340
FILE COPY
SURNAME:

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

Holder
Ballard

G.E.C.

August 2, 1951

AIR MAIL

West Slope Mining Co., Ltd.
P. O. Box 1595
Butte, Montana

In reply please refer to
DMA-1473 Tungsten

Gentlemen:

We have reviewed the new information submitted through Mr. Weissenborn and still must deny your application.

A copy of our letter to Mr. Weissenborn was sent to you and has been returned unclaimed. The copy is enclosed, which is self-explanatory.

Very truly yours,

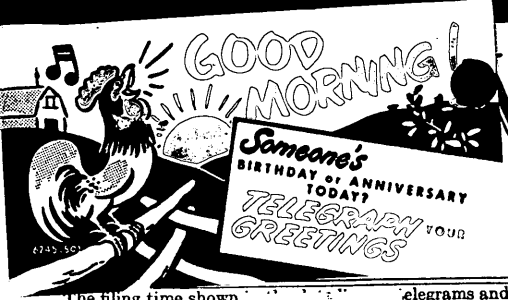
George B. Holderer

George B. Holderer
Chief, Tungsten Branch

Enclosure

TJBallard:bl

CC: Adm Reading File
Reports & Records Unit
Mr. Holderer
Field Team - Region III
Files



WESTERN UNION

W. P. MARSHALL, PRESIDENT

1201

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

The filing time shown in the text of all telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

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PRA183

PR BUA303 NL PD=BUTTE MONT 1=

P R BRADLEY=

DEFENSE MINERALS ADMINISTRATION DEPT OF INTERIOR

WASHDC=

BIRDIE TUNGSTEN MINE IS SEVEN THOUSAND FEET UP THE ROCKY MOUNTAINS= THAT AINT PALM BEACH= WITH SUMMER FADING IS DMA 1473X IN SIMILAR CONDITION? RESPECTFULLY=

WEST SLOPE MINING CO=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

AUG 2 7 52 AM '51
BUREAU OF FINANCE
MAIL ROOM
WASHINGTON, D. C.

DEPARTMENT OF THE ARMY
Defense Finance Administration
RECEIVED
8-2
JUL 30 1951
LINDA E. SUSSEL
Executive Secretary

FILE COPY
SURNAME:

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

Lemmon
Selfridge

July 9, 1951

Mr. A. E. Weissenborn, Executive Officer
DMA Field Team, Region II
So. 157 Howard Street
Spokane, Washington

Re: DMA 1473X Tungsten
Birdie Mine, Montana

Dear Mr. Weissenborn:

not stripped in R. & R.

In reply to your memorandum of June 29 recommending reconsideration of the exploration application of the West Slope Mining Co., Ltd. at the Birdie Mine, Butte, Montana:

We fail to see in what respect the applicant has submitted information that justifies further consideration of the case. The quantity of tungsten ore in the one ore shoot known in the mine would not be sufficient to warrant expenditure of the sum requested to reopen the mine, even if none of it was mined in 1916. Our information shows that a mineralized lense 16 feet long and 1.24 feet wide averaged 6.09 percent of WO_3 according to samples taken in 1916 by M. H. Gidel. This average is based on the following 6 samples:

1	0.8 ft.	18.00 percent WO_3
2	2.2	0.50
3	1.5	5.6
4	1.5	7.2
5	1.2	0.75
6	1.2	2.7

Three other samples taken along the drift showed only a trace, and 4 samples from the dump were barren. In computing the average width and grade, sample No. 2 was omitted because it was taken outside the main ore streak.

From published and private records we have put together the following history of tungsten in this mine:

Hubnerite was produced at the Birdie mine in 1907. "The Birdie has been worked for a silver mine, and the tungsten ore is said to occur in a shoot at the end of a silver-bearing vein. The shoot is reached by a 400-foot tunnel at a depth of between 250 and 300 feet." (Mineral Resources, 1907.) "The only tungsten ore known to have been mined in Montana during 1908 was a lot of hubnerite from the Birdie mine near Butte. This mine was formerly worked for silver, and hubnerite is reported to occur in the same vein in shoots which carry the mineral in thin blades embedded in quartz. Some of the blades are yellowish and remarkably translucent." (Mineral Resources, 1908.)

F. Tomsk states in Mining World, vol. 26, p. 63, 1908 as follows: "The only shoot of huebnerite is in the Birdie mine, about 4 miles east of Butte, although a few pieces of the ore were found about ½ mile north and also about 1.5 miles east of this mine, but not enough to warrant expensive mining.

"The Birdie is an old silver mine, having produced thousands of tons of siliceous silver-bearing ore in former years. The mine is opened by a tunnel, about 1,800 feet long, drifts, crosscuts and an upraise to the surface (about 250 feet). The silver ore is all stoped out above the tunnel.

"The chimney shoot of huebnerite is at the west end of the silver-bearing quartz, and is from 12 to 20 inches wide, and from 6 to 10 feet long. All the way from the back of the tunnel to the surface (250 feet) a winze has been sunk on the shoot, where the huebnerite is from 3 to 5 feet wide and about 20 feet long.

"The ore body seems to be increasing in length and width as well as the quantity of metal, as depth is gained, below the tunnel level.

"At present, there is about 30 tons of the crude huebnerite in the bins ready for delivery, for sale. This crude ore will run about 20 percent tungstic acid, and does not contain injurious compounds."

From private sources, we know that the mine was open in 1916, the geology was mapped by Sales and Linforth, and the tungsten was sampled by Gidel. A winze was sunk in the tungsten ore to a depth of 12 feet where work was stopped because the flow of water was too heavy for the suction pump.

About 3 to 4 carloads were shipped from a small area around the winze. At this time, the price of tungsten ranged from $30 to $90 or more per unit of WO_3.

The mine has apparently been closed since 1916. No accurate production records are available. It is stated that San Pedro on June 16, 1916 shipped 62 tons of tungsten ore, and subsequently shipped 20 tons. This material may have been mined previously.

It is highly probable that the tungsten shoot described is the only one in the old workings, for the miners apparently recognized huebnerite as early as 1907 when the mine was open. How much tungsten ore remains in this shoot is highly speculative, for we do know that some tungsten ore was shipped.

We therefore believe that the exploration would disclose insignificant amounts of tungsten, and is unwarranted as a project for

tungsten. At the time the mine was open, tungsten sold at a price higher than in 1951, and mining costs were lower. Whether or not the mine is a good prospect for silver can best be evaluated by the Anaconda geologists who are familiar with the property. We have received no stope maps indicating to what extent the vein matter has been removed.

Under the circumstances, the application is again denied after review of the case.

Very truly yours,

Tom Lyon

Tom Lyon
Director, Supply Division

DMLemmon:bl

CC: Adm. Reading File
Reports & Records Unit
Mr. Holderer
~~Field Team - Region II~~
Mr. Lemmon
Files
West Slope Mining Co., Ltd,

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1207 N. Division St.
Spokane, Wash.
June 29, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1951
LANDON F. STROBEL
Executive Secretary

Thru: L. S. Strobel

MEMORANDUM

To: P. R. Bradley, Jr., Chairman, Tungsten Commodity Committee

From: DMA Field Team, Region II

Subject: West Slope Mining Co., Ltd., Butte, Mont., DMA 1473-x, Tungsten

The applicant was notified June 15,1951 that his application for an exploration loan was being denied because it was considered that the chances of finding an appreciable amount of tungsten in the Birdie mine are slight and that the exploration therefore would be primarily for siliceous silver ore. Furthermore, it was claimed that the hubnerite ore lens probably was mined out in 1916.

The applicant has submitted additional information to the Field Team that justifies further consideration. Concerning the hubnerite ore lens, the applicant states that he can furnish affidavits from at least two miners who worked in the Birdie adit, saw the tungsten ore, and are willing to swear that no mining has been done there since 1905. We believe this constitutes good evidence that the tungsten lens has not been mined out.

Concerning the tungsten possibilities of the area, the applicant states that he retained Mr. Don McMillan, geologist for the past 12 years with the Anaconda Copper Mining Company, to examine the property and that Mr. McMillan advised him the Birdie mine is a good tungsten prospect. Mr. Merle Guidel, chief geologist of the Anaconda Copper Mining Company, in a previous discussion with M. E. Volin, field team member, stated that the area offered attractive possibilities for tungsten exploration. The Anaconda Copper Mining Company has done considerable geologic work there, and these two representatives are well acquainted with the features.

The applicant has prepared a new proposal entailing the opening and rehabilitation of the Birdie adit and raising 80 feet on the tungsten ore. The estimated cost of this work is $38,682. A form of contract has been prepared for an exploration project in this amount and the Field Team recommends that the exploration proposal be approved.

P. R. Bradley, Jr.
Chairman, Tungsten Commodity Comm.

West Slope Mining Co.
June 29, 1951

Enclosed herewith are six signed contracts along with attached exhibits and a map.

By Field Team, Region II

A. E. Weissenborn

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

M. E. Volin

M. E. Volin, Member
(U. S. Bureau of Mines)

Encl.

1207 N. Division St.
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Chairman, Tungsten Commodity Comm.

West Slope Mining Co.
June 29, 1951

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By Field Team, Region II

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

M. E. Volin, Member
(U. S. Bureau of Mines)

Encl.

MF-200
(April 1951)

Docket No. DMA _____
Commodity Tungsten

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] the West Slope Mining Co., Ltd., Silver Bow County, Mont.

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Montana, County of Silver Bow described as follows: [3] Patented claim No. 6076, in sec. 15, T. 3 N., R. 7 W., M.P.M. Summit Valley District including shaft, adit, and drifts already in existence thereon.

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon

(*b*) ~~That he is the lessee in possession and entitled to possession, and that the property is subject only to the following leases, licenses, or other agreements, of which the instrument is attached:~~

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] tungsten ores; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 calendar months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 75 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $29,011, which is 75 percent of the agreed estimated total cost of this project, $38,682.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____

West Slope Mining Co. Ltd.
(Operator)

By W. J. Maretta
General Partner

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "A"

Exploration Project

To explore and evaluate the Birdie vein structure.

Time Schedule
Months

1	1.	Construct road to tunnel, recondition county road to Columbia Gardens intersection, grade mine plant site.
6	2.	Reopen and make usable present Birdie adit openings.
2	3.	Drive 2-compartment timbered raise 80 feet on exposed ore-shoot.
1	4.	Pump out, retimber, and examine winze.

10 mos., total elapsed time.

Estimated cost of project:

1.	Cost of additional facilities	$2,100
2.	Operating equipment to be rented	3,355
3.	Operating equipment to be purchased	3,559
4.	Rental of Operator's equipment	700
5.	Consulting services	1,000
6.	Rehabilitation and repairs to Birdie adit openings, 1040 feet at $22.37/ft.	23,268
7.	Raising on exposed ore-shoot 80 feet at $40/ft.	3,200
8.	Pumping out and retimber winze 15 feet at $100/ft.	1,500
	Total	$38,682

Per foot costs shown in the above schedule are to include all labor, supervision, operating costs, pipe, track, and assaying charges.

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Access road from adit portal to county road, 1000 feet @ $0.80	$800.00
Grading of yard site 1 job @ $300	300.00
Frame shed for office, dry, and tool storage 1 unit @ $1000	1000.00
Total	$2100.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "C"

Operating equipment

To be rented:

	Rental
1 - Hand held rock drill, 1 mo.at $20	$ 20
1 - Sump pump, 1 mo. at $10	10
1 - Air hoist, single drum, 4 mo. at $20	80
8 - M.S.A. cap lamps, 10 mo. at $10.10	101
1 - Compressor, I.R.-GKA-315, 8 mo. at $393	3,144
Total	$3,355

To be purchased:

1 - Exhaust fan, 3 H.P. with gas engine	$ 582
1 - Lamb air mover, 6"	53
1 - I.R. Stoper, R-48	670
1 - Light plant, 1500 watts, gas driven	610
1 - Rectifier, 10 amp	55
6 - Mine cars, 14 cu. ft.	750
2 - Line oilers	39
2 - Air hoses, 50 ft.	90
2 - Water hoses, 50 ft.	60
1,000 ft. Pipe, 1 in. standard	230
1,000 ft. Pipe, 2 in. standard	420
Total	$3,559

Materials, supplies, small tools, etc. required for conduct of project	$9,674

To be furnished by Operator:

1 - Willys 1-ton pickup truck, 4-wheel drive, 10 mos. at $70	$ 700

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

Classification	Rate per shift	No. shifts	Amount	
Miners (daily basis)	$14.65	216	$3,164.00	
Miners (contract basis)	19.00	66	1,254.00	
Trammers	14.65	141	2,065.00	
Mechanic	15.25	28	427.00	
Maintainence mechanic and watchman	14.06	200	2,812.00	
				$ 9,722.00

The foregoing rates are subject to lawful overtime increases and revision of wage scale under union contracts.

Payroll taxes @ 10 percent	$ 972.00	
Supervisor, 10 mos. @ $600	6,000.00	
Consulting services, including engineer and geologist as required	1,000.00	
		$ 7,972.00
Total		$17,694.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

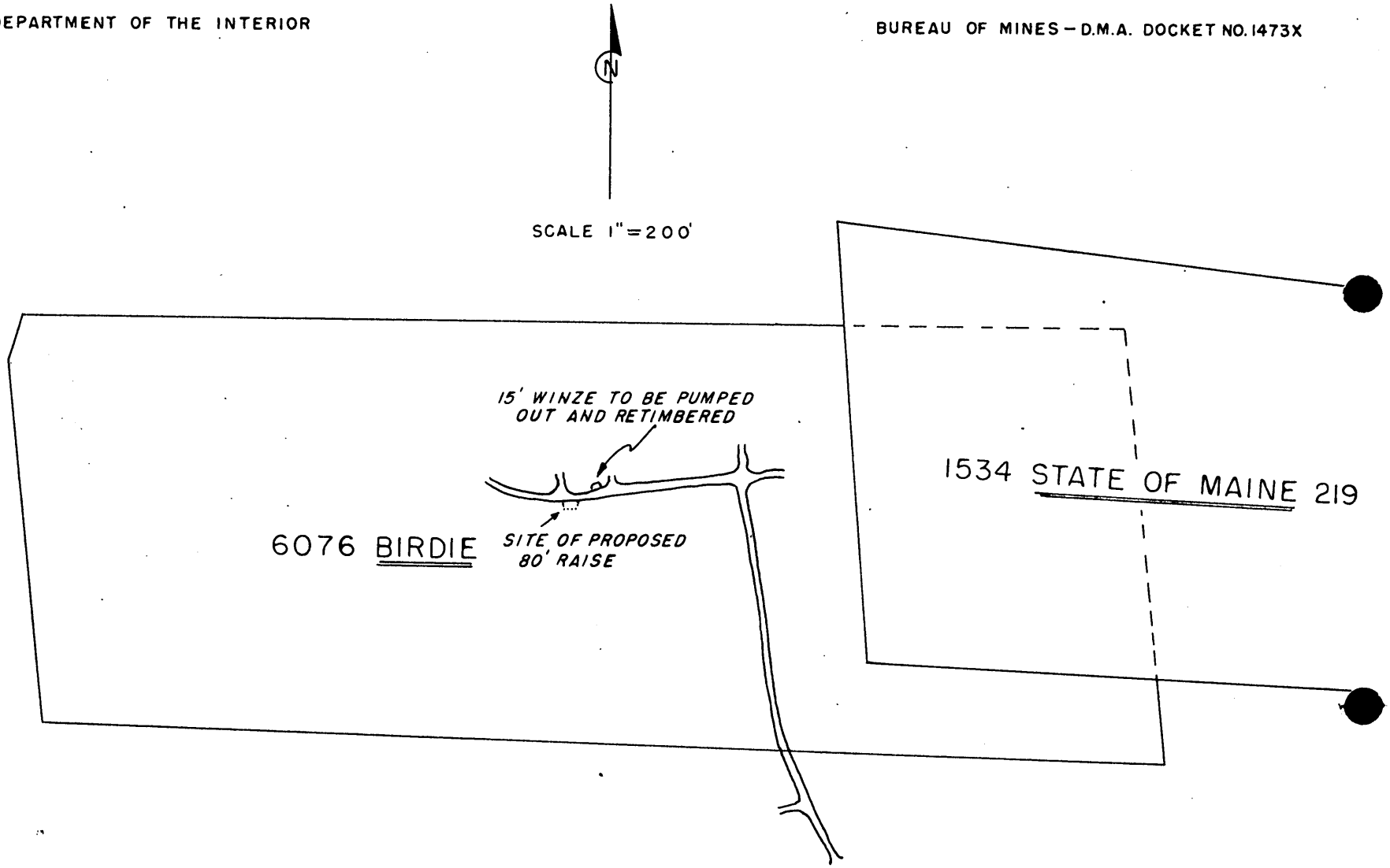
EXHIBIT "E"

Rehabilitation and repairs

Recondition present county road	$300.00
Maintain roads to Columbia Garden intersection	300.00
Repair and maintainence of equipment (above equipment to be acquired)	500.00
Total	$1100.00

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES – D.M.A. DOCKET NO. 1473X



Sketch showing mine workings and proposed exploration work on Birdie claim, Silver Bow County, Mont.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1951
LANDON F. STROBEL
Executive Secretary

1207 N. Division St.
Spokane, Wash.
June 29, 1951

Thru: L. S. Strobel

MEMORANDUM

To: P. R. Bradley, Jr., Chairman, Tungsten Commodity Committee

From: DMA Field Team, Region II

Subject: West Slope Mining Co., Ltd., Butte, Mont., DMA 1473-m, Tungsten

The applicant was notified June 15,1951 that his application for an exploration loan was being denied because it was considered that the chances of finding an appreciable amount of tungsten in the Birdie mine are slight and that the exploration therefore would be primarily for siliceous silver ore. Furthermore, it was claimed that the hubnerite ore lens probably was mined out in 1916.

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P. R. Bradley, Jr.
Chairman, Tungsten Commodity Comm.

West Slope Mining Co.
June 29, 1951

Enclosed herewith are six signed contracts along with attached exhibits and a map.

By Field Team, Region II

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

H. E. Volin, Member
(U. S. Bureau of Mines)

Encl.

MF-209
(April, 1951)

Docket No. DMA _____
Commodity Tungsten

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and[2] the West Slope Mining Co., Ltd., Silver Bow County, Mont.

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Montana, County of Silver Bow described as follows:[3] Patented claim No. 6076, in sec. 15, T. 3 N., R. 7 W., M.P.M. Summit Valley District including shaft, adit, and drifts already in existence thereon.

with respect to which the Operator represents and undertakes:[4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon

(*b*) ~~That he is the lessee of the property and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the lessor is attached:~~

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for[5] tungsten ores; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of[6] 10 calendar months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of proper*[illegible] All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 75 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $ 29,011, which is 75 percent of the agreed estimated total cost of this project, $ 38,682.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____

West Slope Mining Co. Ltd.
(Operator)

By W. J. Maretta
General Partner

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "A"

Exploration Project

To explore and evaluate the Birdie vein structure.

Time Schedule
Months

1	1.	Construct road to tunnel, recondition county road to Columbia Gardens intersection, grade mine plant site.
6	2.	Reopen and make usable present Birdie adit openings.
2	3.	Drive 2-compartment timbered raise 80 feet on exposed ore-shoot.
1	4.	Pump out, retimber, and examine winze.

10 mos., total elapsed time.

Estimated cost of project:

1.	Cost of additional facilities	$2,100
2.	Operating equipment to be rented	3,355
3.	Operating equipment to be purchased	3,559
4.	Rental of Operator's equipment	700
5.	Consulting services	1,000
6.	Rehabilitation and repairs to Birdie adit openings, 1040 feet at $22.37/ft.	23,268
7.	Raising on exposed ore-shoot 80 feet at $40/ft.	3,200
8.	Pumping out and retimber winze 15 feet at $100/ft.	1,500
	Total	$38,682

Per foot costs shown in the above schedule are to include all labor, supervision, operating costs, pipe, track, and assaying charges.

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Access road from adit portal to county road, 1000 feet @ $0.80	$800.00
Grading of yard site 1 job @ $300	300.00
Frame shed for office, dry, and tool storage 1 unit @ $1000	1000.00
Total	$2100.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "C"

Operating equipment

To be rented:

	Rental
1 - Hand held rock drill, 1 mo.at $20	$ 20
1 - Sump pump, 1 mo. at $10	10
1 - Air hoist, single drum, 4 mo. at $20	80
8 - M.S.A. cap lamps, 10 mo. at $10.10	101
1 - Compressor, I.R.-GKA-315, 8 mo. at $393	3,144
Total	$3,355

To be purchased:

1 - Exhaust fan, 3 H.P. with gas engine	$ 582
1 - Lamb air mover, 6"	53
1 - I.R. Stoper, R-48	670
1 - Light plant, 1500 watts, gas driven	610
1 - Rectifier, 10 amp	55
6 - Mine cars, 14 cu. ft.	750
2 - Line oilers	39
2 - Air hoses, 50 ft.	90
2 - Water hoses, 50 ft.	60
1,000 ft. Pipe, 1 in. standard	230
1,000 ft. Pipe, 2 in. standard	420
Total	$3,559

Materials, supplies, small tools, etc. required for conduct of project	$9,674

To be furnished by Operator:

1 - Willys 1-ton pickup truck, 4-wheel drive, 10 mos. at $70	$ 700

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

Classification	Rate per shift	No. shifts	Amount	
Miners (daily basis)	$14.65	216	$3,164.00	
Miners (contract basis)	19.00	66	1,254.00	
Trammers	14.65	141	2,065.00	
Mechanic	15.25	28	427.00	
Maintainance mechanic and watchman	14.06	200	2,812.00	
				$ 9,722.00

The foregoing rates are subject to lawful overtime increases and revision of wage scale under union contracts.

Payroll taxes @ 10 percent	$ 972.00	
Supervisor, 10 mos. @ $600	6,000.00	
Consulting services, including engineer and geologist as required	1,000.00	
		$ 7,972.00
Total		$17,694.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

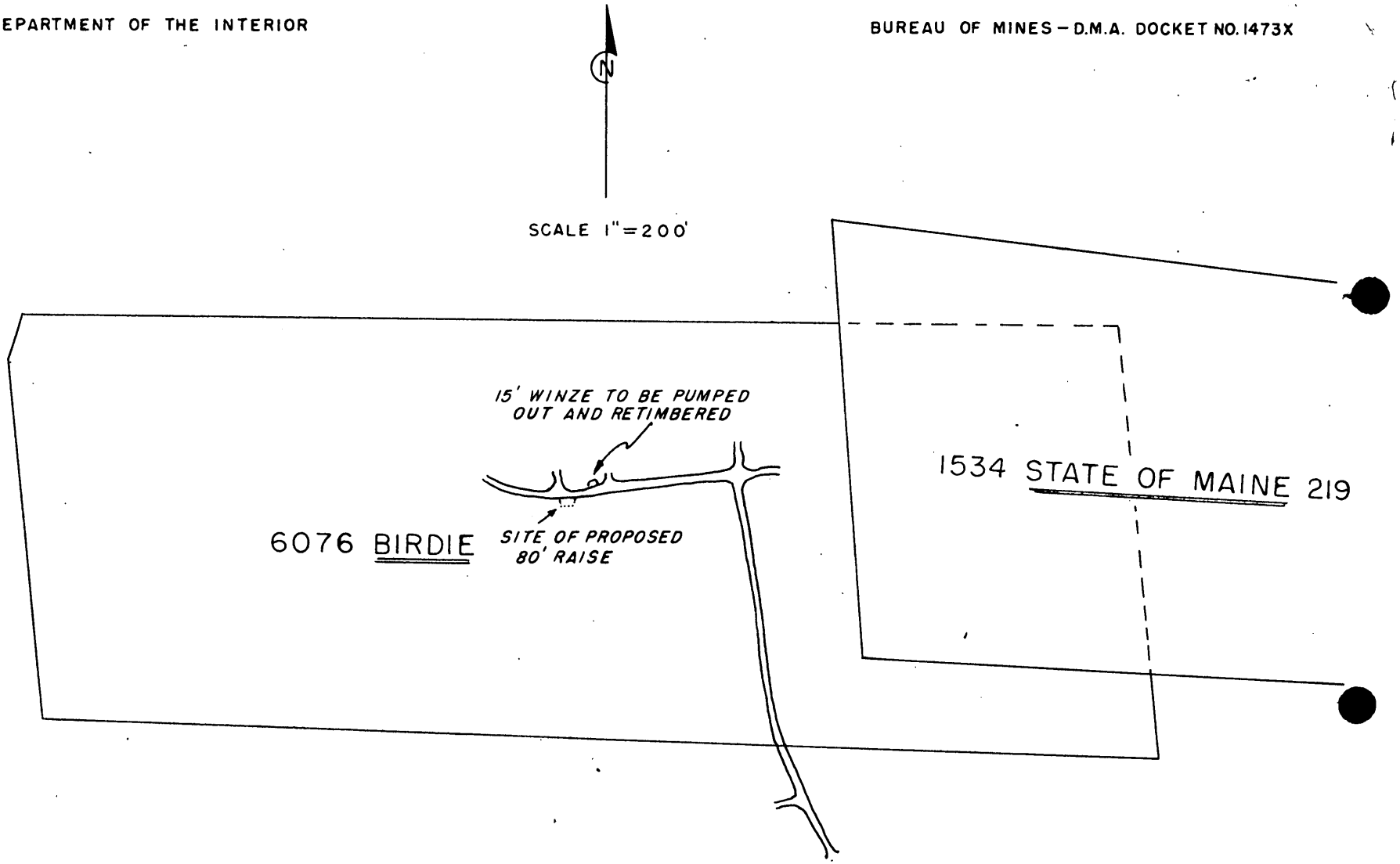
EXHIBIT "E"

Rehabilitation and repairs

Recondition present county road	$300.00
Maintain roads to Columbia Gardens intersection	300.00
Repair and maintainence of equipment (above equipment to be acquired)	500.00
Total	$1100.00

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES – D.M.A. DOCKET NO. 1473X



Sketch showing mine workings and proposed exploration work on Birdie claim, Silver Bow County, Mont.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1951
LANDON F. STROBEL
Executive Secretary

1207 N. Division St.
Spokane, Wash.
June 29, 1951

Thru: L. S. Strobel

MEMORANDUM

To: P. R. Bradley, Jr., Chairman, Tungsten Commodity Committee

From: DMA Field Team, Region II

Subject: West Slope Mining Co., Ltd., Butte, Mont., DMA 1473-x, Tungsten

The applicant was notified June 15,1951 that his application for an exploration loan was being denied because it was considered that the chances of finding an appreciable amount of tungsten in the Birdie mine are slight and that the exploration therefore would be primarily for siliceous silver ore. Furthermore, it was claimed that the hubnerite ore lens probably was mined out in 1916.

The applicant has submitted additional information to the Field Team that justifies further consideration. Concerning the hubnerite ore lens, the applicant states that he can furnish affidavits from at least two miners who worked in the Birdie adit, saw the tungsten ore, and are willing to swear that no mining has been done there since 1905. We believe this constitutes good evidence that the tungsten lens has not been mined out.

Concerning the tungsten possibilities of the area, the applicant states that he retained Mr. Don McMillan, geologist for the past 12 years with the Anaconda Copper Mining Company, to examine the property and that Mr. McMillan advised him the Birdie mine is a good tungsten prospect. Mr. Merle Guidel, chief geologist of the Anaconda Copper Mining Company, in a previous discussion with M. E. Volin, field team member, stated that the area offered attractive possibilities for tungsten exploration. The Anaconda Copper Mining Company has done considerable geologic work there, and these two representatives are well acquainted with the features.

The applicant has prepared a new proposal entailing the opening and rehabilitation of the Birdie adit and raising 80 feet on the tungsten ore. The estimated cost of this work is $38,682. A form of contract has been prepared for an exploration project in this amount and the Field Team recommends that the exploration proposal be approved.

P. R. Bradley, Jr.
Chairman, Tungsten Commodity Comm.

West Slope Mining Co.
June 29, 1951

Enclosed herewith are six signed contracts along with attached exhibits and a map.

By Field Team, Region II

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

M. E. Volin, Member
(U. S. Bureau of Mines)

Encl.

MF-200
(April 1951)

Docket No. DMA _____
Commodity Tungsten

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] the West Slope Mining Co., Ltd., Silver Bow County, Mont.

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Montana, County of Silver Bow described as follows: [3] Patented claim No. 6076, in sec. 15, T. 3 S., R. 7 W., M.P.M. Summit Valley District including shaft, adit, and drifts already in existence thereon.

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Obligation of $6,000 to Harry J. Cross, 306 Concord Building, Portland, Oregon

(*b*) ~~That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.~~

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] tungsten ores; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 calendar months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
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[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

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12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

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Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

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Executed in triplicate the day and year first above written.

THE UNITED STATES OF AMERICA

West Slope Mining Co. Ltd.
(Operator)

By _____

By W. J. Maretta
General Partner

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "A"

Exploration Project

To explore and evaluate the Birdie vein structure.

Time Schedule

Months		
1	1.	Construct road to tunnel, recondition county road to Columbia Gardens intersection, grade mine plant site.
6	2.	Reopen and make usable present Birdie adit openings.
2	3.	Drive 2-compartment timbered raise 80 feet on exposed ore-shoot.
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10 mos., total elapsed time.

Estimated cost of project:

1.	Cost of additional facilities	$2,100
2.	Operating equipment to be rented	3,355
3.	Operating equipment to be purchased	3,559
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5.	Consulting services	1,000
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	Total	$38,682

Per foot costs shown in the above schedule are to include all labor, supervision, operating costs, pipe, track, and assaying charges.

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Access road from adit portal to county road, 1000 feet @ $0.80	$800.00
Grading of yard site 1 job @ $300	300.00
Frame shed for office, dry, and tool storage 1 unit @ $1000	1000.00
Total	$2100.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "C"

Operating equipment

To be rented:

	Rental
1 - Hand held rock drill, 1 mo.at $20	$ 20
1 - Sump pump, 1 mo. at $10	10
1 - Air hoist, single drum, 4 mo. at $20	80
8 - M.S.A. cap lamps, 10 mo. at $10.10	101
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To be purchased:

1 - Exhaust fan, 3 H.P. with gas engine	$ 582
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1 - I.R. Stoper, R-48	670
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Total	$3,559

Materials, supplies, small tools, etc. required for conduct of project	$9,674

To be furnished by Operator:

1 - Willys 1-ton pickup truck, 4-wheel drive, 10 mos. at $70	$ 700

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

Classification	Rate per shift	No. shifts	Amount	
Miners (daily basis)	$14.65	216	$3,164.00	
Miners (contract basis)	19.00	66	1,254.00	
Trammers	14.65	141	2,065.00	
Mechanic	15.25	28	427.00	
Maintainence mechanic and watchman	14.06	200	2,812.00	
				$ 9,722.00

The foregoing rates are subject to lawful overtime increases and revision of wage scale under union contracts.

Payroll taxes @ 10 percent	$ 972.00	
Supervisor, 10 mos. @ $600	6,000.00	
Consulting services, including engineer and geologist as required	1,000.00	
		$ 7,972.00
Total		$17,694.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

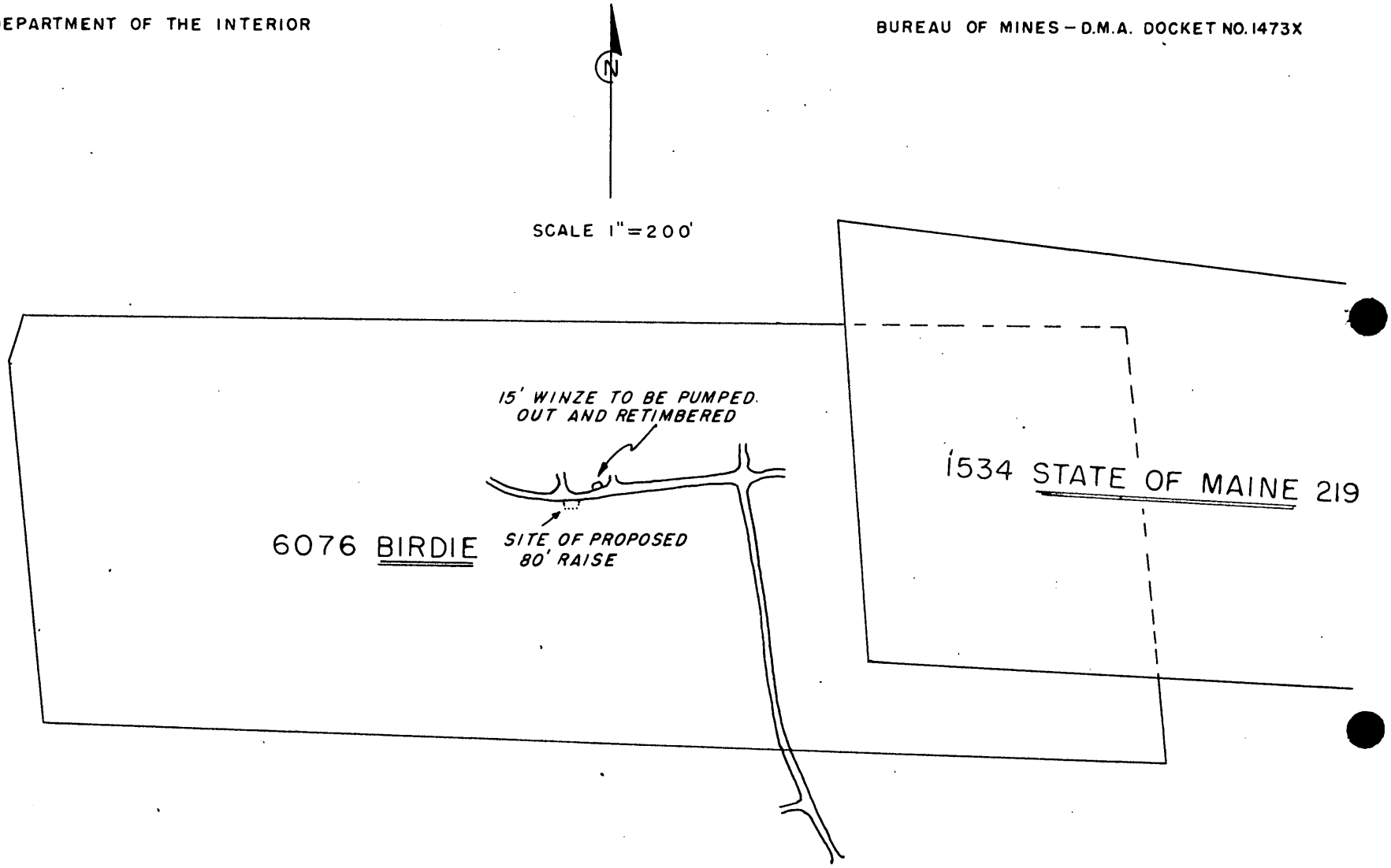
EXHIBIT "E"

Rehabilitation and repairs

Recondition present county road	$300.00
Maintain roads to Columbia Garden intersection	300.00
Repair and maintainence of equipment (above equipment to be acquired)	500.00
Total	$1100.00

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES – D.M.A. DOCKET NO. 1473X



Sketch showing mine workings and proposed exploration work on Birdie claim, Silver Bow County, Mont.

MF-200
(April 1951)

Docket No. DMA _____
Commodity Tungsten

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and[2] the West Slope Mining Co., Ltd., Silver Bow County, Mont.

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Montana, County of Silver Bow described as follows:[3] Patented claim No. 6076, in sec. 15, T. 3 N., R. 7 W., M.P.M. Summit Valley District including shaft, adit, and drifts already in existence thereon.

with respect to which the Operator represents and undertakes:[4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon.

(*b*) ~~That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:~~

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for[5] tungsten ores; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of[6] 10 calendar months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 75 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $29,011, which is 75 percent of the agreed estimated total cost of this project, $38,682.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

West Slope Mining Co. Ltd.
(Operator)

By W. J. Marietta
General Partner

THE UNITED STATES OF AMERICA

By

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "A"

Exploration Project

To explore and evaluate the Birdie vein structure.

Time Schedule
Months

1	1.	Construct road to tunnel, recondition county road to Columbia Gardens intersection, grade mine plant site.
6	2.	Reopen and make usable present Birdie adit openings.
2	3.	Drive 2-compartment timbered raise 80 feet on exposed ore-shoot.
1	4.	Pump out, retimber, and examine winze.

10 mos., total elapsed time.

Estimated cost of project:

1.	Cost of additional facilities	$2,100
2.	Operating equipment to be rented	3,355
3.	Operating equipment to be purchased	3,559
4.	Rental of Operator's equipment	700
5.	Consulting services	1,000
6.	Rehabilitation and repairs to Birdie adit openings, 1040 feet at $22.37/ft.	23,263
7.	Raising on exposed ore-shoot 80 feet at $40/ft.	3,200
8.	Pumping out and retimber winze 15 feet at $100/ft.	1,500
	Total	$38,682

Per foot costs shown in the above schedule are to include all labor, supervision, operating costs, pipe, track, and assaying charges.

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Access road from adit portal to county road, 1000 feet @ $0.80	$800.00
Grading of yard site 1 job @ $300	300.00
Frame shed for office, dry, and tool storage 1 unit @ $1000	1000.00
Total	$2100.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "C"

Operating equipment

To be rented:

	Rental
1 - Hand held rock drill, 1 mo.at $20	$ 20
1 - Sump pump, 1 mo. at $10	10
1 - Air hoist, single drum, 4 mo. at $20	80
8 - M.S.A. cap lamps, 10 mo. at $10.10	101
1 - Compressor, I.R.-GKA-315, 8 mo. at $393	3,144
Total	$3,355

To be purchased:

1 - Exhaust fan, 3 H.P. with gas engine	$ 582
1 - Lamb air mover, 6"	93
1 - I.R. Stoper, R-48	670
1 - Light plant, 1500 watts, gas driven	610
1 - Rectifier, 10 amp	55
6 - Mine cars, 14 cu. ft.	750
2 - Line oilers	39
2 - Air hoses, 50 ft.	90
2 - Water hoses, 50 ft.	60
1,000 ft. Pipe, 1 in. standard	230
1,000 ft. Pipe, 2 in. standard	420
Total	$3,559

Materials, supplies, small tools, etc. required for conduct of project	$9,674

To be furnished by Operator:

1 - Willys 1-ton pickup truck, 4-wheel drive, 10 mos. at $70	$ 700

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

Classification	Rate per shift	No. shifts	Amount	
Miners (daily basis)	$14.65	216	$3,164.00	
Miners (contract basis)	19.00	66	1,254.00	
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				$ 9,722.00

The foregoing rates are subject to lawful overtime increases and revision of wage scale under union contracts.

Payroll taxes @ 10 percent	$ 972.00	
Supervisor, 10 mos. @ $600	6,000.00	
Consulting services, including engineer and geologist as required	1,000.00	
		$ 7,972.00
Total		$17,694.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

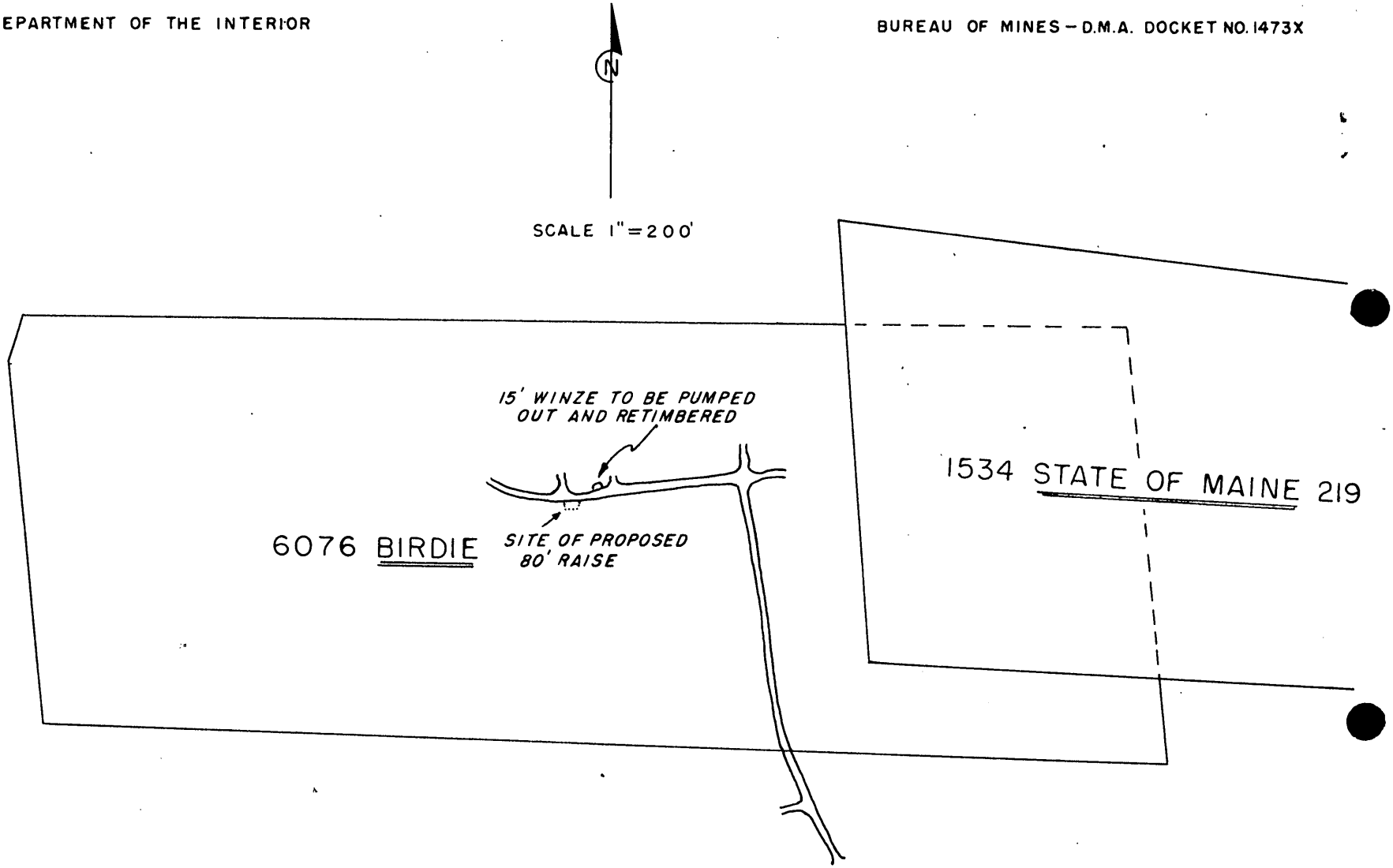
EXHIBIT "E"

Rehabilitation and repairs

Recondition present county road	$300.00
Maintain roads to Columbia Garden intersection	300.00
Repair and maintainence of equipment (above equipment to be acquired)	500.00
Total	$1100.00

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES – D.M.A. DOCKET NO. 1473X



Sketch showing mine workings and proposed exploration work on Birdie claim, Silver Bow County, Mont.

MF-200
(April 1951)

Docket No. DMA _____
Commodity Tungsten

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195___, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] the West Slope Mining Co., Ltd., Silver Bow County, Mont.

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Montana, County of Silver Bow described as follows: [3] Patented claim No. 6076, in sec. 15, T. 3 N., R. 7 W., M.P.M. Summit Valley District including shaft, adit, and drifts already in existence thereon.

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon.

(*b*) ~~That he is a lessee in possession and entitled to possession and the subordination agreement of the lessor is attached.~~

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] tungsten ores; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 calendar months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, and other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 75 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $29,011, which is 75 percent of the agreed estimated total cost of this project, $38,682.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

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Executed in triplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____

West Slope Mining Co. Ltd.
(Operator)

By W. J. Maretta
General Partner

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "A"

Exploration Project

To explore and evaluate the Birdie vein structure.

Time Schedule
Months

1	1.	Construct road to tunnel, recondition county road to Columbia Gardens intersection, grade mine plant site.
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2	3.	Drive 2-compartment timbered raise 80 feet on exposed ore-shoot.
1	4.	Pump out, retimber, and examine winze.

10 mos., total elapsed time.

Estimated cost of project:

1.	Cost of additional facilities	$2,100
2.	Operating equipment to be rented	3,355
3.	Operating equipment to be purchased	3,559
4.	Rental of Operator's equipment	700
5.	Consulting services	1,000
6.	Rehabilitation and repairs to Birdie adit openings, 1040 feet at $22.37/ft.	23,268
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	Total	$38,682

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West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "B"

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Access road from adit portal to county road, 1000 feet @ $0.80	$800.00
Grading of yard site 1 job @ $300	300.00
Frame shed for office, dry, and tool storage 1 unit @ $1000	1000.00
Total	$2100.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "C"

Operating equipment

To be rented:

	Rental
1 - Hand held rock drill, 1 mo.at $20	$ 20
1 - Sump pump, 1 mo. at $10	10
1 - Air hoist, single drum, 4 mo. at $20	80
8 - M.S.A. cap lamps, 10 mo. at $10.10	101
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1 - I.R. Stoper, R-48	670
1 - Light plant, 1500 watts, gas driven	610
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1,000 ft. Pipe, 1 in. standard	230
1,000 ft. Pipe, 2 in. standard	420
Total	$3,559

Materials, supplies, small tools, etc. required for conduct of project	$9,674

To be furnished by Operator:

1 - Willys 1-ton pickup truck, 4-wheel drive, 10 mos. at $70	$ 700

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

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Classification	Rate per shift	No. shifts	Amount	
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Trammers	14.65	141	2,065.00	
Mechanic	15.25	28	427.00	
Maintainence mechanic and watchman	14.06	200	2,812.00	
				$ 9,722.00

The foregoing rates are subject to lawful overtime increases and revision of wage scale under union contracts.

Payroll taxes @ 10 percent	$ 972.00	
Supervisor, 10 mos. @ $600	6,000.00	
Consulting services, including engineer and geologist as required	1,000.00	
		$ 7,972.00
	Total	$17,694.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

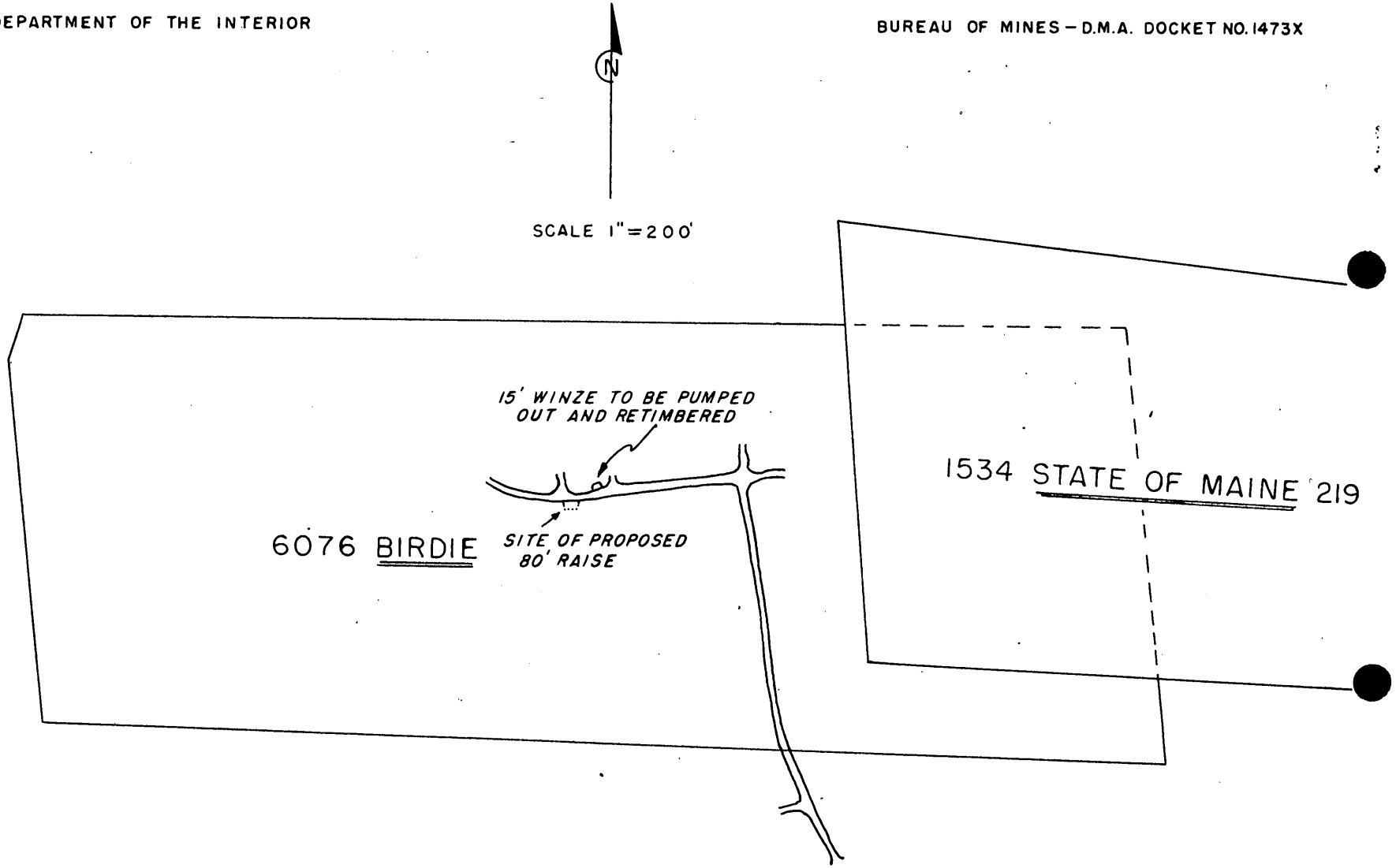
EXHIBIT "E"

Rehabilitation and repairs

Recondition present county road	$300.00
Maintain roads to Columbia Gardens intersection	300.00
Repair and maintainence of equipment (above equipment to be acquired)	500.00
Total	$1100.00

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES – D.M.A. DOCKET NO. 1473X



Sketch showing mine workings and proposed exploration work on Birdie claim, Silver Bow County, Mont.

MF-200.
(April 1951)

Docket No. DMA _____
Commodity Tungsten

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] the West Slope Mining Co., Ltd., Silver Bow County, Mont.

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Montana, County of Silver Bow described as follows: [3] Patented claim No. 6076, in sec. 15, T. 3 N., R. 7 W., M.P.M. Summit Valley District including shaft, adit, and drifts already in existence thereon.

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon

(*b*) ~~That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:~~

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] tungsten ores; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 calendar months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 75 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $29,011, which is 75 percent of the agreed estimated total cost of this project, $38,682.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

West Slope Mining Co. Ltd.
(Operator)

By W. J. Maritta
General Partner

THE UNITED STATES OF AMERICA

By _____

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "A"

Exploration Project

To explore and evaluate the Birdie vein structure.

Time Schedule
Months

1	1.	Construct road to tunnel, recondition county road to Columbia Gardens intersection, grade mine plant site.
6	2.	Reopen and make usable present Birdie adit openings.
2	3.	Drive 2-compartment timbered raise 80 feet on exposed ore-shoot.
1	4.	Pump out, retimber, and examine winze.

10 mos., total elapsed time.

Estimated cost of project:

1.	Cost of additional facilities	$2,100
2.	Operating equipment to be rented	3,355
3.	Operating equipment to be purchased	3,559
4.	Rental of Operator's equipment	700
5.	Consulting services	1,000
6.	Rehabilitation and repairs to Birdie adit openings, 1040 feet at $22.37/ft.	23,268
7.	Raising on exposed ore-shoot 80 feet at $40/ft.	3,200
8.	Pumping out and retimber winze 15 feet at $100/ft.	1,500
	Total	$38,682

Per foot costs shown in the above schedule are to include all labor, supervision, operating costs, pipe, track, and assaying charges.

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Access road from adit portal to county road, 1000 feet @ $0.80	$800.00
Grading of yard site 1 job @ $300	300.00
Frame shed for office, dry, and tool storage 1 unit @ $1000	1000.00
Total	$2100.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "C"

Operating equipment

To be rented:

	Rental
1 - Hand held rock drill, 1 mo.at $20	$ 20
1 - Sump pump, 1 mo. at $10	10
1 - Air hoist, single drum, 4 mo. at $20	80
8 - M.S.A. cap lamps, 10 mo. at $10.10	101
1 - Compressor, I.R.-GKA-315, 8 mo. at $393	3,144
Total	$3,355

To be purchased:

1 - Exhaust fan, 3 H.P. with gas engine	$ 582
1 - Lamb air mover, 6"	53
1 - I.R. Stoper, R-48	670
1 - Light plant, 1500 watts, gas driven	610
1 - Rectifier, 10 amp	55
6 - Mine cars, 14 cu. ft.	750
2 - Line oilers	39
2 - Air hoses, 50 ft.	90
2 - Water hoses, 50 ft.	60
1,000 ft. Pipe, 1 in. standard	230
1,000 ft. Pipe, 2 in. standard	420
Total	$3,559

Materials, supplies, small tools, etc. required for conduct of project	$9,674

To be furnished by Operator:

1 - Willys 1-ton pickup truck, 4-wheel drive, 10 mos. at $70	$ 700

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

Classification	Rate per shift	No. shifts	Amount	
Miners (daily basis)	$14.65	216	$3,164.00	
Miners (contract basis)	19.00	66	1,254.00	
Trammers	14.65	141	2,065.00	
Mechanic	15.25	28	427.00	
Maintainence mechanic and watchman	14.06	200	2,812.00	
				$ 9,722.00

The foregoing rates are subject to lawful overtime increases and revision of wage scale under union contracts.

Payroll taxes @ 10 percent	$ 972.00	
Supervisor, 10 mos. @ $600	6,000.00	
Consulting services, including engineer and geologist as required	1,000.00	
		$ 7,972.00
	Total	$17,694.00

West Slope Mining Co., Ltd.

Silver Bow County, Mont.

Exploration Project Contract

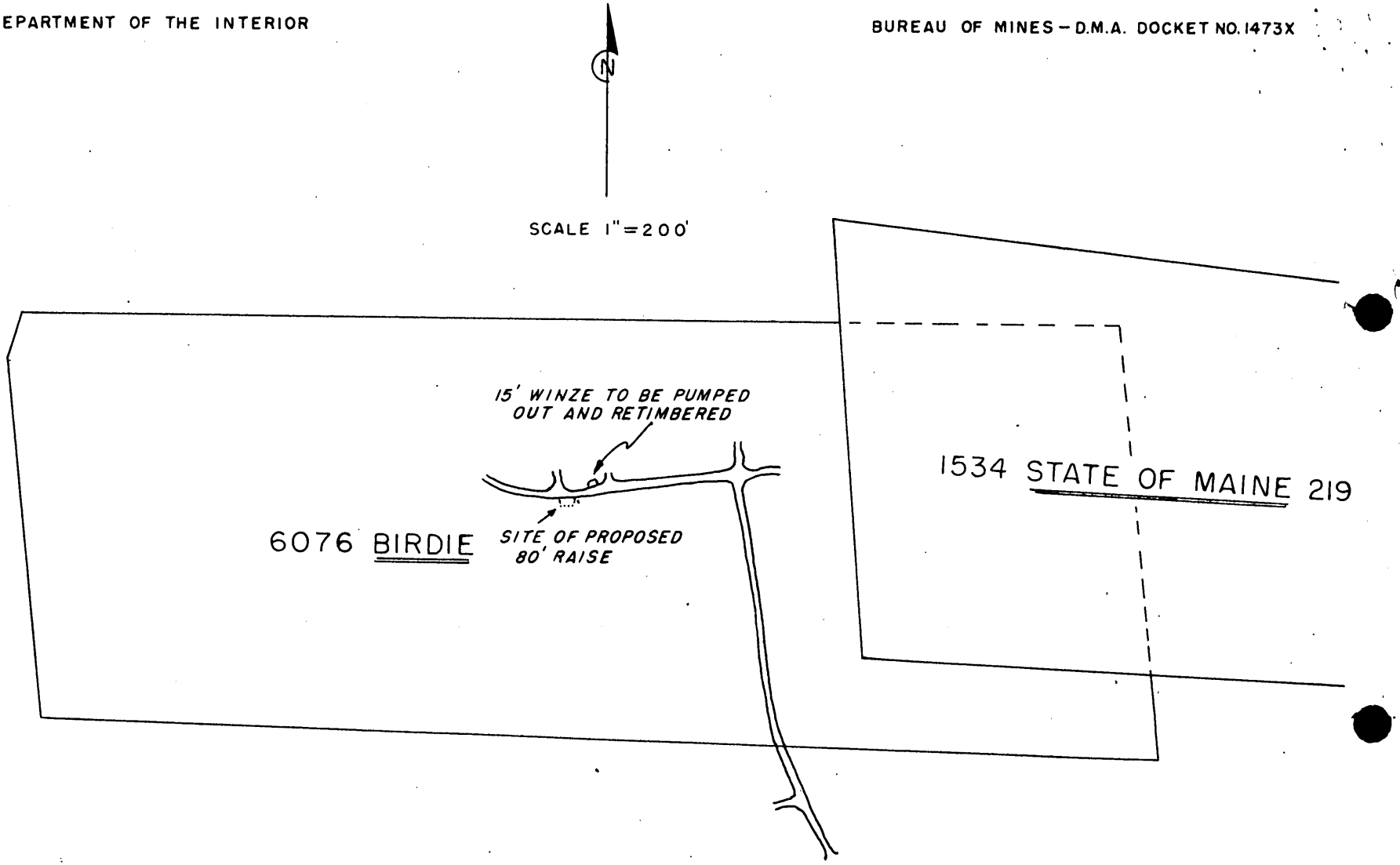
EXHIBIT "E"

Rehabilitation and repairs

Recondition present county road	$300.00
Maintain roads to Columbia Garden intersection	300.00
Repair and maintainence of equipment (above equipment to be acquired)	500.00
Total	$1100.00

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES – D.M.A. DOCKET NO. 1473X



Sketch showing mine workings and proposed exploration work on Birdie claim, Silver Bow County, Mont.

DRAFT

Mr. A. E. Weissenborn, Executive Officer
DMA Field Team, Region II
So. 157 Howard Street
Spokane , Washington

DMA 1473-X Tungsten
Birdie Mine, Montana

Dear Mr. Weissenborn:

In reply to your memorandum of June 29 recommending reconsideration of the exploration application of the West Slope Mining Co., Ltd. at the Birdie mine, Butte, Montana:

We fail to see in what respect the applicant has submitted information that justifies further consideration of the case. The quantity of tungsten ore in the one ore shoot known in the mine would not be sufficient to warrant expenditure of the sum requested to re-open the mine, even if none of it was mined in 1916. Our information shows that a mineralized lense 16 feet long and 1.24 feet wide averaged 6.09 percent of WO_3 according to samples taken in 1916 by M. H. Gidel. This average is based on the following 6 samples:

1	0.8 ft.	18.00 percent WO_3
2	2.2	0.50
3	1.5	5.6
4	1.5	7.2
5	1.2	0.75
6	1.2	2.7

Three other samples taken along the drift showed only a trace, and 4 samples from the dump were barren. In computing the average width and grade, sample No. 2 was omitted because it was taken outside the main ore streak.

From published and private records we have put together the following history of tungsten in this mine:

Huebnerite was produced at the Birdie mine in 1907. "The Birdie has been worked for a silver mine, and the tungsten ore is said to occur in a shoot at the end of a silver-bearing vein. The shoot is reached by a 400-foot tunnel at a depth of between 250 and 300 feet." (Mineral Resources, 1907.) "The only tungsten ore known to have been mined in Montana

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

during 1908 was a lot of huebnerite from the Birdie mine near Butte. This mine was formerly worked for silver, and hubnerite is reported to occur in the same vein in shoots which carry the mineral in thin blades embedded in quartz. Some of the blades are yellowish and remarkably translucent." (Mineral Resources, 1908.)

F. Tomek states in Mining World, vol. 28, p. 63, 1908 as follows: "The only shoot of huebnerite is in the Birdie mine, about 4 miles east of Butte, although a few pieces of the ore were found about ½ mile north and also about 1.5 miles east of this mine, but not enough to warrant expensive mining.

"The Birdie is an old silver mine, having produced thousands of tons of siliceous silver-bearing ore in former years. The mine is opened by a tunnel, about 1,000 feet long, drifts, crosscuts and an upraise to the surface (about 250 feet). The silver ore is all stoped out above the tunnel.

"The chimney shoot of huebnerite is at the west end of the silver-bearing quartz, and is from 12 to 20 inches wide, and from 6 to 10 feet long. All the way from the back of the tunnel to the surface (250 feet) a winze has been sunk on the shoot, where the huebnerite is from 3 to 5 feet wide and about 20 feet long.

"The ore body seems to be increasing in length and width as well as the quantity of metal, as depth is gained, below the tunnel level.

"At present, there is about 30 tons of the crude huebnerite in the bins ready for delivery, for sale. This crude ore will run about 20 percent tungstic acid, and does not contain injurious compounds."

From private sources, we know that the mine was open in 1916, the geology was mapped by Sales and Linforth, and the tungsten was sampled by Gidel. A winze was sunk in the tungsten ore to a depth of 12 feet where work was stopped because the flow of water was too heavy for the suction pump.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

About 3 to 4 carloads were shipped from a small area around the winze. At this time, the price of tungsten ranged from $30 to $90 or more per unit of WO_3.

The mine has apparently been closed since 1916. No accurate production records are available. It is stated that Sam Beers on June 16, 1916 shipped 62 tons of tungsten ore, and subsequently shipped 20 tons. This material may have been mined previously.

It is highly probable that the tungsten shoot described is the only one in the old workings, for the miners apparently recognized huebnerite as early as 1907 when the mine was open. How much tungsten ore remains in this shoot is highly speculative, for we do know that some tungsten ore was shipped.

We therefore believe that the exploration would disclose insignificant amounts of tungsten, and is unwarranted as a project for tungsten. At the time the mine was open, tungsten sold at a price higher than in 1951, and mining costs were lower.

Whether or not the mine is a good prospect for silver can best be evaluated by the Anaconda geologists who are familiar with the property. We have received no stope maps indicating to what extent the vein matter has been removed.

Under the circumstances, the application is again denied after review of the case.

Sincerely yours,

Tom Lyon
Director, Supply Division

dd Field Team, Region II, Spokane
West Slope Mining Co., Ltd.

D. M. Lemmon July 5, 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

FOR DENIAL

Docket No. 1473 X

Commodity Tungsten

Total Amount $96,316.00

Govt. Participation $72, 237.00

1. Name and Address of Applicant West Slope Mining Co., Ltd.
P. O. Box 1595, Butte, Montana

2. Location of Property The Birdie mine, 3 miles airline east of Butte.
T. 3 N., R. 7 W., Helena quadrangle.

3. Mineral or metal Tungsten and silver Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor Chances poor.

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Stated as owner, title would need checking.
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached?

Does the lease have sufficient time to run to cover a future productive period?

*question numbers are those of MF-103

7. Are subordination agreements necessary? Apparently not.

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes

e) Power (question 13)* Yes

Is a field check needed on any of these points? No

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Applicant not experienced in mining; technical advisors apparently competent, but only used as consultants.

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Yes

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? Yes If so, attach a draft.

e) Are the cost estimates reasonable? Yes

f) Should more information be requested from applicant? no

g) Is a field examination necessary to complete Exhibit A? no

11. Exhibit B (question 23-d)*

a) Is it applicable? Yes

b) If so, are sufficient data furnished? Yes If so, attach a draft.

c) Is a field check needed? No

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? Yes If so, attach a draft.

c) Are rents and charges reasonable?_____

d) Is a field check needed? No

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? No

14. Exhibit E (question 23-c)*

a) Is it applicable? No existing facilities

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing q No field examination needed. Workings inaccessible.

It is recommended that the application be denied. The liklihood of finding an appreciable amount of tungsten in this mine is slight, and exploration would be primarily for siliceous silver ore. The past exploration of the mine apparently uncovered a lense of hubnerite ore 16 feet long and 1.25 feet wide, samples of which assayed 6.03% WO_3. This lens was probably mined out in 1916. No tungsten ore was reported from other workings on the claim.

Reviewed by: Dwight M. Lemmon

Date June 12, 1951

P. R. Bradley

97692

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

FOR DENIAL

Docket No. 1473 X

Commodity Tungsten

Total Amount $96,316.00

Govt. Participation $72, 237.00

1. Name and Address of Applicant West Slope Mining Co., Ltd.
P. O. Box 1595, Butte, Montana

2. Location of Property The Birdie mine, 3 miles airline east of Butte.
T. 3 N., R. 7 W. , Helena quadrangle.

3. Mineral or metal Tungsten and silver Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor Chances poor.

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Stated as owner, (question 5, 6, 7)* title would need checking.

6. If applicant is a lessee, is a copy of the lease attached?

Does the lease have sufficient time to run to cover a future

productive period?

*question numbers are those of MF-103

7. Are subordination agreements necessary? Apparently not.

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes

e) Power (question 13)* Yes

Is a field check needed on any of these points? No

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Applicant not experienced in mining; technical advisers apparnelty competent, but only used as consultants.

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

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e) Are the cost estimates reasonable? Yes

f) Should more information be requested from applicant? no

g) Is a field examination necessary to complete Exhibit A? no

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a) Is it applicable? Yes

b) If so, are sufficient data furnished? Yes If so, attach a draft.

c) Is a field check needed? No

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? Yes If so, attach a draft.

c) Are rents and charges reasonable? _____

d) Is a field check needed? No

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? No

14. Exhibit E (question 23-c)*

a) Is it applicable? No existing facilities

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing q

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Reviewed by: Dwight M. Lemmon

Approved Tom Lyon

Date June 12, 1951

P. R. Bradley

97692

a.e.c

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1951
LANDON F... Executive Secretary

1207 N. Division St.
Spokane, Wash.
June 29, 1951

Thru: L. S. Strobel

MEMORANDUM

To: P. R. Bradley, Jr., Chairman, Tungsten Commodity Committee

From: DMA Field Team, Region II

Subject: West Slope Mining Co., Ltd., Butte, Mont., DMA 1473-x, Tungsten

The applicant was notified June 15,1951 that his application for an exploration loan was being denied because it was considered that the chances of finding an appreciable amount of tungsten in the Birdie mine are slight and that the exploration therefore would be primarily for siliceous silver ore. Furthermore, it was claimed that the hubnerite ore lens probably was mined out in 1916.

The applicant has submitted additional information to the Field Team that justifies further consideration. Concerning the hubnerite ore lens, the applicant states that he can furnish affidavits from at least two miners who worked in the Birdie adit, saw the tungsten ore, and are willing to swear that no mining has been done there since 1905. We believe this constitutes good evidence that the tungsten lens has not been mined out.

Concerning the tungsten possibilities of the area, the applicant states that he retained Mr. Don McMillan, geologist for the past 12 years with the Anaconda Copper Mining Company, to examine the property and that Mr. McMillan advised him the Birdie mine is a good tungsten prospect. Mr. Merle Guidel, chief geologist of the Anaconda Copper Mining Company, in a previous discussion with M. E. Volin, field team member, stated that the area offered attractive possibilities for tungsten exploration. The Anaconda Copper Mining Company has done considerable geologic work there, and these two representatives are well acquainted with the features.

The applicant has prepared a new proposal entailing the opening and rehabilitation of the Birdie adit and raising 80 feet on the tungsten ore. The estimated cost of this work is $38,682. A form of contract has been prepared for an exploration project in this amount and the Field Team recommends that the exploration proposal be approved.

P. R. Bradley, Jr.
Chairman, Tungsten Commodity Comm.

West Slope Mining Co.
June 29, 1951

Enclosed herewith are six signed contracts along with attached exhibits and a map.

By Field Team, Region II

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

M. E. Velin, Member
(U. S. Bureau of Mines)

Encl.

cc: U.S.G.S., Spokane (2)

FILE COPY
SURNAME:

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

June 18, 1951

Mr. William J. Maretta
General Partner
West Slope Mining Co., Ltd.
P. O. Box 1595
Butte, Montana

Subject: DMA-1473X
Re: Exploration Loan
Birdie

My dear Mr. Maretta:

Receipt is acknowledged of your application and attachments of May 25, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1473X and was referred to Mr. P. R. Bradley, Chief, Tungsten Branch on June 6, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1473X.

Sincerely yours,

LANDON F. STROBEL
js

Landon F. Strobel
Executive Secretary

LFSTROBEL:js
cc: Strobel-2
>Files
Bradley
Lyon

FILE COPY
SURNAME:

Ballard
Bradley

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

June 15, 1951

Meat Slone Mining Company, Ltd.
P. O. Box 1595
Butte, Montana

In reply please refer to
DMA 1473-X Tungsten

Gentlemen:

Your application for an exploration loan has been carefully reviewed by the Defense Minerals Administration.

The chances of finding an appreciable amount of tungsten in the Birdie mine is slight and exploration would be primarily for siliceous silver ore. The past exploration of the mine apparently uncovered a lense of hubnerite ore, 16 feet long and 1.25 feet wide, which assayed 6.03 percent WO_3. This lens was probably mined out in 1916. No tungsten ore was reported from other workings on the claim.

It is therefore necessary that we deny your application for a loan to finance the $93,316 exploration program.

Very truly yours,

Tom Lyon

Ton Lyon
Director, Supply Division

TJBallard:ec

CC: Adm. Reading File
Mr. Strobel
Mr. Holderer
Files

dma 1473X

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington

May 31, 1951

Mr. L. F. Strobel
Executive Secretary
Defense Minerals Administration
Department of Interior
Washington 25, D. C.

Dear Mr. Strobel:

Enclosed herewith for appropriate action are three copies of an application for exploration assistance submitted by the Birdie mine, Silver Bow County, Montana, which presents a detailed program intended to explore a silver-tungsten project. One copy of the application has been withheld in this office in order that an early examination may be made in the event that an examination team from this region is in the vicinity of the Birdie mine.

Available evidence, largely from the records of the Anaconda Copper Mining Company, indicate the structure is unusually strong and contains significant amounts of tungsten. Additional work is required to evaluate properly the deposit before a program of production is undertaken.

The application is logically detailed on a step basis. The expenditures proposed, together with the anticipated time schedule, appear realistic. Successful conclusion of the project may well indicate a tungsten producing area of considerable importance.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

Enclosures

cc: U.S.B.M.-Spokane

2 copies of M-7100 + 103 rec'd. -B. L. - 6/6/51

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 - 1951
LANDOR F. STROBEL
Executive Secretary

MAY 29 1951

May 27, 1951

Defense Metals Administration
Department of the Interior
Washington, D. C.

Gentlemen:

We enclose with this communication, Form MF-100 and Form MF-103 together with supporting data, including maps and sketches, all relating to the Birdie Mine, Butte, Montana.

It will be noted therein that we have outlined a program of exploration for tungsten ore, the maximum total cost of which we estimate to be $96,316. It is our understanding that, if approved, this application will be the basis for a contract to be negotiated and which will cover the actual terms, extent and methods to be followed in such exploration program.

We wish to point out that in preparing the attached application and supporting data, we have consistently tried to anticipate the highest costs that might reasonably be expected to be encountered. It is our feeling that many economies will be achieved in carrying out the work, and that the ultimate actual cost will be substantially less. We also are aware of the very real possibility that the operation may be converted to a production basis before completion of the full program we have outlined.

It is our further understanding that the Defense Metals Administration, as participant, or we, as operators, may withdraw from the project when, in the opinion of either, the results attained to that point do not justify its continuance.

We wish to acknowledge with gratitude the very helpful cooperation we have received from Mr. Miller, Mr. Volin, Mr. Reed and other staff members of the Bureau of Mines, and to extend our appreciation of your consideration of this application.

Yours very truly,

WEST SLOPE MINING CO., LTD.

W. J. Maretta

William J. Maretta
General Partner

West Slope Mining Co. Ltd.
P? O. Box 1595
Butte, Montana

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 - 1951
LANDON E. STROBEL
Executive Secretary

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. dma 1473

Date received

Participation

West Slope Mining Co., Ltd.
P. O. Box 1595
Butte, Montana

Name and address of applicant

Date May 25, 1951

FILL IN THIS BLOCK

Date of application May 25, 1951

Estimated cost $96,316.

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Three miles airline east of Butte, Montana

Date of filing MF-100 May 25, 1951

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.

*5. Are you the owner or the lessee of the property?

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. Page1, attached

7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. page 1

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? Page 1, attached

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

NOTE: Form MF-100 is being filed simultaneously with this application.

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. Page 2, attached

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled. Ore can be shipped by truck & rail to Salt Lake City, or nearest Federal receiving station

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. Page 2, attached

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? Tungsten

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. Page 3

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. Page 3

THE REQUIREMENTS AND COSTS

Pages 4, 5, & 7

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. Page 8

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

West Slope Mining Co., Ltd.
(Name of company)

By W. J. Maretta
(Signature of authorized official)

May 25, 1951
(Date)

General Partner
(Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

6. There are no claims, liens, or encumbrances of record against the property. An obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon, has not been placed of record in order to give priority to any claim of the United States Government arising from participation in the cost of exploring the property. Mr. Cress has expressed his complete willingness to subordinate his claim to any such obligation to the Government.

7. Not applicable.

8. West Slope Mining Co., Ltd.
Balance Sheet May 20, 1951

Cash	$ 3,616.00	
Due from Partners	17,500.00	
Truck	2,177.06	
Prepaid Insurance	99.42	
Birdie Mine	51,125.00	
Total Assets		$74,517.48
Truck Contract	1,900.00	
Due H. J. Cress	6,000.00	
Total Liabilities		7,900.00
Net Worth		66,617.48
		$74,517.48

West Slope Mining Co. is a new firm, formed April 1, 1951 for the purpose of developing a tungsten mining operation on the Birdie property. It has had no revenue to date. Total expenses to May 20, 1951, including salary of the general partner, were $2,382.52.

9. Applicant is prepared to invest $25,000 cash or more, should the need arise and the prospects so warrant. This sum mk is sufficient to pay our cost of the project as detailed under question 23, in accordance with Section 9 of Mineral Order 5.

10(a) All of the real property involved in this exploration project is that known as the Birdie Mine, more particularly described as Claim No. 6076, Section 15, Township 3 North, Range 7 West, Summit Valley District, Silver Bow County, Montana, and includes the shaft, tunnel, and drifts already in existence thereon.

(b) Same as the area described in 10(a).

19. It is undoubtedly pertinent that the Birdie mine is situated in an area in which there was extensive prospecting of the surface outcrops in the early days of mining activity around Butte. Numerous outstanding geologists, including Mr. Walter Harvey Weed, Mr. E. V. Corry, and Mr. Glenn Anderson have repeatedly expressed the opinion that deeper exploration in this area would reveal ore bodies of importance.

Shallow as they are, the old workings of the Birdie represent the deepest known penetration in this area. The exploration contemplated in this application will not only further extend the old penetrations, but will be the first such development in that region having the benefit of modern equipment, methods and geology. It should further be borne in mind that many of the ores which today are in critical demand, were of little or no interest to the prospectors and miners of fifty years ago.

It is therefore conceivable that the proposed exploration program to be undertaken in the Birdie may not only reveal additional deposits of tungsten ore therein, but that its results may furnish the impetus for further and greater development of that region, and the discovery of ore bodies of importance.

20. The exploration will be conducted to find bodies of tungsten ore lying within the main Birdie vein, the other veins exposed in the property, and such other veins as may be encountered.

21. The over-all exploration program contemplated should be completed in its entirety in 19 months or less. It may be roughly divided into the following steps:

(1) To reopen, clean out and make useable and safe the present tunnel and drifts, as set forth under items 1, 2 and 3 of question 24;

(2) Raise 80 feet on exposed tungsten ore shoot; pump out, retimber and examine winze (items 4 and 5, question 24)

(3) Drift approximately 300 feet east on main Birdie vein to its projected confluence with second, diagonal vein, as shown on attached maps and sketches;

(4) Drift additional 300 feet east on main vein; drift approximately 100 feet west on main vein, (all drifts with cross-cuts of the vein at minimum intervals of 100 feet); drift on such other veins as may be of sufficient promise.

22. In addition to the statement of Mr. James Gillie, lessee and operator of the Birdie in 1901 and 1902, that at least ten tons of tungsten ore were ~~xxxxxx~~ given to the Montana School of Mines, the assay map accompanying Form MF-100 submitted on this date shows an exposed shoot of tungsten ore averaging 6.03% tungsten oxide.

In the authoritative paper, "Ore Depositis at Butte, Montana", by R. H. Sales (Trans. AIME, vol. XLVI, 1914, page 56) the statement is found that hubernite "is found in considerable quantities in certain veins, two miles east of the Pittsmont mine". Little or no mining has been done in this area since Mr. Sales wrote his paper, so no further information on the occurrence of tungsten is available. However, it is significant that the presence of hubernite in the Birdie and other veins in this area was recognized by competent observers when the mine workings were accessible.

It is a reasonable geological assumption that further exploration of the Birdie vein will expose additional deposits of tungsten.

23. NOTE- In compiling the attached estimate of cost of the proposed exploration, optimism has been purposely avoided. For example, prices used in reference to equipment and supplies are maximum current quotations on items of top quality. In actual practice, it will be our firm policy to substitute used or rented items whenever such a step would prove practical and economical. Similarly, we have attempted to undertake the course involving the lower net cost, as in the case in which a more expensive piece of equipment, by virtue of its greater salvage value, would be less expensive in the long run, than a similar item costing less to purchase.

	QUANTITY	RATE OR UNIT	UNIT COST	TOTAL COST
(a) Labor				
Miners (daily basis)	216	Shifts	$14.65	$ 3,164.
Miners (contract basis)	570	"	19.00	10,830.
Trammer	393	"	14.65	5,757.
Mechanics	56	"	15.25	854.
Laborers	16	"	13.85	222.
Maintenance mechanic	418	"	14.06	5,877.
Total Labor				$26,704.

(b) Supervisors
Manager (19 months @ $600 month) $11,400.

(c) No facilities to be repaired.

(d) Cost of additional facilities

Construct road from tunnel to county road (1,000 ft,)	$ 800.
Grade site for building and storage yard	300.
Quonset hut, 24' x 48', to be partitioned to provide shop, warehouse, dressing and living space. (per contractor's firm bid to erect)	5,400.
	$6,500.

23. (e) Equipment with unit cost over $50

Exhaust fan, Joy Mfg. Co. 3 h.p. Aerovane (or equivalent) with gasoline engine	$ 582.
Lamb air mover. M.S.A. 6 in.	53.
Compressor, Ingersoll-Rand GKA 315, gasoline driven	7,355.
Stopers, Ingersoll-Rand R-44 (3 @ $670.)	2,010.
Mancha Air-powered Locomotive	2,100.
Light plant, 1500 watt, gasoline powered	610.
Rectifier, 10 amp	55.
Loader, EIMCO Model 12-13	2,850.
Total	$15,615.

(f) Cost of rental for equipment

Jackhammer, (one month)	$ 20.
Sump pump (one month)	10.
Air hoist, single drum (4,mos @ 20.)	80.
M.S.A. cap lamps (8)	192.
Total	$ 302.

(g) Rental of contractor's equipment

1951 Willys 1-ton pickup truck, with 4-wheel drive (based on depreciation, insurance and taxes only) 19 mos. @ $70.	$ 1,330.

(h) Materials & supplies with unit cost of under $50

Framed round posts, 7'5",	400 @ $2.50	$ 1,000.
Framed round caps, 5'4" & 3'6",	200 @ $2.00	400.
Framed round girts, 5'0",	400 @ $1.20	480.
Stulls, 16'	140 @ $2.25	315.
Track ties, 4"x8"x3'6"	600 @ .50	300.
Ladders, 7'9" (2"x4" rails)	20 @ 1.50	30.
Lumber for lagging, spiling, etc.	62M b.f. @ $90. M	5,580.
Nails	800 lbs @ .10	80.
Wood wedges,	3,000 @ $35.00M	105.
Ore cars, 14 cu. ft.	10 @ 125.00	1,250.
Rail for track & spiling	32,575 lbs @ .09	2,932.
Track spikes, ½"x5"	3,600 @ .04	144.
Fish plates	250 pr. @ .60 pr	150.
Track bolts	2,000 @ .05	100.
Rail bender	1 @	31.
Tongue switches, 25#	4 @ 20.00	80.
Total carried forward to Page 6		$12,977.

23(h) (Continued)

Total brought forward from Page 5				$12,977.
Galvanized vent pipe, 16" diam.	1,600'	@	$ 1.50	2,400.
Wire rope, ¼ in.	600'	@	.09	54.
I-R Carset Jackbits	110	@	16.00	1,760.
Bench grinder & silicon carbon wheel	1	@	32.00	32.
Hex drill shanks, 1"x40"	80	@	3.70	296.
" " " 1"x58"	80	@	4.85	388.
" " " 1"x76"	80	@	6.00	480.
Blasting caps, boxes	45	@	2.00	90.
Lion brand fuse, reels	18	@	30.00	540.
DuPont Celex #2 powder, boxes	200	@	7.25	1,450.
Lub. oil for rock drills, gals.	75	@	1.20	90.
Line lubricators	2	@	19.25	39.
Air hoses, 50' length	2	@	45.00	90.
Water hoses, 50' length	2	@	30.00	60.
Black pipe, 1 in. standard	2,400'	@	.23 ft	552.
" " 2 in. standard	1,700'	@	.42	714.
Pipe hangers,	400	@	.30	120.
Miscellaneous pipe fittings				200.
Picks and shovels	20	@	3.00	60.
Pinch bars, 8'	3	@	4.00	12.
Axes	12	@	3.50	42.
Threader	1	@	21.00	21.
Cross-cut saws, 3'	4	@	4.30	17.
First aid kit	1	@	22.95	23.
Fire extinguisher	1	@	32.00	32.
Fuel oil , gals.	3,120	@	.166	518.
Gasoline for trucks, gals	2,460	@	.25	615.
Motor oil for trucks, gals	50	@	1.40	70.
Gasoline for machinery, gals	8,100	@	.20	1,620.
Miscellaneous tools & supplies				600.
Grand total, item 23(h)				$25,962.

23(i) Other costs not provided above

Recondition present county road	$ 300.
Maintain roads to Columbia Gardens intersection	600.
Repair & maintenance of equipment	900.
Consulting services, engineer & geologist	1,000.
Assaying charges	1,500.
Payroll taxes	1,075.
Compensation insurance	668.
County property taxes	960.
Other direct costs	1,500.
Total, item 23(i)	$8,503.

Item 23 Recapitulation

(a)	Labor	(Page	4)	$26,704.
(b)	Salaries of supervisors	"	4	11,400.
(c)	Repairs to existing facilities	"	4	nil
(d)	Cost of additional facilities	"	4	6,500.
(e)	Cost of equipment over $50 each	"	5	15,615.
(f)	Cost of rental equipment	"	5	302.
(g)	Rental of operator's equipment	"	5	1,330.
(h)	Materials and supplies with unit cost less than $50.	"	6	25,962.
(i)	Other costs	"	6	8,503.
	Grand Total, Item 23			$96,316.

24. Step-by-step progress of the exploration will be dictated in part by circumstances, and by information developed as the work proceeds. The following is a tentative, and arbitrary schedule, and the time intervals designated should prove more than ample.

XXI		CUMULATIVE COST	ELAPSED TIME
(1)	Construct road to tunnel, recondition county road to Columbia Gardens intersection; grade site; hire crew; order equipment and supplies. Total time, this phase 1½ mos. Total financial commitment, $25,636.	$25,636.	1½ mos.
$20	Open tunnel, construct water line from spring, install surface haulage track. Total time, this phase 1 mo. Total financial commitment $6,810.	32,446.	2½ "
(3)	Clean out & repair old workings, scale walls & back, clean out slough & lay track, clean bottom for track & ditch; timber as necessary; install pipe & vent tube; build oil storage shed. Total time, this phase 3½ mos. Total financial commitment $14,097.	46,543.	6 "
(4)	Drive 80-foot raise on tungsten ore shoot; build powder magazine. Total time, this phase 2 months Total financial commitment $6,717.	53,260.	8 "
(5)	Pump out old winze, timber winze, and break one round to examine bottom. Total time, this phase 1 mo. Total financial commitment $3,027.	56,287.	9 "
(6)	Drive 800 linear feet of drifts and cross-cuts (8' x 5½') Total time, this phase 10 mos. Total financial commitment $40,029.	$96,316.	19 "

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. dma 1473

Date received

West Slope Mining Co., Ltd.
P. O. Box 1595
Butte, Montana

Name and address of applicant

Date May 25, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? Anticipate tungsten
   (*b*) What are the byproducts, if any? Silver
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry(ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
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   (*d*) Linear feet of other mine openings (explain briefly).
   Page 1, attached
   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
   Page 1
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. Not in operation
   (*b*) Are you operating this property as: (See Page 1)
   - [x] Owner.
   - [x] Lessee.
   - [ ] Contractor.
5. Number of years in production In production during 1901 and 1902
   If not in production or operation, estimated date when production will begin In 1952, if exploration is successful.
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project. Page 2, attached
7. History: Page 3.
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
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   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation. **(Limited partnership. Formed April 1, 1951)**

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Duncan B. Macdonald 740 Center Drive Palo Alto, Calif.	Limited Partner		Over $100,000				
H. Marcus Radin 6260 Van Ness Blvd. Fresno, California	Limited Partner		Over $100,000				
William J. Maretta P. O. Box 1595 Butte, Montana	General Partner		Over $10,000	(Present salary received from partnership, $600 mo.)			
	Total		x x x x x			x x x x x	x x x x x

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Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
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*Indicate period covered.

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Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
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2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. **Depends on result of exploration.**

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. **Page 4, attached.**

2. This old mine is and always has been known as the "Birdie". The workings comprise:

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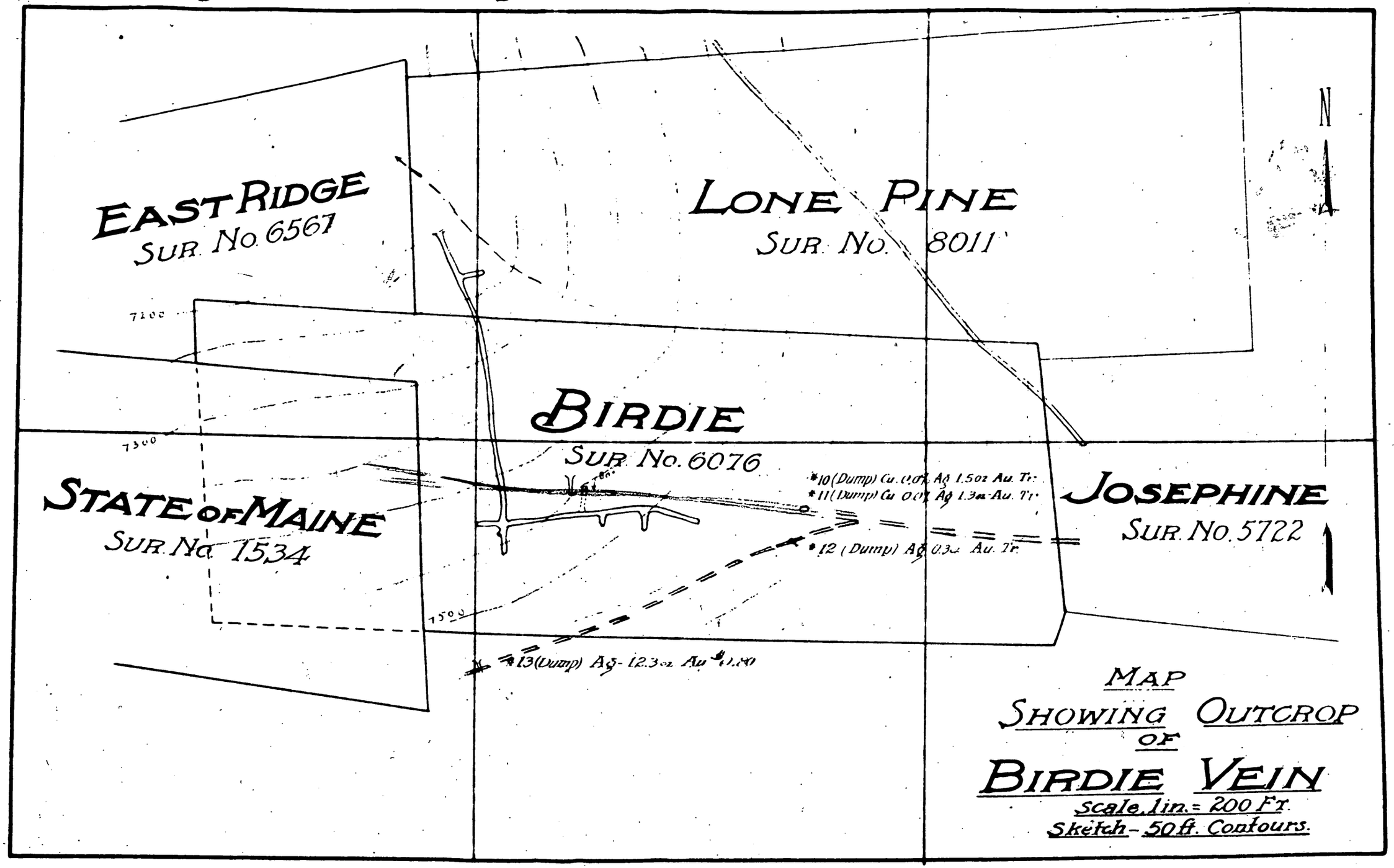
18. It has been mentioned that the tunnel of the Birdie is inaccessible by reason of caving at the portal. However, it is the opinion of those who have inspected the mine when it was open and of geologists familiar with the area, that the tunnel will be found virtually intact, once the portal caving is breached. Surface contours at the mouth of the tunnel and other indications support this belief.


EAST RIDGE
SUR. No. 6567
LONE PINE
SUR. No. 8011
N
7200
BIRDIE
SUR. No. 6076
7300
STATE OF MAINE
SUR. No. 1534
*10 (Dump) Cu. 0.07% Ag 1.5oz Au. Tr.
*11 (Dump) Cu 0.07% Ag 1.3oz Au. Tr.
JOSEPHINE
SUR. No. 5722
*12 (Dump) Ag 0.3oz Au. Tr.
7500
*13 (Dump) Ag - 12.3oz Au 0.80
MAP
SHOWING OUTCROP
OF
BIRDIE VEIN
Scale, 1in. = 200 Ft.
Sketch - 50 ft. Contours.

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. _____

Date received _____

1473-X

West Slope Mining Co., Ltd.
P. O. Box 1595
Butte, Montana

Name and address of applicant

Date May 25, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? Anticipate tungsten
   (*b*) What are the byproducts, if any? Silver
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry(ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
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8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation. (Limited partnership. Formed April 1, 1951)

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
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	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

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Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
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12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. Page 4, attached.

May 27, 1951

Defense Metals Administration
Department of the Interior
Washington, D. C.

Gentlemen:

We enclose with this communication, Form MF-100 and Form MF-103 together with supporting data, including maps and sketches, all relating to the Birdie Mine, Butte, Montana.

It will be noted therein that we have outlined a program of exploration for tungsten ore, the maximum total cost of which we estimate to be $96,316. It is our understanding that, if approved, this application will be the basis for a contract to be negotiated and which will cover the actual terms, extent and methods to be followed in such exploration program.

We wish to point out that in preparing the attached application and supporting data, we have consistently tried to anticipate the highest costs that might reasonably be expected to be encountered. It is our feeling that many economies will be achieved in carrying out the work, and that the ultimate actual cost will be substantially less. We also are aware of the very real possibility that the operation may be converted to a production basis before completion of the full program we have outlined.

It is our further understanding that the Defense Metals Administration, as participant, or we, as operators, may withdraw from the project when, in the opinion of either, the results attained to that point do not justify its continuance.

We wish to acknowledge with gratitude the very helpful cooperation we have received from Mr. Miller, Mr. Volin, Mr. Reed and other staff members of the Bureau of Mines, and to extend our appreciation of your consideration of this application.

Yours very truly,

WEST SLOPE MINING CO., LTD.

W. J. Maretta

William J. Maretta
General Partner

West Slope Mining Co. Ltd.
P? O. Box 1595
Butte, Montana

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 - 1951
LANDON F. STROBEL
Executive Secretary

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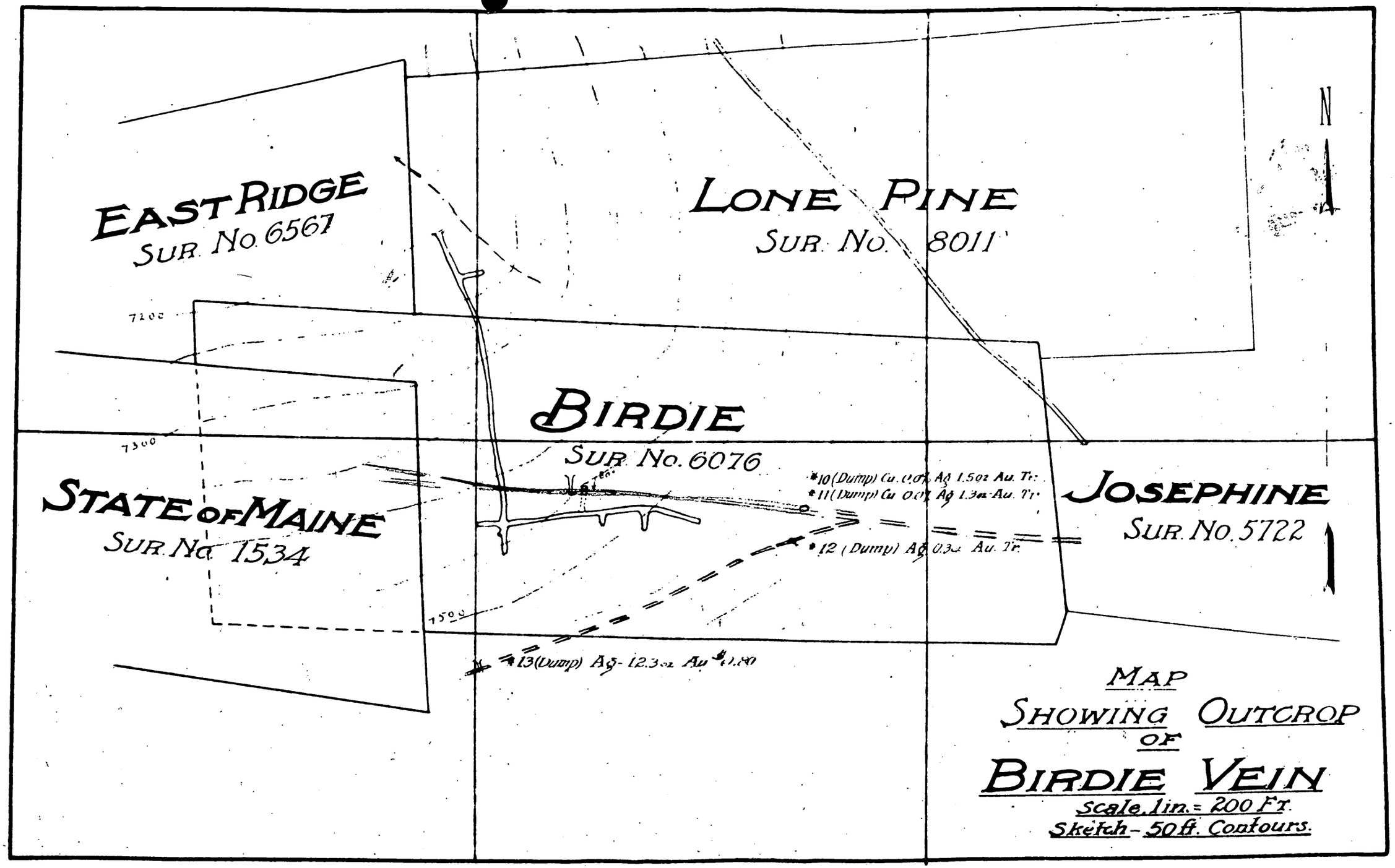
EAST RIDGE
SUR. No. 6567
LONE PINE
SUR. No. 8011
BIRDIE
SUR. No. 6076
STATE OF MAINE
SUR. No. 1534
JOSEPHINE
SUR. No. 5722
7200
7300
7500
*10 (Dump) Cu. 0.07 Ag 1.5oz Au. Tr.
*11 (Dump) Cu 0.07 Ag 1.3oz Au. Tr.
*12 (Dump) Ag 0.3oz Au. Tr.
*13 (Dump) Ag - 12.3oz Au 0.80
N
MAP
SHOWING OUTCROP
OF
BIRDIE VEIN
Scale. 1in. = 200 Ft.
Sketch - 50 ft. Contours.

(*b*) If deposit is other than placer: Page 4, attached

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: Page 4

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: Page 5

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power: Page 5

State amount of power used, rate per hour, and source thereof.

16. Labor: Page 5

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities: Page 5

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

Page 5

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

West Slope Mining Co., Ltd.
(Name of company)

By W. J. Maretta
(Signature of authorized official)

May 25, 1951
(Date)

General Partner
(Title)

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—63792-1

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 - 1951
LANDON F. STROBEL
Executive Secretary

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. .....

Date received .....

Participation .....

West Slope Mining Co., Ltd.
P. O. Box 1595
Butte, Montana

1473-X

Name and address of applicant

Date May 25, 1951

FILL IN THIS BLOCK

Date of application May 25, 1951

Estimated cost $96,316.

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Three miles airline east of Butte, Montana

Date of filing MF-100 May 25, 1951

DMA Docket Number, if available .....

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property. Page1, attached
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. page 1
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? Page 1, attached

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

NOTE: Form MF-100 is being filed simultaneously with this application.

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. Page 2, attached

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled. Ore can be shipped by truck & rail to Salt Lake City, or nearest Federal receiving station

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

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(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves? (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. Page 2, attached

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? Tungsten

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. Page 3

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. Page 3

THE REQUIREMENTS AND COSTS

Pages 4, 5, & 6

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

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(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

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24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. Page 8

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(Signature of authorized official)

May 25, 1951
(Date)

General Partner
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*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

6. There are no claims, liens, or encumbrances of record against the property. An obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon, has not been placed of record in order to give priority to any claim of the United States Government arising from participation in the cost of exploring the property. Mr. Cress has expressed his complete willingness to subordinate his claim to any such obligation to the Government.

7. Not applicable.

8. West Slope Mining Co., Ltd.
Balance Sheet May 20, 1951

Cash	$ 3,616.00	
Due from Partners	17,500.00	
Truck	2,177.06	
Prepaid Insurance	99.42	
Birdie Mine	51,125.00	
Total Assets		$74,517.48
Truck Contract	1,900.00	
Due H. J. Cress	6,000.00	
Total Liabilities		7,900.00
Net Worth		66,617.48
		$74,517.48

West Slope Mining Co. is a new firm, formed April 1, 1951 for the purpose of developing a tungsten mining operation on the Birdie property. It has had no revenue to date. Total expenses to May 20, 1951, including salary of the general partner, were $2,382.52.

9. Applicant is prepared to invest $25,000 cash or more, should the need arise and the prospects so warrant. This sum mk is sufficient to pay our cost of the project as detailed under question 23, in accordance with Section 9 of Mineral Order 5.

10(a) All of the real property involved in this exploration project is that known as the Birdie Mine, more particularly described as Claim No. 6076, Section 15, Township 3 North, Range 7 West, Summit Valley District, Silver Bow County, Montana, and includes the shaft, tunnel, and drifts already in existence thereon.

(b) Same as the area described in 10(a).

19. It is undoubtedly pertinent that the Birdie mine is situated in an area in which there was extensive prospecting of the surface outcrops in the early days of mining activity around Butte. Numerous outstanding geologists, including Mr. Walter Harvey Weed, Mr. E. V. Corry, and Mr. Glenn Anderson have repeatedly expressed the opinion that deeper exploration in this area would reveal ore bodies of importance.

Shallow as they are, the old workings of the Birdie represent the deepest known penetration in this area. The exploration contemplated in this application will not only further extend the old penetrations, but will be the first such development in that region having the benefit of modern equipment, methods and geology. It should further be borne in mind that many of the ores which today are in critical demand, were of little or no interest to the prospectors and miners of fifty years ago.

It is therefore conceivable that the proposed exploration program to be undertaken in the Birdie may not only reveal additional deposits of tungsten ore therein, but that its results may furnish the impetus for further and greater development of that region, and the discovery of ore bodies of importance.

20. The exploration will be conducted to find bodies of tungsten ore lying within the main Birdie vein, the other veins exposed in the property, and such other veins as may be encountered.

21. The over-all exploration program contemplated should be completed in its entirety in 19 months or less. It may be roughly divided into the following steps:

(1) To reopen, clean out and make useable and safe the present tunnel and drifts, as set forth under items 1, 2 and 3 of question 24;

(2) Raise 80 feet on exposed tungsten ore shoot; pump out, retimber and examine winze (items 4 and 5, question 24)

(3) Drift approximately 300 feet east on main Birdie vein to its projected confluence with second, diagonal vein, as shown on attached maps and sketches;

(4) Drift additional 300 feet east on main vein; drift approximately 100 feet west on main vein, (all drifts with cross-cuts of the vein at minimum intervals of 100 feet); drift on such other veins as may be of sufficient promise.

22. In addition to the statement of Mr. James Gillie, lessee and operator of the Birdie in 1901 and 1902, that at least ten tons of tungsten ore were ~~skipped~~ given to the Montana School of Mines, the assay map accompanying Form MF-100 submitted on this date shows an exposed shoot of tungsten ore averaging 6.03% tungsten oxide.

In the authoritative paper, "Ore Depositis at Butte, Montana", by R. H. Sales (Trans. AIME, vol. XLVI, 1914, page 56) the statement is found that hubernite "is found in considerable quantities in certain veins, two miles east of the Pittsmont mine". Little or no mining has been done in this area since Mr. Sales wrote his paper, so no further information on the occurrence of tungsten is available. However, it is significant that the presence of hubernite in the Birdie and other veins in this area was recognized by competent observers when the mine workings were accessible.

It is a reasonable geological assumption that further exploration of the Birdie vein will expose additional deposits of tungsten.

23. NOTE- In compiling the attached estimate of cost of the proposed exploration, optimism has been purposely avoided. For example, prices used in reference to equipment and supplies are maximum current quotations on items of top quality. In actual practice, it will be our firm policy to substitute used or rented items whenever such a step would prove practical and economical. Similarly, we have attempted to undertake the course involving the lower net cost, as in the case in which a more expensive piece of equipment, by virtue of its greater salvage value, would be less expensive in the long run, than a similar item costing less to purchase.

	QUANTITY	RATE OR UNIT	UNIT COST	TOTAL COST
(a) Labor				
Miners (daily basis)	216	Shifts	$14.65	$ 3,164.
Miners (contract basis)	570	"	19.00	10,830.
Trammer	393	"	14.65	5,757.
Mechanics	56	"	15.25	854.
Laborers	16	"	13.85	222.
Maintenance mechanic	418	"	14.06	5,877.
Total Labor				$26,704.

(b) Supervisors

Manager (19 months @ $600 month) $11,400.

(c) No facilities to be repaired.

(d) Cost of additional facilities

Construct road from tunnel to county road (1,000 ft,)	$ 800.
Grade site for building and storage yard	300.
Quonset hut, 24' x 48', to be partitioned to provide shop, warehouse, dressing and living space. (per contractor's firm bid to erect)	5,400.
	$6,500.

23. (e) Equipment with unit cost over $50

Exhaust fan, Joy Mfg. Co. 3 h.p. Aerovane (or equivalent) with gasoline engine	$ 582.
Lamb air mover. M.S.A. 6 in.	53.
Compressor, Ingersoll-Rand GKA 315, gasoline driven	7,355.
Stopers, Ingersoll-Rand R-4 (3 @ $670.)	2,010.
Mancha Air-powered Locomotive	2,100.
Light plant, 1500 watt, gasoline powered	610.
Rectifier, 10 amp	55.
Loader, EIMCO Model 12-13	2,850.
Total	$15,615.

(f) Cost of rental for equipment

Jackhammer, (one month)	$ 20.
Sump pump (one month)	10.
Air hoist, single drum (4 mos @ 20.)	80.
M.S.A. cap lamps (8)	192.
Total	$ 302.

(g) Rental of contractor's equipment

1951 Willys 1-ton pickup truck, with 4-wheel drive (based on depreciation, insurance and taxes only) 19 mos. @ $70.	$ 1,330.

(h) Materials & supplies with unit cost of under $50

Framed round posts, 7'5",	400 @ $2.50	$ 1,000.
Framed round caps, 5'4" & 3'6",	200 @ $2.00	400.
Framed round girts, 5'0",	400 @ $1.20	480.
Stulls, 16'	140 @ $2.25	315.
Track ties, 4"x6"x3'6"	600 @ .50	300.
Ladders, 7'9" (2"x4" rails)	20 @ 1.50	30.
Lumber for lagging, spiling, etc.	62M b.f. @ $90. M	5,580.
Nails	800 lbs @ .10	80.
Wood wedges,	3,000 @ $35.00M	105.
Ore cars, 14 cu. ft.	10 @ 125.00	1,250.
Rail for track & spiling	32,575 lbs @ .09	2,932.
Track spikes, ½"x5"	3,600 @ .04	144.
Fish plates	250 pr. @ .60 pr	150.
Track bolts	2,000 @ .05	100.
Rail bender	1 @	31.
Tongue switches, 25#	4 @ 20.00	80.
Total carried forward to Page 6		$12,977

23(h) (Continued)

Total brought forward from Page 5				$12,977.
Galvanized vent pipe, 16" diam.	1,600'	@	$ 1.50	2,400.
Wire rope, ¾ in.	600'	@	.09	54.
I-R Carset Jackbits	110	@	16.00	1,760.
Bench grinder & silicon carbon wheel	1	@	32.00	32.
Hex drill shanks, 1"x40"	80	@	3.70	296.
" " " 1"x58"	80	@	4.85	388.
" " " 1"x76"	80	@	6.00	480.
Blasting caps, boxes	45	@	2.00	90.
Lion brand fuse, reels	18	@	30.00	540.
DuPont Celex #2 powder, boxes	200	@	7.25	1,450.
Lub. oil for rock drills, gals.	75	@	1.20	90.
Line lubricators	2	@	19.25	39.
Air hoses, 50' length	2	@	45.00	90.
Water hoses, 50' length	2	@	30.00	60.
Black pipe, 1 in. standard	2,400'	@	.23 ft	552.
" " 2 in. standard	1,700'	@	.42	714.
Pipe hangers,	400	@	.30	120.
Miscellaneous pipe fittings				200.
Picks and shovels	20	@	3.00	60.
Pinch bars, 8'	3	@	4.00	12.
Axes	12	@	3.50	42.
Threader	1	@	21.00	21.
Cross-cut saws, 3'	4	@	4.30	17.
First aid kit	1	@	22.95	23.
Fire extinguisher	1	@	32.00	32.
Fuel oil , gals.	3,120	@	.166	518.
Gasoline for trucks, gals	2,460	@	.25	615.
Motor oil for trucks, gals	50	@	1.40	70.
Gasoline for machinery, gals	8,100	@	.20	1,620.
Miscellaneous tools & supplies				600.
Grand total, item 23(h)				$25,962.

23(i) Other costs not provided above

Recondition present county road	$ 300.
Maintain roads to Columbia Gardens intersection	600.
Repair & maintenance of equipment	900.
Consulting services, engineer & geologist	1,000.
Assaying charges	1,500.
Payroll taxes	1,075.
Compensation insurance	668.
County property taxes	960.
Other direct costs	1,500.
Total, item 23(i)	$8,503.

Item 23 Recapitulation

(a)	Labor	(Page	4)	$26,704.
(b)	Salaries of supervisors	"	4	11,400.
(c)	Repairs to existing facilities	"	4	nil
(d)	Cost of additional facilities	"	4	6,500.
(e)	Cost of equipment over $50 each	"	5	15,615.
(f)	Cost of rental equipment	"	5	302.
(g)	Rental of operator's equipment	"	5	1,330.
(h)	Materials and supplies with unit cost less than $50.	"	6	25,962.
(i)	Other costs	"	6	8,503.
	Grand Total, Item 23			$96,316.

24. Step-by-step progress of the exploration will be dictated in part by circumstances, and by information developed as the work proceeds. The following is a tentative, and arbitrary schedule, and the time intervals designated should prove more than ample.

III		CUMULATIVE COST	ELAPSED TIME
(1)	Construct road to tunnel, recondition county road to Columbia Gardens intersection; grade site; hire crew; order equipment and supplies. Total time, this phase 1½ mos. Total financial commitment, $25,636.	$25,636.	1½ mos.
$20	Open tunnel, construct water line from spring, install surface haulage track. Total time, this phase 1 mo. Total financial commitment $6,810.	32,446.	2½ "
(3)	Clean out & repair old workings, scale walls & back, clean out slough & lay track, clean bottom for track & ditch; timber as necessary; install pipe & vent tube; build oil storage shed. Total time, this phase 3½ mos. Total financial commitment $14,097.	46,543.	6 "
(4)	Drive 80-foot raise on tungsten ore shoot; build powder magazine. Total time, this phase 2 months Total financial commitment $6,717.	53,260.	8 "
(5)	Pump out old winze, timber winze, and break one round to examine bottom. Total time, this phase 1 mo. Total financial commitment $3,027.	56,287.	9 "
(6)	Drive 800 linear feet of drifts and cross-cuts (8' x 5½') Total time, this phase 10 mos. Total financial commitment $40,029.	$96,316.	19 "

NE 1/4 Sec 15 T8N R4
Birdie Claim
(6076)
1"=200'

Sketch Showing Proposed Development Work on Birdie Claim

Existing Workings ═══
Proposed Workings - - - - -
1"=200'

DEPARTMENT OF THE INTERIOR
Bureau Records Administration
RECEIVED
JUN 1 - 1951
DONOVAN F. SUMMERILL
Executive Secretary

Form MF-103
(April 1951)

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DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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Location of mine Three miles airline east of Butte, Montana

Date of filing MF-100 May 25, 1951

DMA Docket Number, if available .....

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(Name of company)

By W. J. Marette
(Signature of authorized official)

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(Date)

General Partner
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16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

6. There are no claims, liens, or encumbrances of record against the property. An obligation of $6,000 to Harry J. Cress, 306 Concord Building, Portland, Oregon, has not been placed of record in order to give priority to any claim of the United States Government arising from particiipation in the cost of exploring the property. Mr. Cress has expressed his complete willingness to subordinate his claim to any such obligation to the Government.

7. Not applicable.

8. West Slope Mining Co., Ltd.
Balance Sheet May 20, 1951

Cash	$ 3,616.00	
Due from Partners	17,500.00	
Truck	2,177.06	
Prepaid Insurance	99.42	
Birdie Mine	51,125.00	
Total Assets		$74,517.48
Truck Contract	1,900.00	
Due H. J. Cress	6,000.00	
Total Liabilities		7,900.00
Net Worth		66,617.48
		$74,517.48

West Slope Mining Co. is a new firm, formed April 1, 1951 for the purpose of developing a tungsten mining operation on the Birdie property. It has had no revenue to date. Total expenses to May 20, 1951, including salary of the general partner, were $2,382.52.

9. Applicant is prepared to invest $25,000 cash or more, should the need arise and the prospects so warrant. This sum ~~mx~~ is sufficient to pay our cost of the project as detailed under question 23, in accordance with Section 9 of Mineral Order 5.

10(a) All of the real property involved in this exploration project is that known as the Birdie Mine, more particularly described as Claim No. 6076, Section 15, Township 3 North, Range 7 West, Summit Valley District, Silver Bow County, Montana, and includes the shaft, tunnel, and drifts already in existence thereon.

(b) Same as the area described in 10(a).

19. It is undoubtedly pertinent that the Birdie mine is situated in an area in which there was extensive prospecting of the surface outcrops in the early days of mining activity around Butte. Numerous outstanding geologists, including Mr. Walter Harvey Weed, Mr. E. V. Corry, and Mr. Glenn Anderson have repeatedly expressed the opinion that deeper exploration in this area would reveal ore bodies of importance.

Shallow as they are, the old workings of the Birdie represent the deepest known penetration in this area. The exploration contemplated in this application will not only further extend the old penetrations, but will be the first such development in that region having the benefit of modern equipment, methods and geology. It should further be borne in mind that many of the ores which today are in critical demand, were of little or no interest to the prospectors and miners of fifty years ago.

It is therefore conceivable that the proposed exploration program to be undertaken in the Birdie may not only reveal additional deposits of tungsten ore therein, but that its results may furnish the impetus for further and greater development of that region, and the discovery of ore bodies of importance.

20. The exploration will be conducted to find bodies of tungsten ore lying within the main Birdie vein, the other veins exposed in the property, and such other veins as may be encountered.

21. The over-all exploration program contemplated should be completed in its entirety in 19 months or less. It may be roughly divided into the following steps:

    (1) To reopen, clean out and make useable and safe the present tunnel and drifts, as set forth under items 1, 2 and 3 of question 24;

    (2) Raise 80 feet on exposed tungsten ore shoot; pump out, retimber and examine winze (items 4 and 5, question 24)

    (3) Drift approximately 300 feet east on main Birdie vein to its projected confluence with second, diagonal vein, as shown on attached maps and sketches;

    (4) Drift additional 300 feet east on main vein; drift approximately 100 feet west on main vein, (all drifts with cross-cuts of the vein at minimum intervals of 100 feet); drift on such other veins as may be of sufficient promise.

22. In addition to the statement of Mr. James Gillie, lessee and operator of the Birdie in 1901 and 1902, that at least ten tons of tungsten ore were ~~shipped~~ given to the Montana School of Mines, the assay map accompanying Form MF-100 submitted on this date shows an exposed shoot of tungsten ore averaging 6.03% tungsten oxide.

    In the authoritative paper, "Ore Depositis at Butte, Montana", by R. H. Sales (Trans. AIME, vol. XLVI, 1914, page 56) the statement is found that hubernite "is found in considerable quantities in certain veins, two miles east of the Pittsmont mine". Little or no mining has been done in this area since Mr. Sales wrote his paper, so no further information on the occurrence of tungsten is available. However, it is significant that the presence of hubernite in the Birdie and other veins in this area was recognized by competent observers when the mine workings were accessible.

    It is a reasonable geological assumption that further exploration of the Birdie vein will expose additional deposits of tungsten.

23. NOTE- In compiling the attached estimate of cost of the proposed exploration, optimism has been purposely avoided. For example, prices used in reference to equipment and supplies are maximum current quotations on items of top quality. In actual practice, it will be our firm policy to substitute used or rented items whenever such a step would prove practical and economical. Similarly, we have attempted to undertake the course involving the lower net cost, as in the case in which a more expensive piece of equipment, by virtue of its greater salvage value, would be less expensive in the long run, than a similar item costing less to purchase.

	QUANTITY	RATE OR UNIT	UNIT COST	TOTAL COST
(a) Labor				
Miners (daily basis)	216	Shifts	$14.65	$ 3,164.
Miners (contract basis)	570	"	19.00	10,830.
Trammer	393	"	14.65	5,757.
Mechanics	56	"	15.25	854.
Laborers	16	"	13.85	222.
Maintenance mechanic	418	"	14.06	5,877.
Total Labor				$26,704.

(b) Supervisors
Manager (19 months @ $600 month) $11,400.

(c) No facilities to be repaired.

(d) Cost of additional facilities

Construct road from tunnel to county road (1,000 ft,)	$ 800.
Grade site for building and storage yard	300.
Quonset hut, 24' x 48', to be partitioned to provide shop, warehouse, dressing and living space. (per contractor's firm bid to erect)	5,400.
	$6,500.

23. (e) Equipment with unit cost over $50

Exhaust fan, Joy Mfg. Co. 3 h.p. Aerovane (or equivalent) with gasoline engine	$ 582.
Lamb air mover. M.S.A. 6 in.	53.
Compressor, Ingersoll-Rand GKA 315, gasoline driven	7,355.
Stopers, Ingersoll-Rand R-48 (3 @ $670.)	2,010.
Mancha Air-powered Locomotive	2,100.
Light plant, 1500 watt, gasoline powered	610.
Rectifier, 10 amp	55.
Loader, EIMCO Model 12-13	2,850.
Total	$15,615.

(f) Cost of rental for equipment

Jackhammer, (one month)	$ 20.
Sump pump (one month)	10.
Air hoist, single drum (4,mos @ 20.)	80.
M.S.A. cap lamps (8)	192.
Total	$ 302.

(g) Rental of contractor's equipment

1951 Willys 1-ton pickup truck, with 4-wheel drive (based on depreciation, insurance and taxes only) 19 mos. @ $70.	$ 1,330.

(h) Materials & supplies with unit cost of under $50

Framed round posts, 7'5",	400 @ $2.50	$ 1,000.
Framed round caps, 5'4" & 3'6",	200 @ $2.00	400.
Framed round girts, 5'0",	400 @ $1.20	480.
Stulls, 16'	140 @ $2.25	315.
Track ties, 4"x8"x3'6"	600 @ .50	300.
Ladders, 7'9" (2"x4" rails)	20 @ 1.50	30.
Lumber for lagging, spiling, etc.	62M b.f. @ $90. M	5,580.
Nails	800 lbs @ .10	80.
Wood wedges,	3,000 @ $35.00M	105.
Ore cars, 14 cu. ft.	10 @ 125.00	1,250.
Rail for track & spiling	32,575 lbs @ .09	2,932.
Track spikes, ½"x5"	3,600 @ .04	144.
Fish plates	250 pr. @ .60 pr	150.
Track bolts	2,000 @ .05	100.
Rail bender	1 @	31.
Tongue switches, 25#	4 @ 20.00	80.
Total carried forward to Page 6		$12,977.

23(h) (Continued)

Total brought forward from Page 5				$12,977.
Galvanized vent pipe, 16" diam.	1,600'	@	$ 1.50	2,400.
Wire rope, ¼ in.	600'	@	.09	54.
I-R Carset Jackbits	110	@	16.00	1,760.
Bench grinder & silicon carbon wheel	1	@	32.00	32.
Hex drill shanks, 1"x40"	80	@	3.70	296.
" " " 1"x58"	80	@	4.85	388.
" " " 1"x76"	80	@	6.00	480.
Blasting caps, boxes	45	@	2.00	90.
Lion brand fuse, reels	18	@	30.00	540.
DuPont Celex #2 powder, boxes	200	@	7.25	1,450.
Lub. oil for rock drills, gals.	75	@	1.20	90.
Line lubricators	2	@	19.25	39.
Air hoses, 50'length	2	@	45.00	90.
Water hoses, 50'length	2	@	30.00	60.
Black pipe, 1 in. standard	2,400'	@	.23 ft	552.
" " 2 in. standard	1,700'	@	.42	714.
Pipe hangers,	400	@	.30	120.
Miscellaneous pipe fittings				200.
Picks and shovels	20	@	3.00	60.
Pinch bars, 8'	3	@	4.00	12.
Axes	12	@	3.50	42.
Threader	1	@	21.00	21.
Cross-cut saws, 3'	4	@	4.30	17.
First aid kit	1	@	22.95	23.
Fire extinguisher	1	@	32.00	32.
Fuel oil , gals.	3,120	@	.166	518.
Gasoline for trucks, gals	2,460	@	.25	615.
Motor oil for trucks, gals	50	@	1.40	70.
Gasoline for machinery, gals	8,100	@	.20	1,620.
Miscellaneous tools & supplies				600.
Grand total, item 23(h)				$25,962.

23(i) Other costs not provided above

Recondition present county road	$ 300.
Maintain roads to Columbia Gardens intersection	600.
Repair & maintenance of equipment	900.
Consulting services, engineer & geologist	1,000.
Assaying charges	1,500.
Payroll taxes	1,075.
Compensation insurance	668.
County property taxes	960.
Other direct costs	1,500.
Total, item 23(i)	$8,503.

Item 23 Recapitulation

(a)	Labor	(Page	4)	$26,704.
(b)	Salaries of supervisors	"	4	11,400.
(c)	Repairs to existing facilities	"	4	nil
(d)	Cost of additional facilities	"	4	6,500.
(e)	Cost of equipment over $50 each	"	5	15,615.
(f)	Cost of rental equipment	"	5	302.
(g)	Rental of operator's equipment	"	5	1,330.
(h)	Materials and supplies with unit cost less than $50.	"	6	25,962.
(i)	Other costs	"	6	8,503.
	Grand Total, Item 23			$96,316.

24. Step-by-step progress of the exploration will be dictated in part by circumstances, and by information developed as the work proceeds. The following is a tentative, and arbitrary schedule, and the time intervals designated should prove more than ample.

		CUMULATIVE COST	ELAPSED TIME
(1)	Construct road to tunnel, recondition county road to Columbia Gardens intersection; grade site; hire crew; order equipment and supplies. Total time, this phase 1½ mos. Total financial commitment, $25,636.	$25,636.	1½ mos.
(2)	Open tunnel, construct water line from spring, install surface haulage track. Total time, this phase 1 mo. Total financial commitment $6,810.	32,446.	2½ "
(3)	Clean out & repair old workings, scale walls & back, clean out slough & lay track, clean bottom for track & ditch; timber as necessary; install pipe & vent tube; build oil storage shed. Total time, this phase 3½ mos. Total financial commitment $14,097.	46,543.	6 "
(4)	Drive 80-foot raise on tungsten ore shoot; build powder magazine. Total time, this phase 2 months Total financial commitment $6,717.	53,260.	8 "
(5)	Pump out old winze, timber winze, and break one round to examine bottom. Total time, this phase 1 mo. Total financial commitment $3,027.	56,287.	9 "
(6)	Drive 800 linear feet of drifts and cross-cuts (8' x 5½') Total time, this phase 10 mos. Total financial commitment $40,029.	$96,316.	19 "

NE¼ SEC 15 T6L R9
BIRDIE CLAIM
(6076)
1"=200'

SKETCH SHOWING PROPOSED DEVELOPMENT WORK ON BIRDIE CLAIM

EXISTING WORKINGS ═══

PROPOSED WORKINGS - - - - -

1"=200'

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 — 1951
LABOR & COUNSEL
Executive Secretary

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. _____

Date received _____

West Slope Mining Co., Ltd.
P. O. Box 1595
Butte, Montana

Name and address of applicant

Date May 25, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? Anticipate tungsten
   (*b*) What are the byproducts, if any? Silver
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).
   Page 1, attached
   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
   Page 1
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. Not in operation (See Page 1)
   (*b*) Are you operating this property as:
   ☐ Owner.
   ☐ Lessee.
   ☐ Contractor.
5. Number of years in production In production during 1901 and 1902
   If not in production or operation, estimated date when production will begin In 1952, if exploration is successful.
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project. Page 2, attached Page 3.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation. (Limited partnership. Formed April 1, 1951)

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Duncan B. Macdonald 740 Center Drive Palo Alto, Calif.	Limited Partner		Over $100,000				
H. Marcus Radin 6260 Van Ness Blvd. Fresno, California	Limited Partner		Over $100,000				
William J. Maretta P. O. Box 1595 Butte, Montana	General Partner		Over $10,000	(Present salary received from partnership, $600 mo.			
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production: None since 1902

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. Depends on result of exploration.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by a [illegible] available report on the geology and ore reserves. Page [illegible] attached.

2. This old mine is and always has been known as the "Birdie". The workings comprise:

   (a) A 250-foot inclined shaft;

   (b) Drift of 375 feet along the main vein at the 250-foot level, with 75 feet of collateral drifts and crosscuts;

   (c) A 540-foot tunnel intersecting the drift at 160 feet east of the shaft;

   (d) There are no other mine openings, although a few shallow pits along the outcrop may be observed.

   Although the mouth of the tunnel is caved and inaccessible, a small stream emerges, ~~indicating that~~ and the workings are not flooded. A winze of unknown depth on the drift probably will require emptying by a small rented sump pump.

3. (a) Location is three miles east of Butte, Montana. By the present road, it is 4.7 miles to the Northern Pacific main line tracks, and 5.4 miles to the ore loading chutes of that railroad in Butte.

   (b) Summit Valley Mining District

   (c) Township 3 North; Section 15; Range 7 West

   (d) Silver Bow County, Montana

4. (a) The property is not in operation, and has not been operated since 1902.

   (b) Applicant will operate the property as owner.

6. H. Marcus Radin and Duncan B. Macdonald, Limited partners in West Slope Mining Co., are stockholders, officers and active managers of Golden Gate Realty Co., Golden Gate Construction Co., and Triangle Lumber & Materials Co., of Stockton, Calif.; Golden Gate Lumber Co. of Eugene, Oregon, and are principals in various other substantial enterprises. In this undertaking they will participate in policy formulation and review, and in planning the activities of the firm. The individual net worth of each is substantially in excess of $100,000.

William J. Maretta holds California public accountant certificate number 8198, and is a former partner in the firm of Wm. W. McCullough & Co., whose principal office is at Visalia, California. In addition to public accounting, tax, and Business consultation experience, he has been identified with petroleum development enterprises. Mr. Maretta will be in active, full-time charge of the Birdie project, will develop and maintain the accounting records, and will handle personnel, purchasing, supply, and all other management functions of a non-technical nature.

John J. Maxwell is a veteran miner and prospector, with over forty years of experience in the Butte area, including the vicinity of the Birdie. Although advanced in years, Mr. Maxwell remains very active, and will participate in and direct the actual work of reopening the mine. His many years of practical experience render him ideally qualified for this task.

William R. Catrow is a mining engineer on the staff of Anaconda Copper Mining Co., at Butte. He is a graduate of Colorado School of Mines and has had over ten years of experience in mine operation, and in the specific field of mining costs and cost estimates. The answers to questions 23(a) through 23(i) of Form MF-103 were prepared by Mr. Catrow, who will be retained on a consulting basis during subsequent operations.

Donald McMillan is a graduate of Williams College and Montana School of Mines, and has been a geologist with the Butte division of Anaconda Copper Mining Co. since 1939. On attached Form MF-103, and on this questionnaire, all information of a geological nature was prepared by him, or under his direction. Mr. McMillan will serve on a part-time basis as geologist for this project, as such services are required.

7. (a) The Birdie claim was located about 1890 by Sampson Beer. During the succeeding ten years, it was developed by him, and by various lessees. During 1901 and 1902, it was leased and operated by Mr. James Gillie, who later became an executive of Anaconda Copper Mining Co. Mr. Gillie stated to the applicant in 1948, that he had shipped from the Birdie, siliceous silver ore from which the smelter returns exceeded $70,000. However, no details of these shipments can be learned at the present time. Mr. Gillie also stated that Mr. Beer had donated to the Montana School of Mines some ten tons of tungsten ore that had been removed during the search for silver and gold bearing deposits.

Development of the Birdie vein consists of several shallow pits along the outcrop, together with a 250-foot inclined shaft and 375 feet of drifting on the main vein at the 250-foot level. A 540-foot tunnel intersects the drift 160 feet east of the shaft. These workings are fifty years or more old, and are inaccessible at the present time. According to Mr. Gillie, injury to one of his miners, and a resulting lawsuit, together with the depressed silver market around 1903 led him to abandon the operation, and no activity was ever resumed.

(b) The Josephine claim, which adjoins the Birdie on the east, has been developed by a shaft on the Birdie vein. This shaft is now inaccessible. Shipments of commercial ore are known to have been made from this claim and from the Mountain Lion, which also lies on the Birdie vein, but again, detailed information no longer can be located.

(c) All of the available reports on this property are the assay and geological maps accompanying this application, and which have been reproduced from the files of the Anaconda Copper Mining Company. The original from which the assay map was reproduced bears the notation "R. H. Sales -- 1916".

12 (a) The Birdie vein is a strong east-west fissure that is traceable westward through the State of Maine and Mountain Lion claims, and eastward through the Josephine and Mary Ellen claims, a distance of more than a mile. On the Birdie 250-foot level, the vein is twenty to twenty-five feet wide. Mineralization, as noted in the outcrop, is sparse, which is characteristic of this region. The vein material is chiefly massive quartz with small amounts of pyrite.

A shoot of tungsten ore 16 feet by 1.25 feet is exposed on the 250-foot level. A second vein, concerning which there is no information, is shown on the map to lie south of the Birdie vein, which it joins or intersects at 330 feet west of the east end line. According to Mr. Gillie, two other veins, which he described as "strong", are exposed in the present workings.

(b) (1) Available maps and assay data accompany this application.

(2) The geological and assay map attached shows a shoot of tungsten ore 16 feet long and 1.25 feet wide, which averages 6.03% WO_3. The full extent of this ore shoot in the vertical dimension is unknown, and one of the initial objectives of the proposed exploration will be to test such vertical extensions.

13. The portal of the Birdie tunnel is approximately 300 yards from a graded but otherwise unimproved county road. By this road, it is 2.2 miles to its intersection with Columbia Gardens Road, a paved thoroughfare. Total distance from the mine to the tracks of the Northern Pacific Railroad is 4.7 miles, and to downtown Butte, 5.5 miles.

For the 300 yards from the tunnel portal to the county road the original roadsite is still discernible, although now overgrown by willows and small scrub pines. In our opinion, it should cost approximately $1,000 to connect the mine with the county road, and recondition the latter to its point of intersection with Columbia Gardens Road. This figure may be reduced if we are successful in obtaining assistance from the County Road Department.

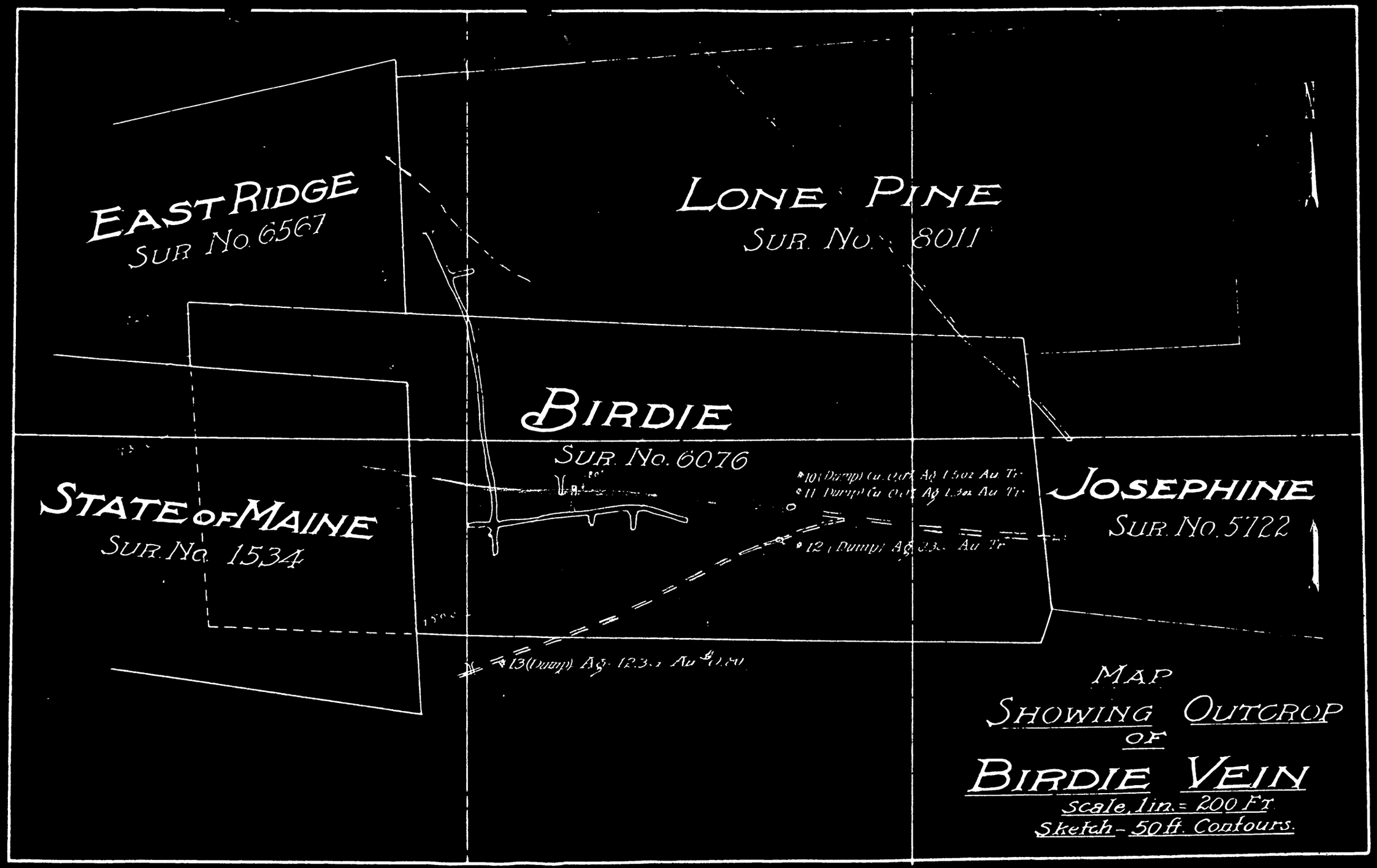
14. Sufficient water for operations at all seasons of the year is available from natural springs on the property.

15. During the exploration program, sufficient power can be obtained from a 1500-watt portable gasoline generator. Should a full-scale operation be developed, it is approximately one-half mile to the nearest lines of the Montana Power Company.

16. As phrased, this question is not applicable. However, it should be pointed out that the location and accessibility of the Birdie make it possible to hire miners who can continue to live in the city of Butte. Of course, there is no surplus of miners, in Butte or anywhere else. But the small number that will be required for this exploration can be obtained without difficulty.

17. There are no useable facilities or equipment on the property. The only suitable item now owned by the applicant is a 1951 Willys 1-ton Pickup, with 4-wheel drive.

18. It has been mentioned that the tunnel of the Birdie is inaccessible by reason of caving at the portal. However, it is the opinion of those who have inspected the mine when it was open and of geologists familiar with the area, that the tunnel will be found virtually intact, once the portal caving is breached. Surface contours at the mouth of the tunnel and other indications support this belief.


EAST RIDGE
SUR. No. 6567
LONE PINE
SUR. No. 8011
BIRDIE
SUR. No. 6076
STATE OF MAINE
SUR. No. 1534
JOSEPHINE
SUR. No. 5722
N
MAP
SHOWING OUTCROP
OF
BIRDIE VEIN
Scale, 1 in. = 200 Ft.
Sketch - 50 ft. Contours.

(*b*) If deposit is other than placer: Page 4, attached

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: Page 4

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: Page 5

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power: Page 5

State amount of power used, rate per hour, and source thereof.

16. Labor: Page 5

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities: Page 5

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain. Page 5

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

West Slope Mining Co., Ltd.
(Name of company)

By W. J. Marette
(Signature of authorized official)

May 25, 1951
(Date)

General Partner
(Title)

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—63792-1

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 - 1951
LANDON F. STROBEL
Executive Secretary

(*b*) If deposit is other than placer: **Page 4, attached**

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: **Page 4**

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: **Page 5**

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power: **Page 5**

State amount of power used, rate per hour, and source thereof.

16. Labor: **Page 5**

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities: **Page 5**

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

Page 5

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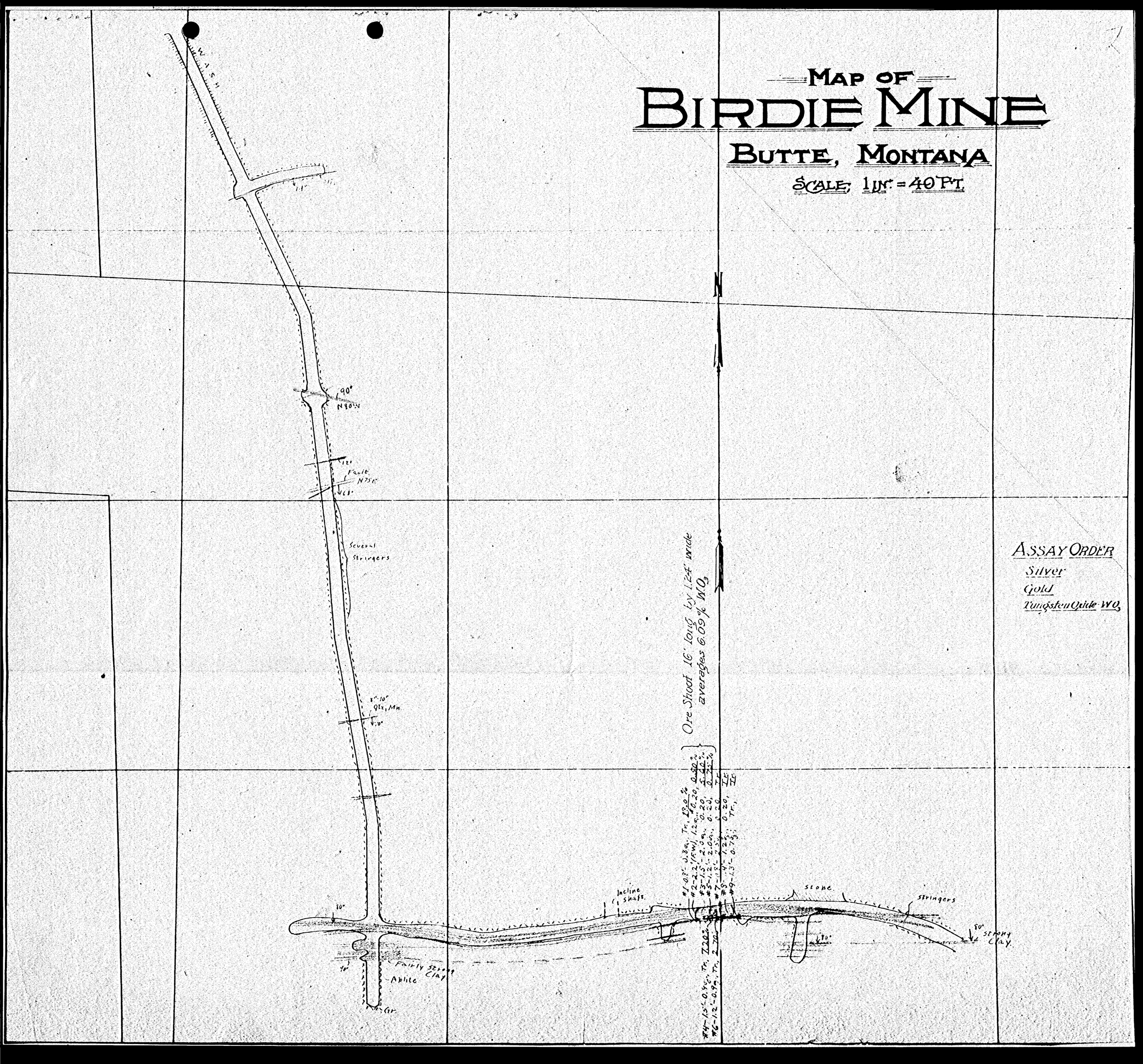
MAP OF BIRDIE MINE

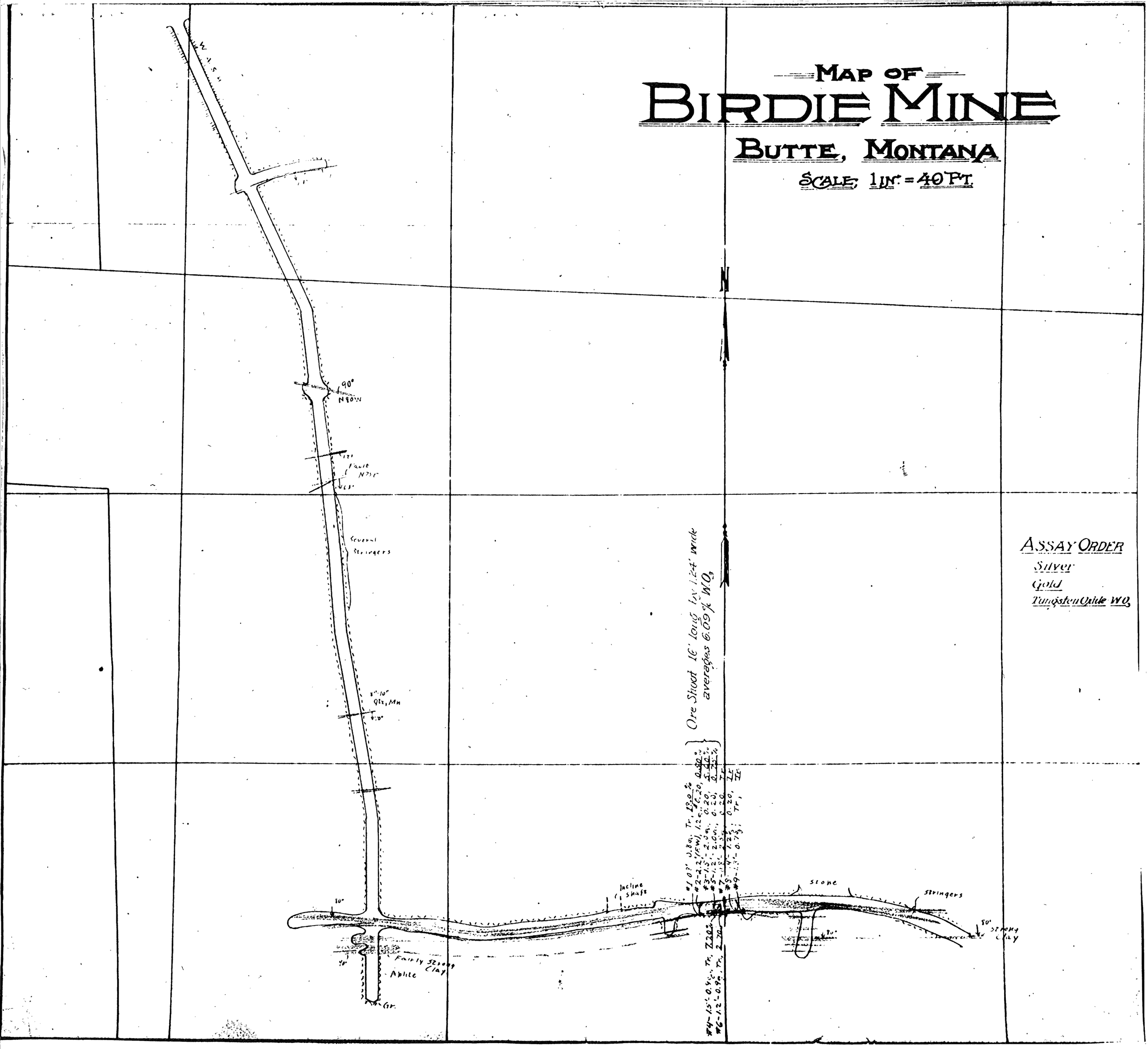
BUTTE, MONTANA

SCALE: 1 IN. = 40 FT.



MAP OF
BIRDIE MINE
BUTTE, MONTANA

SCALE; 1 IN. = 40 FT.

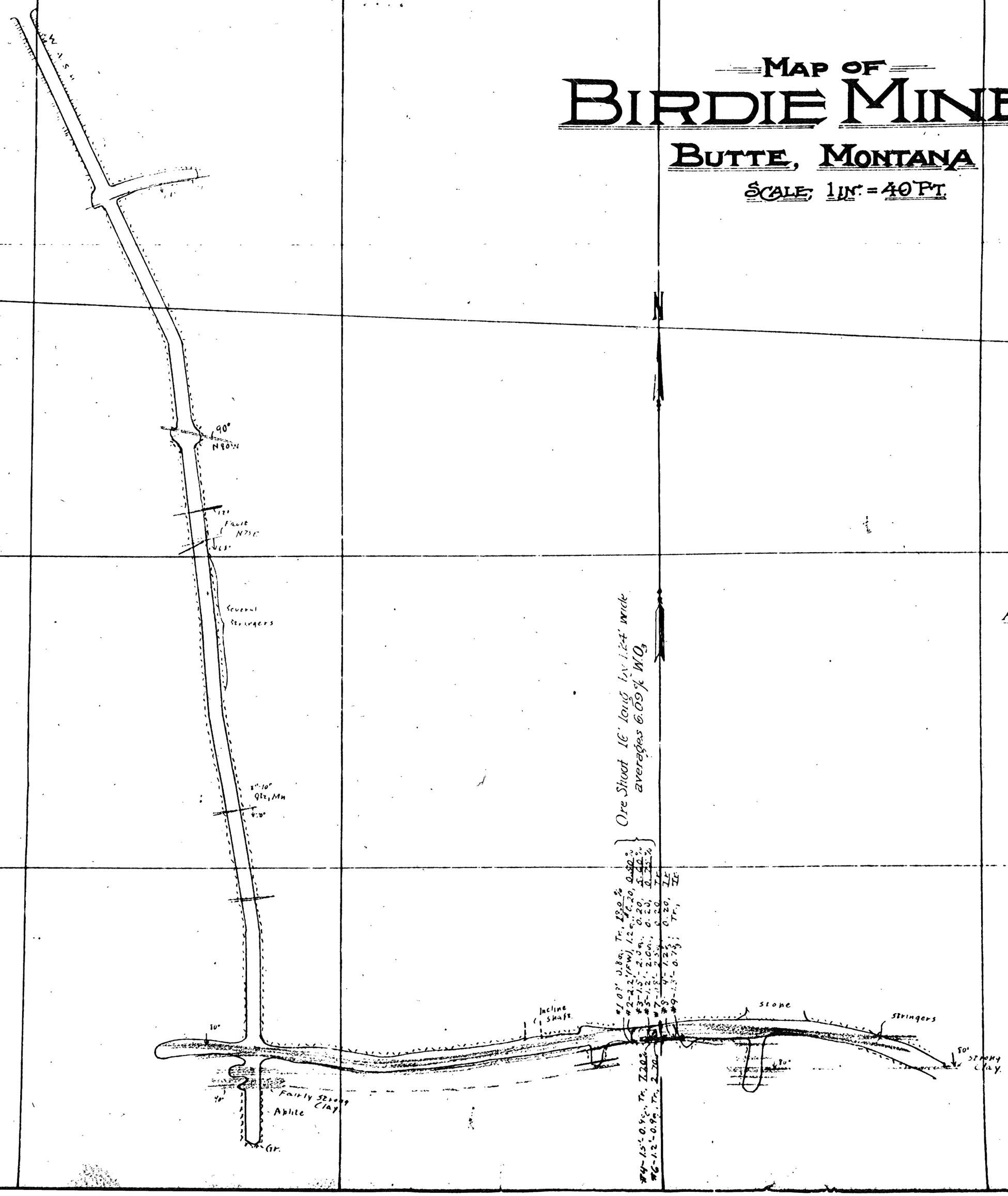


ASSAY ORDER
Silver
Gold
Tungsten Oxide WO_3

MAP OF BIRDIE MINE

BUTTE, MONTANA

SCALE: 1 IN. = 40 FT.



ASSAY ORDER

Silver

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Tungsten Oxide WO_3