DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Idm-E NO. _____

DMEA NO. 4837

Application
- [x] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

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

Right Side

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

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

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

Additional Folders:

Left Side

Folders No. _____: Reports

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

Right Side

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

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

Folders No. _____: Settlement Sheets

Folders No. _____: Drill Logs

Folders No. _____: Royalty material

17963

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

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 26 1957

DATE	INITIALS	CODE

September 20, 1957

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

Re: New Application (Tungsten-Lead-Silver-Copper)
Slate Creek Mines
Slate Creek Property
Ravalli County, Montana

Dear Mr. Selfridge:

Enclosed are the original and two copies of an application received from Mr. Jack Sargent of Darby, Montana, one of the partners of Slate Creek Mines, Ravalli County, Montana. We have retained one copy for our files.

Because of the lateness of the season, we plan to examine the property as soon as possible; we tentatively plan to look at it early in October.

Sincerely yours,

A E Weissenborn

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

Enclosures

cc: USBM (2)
Geologist

Form MF-103
Revised Feb. 1957

RECEIVED SEP 26 1957 D.M.E.A.

RECEIVED BUREAU OF MINES SEP 1 1957 SPOK. WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1035.3
Approval expires June 30, 1958

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

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

SLATE CREEK MINES
DA RBY, MONTANA

APPLICANT NOT TO USE THIS BLOCK

Docket Number: DMEA-4837

Date Received: 9/26/57

Government Participation %:

Region: I

Division Code: 400

BUSINESS ORGANIZATION (Check one)

- Individual [ ]
- Corporation [ ]
- Partnership [XX]
- Other (Specify) [ ]

State in which firm is organized: MONTANA

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
JACK SARGENT	DARBY, MONTANA	
FRANSIS SARGENT	DARBY, MONTANA	
MERLE McKINNEY	DARBY, MONTANA	
WILLIAM GUGLER	SALT LAKE CITY, UTAH	
BERT HAUGEN	DARBY, MONTANA	

Mineral(s) for which you wish to explore: TUNGSTEN, LEAD, SILVER, COPPER

Estimated Cost of Project: $ 25,000. (twenty-five thousand)

LOCATION OF PROPERTY

Name	County	State
SLATE CREEK	RAVALLI	MONTANA

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order-I, Amended, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

September 11, 1957
Dated

Jack Sargent
BY (Signature)

PARTNER
Title

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

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

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

(b) State your interest, if any, in operations stated in 2*(a)*.

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

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

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

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

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

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

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

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

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State your anticipated average daily or monthly rate of progress for each type of work.

5. *Experience:*

State your operating experience and background with relation to your ability to carry out this exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of Costs:*

Furnish detailed estimates of the costs *for each item of the work proposed in 4(a)* under the headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in detail under categories *(b)* through *(g)*.

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

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available.

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

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

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

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

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

Note – 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)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Amended.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

INT.-DUP. SEC., WASH., D.C. 15539

Jack Sargent Darby,Montana

1.(a) There are four claims,all in SECTION 6,TOWNSHIP 2,SOUTH,RANGE 21 WEST

		BOOK	PAGE
CLAIM NAMES:	CITATION	9	461
	WHIRLAWAY	9	459
	FLYING JEAN	9	457
	KA Y DIANNE	9	463

All claims are recorded in Ravalli County Court House, Hamilton,Montana

1.(b) Same as above
(c)Owner
(d) None.

2.(a) Separate page
(b) All work performed as listed in 2a was done by the partnership.
(c) No production.
(d) 600 tons in sight
(e) Separate page.
(f) Surface indications show Scheelite,Lead & Silver,Copper.
(g) None.

3.(a) Jack Sargent,Fransis Sargent,Merle McKinney,Darby,Montana
Jeep road accessibility right to the property.
(b) Darby,Montana and 35 miles to the property.

4.(a) Separate page
(b) 7 miles of access road already built.
(c)Project would start June 1st.1958
5 months to complete.
Expect to make 3ft.a day on the drift.
" " " 3ft.a day on the shaft.

5. Harland McFadden Supervisor,has had 25yrs.experience in all phases of mining.
Sargent & McKinney have successfully operated a logging operation for 5yrs.

6.(a) No independent contract.
(b) Supervision and enineering----------$35.00 per day
Labor (4men)----------$80.00 per day
5 months employment
M en are available
(c) Operating materials are:Gasoline,Deisel,Dynamite,Caps and Fuse.
Two tons of power @ $550.00 per ton----------$1100.00
Fuse and caps---------- 150.00
Deisel, 500 gals. @ 20¢ per gal.---------- 100.00
Gasoline,2400 gals.@ 32¢ per gal.---------- 768.00

6.(d) Operating equipment owned----------(Market Value)
1 D8 Caterpillar----------$32,000.00
1 Compressor---------- 4,000.00
1 Jeep---------- 500.00
One 4 wheel drive GMC truck-------- 3,000.00
1 A.C. model L dozer with Jumbo drill $6,000.00
2 Air hammers and steel----------$1,000.00

T o be purchased----------
Two ore cars and 400ft.of track---------$700.00

T o be rented----------
One slusher and one mucking machine-----$10.00 per day

(e) No existing buildings
(f) New buildings include,T wo tents and one small trailer.
One 2500 watt light plant is owned.

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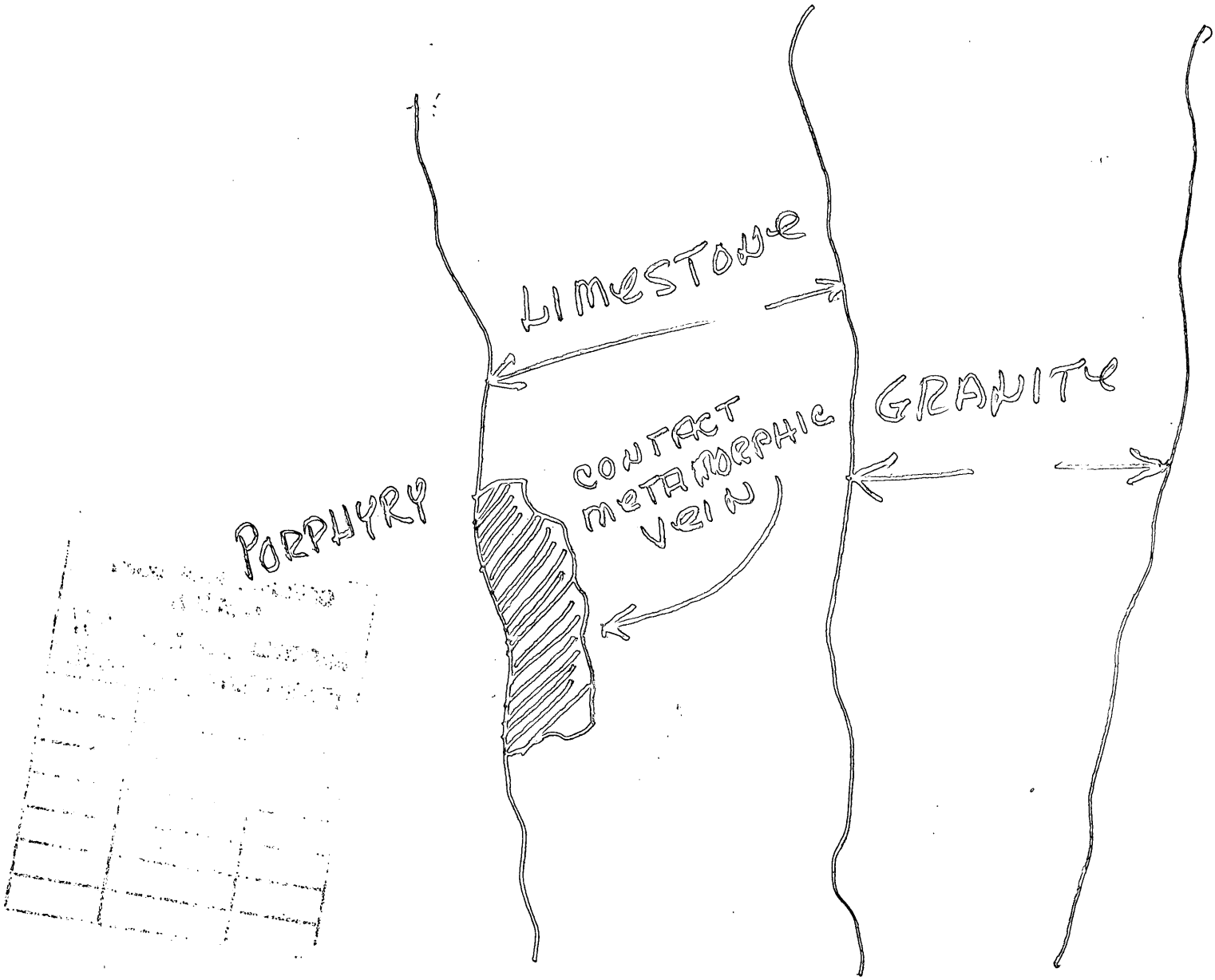
DATE	INITIALS	CODE

Jack Sargent Darby, Montana

2.(e) Geological features are Limeston, Granite, Porphyry.
Ore minerals are: Scheelite
Galena
Silver
Copper
Contact Metamorphic Vein Deposit



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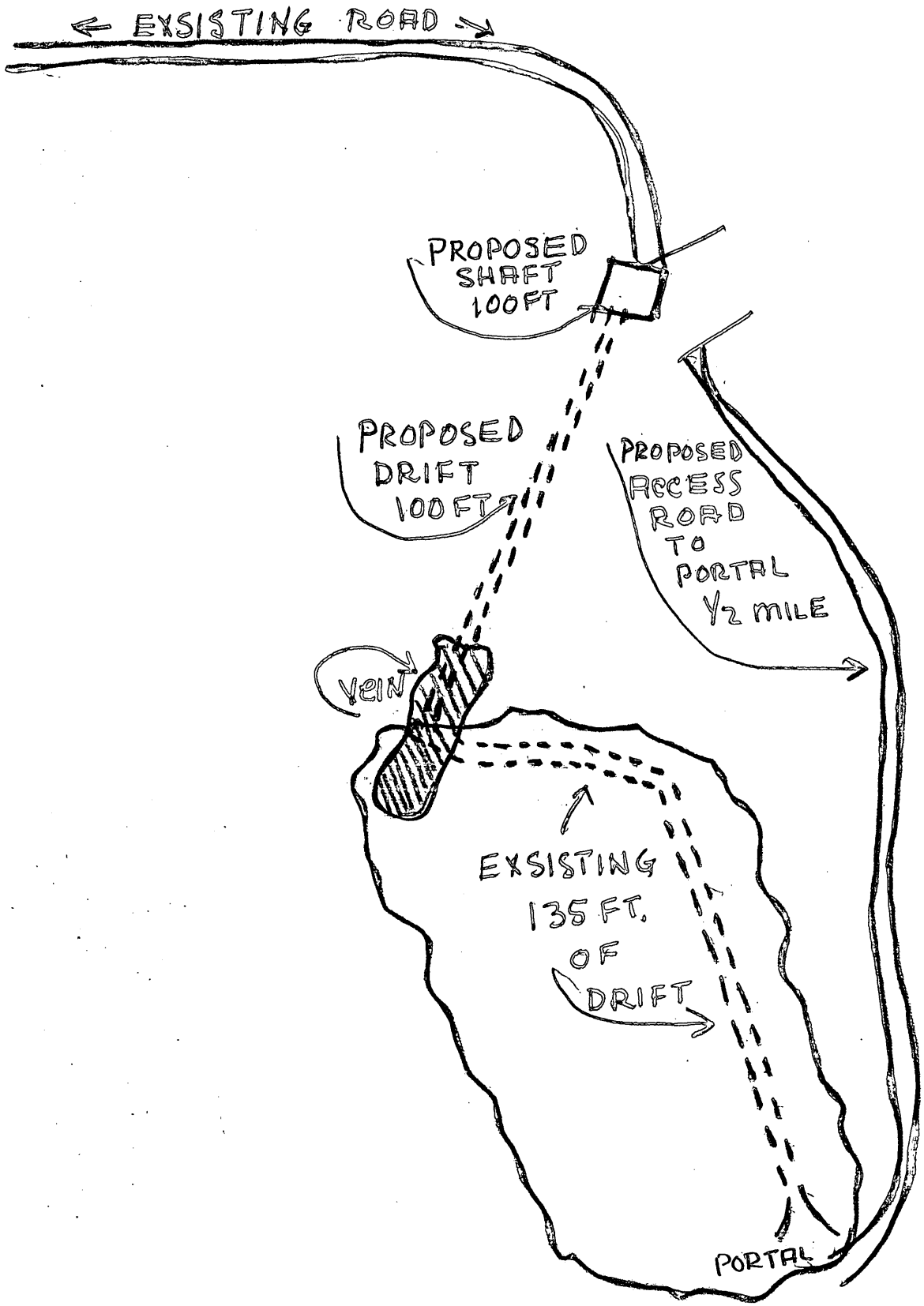
DATE	INITIALS	CODE

Jack Sa rgent Da[illegible], Montana

4.(a) Proposed exploration consist of 100ft.of drift 5ft.X 7ft.
100ft.of shaft 5ft.X 7ft.



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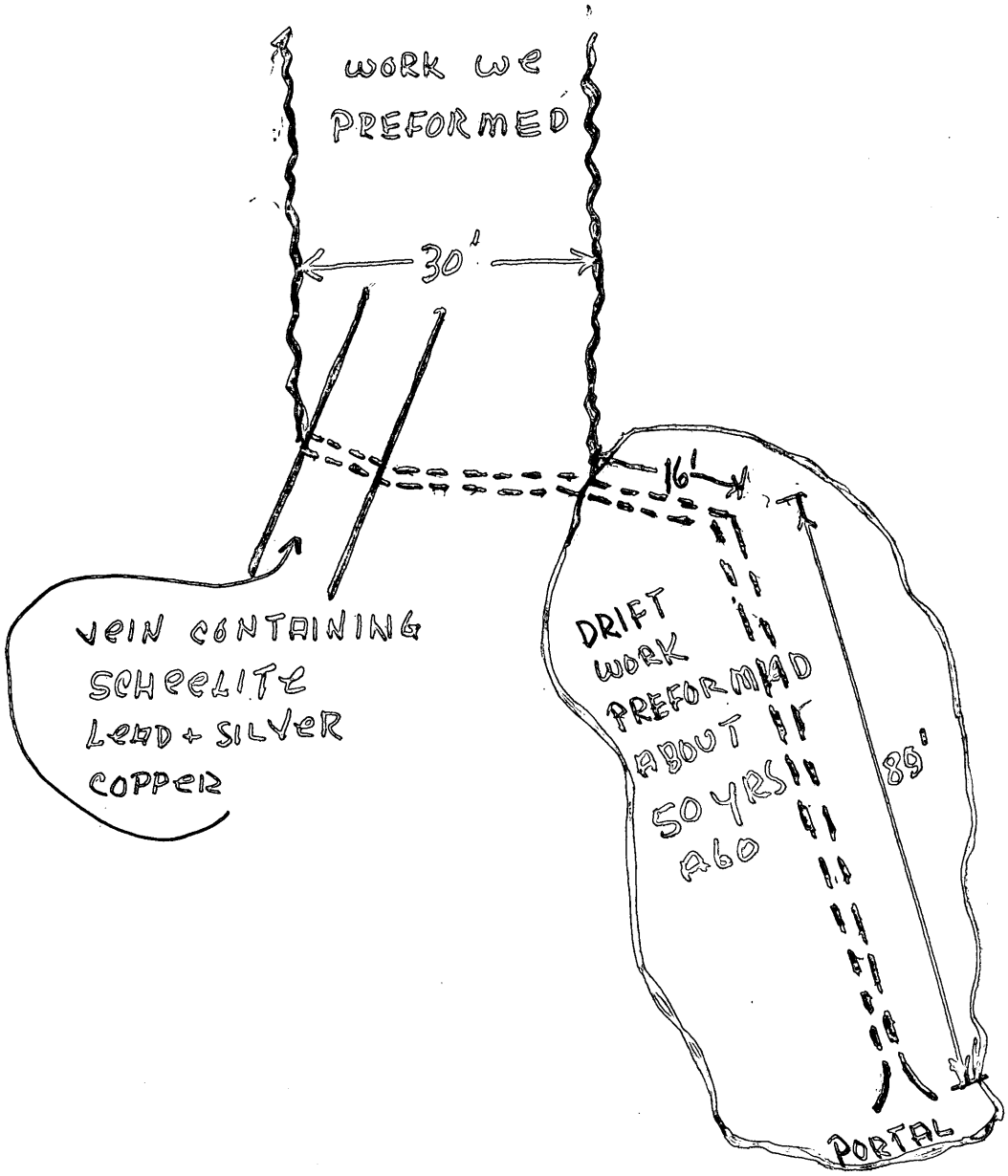
DATE	INITIALS	CODE

Jack Sargent, Darby Montana

2.(a)

Our exploration operations to date, have been to build 7 miles of access road, and extend a drift 30 ft.
About 50 ago this drift was started to try and intercept the vein showing, which is 65ft. above the portal. After drifting in another 30 ft. we cross cut the vein which proved to be 8 ft. wide.



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Jack Sargent Darby Montana

6.(g) Maintenance cost for 5 months period:

D8 Cat	$700.00
Compressor****	350.00
Jeep	200.00
Pick Up	150.00
Air Hammer and steel	400.00
A.C. Cat and drill	200.00

(e) Accounting, $200.00 per month.
Cost of compensation, liability insurance, parroll taxes 20% of the payroll.

7.(a) Yes.
(b) Use of equipment and own labor.

DATE	ITEMS	

DMEA Form 7
(12-56)

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Date	Surname	Code
2-10	Chapman	400
2-10	Martin	400
		116
		100
		220

February 7, 1958

MEMORANDUM

To: Administrator

From: Division of Iron and Ferro-Alloys

Subject: Denial of the subject application for exploration assistance in the amount of $25,000.00
Docket No. DMEA 4837 - Tungsten, Lead, Copper and Silver
Slate Creek Mines
Slate Creek property
Ravalli County, Montana

A denial of the subject application for exploration assistance is recommended by this Division based on the following information:

The above-noted property was the subject of a request, dated September 11, 1957, for exploration assistance at an estimated cost of $25,000.00 for road building, shaft sinking and drifting. The property was examined on October 11, 1957, by E. W. Parsons, Bureau of Mines, and W. C. Prinz, Geological Survey, accompanied by Jack Sargent, representing the Applicant.

Applicant: Slate Creek Mines (A partnership)
Darby, Montana

Property Ownership: The property consists of four unpatented lode mining claims owned by the partnership, located in section 6, T. 2 S., R. 21 W., Ravalli County, Montana, and recorded as follows:

Claim Name	Book No.	Page No.
Citation	9	461
Whirlaway	9	459
Flying Jean	9	457
Kay Diannes	9	463

Geology: This property lies in the eastern part of the Idaho batholith, near the edge of Precambrian country rock. Granite or quartz monzonite contains small roof pendants of Belt series of quartzite and tactite. Thin bands of tactite 1 inch to 3 feet wide parallel the banding in the quartzite. In addition, small lenses of tactite occur in the granite.

Scheelite, chalcopyrite, and galena are disseminated irregularly in the mineralized tactite areas. The maximum tactite body noted was narrow and about 25 feet long.

DEVELOPMENT: The property was located about 50 years ago and work at that time included a 100 foot adit and a 15 foot shaft. The present owners crosscut about 30 feet from the face of the adit and cut a tactite zone 8 feet wide.

Ore Values and Tonnage: Results from samples are as follows:

Sample No. and Width	% WO_3			Ozs. Ag.			% Pb			% Cu		
	USBM	Hanks	Mack	USBM	Hanks	Mack	USBM	Hanks	Mack	USBM	Hanks	Mack
EWP-20A 7.5'	0.06	0.12	0.08	1.52	1.55	1.6	0.69	0.71	0.6	0.26	0.36	0.06
EWP-21A 6.0'	0.13	0.20	0.18	1.56	1.58	1.6	0.94	0.98	0.9	0.21	0.23	0.11
EWP-22A 7"	0.02	0.01	Tr.	0.70	0.70	0.7	0.35	0.30	0.1	0.11	0.14	Tr.
EWP-23A 2.4'	0.14	0.14	0.11	2.72	2.65	2.7	1.82	1.47	1.65	0.38	0.44	0.31
EWP-24A	0.14	0.24	0.27	0.82	1.20	1.3	0.80	0.78	0.7	0.22	0.11	Tr.

It is indicated that the grade of ore is too low and possible ore bodies too small to expect the development of any significant ore bodies. There is little or no tonnage of ore on the property.

Applicant's Proposal: The Applicant proposed to advance the adit 100 feet along a tactite zone, and sink a shaft 100 feet to connect with the adit.

Comments and Conclusions: The examining engineer and geologist, with concurrence of the Field Team, conclude that the property has no potential value as a tungsten, lead or copper property due to the low metal content and small size of possible ore bodies.

The Commodity Divisions of the Geological Survey, and the Bureau of Mines, concur in the conclusions and recommendations of the Field Team.

W S Martin
W. S. Martin, Director
Division of Iron and Ferro-Alloys

TLChapman/foc
2-7-58
cc: Docket
Code 400
Admr. R. File
Oper. Comm.

DMEA Form 7
(12-56)

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Date	Surname	Code
2-6	Chapman	400
2-6	Martin	400
2/12	Selbedge	130
2/12	Lewis	130
2/12	Kiilsgaard	130
"	Johnson	110
"	Mittendorf	100
		220

FEB 12 1958

Slate Creek Mines
Darby, Montana

Re: Docket No. DMEA 4837 - Tungsten,
Lead, Copper
Slate Creek Property
Ravalli County, Montana

Gentlemen:

Your application for exploration assistance and other data available to us in Washington concerning the referenced property have been reviewed.

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

Careful study of all our information, although noting the occurrence of tungsten, lead and copper mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. Under these circumstances, we regret to advise you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing this property to our attention.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

TLCHAPMAN/dlm 2-6-58
cc to: Code 400
Admr. R. File
Oper. Comm.
Region I
Messrs. R. W. Holliday, USBM
T. H. Kiilsgaard, USGS

8623

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DATE	INITIALS	CODE
2/6	C	220
	WSM	400

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

Date February 6, 1958

DMEA Docket No. 4837
DMEA Contract No.
Commodity Tungsten-lead, copper, silver
Name of applicant Slate Creek Mines (Partnership)
Name of property Slate Creek Mine
Location of property Ravalli County, Montana
Estimated cost of project

Memorandum

To: W. S. Martin, Chief, Iron and Ferroalloys Division-DMEA
Through: Acting Chief, Branch of Ferrous Metals & Ferroalloys

From: R. W. Holliday, Commodity Specialist, Branch of Ferrous Metals & Ferroalloys

Subject: Review of Review of Field Team Report
(Application, Field Team Report, etc.)

1. Date of subject document: _____. 2. Date received by reviewer: _____.

3. Prior reports on this property known to reviewer: Yes ☐ No ☒

4. Prior reports on nearby properties known to reviewer: Yes ☐ No ☒

5. Information available on past production: Yes ☐ No ☒

6. Other pertinent factors known to reviewer: Yes ☐ No ☒

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location ☐
   b. Ownership ☐
   c. Evidence of mineralization ☐
   d. Geology ☐
   e. Proposed exploration method ☐
   f. Alternate exploration method ☐
   g. Costs ☐
   h. _____ ☐

9. Action advised:
   a. Obtain information from applicant ☐
   b. Refer to Field Team ☐
   c. Denial ☒
   d. Agree with Field Team ☒
      i. Consult with Mr. _____ at _____ AEC office.
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another examination ☐
   h. Approval ☐

10. Remarks: (Use back of page if necessary) I concur with the Field Team recommendation of denial.

R. W. Holliday
R. W. Holliday

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RECEIVED JAN 16 1958

DATE	INITIALS	CODE
1/16	C	220
	WSM	400
	✓	

IN REPLY REFER TO:

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

January 16, 1958
Re: DMEA 4837
Slate Creek Mines (Partnership)
Slate Creek Mine
Ravalli County, Montana
$25,000.00 - Tungsten, lead, copper, silver

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of Field Team Report

The applicants requested assistance in exploring a tactite zone in a remnant of Precambrian (Belt) rock in the Idaho granite or quartz monzonite batholith. Some work was done on the property, possibly 50 years ago and the applicants have done 30 feet of work in an adit.

As indicated by the work, the remnant mass is probably only 40 feet long, though it may be 150 feet long at the outside. The mineralized tactite band which shows in the shaft and open cut may be the same as cut in the crosscut adit 63 feet below. Five samples taken by the examiners in the shaft and crosscut indicate the material is too low grade to handle economically. The maximum width sampled is in the crosscut. The sample assayed (Hanks' certificate):

Sample No.	Width	% WO_3	Ag. Oz	% Pb	% Cu
EWP-20 A	7.5'	0.12	1.55	0.71	0.36

The best grade material sampled is in the shaft, as (Hanks' certificate):

EWP-23 A	2.4'	0.14	2.65	1.47	0.44

The examiners conclude Government assistance in doing more work is not warranted and recommend denial of the application.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

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

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DATE		NOTES
1/13	C	220
1-17	JFB	130
1/20	C	220
	WSM	400

January 9, 1958

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

Re: Docket No. DMEA-4837 (Tungsten-Lead-Copper-Silver)
Slate Creek Mines
Ravalli County, Montana

Dear Mr. Selfridge:

Enclosed are three copies of a report by E. W. Parsons, Mining Engineer, U. S. Bureau of Mines, and W. C. Prinz, Geologist, U. S. Geological Survey, on the examination of the Slate Creek tungsten prospect in Ravalli County, Montana. The examiners conclude that the exposed occurrences of tactite are small, apparently unconnected, and are only weakly mineralized. They recommend denial of the application. The Field Team concurs with this recommendation.

By Field Team, Region I

A. E. Weissenborn by OKA
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)
Prinz

Received by
1-17-58

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DATE	INITIALS	CODE
1-17	HB	130
		220

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

January 6, 1958

MEMORANDUM

To: DMEA Field Team, Region I

From: E. W. Parsons, Mining Engineer, U. S. Bureau of Mines and W. C. Prinz, Geologist, U. S. Geological Survey

Subject: Field Examination Report, Docket No. DMEA-4837 (tungsten, lead, copper, silver), Slate Creek Mines, Ravalli County, Montana

INTRODUCTION

The Slate Creek Mines, a partnership, submitted, on September 11, 1957, an application for aid to explore a series of tactites for tungsten, lead, copper, and silver on the Slate Creek property in sec. 6, T. 2 S., R. 21 W., on Slate Creek, Ravalli County, Montana.

on Site Exam

The property was known and prospected possibly 50 years ago. In July 1953 an inquiry was made by the present applicant as to the possibility of obtaining DMEA aid but no application was submitted at that time.

SUMMARY

Reviewed by OPERATING COMMITTEE 1-17-58 (date)

The property was examined on October 11, 1957, by E. W. Parsons, Mining Engineer, U. S. Bureau of Mines, and W. C. Prinz, Geologist, U. S. Geological Survey, accompanied by Jack Sargent for the applicant.

Work done years ago on the property consisted of an adit roughly 100 feet in length and a shaft 15 feet in depth. Recent work consists of finishing a 7-mile Jeep road up the mountain to the property and a 30-foot advance in the adit face. The drifting cut an 8-foot zone of tactite and the road work exposed and practically cut away a small lens of tactite.

The bedrock of the property consists of inclusions of tactite and quartzite (Precambrian Belt series) in the Jurassic or Cretaceous Idaho granite or quartz monzonite batholith. The tactite bands, which

probably represent altered calcareous beds, are found associated with quartzite or as isolated lenses or pods in the granite. The tactite is composed mainly of actinolite with some calcite and pyrite, and the ore minerals galena, scheelite, and chalcopyrite. The largest tactite band is 5-8 feet wide but more commonly they are only 1 foot or less in width, and the maximum length expected would be about 40 feet. Assay results show that the ore minerals are present in subcommercial amounts.

RECOMMENDATION

The examining team concurs in the recommendation that the application be denied because the exposed occurrences of tactite are small and apparently not connected, are relatively far apart, and are only weakly mineralized.

ACCESSIBILITY

The Slate Creek property is composed of 4 unpatented lode mining claims at an altitude of 6,900 feet on the south side of Slate Creek about 2 miles east of the Bitterroot storage reservoir on the West Fork of Bitterroot River. From Darby, Montana, go south on paved U. S. Highway 93 for 4.1 miles, then turn right on graveled county road (West Fork Road). At the fork 5 miles from Highway 93, turn left and continue for 11.7 miles to a point 4.3 miles beyond the reservoir dam on the east side of the lake, then left on a very steep Jeep road for about 6 miles or to the end of the road which is on the Slate Creek property. The Jeep road will usually be closed due to snow from the latter part of October until May. The county road will be closed only during and after heavy snow storms.

PROPERTY

The property consists of 4 unpatented lode mining claims owned by the partnership. The claims are recorded in the County Recorder's Office, Ravalli County Courthouse, Hamilton, Montana. The claims are listed as follows:

Name	Book	Page
Citation	9	461
Whirlaway	9	459
Flying Joan	9	457
Kay Dianne	9	463

COMPETENCY OF APPLICANT

The applicant is a partnership composed of 5 men of various occupations, all apparently having done some prospecting. They appear to be financially able to assume their share of costs of the proposed work and, while not miners, could arrange for the work to be done.

DESCRIPTION OF PROPERTY

The property lies on a steep slope on the south side of Slate Creek. Surface outcrops consist of knobs and cliffs of fine-grained granite and granite porphyry with some quartzite and a few small irregular pods and lenses of tactite. The Jeep road ascends the south slope of a ridge south of Slate Creek, a rise of about 2,000 feet, then drops down a few hundred feet on the north slope to the property. One adit approximately 135 feet in length and a shaft 15 feet in depth are the only workings. There are no facilities or equipment on the property. Five channel samples were cut during the examination.

GEOLOGY

The Slate Creek property lies in the eastern part of the Idaho batholith (Cretaceous or Jurassic) near the northern edge of a re-entrant of Precambrian country rock. Granite or quartz monzonite, commonly porphyritic, containing small inclusions or roof pendants of Belt series quartzite and tactite are found on the property.

A quartzite inclusion or roof pendant is exposed in the northern part of the adit (fig. 1) and what is believed to be the same quartzite inclusion is exposed east and south of the surface discovery shaft (fig. 2). A smaller quartzite inclusion is found at the surface near the end of the Jeep road. The quartzite is a fine-grained, gray rock consisting mainly of quartz. Commonly it is slightly calcareous and it contains some streaks of dark-gray phyllite. In a few places, medium- and light-gray bands which probably represent bedding are discernible in the quartzite. These bands or beds strike north or slightly west of north in the quartzite exposed in the adit and near the discovery shaft, and they strike east-west and are nearly vertical in the quartzite near the end of the Jeep trail.

Some bands of tactite, probably representing altered calcareous beds, are associated with the quartzite in the adit and near the discovery shaft, and are included in the granite near the face of the adit, at the portal of the adit, and near the end of the Jeep trail. Thin bands of tactite from 1 inch to 3 feet wide parallel the banding or bedding in the quartzite both in the adit and east and

southeast of the discovery shaft. These bands dip from 45° to 72° west and the two zones are believed to be continuous. A zone of tactite about 5 feet thick and adjacent to quartzite is exposed in the discovery shaft but is cut off by granite to the south. A band up to 8 feet thick is exposed near the end of the adit. It is believed that these two were once continuous but that during intrusion of the granite, the tactite band in the adit was torn away from the main part of the quartzite inclusion. In addition to these tactite occurrences, small lenses of tactite averaging 1 foot thick and 10-15 feet long are found in the granite near the portal of the adit and at the end of the Jeep trail.

The tactite is quite variable in composition but consists mainly of fine-grained to coarse radiating fibrous green actinolite with occasional pods of medium- to coarse-grained black calcite. The rock also contains grains of white or light-gray calcite, magnetite, fine-grained quartz, garnet, and epidote. White calcite veinlets from paper thin to ½-inch wide and with random orientations are also present. Grains of pyrite, chalcopyrite, galena and scheelite are disseminated irregularly in some of the tactite bodies but may be absent in others, and the scheelite rarely occurs in 1/8-inch wide stringers.

Away from the tactite and quartzite inclusions, the batholith consists of light-gray, medium-grained granite or quartz monzonite composed of white altered feldspar, quartz, and hornblende. In some places the rock contains euhedral phenocrysts of orthoclase up to 1½ inches long. Near the contact, the granite grades into a finer grained rock consisting of white plagioclase, dark greenish black hornblende, a trace of clear quartz, and calcite in a fine-grained, pale greenish gray groundmass. The contact between the granite and quartzite or tactite may be either a normal intrusive contact or it may be marked by a narrow seam of gouge.

The ore minerals found on the property consist of galena, chalcopyrite, and scheelite irregularly disseminated in the tactite bands or lenses. The lenses of tactite exposed near the portal of the adit and near the end of the Jeep trail are all very small and obviously not commercial. The largest tactite exposures are associated with the large quartzite inclusion found in the northern part of the adit and near the discovery shaft. Underground, the quartzite inclusion is at least 40 feet wide in an east-west direction across the strike of the banding; how much further eastward it extends is unknown. On the surface, this inclusion is exposed over a length of about 40 feet in a north-south direction parallel with the banding; however, the main tactite band is cut off to the south by granite and is much shorter. This inclusion cannot extend far to the south as it is not found in a cliff of granite south of the discovery shaft (fig. 2). North of the inclusion is a covered area 100 feet long and beyond that, a cliff of

granite extends eastward from near the end of the Jeep trail. No tactite is found in this cliff. The maximum observed length of a tactite band is about 25 feet for a thin band east of the discovery shaft, and the maximum length that can be safely inferred from the exposures of the quartzite inclusion is about 40 feet. Even taking the extremely optimistic view that the quartzite inclusion extends northward throughout the whole 100-foot covered interval and southward for 10 feet, the maximum possible length for a tactite band in the quartzite would be only 150 feet. More than likely, 40 feet would be a more realistic figure.

While on the property, the applicant referred to a large zone of tactite extending a long distance to the northwest from the area examined. However, even should such a zone exist, the relationships shown on figure 2 indicate that it is made up of isolated and diversely oriented inclusions and does not represent a continuous minable belt.

Five samples from the property were assayed by the U. S. Bureau of Mines, Abbot Hanks, and Peter Mack and the results are shown below.

Sample No. and width	Percent WO_3			Ozs. Ag/ton			Percent Pb			Percent Cu		
	Assayers											
	USBM	Hanks	Mack	USBM	Hanks	Mack	USBM	Hanks	Mack	USBM	Hanks	Mack
EWP-20A 7.5'	0.06	0.12	0.08	1.52	1.55	1.6	0.69	0.71	0.6	0.26	0.36	0.06
EWP-21A 6.0'	0.13	0.20	0.18	1.56	1.58	1.6	0.94	0.98	0.9	0.21	0.23	0.11
EWP-22A 7"	<0.02	0.01	Tr	0.70	0.70	0.7	0.35	0.30	0.1	0.11	0.14	Tr
EWP-23A 2.4'	0.14	0.14	0.11	2.72	2.65	2.7	1.82	1.47	1.65	0.38	0.44	0.31
EWP-24A 3.5'	0.14	0.24	0.27	0.82	1.20	1.3	0.80	0.78	0.7	0.22	0.11	Tr

Hanks' assays are also shown on figures 1 and 2.

It is apparent that the size of the tactite bodies is too small and their grade too low to expect the development of a significant deposit.

PAST OPERATION

Previous work on the property consisted of drifting and sinking which produced some mineralized tactite that may be ore. No ore has been shipped though there are a few tons on dumps from the adit and shaft.

SUPPLIES AND EQUIPMENT

Materials, supplies, and equipment are available in Missoula, Montana, about 100 miles north, and to some extent in Darby and Hamilton, 25 and 40 miles north, respectively. Labor is available locally and the wage scale will start at $16 per day. Small springs within a mile of the prospect work can supply a moderate amount of domestic and drill water. All equipment will need to be driven by gasoline or diesel engines.

APPLICANT'S PROPOSAL

The applicant's proposal calls for advancing the face of the adit 100 feet in a northerly direction to follow a mineralized tactite zone; to sink a shaft from the end of the present road 100 feet to connect with the face of the extended adit; and to make half a mile of new road which will lead to the adit portal. The application listed some costs but did not have a detailed cost analysis. The estimated cost of the proposed project is $25,000.

It was pointed out to the applicant that there would be little advantage of sinking a shaft at the end of the road as the hill dropped away at that point at 44°. Judged by the numerous tactite outcrops on the hillside none are large enough to be seriously considered for mining and they are too far apart to be mined as a group. Also, assay results show that they are not of commercial grade. Since the examining team was in accord in the belief that no significant discovery would be made on the property, there was no discussion of the applicant's proposed costs. The small, irregular, and widely spaced tactites exposed indicate the probable size of others which might be encountered.

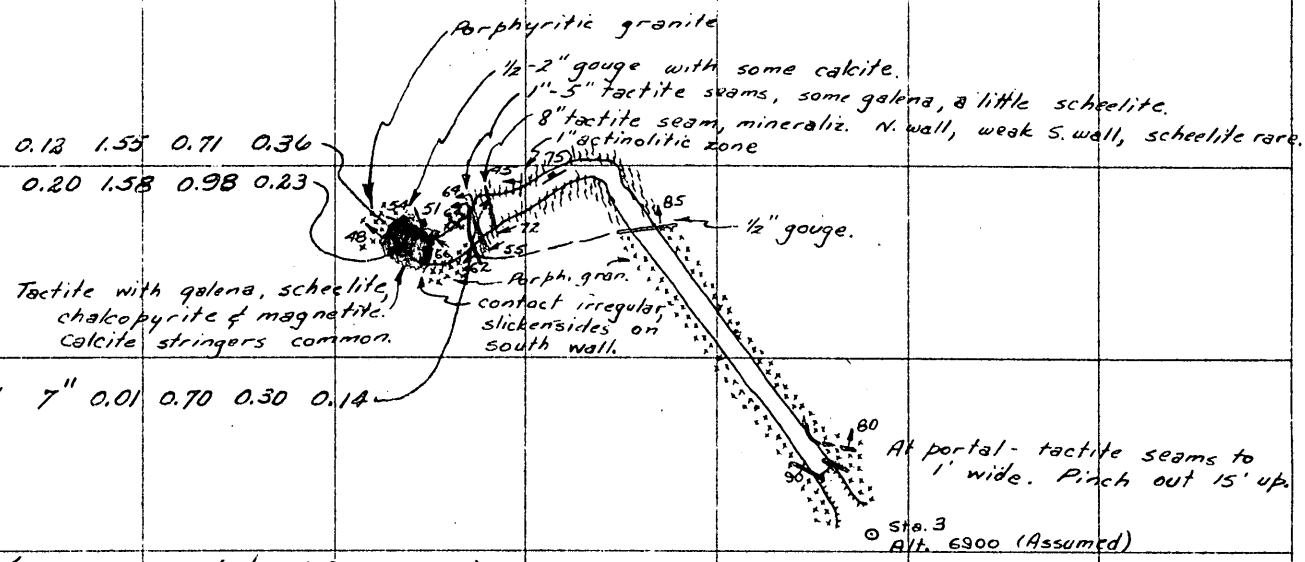
Attachments

Distribution:
DMEA (3)
USBM (5)
USGS(SRO)
Docket
Prime

EWP-20A 7.5' 0.12 1.55 0.71 0.36

EWP 21A 6.0' 0.20 1.58 0.98 0.23

EWP-22A 7" 0.01 0.70 0.30 0.14



Assay Plan (Hanks' Assays)
Sample No., Width, % WO_3, Oz Ag/ton, % Pb, % Cu

Brunton & tape survey by:
WC Prinz & EW Parsons 10/11/57

Geologic Map of Adit
Slate Creek Property
Ravalli County, Mont.

0 40 80 Feet

Fig — 1

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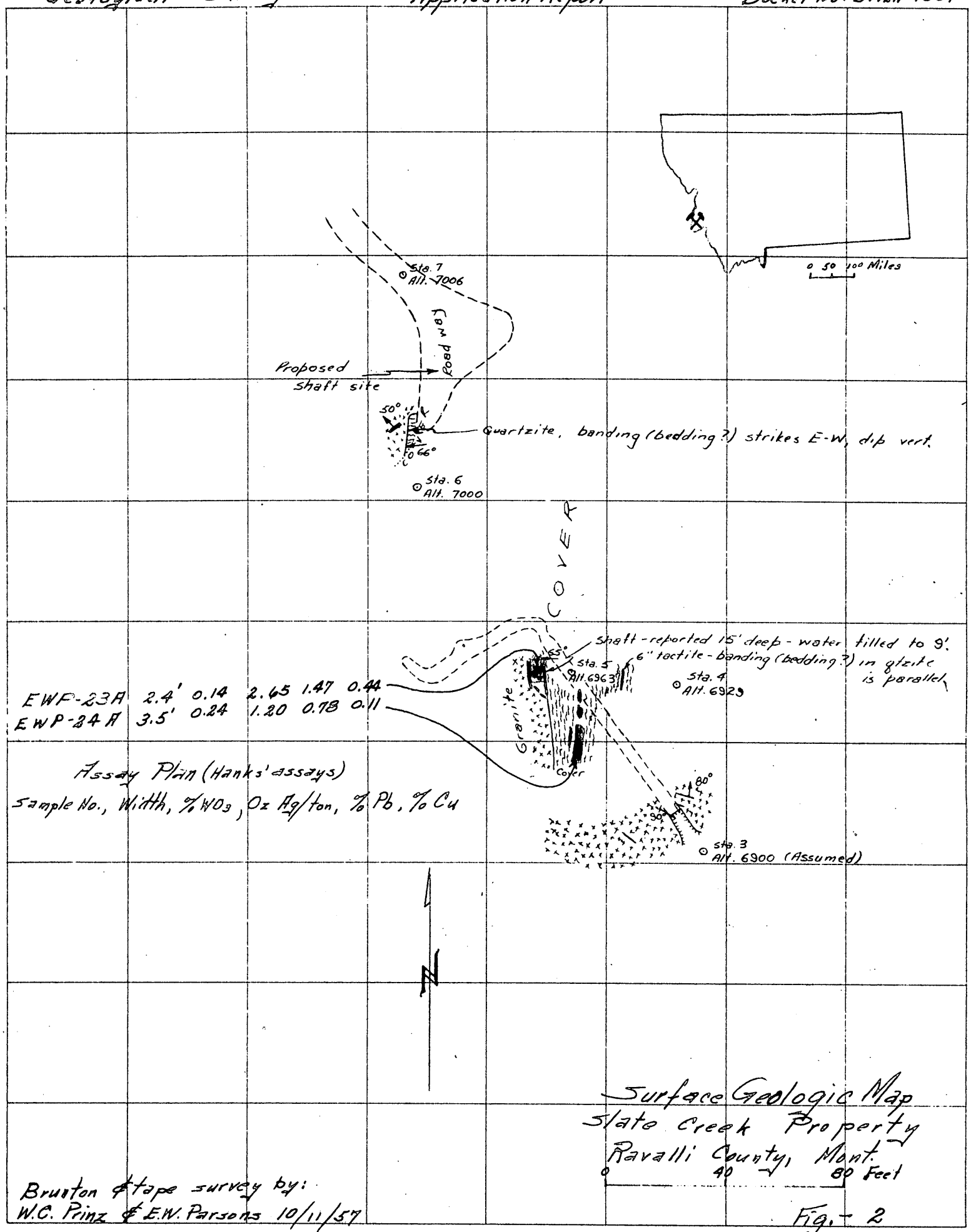
DATE		CODE

United States Dept. of the Interior D.M.E.A.
Geological Survey Application Report Docket No. DMEA 4837



EWF-23A	2.4'	0.14	2.65	1.47	0.44
EWP-24A	3.5'	0.24	1.20	0.78	0.11

Assay Plan (Hanks' assays)
Sample No., Width, % WO_3, Oz Ag/ton, % Pb, % Cu

Surface Geologic Map
Slate Creek Property
Ravalli County, Mont.

Bruston & tape survey by:
W.C. Prinz & E.W. Parsons 10/11/57

Fig. - 2

J. A. Gendron Co., Spokane
"ALBANENE" No. 185M K&E CO., N.Y. REG. U.S. PAT. OFF

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DMEA

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

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

Re: Docket No. DMEA 4837 - Tungsten,
Lead, Copper
Slate Creek Mines
Slate Creek property
Ravalli County, Montana

Dear Mr. Weissenborn:

Reference is made to your letter of September 20, 1957, in which you advised that due to the lateness of the season you tentatively planned to make an examination of the above-noted property early in October.

Copies of memoranda dated October 10 and 25, 1957, by W. P. Williams, Geological Survey, and R. W. Holliday, Bureau of Mines, respectively, relating to the project are enclosed. Also enclosed is an extra copy of the application for the use of the Field Team.

We are enclosing a letter to the Applicant, which you will please forward in case the examination has not been made.

Sincerely yours,

APPROVED:

Chairman, Operating Committee

Member, Bureau of Mines

Weissenborn in. 10 8 57
Property examined and report being prepared

Member, Geological Survey

Enclosures Letter not used

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

Slate Creek Mines
Darby, Montana

Re: Docket No. DMEA 4837 - Tungsten,
Lead, Copper
Slate Creek property
Ravalli County, Montana

Gentlemen:

The above-referenced application for exploration assistance for tungsten, lead and copper ores has been reviewed by the Division of Iron and Ferro-Alloys of the Defense Minerals Exploration Administration, and referred to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, South 157 Howard Street, Spokane 4, Washington, for a field examination of the property.

Any assistance you can give the members of the Field Team will be appreciated.

Sincerely yours,

Administrator

Letter not mailed

Property examined.

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DATE	INITIALS	CODE
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10/30	WJM	400

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

Date October 25, 1957

DMEA Docket No. 4837
DMEA Contract No.
Commodity Tung. Lead-Silver-Copper
Name of applicant Slate Creek Mines
Name of property Slate Creek Property
Location of property Ravalli Co., Montana
Estimated cost of project

Memorandum

To: W. S. Martin, Chief, Iron and Ferroalloys Division-DMEA
Through: Chief, Branch of Ferrous Metals & Ferroalloys

From: R. W. Holliday, Commodity Specialist, Branch of Ferrous Metals & Ferroalloys

Subject: Review of New Application
(Application, Field Team Report, etc.)

1. Date of subject document: 9/11/57. 2. Date received by reviewer: 10/21/57.

3. Prior reports on this property known to reviewer: Yes ☐ No ☒

4. Prior reports on nearby properties known to reviewer: Yes ☐ No ☒

5. Information available on past production: Yes ☐ No ☒

6. Other pertinent factors known to reviewer: Yes ☐ No ☒

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location ☐
   b. Ownership ☐
   c. Evidence of mineralization ☐
   d. Geology ☐
   e. Proposed exploration method ☐
   f. Alternate exploration method ☐
   g. Costs ☐
   h. ☐

9. Action advised:
   a. Obtain information from applicant ☐
   b. Refer to Field Team ☐
   c. Denial ☐
   d. Agree with Field Team ☐
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another examination ☐
   h. Approval ☐
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary) An examination by the Field Team has been scheduled and appraisal should wait for the examination report.

R. W. Holliday

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

IN REPLY REFER TO:
OFFICIAL FILE COPY
DMEA
RECEIVED OCT 11 1957

DATE	INITIALS	CODE
10/11	C	220
	WSM	400

Memorandum

October 10, 1957

To: W. S. Martin, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 4837 (tungsten, lead, silver, copper), Slate Creek mines, Ravalli County, Montana

The applicant proposes to explore for tungsten, lead, silver, and copper ore deposits at an old mine property that dates back some 50 years. The proposed work would consist of shaft sinking and drifting.

The ore producing potentialities of the property should be evaluated by field examination. A letter from the Executive Officer, Region I, dated Sept. 20, 1957, states that a field examination of the property will probably be made in early October.

W. P. Williams

W. P. Williams

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

September 26, 1957

Slate Creek Mines
Darby, Montana

Subject: DMEA-4837

Gentlemen

Your application for exploration assistance, dated September 11, 1957 submitted to our office at Spokane, Washington has been assigned Docket Number DMEA-4837 and referred to the Iron and Ferro-Alloys Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

Region I