IMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

IMEA NO. 4560

Application (Denied
(Withdrawn
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

Left Side

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
Certificate of Audit (Final)
Interim Audit(s)
Report of Review
Termination Notice or Agreement
Recision Notice
Assignment of Contract
Contract Amendments (latest on top)
Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
Leases and assignments of leases
✓Application and attachments
(3) Envelope for maps

Right Side

Project summary
Work completed analysis
All other material is filed in chronological order with correspondence including the following reports as checked:

Final Field Team Report (Tab)
Operator's Final Report
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
✓On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

Left Side

Folder No. 2: (In chron. order)
Interim Summary Reports by W. O. Engineers

Right Side

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

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

9775

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

RECEIVED DEC 3 1956 D.M.E.A.

November 28, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: New application (Lead-Zinc)
Montana Standard Mining Co., Ltd.
Unnamed property
Sanders County, Montana

Dear Mr. Selfridge:

Enclosed are three copies of an application for aid to explore for lead and zinc in the Burns Mining District, Sanders County, Montana. We have retained one copy for our files.

2/9/57 ok

You will note that the applicant has requested the return of all maps and work sheets for his files. We have reproduced the assay data and settlement sheets but ask that the maps be returned with the referral from your office as we have been unable to reproduce them and will need them at the time of the field examination, of one is made.

Sincerely yours,

Donald R. MacLaren

Donald R. MacLaren
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures
cc: USBM(2)
Geologist

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
NOV 26 1956
U. S. G. S.
SPOKANE, WASH.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4560
Metal or Mineral Lead-Zinc
Date Received 12-3-56
Estimated Cost $80,010.50
Participation (Government %)

INSTRUCTIONS

RECEIVED DEC 3 1956 D.M.E.A.

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Montana Standard Mining Co., Ltd P.O. Box 146 Burke, Idaho
Mine Office P.O. Box 387 Thompson Falls, Montana
incorporated under the laws of State of Idaho

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. Separate Sheet

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract 13 patented Claims comprising 173.607 acres
Mineral Survey #9435 Missoula Land District in Burns Mng District
Sanders County Montana namely: Montana Standard Mining Co., Ltd

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See Maps

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

16—66551-1

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Lead, Silver and Zinc

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 60 days and be completed within 24 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. Separate Sheet

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

Making arrangements to sell 500,000 shares to net $100,000

[X] Money [X] Use of equipment owned by you [X] Other

Explain in detail on acompanying paper.

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.

Dated Nov. - 23, 1956

Montana Mg Co Ltd
(Applicant)

By Jay F. Voss President

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

No I

#1 (C)-Officers

Loy L. Vose--President, Mine Operater	Thompson Falls, Montana
Charles Zurnstein V.P. Mine Hoistman	Burke, Idaho
Evaleen Seelig retired Sec.&Treas.	Wallace, Idaho 406 First St.
Wayne J. Walker Mine Foreman, Director	Thompson Falls, Montana
Wray Featherstone, Mining Engineer	Wallace, Idaho

RECEIVED OCT 3 1956 O.M.E.A.

#4 (B)
Accompaning mill and smelter sheets explain production. Estimated reserve 10,000 tons with an average of 6% lead and 4% zinc 2oz of silver

(C)----The mineralization is lead, silver, zinc deposit bedded in quartz sites, a well defined fissure vein with a strike, approximately east and west. Dip~~s~~ to the south about 74%. (Maps to accompany)

(D)----It is on a good county road 11 miles from the railhead Thompson Falls, Mont. The operators have made the No. 3 or working tunnel accessable by bridge and short laterals to main road.

(E)----Man power is readily available in the districts of both Wallace, Idaho and Thompson Falls. Materials and supplies are to be had at either place. Prospect Creek runs at the foot of the dump with ample water, the cla ims are covered with the finest type of mining timber. The Montana Power line is extended to the mouth of #3#tunnel. We are enclosing schedule of rates quoted by them, these are the rates we are working under at the present time.

#5 (B)
We wish to sink a winze an ~~W~~ additional 400 feet, to W 4 by 4 compartment squared - setted with 10 x10 timber at 4' ft 2" intervals on the vein. We want to run drifts east and west on the 200 foot level and a lso 400 ft level, these drifts will be ~~[illegible]~~ a total of 225 ft on each of these levels and will follow the vein structure showing on the #3 tunnel level.

(D)----The work will be directed by the present manager, Loy Vose, who is also the President of th e Co.; while not an engineer or geologist has had many years of experience of a ll types of mining that will be required to accomplish the above work. The large amount of work accomplished under his supervision should BE ample proof of his capability. The overall supervision at present is figured at $450 per month plus a $150 per month to cover car and miscellanious expenses. This has covered secreterial work also bookkeeping at the mine.

Bill of particulars to cover sinking and drifting on proposed project.

#6--

Timber	per foot	$ 10.50
Explosives including delays	" "	4.00
Airline, fanline, water cols.	" "	4.75
Labor inc. hoistman	" "	60.00
Timber framing inc. blocking ~~in~~ wedges	pr.ft	6.00
Steel, air, &machines, water pumping	pr.ft	6.60
Waste tramming and disposal, this incl. all misc. expense not itemized	pr.ft	2.28
		$ 94.13

#6 con't
Total footage
400 feet of winze
450 feet of drifting incl.stations,pockets,track and carr
Total ask to cover project $ 80,010.50

The company agrees to furnish operating equipment--compressors, hoists,trammer,cars and equipment needed to dispose of waste,also upkeep of said equipment and the labor involved. Also agree to build such buildings that are necessary to house and take care of orderly operation of the above project such as--;a dry room ,housing neccessary for men and equipment.

The company has the present winze down 55 feet and raised 50ft to accommadate dump and skippocket which,is cut and installed having spent in the last two years about $20,000 to futher this work. The accompaning sheets will give details of the substantial mill test and the sorted crude taking from stopes so far opened up. This work has been done and paid for by individuals independent of the mining Co. itself. These individuals have accepted stock for th e money and labor expended since 1953. The company is virtually out of debt except small current accounts which can be taken care of and will agree to a royalty of all ore shipped until money frowarded by the government as liquidated.

All maps and work sheets we wish to be returned for our files upon completion of your answer to this contract.

Your Butte office had a man by the name of Mr. John Bowsher here to check this property at one time and has copy of maps etc, but we are inclosing duplicate set.

We will use the Montana scale of wages the base will be $18.36 for an hour shift. And use a five day week.

Respectively submitted,
Montana Standard Mining Co.,Ltd

Roy. F. Vose - Pres

Schedule GS-44—General Service

Available for: All electric service required when supplied through one meter at one point of delivery. Not available for standby, breakdown, supplementary, resale or shared service.

Type of Service: Sixty cycle alternating current at such phase and voltage as Company may have available.

Rate: Net monthly bill.

75c for the first 12 kwh, or less.
3.5c per kwh for the next 288 kwh.
2.5c per kwh for the next 1,500 kwh.
1.5c per kwh for the next 3,200 kwh.
0.9c per kwh for the next 15,000 kwh.
0.7c per kwh for the next 200 kwh per kilowatt.
0.5c per kwh for all additional kwh.

Plus

First 10 kilowatts —No charge.
Next 20 kilowatts —95c per kilowatt.
All additional kilowatts—75c per kilowatt.

Minimum Bill: 75c per month.

Tax Adjustment: The Company may increase the bill for electric service supplied under this Schedule by an amount equal to the proportionate part of any taxes in excess of those in effect on December 31, 1940.

Payment: The net monthly bill is due and payable when rendered and becomes delinquent 10 days thereafter.

Determination of Kilowatts: The average kilowatts supplied during the 15-minute period of maximum use during the month, as determined by permanently installed indicating type meter.

Special Terms and Conditions: Customer may be required to pay the cost of installing and removing all of the facilities required to supply seasonal and short term service. Customer must pay the cost of installing and removing all of the facilities required for rendering temporary service.

Issued September 22, 1944
Approved September 22, 1944 Public Service Commission
Effective October 1, 1944 of Montana
(Supersedes Schedules GS-41)

RIDER - SCHEDULE GS-44 - GENERAL SERVICE

Rider 1 - Commercial Water Heating

Where a storage type water heater of design and size approved by the Company is installed and in regular use and (1) where the customer's monthly consumption ranges from 1050 kilowatt hours to 5000 kilowatt hours, the last 750 kilowatt hours will be billed at a rate of 1.5 cents per kilowatt hour and (2) where the customer's monthly consumption is less than 1050 kilowatt hours, a rate of 1.5 cents per kilowatt hour will be applied to all kilowatt hours used in excess of 300 kilowatt hours. This rider is not applicable to customers using in excess of 5000 kilowatt hours per month as it would represent an increase in rate to these customers.

Rider 2 - Athletic Fields

Where publicly owned athletic fields supply all necessary transformers, Company will waive the application of the demand charges under Schedule GS-44.

Rider 3 - Irrigation or Sprinkling Service

Where a customer has an irrigation pumping or sprinkling outfit which is operated only during the irrigation season and which may be discontinued during the remainder of the year, service will be billed at a rate of 1.5 cents per kilowatt hour, subject to a minimum seasonal bill per point of delivery of $7.50 per horsepower connected. Customer must elect to take service under either this rider or the standard Schedule GS-44 at the beginning of the season and cannot change rates during season.

Issued October 23, 1950
Approved October 23, 1950
Effective November 1, 1950

PUBLIC SERVICE COMMISSION
OF MONTANA

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/4	[illegible]	800
6/5	[illegible]	130
6/5	Lamb	130
6/5	Kiilsgaard	130
		110
"	[illegible]	100
6/6	JWG	225
		225

JUN - 6 1957

Mr. Loy Vose, President
Montana Standard Mining Co., Ltd.
Post Office Box 146
Burke, Idaho

Re: Docket No. DMEA-4560 (Lead-Zinc)
Montana Standard Mining Company, Ltd.
Nellie, et al, claims
Sanders County, Montana

Dear Mr. Vose:

Your application for aid for an exploration project and other reports available to us in Washington concerning your application have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting lead-zinc ore on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Mineral Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mirandon (for)

Administrator

WRGriswold/er 6/4/57
~~WPKlugescheid/er~~
Copy to: Docket
Admr R File
Oper. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.
Reg 1. N.W. Dis (2)

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code

June 4, 1957

Memorandum For The Files

From: Director, Division of Base Metals

Subject: Justification of Denial of Docket No. DMEA-4560, Montana Standard Mining Company, Ltd., Nellie, et al claims, Sanders County, Montana, Lead-Zinc.

The cited application proposed to sink a 400-foot winze and drift 225 feet on each of two levels to explore a small lead-zinc vein. Four levels have already been opened and a small amount of material has been shipped (224 tons of lead concentrates and hand sorted ore and 170 tons of zinc concentrates). It is estimated that such production was derived from 1,925 tons of mine run ore averaging 2.7 ounces Ag., 8.2% Pb. and 5.3% Zn.

The four levels already opened expose the vein for a vertical range of 620 feet; apparently the vein, or veins, form a series of short, disconnected lenses. The field examiners disagreed on their findings; E. W. Parsons, Bureau of Mines, recommended denial, whereas Donald C. Alvord, Geological Survey, favors sinking 200 feet with some drifting.

The Field Team favors denial stating that about all that can be hoped for is an ore shoot 55 feet in length.

We concur in the denial for two reasons. First, that the 55-foot ore shoot, if found, would be of little significance; secondly, a lot of work has already been done on the property, certainly enough to say that the property is already disproven. Any further work would merely be "flogging a dead horse."

W R Griswold

W. R. Griswold

Copy to: Docket
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 20 1957

DATE	INITIALS	CODE
5/20	C	220
5/20	WRG	500

May 17, 1957

Re: DMEA 4560; Pb-Zn; $80,010
Montana Standard Mining
Co., Lmtd.
Burke Idaho
Nellie et al Claims
Sanders County, Montana

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM

Subject: Review of Field Team report dated May 6, 1957 and received May 14, 1957.

The applicant company proposes to deepen an existing 40-foot winze on the No. 3 tunnel by 400 feet and to drift 225 feet on each of two new levels from the winze.

The field examiners Alvord (USGS) and Parsons (USBM) agree that ore is exposed on the No. 1, No. 2, No. 3 and 40-foot level off the winze, but differ in their appraisal of the grade and width that might be encountered in deeper exploration.

The field team concludes that the limited strike length, the limited experience of the applicant and the possibility of conflicting ownership arising from the Eagle Claim conbine to make the exploration unattractive within the range of grade and widths envisioned by the field examiners.

I concur with this viewpoint and recommend denial of the application.

O. M. Bishop

O. M. Bishop

cc: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
Files

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 20 1957

DATE	INITIALS	CODE
5/20	C	220
5/20	WRG	500

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

May 17, 1957
Re: DMEA 4560
Montana Standard Mining Co.,Ltd.
Nellie, etc. Claims
Sanders County, Montana
$80,010.50 - Lead - Zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Report

The applicant requested assistance in exploring a short ore shoot by shaft sinking and drifting.

The examiners do not agree on the propriety of the proposed work. The engineer, basing his conclusions in part on the results of sampling, considers the possible value of the ore shoot too small to warrant the proposed work.

The geologist remarks on the inadequacy of the sampling and by estimating tonnages taken from stope blocks and using the grades of shipments calculates a thickness and grade considerably above that indicated by the sampling. Using the derived values and an inferred tonnage, an ore shoot ($\frac{200 \times 55 \times 4.5}{12}$ = 4,125 tons) worth $164,656.00 (gross) results. The value exceeds the estimate of the engineer by $100,800.

The engineer estimates it would cost $32,460 to develop such an ore shoot allowing for a 200-foot shaft and 225 feet of drifting.

The small ore shoot has possibilities and from the viewpoint of the applicant, the proposed work appears worthwhile. From the viewpoint of DMEA, the proposal has much less attraction.

I recommend that the application be denied without prejudice. Someone, presumedly the applicant, has done a lot of dead work. A little work in the ore shoot might pay off.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
D M E A
RECEIVED MAY 10 1957
DATE | MINERALS | CODE
5/10 | | 220
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5/16 | | 330
| | 500

May 2, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4560 (Lead-Zinc)
Montana Standard Mining Co., Ltd.
Nellie et al. claims
Sanders County, Montana

Dear Mr. Selfridge:

Enclosed are four copies each of two reports on the examination of the property of the Montana Standard Mining Co., Ltd., in Sanders County, Montana, one by E. W. Parsons of the Bureau of Mines and the other by D. C. Alvord of the Geological Survey. Because the two examiners were unable to agree, they have written separate reports.

The chief feature against the property is the short length (55 feet on the No. 3 level) of the one known ore shoot; consequently, based on existing exposures, the property can be, at best, only a very small producer. Parsons, basing his estimate of the grade and width of the ore body on four samples taken during the examination shows that if the ore continues to a depth of 200 feet without change 3,070 tons averaging 0.91 ounce silver per ton, 3.5 percent lead, and 4.0 percent zinc in an ore shoot 3.35 feet wide and 55 feet long, would be available for mining. He estimates that ore of this grade would have a net smelter value of $12.79 per ton, and shows that the cost of exploration would amount to $10.57 per ton leaving $2.22 to defray the cost of mining, milling, transportation and other expenses. Dilution would further reduce the value of the ore. On this basis exploration of the deposit would be clearly unprofitable.

Alvord maintains that the samples cut during the examination are too few in number and were, of necessity, too unsystematically spaced to be indicative of the grade of the ore shoot and because some of them do not cut the full width of the vein, neither do they portray correctly the true width of the ore shoot. He argues that the grade of the ore can be obtained more accurately from the record of ore shipments and his estimate of the tonnage mined, and he figures that the grade must have averaged 2.7 ounces silver per ton, 8.2 percent

Reviewed by
DMEA OPERATING COMMITTEE
5/15/57
(date)

lead and 5.3 percent zinc. From inspection of the mine workings he concludes that the ore above the No. 3 level had a width of at least 4.5 feet. On this basis, he concludes that if the ore continues without change to a depth of 200 feet the exploration would disclose 4,125 tons of ore, that this ore would yield a net smelter return of $26.22 per ton, and that the cost of exploration would be $7.87 per ton, leaving $18.35 per ton to pay for the cost of mining, milling, transportation, etc. Dilution has already been allowed for in estimating the grade of the ore mined. On this basis, he concludes the property might return a small profit. Alvord further states that it is his opinion that for structural reasons there is a good chance that the ore shoot may increase in thickness below the No. 3 level and he does not rule out the possibility of an increase in grade. Some increase in strike length is also very possible. On this basis he concludes that exploration of the property is justified.

After some deliberation, the Field Team is of the opinion that even if the property could operate profitably, a length of ore shoot of only 55 feet does not make it an attractive project for DMEA participation. Also influencing this decision is the inexperience of the applicant, which is illustrated by his proposal to build a 100-ton mill on the property, and the fact that he does not control the Eagle claim, although he may have apex rights within the claim boundaries.

By Field Team, Region I, NW Dist.

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USGS (SRO)
Alvord

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D M E A
RECEIVED MAY 10 1957
DATE | INITIALS | CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

April 22, 1957

ON-SITE Report

MEMORANDUM

To: DMEA Field Team, Region, Northwest District

From: E. W. Parsons, Mining Engineer, U. S. Bureau of Mines

Subject: Field examination report, Docket No. DMEA-4560 (lead-zinc) Montana Standard Mining Co., Ltd., Nellie et al Claims, Sanders County, Montana

INTRODUCTION AND SUMMARY

On November 26, 1956, the Spokane office received an application from the Montana Standard Mining Co., Ltd., of Burke, Idaho, for Government aid to explore for lead and zinc in Sanders County, Montana. The applicant proposes to sink 400 feet from the bottom of a 40-foot winze or shaft on the Adit No. 3 level and drift a total of 450 feet, 225 feet each on the 240- and 440-foot levels, at an estimated cost of $80,010.50. The Government participation was to be $40,005.25.

The property was examined on January 15-17, 1957, in company with D. C. Alvord, Geologist, U. S. Geological Survey. Mr. Loy L. Vose, president of the company, Mr. Wayne J. Walker, mine foreman and a director of the company, and Mr. Don Snider, miner and stockholder, accompanied the examiners during much of the examination. The geology of the workings was checked against that shown on maps furnished by the applicant, the adits were tied in by a brunton and tape traverse, and the target area of the Adit No. 3 level workings was mapped and sampled. None of the surface expressions of the vein were examined (none reported) as a foot of snow covered the property and zero to sub-zero temperatures prevailed during the examination.

The Montana Standard Mining Co., Ltd. property consists of 10 mining claims patented under Survey No. 9435 (pl. 1), which claims clearly control the apex rights to the target structure. Much of the proposed work, however, is vertically beneath the Eagle claim, or the overlap of the Eagle claim with the applicant's Ore Shoot or Andrew Carnegie claims. The Eagle claim, which was patented under Survey No. 8953, would appear to be a prior claim and is not controlled by the applicant.

Reviewed by
DMEA OPERATING COMMITTEE
5/15/57
(date)

The target structure is a sheeted fault zone containing a galena-sphalerite-bearing quartz lode. The fault cuts both the quartzites and the intrusive diorite dike. Exploration on four levels over a vertical interval of 620 feet seems to indicate that, with depth, the structure may increase slightly, both in width and in length. There is some question whether the vein exposed in the original three levels is one continuous vein, faulted segments of the same vein, or separate lenses of a vein system. The grade of the largest known ore shoot has been estimated from data on shipments and from a limited knowledge of the stoped areas at possibly 6 percent lead, 4 percent zinc, and 2 ounces silver per ton. No record was ever kept of run-of-mine ore produced nor is the area definitely known from which ore was mined since 1954. It is possible that all the stoped areas above and below Adit No. 3 level, with the exception of two 30-foot raises which developed the main stope, have been worked since 1954. This possibility would materially increase the estimate of run-of-mine ore produced and decrease the value per ton. Four channel cut samples taken from representative mineralized spots in the stoped area below Adit No. 3 level indicate run-of-mine ore may carry 3.5 percent lead, 4.0 percent zinc, and 0.91 ounces silver over a width of 3.35 feet. Judged by the appearance of the ore, samples taken at regular intervals would probably assay very low in lead and zinc.

RECOMMENDATION

It is recommended that the application be denied, as, judged by available data, costs to explore the ore shoot even 200 feet down dip from the bottom of the winze, including 225 feet of drift, would be more than 80 percent of the net smelter value of the ore developed, based on the channel cut samples, and the cost of mining and milling would greatly exceed the remaining 20 percent.

APPLICANT

The applicant is the Montana Standard Mining Co., Ltd., Burke, Idaho, a corporation incorporated under the laws of the State of Idaho. The company officers are:

Loy L. Vose, President and Mine Operator	Thompson Falls, Mont.
Charles Zurnstein, Vice-President	Burke, Idaho
Evaleen Seelig, Secretary-Treasurer	Wallace, Idaho
W. J. Walker, Mine Foreman-Director	Thompson Falls, Mont.
Wray Featherstone, Mining Engineer	Wallace, Idaho

Mr. Vose has worked for many years in mines in the Coeur d'Alene district and in Grass Valley, California, and apparently is capable of directing the work. Mr. Vose is 72 years old and has a heart condition which prevents him from doing physical work.

The applicant company proposed to meet its share of the costs by depreciation of equipment which it will furnish, and with money. The applicant is making arrangements to sell 500,000 shares of stock which will net $100,000. Part of this money will be used in the exploration program.

LOCATION AND ACCESSIBILITY

The property included in the application is in the unorganized Prospect Creek (locally referred to as Burns) Mining District in T. 21 N., R. 31 W. (unsurveyed), Sanders County, Montana, 11 miles west of Thompson Falls, Montana, on an improved mountain road to Burke, Idaho. Thompson Falls is the nearest rail and shipping point, but during the summer and fall, ore is trucked over Glidden Pass to Burke, Idaho, and beyond.

The area is warm and dry during the summer months; the winter months are cold with snow covering the ground for five months or more. During much of the winter Glidden Pass is closed, but the property can be reached from Thompson Falls throughout the year.

PROPERTY RIGHTS

The Montana Standard Mining Co., Ltd., controls the Nellie group of claims, consisting of 10 lode claims, patented in 1913, under Mineral Survey No. 9435. They are as follows:

Margaret May	Little Maggie
Young Jim	Andrew Carnegie
Herbie	Ore Shoot
Jumbo	Nellie
Maggie Fraction	Carnegie Library

Four unpatented claims are owned by the company. They are:

Ten to One	Bettye
Mary	Tucker

These claims are not mentioned in the application. The claim plat furnished with the application (pl. 1) clearly shows that the apex rights of the vein will fall primarily within the Little Maggie and possibly in the Jumbo and Herbie to the west and the Carnegie Library and Ten to One

on the east. The proposed winze will be vertically under the Andrew Carnegie and Ore Shoot claims and will bottom within 15 feet of the west end line of the Ore Shoot claim, near ground covered by the overlapping Eagle claim (Mineral Survey No. 8953) which is not controlled by the applicant (pl. 2). Any drifting west would carry the work directly toward the Eagle claim; about 30 feet of drift west on the proposed 240 level and 15 feet of drift west on the proposed 440 level would bring the work to the west end line of the Ore Shoot claim. Drifting east would be under the Ore Shoot claim and property disputes in that direction are not likely.

DESCRIPTION OF THE PROPERTY

The claims are on steep north-facing slopes of a small mountain on the south side of Prospect Creek, about half-way between Daisy and Crow Creeks, two north-flowing tributaries of Prospect Creek. The mountain rises from about 2,925 feet at stream level to 5,066 feet. The slopes are covered with a moderately dense growth of evergreen trees and brush.

The property is developed by three crosscut adits, each with some drifting on the vein (pl. 2). Adit No. 1, about 655 feet above stream level, has a total of 300 feet of crosscuts and drifts. Adit No. 2, about 360 feet above stream level, has 900 feet. Adit No. 3, approximately 75 feet above stream level, has 2,700 feet of workings which include a 40-foot winze and 50 feet of drift from the bottom of the winze (pl. 2). All workings are open and very little timber is required.

A small ore bin and picking belt are located just below the portal of Adit No. 3.

Mining equipment at the mine includes an electrically-driven air compressor (approximately 105 cfm), 12-inch ventilating fan, compressed air locomotive, four 20-cubic mine cars, air hoist, sinking bucket, drill machines, steel, and miscellaneous small tools.

PRODUCTION

Work on the property is reported to have started about the turn of the century. By the time the claims were patented in 1913, the three adits were completed. Early production is not known, but it is rumored that two cars were shipped from Adit No. 2 and an unknown tonnage from No. 1 and No. 3 adits. Some work was done by Mr. Vose in 1938. Present work dates from late 1954 during which time two or more men have worked most of the time.

Settlement sheets submitted with the application date from November 17, 1954 through December 5, 1956. It is impossible to determine precisely the amount or grade of ore taken from the stopes during this period because all material was hand-sorted before shipment to mill or smelter. Table 1 summarized the smelter returns. A total of 223.9 tons of lead flotation concentrates and high-grade ore and 169.5 tons of zinc concentrates have yielded a net smelter return of $47,911.81. It is estimated that this yield was from more than 2,700 (possibly 3,300) short tons of mine run ore that possibly contained less than 6 percent lead, 4 percent zinc, and 2 ounces silver per ton, all of which was produced from the main stope above the No. 3 adit level and the two small stopes above the No. 40 or winze level. The above tonnage figures, as far as can be determined, represent from 75 to 90 percent of the total production from the No. 3 level. No information is available on production from the No. 1 and No. 2 adit levels but it appears to have been negligible.

Table 1

Reported production from the Montana Standard Mining Co., Ltd. Nellie Group, November 17, 1954 to December 5, 1956

		Contained metal (calculated from settlement assays, Bunker Hill Co.)		
Product	Short dry tons	Ag ounces	Pb short tons	Zn short tons
Crude ore, hand sorted	33.326	600	19.016	3.603
Conc., lead *	190.568	4,337	136.672	13.994
Conc., zinc *	169.488	252	1.971	84.939

*Milled from hand-sorted ore by the Golconda Custom Mill, Shoshone County, Ida.

MATERIALS AND SUPPLIES

Materials, supplies, and equipment may be secured in Kellogg or Wallace, Idaho, a distance of about 32 miles, or Missoula, Montana, a distance of 105 miles. Manpower is available from the Coeur d'Alene district and locally in Montana. A power line and a stream cross the property and can supply adequate power and water for mining and milling.

GEOLOGY

See report by D. C. Alvord, Geologist, U. S. Geol. Survey.

DESCRIPTION OF UNDERGROUND WORKINGS

The best showings in the entire mine occur on the No. 3 adit level along an 80-foot interval of the structure lying between the West cross fault and the winze (pl. 2). All the available recorded production came from the Main stope above this interval and from the winze and stopes "E" and "W" mined off the 40 or winze level below.

The Main stope is about 50 feet long, 120 feet high, and averages about 4 feet in width. The applicant states that the stope was up 32 feet when work was started in 1954, but this can mean that two raises used to develop the stope were up 32 feet. No estimate was furnished as to tonnage or value of shipments before 1954.

Where first encountered west of the West fault, the structure is about 2 feet wide but is very lean; westward from here, within an interval of about 50 feet, it narrows to a barren fracture an inch or two wide. The ore shoot starts at the West fault and runs about 60 feet east where it starts to pinch. The structure is a sheeted zone of altered quartzite with quartz stringers and veins carrying galena and sphalerite. The thickness ranges from 3 to 4 feet though may be 5 feet over short stretches. Slips or minor faults and fractures have broken and offset the vein to some extent with the movement always to the north on the west side of the fractures. From the winze eastward the vein thins gradually and is practically barren from a few feet east of a small cross fault to where it pinches out to a minor fracture and is lost in the north wall of the drift. Thinning eastward might possibly be due to a decreased competency of the rocks, as they become more argillaceous in this direction.

On the No. 2 adit level the best showings are west of the West cross fault, but at best the structure averages only about 2 feet in width although perhaps over short intervals it is of better grade than on the No. 3 adit level. East of the West cross fault the vein is complicated by a series of closely spaced cross faults; here it is less than a foot wide, and sulphide minerals are sparse.

The No. 1 adit level workings are entirely in rock of the diorite dike, whereas on the No. 2 and No. 3 adit level workings the dike is encountered only at the west end of the drifts and at the portal area of the No. 3 adit level. Practically all the exploration has been west of the West fault and the structure is even more poorly developed than on the No. 2 adit level. It consists of a foot, give or take a few inches, of shear zone containing a fairly high-grade sulphide-bearing quartz stringer that locally is as much as two=thirds of a foot wide but which generally is narrower. A thin parallel mineralized structure about 60 feet north of the vein probably is a split off the main vein and might

be interpreted to be evidence of horsetailing and weakening of the vein at its upper extremities.

MERIT OF THE PROPERTY

An ore-bearing structure is exposed on all four levels over a vertical interval of 620 feet. These exposures may be one continuous vein, one vein faulted into segments, or a series of lenses which are not connected. More work will be necessary to determine the nature of occurrence. No evidence of parallel structures or faulting parallel to the vein was found in the No. 3 adit crosscut. The structure exposed on the four levels widens from about 1 foot on No. 1 level to about 4 feet on the No. 3 and 40 levels. The grade of the ore in the ore shoot averages 3.5 percent lead, 4 percent zinc, and 0.91 ounce silver per ton, based on four channel cut samples from representative faces below the No. 3 level. The grade on the No. 1 and No, 2 levels is probably not very different from that on No. 3 level although present exposures indicate a better grade over short intervals.

The character of the vein along its steeper portions has been disclosed on all three original levels. If the exposed vein on the three levels is the same vein, none of the inferred flats have been explored to any extent.

It can be reasonably expected that the vein will continue downward without any great change in size of vein or its lead, zinc, and silver content.

APPLICANT'S PROPOSAL

The applicant proposed to sink 400 feet in a winze and drift 225 feet on each of two levels at a total cost of $80,010.50. Detailed costs furnished with the application are as follows:

	Per foot
Timber	$10.50
Explosives including delays	4.00
Air line, fan line, water column	4.75
Labor, including hoistman	60.00
Timber framing, incl. blocks & wedges	6.00
Steel, air, machines, water pumping	6.00
Waste tramming and disposal; this includes all miscellaneous expense not itemized	2.28
	$94.13

DISCUSSION OF APPLICANT'S PROPOSAL

The applicant's proposal will test the downward extension of a vein which has been demonstrated to carry marginal values of lead, zinc, and silver. The strike length and width of the ore shoot is small and indications are that it will probably continue about the same with depth. During the examination it was suggested that diamond drilling the structure below the 40 level from a station south of the structure in the No. 3 level crosscut south might be informative and the next logical step. Mr. Vose took a very dim view of this proposal, however, and stated that he would not be interested in diamond drilling prior to winze sinking. With regard to winze sinking, Mr. Vose stated that he would be willing to go along with any program leading to a significant increase in depth. The proposed project seems to be more in the nature of a stock promotion rather than legitimate mine exploration as there is not enough ore in sight to support a mill but the company has plans to erect a 100-ton mill immediately.

Seven samples were cut during the examination, four of which were representative of the ore to be expected in the ore shoot. High-grade streaks are not continuous in the formation and truly representative samples are very difficult to take. Ore shipments provide a clue to the value of ore in place but should be used with caution as the old stopes were not surveyed accurately enough to determine the ore removed and nothing is known of tonnages removed from the various workings or when the work was done. The applicant was vague as to the exact location of work done in 1938 and where the work in 1954 started.

The following calculations are given in support of the recommendation for denial of the application:

Samples	Width	Ag	Pb	Zn
352B	3.1'	1.9 oz.	7.20%	7.10%
353B	1.2'	0.7	2.90	5.60
354B	3.6'	0.3	1.30	2.80
355B	5.5'	0.8	2.90	2.80

	W	W x Ag	W x Pb	W x Zn
352B	3.1'	5.89	22.32	22.01
353B	1.2	0.84	3.48	6.72
354B	3.6	1.08	4.68	10.08
355B	5.5	4.40	15.95	15.40
Average	3.35	0.91 oz.	3.5%	4.0%

	Ag	Pb	Zn
Mill heads:	0.91 oz.	3.5%	4.0%
Recoverable per ton: 95% of Ag & Pb, 90% Zn	0,86 oz.	66.6#	72#
Total recoverable from 3070 tons 1/	2640.2 oz.	204,462#	221,040#
Gross value recovered 2/ Ag/0.91¢, Pb/16¢, Zn/13¢	$2402.58	$32,719.00	$28,735.00
Net value at smelter 3/ 75% of Ag & Pb, 45% of Zn	$1801.93	$24,539.25	$12,930.75

1/ Tonnage to be expected from 200-foot shaft on dip of vein was calculated, using 55 feet as average width of ore shoot, 3.35 feet as the average thickness, and 200 feet on the dip. No dilution factor was allowed and no allowance was made for barren spots which might be left as pillars.

$$\text{Tons} = \frac{55 \times 200 \times 3.35}{12} = 3070$$

2/ Gross recoverable value = $63,856.58 or $20.80 per ton

3/ Net smelter value = $39,271.93 or $12.79 per ton

Cost of proposed shaft sinking 200 feet and drifting 225 feet, which I understand is the proposal favored by the Geological Survey.

Mr. Parson's estimate: $32,460 or $10.57 per ton

Mr. Vose's estimate: ($94.13/ ft.) $40,005.25 or $13.03 per ton

Based on Parson's estimate there would be available a possible $2.22 per ton of ore developed to defray mining, milling and overhead costs. Dilution, which was not considered in the calculations, would run about 30%, thus reducing the $2.22 to $1.70.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
So. 157 Howard Street
Spokane 4, Washington

March 5, 1957

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: Donald C. Alvord, Geologist, Geological Survey

Subject: Field Examination Report, Docket No. DMEA-4560 (Lead-Zinc), Montana Standard Mining Company Limited, Nellie et al. claims, Sanders County, Montana

INTRODUCTION AND SUMMARY

On November 26, 1956, the Spokane office received an application from the Montana Standard Mining Company Limited of Burke, Idaho, for Government aid to explore for lead and zinc in Sanders County, Montana. The applicant proposes to sink 400 feet from the bottom of a 40-foot winze or shaft on the Tunnel No. 3 level and drift a total of 450 feet, 225 feet each on the 240- and 440-foot levels, at an estimated cost of $80,010.50. The Government participation would be $40,005.25.

The property was examined on January 15, 16, and 17, 1957, in company with E. W. Parsons, Mining Engineer, U. S. Bureau of Mines. Mr. Loy L. Vose, president of the company, Wayne J. Walker, mine foreman and a director of the company, and Don Snider, miner and stockholder, accompanied us during much of the examination. The geology of the workings was checked against that shown on maps furnished by the applicant, the adits were tied in by a Brunton and tape traverse, and the target area of the Tunnel No. 3 level workings was mapped and sampled. None of the surface expressions of the vein were examined as a foot of snow covered the property and zero to sub-zero temperatures prevailed during the examination.

Following the examination, Mr. Parsons and I attempted a joint report but we were unable to incorporate our conflicting viewpoints and separate reports were decided upon. Because our reports are modified versions of the same original report, they are very similar except in critical details influencing our recommendations.

The Montana Standard Mining Company Limited property consists of 10 mining claims patented under Survey No. 9435 (pl. 1), which claims clearly control the apex rights to the target structure

Reviewed by
DMEA OPERATING COMMITTEE
5/15/57
(date)

Much of the proposed work, however, is vertically beneath the Eagle claim, or the overlap of the Eagle claim with the applicant's Ore Shoot or Andrew Carnegie claims. The Eagle claim, which was patented under Survey No. 8953, would appear to be a prior claim. Even though the target structure apexes on the applicant's claims, it is presumed that the applicant would have to control the Eagle claim, or at least that part of it which would be transected by the proposed workings, before a DMEA contract could be considered.

The target structure is a galena-sphalerite-bearing quartz lode which occupies a sheeted fault zone in quartzites. The fault cuts both quartzites and an intrusive diorite dike. Exploration on four levels over a vertical interval of 620 feet strongly indicates that with depth the structure increases both in width and in length. The grade of the largest known ore shoot is estimated at 8.2 percent lead, 5.3 percent zinc, and 2.7 ounces silver per ton.

Exploration below the deepest workings to test whether the structure improves with depth might disclose sufficient ore to justify a small mill.

The applicant has proposed to sink 400 feet in a winze and drift 225 feet on each of two levels. A program is recommended that essentially involves the extension of the winze 200 feet and 225 feet of crosscutting and drifting from the bottom.

RECOMMENDATION

I recommend that the application be approved with modifications and that a unit cost contract be awarded on the basis of Bureau of Mines cost estimates. The proposed modifications are acceptable to the applicant.

APPLICANT

The applicant is the Montana Standard Mining Company Limited, Burke, Idaho, a corporation incorporated under the laws of the State of Idaho. The company officers are:

Loy L. Vose, President and Mine Operator	Thompson Falls, Montana
Charles Zurnstein, Vice-President	Burke, Idaho
Evaleen Seelig, Secretary-Treasurer	Wallace, Idaho
W. J. Walker, Mine Foreman-Director	Thompson Falls, Montana
Wray Featherstone, Mining Engineer	Wallace, Idaho

Mr. Vose has worked as a practical miner for many years in mines in the Coeur d'Alene District and in Grass Valley, California, and apparently is capable of directing the proposed work. Although

Mr. Vose is apparently short on an understanding of mining economics, the quality of the work being done in the mine indicates extreme sincerity. Mr. Vose is 72 years old and has a heart condition which prevents him from doing physical work.

The applicant company proposes to meet its share of the costs by depreciation of equipment which it will furnish, and with money. The applicant is making arrangements to sell 500,000 shares of stock which will net $100,000. Part of this money will be used in the exploration program.

LOCATION AND ACCESSIBILITY

The property included in the application is in the unorganized Prospect Creek (locally referred to as "Burns") Mining District in T. 21 N., R. 31 W. (unsurveyed), Sanders County, Montana, 11 miles west of Thompson Falls, Montana, on an improved mountain road to Burke, Idaho. Thompson Falls is the nearest rail and shipping point, but during the summer and fall ore is trucked over Glidden Pass to Burke, Idaho, and beyond.

The area is warm and dry during the summer months; the winter months are cold with snow covering the ground for 5 months or more. During much of the winter Glidden Pass is closed, but the property can be reached from Thompson Falls throughout the year.

PROPERTY RIGHTS

According to the application, the Montana Standard Mining Company Limited controls the Nellie group of claims, consisting of 13 lode claims, patented in 1913. According to Mineral Survey No. 9435 (pl. 1), however, the Nellie group includes only 10 patented claims, as follows:

Margaret May	Little Maggie
Young Jim	Andrew Carnegie
Herbie	Ore Shoot
Jumbo	Nellie
Maggie Fraction	Carnegie Library

Correspondence with the applicant regarding this discrepancy shows that Montana Standard does indeed control the above-cited Nellie group of patented claims and also four unpatented claims, namely, the Ten to One, Mary, Bettye, and Tucker. Although the claim plat of the Nellie group (furnished with the application) shows only the Ten to One unpatented claim, it is assumed that the other three cited unpatented claims are contiguous with the Nellie group. Although the four unpatented claims are not specifically described in the application, undoubtedly Montana Standard will include them if requested to do so.

The claim plat clearly shows that the apex rights of the vein fall primarily within the Little Maggie and possibly in the Jumbo and Herbie to the west, and the Carnegie Library and Ten to One on the east. The ground likely to be benefited by the proposed exploration will all apex within the Little Maggie. The proposed winze, however, is vertically under the Andrew Carnegie and Ore Shoot claims and bottoms within 15 feet of the west end line of the Ore Shoot claim dangerously near ground covered only by the overlapping Eagle claim (Mineral Survey No. 8953) which is not controlled by the applicant (pl. 2). Any drifting west would carry the work directly toward the Eagle claim; about 30 feet of drift west on the proposed 230 level and 15 feet of drift west on the proposed 430 level would bring the work to the west end line of the Ore Shoot claim. Drifting east would be under the Ore Shoot claim and property disputes in that direction are not likely. As the more promising ground lies to the west of the proposed winze, the proximity of this work to the western end line of the Ore Shoot claim and east side line of the Eagle claim should be noted by the legal section of DMEA. If apex rights are firmly established in the Prospect Creek Mining District, probably no legal problems would be encountered in so far as the applicant is concerned, but I presume that before considering a contract DMEA would insist that the applicant have control of the Eagle claim, or that part of it which would be transected by the DMEA workings. This would require some sort of agreement with the owners of the Eagle claim, plus a consent to lien.

DESCRIPTION OF THE PROPERTY

The claims are on steep north-facing slopes of a small mountain on the south side of Prospect Creek, about half way between Daisy and Crow Creeks, two north-flowing tributaries to Prospect Creek. The mountain rises from about 2,950 feet at stream level to 5,066 feet. The slopes are covered with a moderately dense growth of overgreen trees and brush.

The property is developed by three crosscut adits, each with some drifting on the vein (pl. 2). Adit or Tunnel No. 1, about 655 feet above stream level, has a total of 300 feet of crosscuts and drifts. Tunnel No. 2, about 360 feet above stream level, has 900 feet; and Tunnel No. 3, approximately 75 feet above stream level, has 2,700 feet of workings which include a 40-foot winze and 50 feet of drift from the bottom of the winze (pl. 2). All workings are open and very little timber is required.

A small ore bin and picking belt are located just below the portal of Adit No. 3.

Mining equipment at the mine includes an electrically driven air compressor (approximately 105 cfm), 12-inch ventilating fan, compressed air locomotive, four 20-cubic-foot mine cars, air hoist, sinking bucket, drill machines and steel.

PRODUCTION

Work on the property is reported to have started about the turn of the century. By the time the claims were patented in 1913, the three adits were completed. Early production is not known, but it is rumored that two cars were shipped from Adit No. 2, and an unknown tonnage from No. 1 and No. 3 adits. Some work was done by Mr. Vose in 1938. Present work dates from late 1954 during which time two or more men have worked most of the time.

Settlement sheets submitted with the application date from November 17, 1954 through December 5, 1956, and represent production from the No. 3 level and 40 level workings during that period. Because all the material was hand sorted before shipment to mill or smelter, however, it is impossible to determine precisely the amount or grade of ore taken from the stopes during this period. Nevertheless, sufficient information is on hand to permit a reasonably sound estimate of the tonnage and grade of the ore removed from the mine during this period.

Table I summarizes the smelter returns in terms of contained metal (Ag:Pb:Zn). From this table the silver-lead-zinc ratio of the ore can be calculated and would represent a "best estimate" as to the ratio of these metals in the mine-run ore. This ratio proves to be almost exactly 1 oz. Ag:3% Pb:2% Zn.

A total of 223.9 tons of lead concentrates and hand-sorted ore and 169.5 tons of zinc concentrates have yielded a net smelter return of $47,911.81. It is estimated that this yield was from 1,925 short tons of mine-run ore that averaged 2.7 ounces silver per ton, 8.2 percent lead and 5.3 percent zinc, all of which was produced from the Main Stope above the No. 3 level and the 40 level workings. The basis for this estimate is as follows:

We know from an examination of the entire mine workings that no work has been done in the No. 1 or No. 2 level workings for at least a decade or two. From our mapping we know the maximum lengths of stopes "E" and "W" off the 40 level and the heights of the same. We also know that the widths of these two stopes average somewhere between 4.5 and 5.0 feet. We know quite accurately the dimensions of the 40 level and of the winze to the 40 level.

From tape measurements up the two manways of the Main Stope above the No. 3 level we know the present average height to be no more than 120 feet above the sill. From maps and a section by V. F. Hammer-and and A. E. Nugent (see p.8 this report) and from oral communication with the same gentlemen, we know that the Main Stope had been stoped up, with the exception of one small pillar still remaining, to a minimum height of 60 feet and as much as 80 feet above the sill along its entire length at the time of their last examination made on December 7, 8, and 9, 1954. We also know the width of the Main Stope varies between 4 and somewhat more than 6 feet and that it probably averaged 4.5 feet in width.

The volumes and tonnages of the subject workings are calculated as follows:

I. Main Stope - 60 feet high at minimum prior to production period under analysis and 120 feet high at the end of production period.

Block mined: 55 feet long
60 feet high
4.5 feet wide

$$\frac{60 \times 55 \times 4.5}{12} = 1{,}237.5 \text{ short tons}$$

Table 1.--Reported production from the Montana Standard Mining Company, Ltd. Nellie Group, November 17, 1954 to December 5, 1956

Product	Quantity (short dry tons)	Contained metal (Calculated from settlement assays, Bunker Hill Co.) Ag (oz/ton)	Pb (short tons)	Zn (short tons)
Crude ore, hand sorted	33.326	600	19.016	3.603
Concentrates, lead*	190.568	4,337	136.672	13.994
Concentrates, zinc*	169.488	252	1.971	84.939
	393.382	5,189	157.659	102.536

*Milled from hand-sorted ore by the Golconda Custom Mill, Shoshone County, Idaho

II. Stope E

Block mined: 20 feet long (average)
30 feet high (back to back)
4.5 feet wide

$$\frac{30 \times 20 \times 4.5}{12} = 225.0 \text{ tons}$$

III. Stope W

Block mined: 15 feet long (average)
30 feet high (back to back)
4.5 feet wide

$$\frac{30 \times 15 \times 4.5}{12} = 168.75 \text{ tons}$$

IV. 40-level drift

Block mined: 50 feet long
8 feet high (sill to back)
5 feet wide

$$\frac{50 \times 8 \times 5}{12} = 166.6 \text{ tons}$$

V. Winze to 40 level (Little ore shows in walls but applicant reports production from this work.)

Block mined: 10 feet long
30 feet high
5 feet wide

$$\frac{30 \times 10 \times 5}{12} = 125.0 \text{ tons}$$

Total tonnage from all 5 blocks (rounded to nearest 5 tons):

Main Stope	1,240
Stope E	225
Stope W	170
40 level drift	165
Winze	125
	1,925 short tons which yielded 5,189 ounces Ag, 157.66 tons Pb, and 102.54 tons Zn.

The average grade of the subject mine-run ore is figured as follows:

$$\frac{5{,}189 \text{ (oz. Ag)}}{1{,}925 \text{ (tons ore)}} = 2.69 \text{ or } 2.7 \text{ oz. Ag/ton}$$

$$\frac{157.66 \text{ (tons Pb)}}{1{,}925} = 8.19 \text{ or } 8.2 \text{ percent Pb}$$

$$\frac{102.54 \text{ (tons Zn)}}{1{,}925} = 5.32 \text{ or } 5.3 \text{ percent Zn}$$

MATERIALS AND SUPPLIES

Materials, supplies, and equipment may be secured in Kellogg or Wallace, Idaho, a distance of about 32 miles, or in Missoula, Montana, a distance of 105 miles. Manpower is available from the Coeur d'Alene District and locally in Montana. A power line and a stream cross the property and can supply adequate power and water for mining and milling. The current wage scale in the Coeur d'Alene District is: Shaftman, $18.98; miner, $18.14; mucker, $15.80; hoistman, $17.18; and timber framer, $17.18.

GEOLOGY

The Montana Standard mine workings were mapped by V. F. Hammerand and A. E. Nugent during examinations made in 1943, 1947, and 1954. Although Mr. Hammerand and Mr. Nugent are now with the Bunker Hill Company, their work at the Montana Standard mine was done independently. They kindly furnished their field sheets to the Field Team on a personal basis.

The property is underlain by beds of the Prichard formation of Precambrian age (pl. 2). The sediments intersected by the workings are massive to thick-bedded cream to buff and light-gray quartzites with some zones of light-gray to black argillites and gray-green argillaceous quartzites. Locally the beds are limy; grains of pyrite and pyrrhotite are present nearly everywhere in the section. The beds strike N. 15° W. and generally dip 85° E., but locally they are overturned and dip about 85° W. From the Geologic Map of Montana (1955) and plate 2, Geologic Map of the Coeur d'Alene District (U. S. Geol. Survey Bull. 732, 1923), it is inferred that the rocks are part of the east limb of an anticline, the axial plane of which strikes about N. 15° W. Hammerand and Nugent believe the workings are in the upper portions of the Prichard, a zone generally considered favorable for ore deposition.

The beds are cut by a large diorite dike, possibly several hundred feet thick, which strikes slightly east of south across the property and dips 50°-70° W. The diorite is exposed in all of the workings; the No. 2 and No. 3 levels explore sediments on the east

or footwall side of the dike, but the No. 1 level workings are entirely within the diorite (pl. 2). The dike rock is light to medium gray-green in color with a very fine-grained to hornfelsic and even aphanitic texture. In places the dike is so thoroughly altered that it cannot be easily distinguished from the fine-grained sericitic quartzite with which it is in contact. Megascopic examination shows that the diorite is dominantly plagioclase with sparse biotite, hornblende and magnetite accessories. Cubic crystals of pyrite are sparse to abundant at all exposures. Sericite is generally sparse but widespread; chlorite and epidote were noted in places. Quartz, probably introduced by hydrothermal action, locally fills minute fractures and grain interstices of the rock. Quartz stringers and pods up to 6 inches wide fill openings and replace the wall rock along fractures in both the diorite and the nearby quartzites.

Hydrothermal alteration is evidenced in the quartzites by the presence of sericite and biotite, particularly near to inferred or known diorite. Biotite halces jacketing quartz lenses are particularly notable. "Black" alteration of the normally cream to light-gray quartzites is notable along fractures and joints near the diorite. The altered material is too fine grained for a megascopic determination, but it is probably due to the action of iron- and manganese-bearing hydrothermal solutions moving away from the diorite mass.

The principal ore-bearing structure on the property is a sheeted fault that strikes westerly and dips from 35° to 65° S. This structure has itself been cut and invariably offset by a series of steeply dipping post-mineral faults. The cross faults strike predominantly S. 20° E., dip 70°-85° W., and have been followed on the No. 3 level as much as 600 feet. They are generally barren fracture and shear zones with little or no gouge that range from less than an inch to 2 or 3 feet in width. Locally, however, the cross faults may consist mostly of gouge; at other localities minor quartz stringers are present. The only sulfides observed in the cross faults apparently are due to drag; sampling at three exposures indicates they are essentially barren.

Where intersected by the cross faults the principal ore-bearing structure is invariably offset to the north on the west side of the cross faults. On the No. 3 level there is an apparent change in width and/or apparent grade in the ore-bearing structure from one side of a cross fault to the other; this relationship is due to coincidence and not to the influence of the cross faults on the mineralization. This conclusion is supported by the facts that on No. 1 and No. 2 level workings the veins do not change in character or width from one side to the other of a cross fault, and that on the No. 3 level the changes in width and/or apparent grade begin before the ore-bearing structure reaches the cross faults.

Nothing is known concerning the movement along the ore-bearing structure or of the barren cross faults except for the horizontal displacement of the ore-bearing structure by the cross faults. This displacement could be caused either by strike slip and/or dip slip components on the cross faults. The greatest horizontal displacement known is 25 feet, but it is usually more on the order of 4 or 5 feet and does not create much difficulty in keeping with the vein during drifting.

All three adit level workings have exposed galena-sphalerite-bearing quartz veins, and it is probable that these veins occur along one structure (pls. 2 and 3) or at least along an interconnected network of related faults all belonging to the same general zone of shearing.

If the ore-bearing structure is cymoid in character, as shown on plate 1, and if the movement were normal, the best ore-making conditions would occur on the steeper elements; if the movement were reverse, the conditions would be best on the "flats." The only evidence for the existence of "flats" in the structure is 1) the change in dip from about 65° in the stopes above the No. 3 level to 35° on the 40 level; 2) the slight flattening observed at the top of the Main Stope; and 3) the absence of a fault to explain the fact that the position of the vein on the No. 3 level does not correspond to its position if projected from higher levels. An alternate explanation is that there are two or more veins arranged en echelon, but this does not fully explain the change in dip.

The deposit is best developed on the No. 3 level where along its wider portions it consists of a well-developed sheeted zone of roughly parallel fractures filled and replaced with galena-sphalerite-bearing quartz veins separated by layers of barren rock. The quartz veins are occasionally linked by cross fractures filled with mineralized quartz. Locally, pyrite, galena, and sphalerite occur as disseminated crystals and pods in the apparently unfractured country rock. In places the ore and intervening rock is crinkled and folded, evidencing some post-mineral movement.

Where the vein narrows to a foot or so, the quartz usually occurs as a single but discontinuous vein locally accompanied by very minor veinlets. Where stoped, the quartz-bearing sheeted zone generally is from 3 to 4 feet wide, although over short intervals it approaches 5 feet in width. The individual quartz veins commonly range in width from mere wisps up to 6 or 8 inches, and rarely up to a foot or so. The ore minerals form stringers, veins, and irregular bunches at the borders or interior of the quartz veins; the intervening sections of country rock are usually silicified and contain varying amounts of pyrite, sericite, and chlorite. Generally, they appear to be altered and silicified quartzites of the Prichard;

on the 40 level, however, some highly altered diorite was identified in the structure, raising the possibility that the mineralization occurs along a faulted dike.

Although the Montana Standard structure is located in the Prospect Creek District at the west end of the Coeur d'Alene District and is roughly aligned with the Thompson Pass fault, which is mapped from near Sullivan, Idaho in the Coeur d'Alene District to within 6 miles of the property, it bears characteristics common to quartz-silver-lead deposits occurring along metadiorite dikes and sills in the upper Prichard formation in the Grouse Mountain-Callahan Creek area, about 60 miles north-northwest of the Placer Creek District (Gibson, Russell, 1948, Geology and ore deposits of the Libby Quadrangle, Montana: U. S. Geol. Survey Bull. 956).

The best showings in the entire mine occur on the No. 3 level along an 80-foot interval of the structure lying between the West cross fault and the winze (pl. 2). All the recorded production came from the Main Stope above this interval and from the winze and stopes "E" and "W" mined off the 40 level below.

The Main Stope is about 55 feet long, 120 feet high, and averages 4.5 feet in width.

Where first encountered west of the West cross fault, the structure is about 2 feet wide but is very lean; within an interval of about 50 feet westward from here, it narrows to a barren fracture an inch or two wide. From the winze east the vein thins gradually and is practically barren from a few feet east of a small cross fault to where it pinches out to a minor fracture and is lost in the north wall of the drift. Thinning eastward might possibly be due to a decreased competency of the rocks as they become more argillaceous in this direction.

On the No. 2 level the best showings are west of the West cross fault, but at best the structure only averages about 2 feet in width, although perhaps, over short intervals, it is of better grade than on the No. 3 level. East of the West cross fault the vein is complicated by a series of closely spaced cross faults; here it is less than a foot wide and sulfide minerals are sparse.

The No. 1 level workings are entirely in rock of the diorite dike, whereas on the No. 2 and No. 3 level workings the dike is encountered only at the west end of the drifts and at the portal area of the No. 3 level. Practically all the exploration has been west of the West fault and the structure is even more poorly developed than on the No. 2 level. It consists of a foot (give or take a few inches) of shear zone containing a fairly high-grade sulfide-bearing quartz stringer that locally is as much as two-thirds of a foot wide but which generally is narrower. A thin parallel mineralized

structure about 60 feet north of the vein probably is a split off the main vein and might be interpreted to be evidence of horsetailing and weakening of the vein at its upper extremities.

MERIT OF THE PROPERTY

Ore-bearing structure is exposed on all four levels over a vertical interval of 620 feet. Although there are other possibilities, these exposures are believed to be all on one structure as shown on plate 1. If such is the case, the structure widens markedly from around a foot on the No. 1 level to over 4 feet on the No. 3 and 40 levels. The grade of the structure on the No. 3 level is estimated from production records at 8.2 percent lead, 5.3 percent zinc, and 2.7 ounces of silver per ton. The grade on the No. 1 and No. 2 levels is probably not very different.

The character of the vein along its steeper portions has been disclosed on all three levels, but none of the inferred flats have been explored to any extent. Exploration by winze and drift below the 40 level would apparently test a "flat", as well as the likelihood that the structure will continue to widen with depth. Sufficient ore might be disclosed to justify a small mill which would in turn make the ore more economic under the conditions of the locality.

At depth, below the No. 3 level, the ore shoot may have greater economic strike length than is presently known. This is indicated by the fact that at its deepest exposures the structure is both stronger and more consistent in direction of strike than it is on the upper levels. If the structure persists westward to and through the diorite dike, ore possibilities within and near the dike cannot be discounted. The structure, where it intersects the dike on the No. 1 level, is well mineralized, though narrow. The fact that it is narrow on the No. 1 level is probably due to a lessening of movement at its upper extremity; the fact that it is well mineralized only points out that the diorite is receptive to ore deposition. If the relative competence of the quartzites and argillites significantly affect the economic persistence of the structure, then, on this basis alone, because the beds dip 85° E., about 10 feet of additional persistence east per 100 feet of vertical depth can be inferred.

The possibility that the Montana Standard structure will continue to improve in width and strike length below the 40 level appears good and a program to test the structure at depths of from 200 to 400 feet below the 40 level would be good exploration. On the other hand, testing the structure to depths significantly less than 200 feet below the 40 level might do the property harm, as work done over such a short vertical distance would probably yield only inconclusive results regarding the possibility that the structure widens and increases in persistence with depth.

APPLICANT'S PROPOSAL

The applicant proposes to sink 400 feet in a winze and drift 225 feet on each of two levels at a total cost of $80,010.50. Detailed costs furnished with the application are as follows:

	Cost/ft.
Timber	$10.50
Explosives, including delays	4.00
Air line, fan line, water column	4.75
Labor, including hoistman	60.00
Timber framing, including blocks and wedges	6.00
Steel, air, machines, water pumping	6.60
Waste tramming and disposal (this includes all miscellaneous expense not itemized)	2.28
	$94.13

DISCUSSION OF APPLICANT'S PROPOSAL

The applicant's proposal is geologically sound in that it tests to significant depth a barely economic structure that shows possibilities of improvement with depth. During the examination it was suggested that diamond drilling the structure below the 40 level from a station south of the structure in the No. 3 level crosscut south might be informative and the next logical step. Mr. Vose took a very dim view of this proposal, however, and stated that he would not be interested in diamond drilling prior to winze sinking. With regard to winze sinking, Mr. Vose stated that he would be willing to go along with any program leading to a significant increase in depth. In view of the small size of the one known ore shoot, a 400-foot "bite" does not seem prudent at this time. It is suggested that sinking to about half this depth would be sufficient to demonstrate continuity of the ore body and possible improvement with depth and is justified by the showings on the No. 3 level; consequently, the following program is proposed.

RECOMMENDED EXPLORATION PROJECT

A one-stage program of exploration is recommended as follows:

Stage I

Extend the existing two-compartment winze an additional 200 feet and, allowing for a sump, cut a 230 level station. On the 230 level, crosscut and drift a total of 225 feet, or about 100 feet east and 100 feet west -- the actual distances in each direction to be determined by the conditions encountered. The winze should follow, as closely as is practical, the dip of the vein; therefore, very little crosscutting is anticipated. However, if the vein below the 40 level should prove to be as flat (-35°) as measurements on the 40 level indicate, then keeping the winze with the vein would not be practical and more than 25 feet of crosscutting would be needed. This extra footage could easily be transferred from the drift footage.

JUSTIFICATION OF PROPOSED PROGRAM

The proposed program would explore a structure primarily to test the possibility that it improves in width and length at depth. Improvement with depth is already fairly well supported by present exposures but, taking the pessimistic view that there will be no essential change in character with depth, it is still possible that any discoveries made would be economic under the existing mining conditions. The following analysis supports this viewpoint:

Because of timber and high backs samples cut during the examination had to be taken of necessity at the few points where the vein was accessible. Consequently, they could not be systematically spaced within the ore shoot nor could all of them be taken across the full width of the vein (note S-353B which was taken on the sill and represents less than half the actual width of the vein). Further, the main stope above the 3 level, which probably represents the best ore, could not be sampled. The samples, therefore, merely indicate the presence of ore and do not represent quantitatively either the width of the vein or the grade of the ore. Production records, discussed on pages 5-8, although incomplete provide a more accurate record of what may be expected below the No. 3 and 40 levels.

On this basis the ore body would be 55 feet long and 4.5 feet wide and would average 8.2 percent lead, 5.3 percent zinc, and 2.7 ounces of silver per ton. If the ore shoot continues to a depth

of 200 feet it would contain 4,125 short tons.[1] Using the same method of estimating the recoverable value of the ore as used by Parsons, we have:

	Ag	Pb	Zn
Mill heads:	2.7 oz.	8.2%	5.3%
Recoverable per ton: (95% of Ag & Pb, 90% Zn)	2.6 oz.	155.8 lbs.	95.4 lbs.
Total recoverable from 4,125 tons [1]	11,725 oz.	642,675 lbs.	393,525 lbs.
Gross value recovered [2] (Ag @ 91¢; Pb @ 16¢; Zn @ 13¢)	$10,669.75	$102,828.00	$51,158.25
Net value at smelter [3] (75% of Ag & Pb, 45% of Zn)	$ 8,002.31	$ 77,121.00	$23,021.21

1/ Expected ore in block 200 feet on plunge, 55 feet long, 4.5 feet wide. No dilution factor.

$$\frac{55 \times 200 \times 4.5}{12} = 4{,}125 \text{ short tons}$$

2/ Gross recoverable value = $164,656.00 or $39.92 per ton

3/ Net smelter value = $108,144.52 or $26.22 per ton

Cost of proposed 200-foot shaft work and 225 feet of exploratory drifting:

Mr. Parson's estimate: $32,460.00 or $7.87 per ton

There would thus be available $18.35 ($26.22 - $7.87) per ton of ore developed to defray mining, milling and overhead costs. Dilution would not enter into this calculation as the method of arriving at the grade estimate allows for dilution.

This cost analysis is based upon an assumption of no improvement with depth. Even so, the proposed program appears a fair risk and in view of the possibilities of improvement with

depth, the proposed program might well bring the Montana Standard property into successful operation on a small scale.

Enclosures 3

Distribution:
DMEA (4)
USBM (2)
USGS(SRO)
Docket
Alvord

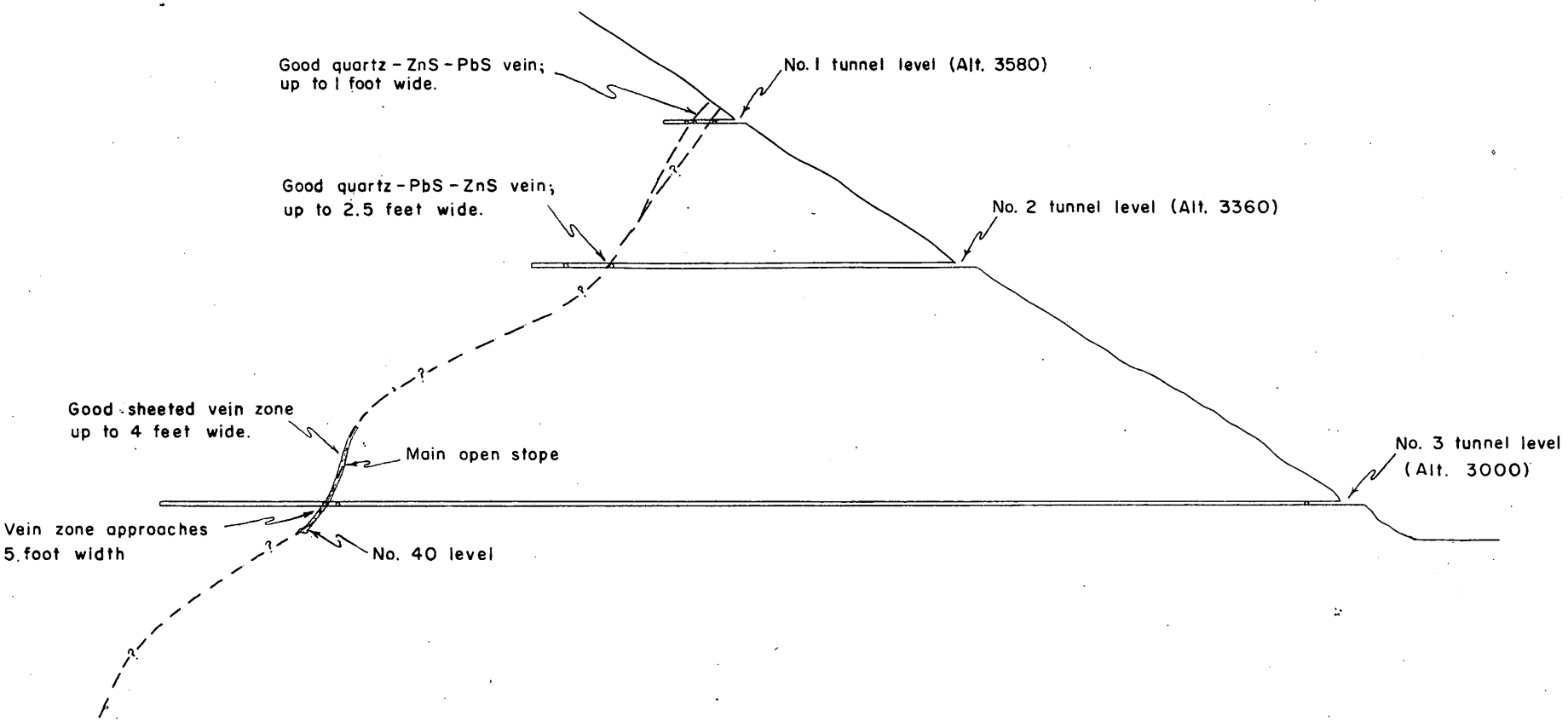


Plate 3 - Vertical Section looking N. 15° E. showing the Montana Standard Vein Structure and principal workings

Montana Standard Mining Company, Ltd. Property

Sanders County, Montana

200 100 0 200 FEET.

RECEIVED
BUREAU OF MINES
MAR 1? 1957
SPOKANE, WASH.

Thompson Falls, Montana
P.O. Box 387
March 11, 1957

United States Dep't of the Interior
Defense Minerals Exploration Administration
[illegible] W. Division St.
Spokane 1, Washington

Re: Docket No. DMMA-[illegible] (Leaf-Zinc)
[illegible] Co., Ltd.
[illegible]

[illegible] March [illegible] of [illegible],
[illegible] so [illegible]
[illegible] have [illegible] the Nellie,
[illegible] Eagle
[illegible] 173,607
[illegible] tented
[illegible] Eagle
[illegible],
[illegible] in
[illegible] have
[illegible] not
[illegible]

FILE COPY
RECEIVED MAR 18 1957

DATE	INITIALS	CODE
3/18	C	220
3/15	WRH	500

ORIGINAL FILE COPY
DMEA

RECEIVED MAR		
DATE	INITIALS	SC.
3/12	C	220
3/12	HRG	500

1201 N. Division St.
Spokane 2, Washington

March 6, 1957

Docket

Montana Standard Mining Co., Ltd.
P. O. Box 146
Burke, Idaho

Re: Docket No. DMEA-4560 (lead-zinc)
Montana Standard Mining Co., Ltd.
Nellie et al Claims
Sanders County, Montana

Gentlemen:

We have noted a discrepancy in your DMEA application. Under Item 3, Property Rights, you state the property includes 13 patented claims comprising 173.607 acres. On the claim map submitted, which is also the claim patent survey, 10 claims are listed which total 173.607 acres.

The claims listed are as follows: Nellie, Carnegie Library, Maggie Fraction, Little Maggie, Andrew Carnegie, Ore Shoot, Margaret May, Young Jim, Herbie, and Jumbo. The Colombia and the Ten to One are shown as unsurveyed, and the Alpha Fraction and Eagle are listed under a different survey number and apparently are not included in your property.

Kindly advise us by return mail the names of the claims included in your application. If you do not control the Alpha Fraction and the Eagle would it be possible for you to obtain control of them if necessary?

Sincerely yours,

Wing G. Agnew, Member
DMEA Field Team, Region I
Northwest District

cc: DMEA (2)
USGS (2)

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
2/7	[illegible]	110
"	[illegible]	100
2/8	C	225
		100

FEB 7 1957

Mr. Loy Vose, President
Montana Standard Mining Co., Ltd.
Post Office Box 146
Burke, Idaho

Re: Docket No. DMEA-4560 (Lead-Zinc)
Montana Standard Mining Company, Ltd.
Nellie, et al claims
Sanders County, Montana

Dear Mr. Vose:

We have been advised by Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, Northwest District, that you wish us to return assay data and settlement sheets which were submitted with your application. We are therefore enclosing:

14 - Assay certificates
8 - settlement sheets
Miscellaneous material

Sincerely yours,

W. R. Griswold

W. R. Griswold, Chief
Base Metals Division

Enclosures

WRGriswold/er 2/7/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.
Reg 1, N.W. Dist (2)

R.C.B.

8623

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

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 1 1957

DATE	INITIALS	CODE
2-1	C	220
2-1	W.R.G	500

January 29, 1957

Docket

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4560 (Lead-Zinc)
Montana Standard Mining Co., Ltd.
Nellie, et al claims
Sanders County, Montana

Dear Mr. Selfridge:

We are enclosing copies of supplemental assay data and settlement sheets which were handed to us by Mr. Loy Vose, president of the company, because he requests the return of the originals as soon as possible. Also, he requests the return of the originals of the other assay data and settlement sheets which were sent to you with our letter of November 28, 1956, transmitting this application. We have reproduced copies for our files.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures
cc: USBM(2)
Alvord

DATE	DESCRIPTION	GROSS AMOUNT	DISCOUNTS	DEDUCTIONS	NET AMOUNT
	As attached				497.62

DETACH THIS STATEMENT BEFORE CASHING CHECK

ACCT.	[illegible]	ACCT.	AMOUNT	ACCT.	[illegible]	APPROVAL	
6.00		5702	497.62				
Cr. 400.9							

BUNKER HILL SMELTER

P. O. Address: KELLOGG, IDAHO
R. R. Station: BRADLEY, IDAHO

BUNKER HILL & SULLIVAN MINING & CONCENTRATING COMPANY

In Account With

MONTANA STANDARD MINING COMPANY

Name of Mine: Montana Standard Mine Lot No. ____ Smelter Lot No. 13

Location: Thompson Falls, Montana R. R. Shipping Point: By Truck Class: Crude

DATE OF ARRIVAL 11/28/56 DATE OF SAMPLING 11/28/56 DATE OF SETTLEMENT 12/5/56

Car Initial	Car No.	H_2O	Weight, Lbs.
1	Truck	0.6	6550

TOTAL GROSS WEIGHT	6550
____ Sacks. Weight of Sacks	
GROSS WEIGHT OF ORE	39
Moisture Pounds	
DRY WEIGHT OF ORE	6511

METAL ASSAY

Gold	Tr.	Oz. P. T.
Silver	18.8	Oz. P. T.
Copper	Tr.	% P. T.
Lead	58.4	% P. T.
Iron	3.6	% P. T.
Insol.	8.4	% P. T.
Lime	0.8	% P. T.
Sulphur	16.0	% P. T.
Zinc	11.6	% P. T.
Antimony	Tr.	% P. T.
Arsenic	.08	% P. T.
Bismuth		% P. T.

QUOTATIONS DATE 11/28/56

Silver	.91375	Per. Oz.
Copper		Per. Lb.
Lead	.24000 - .08333 = .14667	Per. Lb.
Zinc	.13500 @ 25% = .03375	Per. Lb.
Antimony		Per. Lb.

SMELTING AND REFINING DEDUCTIONS—PER TON

Base Smelting Charge		$ 8.000
Plus ____ % Wet Pb. under ____ % @ ____		$
Credit ____ % Iron over (____ % Zinc x 1.8) @ 40c a unit		$
Debit 3.6 % Iron under (11.6 % Zinc x 1.8) @ 40c a unit		$ 6.912
Credit 8.6 % Silica over (3.6 % Iron x) @ 8c a unit		$ - .400
Debit ____ % Silica under (____ % Iron x) @ 8c a unit		$
Credit ____ % Lime over (____ % Iron x) @ 10c a unit		$
Debit ____ % Lime under (3.6 % Iron x) @ 10c a unit		$ .360
TOTAL SMELTING DEDUCTIONS		$ 14.872
Silver Charge over ____ oz. per ton @ ____ c per oz.		$
Arsenic charge over ____ % @ ____ per unit		$
Bismuth charge over ____ % @ ____ per pound		$
Moisture charge over ____ % @ ____ per unit		$
Sulphur charge over ____ % @ ____ per unit		$
		$
		$
TOTAL SMELTING AND REFINING DEDUCTIONS		$ 14.872

PAYMENT FOR METALS — VALUE PER TON

Gold	____ Oz.		@ ____	Per Oz.	$	
Silver	18.8 Oz.	95 %	@ .91375	Per Oz.	$	16.320
Copper	____ %	%	@ ____	Per Lb.	$	
Lead	58.4 %	92 %	@ .14667	Per Lb.	$	155.457
Zinc	11.6 %	90 %	@ .03375	Per Lb.	$	3.915
Antimony	____ %	%	@ ____	Per Lb.	$	
				Gross Value	$	175.692
LESS SMELTING AND REFINING DEDUCTIONS					$	14.872
NET VALUE PER TON					$	160.820

TOTAL OUNCES SILVER IN THIS SHIPMENT 61.20

SETTLEMENT

DRY WEIGHT 6511 POUNDS = 3.2555 TONS @ $ 160.820 PER TON EQUALS $ 523.95

Less Freight from Shipping Point to Bradley, Idaho

Gross Weight ____ Pounds = ____ Tons @ $ ____ per ton equals $ ____

Extra sampling	$ 10.00	
Extra frt. to N.Y. on 3498 lbs. lead paid @ (26.46 - 17.35)	$ 15.93	25.93

Pay: Montana Standard Mining Company, Ltd.
401 1st Street - Wallace, Idaho

NET PROCEEDS $ 497.62

RECEIVED DEC 11 1956 A.E.M.D.

Golconda Lead Mines

Helena, Mont.

October 17, 1956

Montana Standard Mining Co., Ltd.

Custom Milling Lot No. 4, September 21 and 22, 1956

Lead Lot #12, B.H. Co., N.P. 50619	$6,247.05
Zinc Lot # 2, M.R. & Co., N.P. 50511	2,077.13
Net smelter returns	$8,324.18

Milling 300 tons @ $3.50 =	$1,050.00
Hauling stockpile E.G.S. 269 tons @ $0.50 =	134.50
Control assay P. Mack	8.00
Weighing & sampling lead lot #12, E. G. Deggendorfer	5.44
Total deductions	[illegible]

Balance due Montana Standard $7,126.24

Zinc direct to Mr. Vear by Methuen/Clarke Co/Co. 2,077.13

$9,199.11

RECEIVED FEB 1 1957 D.M.E.A.

P. O. Box 808

PHONE 8-3382

CERTIFICATE OF ASSAY

FROM

PETER MACK

ASSAYER AND CHEMIST

Coeur d'Alene Mill

Wallace, Idaho,

MARKED	Gold ozs. per ton	Silver ozs. per ton	Lead %	Zinc %	Copper %	Iron %	Insol. %	Lead %	Zinc %
Date Montana Standard									
Mill Heads 9/21			5.3	6.4					
Lead Concentrates			70.0	8.2					
Lead Tails			0.2	4.65					
Zinc Concentrates			2.6	50.4					
Zinc Tails			Nil	Nil					

Charges

P. Mack

P. O. BOX 808

PHONE 8-3382

CERTIFICATE OF ASSAY

FROM

PETER MACK

ASSAYER AND CHEMIST

Coloonda Mill

Wallace, Idaho, Sept. 26, 1926

MARKED	Gold ozs. per ton	Silver ozs. per ton	Lead %	Zinc %	Copper %	Iron %	Insol. %	Lead %	Zinc %
Date Montana Standard									
9/22 Mill Heads			7.4	5.6					
Lead Concentrates			72.8	7.0					
Lead Tails			0.25	5.2					
Zinc Concentrates			0.7	51.4					
Zinc Tails			0.15	0.15					

RECEIVED OCT 1 1926

Charges

P. Mack

ZINC OXIDE AGRICULTURAL CHEMICALS LEADED ZINC OXIDE

Northwest Refining and Chemical Co.

125 N. Park Road Phone WAlnut 4-1840
Spokane 62, Washington

Cable Address — NORCO

ZINC FLOTATION CONCENTRATE SETTLEMENT DATE 10/11/56

IN ACCOUNT WITH: Montana Standard Mining Co.
Thompson Falls, Montana

OWES Montana Standard

SHIPPED VIA: N. P. Car No. 50511 SHIPMENT NO. 2

DATE RECEIVED: 10/1/56 DATE SAMPLED: 10/1/56

			Pounds
Moisture	9.12%	Gross Weight	119,900
Zinc	50.1 %	Tare	48,500
Lead	%	Weight (Wet)	71,400
Silver	%	Weight (Dry)	64,888
Gold	%		32,444T
Iron	%		
Insol.	%		
Sulphur	%		
	%		
	%		

71400
6512
64888

Base Rate	$ 1.178 p/unit
Bonus	.100 p/unit
Gross Value	$ 2,077.13
Deductions	0
Net Value	$ 2,077.13
Freight	0
Advance	$ 1,700.00
Balance Due	$ 377.13

Our check # 1995

Enclosed Check # 2078

NORCO BRAND

DATE	DESCRIPTION	GROSS AMOUNT	DISCOUNTS	DEDUCTIONS	NET AMOUNT
	As attached Final No 12 Montana Standard				6247.05

D.W.E.A.
FEB 1 1921
RECEIVED

DETACH THIS STATEMENT BEFORE CASHING CHECK

DISTRIBUTION

ACCT.	AMOUNT	ACCT.	AMOUNT	ACCT.	AMOUNT	APPROVALS	
6.60		5702	6317.50				
Cr. 400.9		5700 (cr)	70.45				

THE BUNKER HILL COMPANY

EXPENDITURE AUTHORIZATION

Sept

To: Corporate Accounting

Pay To: Galena Lead Mines

Box 298

Wallace, Idaho

Date	Description	Amount
10/4/56	Final settlement on Lot No. 12 - Montana Standard	6247.05

Authorized By	Distribution
JM	5702 6217.50 5702(GL) 79.45

BUNKER HILL SMELTER

BUNKER HILL & SULLIVAN MINING & CONCENTRATING COMPANY

In Account With

P. O. Address: KE[illegible]
R. R. Station: BRAD[illegible]

Name of Mine [illegible] Mine Lot No. _____ Smelter Lot No. _____

Location [illegible] R. R. Shipping Point [illegible] Class [illegible]

DATE OF ARRIVAL [illegible] DATE OF SAMPLING 9.26.[illegible] DATE OF SETTLEMENT [illegible]

Car Initial	Car No.	H_2O	Weight, Lbs.
		3.5	[illegible]

TOTAL GROSS WEIGHT	[illegible]
___ Sacks. Weight of Sacks	
GROSS WEIGHT OF ORE	[illegible]
Moisture Founds	
DRY WEIGHT OF ORE	[illegible]

METAL ASSAY

Gold	[illegible]	Oz. P. T.
Silver	23.45	Oz. P. T
Copper	[illegible]	% P. T.
Lead	[illegible]	% P. T.
Iron	[illegible]	% P. T.
Insol.	[illegible]	% P. T.
Lime	[illegible]	% P. T.
Sulphur	11.4	% P. T.
Zinc	6.65	% P. T.
Antimony	[illegible]	% P. T.
Arsenic	.02	% P. T.
Bismuth		% P. T.

QUOTATIONS DATE 9.26.56

Silver	[illegible]	Per. Oz.
Copper		Per. Lb.
Lead	[illegible]	Per. Lb.
Zinc	[illegible]	Per. Lb.
Antimony		Per. Lb.

SMELTING AND REFINING DEDUCTIONS—PER TON

Base Smelting Charge		$ [illegible]
Plus ___ % Wet Pb. under ___ % @		$
Credit ___ % Iron over (___ % Zinc x 1.8) @ 40c a unit		$
Debit [illegible] % Iron under ([illegible] % Zinc x 1.8) @ 40c a unit		$ [illegible]
Credit ___ % Silica over (___ % Iron x) @ 8c a unit		$
Debit [illegible] % Silica under ([illegible] % Iron x) @ 8c a unit		$
Credit ___ % Lime over (___ % Iron x) @ 10c a unit		$
Debit ___ % Lime under ([illegible] % Iron x) @ 10c a unit		$ [illegible]
TOTAL SMELTING DEDUCTIONS		$ [illegible]
Silver Charge over ___ oz. per ton @ ___ c per oz.		$
Arsenic charge over ___ % @ ___ per unit		$
Bismuth charge over ___ % @ ___ per pound		$
Moisture charge over ___ % @ ___ per unit		$
Sulphur charge over ___ % @ ___ per unit		$
		$
		$
TOTAL SMELTING AND REFINING DEDUCTIONS		$ [illegible]

PAYMENT FOR METALS				VALUE PER TON
Gold ___ Oz.	@ ___	Per Oz.	$	
Silver 23.45 Oz.	[illegible] % @ [illegible]	Per Oz.	$	[illegible]
Copper ___ %	% @ ___	Per Lb.	$	
Lead [illegible] %	% @ [illegible]	Per Lb.	$	[illegible]
Zinc [illegible] %	% @ [illegible]	Per Lb.	$	[illegible]
Antimony ___ %	% @ ___	Per Lb.	$	
		Gross Value	$	[illegible]
LESS SMELTING AND REFINING DEDUCTIONS			$	[illegible]
NET VALUE PER TON			$	[illegible]

TOTAL OUNCES SILVER IN THIS SHIPMENT [illegible]

SETTLEMENT

DRY WEIGHT [illegible] POUNDS= [illegible] TONS @ $ [illegible] PER TON EQUALS $ [illegible]

Less Freight from Shipping Point to Bradley, Idaho

Gross Weight [illegible] Pounds= [illegible] Tons @ $ [illegible] per ton equals $ [illegible]

Extra frt. to N.Y. on [illegible] lbs lead pc. @(26.[illegible]-[illegible].35) $ 194.[illegible]

To: Golconda Lead Mines
Box 2[illegible], Wallace, Idaho

6247.05

RECEIVED
1957
D.M.E.A.

File Copy
Surname

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

500

DEC 20 1956

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-4560 (Lead-Zinc)
Montana Standard Mining Company, Ltd.
Nellie, et al claims
Sanders County, Montana

Dear Mr. Weissenborn:

The cited application is being referred to your office for consideration, a field examination of the property if warranted, and recommendations.

We are enclosing copies of memoranda, dated December 6 and 12, 1956, by N. E. Nelson, Geological Survey, and O. M. Bishop, Bureau of Mines, respectively, relating to the project. Also one copy of the application is enclosed.

As you had requested, we are returning the five maps which were submitted. In submitting your field report please again forward these maps to us. After a review, we will then forward all original "maps and work sheets" to the Applicant.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

WRGriswold/er 12/18 & 19/56

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
chron.

APPROVED:

Frank D. Lamb
Member, Bureau of Mines

N. E. Nelson
Member, Geological Survey

File Copy
Surname - Griswold
Lamb
Nelson
Selfridge

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

DEC 20 1956

Mr. Loy Vose, President
Montana Standard Mining Co., Ltd.
Post Office Box 146
Burke, Idaho

Re: Docket No. DMEA-4560 (Lead-Zinc)
Montana Standard Mining Co., Ltd.
Nellie, et al Claims
Sanders County, Montana

Dear Mr. Vose:

Your application for Government assistance to explore the cited property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration and is being referred to:

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

If additional information concerning your application is needed, the Field Team will contact you at an early date.

As you request, all maps and work sheets will be returned to you when we have finished processing your application.

Sincerely yours,

C. O. Mitteman (fw)

Administrator

WRGriswold/er 12/18 & 19/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region I, NW Dist (2)
Chron.

R.C.S.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
DEC 13 1956
D.M.E.A.

December 12, 1956

Re: DMEA 4560; Lead-zinc;
$80,010.50
Montana Standard Mining Co.,
Ltd.
13 claims (173.607 acres)
Sanders County, Montana

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, Branch of Base Metals

Subject: Application dated November 23, 1956, transmitted November 28 and received December 5, 1956

The applicant requests DMEA assistance in sinking the present 55-foot winze from the No. 3 Tunnel an additional 400 feet, and in driving 450 feet of drifts east and west from the winze on the 200- and 400-foot sublevels. This work would develop the east-west vein cut by the No. 3 Tunnel crosscut for the length of the known oreshoot.

A study of the maps accompanying the application indicates that this ore structure is the only one discovered and developed, and that stoping above the No. 3 level has apparently been the source of ore assaying about 5.7 percent lead, 4.4 percent zinc and 2 ounces of silver, which the Montana Standard Mining Company has been concentrating and shipping to Couer d'Alene smelters.

The application fails to give the ore widths of the vein or assays for the developed oreshoot or the extensions beyond it. From the evidence at hand it appears that the proposed work is largely a development program for a known oreshoot and it seems probable that the reserves of 10,000 tons indicated in item 4B are chiefly in the block to be developed by the winze.

If such is the case, there is some question whether the proposed work is wholly exploration. Cost data given lump drifting and winzing costs at $94.13 per foot. These may be excessive for drifting and there may be some doubt that the ore developed could pay off the costs.

I recommend that the application be referred to the field team for review and field examination to clarify the application.

O. M. Bishop.

O. M. Bishop

Copy to: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

IN REPLY REFER TO:

RECEIVED DEC 11 1956 D.M.E.A.

December 6, 1956

Griswold

Re: DMEA 4560
Montana Standard M'g. Co.
Montana Standard Mine
Sanders Co., Montana
$80,010.50 - Lead - Zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests assistance in sinking a 400-foot winze and driving 450 feet of drifts to explore a bedded and/or fissure vein in quartzite.

Smelter settlement sheets show intermittent shipments of concentrates have been made in the past year, the most recent, No. 11, being dated May 15, 1956. Shipment No. 10 was made in November 1955.

Maps and sections submitted suggest the ore came from a 50-60-foot ore shoot above the No. 3 Tunnel level, the level from which the winze would be sunk. The maps and descriptive matter do not locate the property other than to say it is 11 miles from Thompson Falls. The country rock is shown as argillite and it probably is part of one of three Precambrian formations, Ravalli, Wallace and Pritchard.

No particular reason is given for sinking 400 feet in one 'bite'. In view of the apparent small size of the known orebody a 100-foot bite may be more appropriate.

Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

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

December 3, 1956

Montana Standard Mining Co, Ltd.
P. O. Box 146
Burke, Idaho

Subject: DMEA-4560

Gentlemen

Your application for exploration assistance, dated November 23, 1956 submitted to our office at Spokane, has been assigned Docket Number DMEA-4560 and referred to the Base Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

(Sgd) Allen S. Dakan

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

Region I, N.W. Spokane, Washington

Code 500

6416

So. 157 Howard Street
Spokane 4, Washington

RECEIVED
DEC 3 1956
D.M.E.A.

November 29, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: New application (Lead-Zinc)
Montana Standard Mining Co., Ltd.
Mineral property
Sanders County, Montana

Dear Mr. Selfridge:

Enclosed are three copies of an application for aid to explore for lead and zinc in the Burns Mining District, Sanders County, Montana. We have retained one copy for our files.

You will note that the applicant has requested the return of all maps and work sheets for his files. We have reproduced the assay data and settlement sheets but ask that the maps be returned with the referral from your office as we have been unable to reproduce them and will need them at the time of the field examination, if one is made.

Sincerely yours,

Donald R. Maclaren
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region 1
Northwest District

Enclosures
cc: USGS(2)
Geologist

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED DEC 13 1956 D.M.E.A.

December 12, 1956

Re: DMEA 4560; ~~Lead-Zinc~~;
$80,010.50
Montana Standard Mining Co., Ltd.
13 claims (173.607 acres)
Sanders County, Montana

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, Branch of Base Metals

Subject: Application dated November 23, 1956, transmitted November 28 and received December 5, 1956

The applicant requests DMEA assistance in sinking the present 55-foot winze from the No. 3 Tunnel an additional 400 feet, and in driving 450 feet of drifts east and west from the winze on the 200- and 400-foot sublevels. This work would develop the east-west vein cut by the No. 3 Tunnel crosscut for the length of the known oreshoot.

A study of the maps accompanying the application indicates that this ore structure is the only one discovered and developed, and that stoping above the No. 3 level has apparently been the source of ore assaying about 5.7 percent lead, 4.4 percent zinc and 2 ounces of silver, which the Montana Standard Mining Company has been concentrating and shipping to Couer d'Alene smelters.

The application fails to give the ore widths of the vein or assays for the developed oreshoot or the extensions beyond it. From the evidence at hand it appears that the proposed work is largely a development program for a known oreshoot and it seems probable that the reserves of 10,000 tons indicated in item 4B are chiefly in the block to be developed by the winze.

If such is the case, there is some question whether the proposed work is wholly exploration. Cost data given lump drifting and winzing costs at $94.13 per foot. These may be excessive for drifting and there may be some doubt that the ore developed could pay off the costs.

I recommend that the application be referred to the field team for review and field examination to clarify the application.

O. M. Bishop

O. M. Bishop

Copy to: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
Files

December 6, 1956

Re: DMEA 4560
Montana Standard M'g. Co.
Montana Standard Mine
Sanders Co., Montana
$80,010.50 - Lead - Zinc

Memorandum

To: W. H. Griswold, Defense Minerals Exploration Administration

From: H. R. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests assistance in sinking a 400-foot winze and driving 450 feet of drifts to explore a bedded and/or fissure vein in quartzite.

Smelter settlement sheets show intermittent shipments of concentrates have been made in the past year, the most recent, No. 11, being dated May 15, 1956. Shipment No. 10 was made in November 1955.

Maps and sections submitted suggest the ore came from a 50-60-foot ore shoot above the No. 3 Tunnel level, the level from which the winze would be sunk. The maps and descriptive matter do not locate the property other than to say it is 11 miles from Thompson Falls. The country rock is shown as argillite and it probably is part of one of three Precambrian formations, Ravalli, Wallace and Pritchard.

No particular reason is given for sinking 400 feet in one 'bite'. In view of the apparent small size of the known orebody a 100-foot bite may be more appropriate.

Referral of the application to the Field Team is recommended.

H. R. Nelson

N. R. Nelson

NRNelson:sk
12/6/56
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)

Docket file Chrono file
O. M. Bishop, 3617

EXTRA COPY DMEA		
RECEIVED [illegible] 1957		
DATE	INITIALS	CODE

So. 157 Howard Street
Spokane 4, Washington

January 29, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Pending

Re: Docket No. MMLA-1560 (Lead-Zinc)
Montana Standard Mining Co., Ltd.
Nellie, et al claims
Sanders County, Montana

Dear Mr. Selfridge:

We are enclosing copies of supplemental assay data and settlement sheets which were handed to us by Mr. Loy Voss, president of the company, because he requests the return of the originals as soon as possible. Also, he requests the return of the originals of the other assay data and settlement sheets which were sent to you with our letter of November 28, 1956, transmitting this application. We have reproduced copies for our files.

Sincerely yours,

A. L. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures
cc: USBM(2)
Alvord

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED DEC 3 1956 D.M.E.A.

RECEIVED NOV 26 1956 U. S. G. S. SPOKANE, WASH.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4560
Metal or Mineral Lead-Zinc
Date Received 12-3-56
Estimated Cost $80,010.50
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Montana Standard Mining Co., Ltd P.O. Box 146 Burton, Idaho
Mine Office P.O. Box 397 Thompson Falls, Montana
Incorporated under the laws of State of Idaho

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. Separate sheet

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

RECEIVED DEC 3 1956 D.M.E.A.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract 13 patented Claims comprising 173.507 acres
Mineral Survey #9435 Missoula Land District in Burns Ung District
Sanders County Montana namely: Montana Standard Mining Co., Ltd

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See Maps

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Lead, Silver and Zinc

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 30 days and be completed within 24 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. Separate Sheet

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

Making arrangements to sell 500,000 shares to net $100,000

[X] Money [X] Use of equipment owned by you [X] Other

Explain in detail on acompanying paper.

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.

Dated _____, 195_

_____ (Applicant)

By _____

Fay L. Rose President

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

No I

#1 (C)-Officers

Loy L. Vose--President, Mine Operator	Thompson Falls, Montana
Charles Zurnstein V.P. Mine Hoistman	Burke, Idaho
Evaleen Seelig retired Sec.&Treas.	Wallace, Idaho 406 First St.
Wayne J. Walker Mine Foreman, Director	Thompson Falls, Montana
Wray Featherstone, Mining Engineer	Wallace, Idaho

RECEIVED DEC. 3 1956 D.M.E.A.

#4 (B)
Accompaning mill and smelter sheets explain production. Estimated reserve 10,000 tons with an average of 6% lead and 4% zinc 2oz of silver.

(C)----The mineralization is lead, silver, zinc deposit bedded in quartz sites, a well defined fissure vein with a strike, approximately east and west. Dipps to the south about 74%. (Maps to accompany)

(D)----It is on a good county road 11 miles from the railhead Thompson Falls, Mont. The operators have made the No. 3 or working tunnel accessable by bridge and short laterals to main road.

(E)----Man power is readily available in the districts of both Wallace, Idaho and Thompson Falls. Materials and supplies are to be had at either place. Prospect Creek runs at the foot of the dump with ample water, the cla ims are covered with the finest type of mining timber. The Montana Power line is extended to the mouth of #3 tunnel. We are enclosing schedule of rates quoted by them, these are the rates we are working under at the present time.

#5 (B) sink
We wish a winze an additional 400 feet, 4 by 4 compartment squared - setted with 10 x10 timber at 4' ft 2" intervals on the vein. We want to run drifts east and west on the 200 foot level and a lso 400 ft level, these drifts will be a total of 225 ft on each of these levels and will follow the vein structure showing on the #3 tunnel level.

(D)----The work will be directed by the present manager, Loy Vose, who is also the President of th e Co.; while not an engineer or geologist has had many years of experience of a ll types of mining that will be required to accomplish the above work. The large amount of work accomplished under his supervision should ample proof of his capability. The overall supervision at present is figured at $450 per month plus a $150 per month to cover car and miscellanious expenses. This has covered secreterial work also bookkeeping at the mine.

Bill of particulars to cover sinking and drifting on proposed project.

#6--

Timber	per foot	$ 10.50
Explosives including delays	" "	4.00
Airline, fanline, water cols.	" "	4.75
Labor inc. hoistman		60.00
Timber framing inc. blocking in wedges	pr.ft	6.00
Steel, air, &machines, water pumping	pr.ft	6.60
Waste tramming and disposal, this incl. all misc. expense not itemized	pr.ft	2.28
		$ 94.13

#6 con't
Total footage
400 feet of winze
450 feet of drifting incl.stations,pockets,track and car
Total ask to cover project $ 30,010.50

The companyagrees to furnish operating equipment--compressors, hoists,trammer,cars and equipment needed to dispose of waste,also upkeep of said equipment and the labor involved. Also agree to build such buildings that are necessary to house and take care of orderly operation of the above project such as--;a dry room ,housing neccessary for men and equipment.

The company has the present winze down 55 feet and raised 50ft to accommadate dump and skippocket which,is cut and installed having spent in the last two years about $20,000 to futher this work. The accompaning sheets will give details of the substantial mill test and the sorted crude taking from stopes so far opened up. This work has been done and paid for by individuals independent of the mining Co. itself. These individuals have accepted stock for the money and labor expended since 1953. The company is virtually out of debt except small current accounts which can be taken care of and will agree to a royalty of all ore shipped until money frowarded by the government as liquidated.

All maps and work sheets we wish to be returned for our files upon completion of your answer to this contract.

~~your~~ Your Butte office had a man by the name~~/~~ of Mr. John Bowsher here to check this property at one time and has copy of maps etc, but we are inclosing duplicate set.

We will use the Montana scale of wages the base will be $18.36 for an hour shift. And use a five day week.

Respectively submitted,
Montand Standard Mining Co.,Ltd

U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1/46)

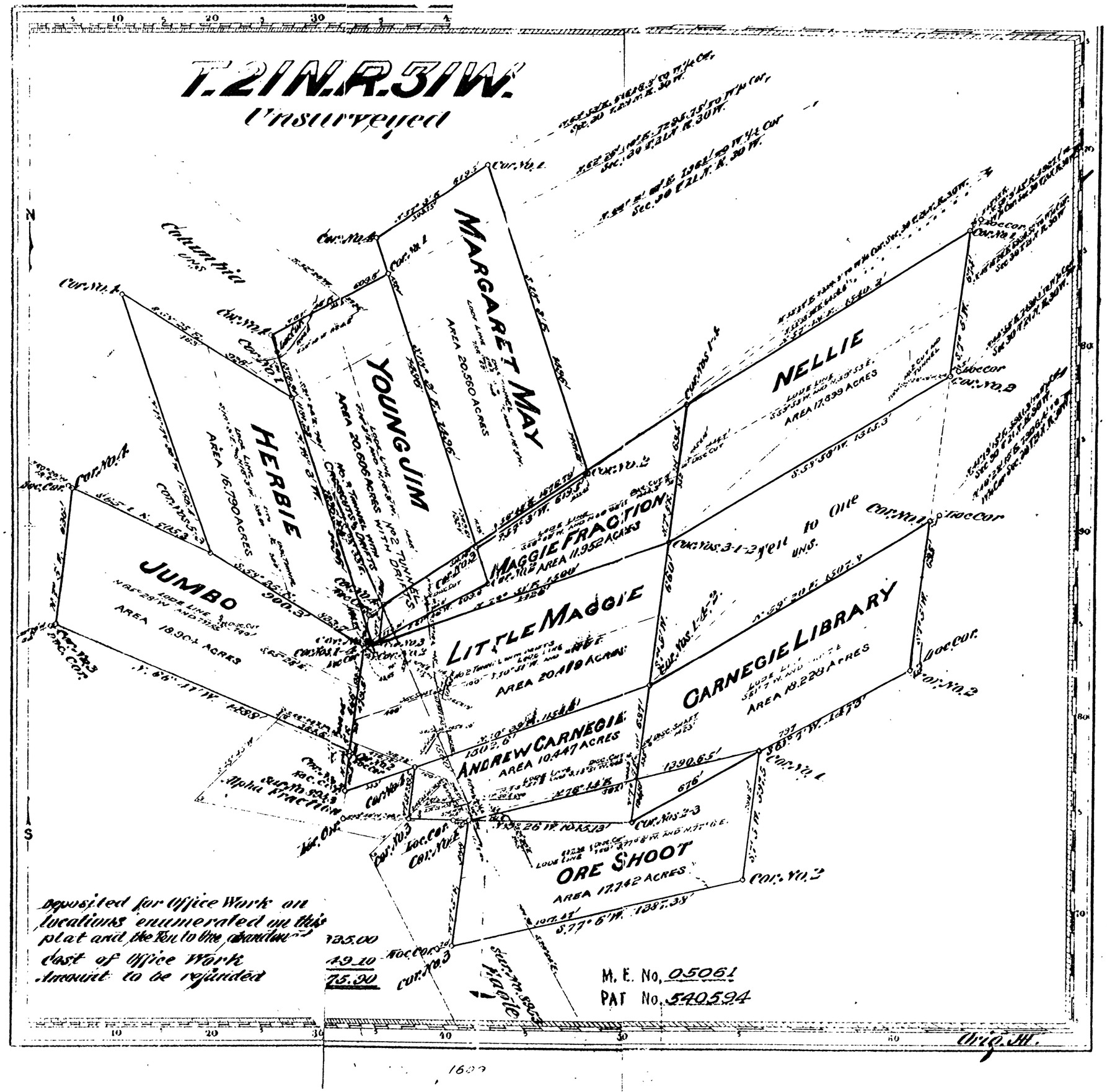
1. Fill blocks consecutively, one at a
2. Void previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
~~Mr. Wyatt~~ ~~Rm.~~	RUN / STOP	Base Metals Coordinator DMEA-4560	RUN / STOP
~~Mr. Danger~~ ~~Type Shop~~ Wash Auditorium	RUN / STOP		RUN / STOP
~~Mr. Stern~~ ~~SMB~~	RUN / STOP		RUN / STOP
~~J. H. Wyatt~~ ~~Rm. 6216~~ ~~G.S.A. Bldg.~~	RUN / STOP		RUN / STOP
~~Danger Type Shop~~ Wash Auditorium	RUN / STOP		RUN / STOP
~~Mr. Kenneth~~ ~~Rm. 1214, GS~~	RUN / STOP		RUN / STOP
~~MR. NICHOLS~~ ~~RM. 5232 GS BLG.~~	RUN / STOP		RUN / STOP
~~Mr. Albers~~ ~~4207 HS~~	RUN / STOP		RUN / STOP
~~Thor Hildegaard~~ ~~5222 Interior~~	RUN / STOP		RUN / STOP
W. S. Martin Rm 3538	RUN / STOP		RUN / STOP

Send surplus envelopes to supply room for reissue.

Use other side

Use RUN and STOP only when messenger service between Government buildings in Washington is required. Your mail room has RUN and STOP information.



Claims located: NELLIE, CARNEGIE LIBRARY, ANDREW CARNEGIE, ORE SHOOT, LITTLE MAGGIE, MAGGIE FRACTION, MARGARET MAY, YOUNG JIM, HERBIE, JUMBO

Mineral Survey No. 9435

Lot No.

Missoula Land District.

PLAT

OF THE CLAIM OF

The Newman Standard Mining Company

KNOWN AS THE

NELLIE, CARNEGIE LIBRARY, ANDREW CARNEGIE, ORE SHOOT, LITTLE MAGGIE, MAGGIE FRACTION, MARGARET MAY, YOUNG JIM, HERBIE & JUMBO LODES

IN Burns (Quartz) MINING DISTRICT,

Sanders COUNTY, Montana

Containing an Area of 173.607 Acres.

Scale of 100 Feet to the inch.

Variation 22° East

SURVEYED Dec. 17th to 23rd, 1912 BY

Charles E. O. Merriam,

U.S. Mineral Surveyor.

The Original Field Notes of the Survey of the Mining Claim of The Newman Standard Mining Company known as the Nellie, Carnegie Library, Andrew Carnegie, Ore Shoot, Little Maggie, Maggie Fraction, Margaret May, Young Jim, Herbie & Jumbo Lodes from which this plat has been made under my direction, have been examined and approved, and are on file in this Office, and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the location thereof.

I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon said Mining Claim by claimant or its grantors, and that said improvements consist of six disc cuts, two disc shafts, two disc tunnels, cut, four tunnels, seven drifts and two crosscuts, valued at $26330.00 that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

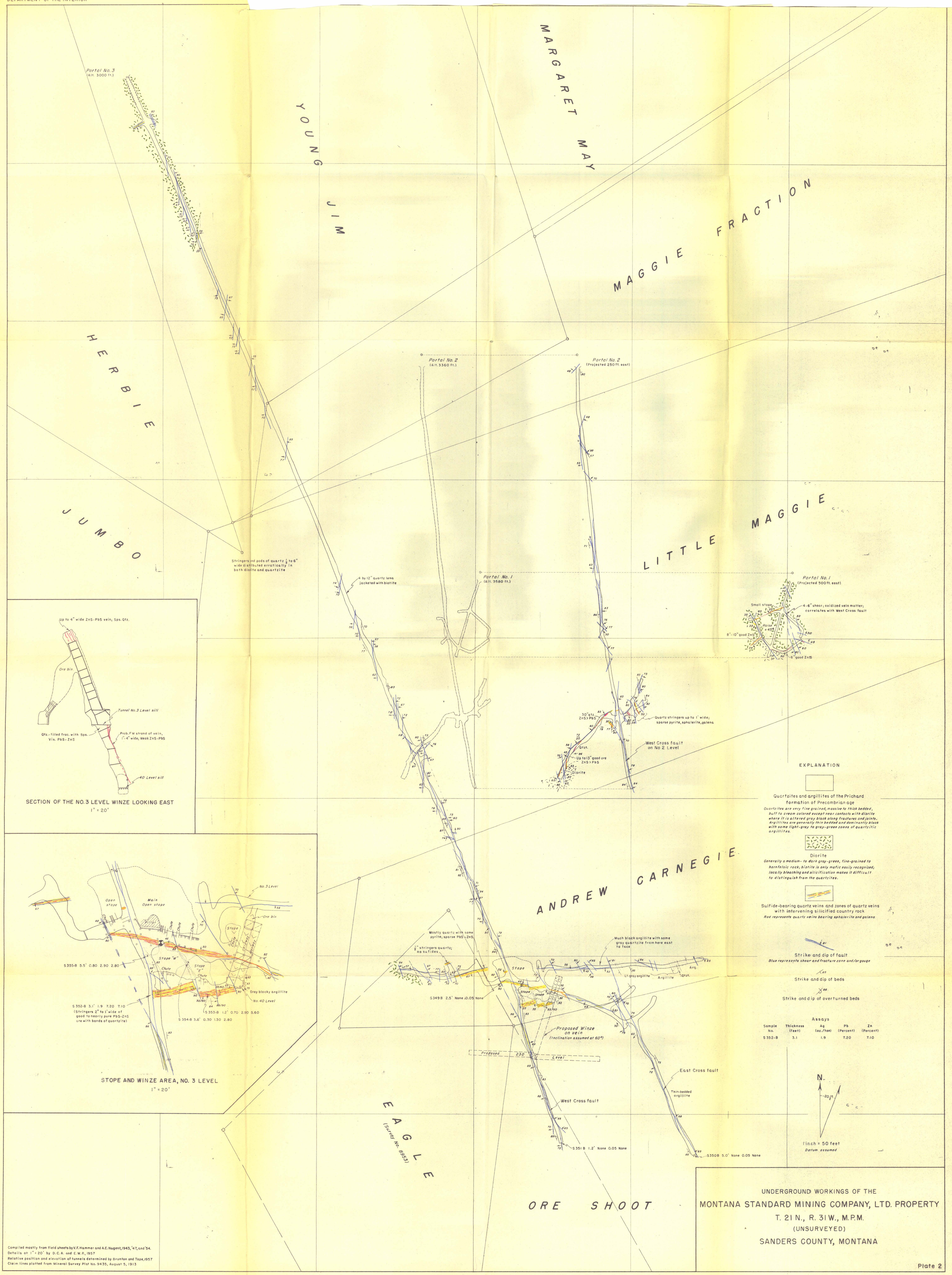
And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office, Helena, Montana, Aug. 5th, 1913.

Jerome G. Locke
U.S. Surveyor General for Montana

Plate 1

UNITED STATES
DEPARTMENT OF THE INTERIOR



Compiled mostly from field sheets by V.F. Hammer and A.E. Nugent, 1943, '47, and '54.
Details at 1" = 20' by D.C.A. and E.W.P., 1957
Relative position and elevation of tunnels determined by Brunton and Tape, 1957
Claim lines plotted from Mineral Survey Plat No. 9435, August 5, 1913

UNDERGROUND WORKINGS OF THE
MONTANA STANDARD MINING COMPANY, LTD. PROPERTY
T. 21 N., R. 31 W., M.P.M.
(UNSURVEYED)
SANDERS COUNTY, MONTANA

Plate 2