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

OME
DEPARTMENT OF THE INTERIOR
JUN 11 1962
REGION III
DENVER, COLORADO

Memorandum

JUN 7 1962

To: Acting Field Officer, Region III

From: Chief, Division of Field Operations

Subject: OME-6252 (Lead-Zinc-Silver)
Outlet Mining Company, Inc.
Holy Moses, et al., Claims
Mineral County, Colorado

The subject application is referred to Region III for review, a field examination if deemed advisable, and recommendations.

We view this application with more than a small degree of skepticism. The proposed drifting would be under previous drifting which was hopelessly barren. In 2,000 feet of drifting on the Outlet Adit Level the DMEA project drew a complete blank, except for one tiny handful of ore. O'Boyle feels that primary ores might be encountered. It might be that such a possibility exists, but about the very best that could be hoped for would be a very basic, zincky material, low in silver. Material of this sort is of no great value unless present in large tonnages, which would warrant a milling plant.

Probably there would be little point in a field examination since we understand nothing of significance is accessible. In any event, kindly let us have your recommendations.

An extra copy of the application is enclosed for your use.

George C. Selfridge

Enclosure

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

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Enclosure

MME Form 40
Dec. 1958

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

MAY 28 1962
O.M.E.

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85-701 (72 Stat. 700; 30 U.S.C. 641)

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

OUTLET MINING COMPANY, INC.
P.O.BOX # 11
CREEDE, COLORADO

OR

OUTLET MINING COMPANY, INC.
c/o James M. Muir Jr.
5189 De Burn Dr.
SAN DIEGO 5, CALIFORNIA

OME
DEPARTMENT OF THE INTERIOR
JUN 11 1962
REGION III
DENVER, COLORADO

APPLICANT DO NOT WRITE IN BLOCK

DOCKET NUMBER: 6252

DATE RECEIVED: 5/28/62

REGION: III

DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL	
CORPORATION	X
PARTNERSHIP	
OTHER *(Specify)*	

STATE IN WHICH FIRM IS ORGANIZED: Colorado

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
James M. Muir Jr.	5189 De Burn Dr. San Diego 5, Calif.	Pres.
Henry H. Muir	1017 Laguna St. Anaheim, Calif.	V. Pres.
Paul B Beaty	215 Franklin St. Oxnard, Calif.	Secretary
Charles S. Greenamyer	2980 Royal Palm Dr. Costa Mesa, Calif.	Treasurer

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Lead, Zinc, Gold, Silver and Copper

ESTIMATED COST OF PROJECT: $ 86,587.05

PROPERTY NAME	LOCATION COUNTY	STATE
Solomon, Holy Moses, Cliff, Cassino & Phoenix Claims	Mineral	Colo.

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

May 19, 1962
DATED

Outlet Mining Company, Inc.
BY *(Signature)* James M. Muir Jr. Pres.
Outlet Mining Company, Inc.
James M. Muir Jr., Pres.
TITLE

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

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the cost of the exploration work.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. Physical Description:

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

(b) State your interest, if any, in operations described in (a).

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

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

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

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

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

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

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

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

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

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

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

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

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

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

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

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

INT.-DUP. SEC., WASH., D.C. 50399

OUTLET MINING COMPANY

A COLORADO CORPORATION

CREEDE, COLORADO

PRESIDENT
CHAIRMAN OF THE BOARD
JAMES M. MUIR, JR.

VICE PRESIDENT
HENRY H. MUIR

SECRETARY
PAUL B. BEATY

TREASURER
CHARLES S. GREENAMYER

DIRECTORS:
HENRY H. MUIR
PAUL J. SNYDER
PAUL B. BEATY
G. BASILICATO, CAPT. USN
C. S. GREENAMYER
W. E. CROSS

May 19, 1962

Department Of The Interior
Office Of Minerals Exploration
Washington 25, D.C.

Dear Sir:

Our Company is applying for an OME loan to help finance its present exploration program. At the present time there is no way to complete this proposed work without an OME loan.

I have enclosed all the necessary data that your forms request with the exception of letters from Banks, a list of all the Company property and Form MME-52. These items will be forwarded at a latter date.

Mr. Charles E. Melbye a Geological - Mining Engineer and Mr. Charles C. O'Boyle a Geological Engineer have wrote reports on the property to be explored and highly recommend the exploration program. Their reports have been enclosed with this letter.

Although the past DMEA loan, contract 3940, IDM-E923 was a failure as far as producing ore it had a lot to do with solving the geology of the Solomon-Ridge-Holy Moses fault and vein system. There is definately two zones of mineralization, the upper zone near the surface to a depth of about 10,000 feet elevation and the lower zone starting at an elevation of 9,500 feet and going on down to unproven depths but proven in the Solomon area to a depth of 8,800 feet elevation. The area in between these zones for some unknown reason does not produce ore in commercial values.

The Outlet tunnel workings came into the area that had no ore with the exception of the Cassino ore body where all the ore was below the tunnel level. About 600 feet south of the Outlet tunnel on the Cliff claim the assays climbed showing a good zone of mineralization but again everything appears to be below the tunnel level. A Plan Map enclosed with Mr. Melbye's report shows all the workings in detail and from this map one can recognize the dead zone immediately.

If you have forms MME-52 available I would appreciate five copies of them. Please notify me if there is anything else needed to complete the report and I will see that you get it immediately.

Very truly yours,

James M. Muir Jr.

James M. Muir Jr., Pres.
5189 De Burn Dr.
San Diego 5, California

OUTLET MINING COMPANY

A COLORADO CORPORATION

CREEDE, COLORADO

Financial Eligibility

a. Letters were sent to the Rio Grande County bank in Del Norte, Colorado where the Company does most of its business. Phone calls and visits were also made. Reference Company letter enclosed dated May 19, 1962. The letter in writing from the Bank has not been received but will be forwarded under separate cover if it is not here in time to go with this report.

   The Company Vice President contacted the Bank of America personally giving them complete information for the loan. The letter in writting from them has not been received but will be forwarded by separate cover if it is not here in time to go with this report. The bank has already stated it will not make such type loans.

   So far everytime I have attempted to get loans from banks such as the type OME gives, the bankers have all they can do to keep from laughing in my face. They will not give a loan under any conditions where they do not have collateral or something they can hold worth about three times the amount of the loan the Company needs.

b. The Colorado Imperial Mining Company, Inc. is a silent partner in the operation. It is a Colorado corporation and will pay for labor, dynamite, fuse and caps and assaying for its share of the operation. If the OME loan is granted, the amount of loan payments will be divided equally between the two Companies. Colorado Imperial has a split check mining agreement with the Company and a copy of the agreement has been enclosed with this report. Outlet has full control of the operations.

c. Both the Outlet and Colorado Imperial expect to issue stock to the public to cover their share of the clearance. If an OME loan was granted and for some unknown reason the stock did not get cleared to the public, the Companies would attempt to borrow the necessary amount to complete the loan from present investors. It is felt that with an OME loan this would not be hard to do.

OUTLET MINING COMPANY

A COLORADO CORPORATION

CREEDE, COLORADO

2. Applicant's Rights in Land

a. Reference copies of lease agreements onland to be explored with OME money.
The claims in question that OME money will be used on are:

Solomon claim	patent # 6837
Holy Moses claim	patent # 7477
Cliff Claim	patent # 7477
Phoenix claim	patent # 7743
Cassino claim	Bk # Pg #

The above claims have a lien against them under a DMEA loan agreement Contract # 3940, IDM #E923 a joint venture between the Outlet Mining Company and the Sublet Mining Company both Limited Partnerships. The loan was for Lead and Zinc.

The Company ownes or leases many more claims in the area which is known as the King Solomon Mining District, Creede, Mineral County, Colorado.

At the present time the Location Certificates are in the hands of Holme, Roberts, More & Owen - 1700 Broadway - Denver, Colorado. The Company is in the proscess of applying for a Security Exchange Commission permit to issue stock to the public. A master list of all claims will be supplied under separate cover as soon as it can be made up.

Location of the property is shown on Plate 1A on the Engineers report. It is in Sections 7, 18, and 19, T42N; RIE.

3. PHYSICAL DESCRIPTION

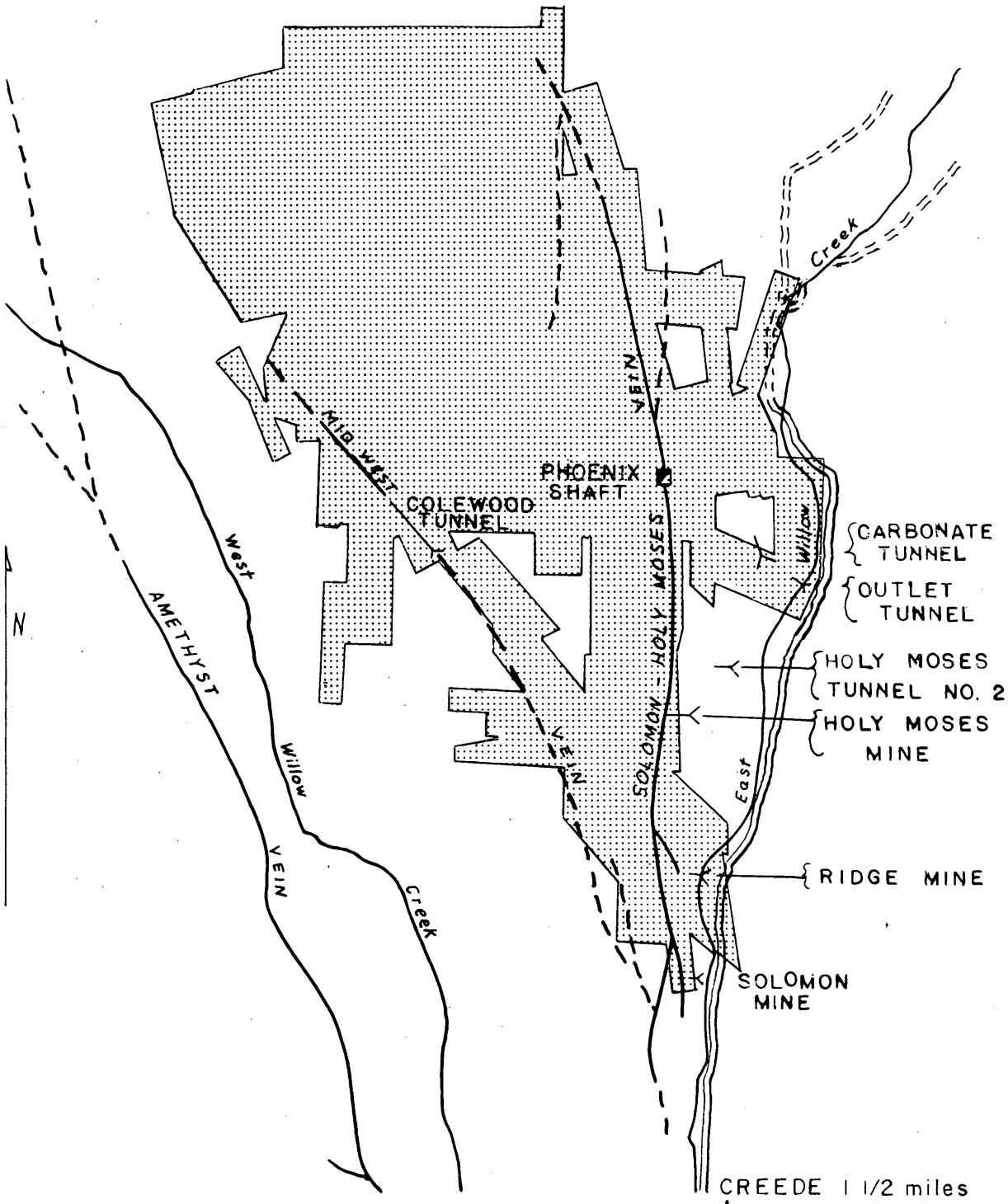
a. Prior and Present Operations:

The original location on the Solomon-Holy Moses vein and fault system was the Holy Moses claim located in August, 1889 by M. C. Creede, and presently under control of Outlet. By the end of the year 1890, the following claims had been located on the Solomon-Holy Moses vein system: Solomon, Holy Moses, Ethel, Mexico, Ridge #1, #2, and #3, Senator Farwell and General Mahoney. During 1890, active mining began on the Holy Moses claim by the Holy Moses Mining Company. During the period from 1890 to 1910, the southern portion of the Solomon-Holy Moses vein system was actively exploited by the following companies: Holy Moses Mining Company, King Solomon Mines, Inc., East Willow Mining Company, C.M.S. Mining Company and the Ridge-Mexico Mining and Milling Company. During this period more than two million dollars worth of ore was produced, principally from the Solomon and Ridge claims. During the years, 1933-1936 a number of lessees operated at various places. Various individuals mined ores running higher gold values from the Gold vein on the Ethel claim. Three small stopes can be seen. Helmich and Wright mined on the Mexico claim, and accounted for some of the mining shown as the Mexico stope. From 1943 through 1949, the Ridge and Mexico mines were operated spasmodically by various other lessees. In 1951, and 1952 two sets of lessees shipped 450 tons from the DMEA winze on the Mexico claim. A $60,000 DMEA loan was then granted to explore from this winze, but the winze caved before work could resume, and they elected to cancel the contract. The Jackson Mining Company was active in the Holy Moses mine in 1954 and shipped 357 tons of crude ore.

Outlet Mining Company started work in the area in 1949, consisting of claim staking. The first actual exploration started in 1950 with the rehabilitation of the Phoenix shaft to a depth of 100 feet and drifting south where an orebody was exposed late in 1951. The first production came in December, 1951, and some production resulted each year until 1960.

Based on a thorough check of historical and company records and individuals who have worked on the property, it is management's opinion that no exploration or mining has been done from the Solomon stope northward since 1910. These investigations also revealed that the vein was well-mineralized but very high in zinc, which was very undesirable in the early days and which contributed to the cessation of northward mining. Rehabilitation of the Solomon tunnel is presently being carried on by Outlet and Colo. Imperial Mining Company to open all of the north workings beyond the Solomon stope; three men are employed. This work started in September, 1961 and over 1300 feet have been completed.

A DMEA loan was granted and the work executed in 1957, under Docket No. 3940 and Contract No. IDM-E923. This was a joint venture of Outlet and Sublet Mining Companys. Under the DMEA contract, the first 1172 feet



PROPERTY MAP

PROPERTY OWNED
OR CONTROLLED BY
OUTLET MINING COMPANY

OUTLET MINING COMPANY
CREEDE DISTRICT
MINERAL COUNTY, COLORADO
APRIL, 1962

0 2000' 4000'

C.E. Melbye, Geol.-Mining E.

of the Outlet adit was rehabilitated and an additional 1036 feet of cross-cutting completed from the end. A total of 2000 feet of drifting was then done both north and south from the crosscut, followed by 300 feet of raising in the Muir raise. No ore reserves were found except for a small possible orebody on the Cassino claim. A subsequent 20-foot raise delineated the upward extent, but the 60-foot Cassino winze was still in a mineralized vein, and 71 tons averaging 25 oz. silver per ton were shipped. The extent of this possible sulphide ore shoot is unknown at the present time.

The accompanying maps and longitudinal sections thoroughly illustrate the extent of workings.

b. Company Interest

The applicants interest in the above-mentioned work date from 1949 and are described above. Present work is being carried out under a split-check mining agreement with Colorado Imperial Mining Company, and a copy of the agreement is included under Part 2 of this application.

c. Production

Past production from the entire Solomon-Holy Moses vein system has been $2,200,000 according to U.S. Geological Survey statistics. Of this total, about 3/4 has come from the Solomon and Ridge mines. Early records on this production are not available, but records since 1950 are available and are listed as follows, except for Outlet and Sublet production on the following pages:

Company	Year	Mine	Tons	Oz.Au	Oz.Ag	%Pb	%Zn
Wintz, Lehman, Hosselkus	1950	Mexico-DMEA Winze	142.95	.042	1.04	14.89	4.90
TOC Development Company	1952	Mexico-DMEA Winze	307.29	.120	1.26	11.03	2.68
Jackson Mining Company	1954	Moses Winze	356.83	.159	1.17	13.59	1.76

d. Ore Reserves

Known ore reserves are presently small and scattered in various parts of the property. It was not considered expedient at this time to sample these areas in a manner that would permit ore reserve calculations. The main reserve is in or near the Moses Winze (See Longitudinal Section, Plate 4). Nine other samples by American Smelting and Refining Company further substantiate the writer's channel samples.

e. Geology

Rock Types

The principal rock-type along the Solomon-Holy Moses vein system is the Willow Creek rhyolite, a part of the Alboroto group of volcanics in the

Tertiary Potosi series. These flows are present over the entire San Juan Mountains and various types comprise the host rock for some of the San Juan ore deposits.

There is a decided lithologic change from the upper workings to the lower. In the Holy Moses No. 2 level, the rhyolite is a gray color with prominent fluidal banding. It is often porous or contains cavities lined with quartz crystals. Very few visible phenocrysts can be seen. In the lowest exposures of the Solomon tunnel, the formation is a dark purple to brown color with small but prominent phenocrysts of orthoclase, less plagioclase, biotite, and quartz. The fluidal banding is absent.

Structure

The most prominent structural feature is the very continuous Solomon-Holy Moses fault zone, which can be traced on surface for about two and one-half miles. This zone is on the same east side of the Creede caldera as the highly productive Amethyst fault zone and dips similarly to the west. It is characteristically a braided structure with a prominent hanging wall and footwall split. Usually the area between the two splits is highly fractured and is part of the fault zone. At the south end of the property, the structure, in addition to the minor braiding, divides into the Solomon and Ridge veins which are a maximum of 330 feet apart. As the vein extends onto the Ethel claim, a sharp bend occurs, and the vein is known as the Ethel vein. Another split occurs on the Ethel claim, in which the Gold vein continues to the southeast. Another fault split extends from just south of the large Ethel stope over to the main Solomon vein again, but this is only weakly mineralized and can hardly be called a vein. Therefore, it appears that the Ridge, Ethel, and Gold veins are all one, and the split south of the Ethel stope is only a minor cross fracture.

A study of the old mine map of the inaccessible north Solomon drift shows a sharp bend to the west, which appears to indicate that drifting was done on the hangingwall vein. A projection of the vein from the Holy Moses No. 2 level above at a 65° dip falls over 100 feet east which supports the idea that the Holy Moses drift is on the footwall vein. A fault split at the Moses winze may be where the hangingwall vein starts. This is important since different veins have apparently been explored on each level, and further exploration appears worthwhile.

Strike of the zone varies irregularly from N 10° - 25° W, and the dip is from 60° - 80° West. Average dip is near 65° W. Vertical displacement on the fault has been about 300 feet; but there is evidence of a considerable horizontal component, based on slickensides observed.

Mineralization and Ore Deposits

The ore deposits are essentially fissure fillings along the faults and fractures of the Solomon-Holy Moses fault zone. Higher-grade

mineralization is found along the prominent fault planes as well as low-grade in the fractures between. The latter is well illustrated at various places along the Solomon tunnel in the Mexico claim. (See Solomon mine plan map, Plate 1) Much post-mineral movement has occurred, as the sulphides have been finely ground and occur in the green chloritic fault gouge. The more grayish-green chloritic material usually indicates a higher sulphide content. This chlorite has been identified by the Geological Survey as thuringite. Because of extreme brecciation in and near the veins, the rhyolite is shattered and the fragments surrounded by chloritic gouge.

Mineralogy: Lead-zinc ore minerals in the primary sulphide zone are galena and sphalerite. Silver occurs in the galena, and the presence of argentite, the silver sulphide, is also suspected. Gold is found in the pyrite, which is actually very scarce. Minor chalcopyrite may also be seen. In the oxide zone, galena has been oxidized to anglesite and cerussite, and the sphalerite to as yet undetermined minerals, probably smithsonite and hemimorphite. Silver is found as the chloride, cerargyrite.

White kaolin clay from hydrothermal alteration is abundant in the oxide zone and hence has been noted by the miners as being the "top of the ore". Other gangue minerals are quartz, barite, and fluorite.

Influence of Oxidation

Oxidation has profoundly affected the Solomon-Holy Moses ore deposits.

Elevation Changes: The oxidized and enriched zone lies between the surface at 10,500 feet elevation and 10,000 feet; a highly leached zone between 10,000 and 9,500 elevation; and a primary zone below to unknown depths but at least to the deepest level in the Solomon mine at 8844 feet. These elevations cannot be regarded as lines of abrupt change as the effects of oxidizing ground waters will vary according to the availability of fractures and other openings in the rock for penetration. For instance, although the Solomon tunnel level is essentially within the primary zone, there are still occasional spots of oxides.

Leached Zone: Silver enrichment in the oxide zone accounted for early-day bonanza silver ore bodies of this vein system as well as the Amethyst and is well understood and predictable. However, the so-called "leached zone" is difficult to understand, especially with the absence of insoluble lead. The writer suspects that the change in wallrock from the upper to the lower workings may have an important bearing on ore deposition as it has in the nearby Telluride-Ouray districts of the San Juan Mountains. If this were so, the leached zone might be a factor of a particular unfavorable volcanic flow as a host rock rather than of oxidation. Regardless of the origin, the leached zone is very definite and must be considered in any exploration.

Ore Tenor as a Function of Zonation

The writer believes that the primary zone presents the major potential since 3/4 of the production has already come from this zone. Furthermore, the silver enrichment will be absent but the soluble zinc, normally removed in the oxide zone, should again be present in the primary zone. The only comparison possible is between the Phoenix-Holy Moses oxide types versus the Solomon-Ridge and Ethel sulphide types. The Gold stopes are near the present surface and appear to be oxide types from more recent oxidation. A comparison of production grades from different places is enlightening with regard to change of ore tenor.

Zone	Place	Oz.Au.	Oz.Ag	%Pb	%Zn
Upper oxide	Phoenix stope	.062	8.91	13.77	0 - .5
Lower oxide or Transitional	Moses winze	.130	.89	9.89	2.63
Sulphide	D.M.A winze	.095	1.19	12.26	3.38
Sulphide (1910 production)*	Ridge mine	.01	1.50	4 - 6%	8 - 12%

*From Henderson, C. I. - U.S. Geological Survey

The absence of higher zinc values in the writer's Mexico sampling is difficult to explain, but must be a function of the original metal deposition rather than oxidation. More abundant zinc must be confined to certain ore shoots which have been mined out in the sampled Mexico area. Considerable galena was seen in the Moses winze, which, together with the appreciable zinc content, indicate that this may be in the oxide-sulphide transitional zone.

f) Reasons for expecting to find ore:

We expect to find ore for the following reasons:

1. Since nearly $2,000,000 in production has come from the lower primary workings on the Solomon-Holy Moses vein system, we feel that this zone presents the major exploration potential.

2. Since considerable past production has come from the oxide workings in the Phoenix and Holy Moses mines, and a substantial vein is now exposed in the bottom of the Moses winze, the presence of primary ore below these workings is certainly to be expected. Whether the "leached zone" is due to ground-water leaching or host rock unfavorability, the zone is nevertheless present and primary ore similar to the Solomon-Ridge area can be reasonably expected below. A major ore potential remains in that over 3000 feet of strike length remains to be explored below the leached zone.

3. The presence of high zinc ore at the north end of the Solomon level is expected from what management considers reliable old company records

and verbal reports. An old C.M.S. Mines Company map indicates "4'6" ore in the bottom" at 300' - 600' from the north end of the level as well as "ore" indicated in two of the raises above. It is not possible to sample the area proposed for exploration as rehabilitation of the Solomon tunnel presently being carried on, has not progressed to the north end. The nearest sampling is that from the bottom of the Moses winze, mentioned under Part (d) above. This sampling is 470 feet above. Sampling has been done by Outlet in the Mexico workings, but this was essentially of low-grade material remaining in stope walls and unmined portions of the drifts. All of these data may be seen on the Mexico-Solomon plan and long section.

g) Two copies of the following are included:

Plate 1A - Property Map
Plate 1 - Plan Map - Solomon Mine
2 -- Longitudinal Section - Mexico Stope Area
3 - Plan Map - Holy Moses Mine
4 - Geologic Assay Map - Moses Winze
5 - Plan Map and Longitudinal Section - Solomon-Holy Moses Vein System

Two Geologic Reports by Charles C. O'Boyle, Geological Engineer.

Most of the application is based on two reports by Charles E. Melbye, Geological-Mining Engineer for Outlet Mining Company which are not enclosed. None of these data need by returned.

4. <u>Accessibility of Property</u>

a) <u>Directions to OME Representative:</u>

The OME representative should contact the following person for arrangements to examine the property:

Charles E. Melbye
2721 Lookout View Drive
Box 309
Golden, Colorado
Phone - CRestview 9-1542

The Solomon Tunnel (south end of property) may be reached by traveling north from Creede, Colorado, 3/4 mile on a well-graveled and county-maintained road which is an extension of State Highway #149, thence 1½ miles up the right or East Fork of Willow Creek. The Holy Moses, Outlet, and Phoenix workings are located an additional one to two miles north over similar good roads. These roads are all county-maintained the year around. Rehabilitation of the Solomon tunnel is proceeding at a steady rate and accessibility to the north workings is expected early in the summer. The Mexico and Holy Moses workings are nearly all accessible, and particularly the Moses winze. Heavy snow and ice prevented the writer's access to the Outlet and Palo Alto workings in

early April, but these should be open in a fairly short time. Elevation of the Solomon tunnel is 9254 feet and snowfall is sometimes heavy but usually does not unduly hamper operations.

b) Shipping and Supply Points

Shipping point is Creede where the Denver and Rio Grande Railroad terminates two miles from the property. The supply point is also Creede for most items as the local merchants carry an unusually complete stock of mine supplies.

5. EXPLORATION WORK

a) Proposed Exploration work

The proposed work follows and is shown on Plates 3 and 5.

Stage I

Drifting 2000 feet

This drifting is proposed to continue 2000 feet northward from the north face of the Solomon tunnel. In 400 feet this will be directly under the Moses winze where ore is present 470 feet above. Based on the westward bend in the old Solomon drift, it is probably on the hangingwall split of the Solomon-Holy Moses vein, and the new drifting will also be on this split. The drift will continue under the Outlet drift, but 230 feet lower on the vein, which will explore the possibility of increased grade below the leached zone, in which the Outlet drift is located. Since the vein splits appear to intersect at the Moses winze, drifting beyond this point should be done on whichever one appears the most promising.

The drift will be 5' x 7' where untimbered and 7' x 8' where timbered. It is estimated that 25% will require timber. Timbers will be 8" x 8" round timbers with 2" lagging. Rail will be 30# at a 24" gauge. Vent pipe will be 12" in diameter, air pipe 2" in diameter, and water pipe 1" in diameter.

Drilling (long-hole) 1500 feet

Purpose of this drilling is to explore the footwall split of the vein from the drift being driven on the hanginwall split or other branches which may occur. This will require underground drill holes each about 100 feet in length. The locations should be determined as drifting proceeds in order to explore the best areas for the maximum information. In favorable areas they are proposed no closer than 100 feet. About 15 holes can be completed.

Long-hole percussion drilling is proposed, since the short length of each hole hardly justifies the preparation of the larger drill station

necessary for diamond drilling. Drill cuttings will be carefully collected, examined, and assayed to determine the vein width and character. Holes should be inclined upward +5° from the horizontal to facilitate clearing of cuttings. Although low grade mineralization is expected between the veins, this is not presently of economic interest, and only the last 10 feet through the vein itself will require careful sample collection and assays.

Drill stations and Switch headings (cross-cutting) 150 feet

A 6-foot crosscut should be sufficient to set up in and long-hole from, or a total of 90 feet. In addition, about three switch areas will be needed in a 2000-foot drift, each estimated at 20 feet. Total cross-cutting will then aggregate 150 feet. Coincidence of the two purposes can be effected in some of the cross-cutting. Crosscuts will be 5' x 7' in size and no timber will be required.

Stage II

Drifting 1000 feet

If favorable results are obtained in the Stage I drift, a second stage drifting program of 1000 feet is proposed to carry the heading directly below the Phoenix mine which has been the largest producer in the oxide zone. This will extend beneath the Casino winze where a small oreshoot is present and continuing downward.

All specifications are the same as under Stage I and are discussed there.

SUMMARY

Stage I:	Drifting	2000 feet
	Long-hole drilling	1500 feet
	Cross-cutting (Stations & Switching)	150 feet
Stage II:	Drifting	1000 feet

b) Access Roads

No access roads must be built.

c) Contract Duration

Work would start within 30 days of contract execution and should be finished within nine months. However, it is requested that eighteen months be granted to allow for work delays of various kinds which might arise.

Anticipated rate of progress for each type is as follows:

Drifting	350 feet/month
Drilling	35 feet/shift

6. EXPERIENCE

Technical supervision will be provided by Charles E. Melbye, Consulting Geologist and Engineer, Golden, Colorado. Mr. Melbye graduated from the Colorado School of Mines in 1950 with a Geol. E. degree. He later completed three years of study toward a Doctor of Science degree. His experience includes both mine operation and exploration for the Anaconda Company, Telluride Mines, Inc., and Colorado Exploration Company, as Instructor in Geology at the Colorado School of Mines, and as consultant to such companies as Phelps-Dodge Corporation, Kennecott Copper Corp., Southern Pacific Railroad, Susquehanna-Western, Inc., Anschutz Drilling Company, Oklahoma Gas and Electric Company, American Metal Climax, Inc., and numerous other companies and individuals.

7. ESTIMATE OF COSTS

A) Independent Contracts — None

b) Personal Services

STAGE I

		Unit Cost	Total Cost
1	Foreman	$2.50/hr	$3240.00
1	Shift Boss	2.25/hr	2916.00
4	Miners	2.00/hr	10368.00
2	Miners (longholing drilling) 2 months only)	2.00/hr	1728.00
1	Outside labor	1.75/hr	2268.00
1	Consulting geol.-engineer inc. expenses	$600/mo.	5400.00
		TOTAL	$25920.00

STAGE II

1/2 of Stage I except miners for drilling — $12960.00

c) Operating Materials and Supplies

STAGE I

40	Drill steel, 7/8"x6'	19.30	$ 772.00
2 kegs	Track spikes	30.00	60.00
1050	Ties	.50	500.00
21,500#	Powder	24.55/100#	5278.25
5000	Caps, regular, #6	3.80/100	160.00
87,000'	Fuse	42.75/3000'	1239.75
11,000 gal	Diesel fuel, compressor	.15	1650.00
1,000 gal	Diesel fuel, generator	.15	150.00
100 gal	Oil, compressor	.65	65.00
50 gal	Oil. generator motor	.95	47.50
250 gal	Oil, rock drill	.78	195.00
100#	Grease	.35	35.00
2000'	Water pipe, 1" black	.30	600.00
100 sets	Nails & wedges for timber	$1/set	100.00
1 keg	Track bolts	50.00	50.00
2000'	Vent pipe, 12", 20 ga.	1.21	2420.00
6	Wheatlamps	34.10	204.60
11,200 bf	Timber	70.00/M	784.00
20.6 T	Rail, 30#	190.00/T	3914.00
2000'	Air pipe, 3"	1.50	3000.00
100 pr	Fish plates	2.00	200.00

Longhole drilling supplies:

2	Driver rods	$26.60	$ 53.20
35	Couplings	6.15	215.25
50	Drill rods, 4' x 1½"	16.80	840.00
3	Bits, tung. carb., 2 3/8"	25.65	76.95
3	Bits 2 1/4"	22.90	68.70
3	Bits 2 1/8"	20.65	61.95
3	Bits 2"	17.15	51.45
1	Air hose, 50'	18.00	18.00
		TOTAL	$22810.60

STAGE II

1/2 of Stage I except for longholing supplies $10712.55

d) Operating Equipment

STAGE I	Unit Present Value	Unit Dep. Per Mo.	Total Cost
Used- Furnished by Outlet Mining Co.:			
1 Baldwin locomotive, 5T	$6500.00	$ 108.33	$ 649.98
1 Locomotive battery charger Square D	3600.00	60.00	360.00
1 Westinghouse generator, 37.5 kva w/LeRoi gas engine and panel board	3000.00	50.00	300.00
1 Ingersoll-Rand drifter, JR-38	1200.00	20.00	120.00
1 Ingersoll-Rand Compressor, 315 Rotary	6150.00	102.50	615.00
1 Worthington Compressor, 210 reciprocating	2000.00	33.33	199.98
2 Electric drills, ½ & ¼"	75.00	1.25	15.00
1 Welding unit	300.00	5.00	30.00
1 Air grinder	150.00	2.50	15.00
10 Mine cars, side-dump, 30 cu ft	275.00	4.58	274.80
1 Eimco mucking machine, 12B	2500.00	41.67	250.02
1 Ingersoll-Rand blower w/ 15 hp motor, 1600 cu ft	1650.00	27.50	165.00
1 Ford Pickup truck, 2.5T, 1953	500 mi/mo	10¢/mi	300.00
Purchased Used:			
1 Ingersoll-Rand Liner drill, DA-35			1000.00
		TOTAL	$ 4294.78

STAGE II

1/2 of Stage I except for liner drill purchase $ 1647.39

e) Initial Rehabilitation and Repairs

Extend end of trestle 100 feet, Stage I only	$1000.00

f) New Buildings, fixtures, installations	None

g) Miscellaneous

STAGE I

450 Assays, Au-Ag-Pb-Zn-Cu @ $6.50	$2925.00
Workmens compensation and unemployment insurance 7.08% of $20,520 payroll	1452.82
Accounting @ $75/month	450.00
TOTAL	$4827.82

STAGE II

1/2 of Stage I	$2413.91

SUMMARY

Stage I:

a) Independent contracts	$ None
b) Personal services	25,920.00
c) Operating materials and supplies	22,810.60
d) Operating equipment	4,294.78
e) Initial rehabilitation and repairs	1,000.00
f) New buildings, fixtures, installations	None
g) Miscellaneous	4,827.82
STAGE I TOTAL	$58,853.20

Stage II:

a) Independent contracts	$ None
b) Personal services	12,960.00
c) Operating materials and supplies	10,712.55
d) Operating equipment	1,647.39
e) Initial rehabilitation and repairs	None
f) New buildings, fixtures, installations	None
g) Miscellaneous	2,413.91
STAGE II TOTAL	$27,733.85
GRAND TOTAL	$86,587.05

OUTLET MINING COMPANY

A COLORADO CORPORATION

CREEDE, COLORADO

6. Experience:

James M. Muir Jr. will act as,attorney in fact, for the Company. He has been ~~been~~ with the Outlet and Sublet Mining Companies since they were started. He has been in charge of all financing and mine operations for many years and understands the geology of the King Solomon Mining District at Creede. He was the, Attorney In Fact# for the DMEA loan contract# 3940, IDM-E923 for $108,254.00. He has managed to keep the Outlet Mining Company operating almost continuously since 1950 under very adverse conditions. At the present time he is in charge of rehabilitating the Solomon-Ethel tunnel for 3,500 feet of which 1,500 feet has already been completed.

Robert F. Davis, Box # 247, Creede, Colorado is the mine forman. He has had many years experience in mining in the Creede area and has been on the Company payroll for over three years. He has also mined in other states for large mining companies and can do just about any type mining work that is requested of him. He was one of the miners that completed the 1200 feet of drifting south of the Outlet tunnel under the DMEA program and has been mine forman in charge of rehabilitating the Solomon-Ethel tunnel since it started. He is very cost conscious and keeps mining cost to a minimum at all times.