guaranteed the payment of this claim which amounts to $6,000. There is a movement on foot now by which the owners of the Crevasse property, not far from the Kimberly properties, hope to secure the management of the latter. The Crevasse contains a large quantity of ore but has no mill to treat it. The Kimberly people have the mill and not a very large ore body to draw from. It is thought that these two properties will eventually be combined.

From THE MINING WORLD'S Staff Correspondent.

Helena, Mont.

The Gold Bond Mining company, of which Mr. James Winscott, of Helena, is president and general manager, has let a contract to put up the shaft house, gallows frame and other buildings at the company's properties in Maupin gulch, and for setting the machinery, which has been purchased. The shaft will be sunk another 200 feet and stations established and levels run on the lead, and work will be pushed vigorously.

Dr. Johnson, of St. Paul, president of the Occidental Mining company, has been in Helena and at the mines for some weeks preparing for vigorous work this season. The property of the company consists of a large group of claims adjoining the Hill Gibson mines, four miles from Wickes, at the head of the north fork of Clancy creek. Nearly 300 feet of development work has already been done on these properties, mostly tunnels. Recently a splendid strike of high-grade silver-lead ore was made, the vein being five feet wide. A drift is being run from a cross-cut on the vein, and the ore runs several hundred ounces in silver. There is a large amount of high-grade ore on the dump and shipments will commence as soon as the roads are passable. The company will vigorously develop and work these properties, and it is believed that these, the James J. Hill and other properties in that immediate vicinity will warrant the early building of a spur from the Great Northern railroad at Clancy.

Work is progressing on the Hill properties, where a 20-foot vein of silver-copper ore was encountered some time since.

Mulvahill & Ely are working a large force of men sinking 200 feet farther on the Daly mine at Wickes.

Mr. Luynn and associates, who have been working the Farmer claims in Scratch Gravel district, four miles west of Helena, are erecting a stamp mill on the property which is known as the Elizabeth mine. There is a shaft down 280 feet, with an eight-foot vein of good ore, which has been milled at Unionville and averages $12 per ton.

R. S. Hale, of Helena, has begun operations in his extensive placer properties four miles south of the city, and will have a long season with a bounteous water supply. Mr. Hale has worked these properties profitably for several years.

The Liverpool continues its shipments, sending seven cars to the smelter in April. Values were at least ten per cent. higher on an average than in the shipments for the previous month.

Work is progressing vigorously upon several groups in the Wickes-Corbin district taken over from the McCabe syndicate. The shaft in the properties of the New York & Montana company, represented by Mr. Matthews, is down nearly 200 feet, with a splendid showing of copper and silver. The Copper Mountain company is working three large shifts of men on its properties, with splendid showings.

McCann & Latimer, who are developing the old Star properties in Lump gulch, near the Liverpool, are down 40 feet, having been in ore from the surface, and have already made a shipment running over 300 ounces of silver. There is a strong vein with a rich pay chute of six inches, which is widening.

The Red Bird company, of Helena, which is owned by the Helena & Livingston company, have been taken over by a new company, of which former Gov. Hauser and A. M. Holter, of this city, and J. Eckert and J. B. Grafus, of New York, are incorporators. The new company has a capital of $1,000,000 and will develop and work the property vigorously. A number of new coke ovens have been added to the plant and the output of coal and coke will be materially increased in the future.

There is unusual activity in the Ophir district, in the Big Blackfoot country, than for a long time before. It is expected that large shipments from this district will be made this season.

A good strike of copper ore has been made in the Jackall claim of Mr. Jackson, in High Ore gulch.

Good shipments are being made from the Stray Horse, near Elliston, leased by Rossberg & Sutton, of Helena.

NEVADA

From THE MINING WORLD'S Staff Correspondent.

Tonopah has this week been visited by Charles M. Schwab, his father and a party of friends from New York and Pittsburg, who with him are interested in several prospects of which John McKane, late of Rossland, B. C., is general manager and holds a large interest. These properties include the Tonopah Extension adjoining the west end lines of the Tonopah Mining company's property, the Denver group and Red Rock group extensions of that ground, the Golden Anchor adjoining the Midway mine and the Hasbrouck mine at Gold mountain, six miles south of Tonopah. In the Tonopah Extension an east and west vein dipping north was encountered in the shaft at a depth of 275 feet and drifts and cross-cuts have disclosed high-grade shipping ore, the vein generally averaging over $50 per ton. The sinking of the shaft was continued and at 435 feet a second vein was encountered and the shaft continued in it to the 500-foot level, at which point a cross-cut to the north is in 55 feet, but has not struck the hanging wall. All of this ore is of good grade. A compressor plant and machine drills are now being installed. At the other Tonopah properties sinking is being pushed vigorously and at the Golden Anchor the formation is being cross-cut from the 500-foot level. At the Hasbrouck mine the vein which on the surface carried values averaging $97 per ton has been struck in a cross-cut for the 200-foot level, carrying very satisfactory values. Mr. Schwab expressed great surprise at the immense ore deposits in Tonopah and stated that it was the intention of himself and friends to invest still more heavily in the camp. At the McNamara mine adjoining the Tonopah Extension on the south the north cross-cut from the 500-foot level is entering quartz stringers carrying good values. The Little Tonopah mine adjoining the Golden Anchor on the west has, at a depth of 350 feet, struck a flow of 3,000 gallons of water per day. W. B. Sollender, manager of the Tonopah California, adjoining the Gold Hill on the south, will shortly recommence work on that property and cross-cuts will be run from the 650-foot level to strike the vein opened up on the 450-foot level. The shaft of the United Tonopah mine, three miles south of Tonopah, is down 326 feet on a vein of good milling ore with some high-grade shipping ore on the hanging wall. At Gold Mountain the Tonopah Gold Mountain Mining company has uncovered on the surface at a point 2,400 feet west of the present workings a vein eight feet wide, five feet of which average over $400 per ton in gold. The company has this week shipped two carloads of ore from its other shaft. At Lone Mountain, 14 miles southwest of Tonopah, the Tonopah Belcher company, owning the General Thomas mine, has now installed a whim on the main working shaft now down 70 feet. In the incline shaft there is a big body of shipping ore which is being sacked for shipment. The Tonopah Monarch company, whose property adjoins on the west, will shortly resume operations. Several applications for leases have been made on these claims. Eight miles south five [illegible] leased by J. Griffin have been

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LD's Staff Correspondent.

Helena, Mont.

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Elkhorn Queen, an old-time notable, and will develop and work it vigorously. There are also good indications that the McClellan group, four miles south of Helena, will be taken over by a new company and active development will be commenced in the near future. The Jay Gould, another famous old-time producer, has during the year been taken over by the Standard Ore company, at the head of which are Messrs. Cory and Steece, of Helena, and the operations of the past few months amply justify their expenditures. A 20-stamp mill was erected and set to work with splendid results, and an addition of ten stamps was soon made. The new addition is almost completed and within a few days will be at work pounding out values.

Besides the work projected on old properties there are a number of large projects under way to open up properties that have only been prospected and not worked. The Big Dick company, organized by Indiana capitalists, will begin active operations for the development of a group of nine claims adjoining the famous Big Indian. There is a large fund guaranteed for this development work, and the company is confident of developing a property of the scale and profit of the Big Indian. [The Gold Reef company has been organized by local and eastern capitalists to develop and operate another group of claims adjoining the Big Indian on the northeast and propose to put in a large mill and operate on an extensive scale.] The Gold Bond Mining company, recently organized by Helena and eastern men, will operate a group of new claims, the Good Cheer group in Maupin gulch, 15 miles from Helena, and also the well-known Tunnel Lode, two and a-half miles from the city, near the Whitlach-Union. This latter property was a famous old-time producer. Three thousand tons of unusually rich ore was taken from this mine, some of which panned $6 per pound in free gold. A new shaft will be sunk to reach below the old workings. The company proposes to commence operations on both properties as soon as machinery can be got on the ground and to sink at least 800 feet on the Good Cheer, with levels every 200 feet. The first-class ore will be shipped and a concentrator will be built to work the second grade.

The Red Bird Mining company, of Helena, which has been operating the Red Bird properties near this city, paying regular monthly dividends for the last 14 months, is vigorously pressing development work on its group of three claims recently acquired in High Ore gulch. A shipment of ore from these claims sent to the East Helena smelter the past week gave returns netting $65.35 per ton. The development work has only been prosecuted since the middle of December, but the company has several cars of shipping ore on the dump. The company is also developing a new claim near their Red Bird mine. At the 120-foot level they have run a crosscut and are on the vein 18 feet without reaching the opposite wall. The vein is iron with a good showing of copper.

The New York & Montana Mining company, which took over about 40 claims in the Wickes-Corbin district from the McCabe syndicate, has gone down 50 feet in its shaft and has struck a fine lead of high grade copper and lead.

Mr. McCabe, of the syndicate, who has recently bonded the Robert Emmet, in Jefferson county, and a group of claims in Madison county, has taken a bond on the General Harris group, adjoining the Magnet group owned by James J. Hill, two and a-half miles from Wickes. There is a big vein of iron and copper and it is understood the price is $50,000. It is asserted by those connected with the Magnet properties that Mr. Hill is seriously contemplating the building of an extension of the Montana Central road from Clancy to these mines and thence to the Cataract district near Basin.

The Pittsburg & Montana smelter has been started up and the company is putting more men on its properties. It is said that 60 miners were sent from Butte to work on their Jacquemin properties at Elkhorn, and a road is being built from the Northern Pacific to the Olson group, near Helena, recently purchased by the company. The smelter treats sulphides and will afford a market for many mines in this vicinity which could not profitably ship to other smelters.

of fine quality for lubricating purposes. Extensi
improvements will be made in the district.

NEVADA.

From The Mining World's Staff Correspondent.

Tonopah, Nevada

The Tonopah district is at present passi
through a period of quiet, many of the mines ha
ing suspended work until the completion of t
railroad, with which satisfactory progress is bei
made. The shaft of the Montana Tonopah is n
down 736 feet and development on the 500 a
600-foot levels have yielded fair quantities
high grade shipping ore and a big tonnage
milling ore has been blocked out and is also
cumulating on the dumps.

The Tonopah Belmont Development company
directing its energies to the development of
814-foot level, where in the north crosscut fr
the east drift a body of ore has been encounte
but its width and extent has not been determin
the assay values running from $26 to $130 per t
This is the fourth vein discovered in this prope
a trial shipment from which yielded 151 ounces
ver and 1.9 ounces gold per ton.

The North Star mine is opening up in a n
satisfactory manner and the recent connection
its 950-foot level with the Montana has by
creased ventilation much facilitated the work
of both properties. The North Star is block
out large quantities of milling ore besides rais
high grade ore which will be shipped at an ea
date.

The Tonopah Extension mine is rapidly de
oping into one of the biggest properties in
camp. The crosscut on the 275-foot level has
monstrated that the vein at this depth is 40
wide, of which 30 feet assay from $10 to $12
ton, seven-foot $54 per ton, and the remain
from $300 to $3,000 per ton. This body is
being drifted on and about three car loads of h
grade ore have been taken out during deve
ment and will be shipped at once. Another cr
cut is now being run to the vein from the 385-
level and the sinking of the main shaft now d
400 feet is also being continued. The propert
controlled by Charles M. Schwab, of Pittsburg.
his associates, the president and manager of
company being John McKane, of Tonopah.

The Tonopah Mining & Milling company's
has completed the crushing of about 600 tons of
from the Tamblyn lease and although the
clean-up is not yet complete $19,000 worth of
lion has been shipped out and it has been de
strated that the mill is a success. It has
started crushing a parcel of 3,000 tons of ore f
the Golden lease.

At Gold Mountain, six miles south of Tono
there is renewed activity owing to the Tone
Gold Mountain Mining company having
countered a vein of jasper quartz four feet
assaying from $110 to $260 gold per ton, a
load of which has been shipped, while leaser
the adjoining property are sacking high g
shipping ore from what is believed to be th
tension of this vein. Two miles west the Ton
United Mining company has recently uncov
close to surface a body of quartz porphyry 40
wide, samples from any part of which show
gold in the pan.

From The Mining World's Staff Correspondent.

Humboldt County, N

The recent striking of the ledge on the S
Gold & Silver Mining company's property has
onstrated that this company will be a re
shipper in the future, and is also the first eve
prove depth on the veins of the Humboldt r
More than $30,000,000 was taken out of a
dozen mines in the Humboldt district an
greatest depth in the district was slightly
water level. The Sheba company has comp
an 800-foot tunnel which taps the vein s
hundred feet under the old workings and wil
more than 500 feet of stoping ground to th
face. The reports from the mine are tha
first ten feet under the ledge brought valu
60 to 70 ounces silver, and it is considered
ble that the next 50 feet of work on the big
will recover a rich ore chute from which ne
million dollars was taken in the upper level

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Dec. 6, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Associated Mining & Metals, Inc.,

Lab No. 657365

ADDRESS: Racine, Wisc.

MARKED: Sample No. 1

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
0.010	9.6								

CHARGES

Geo L Dickinson ASSAYER

DICKINSON LABORATORIE, INC.

ASSAYERS — CHEMISTS — METALLURGIS
PHONES 772-6621 & 772-3088 — P. O. BOX 057
201 N. CLARK EL PASO, EXAS 79991

Dec. 6, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Associated Mining & Metals, Inc.,

Lab No. 657365

ADDRESS: Racine, Wisc.

MARKED: Sample No. 2

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium uoride	Effective Units	% Manganese	% Iron
0.010	5.0								

CHARGES

Geo Dickinson ASSAYER

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Dec. 6, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Associated Mining & Metals, Inc.,

Lab No. 657365

ADDRESS: Racine, Wisc.

MARKED: Sample No. 3

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
Trace	0.2								

CHARGES

Geo. L. Dickinson ASSAYER

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Dec. 6, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Associated Mining & Metals, Inc.,

Lab No. 657365

ADDRESS: Racine, Wisc.

MARKED: Sample No. 4

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
0.125	2.6								

CHARGES

ASSAYER

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Dec. 6, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Associated Mining & Metals, Inc.

Lab No. 657365

ADDRESS: Racine, Wisc.

MARKED: Sample No. 5

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
0.010	1.8								

CHARGES

Leo R. Dickinson ASSAYER

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Dec. 6, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Associated Mining & Metals, Inc.,

Lab No.

ADDRESS: Racine, Wisc.

MARKED: Sample No. 6

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
0.010	2.3								

CHARGES

Geo L Dickinson ASSAYER

Engineering and Mining Experiment Station

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

Rapid City, S. D.

ORIGINAL ASSAY CERTIFICATE

December 7 1965

Mr. Tabacsman- Associated Mining & Metals, Inc.

456 Mulberry Lane Racine, Wisc.

The sample S received from you have been assayed and the results obtained are as follows:

Certificate No. 656 - (956-961)

	Our Sample No.	GOLD		SILVER		Your Sample No.			
		Ounces Per Ton	*Value Per Ton	Ounces Per Ton	*Value Per Ton				
1	656-956	Trace		7.80		1			
2	656-957	0.01		5.48		2			
3	656-958	Trace		0.10		3			
4	656-959	0.04		2.90		4			
5	656-960	Trace		1.58		5	Random Sample		
6	656-961	Trace		10.10		6	Core Sample		
7									
8									
9									
10									

*Values figured on basis of gold @ $ _____ per ounce, silver @ _____ per ounce.

REMARKS:

The Engineering and Mining Experiment Station is responsible for the accuracy of this report but assumes no responsibility as to the source of the sample tested.

M. G. Willigman Assayer.

Director of the Experiment Station

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8558

Date May 10, 1966.

H. Tabaksman,
Associated Mining & Metals,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
~~#1-~~	~~xxxx~~							
#1-	0.16	10.48						
#2-	0.12	2.52						
#3-	0.10	3.24						

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 7.50

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

1000
2000
3000,000

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8631

Date Aug. 22, 1966.

H. Tabaksman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
#1-Rust from Pipe:	0.01	TRACE						
#S-1 Shaft	0.40	10.60						
#S-3 County Rock	TRACE	6.80						
#2-Sulfide:	0.02	0.12						
#S-2	0.28	10.22						

S-2 by Fluorescent X-ray Spectrograph also shows: Copper, 0.59%; Zinc, 0.062%; Lead, 1.8%; Arsenic, 1.3%; Antimony, 0.009%; Bismuth, 0.17% Iron, 7.5%; Nickel, 0.003%; Barium, 0.042%; Strontium, 0.006%; Titanium, 0.035%; Zirconium, 0.013%; Chromium, 0.079%; Molybdenum, 0.008%; Manganese, 0.18%, all figures represent an estimate of percentage content of the respective metals.

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 22.50

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8638

Date August 31, 1966.

H. Tabaksman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
S-D2-S1		0.22	0.015					
S-D2-S2	0.08	10.62	0.20					
BM-1	TRACE	0.10			TRACE			

Total Molybdenum: (Mo): 0.004%

BM-1 by Fluorescent X-ray Spectrograph also shows: Copper, 0.036%; Zinc, 0.024%; Lead, 0.029%; Arsenic, 0.008%; Iron, 6.8%; Nickel, 0.017%; Rubidium, 0.017%; Barium, 0.27%; Strontium, 0.011%; Titanium, 0.12%; Zirconium, 0.008%; Chromium, 0.007%; Manganese, 6.1%; Yttrium, 0.059%; all figures represent an estimate of the percentage content of the respective metals.

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 28.50

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8654

Date Sept. 17, 1966.

H. Tabakeman,
456 ~~[illegible]~~ Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
Shaft Fred:	0.10	14.52						
Shaft #2:	0.08	5.24						
Art 3D-F	0.08	21.16		1.88	0.90			
Muck	0.12	3.62						

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 13.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8790

Date April 1, 1967

H. Tabaksman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
Sample:	0.04	3.46	0.218	3.83	1.54	Bismuth about 0.15%.		

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 7.00

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8792

Date April 7, 1967.

H. Tabaksman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
Sample #1-	0.04	3.36						
Sample #2-	0.03	2.04						
Sample #3-Gouge	0.01	0.09						

Composite of Samples No. 1 and #2 shows by Fluorescent X-ray Spectrograph as follows: Copper, 0.043%; Zinc, 0.085%; Lead, 0.18%; Arsenic, 0.086%; Bismuth, 0.021%; Iron, 2.6%; Rubidium, 0.020%; Strontium, 0.004%; Titanium, 0.21%; Zirconium, 0.007%; Vanadium, 0.029%; Manganese, 0.19%; Yttrium, 0.009%; all figures represent an estimate of the percentage content of the respective metals.

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 17.50

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

Information to accompany application by Associated Mining and Metals, Inc. to Office of Minerals Exploration for a loan

Physical Description

(a) The Good Cheer Mine is located in the southeast quarter of Section 17, Township 8 North, Range 2 West, Jefferson County, Montana, (Fig. 1). It is described briefly in U.S. Geological Survey Bulletin 470 by R. W. Stone, published in 1911, as follows:

> "The Good Cheer Mine is at the head of Maupin Creek in the southeast quarter, Section 17, Township 8 North, Range 2 West, has a shaft 165 feet deep and 400 feet of levels. It is on a 4-1/2 foot vertical east-west quartz vein on or near the contact between granite and granite porphry or acidic granite. Quartz carries pyrite, chalcopyrite and galena. In 1910 Mr. Garneau, the owner, was shipping a little first class sorted ore carrying over $15 a ton and said that up to that time the mine, which is still in the development state, had produced about $8,000.
>
> The Black Bear claim on the hilltop a quarter of a mile south of the Good Cheer Mine is on an east-west quartz vein in granite and is reported by Mr. Garneau to carry twelve ounces of silver and $1.70 in gold to the ton. Short black crystals of tourmaline were found in the ore in the dump."

A diagram of the present mine workings and a claim map of the Associated Mining and Metals Company are appended. An approximation of the volume of the stopes is 28,000 cubic feet, which is roughly about 2,600 tons of ore. Using Mr. Garneau's figures of $15 values per ton he shipped, we conclude he shipped 530 tons in order to earn $8,000. If he shipped this amount, the balance of the 2,600 tons or 2,070 tons, represents the mine dump. The present workings coincide with Mr. Stone's description,

implying that no more ore has been mined since then.

(b) The applicants are officers in the Associated Mining and Metals Company of Racine, Wisconsin. Specific offices held are as follows: (to be filled in by AMMCo.)

(c) The only record of production available is that stated above in the quote from R. W. Stone. At present the Good Cheer Mine is not operating.

(d) At the present time the geologic investigations at the Good Cheer Mine do not indicate any known reserves of proven ore. The amount of earlier stoping exposed by dewatering the workings is quite limited.

Channel samples were taken at the ends of the east-west drifts at the three levels developed by previous operators of the mine. The thickness of the vein ranges from two to four feet and averages three feet. The thickest development of the vein is on the lowest level.

Assay reports of samples collected in the mine workings are appended; the locations of the samples are shown in the sketch of the workings. The grade of ore appears to be increasing with depth with silver analyses on the first and second level averaging about one ounce of silver per ton of ore whereas on the lowest level the silver values average slightly over two ounces per ton. It should be noted that these channel samples were collected from a five-foot working face and include wall-rock gangue.

The thickness of the vein increases with depth from 1 to 1.5 feet at the upper levels to over four feet on the lower level.

(e) The Good Cheer ore body is an east-west striking quartz vein localized in coarse-grained quartz monzonite in an area of extensive east-west fracturing; the immediate region has an extensive historical record of ore production. The vein is intermittently distinguishable on the ground surface for a distance of about 3~~0~~700 yards. Surface oxidation primarily in the form of iron oxides marks the trace of the structure. The vein dips nearly vertically and appears to widen at the lowest level, which is 165 feet below the collar.

The vein mineralogy includes quartz which is the most abundant mineral. Also present are pyrite, sphalerite, galena, arsenopyrite and one or more copper minerals which probably contain the silver values. Hand specimen and binocular microscope investigations of the ore do not indicate the presence of a unique silver mineral, however, polished section studies planned for the future may show the presence of a separate silver phase.

The host rock of the Good Cheer vein is the Clancy granodiorite of Upper Cretaceons to Paleocene Age; this rock unit is part of the Boulder Batholith complex. It is intimately related in time, texturally, mineralogically, and spatially to the Butte quartz monzonite, host rock to the great Butte deposits about 30 miles to the south. A copy of a geologic map modified after Smedes is appended.

(f) Perhaps the main reason for expecting to find ore in the Good Cheer area is that it is located in the center of an area of extensive mineralization, even though a major producer has not yet been developed in the area.

Secondly, as mentioned previously, the width of the vein is increasing with depth and the mineral values in the assays are increasing as well.

(g) Copies of earlier reports are appended.

Accessibility of Property

(a) The property can be reached by driving south from Helena, Montana on U.S. 91 and Interstate 15, fifteen miles to the settlement of Alhambra and then turning east at Alhambra Rest Home onto a dirt road which parallels Warm Springs Creek. From there one follows the Warm Springs Creek Road to its confluence with Maupin Creek Road which leads directly to the mine. The distance from the paved highway to the mine is about seven miles.

The Alhambra turn-off can also be reached by traveling north from Butte, Montana for a distance of approximately fifty miles on U.S. 91 and Interstate 15.

The mine property is readily accessible throughout the year though road-plowing may be necessary during the winter after heavy snowfalls.

(b) Shipping points are available on a Northern Pacific Railroad line from Helena to Butte which passes through Alhambra and nearby Clancy.

Mining supplies are available from Helena or Butte, and also from Missoula and Great Falls.

Exploration Work

(a) The proposed exploration work consists of nine diamond drill core wireline holes of 1-7/16" size. Three of these holes would be drilled at angles of 45° to the vertical vein so as to intersect the vein at a depth of 365 feet and three would be drilled at an angle of 60° to the vein so as to intersect it at 565 feet, the two intersections being 200 and 400 feet respectively below the lowest level. In addition, two horizontal drill holes, each 200 feet in length, would be drilled, one in each direction normal to the vein, from the lowest level of the mine shaft. Finally, one deep hole would be drilled from the surface at an angle of 60° to intersect the vein at a depth of 765 feet or 600 feet below the lowest level. The nine holes represent a total of about 4,800 feet of core drilling. (See diagrams showing details of the proposed exploration).

(b) Not applicable.

(c) To be filled in by AMMCo.

Experience

Technical supervision of the exploration work will be under Fred S. Honkala and Arnold J. Silverman, consultants to the Associated Mining and Metals Company. Honkala and Silverman have had twenty-one and thirteen years respectively of experience in consulting and in western geology. Both men hold the Ph.D degree in geology.

Estimated Costs

(a) (To be filled in when available.)

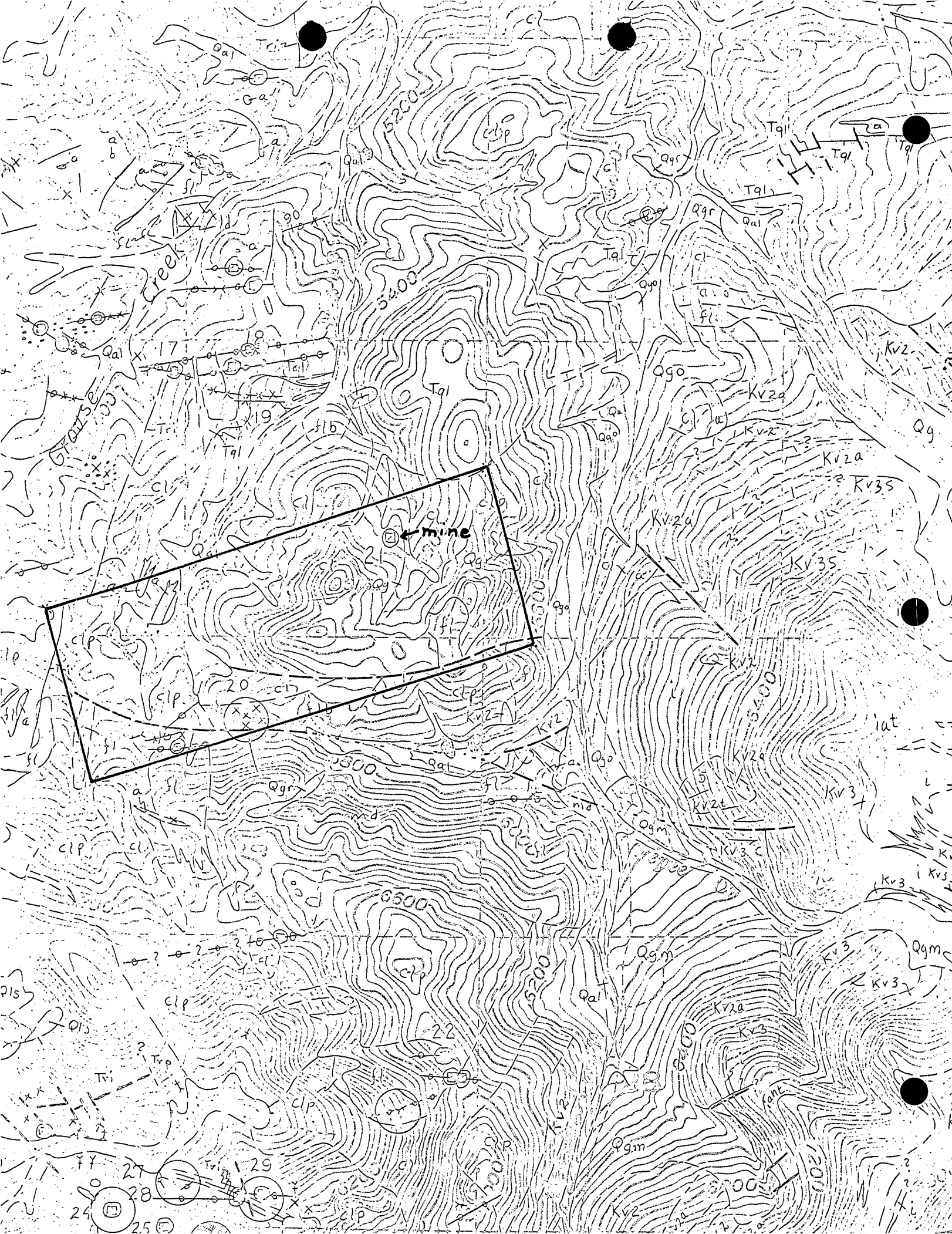
(b) Personal services: Geological services will consist of logging drill core, preparing and analyzing samples and a written report to Associated Mining and Metals Company for a total of 25 man days at $100 per day plus an estimated $500 for travel and other expenses for a total of $3,000.

(NOTE: A figure will have to be furnished here by AMMCo. for the salary of an operations manager (Caravetta ?) and a caretaker-utility man for the length of the drilling contract.)

(c), (d), (e), (f), (g) to be filled in by AMMCo where applicable.

Notes about possible contracts at the Good Cheer Mine

The first type of contract possible is a so-called turn-key contract, in which all costs are furnished by the contractor for the work that we want done. Thesecond type of contract is the unit price, in which a price is furnished at so much per foot for the diamond drilling and also so much per foot for the other operations including reaming, casing, cementing, inclination tests, and core boxes. In general we should try to keep it as simple as possible and to have them do the whole job. We should have inclination tests, however, and also core boxes.


mine
Grouse
Creek
5200
5400
5600
6000
6200
6400
6600
Qal
Qgr
Qgo
Qgm
Tql
Kv2
Kv2a
Kv3
Kv3s
Kv2t
Qg
Tri
clp
17
19
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22
24
25
27
28
29

EXPLANATION OF MAP ON OPPOSITE PAGE

This map is a Xerox copy of part of "Preliminary Geologic Map of the Northern Elkhorn Mountains, Jefferson and Broadwater Counties, Montana" by Harry W. Smedes, published in 1962 as Mineral Investigations Field Studies Map MF-243 by the U. S. Geological Survey.

On this map has been traced the approximate outline of the claims held by AMM, Inc., including the location of the Good Cheer Mine indicated by the number 21, located in the SE 1/4, T8N, R2W, Jefferson County, Montana.

Though many different rock types are noted by Smedes on this map, they can be classed into several broad categories, starting with the youngest.

4. Units labelled Qal, Qg, etc. are Quaternary alluvium - glacial deposits, etc.

3. Units labelled Tri, etc. are Tertiary age volcanic rocks.

2. Units labelled c, cl, clp, ml, mlp, md, fl, flb, etc. are all various aspects of the Upper Cretaceous or Paleocene Butte quartz monzonite. This makes up most of the map.

1. Units labelled Kv_1, Kv_2, Kv_3, etc. are all aspects of the Upper Cretaceous Elkhorn Mountains volcanics.

Some additional symbols include:

metalliferous quartz vein

chalcedony vein or vein zone ("reef")

silicified rock

shaft

adit

trench

prospect

fault

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8739

Date Jan. 9, 1967.

Associated Mining & Metals Co.,
Mr. H. Takaksman,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
						Arsenic (As)	Antimony (Sb)	
1-F-1	0.16	0.54	0.073	0.40	0.25	0.13%	0.003%	
1-F-2	0.18	1.98	0.094	0.36	0.20	0.12%	0.002%	
2-F-1	0.04	0.66	0.26	0.40	0.20	0.13%	0.004%	
2-F-2	0.04	0.74	0.083	0.38	0.62	0.58%	0.008%	
1-S-1	0.04	0.76	0.038	0.10	0.30	0.31%	0.009%	

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 85.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8810

Date April 29, 1967.

H. Tabakman,
Associated M. & M. Co.,
456 Mulberry Lane,
Racine, Wisconsin.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON	
							Arsenic	Antimony	Bismuth
Sample No. 1	0.03	1.75	0.103	0.10	TRACE	4.0	0.077%	0.002%	0.024%
2	0.04	2.84	0.166	0.24	1.60	4.40	0.030%	0.006%	0.020%
3	0.03	2.03	0.145	0.36	TRACE	4.0	0.031%	0.013%	0.014%

Iron, Arsenic, antimony and bismuth by X-ray.

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 51.00

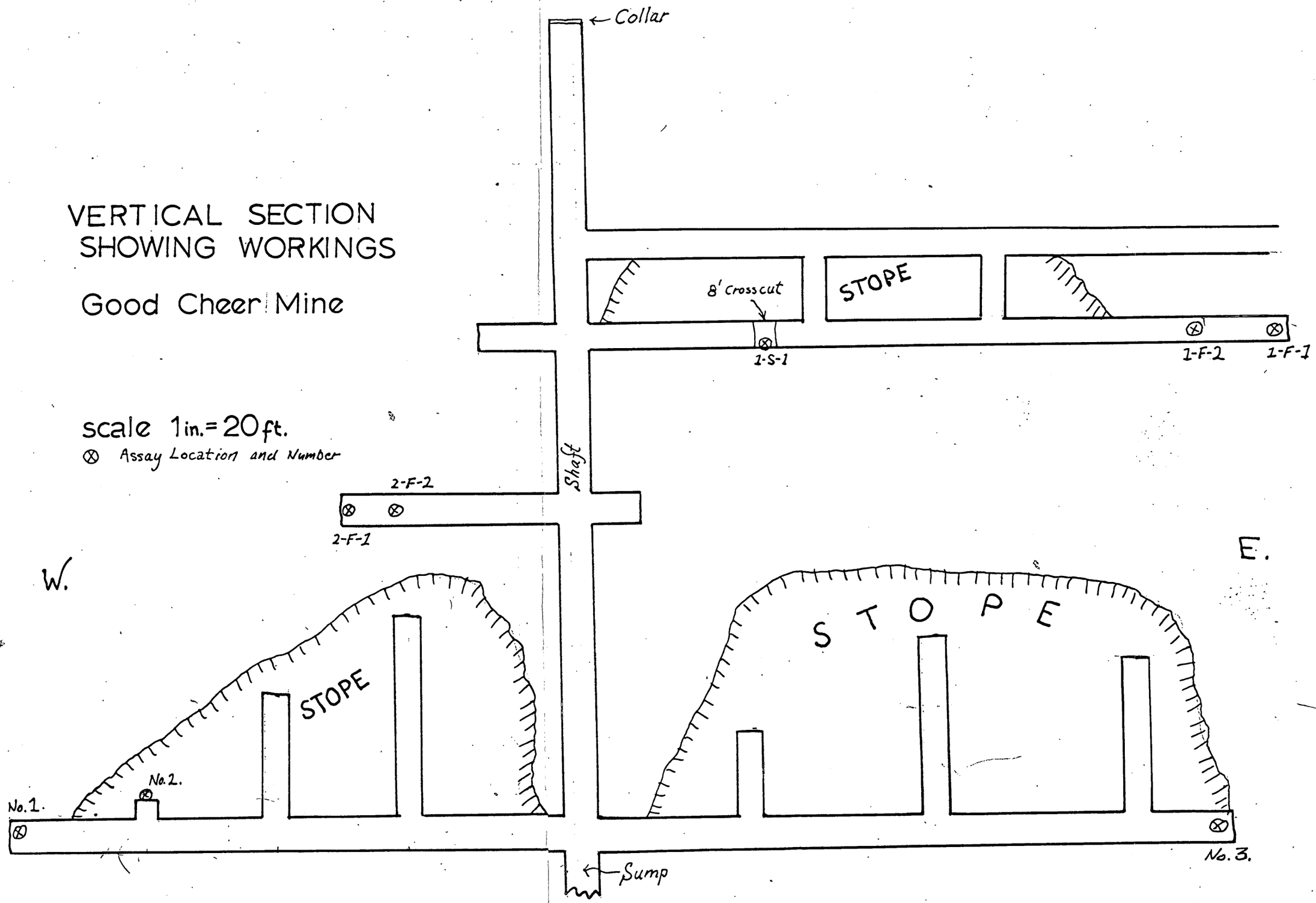
CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

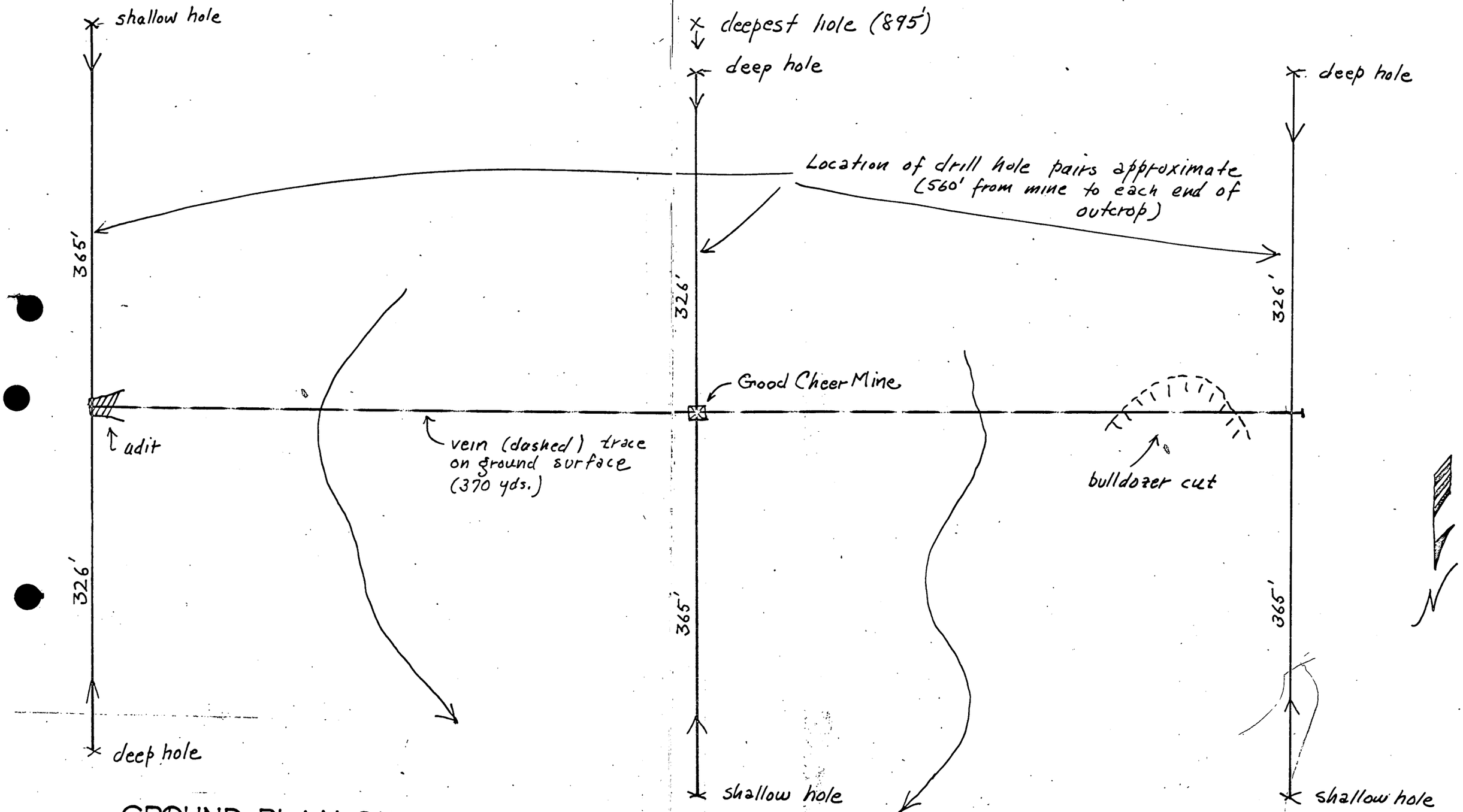
VERTICAL SECTION SHOWING WORKINGS

Good Cheer Mine

scale 1 in. = 20 ft.

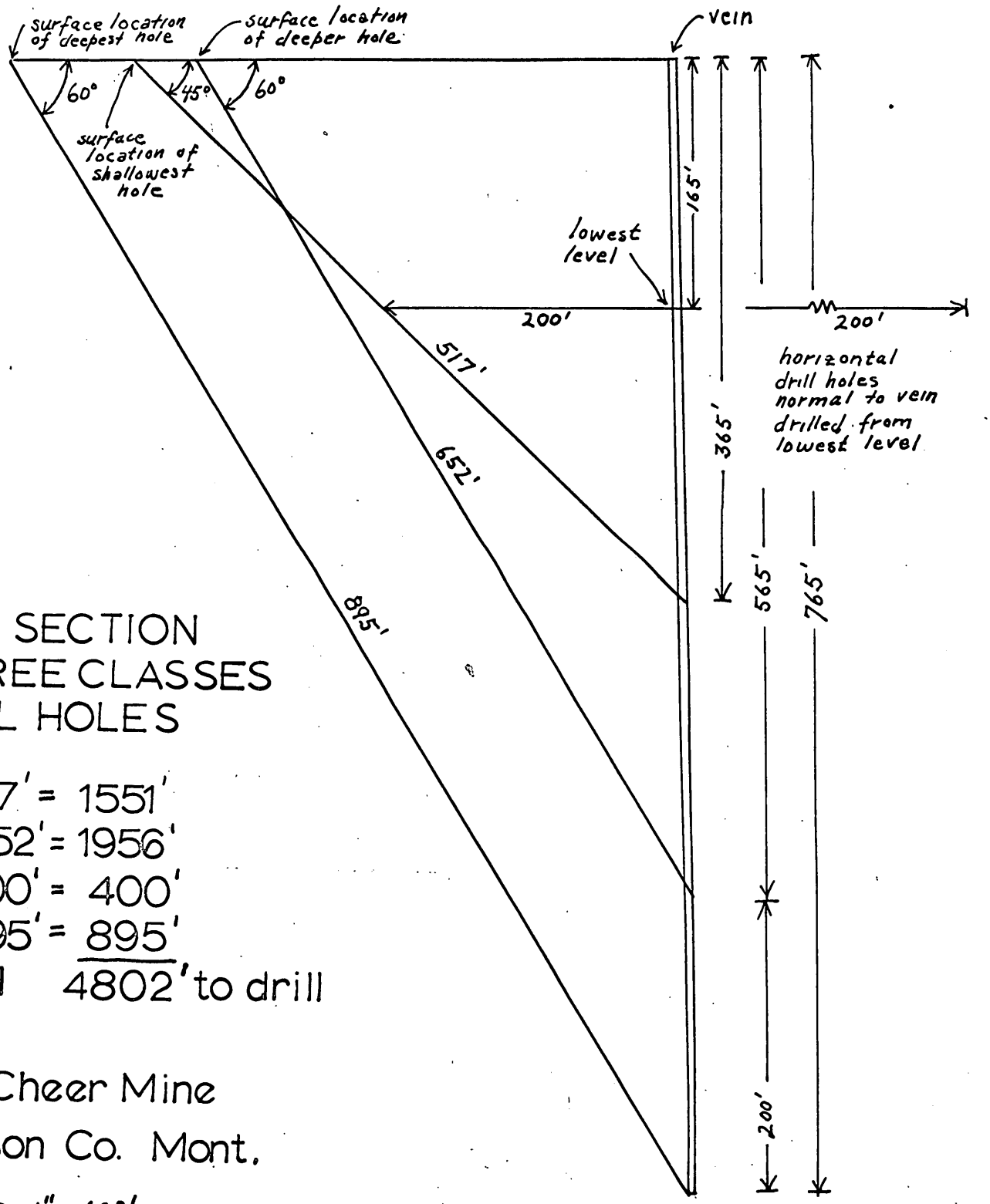
⊗ Assay Location and Number





GROUND PLAN SKETCH

for location of core drill holes



CROSS SECTION
OF THREE CLASSES
OF DRILL HOLES

3 × 517' = 1551'
3 × 652' = 1956'
2 × 200' = 400'
1 × 895' = 895'
total 4802' to drill

Good Cheer Mine
Jefferson Co. Mont.

scale 1" = 100'

August 15, 1966

Mr. Anthony S. DeRose, President
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin

Dear Mr. DeRose:

It was a pleasure to accompany you and your son to the Alhambra, Montana region where you and Mr. Potee and your associates are looking for ore.

Although my visit was purely of a reconnaissance nature and I did not see all of your properties, I can pass on to you a few impressions on the basis of what I did see.

While not passing on the eventual economic outcome of your venture, there seems to be enough mineral of economic significance in the dumps around the old mines as well as in the veins you have exposed as to make it reasonable to look for more in the vicinity. Added to this is the fact of past production from the vicinity.

Your plan of dewatering the old mine that you are working on and exploring for further ore leads within its workings by diamond-core drilling is a reasonable one.

The use of dozer cuts to expose veins is a standard way of doing exploration and assessment work on claims, and your dozer cuts were reasonably placed for this purpose.

I would suggest that you employ a mining geologist to thoroughly inventory all information available about your properties, including surface geology, mapping of underground workings, and a survey of previous reports on the region. A systematic and well-planned exploration program is a necessary first step to a systematic development program if you find ore in economic amounts, and if such a program shows that you don't have ore, it will save you much money.

Sincerely,

Fred S. Honkala
Geologist

FSH:mzc

December 23, 1966

Mr. Anthony S. DeRose, President
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin

Dear Mr. DeRose:

This letter is in the form of an informal report to your company regarding our observations at the Good Cheer property. Honkala has made a total of five visits to the property and Silverman four visits, as well as some laboratory preparation of samples for assaying.

Our two most recent visits to the mine were on December 16th and 22nd. On the earlier visit we consulted with Mr. R. Caravette regarding the surface trenching planned and investigated the progress made in dewatering the mine, removing the bulkhead obstruction and exposing a clean face in the #2 level drift. The work under Mr. Caravette's direction was progressing extremely well, and we were much impressed with the mature, business-like way in which he was progressing toward our stated first stage objectives. It is our view that Caravette accomplished more in two weeks than prior mine management did in three months. Mr. Caravette also approved our suggestion that we hire, on a part-time basis, a mining engineering student who can suggest to management ways to solve some of the everyday technical problems that arise during the work. We have not been able to find anyone as yet.

During our visit on December 22nd we investigated the surface trench work that has been done. We suggested one other cut which is being made today. In the exposures observed we do not find evidence of enriched mineralized zones on either side of the main vein structure. Also, it does not appear at this time that the main mineralized structure extends more than a few hundred yards in an east and west direction from the shaft. We will not be able to make a final assessment of surface possibilities until the spring snow melts; however, we do not see the need for filing more claims at this time, and suggest that we wait until spring before this decision is made.

Exposures within the mine are a little more encouraging, and considering the amount of money you have already invested in the property, we think there are several additional steps that can be taken that would be reasonable. First, the mine should be completely cleaned out so that we can see all of the old workings. The mineralized zone seems to be essentially vertical and tabular and parallel to the regional structure that has been developed in the country rock. Consequently we might recommend doing some diamond core drilling to explore (1) the vein at depth, and (2) the country rock on either side of the vein. Since the vein is nearly vertical, to explore it at depth would require some high angle drill holes punched in from the surface on either side of the mine and slanted so as to intersect the vein at least 200 feet below the bottom of the mine. Secondly, the country rock parallel to the vein should be explored by several horizontal drill holes in both north and south directions and drilled from the bottom of the mine at right angles to the regional structure.

The mineralization in the vein contains copper, lead, and zinc sulphides, with the silver values chemically tied to either the copper or lead, or both. The gangue (non-commercial) minerals include iron arsenic sulphides, and quartz. This ore, if sufficient quantities can be found, will not cause any problem in milling and separating. We are presently preparing samples collected for assay and will report the results as soon as they are available. It is important that the assays show us an economic grade of ore across a five-foot width, the minimum width of stope which can be mined. An analysis of a piece of high grade rock does not indicate that the mine can be made a successful commercial venture. The entire stope width has to be considered.

At present we think that you should press ahead in getting the mine dewatered and cleaned so we may sample and inspect all of the workings. The sandpoint is through the bulkhead, and only five, or at most eight to ten feet of muck remains. Very little progress has been made in this work since Caravette returned to Wisconsin. We strongly advise that someone from your organization stay at the mine in order to press this work forward; otherwise, efficiency and organization at the mine may be difficult to achieve.

We shall be happy to continue consulting for you and will look forward to hearing from you soon.

Sincerely,

Fred S. Honkala

Arnold J. Silverman

February 3, 1967

Mr. Anthony S. DeRose, President
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin

Dear Mr. DeRose:

Dr. Silverman and I tried to call you yesterday to tell you that we had received the results of assays on the samples that we had collected on our several visits to your mine. We were not able to reach you, however, but we did reach Mr. Tabaksman and were pleased to learn that you are making progress in dewatering the mine.

The assay results are not encouraging, though it must be remembered that they were collected at the ends of drifts where mining had ceased for some reason. The most likely reason is that the miners had run out of ore; consequently one would expect low values.

I will make a few comments on these assays: The best sample that we collected was in the first level, labeled 1-F-2 on the Parker list. A rough estimation of the values in this sample totals about $12.50/ton, whereas $25-$30 ore is needed for a worthwhile operation. The gold values are highest in the top level, as we might expect, since we believe that the gold has been concentrated nearer the surface by weathering. The gold and the silver values lead us to conclude that those are the two elements that they were mining. The zinc content goes up slightly as you go down into the mine, as was observable by eye at the new face in the mine.

Enclosed is a copy of our bill.

Sincerely,

FSH

Fred S. Honkala
645 Evans
Missoula, Montana

Enclosure

FSH:mzc

cc: Mr. Harold Tabaksman

Arnold J. Silverman
509 Daly Avenue
Missoula, Montana

May 3, 1967

Mr. Anthony S. DeRose, President
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin

Dear Mr. DeRose:

On April 23, 1967 Drs. Honkala and Silverman visited the Good Cheer Mine at the request of Mr. Harold Tabaksman. We investigated the bottom mine level (#3 level), approximately 250 feet below the shaft collar, and collected samples for assay analysis. The results of this sampling are not yet available.

The Good Cheer vein structure shows encouraging signs of widening on the bottom level. The grade of ore on this level is not yet known; however, rather extensive stoping operations were developed from this level during the last operation of the mine. This factor, together with the vein widening, would appear to warrant additional exploration in order to establish the presence or absence of valuable mineral along both the vertical and horizontal projection of the vein.

Our recommendation, in what may be called Stage II of the Evaluation Plan, is to initiate a modest drilling program producing drill holes that will intersect the downward projection of the vein at a depth of 200 and 400 feet below the bottom (#3) level. This drilling will be done from the surface, and it is suggested that a contract driller be engaged. A minimum of two, and preferably four to six, downholes should be drilled from the surface and angled to intersect the plane of the vein at the indicated depths.

We also recommend that several (two to four) horizontal drill holes be made outward from the #3 level, in order to investigate the possible occurrence of vein structures parallel to the Good Cheer, but which do not crop out at the surface. These holes could be about 200 feet into the granite, both north and south of the main vein.

Sincerely yours,

Fred S. Honkala

Arnold J. Silverman

PERSONAL DATA

for Fred S. Honkala

General

Born, November 30, 1919, Concord, New Hampshire
Married; have 3 children
Own home at 419 Westview Drive, Missoula, Montana

Education

B.S., Geology, University of New Hampshire, 1940
M.A., Geology, University of Missouri, 1942
Ph.D., Geology, University of Michigan, 1949

Military Service

June 1942 to April 1946; served 9 months in Southwest Pacific, enlisted as private, discharged as captain, Corps of Engineers, U. S. Army. In charge of 140 officers and enlisted men overseas, including Heavy Equipment, Repair Shop and Motor Pool Sections of an Engineer batallion.

Present Position

Instructor, Geology Department, University of Montana, 1948-1950
Assistant professor, 1950-1955
Associate professor and acting chairman, 1955-1956
Chairman, Geology Department, 1956-1964
Professor, 1957-
Dean, Graduate School, 1964-
Director of Research, University of Montana Foundation, 1964-
Contracting Officer, University of Montana, 1966-

Summary of progress:

While chairman of the University of Montana Geology Department, it was the first geology department in the United States to receive NDEA fellowships. Department also received NSF, ONR, NDEA, AEC, NASA research grants and monies. Department was first in University to give Ph.D. degree, and first to produce Ph.D. holder. In 1963 no geology department in U.S. received more NSF Cooperative Fellowships than did the U of M Geology Department; same for Geological Society of America Penrose Grants to UM graduate students in 1964.

In the last two years applications for graduate study at UM doubled to 1700 in 1965-1966; enrollment has doubled; new Ph.D. and Master's programs have been started; research grant and contract, and training grant monies have been increased from $250,000/yr. to $2m. at present.

Other positions (summer)

U. S. Geological Survey western phosphate studies, 1948-1952
Research, Penacook, N.H., quadrangle, Penrose grants, Geological Society of America, 1953-1954; (study of igneous and metamorphic terrain)
Consultant, Shell Oil Company, Montana, 1954-1957; (stratigraphic studies and evaluation of oil prospects)
Staff, Montana State University summer session, 1958
Staff, NSF Summer Institute for Secondary School Teachers, 1959
Visiting professor, Indiana University Geologic Field Station, 1960-1963
Occasional consultant; various individuals and companies

Research Summary

Major contribution has been delineation of extensive Centennial Mountains, Montana-Idaho, phosphate deposits, which were opened for leasing by federal government and developed after issuance of my report on the area.

Bibliography contains 31 entries and is appended.

Awards and Grants

Rackham Fellowship, University of Michigan, 1948, ($1,000)
Penrose research grants, Geological Society of America, 1953, 1954($1,340;$550)
NSF General Science In-Service Training Program for Montana Secondary School Science and Mathematics Teachers ($40,230), 1959
Coordinated University effort in behalf of a wood chemistry program resulting in a $143,000 grant from Waldorf-Hoerner Co.
Selected to attend Gordon Research Conference on Coal Science, to be held at New Hampton School, New Hampton, N. H., July 3-7, 1967

Committee and Other Activities at University of Montana

Library Committee, 5 years (appointive)
Budget and Policy Committee (the main faculty committee, the executive committee of the Faculty Senate; an elective committee), served 4 years; past chairman
Faculty Senate (elective), 6 years; past chairman
Faculty Council (elective);(the state-wide inter-unit faculty organization in the University System); served 2 terms; past chairman
Chairman, Faculty Committee which devised a Patent Policy for University
Member, various other ad hoc committees
Member, state-wide Montana University Joint Water Resources Research Council
Member, state-wide Montana University System Coal Resources Research Council
Coordinator; joint proposal from University of Montana and Montana State University to NSF for a center of excellence in environmental science

Off-Campus Professional Activities

Secretary, Rocky Mountain Section, Geological Society of America, 1959
Participant, NRC-NSF-AIME Arden House Conference at Columbia University, February, 1962, on Mineral Industry Training
Visiting Lecturer, such as at University of Alberta, Edmonton, Montana State University at Bozeman, and at Billings Geological Society, Billings, Montana
Captain, visiting Geo-Study team for NSF to study undergraduate geology training on campuses in southeastern United States, member national ad hoc committee to write final report for the ten Geo-Study teams
Past Member, Billings Geological Society Stratigraphic Committee
Member of Governor Babcock's party in visit to AEC Hq. in Washington, D. C. in behalf of Montana's 200 bev. accelerator proposal; made a principal presentation, 1966
Member, Governor Babcock's delegation to Rocky Mountain Governors' Conference to Stimulate Regional Economy, 1965, 1966
Member, Executive Committee, Rocky Mountain Science Council, 1966-1969
Member, Accrediting Committee of Northwest Association of Secondary and Higher Schools for the accreditation of the University of Oregon in Feb. 1967 with specific responsibility for evaluating their Graduate School.
Member, Western Montana Area-Wide Health Facility Planning Committee, 1966-

National Activities

Member, General Technical Advisory Committee, Office of Coal Research, Department of Interior

Public Relations Activities

Public Information Committee, American Association of Petroleum Geologists, 1962-present
Public Relations Committee, Faculty Council (inter-unit faculty organization of University System), 1962-1964
Liaison representative for University of Montana to Highway Research Board, an agency under the National Research Council, 1965-

Professional Organizations and Recognitions

Geological Society of America (fellow)
American Association of Petroleum Geologists (member)
American Association for the Advancement of Science
Billings Geological Society
Sigma Xi (fellow)
American Men of Science
Who's Who in America
National Council of University Research Administrators

Other Activities

Member, First Methodist Church, Missoula (treasurer for 2 years)
Missoula Athletic and Aquatic Club
PTA

Add:
Elected chairman, Executive Committee, Rocky Mountain Science Council, April 22, 1967 (see accompanying copy of letter to Mr. Hill)

January 28, 1967

645 Evans
Missoula, Montana
May 12, 1967

Mr. Jim Dan Hill
Secretary, Screening Committee
Board of Regents of State Colleges
P. O. Box 912
Madison, Wisconsin 53701

Dear Mr. Hill:

Enclosed are the "Presidential Qualifications" forms which I received from you the other day, and completed as per your request.

Since I last wrote to you on April 17 I have received an additional assignment which should be added to my record. I was elected Chairman of the Executive Committee of the Rocky Mountain Science Council, which is composed of all agencies doing basic research in the Rocky Mountain region including the universities, federal research centers such as Los Alamos, and private companies such as Martin-Marietta of Denver. The RMSC is a parent of Associated Western Universities and is advisory to the Rocky Mountain Federation of States.

Sincerely,

Fred S. Honkala

BIBLIOGRAPHY OF FRED S. HONKALA

1. (1949) The geologic section at Sheep Mountain, Fremont County Wyoming. Compass, V. 26, pp. 130-137.

2. (1949) A geologic section on the West Fork of the Madison River, Beaverhead and Madison Counties, Montana (abstract). Northwest Science, V. 23, pp. 42-43.

3. (1949) Stratigraphy of the Centennial Region, Beaverhead County, Montana (abstract). Bull. Geol. Soc. Am., V. 50, p. 1897.

4. (1950) With K. P. McLaughlin, Problems of the Wells and Brazer formations in Southeastern Idaho (abstract). Bull. Geol. Soc. Am., V. 61, p. 1560.

5. (1951) With B. K. Replogle and R. F. Gosman, Stratigraphy of the Phosphoria formation, Centennial Range, Montana, (abstract). Bull. Geol. Soc. Am., V. 62, p. 1537.

6. (1951) Notes on the Amsden formation in southwestern Montana. Billings (Mont.) Geol. Soc. Second Ann. Field Conf. Guidebook, p. 61.

7. (1952) With G. R. Eakins, Cenozoic history of Missoula Valley, Missoula County, Montana (abstract). Bull. Geol. Soc. Am., V. 63, p. 1361.

8. (1952) With R. A. Gulbrandsen, K. P. McLaughlin, S. E. Clabaugh and K. B. Krauskopf, Geologic map and structure sections of the Johnson Creek quadrangle, Caribou County, Idaho. U. S. Geol. Survey open-file report, (2 plates).

9. (1953) Preliminary report on geology of Centennial Range, Montana-Idaho phosphate deposits. U. S. Geol. Survey open-file report, 20 pages, 6 pl.

10. (1953) Structure and stratigraphy in the Philipsburg-Drummond area; Field Trip number 5. Geol. Soc. Am. Rocky Mtn. Sect., 6th Ann. meeting, Guidebook, pp. 46-72.

11. (1953) With M. R. Klepper, O. A. Payne, and E. T. Ruppel, Stratigraphic sections of the Phosphoria formation in Montana, 1948. U. S. Geol. Survey circular 260, 39 pages.

12. (1953) With K. P. McLaughlin, Central Montana Tectonics (abstract). Bull. Am. Assoc. Petr. Geol., V. 37, p. 2615.

13. (1953) Phosphatic rocks in the Centennial Range, Montana-Idaho (abstract). Bull. Geol. Soc. Am., V. 64, p. 1547.

14. (1954) Geology of the Centennial Region of southwestern Montana (abstract). Bull. Geol. Soc. Am., V. 65, pp. 1377-1378.

15. (1954) Western Montana, American Geographical Society, 7 pp., 34 illus., (a film-strip and commentary).

16. (1954) Geology of the Penacook, New Hampshire, quadrangle (abstract). Bull. Geol. Soc. Am., V. 65, p. 1264.

17. (1955) Selected bibliography of standard stratigraphic sections of North America, Bull. Geol. Soc. Am., V. 66, pp. 153-154.

18. (1955) Geology Library facilities in colleges and universities. Science, V. 121, No. 3156, pp. 902-904.

19. (1955) The Cretaceous-Tertiary boundary near Glacier National Park, Montana. Billings (Mont.) Geol. Soc. 6th Ann. Field Conf. Guidebook, pp. 124-128.

20. (1956) With R. A. Gulbrandsen, K. P. McLaughlin and S. E. Clabaugh, Geology of the Johnson Creek Quadrangle, Caribou County, Idaho. U. S. Geol. Survey Bull. 1042-A, 23 pages, 2 plates.

21. (1956) With K. P. McLaughlin, D. M. Johnson, L. V. Bell, Upper Paleozoic Mesozoic and Paleocene Strata of western Montana (abstract). Bull. Geol. Soc. Am., V. 67, pp. 1706-1707.

22. (1957) Mineral Production section in The Montana Almanac, pp. 226-230, Montana State University Press.

23. (1958) First day field conference trip log, Guidebook, 8th Field Conf., Soc. Vertebrate Paleontology, pp. 9-13, Montana State University Press.

24. (1958) Geology between Missoula and Pipestone Springs, Montana. Ibid., pp. 22-25.

25. (1959) With J. P. Wehrenberg, Road Log, Field Trip 2; Drummond-Helmville-Ovando area, with emphasis on Post-Precambrian Geology. Guidebook to Field Trips, 12th Annual Meeting, Rocky Mtn. Sect. Geol. Soc. Amer., pp. 8-25.

26. (1959) With Kenneth Soward and J. P. Wehrenberg, Road Log, Field Trip 3; Glacial Geology of the Flathead Valley and Environs. Ibid., pp. 26-37.

27. (1959) Mesozoic and Cenozoic stratigraphy of western Montana. Ibid.,pp.64-65

28. (1960) Structure of the Centennial Mountains and vicinity, Beaverhead County, Montana. Guidebook, 11th Annual Field Conference, Billings (Mont.) Geol. Soc., pp. 107-113.

29. (1964) Research and Its Importance in Montana, Copper, Silver, Gold - the Alumni News of Montana State University, Volume XXVII, Number 2, Missoula, Montana, pp. 2-3.

30. (1966) With Robert W. Fields, Tertiary system section in Selected Bibliography of Stratigraphy in Montana and adjacent areas, edited by E. H. Gilmour, Montana Bur. Mines and Geology Special Publication 38, 61 pages (see pp. 4-11).

31. (1966) Relation of Contract Research and Research Institutes to Graduate Education at the University of Montana, Proceedings, Western Assoc. Grad. Schools, 1966, pp. 39-41.

TELEPHONE MAIN 3-1852
2114 CURTIS STREET
DENVER 5, COLORADO

June 19, 1967.

Associated Mining & Metals, Inc.,
Attention: Mr. H. Tabsman,
456 Mulberry Lane,
Racine, Wisconsin.

Gentlemen:

At your request, I wish to express my opinion on the amenability of the ores which you have been submitting to me for assay. I realize that my opinion is given without having run a metallurgical test on your material, but from my experience feel that there is no particular problem to be anticipated in proper separation of the lead from the zinc. The gold and silver will either follow the pyrite or the lead, and generally this type of ore will separate the gold and silver from the zinc concentrate, as stated, into the galena and/or pyrite fractions. Of course, before designing, planning, or building the plant it is imperative that a metallurgical test be performed by a competent laboratory.

Very truly yours,

Charles O. Parker

CP-a

TELEPHONE MAIN 3-1852
2114 CURTIS STREET
DENVER 5, COLORADO

June 19, 1967.

Associated Mining & Metals, Inc.,
Attention: Mr. H. Takasman,
456 Mulberry Lane,
Racine, Wisconsin.

Gentlemen:

I am pleased to quote on 120 samples to be assayed for gold, silver, copper lead and zinc. The charges for this work is $7.00 per sample, of a total of $840.00 for the lot of 120 samples. Fluorescent X-ray Spectrograph on ten samples would be $10.00 per sample or $100.00. The sample price will apply on additional samples.

Thank you for the privilege of quoting on your samples.

Very truly yours,

CHARLES O. PARKER & CO.,

By Charles O Parker

CP-a

6637

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

Lynch 3/29
Meyer 3/29
Behr 3/29

APR 4 - 1968

Dear Senator Nelson:

This is in reply to your request dated March 18, 1968, for an impartial opinion from the U. S. Geological Survey on the application from Associated Mining and Metals, Inc., Racine, Wisconsin, for financial assistance to explore the Rock and Roll mining claims in Jefferson County, Montana, under the Office of Minerals Exploration (OME) program.

Since the Office of Minerals Exploration is a part of the U. S. Geological Survey and is staffed by Geological Survey personnel, its actions and decisions are in effect those of the Geological Survey. In response to your request, however, a further review of the situation at the Good Cheer mine has been made by the Geological Survey.

The Good Cheer vein is one of many hundreds of veins in the Boulder batholith region of western Montana that have yielded a small amount of gold and silver. In size and continuity, it must be classed as a small- to medium-sized vein, as it ranges from one to five feet in width within the Good Cheer mine, and it ranges in character from a well-defined fissure to a vague shear zone laced by quartz veinlets. As indicated both by the map of Smedes, to which you referred, and also by the field examination, the vein has short horizontal extent.

As with all veins, there is a chance that more and better ore exists in unexplored parts of the vein than in the explored parts, and as Drs. Honkala and Silverman have noted, this chance can only be appraised by projecting geologic information and, ultimately, by exploration. Drs. Honkala and Silverman have indicated that the silver content of the vein shows a general increase from the surface to the bottom of the mine, at a depth of 165 feet, and that the vein grows stronger (wider) with depth. Taken alone, these are encouraging signs, but they are more than offset by a decrease in gold content of the vein from the surface to the bottom of the mine, which presumably is the reason that mining stopped at the shallow depth of 165 feet. Thus, based on the available data, value of the ore in the vein decreases with depth through the comparatively short vertical distance accessible for observation. In the absence of any identified geologic features that define a specific target for exploration, the vein seems to offer no better opportunity for discovery of economic deposits at depth than is afforded by countless other veins.

Although granting that there is always a chance for discovery by exploration on any vein, the OME is bound by statute to consider "the geologic probability of a significant discovery being made" and also to consider "the estimated cost of the exploration in relation to the size and grade of the potential deposit." Since the number of applications for exploration assistance far exceeds the funds available for this purpose, OME has been forced to adopt a strict interpretation of these directions. The OME field examiner and reviewers of the application and the field examination report concluded that the chance of making a significant discovery at the Good Cheer mine was not favorable enough to meet these standards. The application was denied on the basis of this conclusion.

Representatives of the applicant who visited the OME Washington Office on December 14, 1967, mentioned that additional information on the property either was available or could be obtained. Although invited to submit this information, the applicant has not responded. Prompt and careful consideration will be given to any additional information the applicant wishes to submit.

The material enclosed with your letter is returned for your files.

Sincerely yours,

(Sgd) J. Cordell Moore

Assistant Secretary of the Interior

Hon. Gaylord Nelson
United States Senate
Washington, D C. 20510

Enclosures

cc:
Secretary's File
Secretary's Reading File (2)
Asst. Sec.--MR (2)
Congressional Liaison
Legislative Counsel
USGS: General Files, 5225, GSA
Director's Chron
Division
Economic Geology Reading
OME Docket
OME Reading
OME Region I w/incoming correspondence
Mr. Kirkemo
OME Chron
Tweto Chron

HKirkemo/gla 3/26/68 Rewritten OTweto:ogh 3/29/68 #179314

HENRY M. JACKSON, WASH., CHAIRMAN
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LEE METCALF, MONT.

THOMAS H. KUCHEL, CALIF.
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LEN B. JORD[illegible] AHO
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MARK O. HATFIELD, OREG.

JERRY T. VERKLER, STAFF DIRECTOR

United States Senate

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
WASHINGTON, D.C. 20510

March 18, 1968

INTERIOR DEPARTMENT
RECEIVED
MAR 20 1968
OFFICE OF THE
ASSISTANT SECRETARY
FOR MINERAL RESOURCES

Mr. J. Cordell Moore
Assistant Secretary (Mineral Resources)
Department of the Interior
Washington, D. C. 20240

Dear Mr. Moore:

On June 27, 1967 I wrote to you to express my official interest in the application for financial assistance in minerals exploration submitted by Associated Mining and Metals, Inc. of Racine, Wisconsin, under Public Law 85-701. In late December 1967, the Office of Minerals Exploration denied this application (OME-6637), upon the basis of the field report which alleged that while silver is present, it has not been found in sufficient quantity to make the mining economically feasible.

I respectfully submit two letters from expert geologists employed by Associated Mining and Metals, Inc. together with credentials which establish the expertise of Messrs. Honkala and Silverman.

According to the information and opinions of geologists who know the area in which the Good Cheer Mine is located, the impartial opinion of the U. S. Geological Survey is sought in behalf of the application of Association Mining and Metals, Inc. for $37,500 from the Office of Minerals Exploration. Supporting this request, I have been told of a U. S. Geological Survey Professional Paper 510 by H. W. Smedes which deals with a large area in which the Good Cheer Mine is located. Dr. Smedes' work is cited in support of the conclusion that silver will very likely show a strengthening of the vein structure as you go down the vein, and more reason for core drilling.

Please consider my request for an impartial opinion from the U. S. Geological Survey in connection with the application of Association Mining and Metals, Inc. of Racine, Wisconsin, for financial assistance and advise. Many thanks for this courtesy.

Sincerely yours,

Gaylord Nelson

GAYLORD NELSON
U. S. Senator

GN:p

419 Westview Drive
Missoula, Montana
March 15, 1968

Mrs. Pam Martin Cragun
Secretary to Senator Nelson
United States Senate
Washington, D. C. 20510

Dear Mrs. Cragun:

Thank you for your interesting letter. We shall attempt to respond to your comments and questions.

In your second paragraph you say to us, "You do not say that silver is present in sufficient quantity according to samples taken and mineralization in the area to be financially feasible to develop." You are right; we say, "The mineralization (that we can see) does not reach economic grade," but we also note there is a modest increase in silver values as we go down the vein as well as a strengthening of the vein structure, leading us to conclude that this is a reasonable place to do deep drilling to see if the structure is "financially feasible to develop." We also gave other reasons for this conclusion. In summary, our reason for recommending drilling is projection of our data, and this is in accord with "sound geologic and mining principles."

Later in your letter you ask what the percentage of finding silver is in the Good Cheer Mine and you ask us to notarize this. Any geologist who would do that is a fool, if not a fraud. Geology, when used in situations like this is strictly interpretive, and how good the interpretation is depends on the observational powers and experience of the geologist. He has to collect data at the surface or in a shallow mine and then project them to depths of 500, 1,000, or many thousands of feet below the earth's surface into regions where many variables might be present which are not apparent at the surface. It is much like a doctor examining a patient and saying that this or that condition may prevail, but to find out, we have to do an exploratory operation or take an X-ray.

We should note that since our visits to the Good Cheer Mine and our reports to our clients, U. S. Geological Survey Professional Paper 510, by H. W. Smedes, dealing with this general region, has been published. While this is a regional survey of a large area in which the Good Cheer Mine happens to be located, it is interesting to note that Dr. Smedes lists the Good Cheer Mine (pp. 104-105) as a mesothermal vein which is not shallow (epithermal) or very deep (hypothermal); mesothermal veins may be several thousands of feet deep and often show increases of copper, gold, zinc, lead, and silver with depth. The critical thing here which

core drilling would help establish is how much of the vein has been eroded at the surface. We cite Dr. Smedes' work, not to lean too heavily on him, since the veins of the region were not the principal topic of his study, but mainly because this is a very recent study which lends some support to our conclusions.

Let us restate our view: No one can say with any degree of assurance that the Good Cheer vein will or will not yield economic deposits of metal at depth. There has been no exploration of veins at the depth we propose in the entire area, and since many mesothermal veins like the Good Cheer have yielded ore over considerable depths in other places, and since the Good Cheer vein does not show decrease of metal value with depth, and since the structure remains strong (see our original report), we believe our drilling proposal to be the kind of sound exploration gamble that O.M.E. should fund.

Sincerely,

Fred S. Honkala

Arnold J. Silverman

cc: Mr. Comande
Mr. Tabaksman

419 Westview Drive
Missoula, Montana
February 7, 1968

Mr. Anthony S. DeRose, President
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin 53405

Dear Mr. DeRose:

We were disappointed to learn that the Office of Minerals Exploration denied your company's cooperative exploration project proposal for the Good Cheer Mine in Jefferson County, Montana. It is our professional opinion that the proposal was both the type and of the scope which OME should encourage and support. We do understand that any proposal of this sort must be evaluated in terms of potential economic returns which are substantial enough to merit government investment. Consequently we wish to review certain pertinent geologic information and offer some judgments which we believe support our conclusion that OME funding is warranted in further examination of the Good Cheer property.

First, let us look at the Good Cheer deposit alone. Most of the relatively small amount of early 20th Century mining there occurred at a fairly shallow depth, and the most important elements mined were undoubtedly gold and silver. This early mining may have ended because of decreasing gold and silver values below the zone of oxidation where, upon weathering, metals such as gold and silver are concentrated, or it may have ended for reasons unrelated to the mineralogy and the amount of ore in the vein. We can, however, say with certainty that we do have a well-defined mineralized structure of which the dimensions and the grade of the ore are as yet unknown.

Our examination indicates that the Good Cheer vein appears to widen somewhat at depth. The structure becomes noticeably stronger with depth in the part of the vein which has been explored; that is, down to 165 feet, and although the mineralization does not reach economic grade, it does not show any tendency to decrease at depth. The geologic setting with the vein being near the margin of the Boulder batholith and abundant prospects and mine workings in the immediate vicinity all contribute favorably to the conclusion that the Good Cheer vein should be explored by core drilling to an increased depth. It is well known that the geologic literature reveals many examples of ore development in the deeper parts of nearly barren near-surface structures.

With regard to the regional setting of the Good Cheer Mine and related deposits, we agree that mines have not been developed in the immediate area. Mining has not been actively pursued for many decades,

and to the best of our knowledge no deep exploration has ever been found in the many mineralized showings that are around the Good Cheer property. The practicality of deep mining development (500 feet and deeper) is impossible to evaluate with our present knowledge about the district. The only way to procure the geologic information from which a sound judgment can be made is to drill deep holes on the structure. Of course, we cannot state flatly that the structure will be productive at depth, but there are sound reasons for recommending that the deep holes be drilled. We have consulted with other geologists who have studied the region extensively, and they concur that our proposed exploration is a reasonable approach.

We recognize the risks involved in ore exploration, particularly in an area where there is little geologic information at depth, which might be used for projections to other bodies in the same area. However, the Associated Mining and Metals Company has made substantial investment in the first phase of serious exploration in this relatively unknown area. They have proceeded on the basis of sound geologic and mining principles. We believe that the exploration program we have proposed is the cheapest and most efficient way to test the possible occurrence of ore at depth, and that the OME should look favorably on the proposal. We believe it is to the country's best interests to support exploration for minerals such as silver, which are in short supply and in great demand by our economy. We urge you to approach the Office of Minerals Exploration and ask them to review and reconsider their decision in regard to the proposed exploration of the Good Cheer property.

Sincerely,

Fred S. Honkala

Fred S. Honkala

Arnold J. Silverman

Arnold J. Silverman

PERSONAL DATA

for Fred S. Honkala

General

Born, November 30, 1919, Concord, New Hampshire
Married; have 3 children
Own home at 419 Westview Drive, Missoula, Montana

Education

B.S., Geology, University of New Hampshire, 1940
M.A., Geology, University of Missouri, 1942
Ph.D., Geology, University of Michigan, 1949

Military Service

June 1942 to April 1946; served 9 months in Southwest Pacific, enlisted as private, discharged as captain, Corps of Engineers, U. S. Army. In charge of 140 officers and enlisted men overseas, including Heavy Equipment, Repair Shop and Motor Pool Sections of an Engineer batallion.

Present Position

Instructor, Geology Department, University of Montana, 1948-1950
Assistant professor, 1950-1955
Associate professor and acting chairman, 1955-1956
Chairman, Geology Department, 1956-1964
Professor, 1957-
Dean, Graduate School, 1964-
Director of Research, University of Montana Foundation, 1964-
Contracting Officer, University of Montana, 1966-

Summary of progress:

While chairman of the University of Montana Geology Department, it was the first geology department in the United States to receive NDEA fellowships. Department also received NSF, ONR, NDEA, AEC, NASA research grants and monies. Department was first in University to give Ph.D. degree, and first to produce Ph.D. holder. In 1963 no geology department in U.S. received more NSF Cooperative Fellowships than did the U of M Geology Department; same for Geological Society of America Penrose Grants to UM graduate students in 1964.

In the last two years applications for graduate study at UM doubled to 1700 in 1965-1966; enrollment has doubled; new Ph.D. and Master's programs have been started; research grant and contract, and training grant monies have been increased from $250,000/yr. to $2m. at present.

Other positions (summer)

U. S. Geological Survey western phosphate studies, 1948-1952
Research, Penacook, N.H., quadrangle, Penrose grants, Geological Society of America, 1953-1954; (study of igneous and metamorphic terrain)
Consultant, Shell Oil Company, Montana, 1954-1957; (stratigraphic studies and evaluation of oil prospects)
Staff, Montana State University summer session, 1958
Staff, NSF Summer Institute for Secondary School Teachers, 1959
Visiting professor, Indiana University Geologic Field Station, 1960-1963
Occasional consultant; various individuals and companies

Research Summary

- Major contribution has been delineation of extensive Centennial Mountains, Montana-Idaho, phosphate deposits, which were opened for leasing by federal government and developed after issuance of my report on the area.
- Bibliography contains 31 entries and is appended.

Awards and Grants

Rackham Fellowship, University of Michigan, 1948, ($1,000)
Penrose research grants, Geological Society of America, 1953, 1954($1,340;$550)
NSF General Science In-Service Training Program for Montana Secondary School Science and Mathematics Teachers ($40,230), 1959
Coordinated University effort in behalf of a wood chemistry program resulting in a $143,000 grant from Waldorf-Hoerner Co.
Selected to attend Gordon Research Conference on Coal Science, to be held at New Hampton School, New Hampton, N. H., July 3-7, 1967

Committee and Other Activities at University of Montana

Library Committee, 5 years (appointive)
Budget and Policy Committee (the main faculty committee, the executive committee of the Faculty Senate; an elective committee), served 4 years; past chairman
Faculty Senate (elective), 6 years; past chairman
Faculty Council (elective);(the state-wide inter-unit faculty organization in the University System); served 2 terms; past chairman
Chairman, Faculty Committee which devised a Patent Policy for University
Member, various other ad hoc committees
Member, state-wide Montana University Joint Water Resources Research Council
Member, state-wide Montana University System Coal Resources Research Council
Coordinator; joint proposal from University of Montana and Montana State University to NSF for a center of excellence in environmental science

Off-Campus Professional Activities

Secretary, Rocky Mountain Section, Geological Society of America, 1959
Participant, NRC-NSF-AIME Arden House Conference at Columbia University, February, 1962, on Mineral Industry Training
Visiting Lecturer, such as at University of Alberta, Edmonton, Montana State University at Bozeman, and at Billings Geological Society, Billings, Montana
Captain, visiting Geo-Study team for NSF to study undergraduate geology training on campuses in southeastern United States, member national ad hoc committee to write final report for the ten Geo-Study teams
Past Member, Billings Geological Society Stratigraphic Committee
Member of Governor Babcock's party in visit to AEC Hq. in Washington, D. C. in behalf of Montana's 200 bev. accelerator proposal; made a principal presentation, 1966
Member, Governor Babcock's delegation to Rocky Mountain Governors' Conference to Stimulate Regional Economy, 1965, 1966
Member, Executive Committee, Rocky Mountain Science Council, 1966-1969
Member, Accrediting Committee of Northwest Association of Secondary and Higher Schools for the accreditation of the University of Oregon in Feb. 1967 with specific responsibility for evaluating their Graduate School.
Member, Western Montana Area-Wide Health Facility Planning Committee, 1966-

BIBLIOGRAPHY OF FRED S. HOWARD

1. (1949) The geologic section on Stone Mountain, Fergus County, Montana. Compass, V. 26, pp. 130-137.

2. (1949) A geologic section on the West Fork of the Madison River, Beaverhead and Madison Counties, Montana (abstract). Northwest Science, V. 23, pp. 42-43.

3. (1949) Stratigraphy of the Centennial Region, Beaverhead County, Montana (abstract). Bull. Geol. Soc. Am., V. 50, p. 1897.

4. (1950) With K. P. McLaughlin, Problems of the Wells and Brazer formations in Southeastern Idaho (abstract). Bull. Geol. Soc. Am., V. 61, p. 1560.

5. (1951) With B. K. Replogle and R. F. Gossman, Stratigraphy of the Phosphoria formation, Centennial Range, Montana, (abstract). Bull. Geol. Soc. Am., V. 62, p. 1537.

6. (1951) Notes on the Amsden formation in southwestern Montana. Billings (Mont.) Geol. Soc. Second Ann. Field Conf. Guidebook, p. 61.

7. (1952) With G. R. Eakins, Cenozoic history of Missoula Valley, Missoula County, Montana (abstract). Bull. Geol. Soc. Am., V. 63, p. 1361.

8. (1952) With R. A. Gulbrandsen, K. P. McLaughlin, S. E. Clabaugh and K. B. Krauskopf, Geologic map and structure sections of the Johnson Creek quadrangle, Caribou County, Idaho. U. S. Geol. Survey open-file report, (2 plates).

9. (1953) Preliminary report on geology of Centennial Range, Montana-Idaho phosphate deposits. U. S. Geol. Survey open-file report, 20 pages, 6 pl.

10. (1953) Structure and stratigraphy in the Philipsburg-Drummond area; Field Trip number 5. Geol. Soc. Am. Rocky Mtn. Sect., 6th Ann. meeting, Guidebook, pp. 46-72.

11. (1953) With M. R. Klepper, O. A. Payne, and E. T. Ruppel, Stratigraphic sections of the Phosphoria formation in Montana, 1948. U. S. Geol. Survey circular 260, 39 pages.

12. (1953) With K. P. McLaughlin, Central Montana Tectonics (abstract). Bull. Am. Assoc. Petr. Geol., V. 37, p. 2615.

13. (1953) Phosphatic rocks in the Centennial Range, Montana-Idaho (abstract). Bull. Geol. Soc. Am., V. 64, p. 1547.

14. (1954) Geology of the Centennial Region of southwestern Montana (abstract). Bull. Geol. Soc. Am., V. 65, pp. 1377-1378.

15. (1954) Western Montana, American Geographical Society, 7 pp., 34 illus., (a film-strip and commentary).

Professional Backgrounds

A. J. Silverman - 14 years professional experience

Ph.D., Columbia University, 1963

Consultant experience:
- Anglo American Mining of Africa
- R. T. Vandibilt Talc. Co.
- Sylvania Electric Corp.
- U. S. Bureau of Mines

Research Experience:
- Coeur d'Alene Mining District, Idaho
- Gilman, Colorado
- Teluride District, Colorado
- Leadville, Colorado
- Butte, Montana

Fred S. Honkala - 20 years of professional experience

Ph.D., University of Michigan, 1949

Consultant experience:
- Shell Oil Company in Montana
- Office of Coal Research
- U. S. Geological Survey in Montana and Idaho
- and many small mining concerns

Research experience:

- Shell Oil Company in Montana
- U. S. Geological Survey in Montana and Idaho

National Activities

Member, General Technical Advisory Committee, Office of Coal Research, Department of Interior

Public Relations Activities

Public Information Committee, American Association of Petroleum Geologists, 1962-present
Public Relations Committee, Faculty Council (inter-unit faculty organization of University System), 1962-1964
Liaison representative for University of Montana to Highway Research Board, an agency under the National Research Council, 1965-

Professional Organizations and Recognitions

Geological Society of America (fellow)
American Association of Petroleum Geologists (member)
American Association for the Advancement of Science
Billings Geological Society
Sigma Xi (fellow)
American Men of Science
Who's Who in America
National Council of University Research Administrators

Other Activities

Member, First Methodist Church, Missoula (treasurer for 2 years)
Missoula Athletic and Aquatic Club
PTA

Add:
Elected chairman, Executive Committee, Rocky Mountain Science Council, April 22, 1967 (see accompanying copy of letter to Mr. Hill)

January 28, 1967

APR 4 - 1968

Dear Senator Nelson:

This is in reply to your request dated March 18, 1968, for an impartial opinion from the U. S. Geological Survey on the application from Associated Mining and Metals, Inc., Racine, Wisconsin, for financial assistance to explore the Rock and Roll mining claims in Jefferson County, Montana, under the Office of Minerals Exploration (OME) program.

Since the Office of Minerals Exploration is a part of the U. S. Geological Survey and is staffed by Geological Survey personnel, its actions and decisions are in effect those of the Geological Survey. In response to your request, however, a further review of the situation at the Good Cheer mine has been made by the Geological Survey.

The Good Cheer vein is one of many hundreds of veins in the Boulder batholith region of western Montana that have yielded a small amount of gold and silver. In size and continuity, it must be classed as a small- to medium-sized vein, as it ranges from one to five feet in width within the Good Cheer mine, and it ranges in character from a well-defined fissure to a vague shear zone laced by quartz veinlets. As indicated both by the map of Sandoe, to which you referred, and also by the field examination, the vein has short horizontal extent.

As with all veins, there is a chance that more and better ore exists in unexplored parts of the vein than in the explored parts, and as Drs. Sonbols and Silverman have noted, this chance can only be appraised by projecting geologic information and, ultimately, by exploration. Drs. Sonbols and Silverman have indicated that the silver content of the vein shows a general increase from the surface to the bottom of the mine, at a depth of 165 feet, and that the vein grows stronger (wider) with depth. Taken alone, these are encouraging signs, but they are more than offset by a decrease in gold content of the vein from the surface to the bottom of the mine, which presumably is the reason that mining stopped at the shallow depth of 165 feet. Thus, based on the available data, value of the ore in the vein decreases with depth through the comparatively short vertical distance accessible for observation. In the absence of any identified geologic features that define a specific target for exploration, the vein seems to offer no better opportunity for discovery of economic deposits at depth than is afforded by countless other veins.

Although granting that there is always a chance for discovery by exploration on any vein, the OME is bound by statute to consider "the geologic probability of a significant discovery being made" and also to consider "the estimated cost of the exploration in relation to the size and grade of the potential deposit." Since the number of applications for exploration assistance far exceeds the funds available for this purpose, OME has been forced to adopt a strict interpretation of these directions. The OME field examiner and reviewers of the application and the field examination report concluded that the chance of making a significant discovery at the Good Cheer mine was not favorable enough to meet these standards. The application was denied on the basis of this conclusion.

Representatives of the applicant who visited the OME Washington Office on December 14, 1967, mentioned that additional information on the property either was available or could be obtained. Although invited to submit this information, the applicant has not responded. Prompt and careful consideration will be given to any additional information the applicant wishes to submit.

The material enclosed with your letter is returned for your files.

Sincerely yours,

(Sgd) J. Cordell Moore

Assistant Secretary of the Interior

Hon. Gaylord Nelson
United States Senate
Washington, D. C. 20510

Enclosures

cc:
Secretary's File
Secretary's Reading File (2)
Asst. Sec.--MR (2)
Congressional Liaison
Legislative Counsel
USGS: General Files, 5225, GSA
Director's Chron
Division
Economic Geology Reading
Ome Docket
OME Reading
OME Region I w/incoming correspondence
Mr. Kirkemo
OME Chron
Tweto Chron

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Date	Surname	Code
12/18/67	Kirkemo	120
12/19	Johnson	110
12/20	Kempp	
		220

AIRMAIL

Mr. Anthony S. DeRose
President
Associated Mining & Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin 53405

Re: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

Dear Mr. DeRose:

We have carefully studied your application for financial assistance to explore the Rock and Roll Mining Claims. From the information submitted and from other available information we conclude that the probability of disclosing significant ore reserves on the property is not sufficiently promising to justify Government participation in the proposed exploration. Accordingly, we must inform you that your application for exploration assistance is denied.

This conclusion is based on the fact that the material sampled is too low grade to warrant mining, and that the nature and extent of the mineralized portions of the Good Cheer vein suggest that the possibilities for discovering significant reserves of ore are not favorable.

Mr. Tabaksman and Mr. Comande mentioned to Mr. Kirkemo during their visit to this office on December 14, 1967 that additional information on the property either was available or could be obtained. If such information can be submitted now or obtained in the near future we will be glad to give it immediate consideration. Without additional information, however, we have no alternative but to deny your request for assistance.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

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

HKirkemo/bsl 12/18/67

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MME Form 7
(10-58)

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12/19	Johnson	110
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DEC 19 1967

Memorandum

To: The File

From: Assistant Chief, Office of Minerals Exploration

Subject: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

Justification for Denial

The Applicant proposed a program estimated to cost $118,065.00 consisting of nine diamond drill holes totalling 4,802 feet for the purpose of testing the ore potential of the Good Cheer mine to a depth of 765 feet, and of exploring for unknown veins parallel to the Good Cheer vein.

The Good Cheer mine is located in the Maupin Creek area, McClellan Creek Mining district about 12 miles airline southeast of Helena, Montana. The mine area is underlain by coarse grained quartz monzonite of the Boulder Batholith. No faults or significant alteration zones are reported in the vicinity of the mine.

The Field Officer notes that the promising veins in the area have been explored through depths ranging from 165 to 330 feet, and that the descriptions of the deposits from which the limited production came, strongly suggest that any new ore bodies are likely to be small. About 575 tons of ore (sorted) having an average value of $15.00 per ton have been shipped from the Good Cheer mine according to one report. Another report states that a $30-per-ton ore zone, 3-5 feet wide was developed. Ore minerals present are pyrite, chalcopyrite, and galena. Samples from the mine workings indicate that the intensity of oxidation decreases gradually from the first to the third levels of the mine, and that there is no impressive evidence of an enriched secondary zone. The assay values of about two dozen samples were in the range of trace to 0.12 ounce gold and 1.37 to 21.16 ounces silver per ton. The average width, and grade of all samples taken underground was 46 inches, 0.05 ounces gold and 2.13 ounces silver per ton. While these assays represent the tenor of vein material left in the mine and no doubt are lower grade than the ore mined, indications are not favorable for a significant improvement in grade at greater depth, nor of larger ore shoots below present workings.

If additional information is available or can be obtained by further work at the property as representatives of the Applicant suggested was a possibility when in our Washington Office on December 14, 1967, consideration should be given to it, but from data available at present the chances for discovering worthwhile ore bodies appear unlikely.

I concur in the Field Officer's recommendation to deny the application.

Harold Kirkemo

Harold Kirkemo

cc: Director's Reading File
Division File
Economic Gedogy File
~~OME~~ File
OME Reading File
Mr. Kirkemo

HKirkemo/bsl 12/18/67

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DEC 7 1967
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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
U. S. Court House, Rm. 656
W. 920 Riverside Avenue
Spokane, Washington 99201
December 5, 1967

Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: Application Examination Report
OMS-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

The subject claims, also known as the Good Cheer mine, were visited September 28, 1967, accompanied by Harold Tabakman, Nick Comando, and R. D. Pottee representing the applicant. During the day the inspecting party was joined by Dr. Fred S. Honkala and Dr. Arnold J. Silverman, consultants and members of the faculty, Geology Department, University of Montana. About 5 hours were spent on the property.

An attempt to learn the locations and widths of samples, for which assays accompanied the application, met with only partial success. The foreman had a record book covering them, but in some instances he could give only the sample widths; in other cases he could give the widths and locations, but even here he was not too sure of some of the locations.

The claims are located principally in section 17, T. 8 N., R. 2 W. P.M., in the Maupin Creek Area, McClellan Creek (unorganized) Mining District. The property comprises 13 unpatented lode claims recorded at the Jefferson County Court House, Boulder, Montana, as follows:

Name	Book	Page	Name	Book	Page
Rock and Roll No. 1	51	160	Rock and Roll No. 8	51	172
No. 2	51	162	No. 9	51	174
No. 3	51	164	No. 10	51	176
No. 4	51	184	No. 11	51	178
No. 5	51	166	No. 12	51	180
No. 6	51	168	No. 13	51	182
No. 7	51	170			

ON-SITE EXAM. RPT.

The claim map which accompanied the application shows a nearly E-W oriented rectangle within which the claims are said to lie. The Good Cheer shaft is shown in the upper right hand quarter of the rectangle about at the easterly end of Claim No. 8 center line. A later claim map which accompanied the applicant's letter of August 8, 1967, shows the claims could be roughly contained in a nearly N-S oriented rectangle and shows the Good Cheer shaft near the southerly end. This was mentioned in the field and it was established that the second map was more nearly correct.

A claim corner not too far from the shaft, and said to be the SW corner of Claim No. 6, was indicated in a thick clump of brush within a rough aggregate of rocks and boulders. The time that would have been required to carry a survey line from here to the shaft was considered unreasonable for the accuracy of the results.

The Certificate of Location for Rock and Roll No. 1 states that Corner No. 3 is on the center line of the patented Katy Claim. As nearly as could be determined, the scale of the second map is 660 feet to the inch. To prepare the accompanying figure 1 at a scale of 500 feet to the inch, the east end of the Katy center line was plotted from the NE corner of Section 17 as shown on the applicant's claim map. The Certificates of Location show each claim to be 1,500 feet long by 600 feet wide, but no bearings of side or end lines are given. Therefore, starting at the east end of the Katy center line, the north side lines and the common end line of Claims No. 2 and 13 and the west end line of Claim No. 1 were traced from the applicant's map. The remaining side lines were "jiggled in" to fit the claim dimensions. From Claims No. 1, 2, and 13 thus plotted each succeeding claim to the south was oriented from the south side line of each claim already plotted and the end line common to the next two claims to be plotted, adjusting the corners by scaled distances. Also, according to the Certificate of Location, the main (Good Cheer) shaft is at the west end of the Claim No. 6 center line. The results are probably no more accurate than the applicant's sketch, but it does give a map at a workable scale tied approximately to a section corner.

GEOLOGIC SUMMARY

Rocks occurring in the Maupin Creek Area are light-gray, slightly porphyritic to nonporphyritic quartz monzonite. In the northeast quarter of section 17 they have been intruded by dikes and plugs of andesite and basalt. The quartz monzonite, believed to be related to the Boulder Batholith, has been cut by shears that have been filled by quartz containing pyrite, galena, sphalerite, and chalcopyrite. In some cases veins were repeatedly sheared and healed by more silica (Sander, 1966, Plate I and p. 100).

The Good Cheer vein has been opened by a shaft approximately 165 feet deep from which three levels totalling about 428 feet have been turned. The topmost level shown on the applicant's figure 2 was not accessible and probably does not exist. On page 5 the applicant quotes R. W. Stone (1911) and then states: "The present workings coincide with Mr. Stone's description . . ." Stone says that there were 400 feet of levels, however, if the topmost level is included he would have had to report some 530 feet of levels. All three levels shown on the accompanying figure 2 were visited, but none of the stopes were accessible. The vein strikes N. 80°-85° E. and dips 85° N. to 85° S.

Level 1 has been driven 151 feet easterly and 16 feet westerly from the shaft at a depth of about 62 feet. In the easterly breast there is a 12-inch wide quartz vein along the south wall containing pyrite and possibly an occasional speck of galena. The hanging wall is separated from altered granite by about 12 inches of gouge and breccia. A sample taken by the applicant, his number 1-F-1, said to be across a width of 5 feet, assayed 0.16 ounce gold and 0.54 ounce silver per ton, with negligible amounts of copper, lead, and zinc. Another sample, 1-F-2, taken from the drift back, also said to be across a 5-foot width, assayed 0.18 ounce gold and 1.98 ounces silver per ton, with negligible amounts of copper, lead, and zinc. A third sample taken from this level by the applicant, 1-S-1, assayed 0.04 ounce gold and 0.76 ounce silver per ton, with negligible amounts of copper, lead, and zinc; the width represented by this sample is said to be 5 feet. A fourth sample, taken near his 1-S-1, assayed 0.04 ounce gold and 3.46 ounces silver per ton over a width of 2 feet. The average of these four samples is 0.12 ounce gold and 1.37 ounces silver per ton over a width of 4 feet, 5 inches. From what could be seen through back-lagging below the stoped area and at the east and west breasts, the level follows a shear zone containing quartz that widens and pinches with some evidence of a series of silicified streaks within a shear zone up to 5 feet wide.

Level 2 has been driven 45 feet westerly and 9 feet easterly from the shaft at a depth of about 95 feet. It follows a quartz vein about 4 feet wide at the east breast. Toward the west end in the west breast it is a series of silicified streaks within a shear zone about 4 feet wide. Two samples, 2-F-1 and 2-F-2, taken by the applicant reportedly over 5-foot widths, had respective grades of 0.04 ounce gold and 0.65 ounce silver per ton and 0.04 ounce gold and 0.74 ounce silver per ton; both contained negligible amounts of copper, lead, and zinc. A third sample taken from the east breast assayed 0.08 ounce gold and 21.16 ounces silver over a width of 9 inches. The average grade of these three samples is 0.04 ounce gold and 2.13 ounces silver per ton over a width of 5 feet, 7 inches.

Level 3 was driven 120 feet easterly and 108 feet westerly from the shaft at a depth of about 158 feet and is tightly lagged at the back. The lagging that had been removed so that the applicant's samples could be taken had for the most part been replaced. Where it could be seen, the vein had an average width of about 4 feet. In places, it was quartz very nearly over the full width, at other places it was a series of silicified streaks within a zone of shearing. The average grade, weighted by width only, of 15 samples taken by the applicant from the back of the drift and 1 sample taken from the side near the floor is 0.03 ounce gold and 2.58 ounces silver per ton over an average width of 3 feet, 9 inches.

The average widths and grades based upon 4 samples from Level 1, 3 samples from Level 2, and 14 samples from Level 3 are:

Level No.	Width (inches)	Ounces/Ton Gold	Ounces/Ton Silver
1	51	0.12	1.57
2	43	0.04	2.15
3	45	0.03	2.58

This indicates a definite decrease in gold values and a small increase, 1.01 ounces per ton, in silver values within a vertical distance of about 96 feet. However, on Level 3, the values east of the shaft are, in general, better than those west of the shaft. Also, Level 1 has been driven only 16 feet west of the shaft and Level 2 only 9 feet east. If the Level 1 assays are compared to those on Level 3 east of the shaft and the Level 2 assays are compared to those on Level 3 from the shaft westward, they show:

East of shaft				West of shaft			
Level No.	Width (inches)	Ounces/Ton Gold	Ounces/Ton Silver	Level No.	Width (inches)	Ounces/Ton Gold	Ounces/Ton Silver
1	51	0.12	1.57	2	43	0.04	2.15
3	56	0.04	3.58	3	41	0.03	1.83

The gold values continue to decrease with depth, however, east of the shaft the silver values have increased 2.01 ounces per ton, but west of the shaft silver values decrease 0.30 ounce per ton.

A comparison of the average of 7 samples taken from Levels 1 and 2 with the average of 14 samples taken on Level 3 show:

Level No.	Width (inches)	Ounces/Ton Gold	Ounces/Ton Silver	Developed Length (feet)
1 & 2	47	0.09	1.66	174
3	45	0.03	2.38	228

This again indicates a decrease with depth of gold values and an increase of only 0.72 ounce per ton in silver. Finally, the average width, grade, and developed length of all samples taken underground is:

Length (feet)	Width (inches)	Ounces/Ton Gold	Ounces/Ton Silver
201	46	0.03	2.13

On the surface about 250 feet easterly from the shaft an adit has been driven about 40 feet southeasterly. As nearly as it could be identified, a composite sample of the entire length of the tunnel assayed 0.04 ounce gold and 2.90 ounces silver per ton. The wall rock is highly oxidized quartz monzonite laced with small stringers of quartz; no sulfides were seen. A hole was drilled from the tunnel face for 30 feet and a core sample from 25 to 30 feet assayed trace gold and 10.10 ounces silver per ton. About 70 feet easterly from the tunnel a long cut has been made in the hillside crossing the projected position of the vein. The quartz monzonite was weathered and oxidized, but nothing resembling the vein was exposed.

About 200 feet westerly from the shaft a deep cut in the hillside crosses the projected position of the vein. Quartz monzonite was cut by narrow silicified streaks and a few quartz veinlets in a zone of shearing. A composite of samples taken across a width of 40 feet assayed trace gold and 7.60 ounces silver per ton. As the cut was deepened a sample taken 10 feet below the surface assayed trace gold and 0.10 ounce silver per ton across 40 feet and one at 20 feet below the surface assayed 0.01 ounce gold and 5.48 ounces silver per ton across a width of 50 feet. These assays, made by the South Dakota School of Mines were said to have been checked, respectively, by Charles O. Parker and Co. as follows: 40 feet - 0.16 ounce gold and 10.48 ounces silver per ton; 40 feet - 0.10 ounce gold and 3.24 ounces silver per ton; 50 feet - 0.12 ounce gold and 2.52 ounces silver per ton.

The average width and grade of identifiable assays including three check assays of five samples taken from the surface, one shallow adit and one drill hole is:

Width (feet)	Ounces/Ton Gold	Silver
33	0.07	5.65

The average width and grade of six more samples whose locations could not be determined other than that they came from other structures exposed within or near the Rock and Roll Claim Group is 0.02 ounce gold and 3.03 ounces silver per ton over a width of 23 inches.

Production figures for this and nearby mines are sketchy and not too reliable. Stone (1911, p. 87) locates the Good Cheer mine in the McClellan Creek (unorganized) District; Roby (1960, p. 106) lists it under the Clancy-Lump Gulch District. Sneden (1966, p. 103, and Plate I) mentions the Good Cheer mine in the Maupin Creek Area. Actually, the Maupin Creek Area is between the McClellan and the Warm Springs Areas, but the Clancy-Lump Gulch District is 5 or more miles distant across the valley in which flows Prickly Pear Creek. None of the mines mentioned by Stone or Sneden as being in the vicinity of the Good Cheer are mentioned by Roby, nor do either Stone or Sneden mention another Good Cheer mine in their descriptions of surrounding districts.

In secs. 8 and 17, T. 8 N., R. 2 W., Stone (1911, p. 86-87) says there are several prospects and a few small mines. The principal lode has been developed by the Pilot, Euclid, and Golden Gate mines, the Pilot by a 330-foot shaft and a 1,200-foot tunnel; the Euclid by 9 shafts (the main shaft said to be 200 feet deep; no depth is given for any of the other 8), and a crosscut; the Golden Gate by a 200-foot shaft and 500 feet of levels. At the Pilot, the ore is mostly pyrite carrying gold values; from the Euclid, shut down since 1894, some shipments are said to have carried over $80 per ton in gold; no production figures are given for either mine. At the Golden Gate a 30-ton mill and concentrator, long since burned down, had reportedly produced about $31,000 gross, mostly in gold with the bulk of the ore averaging about $23 per ton. This suggests a maximum production of about 1350 tons. Three other nearby mines are mentioned, but no record of production is given.

Of the Good Cheer mine Stone (p. 87) says the "owner was shipping a little first-class sorted ore carrying over $15 a ton" and that up to that time the mine had produced about $8,000.00.

Granting for the moment that Roby's inclusion of Good Cheer production in a distant and unrelated district was inadvertent, he reports for the years 1909 and 1910 a total of 43 tons of ore having an average grade of 0.16 gold and 22.67 ounces silver per ton, 0.53 percent copper and 1.74 percent lead. At the average prices in 1910 (MMJ, Feb. 1967) of $20.00 per ounce gold, $0.5549 per ounce

for silver, $0.127 per pound for copper, and $0.0445 per pound for lead this ore would have had a value per ton of:

Gold	0.16	x	$20.00	=	$ 3.20
Silver	22.67	x	$ 0.5349	=	12.13
Copper	7.0	x	$ 0.127	=	0.89
Lead	34.8	x	$ 0.0445	=	1.55
	Total				$17.77

This compares favorably with Stone's stated value, given to him by the Operator, of "over $15.00/Ton." Based on this lower value, production worth $8,000.00 given to Stone would have come from some 555 tons of ore. Even if this does not include the 43 tons reported by Roby, it appears that the maximum production from the Good Cheer mine was in the order of 573 tons.

SUMMARY AND CONCLUSIONS

Surface exposures are well oxidized, but in the mine the degree of oxidation decreases gradually but steadily from the first to the third level. Similarly, relative amounts of sulfide minerals, most notably pyrite and lesser amounts of galena, increase from the first to the third level. The constant decrease in gold values and the somewhat erratic but constant though slight increase in silver values and fresh sulfides from level to level further indicate that the zone of maximum oxidation is about to bottom with no impressive evidence of an orebed secondary zone.

The best underground assay came from a sample at the east end of Level 2; it is 21.16 ounces silver per ton over a width of only 9 inches. The next highest assay came from a sample at the east end of Level 3; it is 4.43 ounces silver per ton over a width of 5 feet. These assays, certainly the former, should probably be considered either as erratics or as indicating very spotty and irregular occurrences of higher than average grade vein material.

The applicant's main reason for expecting to find ore is that "the Good Cheer area is located in the center of extensive mineralization, even though a major producer has not yet been developed in the area." That mineralization in the Murphin Creek Area is extensive is indicated by 5 surface samples taken along the Good Cheer structure zone having an average grade of 0.07 ounce gold and 3.65 ounces silver per ton over an average width of 35 inches; also, 6 surface samples taken from various but unidentified locations on other structures have an average grade of 0.02 ounce gold and 3.05 ounces silver per ton over an average width of 23 inches.

The most reliable source of information relative to development and production within the Maupin Creek Area is Stone (1911, p. 86-87). He gives development figures for five properties, including the Good Cheer as totalling at least 933 feet of shafts, and for three of these, level workings totalling 2,100 feet. His production figures given in total dollars and dollars per ton are from only two mines, the Golden Gate and the Good Cheer, which appear to total only 1923 tons. The closing of the Euclid mine in 1893 does not seem reasonably to be due to the depression of that year as "some shipments are said to have carried over $80 per ton in gold." The available development and production figures of the five properties are:

Mine	Shaft (feet)	Level (feet)	Production (tons)	Value/Ton (in 1911)
Pilot	330	1,200	Not given	Not given
Euclid	220	Not given	Do.	1/ $80.00
Golden Gate	200	500	1,350	$23.00
Good Cheer	165	400	573	$15.00
Stockum Lode	18	Not given	Not given	Not given

1/ Value in gold.

Thus, it would appear that promising veins or mineralized structures have been explored through depths ranging from 165 to 330 feet. From the limited reported production it can only be concluded that any ore bodies found have been small. Although it does not entirely rule out the possibility that there may be a significant ore body somewhere in the area, the amount of reported work and the small recorded production therefrom lessens the probability.

It is concluded that the chance of making a significant discovery by drilling to depths of 365, 367, and 765 feet as proposed by the applicant is less than fair and it is recommended that the application be denied.

D. R. MacLaren

Enclosure
Distribution:
OMR ✓ Docket
USGS (SRO) MacLaren

REFERENCES

Smedes, Harry W., 1966, Geology and igneous petrology of the northern Elkhorn mountains Jefferson and Broadwater Counties, Montana: U. S. Geol. Survey Prof. Paper 510, p. 104-103, and Plate I.

Roby, R. N., et al., 1960, Mines and mineral deposits (except fuels) Jefferson County, Montana: State of Montana Bur. of Mines and Geol. Bull. 16.

Stone, R. W., 1911, Geologic relation of ore deposits in the Elkhorn mountains, Montana: U. S. Geol. Survey Bull. 470, p. 86-87.

GEORGE A. SMATHERS, FLA., CHAIRMAN
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WILLIAM T. MC INARNAY,
STAFF DIRECTOR AND GENERAL COUNSEL

RAYMOND D. WATTS,
ASSOCIATE GENERAL COUNSEL

United States Senate

SELECT COMMITTEE ON SMALL BUSINESS
(CREATED PURSUANT TO S. RES. 58, 81ST CONGRESS)

1469

October 20, 1967

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Mr. J. Cordell Moore
Assistant Secretary (Mineral Resources)
Department of the Interior
Washington, D. C. 20240

Dear Mr. Moore:

I have been asked to express the appreciation of officials of the Associated Mining and Metals firm of Racine, Wisconsin, for the courtesies extended by Mr. McLar~~ing~~en of your Spokane Office of Minerals Exploration. Mr. McLar~~ing~~en, my constituents and their geologist visited the mines which are the subject of an application for financial assistance in minerals exploration, OME-6637.

With warm good wishes, I am

Sincerely yours,

Gaylord Nelson

GAYLORD NELSON
U. S. Senator

GN:p

cc: Don S. McLar~~ing~~en
Anthony S. DeRose
Nick Comande

10/27/67
No reply necessary

MME FORM
REV. 2-59

REFERENCE SLIP
OFFICE OF MINERALS EXPLORATION

	DATE	INITIALS
TO: H. Kirkemo	10/5/67	
1.		
Re: OME-6637 (Silver) Associated Mining & Metals, Inc.		
2. Rock and Roll Mining Claims		
3. Jefferson County, Montana		
4.		
5. D. R. MacLaren		
FROM: Fld. Officer, Reg. I		

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FOR: Check items for action desired

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

REMARKS:

Attached are Thermo-Fax copies of correspondence you requested by telephone on this date.

For another property Why were these requested? Copies are in the docket

Grace

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

M56300-62

[illegible]
[illegible] Howard [illegible]
Spokane, Washington [illegible]
September 18, 1967

Refer to: 2810

Mr. Robert S. Morgan
Forest Supervisor
Helena National Forest
Forest Service
U. S. Department of Agriculture
Helena, Montana 59601

Re: [illegible]
Associate [illegible] and Metals, Inc.
Rock and [illegible] claims
Jefferson County, Montana

Dear Mr. Morgan:

Thank you for the two maps. The one of [illegible], will be quite helpful.

Ordinarily, because of the limited time available, we try to tie one claim corner to a section corner, mineral [illegible] or whatever physical feature is reasonably nearby and then plot a claim map from there basing it on bearings and distances [illegible] in the location notices. They are not always too accurate. Under these times, we accept a claim map as presented by an applicant. Here too, the accuracy is open to question, but it serves our need to know where his workings and major geologic features are within the claim group.

When I have assembled my data, I will give Mr. Manchester a call and at least discuss things with him.

Sincerely yours,

[illegible] R. MacLaren
Field Officer, [illegible]
Region [illegible]

DRMacLaren/mls

cc: [illegible] w/cpy incoming

Director's Reading File

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
HELENA NATIONAL FOREST
HELENA MONTANA 59601

ADDRESS REPLY TO
FOREST SUPERVISOR
AND REFER TO

2810
September 15, 1967

Mr. Donald R. MacLaren
Office of Mineral Examination
U. S. Geological Survey
157 South Howard
Spokane, Washington 99204

Dear Mr. MacLaren:

I appreciate your phone call. I had actually intended that pertinent information regarding the Pottee claims be furnished our people in the Minerals Branch in Missoula - specifically Mr. R. W. Manchester, or one of his associates.

We do not have an accurate map of the Rock & Roll claim group, as they have not yet been examined. I am enclosing a general location map of the improvements of this group and a plat of the R. D. Pottee group for whatever help they might be to you.

Sincerely yours,

ROBERT S. MORGAN,
Forest Supervisor

By

cc: D-3
Enclosure

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
10/5	Kirkemo	120
		110
		220
10/6	RSH	120M

OCT 5 1967

Memorandum

To: Field Officer, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

Referring to your memorandum of September 14, 1967 regarding possible transmittal to the Forest Service of a copy of your forthcoming Report of Examination on the subject property, we advise that you not furnish a copy of your findings or report pending consideration by this office of a written request from the Forest Service.

We appreciate the fact that Forest Service officials have been very cooperative, and under certain circumstances factual information such as geologic maps and cross sections may be discussed with or given to them. However, any information such as assay data or other information that could be used to estimate the possible economic worth of the property, and your conclusions and recommendations should not be released informally to anyone outside the Geological Survey. If released, we could not prevent use of this information in actions adverse to the Applicant's interests. A pledge that no action would be taken against the Applicant may be binding with the present Forest Service officials, but succeeding officials in Missoula or officials elsewhere may not be as cooperative.

We agree with the decision you have reached with Mr. Robert S. Morgan, Forest Supervisor, Helena National Forest, that the Forest Service will submit a written request stating the nature of the information desired. We add further that the purpose for which it is intended should be stated in the request.

Prompt consideration of the written request will be given by this office.

FRANK E. JOHNSON

(fk)

Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
✓OME Docket
OME Reading File
Mr. Kirkemo
130

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
September 14, 1967

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 18 1967

INITIALS	CODE
gla	130
Bll	120
JED	~~140~~
	120

Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

The afternoon of September 14, 1964, Robert S. Morgan, Forest Supervisor, Helena National Forest, telephoned to explain in more detail his letter of September 13, 1967, of which a copy is enclosed.

Apparently, the claims are in grazing ground within the Helena National Forest and for some time the cattle men have been complaining about what they consider excessive trenching, tearing up much of the land without sufficient justification. The map, Item 1, which accompanied the applicant's letter of August 8, 1967, shows at least 31 trenches.

Finally, the Forest Service became alarmed and over the last couple of years have tried to get Potee to be more reasonable. He has not cooperated and the Forest Supervisor was about to have Forest Service geologic and engineering personnel make an appraisal of the value of the claims with the possible result of forbidding further bulldozing.

It was when Potee was told, along with the general public, that he had to stay out of the forest because of the fire situation that he informed Morgan that he had to continue now because an OME examination was to be made September 14th and he had to have everything ready.

Morgan was told that the project proposed by Associated Mines and Metals, Inc., involved only diamond drilling from the surface. His office has no objection on that score. The reason he asked us to contact his office was to ask if we could give the Forest Service geologists' office, located in Missoula, an account of our findings.

It was agreed that Morgan would put this request in writing and that later in the year when the pressure would be eased, I would try to visit or write to the Missoula office and discuss the geology on a "For Government Use Only" basis.

The people in Missoula have been very cooperative in giving us information and I suggest I be authorized to give them a copy of the geologic section, assay data, conclusions, and recommendations when the examination report is prepared.

D. R. MacLaren

Enclosure

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
HELENA NATIONAL FOREST

2810

September 13, 1967

Office of Mineral Examination
U.S. Geological Survey
157 South Howard
Spokane, Washington 99204

Gentlemen:

Mr. R. D. Potee, a mining claimant who has been carrying on extensive prospecting on lands in this forest informs us that your office has scheduled a mineral examination of one or more of his claims.

We would appreciate having the examiner contact this office when he visits the area, as we have been dealing with Mr. Potee administratively for some time in regard to these claims.

Telephone numbers are: District Ranger William MacKenzie - 442-6960
Forest Supervisor's Office
Contact Mr. Fred Haller - 442-9040
Ext. 3201

Sincerely yours,

/s/ Robert S. Morgan

ROBERT S. MORGAN
Forest Supervisor

OMe

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
September 18, 1967

Refer to: 2810

gla 130
AK 120 M
JE 110

Mr. Robert S. Morgan
Forest Supervisor
Helena National Forest
Forest Service
U. S. Department of Agriculture
Helena, Montana 59601

Re: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

Dear Mr. Morgan:

Thank you for the two maps. The one of T. 8 N., R. 2 W., will be quite helpful.

Ordinarily, because of the limited time available, we try to tie one claim corner to a section corner, mineral monument or whatever physical feature is reasonably nearby and construct a claim map from there basing it on bearings and distances given in the location notices. They are not always too accurate. Other times, we accept a claim map as presented by an applicant. Here too, the accuracy is open to question, but it serves our need to know where his workings and major geologic features are within the claim group.

When I have assembled my data, I will give Mr. Manchester a call and at least discuss things with him.

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

DRMacLaren/mls

cc: OME w/cpy incoming

Director's Reading File

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
HELENA NATIONAL FOREST
HELENA MONTANA 59601

ADDRESS REPLY TO
FOREST SUPERVISOR
AND REFER TO

2810
September 15, 1967

Mr. Donald R. MacLaren
Office of Mineral Examination
U. S. Geological Survey
[illegible] South Howard
Spokane, Washington 99204

Dear Mr. MacLaren:

I appreciate your phone call. I had [illegible] intended that pertinent information regarding the Pottee claims be furnished our people in the Minerals Branch in Missoula - specifically Mr. R. W. Manchester, or one of his associates.

We do not have an accurate map of the [illegible] & holl claim group, as they have not yet been examined. I am enclosing a general location map of the improvements of this group and a plat of the R. D. Pottee group for whatever help they might be to you.

Sincerely yours,

ROBERT S. MORGAN,
Forest Supervisor

By [illegible]

cc: D-3
Enclosure

OFFICIAL COPY

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
September 13, 1967

AIRMAIL

Mr. Anthony S. DeRose
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin 53402

Re: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

Dear Mr. DeRose:

This will confirm our appointment, made by telephone September 13, 1967, to inspect the Rock and Roll Claims relative to your OME application on Thursday, September 28, 1967.

I expect to arrive in Helena the latter part of the afternoon of the 27th and will stay at the Main Motel. Will you please call me there so we can arrange a time and place to meet on the 28th.

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

DRMacLaren/mls

cc: OME

Director's Reading File

E Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
8/15	Johnson	110
8/15/67	R Kerkamo	120
		1151
		220

AUG 15 1967

Memorandum

To: Field Officer, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

We are referring the subject application to you for consideration, a field examination if you deem it necessary, and a report thereon with recommendations.

Enclosed is a copy of the applicant's letter of August 8, 1967, submitting additional information and transmitting Items 1 through 6, inclusive, except for Item 2, copy of Lien and Subordination Agreements, which has been retained in this office.

If you favor a project on this property, you should request three additional copies of the completed Lien and Subordination Agreements form.

We have discussed the proposal with the applicant's representatives and the consulting geologist. In our discussion with the applicant's representatives, we advised that if the project appears to be warrented horizontal drill holes on the lowest level could be eliminated and all holes drilled from the surface as the same information could be obtained by surface drilling. This also would reduce the costs by eliminating the high cost of keeping the shaft unwatered.

FRANK E. JOHNSON

Frank E. Johnson

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file

Enclosures

130

FEJohnson/bih 8/15/67

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
8/15	Johnson	110
8/15/67	Lindemann	120
		110
		220

AUG 15 1967

AIRMAIL

Mr. Anthony S. DeRosa
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin 53402

Re: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

Dear Mr. DeRosa:

Thank you for your letter of August 8, 1967, enclosing additional information in support of the subject application for exploration assistance.

We are referring your application to our Field Officer for Region I, Mr. Don R. MacLaren, South 157 Howard Street, Spokane, Washington 99204, for review and possible field examination. Mr. MacLaren will notify you if further information concerning the application is needed; and possibly to make arrangements for a field examination.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
OME Region I

FEJohnson/bih 8/15/67

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
7/20		110
10	Col	220
		120

Mr. Anthony S. DeRose
Associated Mining and Metals, Inc.
1136 Valley View Drive
Racine, Wisconsin 53402

Re: OME-6637 (Silver)
Associated Mining and Metals, Inc.
Rock and Roll Mining Claims
Jefferson County, Montana

Dear Mr. DeRose:

Reference is made to the meeting held on June 22, 1967, with representatives of your company, in which the need for additional information to support your application for exploration assistance was explained.

At that meeting additional information was requested as follows:

Claim map in duplicate showing the location of the present workings on the property and the proposed work.

Set of Lien and Subordination Agreements from the locator of the claims (copies of forms enclosed).

Two copies of the operating contract with the claim locators mentioned in paragraph 2, Applicants Rights in Land on page 2 of your application.

Two copies of location notices, or in lieu thereof, a list of claims, in duplicate, showing book and page number where recorded.

Two additional bids in duplicate from Independent Contractors for the proposed drilling.

Results of the extensive open cut dozer work stated as having been performed on the property. Show locations of open cuts, geology with dips and strikes for structures exposed, and assays of samples taken of the mineralization showing in the open cuts.

23263

Assay results of representative samples taken from the floor of No. 3 drift below old stopes. Show locations and widths sampled on map. Also show widths represented by each sample indicated on Vertical Section of Good Cheer Mine submitted with the application.

We do not want to put you to any unnecessary expense, however, prompt submission of the foregoing information will expedite the processing of your application. If you do not wish to proceed with your application, please advise accordingly.

This request for additional information should not be construed that an exploration contract will be granted.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

cc: Director's reading file
Division file
Economic Geology file
OME file (docket)
OME reading file
OME Region I

FEJohnson/bih 7/20/67

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
7/6	Johnson	
7/10	Cover	
7/11	Wyman	

JUL 12 1967

Hon. Lee Metcalf
United States Senate
Washington, D. C. 20510

Dear Senator Metcalf:

This is in reply to your letter of June 29 enclosing a letter to you dated June 26 from Mr. Fred S. Honkala of Missoula, Montana, concerning the application (OME-6637) of Associated Mining and Metals, Inc., for financial assistance to explore for silver at the Good Cheer Mine in Jefferson County, Montana.

At a meeting on June 22 the Chief, Office of Minerals Exploration discussed this application with representatives of the applicant and requested additional information necessary to support the proposed exploration.

Please be assured that upon receipt of the additional information requested it will be given prompt and careful consideration.

Mr. Honkala's letter to you is returned as requested.

Sincerely yours,

Acting Director

Enclosure

cc: General files
Division file
Director's chron. file
Economic Geology file
OME file
OME reading file
OME Region I

FEJohnson/bih 7/6/67

23263

RUSSELL B. LONG, LA., CHAIRMAN

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THRUSTON B. MORTON, KY.
EVERETT McKINLEY DIRKSEN, ILL.

TOM VAIL, CHIEF COUNSEL

United States Senate

COMMITTEE ON FINANCE

Zip Code 20510

29 June 1967

Office of Minerals Exploration
Department of the Interior
Washington, D. C. 20240

Gentlemen:

Attached is a letter from Dr. Fred S. Aoukala, concerning a development and exploration loan for Associated Mining and Metals, Inc. of Racine, Wisconsin, in connection with their interest in the Good Cheer Mine near Clancy, Montana.

I shall appreciate whatever favorable consideration you might find it possible to give this application. Please return the enclosure for my files with your reply.

Very truly yours,

Enclosure

June 26, 1967

Honorable Lee Metcalf
U. S. Senate
Washington, D. C.

Dear Senator Metcalf:

Last fall the Associated Mining and Metals, Inc. of Racine, Wisconsin asked Dr. Arnold Silverman of our staff and me to advise them in their project of dewatering the Good Cheer Mine located near Clancy in Jefferson County. We have consulted with them and visited their project a number of times since then. On the basis of the facts that the silver content has shown an encouraging increase with depth and that the width of the vein has increased from one to four feet with depth and that the location of the property in an area of extensive mineralization, it was agreed that the company should try to obtain an exploration loan from the Office of Minerals Exploration in the Department of the Interior. We recommended that they do some core-drilling to explore the vein below the 165-foot level, which is the bottom of the mine presently.

The officials of the company are reasonable men, and they are proceeding with their exploration in a scientific and prudent manner. To date they have spent a considerable amount of their own money in the general region, thereby enhancing the local economy. The amount of the loan they are attempting to obtain is but a small fraction of the money that the company has spent and stands ready to spend to the general benefit of the area if our core-drilling results are positive, as we believe they can well be. To these considerations we should also add the nation's need for silver and the availability of experienced miners in the region.

Any help that you can give Associated Mining and Metals, Inc. with this loan would be greatly appreciated.

Sincerely,

Fred S. Honkala
645 Evans
Missoula, Mont. 59801

cc: Hon. Gaylord Nelson
Assoc. Mining & Metals, Inc.

June 20, 1967

Associated Mining & Metals Inc.
1136 Valley View Drive
Racine, Wisconsin 53402

Subject: OME - 6637

Gentlemen:

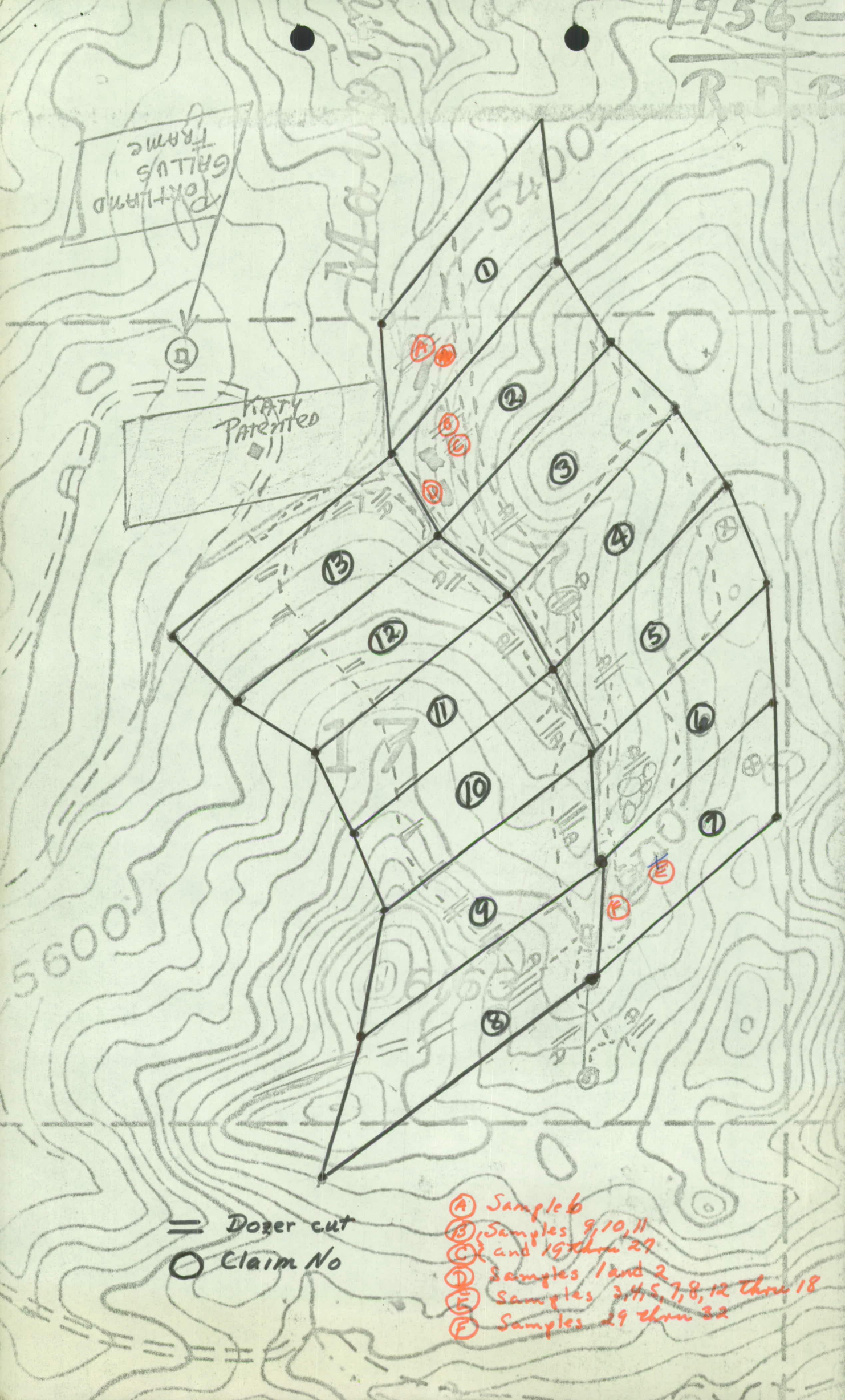
Your application for exploration assistance, dated June 15, 1967, submitted to our office at Washington, D. C., has been assigned Docket No. OME-6637.

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

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy R-I wity application and
all attachments


1956
R.D.P.
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5600
Fort Harno Gallus Frame
Katy Patented
1
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11
12
13
A
B
C
D
E
F
= Dozer cut
Claim No
A Sample 6
B Samples 9, 10, 11
C and 19 thru 27
D Samples 1 and 2
E Samples 3, 4, 5, 7, 8, 12 thru 18
F Samples 29 thru 32

VERTICAL SECTION
SHOWING WORKINGS

Good Cheer Mine

scale 1in.=20ft.

⊗ Assay Location and Number

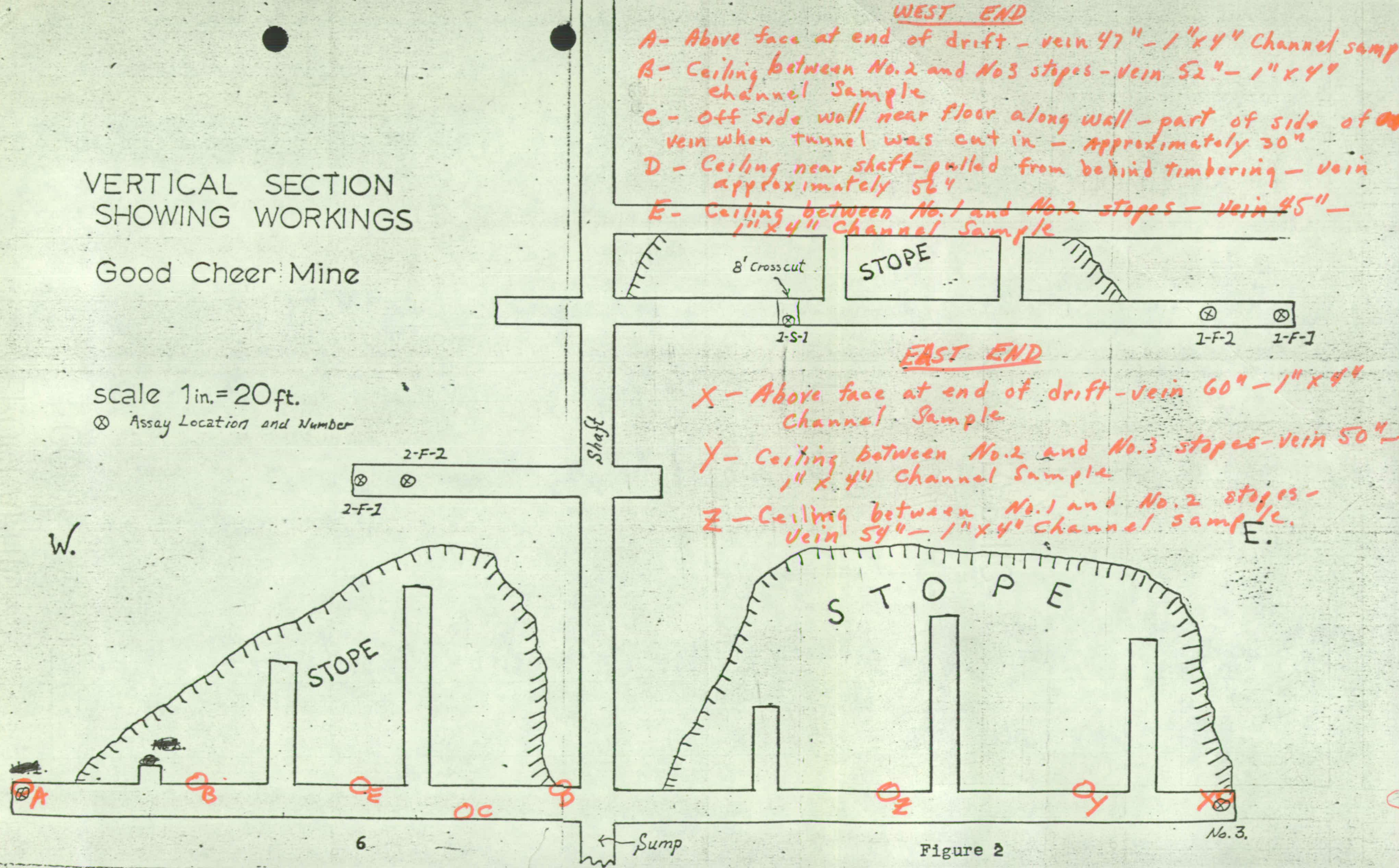
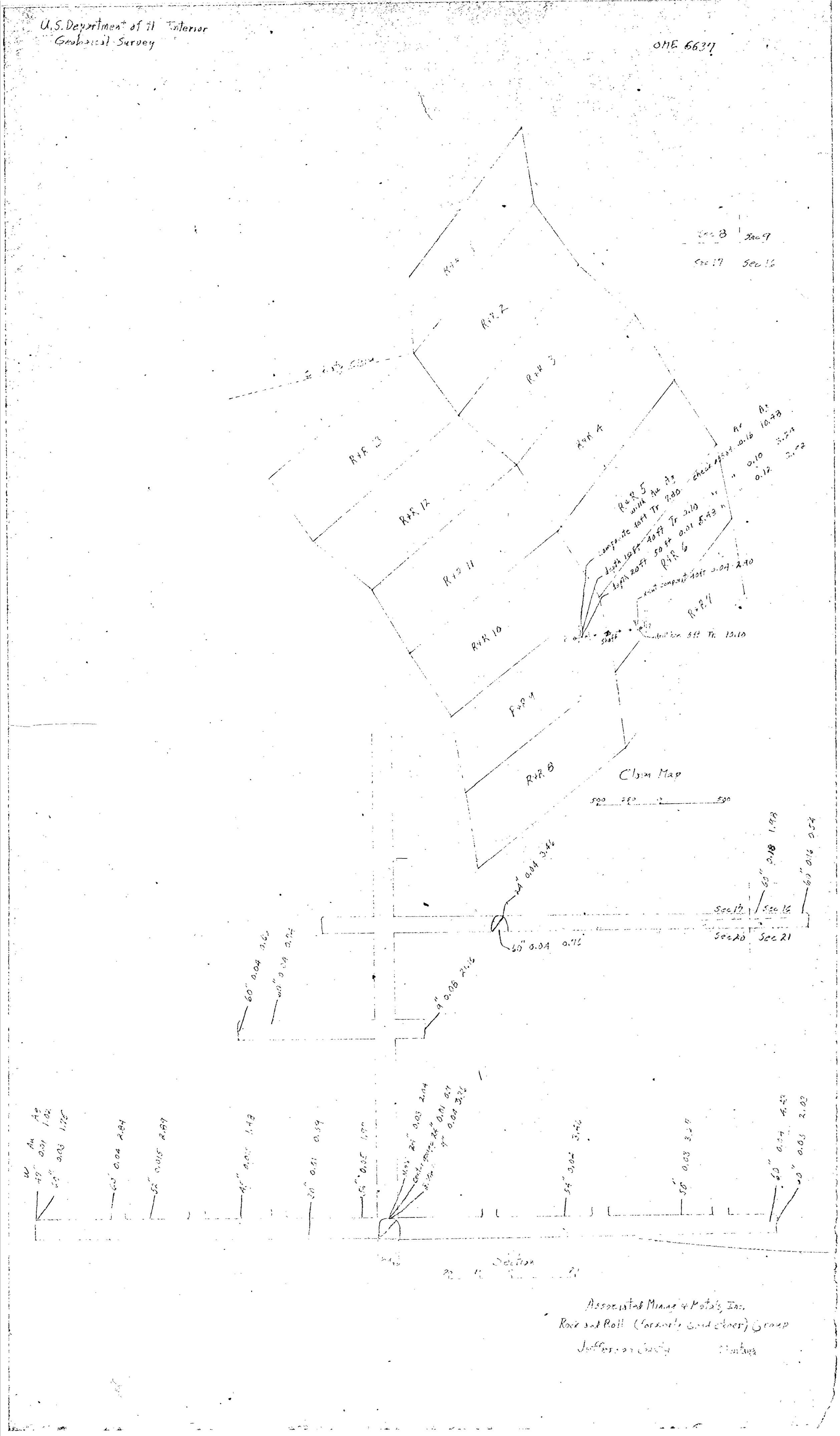


Figure 2

U.S. Department of the Interior
Geological Survey

OME 6637



Associated Mining & Metals, Inc.
Rock and Roll (formerly Grandeur) Group
Jefferson County Montana