MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE

Contract No. 14-23- 2203 Docket No. MME- 6436

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [x] Certification of Discovery 5-18-67
- [ ] Closing Letter
- [x] Cost Audits December 1966
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [x] Contract Amendments
- [x] Contract with all exhibits and annexes
- [x] Owner's Consent to Lien and Subordination Agreement
- [x] Application and Attachments

Right Side

- [ ] Project Summary (final)
- [ ] Work Completed Analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [x] Field Team Semiannual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab) Dec. 1966
- [x] Interim Field Team Reports
- [x] Operator's monthly reports and all attachments
- [x] On-site Exam. Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2, 3, 4 (1965, 1966 Jan-June, July-Dec. 1966): Reports
- [ ] Analysis of Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [ ] Field Team Semiannual Report for Certified Project
- [x] Field Team Interim Reports
- [x] Operator's Monthly Reports with Transmittal, Narrative and Maps

Folders No. 1-A: Maps (Use pocket folder or envelope)

Folders No. _____: Settlement Sheets

Folders No. _____: Drill Logs

Folders No. _____: Royalty Material

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
7/20/67	RM Smith	120
7/21/67	Kirbano	120
		110
		220
	Lorge	140
		110
		220

AIRMAIL

Mr. Louis Rossi
P. O. Box 569
Beowawe, Nevada 89821

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Rossi:

Reference is made to your letter of May 24, 1967, concerning a copy of a "Certification of Possible Production Under an Exploration Contract" forwarded to you and Mr. and Mrs. Tony Rossi, Winnemucca, Nevada 89445, by letters dated May 18, 1967, relating to the Lien and Subordination Agreements executed by you on February 20, 1965, with respect to the referenced contract.

An Amendment No. 3 to the contract has now been executed by the Operator and the Government which deletes the group of claims known as the Rossi claims, from the land referred to in Article 2 of the contract and described in Annex I.

Accordingly, the Government retains no claim or lien against the group of claims recorded as Mockingbird Nos. 1, 2, 3, 4, 5, and 6, and Juniper Nos. 1, 2, 3, 4, 5, 6, 7, 8, and 9, or against any future production therefrom.

Thank you for calling this matter to our attention.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

RECEIVED
JUL 25 1967
Division of Mineral Resources
General Legal Services

Copy to: Mr. and Mrs. Tony Rossi
Winnemucca, Nevada 89445

cc: Cortez Joint Venture, c/o American Exploration & Mining Co.
Cortez Metals Company
American Exploration & Mining Company

cc: Director's Reading File
Division File
Econ. Geol. File
Budget and Finance, Room 1359, Int.
OME Docket
GLAult/a 7-20-67

OME Reading File
OME Region II
Mr. Johnson
Mr. Smith
130 (2)

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MME Form 7
(2/63)

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J-65-2139.11

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MAY 15 1967
SOLICITOR

OFFICIAL FILE COPY

Date	Surname	Code
5/12/67	R. M. Smith	
5/12/67	Kirkemo	
"	Johnson	
5/15/67	Long	
	Asst. Sol. Opr.	
5/17	Kilgsaard	
5/18	Keyes	

UNITED STATES OF AMERICA
CERTIFICATION OF POSSIBLE PRODUCTION
UNDER AN EXPLORATION CONTRACT

Cortez Joint Venture
c/o American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine ~~and Rossi Property~~ deleted
Eureka and Lander Counties, Nevada
Contract 2203

Gentlemen:

Pursuant to Articles 7 and 16 of the referenced contract, the Government hereby certifies that mineral or metal production may be possible as a result of the exploration work.

Therefore, royalties shall be paid to the Government as provided in the contract on all production from the land described in the contract and on all production transported through workings to the cost of which the Government contributed in accordance with the "Special Agreement Concerning Royalty" of Article 16 (Annex I) of the contract from June 29, 1965, to June 29, 1977, or until the sum of $118,863.22 (subject to audit) is fully repaid with interest at the rate of 6-1/4 percent per annum, whichever occurs first. The payment of royalties is secured by liens upon the land and upon any production therefrom. credit March 1968 o.k.

Royalty payments on any production computed as provided in the contract should be made in favor of the U. S. Geological Survey and should be mailed or delivered to the Field Officer, Office of Minerals Exploration, Building 2, 345 Middlefield Road, Menlo Park, California 94025. Each payment should be accompanied by two copies of settlement sheets or other suitable sales evidence showing the name of the purchaser, the quantity and grade of the production sold, the price per unit, and the gross proceeds and allowable deductions therefrom.

The Field Officer should be promptly notified upon resumption of operations, of any production, and any cessation thereof. Production

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MAY 15 1967
Division of Mineral Resources
and General Legal Services

CLOSE

unsold or unused six months after extraction from the ground should be reported promptly to the Field Officer.

Attention is specifically invited to the provisions of Article 2(c) of the contract referring to the preservation of the Government's royalty rights. Two true copies of any instrument transferring, surrendering, or encumbering any of said rights shall be furnished to the Field Officer.

Dated this 18th day of May, 1967

THE UNITED STATES OF AMERICA

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of Minerals Exploration
U. S. Geological Survey

cc: Director's Reading File
Division File
Econ. Geol. File
Budget and Finance, Room 1359, Int.
OME Docket
OME Reading File
OME Region II
Mr. Johnson
130 (2)
RMSmith/mm (5/10/67)

&

Copy to: American Exploration/Mining Co.
Cortez Metals Company
Louis Rossi
Mr. and Mrs. Toni Rossi

Docket Copy

UNITED STATES DEPARTMENT OF THE INTERIOR

OFFICE OF SURVEY AND REVIEW
AUDIT OPERATIONS
WASHINGTON, D.C.

Report of Review-Contract 2203
Docket No. OME-6436 (Silver)
Cortez Joint Venture (Operator)
Cortez Mine
Eureka and Lander Counties, Nevada

March 1968

We have examined the disbursement records in the Branch of Budget and Finance, Administrative Division, Geological Survey and reviewed the Office of Minerals Exploration (OME) contract files pertaining to the subject minerals exploration contract. The review was made at Washington, D. C., on March 4, 1968.

An interim review of this project disclosed that settlements made with the Operator for work performed through July, 1966, had omitted certain costs that were eligible for Government participation. Such costs have now been allowed and the Operator has been reimbursed for 75 percent of the items as provided by the contract.

The exploration work was completed in August 1966.

The total costs reported by the Operator and accepted by OME as conforming to the contract provisions amounted to $158,484.30. The Operator has been paid $118,863.22 representing the Government's 75 percent participation.

An acceptable final report was received from the Operator on March 3, 1967. On May 18, 1967, a "Certification of Possible Production" was issued by OME stating that the amount of $118,863.22 (subject to audit) was subject to possible refund through the payment of royalty based on the value of any production from the property covered

by the contract during a period of 12 years from the date of the contract, i.e., from June 29, 1965, to June 29, 1977, or until the entire amount of the Government's advance is fully repaid with interest at the rate of $6\frac{1}{4}$ percent per annum, whichever occurs first. There is no record in the files of any royalty payments nor of any production subject to royalty as of the date of this review.

No exceptions are taken to the settlement with the Operator.

C. E. Fisher

C. E. Fisher, Auditor

Reviewed by:

W. H. Wilkerson, Jr.

W. H. Wilkerson, Jr., Contract and Grant Audit
Audit Operations, Office of Survey and Review

UNITED STATES DEPARTMENT OF THE INTERIOR

OFFICE OF SURVEY AND REVIEW
AUDIT OPERATIONS
WASHINGTON, D.C.

Report of Review-Contract 2203
Docket No. OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada

Report Issued: December 1966

An examination of the disbursement records in the Branch of Budget and Finance, Administrative Division, U.S. Geological Survey and a review of the Office of Minerals Exploration contract files pertaining to the subject minerals exploration project was made at Washington, D.C., on October 27 and 28, and December 6, 1966.

The Operator has been reimbursed for the Government's 75 percent participation in claimed costs through July 1966. The files indicate that the work continued after July 1966 and that Government participation will be requested in additional costs. Thus, this review must of necessity be an interim review of settlements made with the Operator.

The following tabulation shows the estimated costs of the work provided for in the contract together with units and costs accepted by the Field Officer, OME, Region III, Menlo Park, California, as valid and proper for Government participation and settlements made with the Operator.

Estimated Costs per Contract - 2203			Claimed and Accepted Costs	
Item Actual	Units	Value	Units	Value
Category (1) Independent Contracts				
Mobilization and demobilization, equipment, men, and materials for driving drifts and cross-cuts	1	$ 5,000		$ 4,300.00
Drifting and crosscutting @ $43.50/ft.	2,640	114,840	2,497.6	108,645.60
			112.5	4,792.50
Mobilization and demobilization, drill unit	1	535	½	267.50
Core drilling (various rates)	3,400	21,500	2,625	13,492.13
Compressed air @ $0.60/ft.	3,400	2,040	2,625	1,575.00
Cementing @ $11.60/hr.	110	1,276	-0-	-0-
Cement, etc.		1,456	-0-	-0-
Reaming @ $2.25/ft.	500	1,125	256	576.00
Lost casing @ $2.00/ft.	150	300	185	300.00
Moving drill @ $11.60/hr.	50	580	50	580.00
Standby time @ $11.60/hr.	25	290	-0-	-0-
Total Category (1)		$148,942		$134,528.73
Category (2) Personal Services				
(a) Supervision and Technical				
1 Supervisor-geologist-engineer @ $800/month	11	$ 8,800		$5,228.76
(b) Labor				
1 Laborer @ $21.66/day	110	2,385	110	2,385.00
Total Category (2)		$11,185		$7,613.76
Category (2) Oper. Matls. & Supplies				
Cardboard core boxes @ $1.00 ea.	340	$ 340	218	$ 218.00
Category (7) Miscellaneous				
Payroll taxes, F.I.C.A. insurance, etc. 15% of payroll		2,013		1,370.49
Total Actual Costs		$162,480		$143,730.98
Stated-Unit Costs				
Bulldozer @ $16.00/hr.	180	$ 2,880	11	$ 176.00
Rental of Jeep @ $9.00/dy.	242	2,178	239	2,151.00
Rental of water truck @ $0.25/mi.	3,600	900	3,679	900.00

Estimated Costs per Contract - page			Claimed and Accepted Costs	
Fixed-Unit Costs (cont'd)	Units	Value	Units	Value
Samples assayed for au. and ag. @ $3.00	1,220	$ 3,660	514	$1,542.00
" " " cu. pb, and zm. @ $1.75	880	1,540	38	66.50
Transportation and sacks @ $0.10 ea.	1,220	122	514	51.40
Office expense @ $100/month	11	1,100	9 1/3	933.33
Total Fixed-Unit Costs		$12,380		$5,820.23
Total Estimated Costs of the Work		$174,860		$149,551.21
Government Participation @ 75%		$131,145		$112,163.40
Paid to Operator		$112,163.40		$112,163.40
Unexpended Obligation		18,981.60		-0-

No exceptions have been taken to settlements made with the Operator for work performed through July 1966. However, it is noted that the Operator may be entitled to claim reimbursement by the Government for 75 percent of certain costs incurred that have been omitted from the claimed and accepted costs, as follows:

(1) The drifting and crosscutting work was performed by Ponderosa Development Company, Inc., under contract with the Operator. On an invoice dated August 6, 1965, Ponderosa charged the Operator $5,489.58 for mobilization of equipment. On his reimbursement voucher for September 1965, the Operator included in claimed costs an amount of $2,500 (one-half of $5,000 allowable under the terms of the exploration contract) for mobilization and demobilization of equipment.

On an invoice dated May 25, 1966, Ponderosa charged the Operator $1,800 for demobilization of the equipment. The Operator included this amount in claimed costs on his reimbursement voucher for May and June 1966.

The Operator has incurred costs of $7,289.58 for mobilization and demobilization of such equipment and has included $4,300 of such costs in the claimed costs for Government participation. The exploration contract provides for Government participation in the actual costs of mobilization and demobilization of the equipment in an amount not in excess of $5,000. Thus, the Operator appears to be entitled to claim an additional amount of $700 for Government participation on a 75 percent basis.

(2) On Invoice No. 26629, dated February 28, 1966, E. J. Longyear Company, the diamond drill contractor on this project, charged the Operator $314.50 for value of 185 feet of AX casing left in a drill hole. The Operator claimed cost of $300 under the exploration contract which estimated 150 feet of lost casing at $2.00 per foot. The rate of $2.00 per foot is a maximum for Government participation, however, the number of feet is not a maximum and may be exceeded provided the total cost of independent contracts stated in the exploration contract is not exceeded. Thus, the Operator is entitled to claim an additional $14.50 for Government participation.

(3) E. J. Longyear Company invoices have included charges for moving and setting-up its drilling equipment at the various holes drilled under the exploration contract, as follows:

Invoice No.	Manhours	Charges at $5.80/manhour
16618	30	174.00
26629	28	162.40
66646	94	545.20
76664	52	301.60
Totals	204	$1,183.20

The exploration contract includes estimated costs of $580 for 50 hours time moving between drill holes (2 men involved) at $11.60 per hour. The Operator has included $580 in claimed costs for Government participation. While the hourly rate is a maximum, the number of hours is not a maximum and may be exceeded provided the total amount specified for independent contracts is not exceeded. Apparently, the Operator is entitled to claim $603.20 additional costs for Government participation.

(4) The Operator has claimed costs for 110 mandays of service of a laborer at $21.66 per day, total $2,385 (a "rounded" amount stated in the exploration contract). Supporting detail accompanying the reimbursement vouchers indicate that the laborer was employed 108 days during the months October 1965 through February 1966 and that $2,339.28 was included in costs for Government participation. For March 1966, an amount of $45.72 was reported for this service so that the total claimed cost would equal $2,385. The exploration contract does not provide any

maximums with respect to this item of expense, except that total costs under the entire contract shall not exceed $174,860. The Operator is entitled to claim reimbursement for 75 percent of any additional expense of labor applicable to the exploration work. Also, claim could be made for additional fringe benefits included under Category (7).

(5) The contract provides for rent of a water truck at a fixed-unit cost rate of 25¢ per mile. It was estimated that 3,600 miles of service would be required making $900 as the estimated cost of this service subject to Government participation. Such amount has been included in the claimed and accepted costs. The reimbursement voucher for January 1966 indicated that the water truck was in service for 1,046 miles, however, the amount claimed for Government participation was limited to $241.75 to keep within the amount of $900 mentioned in the contract. Inasmuch as neither the mileage (3,600 miles) nor the amount of $900 are maximums for Government participation, the Operator is entitled to claim additional costs with respect to the water truck at the 25¢ rate, being limited only by the contract provision that total costs shall not exceed $174,860.

C. E. Fisher

C. E. Fisher, Auditor

Reviewed By:

Dwight E. Savage

D. E. Savage, Office of Survey and Review

Government's Copy

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

AMENDMENT NO. 3

It is agreed this 20th day of June, 1967, between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter called the "Government," and Cortez Joint Venture, hereinafter called the "Operator," that Exploration Contract 2203 (OME-6436), dated June 29, 1965, as amended, is further amended effective the termination date of the contract (October 29, 1966), as follows:

The following group of claims, known as the Rossi claims, recorded in the Office of the County Clerk and Recorder, Eureka, Nevada, are deleted from the land referred to in Article 2 of the Contract and described in Annex I:

Claim	Book	Page
Mockingbird No. 1	K	198
" " 2	K	199
" " 3	K	199
" " 4	K	200
" " 5	M	1
" " 6	M	1
Juniper No. 1	K	197
" " 2	K	197
" " 3	K	197
" " 4	K	198
" " 5	K	340
" " 6	K	340
" " 7	4	118
" " 8	4	119
" " 9	4	120

Notwithstanding the provisions of Article 7 or of any Certification of Possible Production or of the special "Agreement Concerning Royalty," the Government retains no claim or lien against the Rossi group of lode mining claims or against any future production therefrom.

Executed in quadruplicate the day and year first above written.

UNITED STATES OF AMERICA

By Frank E. Johnson
Chief, Office of Minerals Exploration
U. S. Geological Survey

THE CORTEZ JOINT VENTURE
By AMERICAN EXPLORATION & MINING CO.
Managing Coventurer
CORTEZ JOINT VENTURE

By J. G. Gordy

Title VICE PRESIDENT

Lang
Smith
Kiokemo
Johnson
Kilsgaard
Power
Allen

MME Form 7
(2/63)

OFFICIAL F

Date	Sur	
6/7/67	RMS	
	John	
		12

June 7, 1967

Memorandum

To: The File

From: R. M. Smith, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Justification for Amendment No. 3

Subsequent to receiving the Certification of Possible Production which OME issued as a result of the work under the subject contract, the Operator requested, on May 31, 1967, that a part of the land known as the Rossi claims be exempted from the Government's lien. The basis for this request is as follows:

1. The land consists of two adjoining groups of claims, the Cortez Metals group and the Rossi group, under separate ownerships.

2. In the application, exploratory work was contemplated on separate veins in both groups.

3. In the contract, work was authorized on the Cortez group only. Work on the Rossi group was not authorized because of insufficient geological evidence of a worthwhile target. The Rossi group was not deleted from the contract because it was the intent of both parties to amend the contract to permit drilling if the Operator found sufficient evidence during the life of the project. Such evidence was not found. No work on the Rossi group was done under the contract, and no Government funds were spent.

4. Had the Operator requested a deletion of the Rossi land prior to or during the life of the project, such deletion could have been authorized. Without a request from the Operator, however, the Government could not initiate such an action.

5. The work on the Cortez group resulted in the discovery of two small ore bodies in the Cortez mine more than 1200 feet from the Rossi group whose trends do not project toward or into the Rossi group.

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6. No production from the Rossi group is possible as a result of the OME work, and no benefit to the group resulted from the project. An OME project on the Rossi group is not warranted at present and would not be approved. Recommended.

7. Certification by the Government places a lien on the land which reduces its value to the owner and to any prospective lessee or buyer until June 29, 1977, whereas release of the land will remove a deterrent to additional prospecting and exploration.

As additional exploration for silver would serve the national interest, and as the Government will not suffer a loss of royalties by releasing the group, I recommend, therefore, that the contract be amended to exempt the Rossi group of claims from the terms of the Certification of Possible Production.

R. M. Smith

R. M. Smith

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Mr. Smith

RMSmith/gla 6-7-67

Government's Copy

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

AMENDMENT NO. 2

It is agreed this 15th day of November, 1966, between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter called the "Government," and Cortez Joint Venture, hereinafter called the "Operator," that Exploration Contract 2203 (OME-6436), dated June 29, 1965, is amended effective June 29, 1966, as follows:

In Article 1(a) the time set for the completion of the work is extended from twelve (12) to sixteen (16) months from the date of the contract.

This amendment shall not be construed to increase the estimated total cost of the contract, the aggregate amount which the Government may be required to contribute, the amount of any item designated as maximum, nor the fixed unit cost of any item of work.

Executed in quadruplicate the day and year first above written.

UNITED STATES OF AMERICA

By Frank E. Johnson
Chief, Office of Mineral Exploration
U. S. Geological Survey

THE CORTEZ JOINT VENTURE
By AMERICAN EXPLORATION & MINING CO.
~~CORTEZ JOINT VENTURE~~ MANAGING COVENTURER

By [illegible]

Title Vice President

Long
Appr. Sol. Office
Smith
Kirkham
Johnson
Kilsgaard
[illegible]

MME Form 7
(2/63)

OFFICIAL FIL

Date	Surname
11/7/66	Kirkham

November 7, 1966

Memorandum

To: The File

From: R. M. Smith

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Justification for Amendment No. 2

The contract work was interrupted by long-hole drilling done at the Operator's own expense to test an ore shoot found by the OME work. As a result, the completion of the OME work has been delayed beyond the expiration date of the contract. This work should be completed in order to explore all target areas specified in the contract or subsequently authorized by the Field Officer.

R. M. Smith

R. M. Smith

cc: Director's Reading File
Division File
Economic Geology File
OM E Reading File
R. M. Smith

RMSmith/mm (11/7/66)

23263

Government's Copy

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

AMENDMENT NO. 1

It is agreed this 24th day of May, 1966, between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter called the "Government," and Cortez Joint Venture, hereinafter called the "Operator," that Exploration Contract 2203 (OME-6436), dated June 29, 1965, is amended effective April 22, 1966, as follows:

In Exhibit A, under the heading Description of the Work, the fourth and fifth paragraphs are revised to read as follows:

From the drill stations drill a total of 13 core drill holes for an aggregate of not to exceed 3,400 feet. The holes shall be drilled to explore the walls of the No. 1 dike-fissure zone. The sites, bearings, inclinations, and depths of individual holes shall be mutually agreed upon by the Operator and the Government.

The locations of the drifts, crosscuts, and drill holes are indicated provisionally in red on Figure 2, entitled ". . . Plan Map Arctic Level," and on Figure 3, entitled ". . . Longitudinal Section of Cortez Mine . . ." attached hereto and made part hereof.

This amendment shall not be construed to increase the estimated total cost of the contract, the aggregate amount which the Government may be required to contribute, the amount of any item designated as maximum, nor the fixed unit cost of any item of work.

Executed in quadruplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By Frank E. Johnson,
Chief, Office of Minerals Exploration
U. S. Geological Survey

THE CORTEZ JOINT VENTURE
by AMERICAN EXPLORATION & MINING CO.
Managing Coventurer
CORTEZ JOINT VENTURE

By [signature]

Title VICE PRESIDENT

Long
App'd. [illegible]
Smith
Kiebema
Johnson
Kilgard
Quets
Clepp

MME Form 7
(2/63)

OFFICIAL F

Date	Surnam
5/12	RM Smith
5/12	[illegible]
5/13	[illegible]

May 12, 1966

Memorandum

To: The File

From: R. M. Smith

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Justification for Amendment No. 1

After completing the drifting and core drill holes 1, 2, 3, 5, 6, and 7 of the 13 holes authorized by the contract, assays of mineralized core from holes 5 and 7 indicated a mineralized zone about 100 feet south of and about parallel with the East drift. The new discovery may in fact be the No. 1 dike-fissure zone faulted south from its expected location. The purpose of the project is to explore a mineralized zone on the Arctic level, and also above and below the level where the zone intersects favorable strata. As the location of the discovery was not anticipated, the contract specifies sites, bearings, inclincations, and lengths for each of the 13 holes which are no longer applicable.

On April 22, 1966, the Field Officer approved changes of the sites, bearings, inclination, and lengths of the six holes remaining to be drilled, to permit the Operator to continue without interruption. The changes conform to the intent and exact wording of the contract except for specifications of individual drill holes. I recommend, therefore, that the contract be amended to authorize the Operator with the consent of the Field Officer to establish specifications for the remainder of the core drilling.

R. M. Smith

R. M. Smith

cc: Director's Reading File
Division File
Economic Geology File
Docket
OME Reading File
Smith

RMSmith/mm (5/12/66)

23263

Government's Copy

Form 50
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
(Long Form)

Docket No.	Commodity	Contract No.	Counties ~~XXXXXX~~	State
OME-6436	Silver	14-23-090-2203	Eureka and Lander	Nevada

It is agreed JUN 29 1965 (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and Cortez Joint Venture, a joint venture composed of American Exploration and Mining Co., Bunker Hill Company, Webb Resources, Inc., and Vernon F. Taylor, whose mailing address is 2300 Russ Building, San Francisco, California 94104, hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before August 15, 1965 (Date), and, subject to the provisions of Article 9 and Exhibit A, shall either have completed the work within 12 months from the date of the contract or shall have incurred allowable costs (see Article 6) in a sum not less than the total cost set forth in Exhibit A.

(b) The total allowable cost of the work set forth in Exhibit A is $174,860.00. The Government will contribute ~~50~~ 75 percent of the allowable costs as they are incurred, in a total sum not in excess of $131,145.00 in accordance with the provisions of Articles 3, 4, 5, and 6. "Costs incurred" means costs that have been paid or have become due and payable, or that the Government determines have become obligations.

(c) Interest computation.--Simple interest at the rate of 6 ¼ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

See Annex I

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the lien agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

See Annex I

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 7 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Independent contracts.--To the extent that the allowable costs are estimated in Exhibit A with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed (see Article 6(a), Category (1)). Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract, the Government will participate in payments to the independent contractor only as to work performed in accordance with the provisions of this exploration contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.-- The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government; however, the original of the Operator's Monthly Voucher shall be supported by documentary evidence, such as certified copies or transcripts of payrolls and invoices, for all costs claimed under Article 6 (a) (1).)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the related costs.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of the same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Costs.--(a) Allowable costs.--The allowable costs of the work to which the Government will contribute are limited to:

(1) the necessary, reasonable, and direct actual costs that are estimated in Exhibit A by categories as specified in this article; and

(2) fixed costs for units of work to be performed (per foot, per hour, etc.) agreed upon in lieu of actual costs and set forth in Exhibit A.

The Government will not contribute to costs under any category or subcategory omitted from the estimate of costs in Exhibit A. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost; any excess over a fixed unit cost; and any excess over the total allowable cost of the work are not allowable. The Operator shall incur such excesses for his own account without contribution by the Government, but the Operator is not obligated to incur more than his agreed percentage of the total allowable cost of the work.

Any category or subcategory or element thereof not designated as a maximum in this article or in Exhibit A may be exceeded, provided that the total allowable cost of the work, which is a maximum, is not exceeded.

CATEGORY (1)--INDEPENDENT CONTRACTS.--(See Article 3(b)). The total of this category and the average unit cost estimated for each type of work to be performed under an independent contract are maximums.

CATEGORY (2)--PERSONAL SERVICES.

Subcategory (a)--Supervision and Technical Services--All elements of this subcategory (number of supervisors, technicians, outside consultants, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)--Labor.

CATEGORY (3)--OPERATING MATERIALS AND SUPPLIES.--Includes such items as drill bits and steel, explosives, fuel, pipe, power, timber, rail, and small tools costing less than $50 each.

CATEGORY (4)--OPERATING EQUIPMENT.

Subcategory (a)--Rental.--The number of each rented item [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)--Purchases.--The total of this subcategory is a maximum.

Subcategory (c)--Depreciation.--All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)--INITIAL REHABILITATION AND REPAIRS.--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

Subcategory (a)--Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).--The total of this subcategory is a maximum.

Subcategory (b)--Initial rehabilitation and repairs of operating equipment.--The total of this subcategory is a maximum.

CATEGORY (6)--NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

CATEGORY (7)--MISCELLANEOUS.--Includes requirements and costs that do not fall within any of the first six categories, such as repairs other than initial and maintenance of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, and communications.

(b) Nonallowable costs.--In addition to the limitations imposed by paragraph (a) of this Article 6 the Government will not contribute to the following costs:

(1) Costs of the land, such as rental, depreciation, depletion, or other costs of acquiring, owning, or holding possession;

(2) Indirect costs, such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) Previous work performed or costs incurred before the date of this contract; and

(4) Deferred payments.--Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods, unless the purchase agreement is approved by the Government in writing.

(c) Reductions in costs.--The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original total cost. The provision does not apply to receipts from production which are subject to the Government's royalty under the provisions of Article 7.

ARTICLE 7. Repayment by Operator.--(a) Certification.-- If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retains his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certicifation of possible production--from the date of the contract until the lapse of the time within which the government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of twelve years from the date of the contract, or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or Producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination or the market value, whichever is greater.

(e) Lien for payment.--To secure the payment of royalty (see Article 7(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be contrued as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 8. Interests in purchased property.--(a) Title and ownership.--All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions although title thereto shall be taken in the name of the Operator.

(b) Preservation of property.--Until the final disposal of any property in which the Government has an interest, the Operator shall preserve and protect same for the best interest of the Government, and any reasonable and necessary cost thereof will be treated as an allowable cost of the exploration. After the completion of the work, termination of the Government's obligation to contribute, or when such property is not being used for the work, the Operator shall not use it elsewhere without the written consent of the Government and without paying a reasonable rental to be fixed by the Government for its proportionate interest.

(c) Disposal of property.--Upon the completion of the work, termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, sale to others, purchase by the Operator, or sale or transfer to the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government, the Operator shall not sell at any price any item of property that cost more than $500, and shall not sell at less than 25 percent of the purchase price any item of property that cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or offers. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, explosives, pipe, or rail), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item, the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the exploration.

(d) Default of the Operator re disposal.--If within 90 days after the completion of the work, termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may:

(1) in writing extend the time within which the Operator must dispose of or liquidate the property;

(2) by written notice to the Operator, place upon such property what it determines to be a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; and

(3) enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 9. Termination of the Government's obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 9 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 13.

ARTICLE 10. Notices to be given by the Government may be delivered to the Operator, or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 11. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 12. Nondiscrimination in Employment. The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961 as amended and supplemented are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 13. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 14. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for

liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 15. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 16. Changes and added provisions.--

Special Agreement pertaining to royalties in Annex I

Executed in quintuplicate the day and year first above written.

The Cortez Joint Venture
by American Exploration & Mining Co.
Managing Coventurer

(Operator)

CORTEZ JOINT VENTURE

By H. Goudey

Vice President
Managing Coventurer

Title

THE UNITED STATES OF AMERICA

Long
App'd. as to form
R M Smith
Selfridge

By Frank E. Johnson

Acting Director, Office of
Minerals Exploration

I, M. H. Morgan (Name), certify that I am the

secretary of the corporation named as Operator herein; that

H. Goudey (Name), who signed this contract on behalf of the Operator, was then

Vice President (Title) of said corporation; that said contract was duly signed for

and in behalf of said corporation by authority of its governing body, and is within the scope of its

corporate powers.

M. H. Morgan

[CORPORATE SEAL]

(continued on page 8)

American Exploration and Mining Company

by _____

Title VICE PRESIDENT

Bunker Hill Company

By _____

Title President

Webb Resources, Inc.

By _____

Title President

Vernon F. Taylor, Jr.

By Jean Hinshaw
Attorney-in-Fact

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

ANNEX I

The land, including all rights pertaining thereto, referred to in Article 2 of the contract consists of thirty-eight (38) patented lode mining claims, known as the Cortez Metals patented claims, twenty-six (26) unpatented lode and placer mining claims, known as the Cortez Metals unpatented claims, and fifteen (15) unpatented lode mining claims known as the Rossi claims, in secs. 4, 5, 7, and 8, T. 26 N., R. 48 E., and in adjoining unsurveyed sections in T. 27 N., R. 48 E., MDB&M, Cortez mining district, Eureka and Lander Counties, Nevada. The outer boundary of the claims is outlined in green on Plate 1, entitled ". . . Cortez Joint Venture . . . Area of proposed Cortez mine exploration . . .," attached hereto and made part hereof.

The patented claims are recorded in the Office of the County Clerk and Recorder, Eureka, Nevada, as follows:

Claim	Book	Pages
Arctic (or Artic)	11	595-97
Avalanche	12	558-60
Adjunct	13	544-45
Alta	13	546-47
Bewick	13	566-67
Cummings	11	586-88
Central Consolidated	13	50-52
Conclave	13	562-63
Compressor	13	44-46
Conjunction	13	570-71
Chance	20	276-79
DeValla	13	550-51
Equator	13	558-59
Eclipse	13	542-44
Excelsior	13	53-55
Fitzgerald	11	589-91
Garrison	11	583-85
Hidden Treasure	13	554-55
Idaho	11	598-600
Junction	11	580-82

Claim	Book	Pages
Jeanette	13	47-49
Kingsbury	13	564-65
Lead	20	276-79
Moreang	13	556-57
Monarch	13	552-53
Meteor	13	585-86
Mt. Tenabo	13	560-61
Premium	11	592-94
Pontifex	13	548-49
Protection	13	574-75
Prevision	13	572-73
Quartzite	20	276-79
Rosebush	20	276-79
Remnant	13	587-88
St. Louis	11	601-03
Speculation	13	540-41
Summit	13	568-69
Millsite - Cortez	19	462-63

The Cortez Metals unpatented claims are partly in Eureka County and partly in Lander County. They are recorded as appropriate either in the Office of the Eureka County Clerk and Recorder, Eureka, Nevada, or in the Office of the Lander County Clerk and Recorder, Austin, Nevada, as follows:

Claim	County	Book	Page
Alert	Eureka	H	270
Alpha	"	G	416
Beta	"	G	416
Bullion	Lander	18	153
Columbian	Eureka	H	271
February	"	H	267
Free Coinage	"	H	272
Gamma	"	G	415
George	"	H	276
Gold Bug	"	H	273
Ivanhoe	"	H	266
Legal Tender	"	H	265
London	"	H	274
Martinez	Lander	10	46
New	Eureka	H	269

Claim	County	Book	Page
Oversight	Eureka	H	269
Queen	"	H	275
Residue	"	J	208
Residue No. 1	"	J	209
Residue No. 2	"	J	209
Security	"	H	264
Silver State	"	H	268
Tough Lode	"	H	277
Blue Streak Placer	Lander	18	155
Cash In Placer	"	18	154
Wheel of Fortune Placer	"	18	155

The Rossi claims are recorded in the Office of the County Clerk and Recorder, Eureka, Nevada, as follows:

Claim	Book	Page
Mockingbird No. 1	K	198
Mockingbird No. 2	K	199
Mockingbird No. 3	K	199
Mockingbird No. 4	K	200
Mockingbird No. 5	M	1
Mockingbird No. 6	M	1
Juniper No. 1	K	197
Juniper No. 2	K	197
Juniper No. 3	K	197
Juniper No. 4	K	198
Juniper No. 5	K	340
Juniper No. 6	K	340
Juniper No. 7	4	118
Juniper No. 8	4	119
Juniper No. 9	4	120

deleted by Amd. #3

The Operator has rights to the patented claims and to the Cortez Metals unpatented claims under the terms of an assignment from American Exploration and Mining Co., executed June 5, 1964. The Operator has rights to the Rossi claims under the terms of an assignment from American Exploration and Mining Co. executed February 20, 1965.

The American Exploration Co. has rights to the patented claims and to the Cortez Metals unpatented claims under the terms of a mining lease and option executed August 18, 1959, and amended September 16, 1959,

by the owner, Cortez Metals Company, c/o Thomas Cooke, P. O. Box 2229, Reno, Nevada. The American Exploration Co. has rights to the Rossi claims under the terms of a lease and option agreement executed May 11, 1964, by the owners, Louis L. Rossi, P. O. Box 164, Winnemucca, Nevada, Antonio A. Rossi, and Birdie Rossi, Winnemucca, Nevada.

Copies of the two assignments and of the two lease and option agreements cited above are contained in the docket of this contract and are made a part hereof by reference.

Two Lien and Subordination Agreements, each covering the patented claims and the Cortez Metals unpatented claims, one executed March 25, 1965, by Cortez Metals Company, and the other May 18, 1965, by American Exploration and Mining Co., and two additional Lien and Subordination Agreements covering the Rossi claims, one executed February 20, 1965, by Louis, Tony and Birdie Rossi, and the other March 15, 1965, by American Exploration and Mining Co. are attached hereto and made part hereof.

A special "Agreement Concerning Royalty" is added as follows:

"Notwithstanding the certification provisions of Article 7, and with no further action required on the part of the Government, the Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, or his successor, shall pay to the Government a royalty on any production, regardless of origin, that is transported through any new workings to the cost of which the Government has contributed, or any portion of said workings, for the same period as is described in Article 7(b)(2) of the contract and pursuant to the terms of Article 7(c) et seq. However, in no event shall more than one royalty be due or paid on the same production.

"In the event that production from outside the boundaries of the land described in Article 2 is transported through the workings described above, and neither the Operator nor any subsidiary or affiliate thereof has an interest in said production, the Government shall be paid by the Operator the fixed rate of 5 percent of the total transportation charges received by the Operator."

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY	
Operator	
Docket No. OME –	
Contract No. 14-23-090–	2203
Contract Date	JUN 2 9 1965

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Eureka and Lander, State of Nevada,

described as follows: 2/ Mining Claims of Cortez Metals Co. as shown on attached Annexes A & B

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

_____ 3/

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

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

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

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

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

Mining Lease & Option, Cortez Metals Co. to American Exploration & Mining Co. (not recorded)

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated _____, and recorded in Book _____, Page ____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

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

Dated this 25th day of March, 1965.

Cortez Metals Company	(Seal)	P.O. Box 2229 (Street) Reno, Nevada (City & State)	
By Kathleen Coleman O'Brien, President	(Seal)	1571 Lakeside Dr (Street) Dunedin, Fla. (City & State)	
	(Seal)	(Street) (City & State)	
	(Seal)	(Street) (City & State)	
	(Seal)	(Street) (City & State)	
	(Seal)	(Street) (City & State)	

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

Marguerite Menzenhauer
Marguerite Menzenhauer, Secretary

(Corporate Seal)

ANNEX A

PATENTED MINING CLAIMS OF CORTEZ METALS CO.

NAME OF CLAIM	COUNTY	PATENT RECORDED BOOK	PAGE
Arctic	Eureka	11	595-97
Avalanche	"	12	558-60
Adjunct	"	13	544-45
Alta	"	13	546-47
Bewick	"	13	566-67
Cummings	"	11	586-88
Central Consolidated	"	13	50-52
Conclave	"	13	562-63
Compressor	"	13	44-46
Conjunction	"	13	570-71
Chance	"	20	276-79
DeValla	"	13	550-51
Equator	"	13	558-59
Eclipse	"	13	542-44
Excelsior	"	13	53-55
Fitzgerald	"	11	589-91
Garrison	"	11	583-85
Hidden Treasure	"	13	554-55
Idaho	"	11	598-600
Junction	"	11	580-82
Jeanette	"	13	47-49
Kingsbury	"	13	564-65
Lead	"	20	276-79
Moreang	"	13	556-57
Monarch	"	13	552-53
Meteor	"	13	585-86
Mt. Tenabo	"	13	560-61
Premium	"	11	592-94
Pontifex	"	13	548-49
Protection	"	13	574-75
Prevision	"	13	572-73
Quartzite	"	20	276-79
Rosebush	"	20	276-79
Remnant	"	13	587-88
St. Louis	"	11	601-03
Speculation	"	13	540-41
Summit	"	13	568-69
Millsite-Cortez	"	19	462-63

ANNEX B

UNPATENTED MINING CLAIMS OF CORTEZ METALS CO.

NAME OF CLAIM	LOCATION NOTICE RECORDED COUNTY	BOOK	PAGE
Alert	Eureka	H	270
Alpha	"	G	416
Beta	"	G	416
Bullion	Lander	18	153
Columbian	Eureka	H	271
February	Eureka	H	267
Free Coinage	"	H	272
Gamma	"	G	415
George	"	H	276
Gold Bug	"	H	273
Ivanhoe	"	H	266
Legal Tender	"	H	265
London	"	H	274
Martinez	Lander	10	46
New	Eureka	H	269
Oversight	"	H	269
Queen	"	H	275
Residue	"	J	208
Residue No. 1	"	J	209
Residue No. 2	"	J	209
Security	"	H	264
Silver State	"	H	268
Tough Lode	"	H	277
Blue Stack Placer	Lander	18	155
Cash in Placer	"	18	154
Wheel of Fortune Placer	"	18	155

It is noted that in Exhibit B of the Mining Lease and Option between Cortez Metals Company and American Exploration & Mining Co. the claim listing Bullion (Blue Streak placer) Eureka County Book H, no page, actually consists of Bullion (lode) recorded in Lander County, Book 18, page 153 and Blue Stack placer recorded in Lander County, Book 18, page 155.

It is further noted that in regard to the Exhibit C claims of said Mining Lease and Option, in accordance with the option granted to lessee in Amendatory Agreement of August 18, 1959 of said Mining Lease and Option lessee has not performed or is not performing annual assessment work on or with respect to the following claims:

Carlo
Delta
Lizzie
John
Maiola
Tony
Louise
Reno (Rene)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090 – 2203
Contract Date JUN 2 9 1965

LIEN AND SUBORDINATION AGREEMENTS[1]

To the United States of America:

That certain land in the County ies of Eureka and Lander, State of Nevada;

described as follows:[2] Interest as Joint Venturer in Cortez Joint Venture with respect to, and as assignor to said Joint Venture of unrecorded Mining Lease and Option Agreement (dated August 18, 1959, amended September 16, 1959) from Cortez Metals Co. to undersigned conveying rights in the mining claims described on attached Annexes A & B. A copy of said Mining Lease and Option and Amendment accompanies the application, MME form 40.

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Cortez Joint Venture, 2300 Russ Building, San Francisco, Calif. 94104,[3]
hereinafter called the "Operator". In consideration for and as an inducement to the Government executing the Contract, the undersigned:

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

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

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

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

None, except as noted above

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated_____, and recorded in Book_____, Page____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

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

Dated this 18th day of May, 1965.

		2300 Russ Building	(Street)
American Exploration & Mining Co.	(Seal)		(City & State)
H. Goudey Vice President	(Seal)		(Street)
			(City & State)
			(Street)
	(Seal)		(City & State)
			(Street)
	(Seal)		(City & State)
			(Street)
	(Seal)		(City & State)
			(Street)
	(Seal)		(City & State)

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

Melvin H. Morgan

(Corporate Seal)

ANNEX A

PATENTED MINING CLAIMS OF CORTEZ METALS CO.

NAME OF CLAIM	COUNTY	PATENT RECORDED BOOK	PAGE
Arctic	Eureka	11	595-97
Avalanche	"	12	558-60
Adjunct	"	13	544-45
Alta	"	13	546-47
Bewick	"	13	566-67
Cummings	"	11	586-88
Central Consolidated	"	13	50-52
Conclave	"	13	562-63
Compressor	"	13	44-46
Conjunction	"	13	570-71
Chance	"	20	276-79
DeValla	"	13	550-51
Equator	"	13	558-59
Eclipse	"	13	542-44
Excelsior	"	13	53-55
Fitzgerald	"	11	589-91
Garrison	"	11	583-85
Hidden Treasure	"	13	554-55
Idaho	"	11	598-600
Junction	"	11	580-82
Jeanette	"	13	47-49
Kingsbury	"	13	564-65
Lead	"	20	276-79
Moreang	"	13	556-57
Monarch	"	13	552-53
Meteor	"	13	585-86
Mt. Tenabo	"	13	560-61
Premium	"	11	592-94
Pontifex	"	13	548-49
Protection	"	13	574-75
Prevision	"	13	572-73
Quartzite	"	20	276-79
Rosebush	"	20	276-79
Remnant	"	13	587-88
St. Louis	"	11	601-03
Speculation	"	13	540-41
Summit	"	13	568-69
Millsite-Cortez	"	19	462-63

ANNEX B

UNPATENTED MINING CLAIMS OF CORTEZ METALS CO.

NAME OF CLAIM	LOCATION NOTICE RECORDED COUNTY	BOOK	PAGE
Alert	Eureka	H	270
Alpha	"	G	416
Beta	"	G	416
Bullion	Lander	18	153
Columbian	Eureka	H	271
February	Eureka	H	267
Free Coinage	"	H	272
Gamma	"	G	415
George	"	H	276
Gold Bug	"	H	273
Ivanhoe	"	H	266
Legal Tender	"	H	265
London	"	H	274
Martinez	Lander	10	46
New	Eureka	H	269
Oversight	"	H	269
Queen	"	H	275
Residue	"	J	208
Residue No. 1	"	J	209
Residue No. 2	"	J	209
Security	"	H	264
Silver State	"	H	268
Tough Lode	"	H	277
Blue Stack Placer	Lander	18	155
Cash in Placer	"	18	154
Wheel of Fortune Placer	"	18	155

It is noted that in Exhibit B of the Mining Lease and Option between Cortez Metals Company and American Exploration & Mining Co. the claim listing Bullion (Blue Streak placer) Eureka County Book H, no page, actually consists of Bullion (lode) recorded in Lander County, Book 18, page 153 and Blue Stack placer recorded in Lander County, Book 18, page 155.

It is further noted that in regard to the Exhibit C claims of said Mining Lease and Option, in accordance with the option granted to lessee in Amendatory Agreement of August 18, 1959 of said Mining Lease and Option lessee has not performed or is not performing annual assessment work on or with respect to the following claims:

Carlo
Delta
Lizzie
John
Maiola
Tony
Louise
Reno (Rene)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090– 2203
Contract Date JUN 2 9 1965

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Eureka, State of Nevada,

described ~~as follows~~: 2/ In an agreement with option topurchase dated May 11, 1964 and recorded in Book 4, Page 152, File No. 39812, official records of Eureka County.

Claims are Mockingbird 1,2,3,4, Bk.K. P.198-199-200, Mockingbird 5 and 6, Bk.M. P.1. Juniper 1,2,3 Bk.K P.197, Juniper 4, Bk.K P.198. Juniper 5 and 6 Bk.K P.340 Juniper 7, 8 and 9 Bk. 4 P.118,119,120 in the Cortez district and recorded in Eureka County, Nevada

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Cortez Joint Venture, 2300 Russ Building, San Francisco, Calif. 94104 3/

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

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

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

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

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

None, except above referred to agreement.

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated_____, and recorded in Book_____, Page____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

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

Dated this 20th day of February, 1965.

Louis Rossi	(Seal)	Cortez, Nevada Via Battle Mtn Nev	(Street) (City & State)
Tony Rossi	(Seal)	Winnemucca Nevada	(Street) (City & State)
Birdie Rossi	(Seal)	Winnemucca Nevada	(Street) (City & State)
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)

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

_____
(Corporate Seal)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090 – 2203
Contract Date JUN 29 1965

LIEN AND SUBORDINATION AGREEMENTS[1]

To the United States of America:

That certain land in the County of Eureka, State of Nevada;

described as follows:[2] Interest as Joint Venturer in Cortez Joint Venture with respect to, and as assignor to said Joint Venture of an Agreement with Option to Purchase (dated May 11, 1964) from Louis L. Rossi, Antonio A. and Birdie Rossi, to American Exploration & Mining Co. and recorded in Book 4, Page 152, File No. 39812, official records of said County conveying rights in the mining claims described on attached Annex. A. A copy of said Agreement accompanies the application MME Form 40.

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Cortez Joint Venture, 2300 Russ Building, San Francisco, Calif. 94104 [3]

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

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

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

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

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

None, except as above noted.

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated _____, and recorded in Book _____, Page ____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

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

Dated this 15th day of March, 19 65

American Exploration & Mining Co.	(Seal)	2300 Russ Building San Francisco, Calif. 94104	(Street) (City & State)
H. Goudey Vice President	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)
	(Seal)		(Street) (City & State)

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

Melvin H. Morgan

(Corporate Seal)

ANNEX A

UNPATENTED MINING CLAIMS OF ROSSIS RECORDED IN EUREKA COUNTY, NEVADA

NAME OF CLAIM	RECORDED IN BOOK	RECORDED IN PAGE
Mockingbird 1	K	198-200
Mockingbird 2	K	198-200
Mockingbird 3	K	198-200
Mockingbird 4	K	198-200
Mockingbird 5	M	1
Mockingbird 6	M	1
Juniper 1	K	197
Juniper 2	K	197
Juniper 3	K	197
Juniper 4	K	198
Juniper 5	K	340
Juniper 6	K	340
Juniper 7	4	118-120
Juniper 8	4	118-120
Juniper 9	4	118-120

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

EXHIBIT A

The purpose of this project is to explore by rehabilitation, drifting, crosscutting, and underground core drilling in and along the No. I dike-fissure zone on the Arctic level of the Cortez mine for silver-bearing replacement ore bodies in the Cambrian Hamburg and the Ordovician Hanson Creek dolomites, and for silver-bearing veins in the Ordovician Eureka quartzite.

It is agreed that the Operator at its sole expense will complete the rehabilitation hereinafter described under the heading "Description of the Work"; upon completion of which, the Government will participate to the extent of 75 percent in the approved costs of not to exceed 2,640 feet of drifting and crosscutting, 3,400 feet of underground diamond core drilling, and 1,220 and 880 assays for gold and silver and for copper, lead, and/or zinc, respectively.

General Provisions

All drifts and crosscuts shall be not less than 6 by 8 feet in cross section in the clear of timber and shall be timbered as necessary, using standard drift sets of not less than 8- by 8-inch timber, or equivalent round timber, and/or appropriate roof bolts. The drifts and crosscuts shall be ventilated using pipe or tubing of not less than 12-inch diameter. Mine rails shall be of not less than 20-pound size, air lines of not less than 4-inch diameter, and water lines of not less than 1-inch diameter.

All significantly mineralized areas traversed by the drifts or crosscuts shall be sampled normal to their trends at linear intervals of not more than ten feet. In addition, a representative bulk sample may be taken of each round broken. Each sample shall be split as necessary and one split shall be assayed for gold and silver, and for copper, lead, and/or zinc as warranted. The remainder shall be stored in a suitable container for Government inspection and possible use.

All core drill holes shall be completed not less than standard AX core size (approximately 1-1/8") or equivalent wireline size. Facilities shall be provided for recovering drill sludge, and such sludge shall be retained when drilling in significantly mineralized ground. The drill core shall be stored in boxes identified by hole number with markers in the core sections indicating the depths represented.

Significantly mineralized core shall be split and one split shall be assayed in the manner previously mentioned. Whenever the core recovery is found to be less than 60 percent, a split of the corresponding retained sludge and a split of such core as may have been recovered shall be assayed separately and the assay results combined according to standard practice to represent a single sample. The remaining core shall be stored in proper sequence with any unsampled core, and the remaining sludge shall be stored in suitable containers properly identified as to source and location. The stored core and sludge samples shall be made available for Government inspection and possible use. The Operator may dispose of the stored samples, from whatever source, with prior Government approval, confirmed in writing.

All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing assays shall be furnished monthly to the Government.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly report which shall also include a map or sketch showing the work completed during the reporting period, the locations of all samples taken, and the general geological formations and structures traversed by the work performed.

The Operator shall employ a full-time supervisor-engineer-geologist and such labor as may be required to complete the work in a satisfactory manner. The Government will contribute only to that portion of monthly salaries or daily wages representing the time spent on the project work by the various employees.

No work under this contract shall be performed closer than 200 feet to the outer boundary of the land outlined on Plate 1.

The location, direction, and extent of each work item shall be subject to Government approval.

Description of the Work

The initial work under this project shall consist of rehabilitating the Arctic crosscut adit, the Arctic raise, and the east and west drifts along the No. 1 dike-fissure zone on the Arctic level.

From its present face continue the East drift on or if ground conditions necessitate along side of the No. 1 dike-fissure zone for approximately 1,700 feet or about 300 feet beyond the contact of the Eureka quartzite. Continue the West drift similiarly for approximately 300 feet.

Starting near the contact of the Eureka quartzite in the East drift, drive crosscuts both northerly and southerly an aggregate distance of approximately 500 feet. In addition, from the ends of the completed drifts and from four intermediate points at about 400-foot intervals along the East drift, drive five crosscuts northerly and three southerly an aggregate of approximately 140 feet for drill stations. The station at the east end of the East drift shall consist of a crosscut 15 feet long or the equivalent volume of raising.

From the drill stations drill a total of 13 core drill holes for an aggregate of not to exceed 3,400 feet. The holes will range from 200 to 450 feet in length to explore the walls of the No. 1 dike-fissure zone; and in addition, five of the holes will explore the carbonate rocks above and below the Eureka quartzite. The holes are to be drilled approximately as follows:

Drill Hole Numbers	Bearing	Inclination	Depth
DDH-1	S. 9 W.	Horizontal	200'
DDH-2	N. 9 E.	"	200'
DDH-3	North	"	450'
DDH-4	N. 15 E.	"	300'
DDH-5	S. 14 W.	"	200'
DDH-6	N. 14 E.	"	250'
DDH-7	S. 15 W.	"	200'
DDH-8	N. 15 E.	"	200'
DDH-9	S. 65 E.	+45°	200'
DDH-10	N. 65 W.	-45°	250'
DDH-11	Vertical	-90°	250'
DDH-12	S. 65 E.	+65°	300'
DDH-13	S. 65 E.	+25°	400'

The approximate locations of the drifts, crosscuts, and drill holes are indicated in red on Figure 2, entitled ". . . Plan Map Arctic Level", and on Figure 3, entitled ". . . Longitudinal Section of Cortez Mine . . .", attached hereto and made part hereof.

Estimated Costs of the Project

* - Indicates a maximum

Actual Costs

Category (1) Independent Contracts

Mobilization and demobilization, equipment, men, and materials for driving drifts and crosscuts $ 5,000.00*

Supported drifting and crosscutting, 2,640 feet @ $43.50/ft.	$114,840.00
Mobilization and demobilization - one drill unit	535.00
Core drilling, 3,400 feet	21,500.00

Depth	Size	Carbonate rock	Siliceous rock
0 - 200'	BX	$5.25/ft.	$6.25/ft.
	AX	5.00	6.00
200 - 400'	BX	5.50	6.60
	AX	5.25	6.35
400 - 600'	BX	5.75	7.10
	AX	5.50	6.85

Compressed air for core drilling 3,400 feet @ $0.60/ft.	$ 2,040.00	
Cementing drill holes, 110 hours @ $11.60/hr.	1,276.00	
Cement, mud, lost circulating materials used in drilling	1,456.00	
Reaming - any size, 500 feet @ $2.25/ft.	1,125.00	
Lost casing, 150 feet @ $2.00/ft.[1/]	300.00	
Moving drill between holes, 50 hours @ $11.60/hr.	580.00	
Standby time requested by Operator, 25 hours @ $11.60/hr.	290.00	
		$148,942.00

Category (2) Personal Services

None except:

Subcategory (a) Supervision and Technical Services

1 Supervisor-geologist-engineer, 11 months @ $800.00/month	8,800.00

Subcategory (b) Labor		
1 Laborer, 110 days @ $21.66/day (rounded)	$ 2,385.00	$11,185.00
Category (3) Operating Materials and Supplies		
None except:		
Cardboard core boxes, 340 @ $1.00/each	340.00	$ 340.00
Category (7) Miscellaneous		
None except:		
Payroll taxes, F.I.C.A., insurance, etc. @18% of payroll (rounded)	2,013.00	$ 2,013.00
Total Estimated Actual Costs		$162,480.00
Fixed Unit Costs		
Bulldozer for road maintenance, 180 hours @ $16.00/hr.	$ 2,880.00	
Rental of one Jeep 60 miles/day @ $0.15/mile, 242 days @ $9.00/day	2,178.00	
Rental of one water truck, 3,600 miles @ $0.25/mile	900.00	
1,220 samples assayed for gold and silver @ $3.00/each sample	3,660.00	
880 samples assayed for copper, lead, and/or zinc @ $1.75/each element	1,540.00	
Transportation and sacks, 1,220 samples @ $0.10/each sample	122.00	
Office expenses, 11 months @ $100.00/mo.	1,100.00	
Total Estimated Fixed Unit Costs		$ 12,380.00
Total Estimated Costs of the Work		$174,860.00
Government Participation @ 75%		$131,145.00

1/ The Government will not contribute to the cost of casing left in place at the request of the Operator.

EXHIBIT B

NONDISCRIMINATION IN EMPLOYMENT

(Section 301, Executive Order 10925, March 6, 1961, as amended)

'During the performance of this contract, the contractor agrees as follows:

'(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited, to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.

'(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

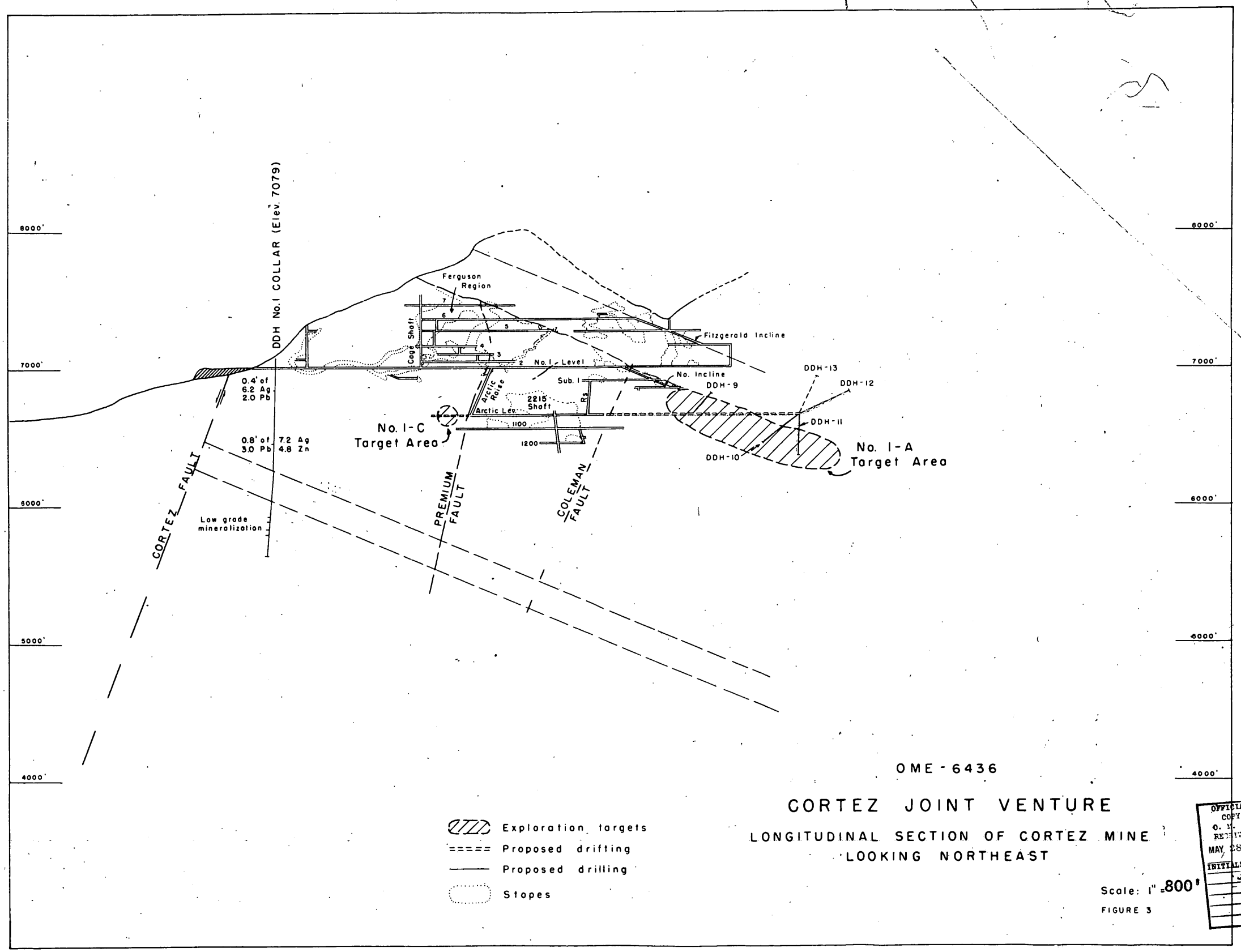
'(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

'(4) The contractor will comply with all provisions of Executive Order No. 10925 of March 6, 1961, as amended, and of the rules, regulations, and relevant orders of the President's Committee on Equal Employment Opportunity created thereby.

'(5) The contractor will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, as amended, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

'(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, as amended, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of the President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

'(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the President's Committee on Equal Employment Opportunity issued pursuant to section 303 of Executive Order No. 10925 of March 6, 1961, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.'"



OME-6436

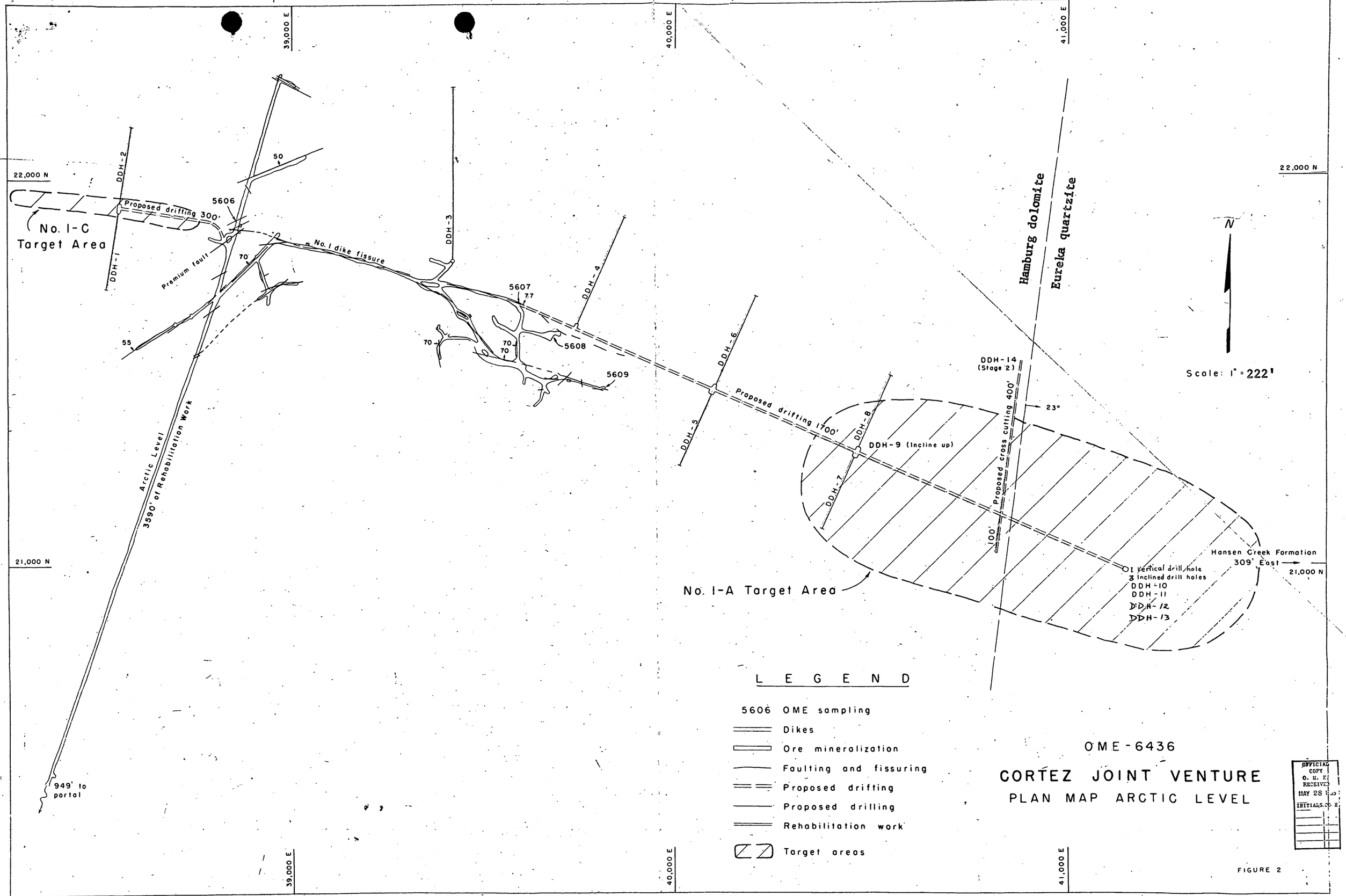
CORTEZ JOINT VENTURE

LONGITUDINAL SECTION OF CORTEZ MINE LOOKING NORTHEAST

Scale: 1" = 800'

FIGURE 3

OFFICIAL COPY O. M. E. RECEIVED MAY 28 1985 INITIALS CO. E.



OME-6436

CORTEZ JOINT VENTURE

PLAN MAP ARCTIC LEVEL

OFFICIAL COPY O. M. E. RECEIVED MAY 28 INITIALS

FIGURE 2

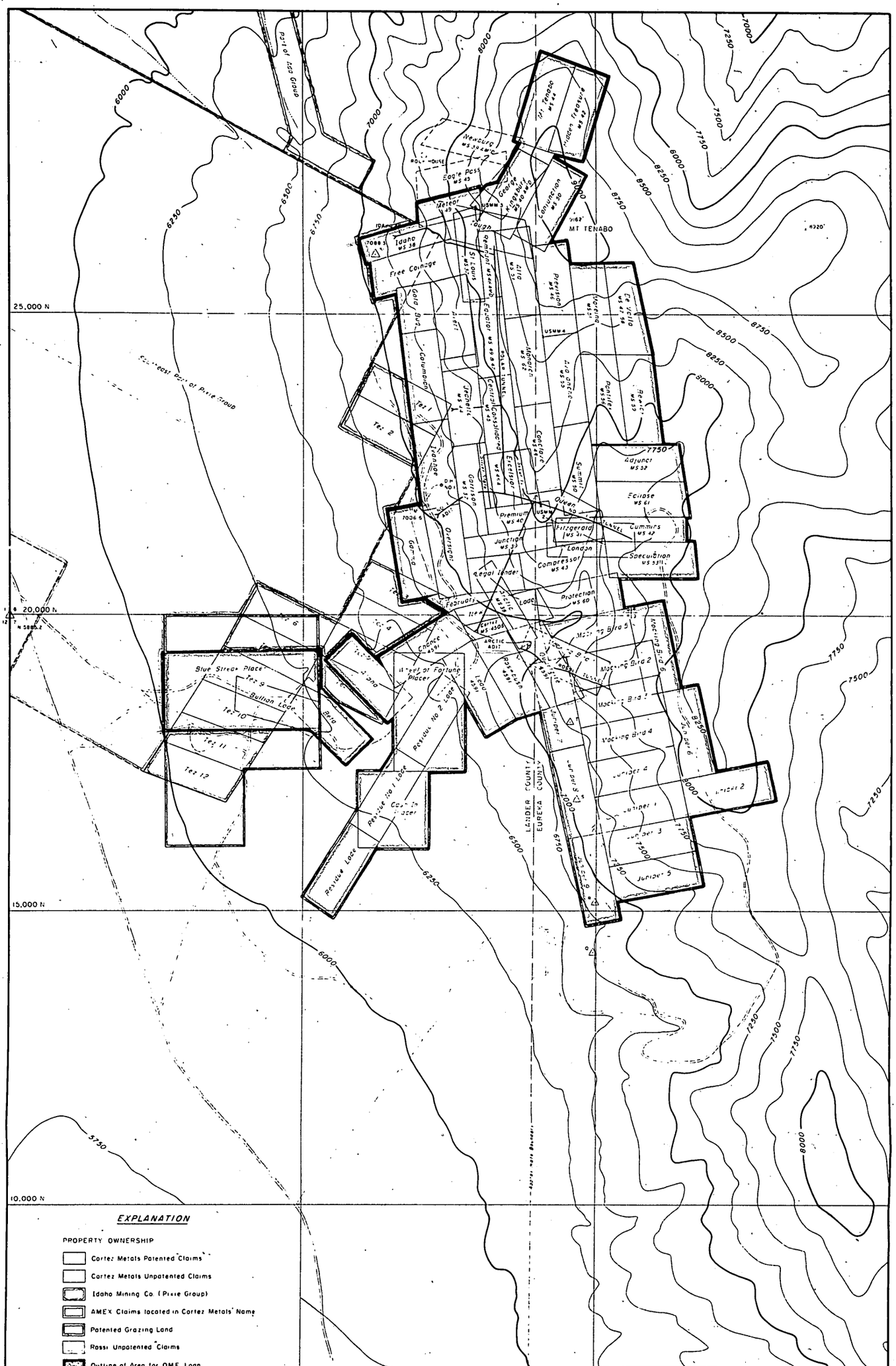

MT TENABO
Free Coinage
Idaho
Pixie Group
Southeast Corner of Pixie Group
Tez 1
Tez 2
Tez 9
Tez 10
Tez 11
Tez 12
Blue Stream Placer
Bullion Lode
Pessimist No 1 Lode
Pessimist No 2 Lode
Pessimist Lode
Pot of Fortune Placer
Chance
Premium
Junction
Regal Lander
Protection
Adjunct
Eclipse
Speculation
Mocking Bird 1
Mocking Bird 2
Mocking Bird 3
Mocking Bird 4
Mocking Bird 5
Juniper 1
Juniper 2
Juniper 3
Juniper 4
Juniper 5
Juniper 6
LANDER COUNTY
EUREKA COUNTY
25,000 N
20,000 N
15,000 N
10,000 N
35,000 E
40,000 E
EXPLANATION
PROPERTY OWNERSHIP
Cortez Metals Patented Claims
Cortez Metals Unpatented Claims
Idaho Mining Co. (Pixie Group)
AMEX Claims located in Cortez Metals' Name
Patented Grazing Land
Rossi Unpatented Claims
Outline of Area for OME Loan
Note 1 Topography after USGS
2. Triangulation and control of stations A to N by Settelmeyer and Chilton; stations O to T by Cortez J V
3 Claims and drill hole locations by Cortez J V Surveys
AMERICAN EXPLORATION & MINING CO.
CORTEZ JOINT VENTURE
Cortez, Nevada
AREA OF PROPOSED CORTEZ MINE EXPLORATION
0 1000 2000 3000 Feet
Compiled by R G Garwood, J J Oberbillig, Jan 1965
Drafted by JBJ

PLATE I

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, That I, Vernon Taylor, Jr., of Denver, Colorado, do hereby make, constitute and appoint Jean Hinshaw of Denver, Colorado, to be my true and lawful attorney, with full power and authority in my name and stead and on my behalf to manage my affairs, handle my investments, arrange for the investment and reinvestment of funds, accept remittances of income and disburse the same including authority to open bank accounts in my name and endorse checks for deposit therein or in any bank or trust company where I may at any time have money on deposit, and sign checks covering withdrawals therefrom; to purchase or otherwise acquire for me any property, real or personal; also with power to endorse stock certificates for transfer and to make delivery of stocks, bonds or other securities to be sold for my account and receive the proceeds of such sale; also with power in my name to purchase or subscribe for any shares of stock, bonds or other securities, and to subscribe for new shares of stock available under rights granted to stockholders, or make sale of such rights as he may determine and to subscribe for any bonds or other securities to which I may become entitled to subscribe, or to sell the rights covering such subscription in his discretion; also with power to act for me with full authority to represent me and my ownership in any business or corporation, including power to vote in my name in such manner as he may think best and to give proxies therefor; also with power to prepare, execute and

file tax returns and schedules required by law, including federal and state returns, to consent to and pay taxes, assessments, charges and penalties of every kind, both state and federal, due or payable by me in reference to my income or property, or to refuse to consent thereto and to contest the same, to execute and file all claims for abatement, refund or other papers relating to federal and state taxes assessed or to be assessed, to receive refund checks, to appear before any officer, board, bureau or court with full power to do everything whatsoever requisite and necessary to be done in the premises, to execute waivers of the statute of limitations, to make adjustments by compromise or otherwise, and to execute closing agreements; also with power to sign, execute, acknowledge and deliver as my attorney-in-fact and in my behalf any deed of transfer or conveyance covering personal property or real estate or any interest therein, wheresoever situated or any discharge or release of mortgage or deed of trust held by me on real estate; also with power at his discretion to borrow money from time to time in my name, and to give promissory notes or other obligations therefor, and to deposit as collateral thereunder or pledge as security for the payment thereof, any or all my securities or other property of whatsoever nature; also to demand, collect, sue for, receive and receipt for any money, debts or property of any kind, now or hereafter payable, due or deliverable to me; for me and in my name to prosecute and to defend any and all proceedings at law or in equity; to enforce and collect by appropriate proceedings any right, claim, inheritance or cause of action which now has or may hereafter accrue to me, and to resist and defend any claim, charges, suits or actions that may have been or may hereafter be made or brought against me and to pay,

adjust, settle, compromise or submit to arbitration any accounts, debts, claims, demands, disputes or matters which are now subsisting or may hereafter arise between me or my said attorney, and any other person or persons, firms or corporation, whether in litigation or not; also with power to execute vouchers in my behalf for any and all allowances and reimbursements properly made payable to me by the United States, and to collect the proceeds of all checks payable to my order, drawn on the Treasurer of the United States; and in general I give to my said attorney full power to handle all my affairs in such manner and with such authority as I, myself, might exercise, including the power to make, execute and acknowledge instruments of every kind which may be proper or requisite to effectuate all or any of the premises, with the further power in his discretion to delegate authority under this power and to constitute and appoint from time to time as occasion may require, one or more agents under him and to substitute one or more attorneys for me in his place, and at pleasure to revoke the authority of all such agents or attorneys. The use of the masculine gender herein with respect to my said attorney shall be applicable to the feminine gender.

I hereby ratify, confirm and approve each and every act of my said attorney-in-fact heretofore or hereafter taken in conformity with this power of attorney.

This power of attorney shall be effective until revoked by me in writing, such revocation to be delivered by me to my said attorney-in-fact, and everyone dealing with my said attorney-in-fact shall be entitled to rely upon the certificate of such attorney-in-fact to the effect that this power is in effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand at

Denver, Colorado, this 11th day of June, 19 65.

STATE OF COLORADO)
) ss.
CITY AND COUNTY OF DENVER)

The foregoing instrument was acknowledged before me this 11th day of June, 1965, by Vernon Taylor, Jr.

My commission expires My Commission expires Mar. 4, 1968.

WITNESS my hand and notarial seal.

Notary Public

(SEAL)

OFFICIAL
COPY
O. M. E.
RECEIVED
JUL 26 1965
INITIALS | CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OFFICIAL COPY
O. M. E.
RECEIVED
APR 5 1965
INITIALS | CO. E

April 2, 1965

Memorandum

To : Chief, Division of Field Operations, OME, Washington, D. C.

From : Acting Field Officer, OME, Region II

Subject: New Application (Silver)
Cortez Joint Ventures
2300 Russ Building
San Francisco, Calif.
Cortez Mine
Eureka and Lander Counties, Nev.

Enclosed herewith is an application for financial assistance, submitted by Mr. Hatfield Goudey, in the amount of $326,034.52. Since I was in the area where the subject applicant's property is located during my last field trip, and a rough draft application was available, the property was examined March 18, 1965, accompanied by Mr. Robert Garwood, geologist for the subject company.

The property is known as the Cortez Mine and is located about 40 miles southeast of Beowawe, Nevada at Cortez, Nevada. The mine had a significant silver production record of over $12 million. The applicant's exploration work will be contracted to an independent contractor. The application is supported by three bids for mining operation and three bids for their drilling program. The exploratory work is in two stages. The Stage I work consists of 2500 feet of drifting, crosscutting, 3800 feet of rehabilitation, 40 feet of raising, and 12 underground diamond drill holes totaling 2700 feet. The three surface diamond core drill holes are on the Rossi property (adjoining the Cortez property to the southeast) for a total footage of 3,050 feet.

Stage II work will depend upon the results of Stage I. Stage II involves deeper underground diamond drilling to test the El Dorado dolomite below the Geddes limestone. Total footage involved is 4,400 feet. Several samples were taken along the No. 1 dike fissure in the Artic tunnel during the examination and are being assayed for silver. A favorable recommendation is being considered.

Also enclosed is a copy of a letter showing the past experience from the low bidder for the underground mining operation.

Paul V. Fillo

Paul V. Fillo

Enclosures

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF., 94104

March 31, 1965.

Mr. Paul Fillo,
U.S. Dept. of the Interior Office of
Minerals Exploration,
450 Golden Age Avenue,
Box 36012,
San Francisco, California.

Dear Mr. Fillo:

Enclosed herewith are two sets of documents pertaining to our application for an O.M.E. loan for the "Cortez Mine Exploration Project".

Each set of documents is made up of four parts in binders marked "A", "B", "C" and "D". Part "A" contains the application with supporting data and maps. Part "B" contains copies of agreements, assignments, assay certificates, contractors' bids, and letters to and replies from banks. Part "C" contains copies of geologic reports and a diamond drill log. Part "D" contains a copy of an old report on Cortez Mine sampling.

In addition to the above we are enclosing six copies of each of the following lien and subordination agreements:

(a) On the Rossi property signed by the Rossis.
(b) On the Rossi property signed by Cortez Joint Venture. ?
(c) On the Rossi property signed by American Exploration & Mining Co.
(d) On the Cortez Metals Co. property signed by Cortez Joint Venture. ?
(e) On the Cortez Metals Co. property signed by American Exploration & Mining Co.

The lien and subordination agreement on the Cortez Metals Co. property has not yet been received; however, verbal assurance of this has been given. Upon receipt of this document we will forward it to you immediately.

Yours sincerely,

AMERICAN EXPLORATION & MINING CO.

J. B. Bush.

JBB:gf

Enclosures

Ponderosa Development Company, Ltd.

WRITE TO:
BOX 4800-N
TUCSON, ARIZONA

OFFICE
6 NORTH TUCSON BOULEVARD

TELEPHONE
EAST 6-1114

March 28, 1965

Mr. J.B.Bush
American Exploration & Mining Company
23rd. Floor Russ Building
San Francisco, California 94104

Dear Jack:

In response to your telephone call of March 24th. I am giving you the information you requested for the O.M.E.

1. Statement of past experience:

Within the last fourteen years we have completed several thousand feet of drifts and shafts, as well as numerous other work for many companies in several states, however much of the work has been done for the three following firms.

(a) Bear Creek Mining Company
(check with Mr. Raymond F. Robinson, formally chief geologist, now with the Duval Corp. 500 South Plumas, Reno,Nevada

(b) Allen Bowman, Vice President
Banner Mining Company
2042 Conner Stravenue
Tucson, Arizona

(c) B.G.Messer, Chief Engineer
Duval Corporation
P.O.Box 38
Sahurita, Arizona

Most of the work was done under our old parent company's name of Tate Mine Development & Supply, but with the same present staff management.
We also did several jobs for the state and federal government.

2. Mobilization

$3,081.12	freight on track,pipe, and incidentals thereto.
$2,408.46	Cost of moving our equipment and crews to job site.
$5,489.58	Total.

3. List, type, and condition of equipment.

1 600 cfm Air Compressor
1 315 cfm. Air Compressor
1 12-B or 21 Eimco Mucking Machine
1 7 ton Battery Locomotive, complete
10-12 32-40 cu. ft. side dump cars
1 2 drill hdy. jumbo
4 jacklegs, complete
1 single drum tugger
1 double drum slusher
1 electric generator
1 arc welder
1 20 ton, 10 wheel truck and trailer
1 blower
Miss. lot tools, equipment, and parts.

This is but a rough list and may be altered or changed slightly. All of the equipment is in excellent condition and in most cases we will have an extra item of each for standby.

Please be assured that we definitely have sufficient experience, ability, and equipment to perform a competent job.

Should the information be inadequate, just let me know what else you need.

Very truly yours,

M. L. Tate

M.L.Tate, General Manager

APPLICATION FOR O.M.E. LOAN

Cortez Mine Exploration Project, Cortez, Nevada

Part "A" containing application with supporting data and maps

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 5 1965

INITIALS	CODE

GENERAL STATEMENT OF THE PROPOSED CORTEZ MINE EXPLORATION PROJECT

On August 18, 1959 the American Exploration & Mining Co., herein referred to as Amex, acquired by long-term lease with option to purchase all of the mineral lands of the old Cortez Silver Mine at Cortez, Nevada. Subsequently, Amex obtained control over most of the mineral lands in an area of about five square miles. During late summer of 1963, a diamond drill hole was drilled to a depth of 1,469 feet to test the existence of favorable stratigraphy for ore deposits below the Cortez Silver Mine. The results of this hole were favorable and an intensive program of geologic mapping and exploration was then undertaken. The Cortez Joint Venture comprised of Amex, Bunker Hill Company, Webb Resources, Inc. and Vernon F. Taylor, Jr. was formed to share the risk of this large project. A Management Committee representing the four coventurers was established to direct the project, which is financed by contributions from the Coventurers in direct proportion to their relative participation.

The Cortez Joint Venture is herein requesting O.M.E. assistance for the exploration of a group of claims leased from Cortez Metals Co. and a group of 15 claims known as the Rossi property. Cortez Joint Venture controls the Cortez Metals claims under a lease and option agreement with Cortez Metals Co. and the Rossi group of claims under a 20-year lease with option to purchase agreement with Rossis dated May 11, 1964. As the work will be done in the general area of the old Cortez Silver Mine, it will be known as the Cortez Mine Exploration Project.

The coventurers are requesting financial assistance for:

1. Rehabilitation of and drifting and crosscutting on the Arctic level of the Cortez Silver Mine.

2. Underground horizontal diamond drilling on the Arctic level.

3. Underground deep diamond drilling on the Arctic level.

4. Surface drilling on the Rossi property.

This is work which the coventurers are unable or unwilling to completely finance at this time and O.M.E. aid is requested in the nature of an exploration loan. The objective of the project is to explore for silver ore similar to that previously mined from the Cortez Silver Mine. The Cortez Metals claims and Rossi claims will be subordinated in favor of the Government's respective interest and the loan would be repaid out of production should an economic discovery be made. In this event the coventurers would invest sufficient money to develop and mine the deposit.

Necessary supporting data included with this application are as follows:

1. A completed application on form MME 40.

2. Information to support O.M.E. application:

   a. Statement of financial eligibility.

   b. Statement of ownership of the lands, specifically the Cortez Metals group of patented and unpatented claims and the Rossi group of unpatented claims.

3. Copies of Amex agreements with Cortez Metals Co. and with the Rossis giving Amex exploration, development and purchase rights on their respective properties.

4. Assignments:

   (a) Amex to Cortez Joint Venture for Cortez Metals Co. property.

   (b) Amex to Cortez Joint Venture for Rossi property.

   (c) Consent given to Amex by Cortez Metals Co. to assign Cortez Metals property.

5. Copies of letters to and from two banks that rejected the Cortez Joint Venture application for an exploration loan.

6. A statement concerning the physical description of the land.

7. A narrative report of the geology of the Cortez Mine Exploration Project, (in application).

8. "Report on Results of Mine Sampling Consolidated Cortez Silver Mines Company, Cortez, Nevada" by H. J. Evans October 20, 1922.

9. Preliminary Report "Economic Geology of the Cortez Mine", Cortez Joint Venture, by John N. Faick, June 20, 1964.

10. Memorandum Report "Notes on Cortez Mine, Nevada" by J. B. Bush, December 28, 1964.

11. Drill log of Hole No. 1.

Of the above reports, Numbers 8, 9, 10 and 11 should be returned after they have served their purpose. Please return them to Cortez Joint Venture, c/o American Exploration & Mining Co., 2300 Russ Building, San Francisco, California 94104.

MME Form 40
July 1962

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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

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.)*	APPLICANT DO NOT USE THIS BLOCK
Cortez Joint Venture 2300 Russ Building San Francisco, Calif. 94104	DOCKET NUMBER: 6436 DATE RECEIVED: 4-5-65 REGION: II DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*	LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE (NAME / ADDRESS / TITLE)
INDIVIDUAL [ ] CORPORATION [ ] PARTNERSHIP [ ] OTHER *(Specify)* [x] Joint Venture	As explained in the attached item 1b this is a joint venture composed of four associates, as follows: American Exploration & Mining Co., San Francisco, Calif. Bunker Hill Company, Kellogg, Idaho Vernon F. Taylor, Jr. Denver, Colorado Webb Resources, Inc. Denver, Colorado
STATE IN WHICH FIRM IS ORGANIZED	

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE	PROPERTY NAME	LOCATION COUNTY	STATE
Silver	Cortez Mine	Eureka & Lander	Nevada
ESTIMATED COST OF PROJECT: $ 326,034.52			

GENERAL INSTRUCTIONS

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

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.

The Cortez Joint Venture
by American Exploration & Mining Co.
Managing Coventurer

March 30, 1965
DATED

BY *(Signature)*

TITLE
Vice President

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 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. 11879

INFORMATION TO SUPPORT O.M.E. APPLICATION

(Refer to Form MME 40)

ITEM 1. FINANCIAL ELIGIBILITY

(a) Exploration at Cortez, Nevada, is being conducted as a four-way Joint Venture with three companies and one individual participating. The Joint Venture has no income except as is paid in by the associated coventurers. The entire exploration venture is of such a large magnitude and so expensive that the associates are unable or unwilling to bear the entire exploration cost; therefore O.M.E. funds are being sought to help pay exploration costs on part of the area being explored.

Amex, acting for the Cortez Joint Venture, applied to its own bank and to one other bank for financial assistance in the form of a loan to be used for rehabilitation, drifting, crosscutting, horizontal diamond drilling, and deep diamond drilling on the Cortez Metals property and for diamond drilling on the Rossi property all in the area of proposed exploration. The applications for loans to the following two banks were denied:

1. The Canadian Bank of Commerce
   344 Pine Street,
   San Francisco, California

2. Nevada Bank of Commerce
   Elko Branch
   Elko, Nevada

Copies of letters of application for loans and the replies are attached.

(b) The Cortez Joint Venture is the applicant. Amex is the managing coventurer of the Cortez Joint Venture. The other coventurers are the Bunker Hill Company, Webb Resources, Inc. and Vernon F. Taylor, Jr. Listed below are the names and addresses of representatives and alternate representatives that compose a Management Committee formed to direct the business affairs of the Cortez Joint Venture:

Associate	Fractional Interest	Management Committee Member	Alternate Member
Bunker Hill Co.	2/9th	R. J. McRae P. O. Box 29 Kellogg, Idaho	C.A.R. Lambly P. O. Box 29 Kellogg, Idaho
Vernon F. Taylor, Jr.	2/9th	John A. Wood 133 E. 14th St. North Vancouver, B.C. Canada	V.F. Taylor, Jr. 1670 Denver Club Bldg. Denver 2, Colorado

Associate	Fractional Interest	Management Committee Member	Alternate Member
Webb Resources, Inc.	2/9th	J. H. Cazier 1645 Court Place Denver 2, Colorado	
American Exploration & Mining Co.	3/9th	H. Goudey 2300 Russ Building San Francisco, Calif. 94104	E. A. Scholz 700 Burrard Bldg. Vancouver 5, B.C. Canada

(c) The four associated coventurers mentioned above have mutually agreed to share the risk and responsibility of exploring for ore on the mining properties controlled by the Cortez Joint Venture. Each associate will contribute exploration funds in direct proportion to its fractional interest. The Cortez Joint Venture share of cost of the exploration work for the Cortez Mine Exploration Project will be raised by a call for funds from each participant.

ITEM 2. APPLICANT'S RIGHTS IN LAND

(a) The Cortez Joint Venture controls seven parcels of mineral land in the Cortez Mining District, but exploration is proposed only for the Cortez Metals Co. property and the adjacent Rossi group of claims. The property of Cortez Metals Co., c/o Thomas Cooke, P. O. Box 2229, Reno, Nevada, is controlled by the Cortez Joint Venture through an assignment from American Exploration & Mining Co. dated June 5, 1964. Amex acquired control of the Cortez Metals property by a mining lease and option dated August 18, 1959, amended September 16, 1959.

The Rossi property is controlled by the Cortez Joint Venture through an assignment from American Exploration & Mining Co. dated February 20, 1965. Amex acquired control of the Rossi property by an option and agreement dated May 11, 1964. The address of the owner of the Rossi property is Mr. Louis L. Rossi, P. O. Box 164, Winnemucca, Nevada.

Both properties are shown on the accompanying map. (Plate 1). Patented mining claims of Cortez Metals are as follows:

NAME OF CLAIM	COUNTY	PATENT RECORDED BOOK	VOLUME	PAGE
Arctic	Eureka	11		595-97
Avalanche	"	12		558-60
Adjunct	"	13		544-45
Alta	"	13		546-47
Bewick	"	13		566-67
Cummings	"	11		586-88
Central Consolidated	"	13		50-52
Conclave	"	13		562-63
Compressor	"	13		44-46
Conjunction	"	13		570-71
Chance	"	20		276-79
DeValla	"	13		550-51
Equator	"	13		558-59
Eclipse	"	13		542-44
Excelsior	"	13		53-55
Fitzgerald	"	11		589-91
Garrison	"	11		583-85
Hidden Treasure	"	13		554-55
Idaho	"	11		598-600
Junction	"	11		580-82
Jeanette	"	13		47-49
Kingsbury	"	13		564-65
Lead	"	20		276-79
Moreang	"	13		556-57
Monarch	"	13		552-53
Meteor	"	13		585-86
Mt. Tenabo	"	13		560-61
Premium	"	11		592-94
Pontifex	"	13		548-49
Protection	"	13		574-75
Prevision	"	13		572-73
Quartzite	"	20		276-79
Rosebush	"	20		276-79
Remnant	"	13		587-88
St. Louis	"	11		601-03
Speculation	"	13		540-41
Summit	"	13		568-69
Millsite - Cortez	"	19		462-63

Unpatented mining claims of Cortez Metals are as follows:

NAME OF CLAIM	COUNTY	LOCATION NOTICE BOOK	LOCATION NOTICE VOLUME	RECORDED PAGE
Alert	Eureka	H		270
Alpha	"	G		416
Beta	"	G		416
Bullion	Lander	18		153
Columbian	Eureka	H		271
February	"	H		267
Free Coinage	"	H		272
Gamma	"	G		415
George	"	H		276
Gold Bug	"	H		273
Ivanhoe	"	H		266
Legal Tender	"	H		265
London	"	H		274
Martinez	Lander	10		46
New	Eureka	H		269
Oversight	"	H		269
Queen	"	H		275
Residue	"	J		208
Residue No. 1	"	J		209
Residue No. 2	"	J		209
Security	"	H		264
Silver State	"	H		268
Tough Lode	"	H		277
Blue Stack Placer	Lander	18		155
Cash In Placer	"	18		154
Wheel of Fortune Placer	"	18		155

Unpatented mining claims of the Rossi Property are as follows:

NAME OF CLAIM	COUNTY	BOOK	PAGE
Mockingbird No. 1	Eureka	K	198
Mockingbird No. 2	"	K	199
Mockingbird No. 3	"	K	199
Mockingbird No. 4	"	K	200
Mockingbird No. 5	"	M	1
Mockingbird No. 6	"	M	1
Juniper No. 1	"	K	197
Juniper No. 2	"	K	197
Juniper No. 3	"	K	197
Juniper No. 4	"	K	198
Juniper No. 5	"	K	340
Juniper No. 6	"	K	340
Juniper No. 7	"	4	118
Juniper No. 8	"	4	119
Juniper No. 9	"	4	120

(b) The tract of land which is being explored lies in both surveyed and unsurveyed areas. It includes areas that lie mostly within the sections listed below:

Sec. 7	T 26 N R 48 E
Sec. 8	T 26 N R 48 E
Sec. 5	T 26 N R 48 E
Sec. 4	T 26 N R 48 E

and adjacent areas in the southwest portion of unsurveyed T 27 N R 48 E.

The Cortez Joint Venture also controls through options and agreements the Pixie group of claims, Boitano group of claims, Russell-Nelson claims, Ward-Fox claim and Ward-Lawrence group of claims all extending west of the Cortez Metals Company property. Only the land belonging to Cortez Metals and the Rossis, and as outlined on the accompanying map, is to be subject to this O.M.E. loan. This is requested because these claims cover a geographically and geologically distinct area.

(c) Lease agreements with Cortez Metals Company and the Rossis convey through American Exploration & Mining Co. to the Cortez Joint Venture all necessary rights to the property. Letters of subordination on MME form 52 have been obtained from Cortez Metals Co. and the Rossis and are enclosed.

ITEM 3. PHYSICAL DESCRIPTION

(a) The area of the Cortez Silver Mine, in which exploration is proposed, was first discovered in 1863. By 1941 the total silver production from the mine had grossed between 10 and 15 million dollars. The area of the Rossi property in which exploration is also proposed has had a minor production from small pockets of ore discovered by prospectors. One long adit called the Rossi tunnel was driven on the No. 8 dike fissure into the Rossi property from the Cortez Metals property. There has been no production from the Rossi tunnel.

The following maps are enclosed in a pocket at the back of this application:

Plate 1	Plan Map of Area of Proposed Cortez Mine Exploration
Plate 2	Plan Map of Arctic Level 1" = 400' scale 1" = 100' scale
Plate 3	Plan Map of No. 1 Level
Plate 4	Plan Map of No. 6 Level
Plate 5	Composite Level Plan Map
Plate 6	Section A-A', Longitudinal Section of Cortez Mine
Plate 7	Section B-B' and Section C-C' Cross Sections of Cortez Mine
Plate 8	Section D-D' and Section E-E' Cross Sections of Cortez Mine
Plate 9	Surface Geologic Map of Rossi Property
Plate 10	Sections of Rossi Property
Plate 11	Section F-F' and Section G-G' Sections showing Stage II Drilling

Following is a brief summary of the history of the Cortez Silver Mine to 1941:

1863	Discovery of St. Louis lode at west end of Cortez ore zone.
1864	Eight-stamp mill built in Mill Canyon; subsequently enlarged to 16 stamps.
1864	Discovery of ore near present Garrison shaft.

1867	Wenben mill started operating in July.
1886	New mill built near Garrison mine.
1886-1892	New mill operated continuously using chloridizing roast with sodium hyposulfate leaching to recover 85-90 percent of values.
1892-1896	Operation apparently idle.
1896-1903	Mill operated continuously at capacity of 25 tons per day. Total production to 1903 about $10,000.00 according to Emmons. ?
1903-1908	Apparently idle.
1908-1920	Geiger cyanided 120,000 tons of tailings but little or no work was done in the mine.
1920-1923	Consolidated Cortez Silver Mines Co. purchased property in 1920 and initiated exploration, and in 1923 built a 100-150 ton per day cyanide plant.
1923-1927	Consolidated Cortez Silver Mines mined and milled 100-150 tons of ore per day. About 140,000 tons of ore was mined and milled between 1923 and 1927, of which 60 percent was obtained from old filled stopes.
1927	Mill was converted to 150-ton flotation plant.
1929	Last full year of major production. Ore mined and milled amounted to 43,808 tons averaging 13.96 oz. silver per ton recovered with recoveries of 75 percent.
1930	The Consolidated Cortez Silver Mines Co. employed about 60 men to mine and mill 125 tons of silver-lead ore daily for a short period. Date of resuming operations unknown. Total production about 1600 tons. Mine went into receivership July 5, 1930.
1931-1936	Essentially no activity.
1937	Small amounts of ore shipped.
1938	Four small mines in Cortez and Mill Canyon district yielded 6354 tons of lode ore containing 64,683 ounces of silver.
1940	Cortez Metals Company shipped 1468 tons of silver ore containing 98 ounces of gold and 51,011 ounces of silver.

Minor exploration may have been carried on from 1941 to 1959 but there is no record of such activity. From 1959 to date, Amex and the Cortez Joint Venture have reopened many of the workings and have partly rehabilitated the No. 1 level. Many of the old working levels have been mapped; several samples of mineralization have been taken to determine the possible value of various zones; and a 1469-foot diamond drill hole has been drilled near the No. 1 level portal to test for the existence of favorable stratigraphy for ore deposition below the Arctic level.

The mine has been explored through a vertical distance in excess of 1,000 feet from the top of No. 7 level extending downward through the No. 6, No. 5, No. 4, No. 3, No. 2, No. 1, 1,000, 1,100, and the 1,200 level, the deepest level in the mine. Main working levels are the No. 6, No. 1, and 1,000 (Arctic) level. In addition and at various levels are numerous minor sub-levels. Many working mine levels are shown on the attached composite plan map (Plate 5). It has been reported that there are 25-30 miles of workings in the mine.

All mine buildings and mill facilities have either been torn down or are in such a condition of decay that they are considered unfit for use.

(b) Geologic information gained from the mine workings has been used to project mineralization and structure for the proposed exploration program. Several of the workings will be used for mine ventilation and possible escape exits as required. Should the exploration program be successful in discovering new orebodies then it will be justified to rehabilitate many of the other old levels and stoped areas in the search for extensions of ore shoots.

(c) The tables on pages 11, 12 and 13 show production of the Cortez Silver Mine and the Cortez Mining District of which the Cortez Silver Mine was the main producer.

Since 1941, the only known production from the property has been a shipment of several carloads of tailings as silver-bearing smelter flux to Selby, California. From 1959 to date, there has been no production from the property.

It should be noted that the above listed tables indicate only the minimum value produced. As explained by Dr. J. N. Faick in the attached report, "Economic Geology of the Cortez Mine", June 30, 1964, other sources of information give a greater value to the mine's production.

(d) There are no developed ore reserves in the mine or on the Rossi property. Several narrow faces in pillars and remnants have been sampled which show good assay values and are indicative of a grade previously mined and to be expected in new discoveries, but are not presently mineable.

Attached is a "Report on Results of Mine Sampling, Consolidated Cortez Silver Mines Company, Cortez, Nevada", by H. J. Evans dated

I.C. 7022

TABLE I

Table 1. - Gold, silver, copper, and lead production from Cortez district, Eureka and Lander Counties, Nevada, 1902-1936, in terms of recovered metal.

(Compiled by Charles White Merrill, Mineral Production and Economics Division, Bureau of Mines.)

Year	No. of mines	Lode				
		Ore, short tons	Gold		Silver	
			Fine ounces	Value	Fine ounces	Value
1902	1	6,749	289.28	$5,980	214,094	$113,470
1903	4	9,709	858.46	17,746	149,343	80,645
1904	3	5,561	439.60	10,121	115,902	67,242
1905	2	1,837	96.75	2,000	37,540	22,674
1906	2	144	66.81	1,381	8,792	5,891
1907	1	125	42.33	875	5,000	3,300
1908	2	1,173	73.00	1,509	18,700	9,911
1909	3	898	283.62	5,863	40,459	21,039
1910	-	-	-	-	-	-
1911	5	135	26.99	558	7,712	4,087
1912	2	13,433	294.97	6,098	52,429	32,244
1913	6	12,968	282.36	5,837	54,196	32,734
1914	3	2,946	192.13	3,972	44,185	24,434
1915	6	15,692	816.84	16,886	67,873	34,412
1916	4	5,534	268.42	5,549	42,139	27,727
1917	10	647	161.50	3,339	26,950	22,207
1918	12	456	101.52	2,098	31,578	31,578
1919	2	133	.78	16	11,387	12,753
1920	5	140	21.98	454	7,872	8,580
1921	2	85	11.70	242	8,416	8,416
1922	3	209	35.09	725	39,386	39,386
1923	1	9,250	272.45	5,632	172,466	141,422
1924	1	32,434	713.78	14,755	423,163	283,519
1925	2	40,315	671.68	13,885	366,350	254,247
1926	2	44,482	742.02	15,339	345,381	215,518
1927	2	37,864	304.25	6,289	544,646	308,814
1928	1	51,167	443.22	9,162	785,980	459,798
1929	4	44,322	515.19	10,650	493,766	263,177
1930	2	1,623	39.55	818	44,423	17,103
1931	3	13	13.53	280	618	179
1932	1	2/	2/	2/	2/	2/
1933	3	371	74.42	1,538	18,424	6,448
1934	2	7	6.72	235	341	220
1935	1	44	2.97	104	3,829	2,752
1936	2	2/	2/	2/	2/	2/
Total	-	340,720	8,267.07	171,786	4,195,128	2,564,972

1/ Not to be confused with average assay value of ore.
2/ Bureau of Mines not at liberty to publish figures, but concealed figures included in totals.

TABLE II

[illegible] - Gold, silver, copper, and lead production from Cortez district, Eureka and Lander Counties, Nevada, 1902-1936, in terms of recovered metal - Continued.

(Compiled by Charles White Merrill, Mineral Production and Economics Division, Bureau of Mines.)

Year	Lode					
	Copper		Lead			
	Pounds	Value	Pounds	Value	Total value	Average recoverable value of ore per ton 1/
1902	5,907	$721	12,564	$515	$120,686	$17.38
1903	3,100	391	20,489	550	99,332	10.23
1904	13,963	1,380	16,726	577	79,330	14.26
1905	64	10	56,827	2,670	27,354	14.89
1906	-	-	21,315	1,215	8,487	58.94
1907	-	-	-	-	4,175	33.40
1908	7,773	1,026	9,095	382	12,828	10.94
1909	1,000	130	10,721	461	27,493	30.62
1910	-	-	-	-	-	-
1911	2,022	253	31,970	1,439	6,337	46.94
1912	803	132	46,893	2,110	40,584	3.02
1913	1,581	245	83,791	3,687	42,503	3.28
1914	402	53	179,599	7,004	35,463	12.04
1915	2,543	444	84,068	3,950	55,692	3.55
1916	1,373	338	36,922	2,548	36,162	6.53
1917	7,434	2,029	148,741	12,792	40,367	62.39
1918	4,614	1,140	160,030	11,362	46,178	101.27
1919	780	145	63,358	3,358	16,272	122.35
1920	1,084	199	45,945	3,675	12,908	92.20
1921	368	48	24,959	1,123	9,829	115.64
1922	2,764	373	26,625	1,464	41,948	200.71
1923	2,216	326	30,705	2,149	149,529	161.65
1924	5,021	658	67,041	5,363	304,295	9.38
1925	2,419	344	46,417	4,038	272,514	6.76
1926	3,308	463	38,580	3,086	234,406	5.27
1927	13,770	1,804	176,959	11,148	328,055	8.66
1928	25,031	3,605	364,617	21,148	493,713	9.65
1929	17,990	3,166	435,990	27,467	304,460	6.87
1930	1,768	230	37,252	1,863	20,014	12.33
1931	-	-	1,636	60	519	39.92
1932	2/	2/	2/	2/	2/	2/
1933	1,368	87	25,640	949	9,022	24.32
1934	-	-	240	9	464	66.29
1935	142	12	1,268	51	2,919	66.34
1936	2/	2/	2/	2/.	2/	2/
Total	131,828	19,841	2,311,093	138,364	2,894,963	8.50

1/ Not to be confused with average assay value of ore.
2/ Bureau of Mines not at liberty to publish figures, but concealed figures included in totals.

TABLE III

Nevada's Metal and Mineral Production

Eureka County

DISTRICT PRODUCTION BY YEARS

CORTEZ
Silver, Lead, Gold, Copper, Zinc

Year	*Tons*	*Gross yield*
1865	6	$1,026
1866	483	45,394
1867	80	15,891
1868	72	37,404
1869	234	33,057
1870	80	10,888
1871	340	30,776
1872	334	43,371
1873	373	75,674
1874	591	65,000
1875	557	27,124
1877	853	56,950
1878	655	85,218
1879	1,037	87,419
1880	481	$62,842
1881	983	121,609
1882	988	61,162
1883	1,384	85,976
1884	1,839	118,068
1885	1,652	100,389
1886	5,813	187,251
1887	6,320	325,827
1888	7,543	363,819
1889	8,080	376,110
1890	9,521	378,333
1891	8,534	381,231
1892	1,908	136,420
1893	36	7,600
1897	5,922	165,481
1898	7,229	185,432
1899	6,242	116,442
1900	8,214	152,829
1901	6,358	125,731
1902	6,777	113,602
1903	4,807	75,225
1904	4,088	61,625
1905	280	18,810
1906	136	6,990

TOTALS 60,777 $3,321,831
= $54.66
@ 129/oz = 42.37 oz

CORTEZ—*Continued*

Year	*Tons*	*Gross yield*
1907	117	3,998
1908	.....	21,962
1909	.....	23,335
1911	.....	26,405
1912	361	37,475
1913	706	37,171
1914	2,334	20,811
1915	717	11,293
1916	283	8,970
1917	54	4,670
1924	32,358	280,371
1925	18,589	144,476
1926	44,030	244,902
1927	30,149	270,094
1928	26,502	$254,165
1933	60	1,520
1934	613	7,559
1936	4,067	29,449
1937	11,701	86,366
1938	13,510	158,766
1939	21,497	265,566
	325,554	$6,375,839

BUCKHORN (Mill Canyon)
Gold, Silver, Lead

1910	19	$3,991
1914	72,627	327,535
1915	103,524	345,553
1916	.....	28,368
1931	196	3,093
1932	42	462
1936	3,133	27,222
1937	22,917	282,740
1938	34	276
1939	896	10,265
1940	10,394	11,700
	213,782	$1,041,205

October 20, 1922, reporting on an extensive sampling program at the mine in 1922. Since that time, some ore, pillars and fill have been mined from the examined area, although many of the sample locations that are mentioned in the report are still identifiable by their numbers which can be found to this day on various stopes and drift walls.

Also attached are copies of assay certificates of samples taken by the staff of Amex.

(e) Narrative Report on the Geology of the Cortez Mine Exploration Project.

Introduction

The Cortez Silver Mine occurs within a thick section of moderatelydipping Paleozic formations which crop out in bold relief along the western front of Mount Tenabo. The orebodies occur mostly in fissure veins and manto-type replacements within the upper 400 feet of the Cambrian Hamburg dolomite and as fissure veins in the overlying Eureka quartzite. Some ore was also mined from replacement deposits in the basal section of the Hansen Creek dolomite which overlies the Eureka quartzite.

Maps and references to accompany this narrative report and the proposed exploration program are attached.

Sedimentary Rocks

Only sedimentary rocks of Devonian age or older are found in the immediate area of the Cortez Silver Mine. The oldest and deepest formation known in the area is the Eldorado dolomite, of middle Cambrian age, which is also the major host rock for ore in the Eureka district, Eureka, Nevada. This formation does not outcrop at Cortez but has been located by diamond drill Hole No. 1 (Plate 6). Either the Geddes Limestone or Clarks Spring member of the Secret Canyon shale overlies the Eldorado dolomite and like the Eldorado, has only been found by diamond drilling.

The most productive host rock to date at Cortez is the Hamburg dolomite which unconformably overlies the Geddes limestone and is exposed on the west side of Mount Tenabo. The Hamburg is a massive, thick-bedded, white to gray dolomite, approximately 1,700 feet thick. The upper 400 feet seems to be the most favorable horizon for manto ore bodies; a situation which is also true at Eureka, Nevada.

About 350 feet of Eureka quartzite unconformably overlies the Hamburg. The Hansen Creek formation of dolomite and limestone overlies the Eureka quartzite and is about 600 feet thick. Dolomite is mapped at the top and bottom of this formation and is separated by a gray, siliceous member consisting of nodular chert and quartzite interbedded with limey-dolomite. Silver ore has been produced from both the Eureka quartzite and Hansen Creek dolomite.

The Roberts Mountain formation overlying the Hansen Creek dolomite varies in thickness from less than 1000 feet above the Cortez mine to about 1500 feet on the Rossi property. It consists of thin-bedded, blue-black pyritized limestone. The Wenben limestone overlying the Roberts Mountain (mostly on the Rossi property) is from 150 to 300 feet thick and is composed of thin-bedded, black to brown, red-stained and pyritized shaley limestone.

map shows Roberts Mtn.

Of all the sedimentary rocks, the Hamburg and Eldorado dolomites are considered to be the most favorable host rocks for ore.

Igneous Rocks

Igneous rocks exposed in the immediate mine area consist of altered dike rocks which may vary in composition from diorite to rhyolite. Generally, the dikes are from 2 to 15 feet wide, are highly oxidized and are so highly altered in areas, that the original igneous features are completely obliterated. It is believed that the dikes fill pre-existing fault structures and are pre-ore. However, these structures may also be channels for the migration of the ore solutions.

About 1 mile north of the mine is a quartz monzonite stock. Welded tuffs are located about 2 miles to the west of the mine area. The age of mineralization is not accurately known, but it is later than the intrusion of the dikes and quartz monzonite and could be either younger or older than the welded tuffs.

Structure

Regionally the Cortez mine lies within the Cortez window or fenster. Cambrian to Devonian rocks have been positioned by localized doming and then exposed by basin and range faulting (Crescent Valley and Cortez Faults). Either prior to, or contemporaneous with, the movement along the Cortez fault, a series of northeast- and southeast-striking and north- to east-dipping faults were developed. These northeast- and southeast-striking

structures probably have been cut and displaced by the Cortez north-south striking fault which in turn has been displaced by the east-west striking Crescent Valley Fault.

Locally in the Cortez Mine, the predominating structures are northeasterly-trending fault systems and southeasterly-trending fault and/or dike systems. Ore in fissure veins is associated with some of the southeast-striking structures and has been localized by the intersection of the northeast structures or by the formation of "cymoid loops" in the southeasterly-trending vein systems. In addition to the fissure veins, manto orebodies have been localized closely under or above the Eureka quartzite where it is intersected by the No. 1 dike fissure zone. Pipe-like high-grade orebodies are also known to occur near the No. 1 dike-fissure zone but the structural reason for the formation of this type of orebody is not yet clear.

Recent mapping of the surface of the Rossi property indicates that the structural pattern of southeast-striking structures filled with dike material and intersected with northeast-striking faults occurs as at the Cortez Silver Mine.

Alteration and Mineralization

Most of the dikes observed in the mine have been altered to a degree where most of the mafic minerals have been destroyed and many of the feldspar minerals have been decomposed to clay. Quartz grains and clay are often the only recognizable minerals remaining in some of the dikes. The dolomite host rock alteration in the vicinity of ore seems to consist of very slight bleaching and recrystallization of the dolomite associated with some introduced quartz, calcite and dolomite veinlets. In places the introduced quartz and carbonate form small blotches or blebs thus imparting a mottled appearance to the dark dolomite. The host rock is often criss-crossed with innumerable quartz-carbonate veinlets and in a few places it is brecciated. This alteration, although only a few feet wide, seems to be related to ore or mineralization, and may provide a guide for exploration in the dark dolomite. Dolomite found at some distance from orebodies shows no apparent alteration.

Mineralization in the old Cortez mine consists of fine-grained light gray or milky white quartz which in some places contains galena, sphalerite and tetrahedrite with silver values. Minerals derived from oxidation of the sulphides have been observed. Calcite is common

but its relationship to ore is doubtful. Zinkenite, bournonite, poylbasite and boulangerite were reported at greater depth in core from No. 1 diamond drill hole.

Silicification with silver, lead and copper mineralization has been found above the Eureka quartzite on the Rossi property. Dump samples from old workings contain as much as 20 ounces of silver per ton.

Conclusions

Our study of the Cortez Silver Mine indicates that there is an excellent chance of finding ore on the Arctic level along the strike of the No. 1 dike fissure, on the Hamburg-Eureka quartzite contact near the intersection with the No. 1 dike fissure; and along the No. 1 dike fissure at depth in the Eldorado dolomite. In addition, sufficient mineralization and structure has been found on the Rossi property to warrant a search for ore at the Hamburg-Eureka quartzite contact. A thorough exploration program should be conducted in these areas.

(f) Reasons for expecting to find ore by the proposed exploration project

1. Cortez Mine Arctic Level, Target 1-A and 1-C (Plate 2)

The No. 1 dike-fissure can be projected as a mappable unit to the Eureka quartzite. At all levels above the Arctic Level, this quartzite-fissure intersection has resulted in manto orebodies located under the quartzite. No evidence has been found to indicate that this will not recur at the Arctic level. The intersection of the Coleman fault with the No. 1 dike fissure may form an ore body which would be found while extending the Arctic level to the quartzite contact. The hanging wall side of the "cymoid loop" will be explored almost upon the start of drifting. This hanging wall may contain ore of grade and size equal to that found on the footwall leg. In addition, chances are good that another "cymoid loop" will be found between the present drift face and the Eureka quartzite. Past production records indicate an expected ore grade of at least 20 oz/T.Ag.

1-C not described

2. Cortez Mine - Target 1-B (Plate 6)

During 1963, a 1469-foot diamond drill hole was drilled near the portal of the No. 1 level to obtain stratigraphic information on the mine area. This hole showed the existence of favorable dolomite and limestone over its entire depth and, although no fossil evidence was found, stratigraphic correlation indicates that the hole penetrated the Hamburg dolomite, the Geddes limestone and bottomed in the Eldorado dolomite. This hole also indicated silver mineralization

in depth even though the values were not of ore grade.

The Eldorado dolomite was the most productive formation at Eureka, Nevada, and it may also prove to be an excellent host rock at Cortez. In this program it is proposed to drill a deep hole from an underground station to test the Eldorado on the down rake of favorable structures which apparently localized the Cortez orebodies. Should this drill hole yield encouraging results then two additional deep holes are proposed under a Stage II program.

3. Rossi Property, Target No. 2 (Plate 10)

Minor amounts of galena and oxidized copper minerals are found along the contact of the Eureka quartzite and Hansen Creek dolomite. This mineralization may be leakage through the quartzite from manto-type orebodies underlying the quartzite. The most likely place to locate these orebodies would be at the intersection of northeast-striking and southeast-striking structures. Three drill holes are programmed to penetrate through the quartzite to search for manto-type orebodies in the underlying Hamburg dolomite.

Sample locations and values taken by the Cortez Joint Venture are posted on the accompanying maps and assay certificates are enclosed. Also enclosed is a report written in 1922 with many sample values. Samples taken by the Cortez Joint Venture are chip samples.

(g) Engineering and Geologic Reports

The following engineering and geologic reports are attached:

Faick, J.N. - Preliminary Report "Economic Geology of the Cortez Mine" Cortez Joint Venture, June 30, 1964.

Bush, J.B. - Notes on Cortez Mine, Nevada, December 28, 1964.

Evans, H.J. - "Report on Results of Mine Sampling, Consolidated Cortez Silver Mines Company, Cortez, Nevada", October 20,1922.

ITEM 4. ACCESSIBILITY OF PROPERTY

(a) The person most likely to meet the O.M.E. representative is Robert G. Garwood. During the week he is stationed at Crescent Valley, Nevada, P.O.Box 73, phone Crescent Valley, No. 1, and on week ends at Elko, Nevada, 975 Panorama Drive, phone 738-5400. Crescent Valley, Nevada is located about 14 miles southwest of Beowawe, Nevada on a paved highway. The property is at Cortez about 24 miles southwest of Crescent Valley.

(b) The nearest rail shipping point is at Beowawe, Nevada, about 40 miles north of the property. Elko, the largest city in north-eastern Nevada, is about 80 miles distant by road.

ITEM 5. EXPLORATION WORK

(a) The Cortez Joint Venture proposes to test four exploration target areas in or near the old Cortez Silver Mine. These target areas, as indicated on the enclosed plans and sections (Plates 2, 6 and 10), are listed as follows:-

Exploration Target	Objective
1. Target 1-A	To test the easterly extension of the No. 1 dike-fissure zone and its intersection with the Eureka quartzite by drifting, crosscutting and short-hole diamond drilling on the Arctic level.
2. Target 1-B	To test the favorable Eldorado dolomite at the down-rake projection of the No. 1 dike-fissure zone and the known Cortez orebodies by deep down drilling from the Arctic level.
3. Target 1-C	To test the westerly extension of the No. 1 dike-fissure zone and its intersection with the Premium fault by drifting and short hole drilling on the Arctic level.
4. Target 2	To test for manto-type orebodies under the quartzite by surface drilling on the Rossi property.

One of these four target areas, Target 1-B, will be tested in two stages. The results of Stage I drilling for this target area will dictate the decision whether or not to proceed with Stage II.

Enclosed are the following maps, plans and sections showing location and extent of proposed work and target areas in addition to old workings and known geology:

	Map	Purpose
Plate 1	Plan Map of Area of Proposed Cortez Mine Exploration	Shows extent of claims, location of adits, roads and general property status.
Plate 2	Plan Map of Arctic Level 2 scales: 1" = 400' 1" = 100'	Shows workings and geology on Arctic level, target areas, necessary rehabilitation, proposed drifting and crosscutting, proposed horizontal and deep diamond drilling.

	Map	Purpose
Plate 3	Plan Map of No. 1 Level	Shows geology and quartzite-dolomite contact. Used to project structure and geology.
Plate 4	Plan Map of No. 6 Level	Same as above.
Plate 5	Composite Level Plan Map	Composite of almost all Cortez Mine levels.
Plate 6	Section A-A', Long Section of Cortez Mine	Shows stoped out orebodies, proposed drifting, deep drilling and target areas.
Plate 7	Section B-B', Cross Section through Cage Shaft. Section C-C', Cross Section through Arctic Raise.	Shows general dip of structures and location of Eldorado target area and deep drilling.
Plate 8	Section D-D', Cross Section through 2215 Shaft Section E-E', Cross Section through No. 1 Incline and Fitzgerald Region	Shows stoped out orebodies and general dip of structures.
Plate 9	Surface Geologic Map of Rossi Property	Shows surface geology, existing roads and proposed drill sites.
Plate 10	Sections of Rossi Property	Shows proposed surface drilling and target area.
Plate 11	Section F-F', Cross Section through Proposed Workings and Deep Drill Hole CU-13. Section G-G', Cross Section through Proposed Workings and Deep Drill Hole CU-14.	Shows proposed Stage II deep diamond drilling and target area.

The proposed exploratory work necessary to adequately test each one of the four above described target areas is discussed under the following work categories:

1. Mobilization, Rehabilitation, Drifting, Crosscutting and Raising:

Upon the mobilization of all necessary men, equipment and materials the first step in the underground exploration program is to rehabilitate the Arctic level. This will consist
1 A,B,C of: (a) laying 300 feet of track on the mine dump to provide for dump room and access to facilities; (b) a minor amount of

clean up and re-timbering of the Arctic level portal; and
1 A,B,C (c) laying 3,590 feet of mine track, water line and air line to the new working faces and to the proposed deep hole drill site. A minor amount of vent tubing may have to be installed but the major ventilation fans can be installed underground near the Arctic raise or a raise to the Fitzgerald area, both of which are open and are a source of good air.

After completion of the rehabilitation work drifting will start on the north branch of the No. 1 dike-fissure zone near coordinates N 21,680, E 39,590 as shown on the Arctic level
1 A map (Plate 2). It proposed to drift easterly along the No. 1 dike fissure and into the Eureka quartzite, a distance of approximately 1700 feet. It is intended to follow the bearing as indicated on the Arctic level map as closely as possible. However, in order to follow mineralized structures, it is requested that minor changes (up to 15°) in drift direction be allowed so long as the drift progresses to its final objective and terminates within the area outlined as Target 1-A
Prospect on the level plan (Plate 2). Drill stations, consisting of stub drifts about 15 feet long on each side of the drift, will be cut every 400 feet along the length of the drift as indicated on the level plan. Starting at a point in the drift
1A near the quartzite contact it is proposed to crosscut northerly and southerly for a total distance of 500 feet to explore for
Ore manto-type orebodies under the quartzite hanging wall.

In the west end of the mine it is proposed to test Target 1-C
1 C by 300 feet of drifting along the westerly extension of the No. 1 dike-fissure zone to its intersection with the Premium fault
1 C offset. Two 15-foot drill station stub drifts will be cut at the end of this drift.

In preparation for the Stage I underground deep hole drilling
1B a 40-foot raise is required to provide a drill station. If Stage II deep drilling is warranted then a 240-foot crosscut
Stage II 1B and two 40-foot raises will be required for additional drill stations.

X-cut to

The cross sectional dimensions of the existing horizontal headings vary in size from 5' x 7' to 7' x 8'. All new headings will be driven with a minimum cross section of 6' x 8'. All raises will be driven with 6' x 6' dimensions. No

2. Underground Short Hole Diamond Drilling

The possibility for the occurrence of paralleling ore struct-
Prospect 15'x ures will be tested by horizontal diamond drilling from stations spaced at 400-foot intervals along the No. 1 dike-fissure zone on the Arctic level. These holes will range from 200 to 450 Prospect ? feet in length. In the Target 1-A area it is also planned
1 A to extend the drift out into the quartzite for purposes of

establishing a drilling location from which to test, by down holes, for the down-dip extension of manto-type ore at the base of the quartzite. One inclined up hole is planned to test for up-dip extensions of ore at the base of the quartzite.

The short-hole drilling program entails a total of 11 holes with an aggregate footage of 2700 feet. Most of these will be started and completed in Bx size.

3. Underground Deep-Hole Diamond Drilling

Deep-hole down drilling from an underground station on the Arctic level is proposed to test for mineralization in the favorable underlying Eldorado dolomite at its projected intersection with favorable ore-controlling structures which are known in the mine area. The one and only Stage I deep hole is located so that it will penetrate the Eldorado - No. 1 dike-fissure intersection at a depth of 1800 feet. This hole can be drilled concurrently with the drifting program.

Contingent upon favorable results encountered in the first hole it is proposed to drill two additional deep holes (totalling 4400 feet) under a Stage II program. The locations of all proposed drill holes are plotted on the enclosed plan and section (Plates 2 and 6).

Stage I and II deep hole drilling will entail a total footage of 6200 feet. These holes will be started NXWL size and probably be bottomed in BXWL size.

4. Surface Diamond Drilling

A surface diamond drilling program consisting of three vertical holes is proposed to test the Rossi property for manto-type orebodies below the Eureka quartzite. Hole RS-1 would be drilled to a depth of 1100 feet to intersect a southeast structure projected to the underlying Hamburg dolomite. Hole RS-2, located south of the first hole, would be drilled to a depth of 900 feet to test the same target. At the south end of the property Hole RS-3 would be drilled to a depth of 1050 feet to test another structural intersection under the Eureka quartzite. Total proposed surface drilling is 3050 feet. All holes to be drilled in NXWL size with a reduction to BXWL if necessary. Drill hole locations are shown on the enclosed map and sections of the Rossi property (Plates 9 and 10).

The following tables summarize the proposed Stage I and Stage II exploration work:

STAGE I

	Item	Total Footage	Bearing	Size
1-A,B,C	Dump rehabilitation	300		
	Arctic level rehabilitation	3590		
1 C	Drift West of Arctic Rs.	300	N80W	6' x 8'
1 A	Drift East into Quartzite	1700	S65E	6' x 8'
1 A	Crosscut along Quartzite N & S	500	N7E-S7W	6' x 8' ?
Prospect 1 C	8 x 15 = 120 Horizontal Drill Stations 2 x 15 = 30	100 (150?)	N23E-S23W	6' x 8'
1 A	Raise at drill station	40	Vertical	6' x 6'
Prospect	DH Cu-1 (Horizontal)	200	S9W	BX to AX
	DH Cu-2 "	200	N9E	BX to AX
	DH Cu-3 "	450	North	BX to AX
	DH Cu-4 "	300	N15E	BX to AX
	DH Cu-5 "	200	S14W	BX to AX
	DH Cu-6 "	250	N14E	BX to AX
	DH Cu-7 "	200	S15W	BX to AX
	DH Cu-8 "	1 200 2000	N15E	BX to AX
1 A	DH Cu-9 + 45°	200	S65E	BX to AX
1 A	DH Cu-10 - 45°	250	N65W	BX to AX
1 A	DH Cu-11 Vertical down	1 250 2700	Vertical	BX to AX
1 B	DH Cu-12 Vertical	1800	Vertical	NXWL to BXWL
2	DH RS-1 (Rossi)	1100	Vertical	" "
2	DH RS-2 (Rossi)	900	"	" "
2	DH RS-3 (Rossi)	1050	"	" "

NB: Cu - Cortez Underground
Rs Rossi Surface

STAGE II

				1 800		
Stage II 1B	DH	Cu-13	Vertical	2,000	Vertical	NXWL to BXWL
	DH	Cu-14	Vertical	2,400	Vertical	NXWL to BXWL
				6 200 ✓		
Stage II 1B	Crosscut for drill station		N15E	240	N15E	6' x 8'
Stage II 1B	2 raises for drill station			80	Vertical	6' x 6'

Expected progress is as follows:

Project	Stage I Advance	Total Time
Mobilization and rehabilitation		10 weeks
Drifting - crosscutting	6' per shift	35 weeks
Drill stations	4' per shift	3 weeks
Raising	5' per shift	1 week
Horizontal drilling	30' per shift	9 weeks
Deep drilling	30'? per shift	5 weeks
Rossi drilling	20' per shift	13 weeks
		76

As some of the above listed work will overlap in time, the estimate of one year is felt to be adequate. + 6 mo. = 18 mo.?

Project	Stage II Advance	Total Time
Crosscut	5' per shift	3 weeks
Raising	5' per shift	2 weeks
Deep drilling	30' per shift	13 weeks

Total additional time to complete Stage II - 18 weeks. = 4½ mo.

(b) No access road are required. However, an allowance for road maintenance of $2880 is requested. ?

(c) If and when an O.M.E. contract is executed, work would commence immediately mobilizing contractors and equipment. During the program, a minimum of 2 shifts per day, 6 days a week should be worked (barring serious breakdown or severe weather conditions). It is anticipated that the Stage I program would be completed within one year's elapsed time from the date the contract is executed.

Part of Stage II, if warranted, could be done at the same time as Stage I. Probably both Stage I and Stage II programs can be completed in 15 months from the date the contract is executed. 18?

ITEM 6 EXPERIENCE

The Management Committee and the Amex technical staff available or actually working on this exploration project represent about three hundred man years of experience in all phases of exploration and mining. R. G. Garwood, who will probably be project supervisor, graduated from Montana School of Mines with a B.S. in Geological Engineering and has had experience as mine geologist for Umont Mining, Inc., at Butte, Montana, has worked three years for a consultant evaluating underground mines in north-central Montana; and in four years with Amex has had experience in operating underground mines, evaluating underground and pit mines and has been connected with, or in charge of, four rotary or diamond drilling programs.

ITEM 7 ESTIMATE OF COSTS

The Cortez Joint Venture intends to use independent contractors for the underground work and for all drilling. To this end, bids for the underground work and for the drilling were requested and the following firms submitted bids:

Mining

Ponderosa Development Company, Ltd.,
Boyles Bros. Drilling Co.
Centennial Development Co.

Drilling

E. J. Longyear Company
Sprague & Henwood, Inc.
Boyles Bros. Drilling Co.
Joy Manufacturing Company
Justice Core Drilling Co.

A copy of each bid is enclosed.

Supervision, geologic mapping, surveying, core logging and sampling will be performed by personnel of the Cortez Joint Venture.

Upon approval of this O.M.E. application, it is our intention to award the underground work to Ponderosa Development Company, Ltd. because they are the lowest bidder and it is believed that they can adequately complete the job to meet all standards and within a reasonable time. It is also our intention to award the drilling bid to E. J. Longyear Co. because our calculations show it to be the lowest bid submitted, that the work will be completed to the standards set forth and that the job will be completed without undue delay.

(a) Independent Contracts

Using the best bids, the following attached tables have been prepared showing total cost and cost per unit of the various contract items:

Table IV - Estimated Cost of Mobilization, Rehabilitation and Heading Advances.

Table V - Estimated Cost of Underground Short Hole Diamond Drilling.

Table VI - Estimated Cost of Underground Deep Hole Diamond Drilling.

Table VII - Estimated Cost of Surface Diamond Drilling.

Some of the items listed in the above tables are more fully explained as follows:

1. Moving Diamond Drill

It is estimated that it will require six hours to move the underground diamond drill from one drill station to another and complete a drill set up. With Longyear's cost of $5.80 per man hour and two men moving the drill, this cost is $69.00 per move. x 17 holes

2. Lost Casing

It is assumed that lost casing will average 10 feet per hole on the short holes and 150 feet on the deep holes. An average price of $2.00 per foot of casing is expected.

3. Cementing

It is estimated that cementing and drilling out cement will average one hour plus one sack of cement for each 50 feet of diamond drill hole. Therefore, cost per foot =

One hour @ $11.60
One sack @ $7.50
Cost per 50 feet = $19.10
Cost per foot = $0.38

TABLE IV

ESTIMATED COST OF MOBILIZATION, REHABILITATION AND HEADING ADVANCES

(based on Ponderosa Development bid)

ITEM	STAGE I Footage	STAGE I Cost/Ft.	STAGE I Total Cost		STAGE II Footage	STAGE II Cost/Ft.	STAGE II Total Cost
Mobilization			5,489.58				
Laying Dump Track	300	3.97	1,191.00				
Underground Rehabilitation	3,590	5.80	20,822.00	[illegible]			
Drifting West	300	43.50	13,050.00	includes Supv.			
Drifting East	1,700	43.50	73,950.00	" "			
Crosscutting	500	43.50	21,750.00	"	240	" 43.50	10,440.00
Raising	40	32.90	1,316.00		80	32.90	2,632.00
Drill Stations	100	42.60	4,260.00				
Timber Cost (Boyles bid est.)	125	22.50 ?	2,812.50		10	22.50	225.00
Rock Bolt Cost (Boyles bid est.)	100	7.50 ? [illegible]	750.00		5	7.50	37.50
Demobilization			1,800.00				
TOTAL COST:			147,191.08				13,334.50

TABLE V

ESTIMATED COST OF UNDERGROUND SHORT-HOLE DIAMOND DRILLING

(based on E.J. Longyear Co. bid)

Hole No.	Cost/Ft.		CU-1	CU-2	CU-3	CU-4	CU-5	CU-6	CU-7	CU-8	Quartzite CU-9	Quartzite CU-10	Quartzite CU-11	TOTAL
Total Depth of Hole			200	200	450	300	200	250	200	200	200	250	250	2700'
Footage Rates:	Dolomite	Quartzite												
0-200'	5.25	6.25	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	1050.00	525.00 625.00	1320.00	1320.00	12190.00
200-400'	5.50	6.60			1100.00	550.00		275.00				330.00	330.00	2585.00
400-600'	5.75	7.10			287.50									287.50
Mobilization		.099	19.80	19.80	44.50	29.70	19.80	24.75	19.80	19.80	19.80	24.75	24.75	267.50
Demobilization		.099	19.80	19.80	44.50	29.70	19.80	24.75	19.80	19.80	19.80	24.75	24.75	267.50
Moving onto Hole 6 hrs./hole @ $11.60/hr.				69.60	69.60	69.60	69.60	69.60	69.60	69.60	69.60	69.60	69.60	696.00
Lost Casing - 10ft./hole @ $2.00/ft.			20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	220.00
Cementing		.38	76.00	76.00	171.00	114.00	76.00	95.00	76.00	76.00	76.00	95.00	95.00	1026.00
Compressed Air		.60	120.00	120.00	270.00	180.00	120.00	150.00	120.00	120.00	120.00	150.00	150.00	1620.00
Total Cost			1305.60	1375.20	3057.10	2043.00	1375.20	1709.10	1375.20	1375.20	1475.20	2034.10	2034.10	19159.50

TABLE VI

ESTIMATED COST OF UNDERGROUND DEEP-HOLE DIAMOND DRILLING

(based on E.J. Longyear Co. bid)

		Stage I		Stage II	
Hole No.	Cost/Ft.	Cu-12	Cu-13	Cu-14	Total
Total Depth of Hole		1800'	2000	2400	4400
Footage Rates:					
NXWL: 0-250	5.50	1375.00	1375.00	1375.00	2750.00
250-500	5.75	1437.50	1437.50	1437.50	2875.00
500-750	6.35	1587.50	1587.50	1587.50	3175.00
750-1000	7.10	1775.00	1775.00	1775.00	3550.00
BXWL: 1000-1250	6.35	1587.50	1587.50	1587.50	3175.00
1250-1500	6.85	1712.50	1712.50	1712.50	3425.00
1500-1750	7.60	1900.00	1900.00	1900.00	3800.00
1750-2000	8.60	430.00	2150.00	2150.00	4300.00
2000-2250	9.70			2425.00	2425.00
2250-2500	10.90			1635.00	1635.00
Mobilization		415.00			
Demobilization		415.00			
Moving onto hole -12 hrs/hole @ $11.60/hr.			139.20	139.20	278.40
Lost Casing - 150 ft/hole @ $2.00/ft		300.00	300.00	300.00	600.00
Cementing	.38	684.00	760.00	912.00	1672.00
Mud and Lost Circulation Materials	.44	792.00	880.00	1056.00	1936.00
Compressed Air	.60	1080.00	1200.00	1440.00	2640.00
TOTAL COST		15491.00	16804.20	21432.20	38236.40

TABLE VII

ESTIMATED COST OF SURFACE DIAMOND DRILLING

(based on E.J. Longyear Co. bid)

Hole No.			RS-1	RS-2	RS-3	TOTAL
Total Depth of Hole			1,100'	900	1,050	3,050
Footage Rates:	Dolomite*	Quartzite*				
NXWL 0-250'	5.75	7.45	1,437.50	1,650.00	1,437.50	4,525.00
250-500	6.00	7.95	1,792.50	1,987.50	1,890.00	5,670.00
500-750	6.35	8.60	2,150.00	2,037.50	2,150.00	6,337.50
750-1000	6.85	9.60	2,125.00	1,027.50	1,987.50	5,140.00
1000-1250	7.35	10.60	735.00		367.50	1,102.50
Mobilization		.21	234.00	191.00	222.50	647.50
Demobilization		.21	234.00	191.00	222.50	647.50
Moving onto Hole - 4 hrs/hole @ $11.60/hr.				46.40	46.40	92.80
Lost Casing - 150 ft/hole @ $2.00/ft.			300.00	300.00	300.00	900.00
Cementing		.38	418.00	342.00	399.00	1,159.00
Mud and Lost Circulation Materials		.44	484.00	396.00	462.00	1,342.00
Water Cost		.42	462.00	378.00	441.00	1,281.00
TOTAL COST			10,372.00	8,546.90	9,925.90	28,844.80

* RS-1 : 0-350' (dolomite); 350'-900'(quartzite); 900'-1100' (dolomite)

RS-2 : 0-125' (dolomite); 125'-700' (quartzite); 700'-900' (dolomite)

RS-3 : 0-300' (dolomite); 300'-850' (quartzite); 850'-1050' (dolomite)

4. Mud and Lost Circulation Materials

It is expected that no mud or lost circulation materials will be used on the short horizontal drill holes. It is expected that mud will be used on the deep drill hole at a comparable cost as experienced on the No. 1 drill hole which was 44¢ per foot of hole drilled.

5. Compressed Air Supply

Based on E. J. Longyear's bid the cost of compressed air for underground drilling is calculated thus:

Rental on air compressor for 8 months @ $600 =	$4800
Mobilization and Demobilization of compressor=	200
Total compressed air cost =	$5000

Cost/foot of underground drilling = $\frac{\$5000}{7900'}$ = $0.60/ft

6. Water Supply

For surface drilling the Contractor is responsible for supplying his own water at the following charge:

Truck Rental @ $250/month	= $4.80/shift
Mileage: 24 miles/shift (2 loads) @ 15¢/mile	= 3.60/shift
Total	= $8.40/shift

Cost/foot (@ 20'/shift) = $0.42

(b) Personal Services

The Managing Coventurer of the Cortez Joint Venture has an amply qualified technical staff. Therefore, Amex will provide all the supervisory, technical and non-technical personnel (excluding Contractor's personnel) to manage this exploration project. It is not expected to hire any outside consultants for this project.

The following Amex personnel will be required on this project:

1. One Supervisor - Geologist-Engineer

Duties - Managing and coordinating the entire program and assisting in geologic mapping surveying and logging drill core.

Cost - Stage I = 11 months @ $800/month = $8800
Stage II = 2 months @ $800/month = $1600

2. One Geologist-Engineer

Duties - Geologic mapping, surveying, logging drill core and assisting supervisor.

all on actual costs

Cost - Stage I : 11 months @ $625/month = $6875
Stage II: 2 months @ $625/month = $1250

(Should the program be accelerated to three shifts per day, it may be necessary to have two men with either engineering or geological training to assist the supervisor.)

3. One Sampler

Duties - Sampling underground headings and assisting with drill core sampling.

Cost - Stage I = 228 days @ $21.66/day = $4938.48

4. One Sampler-Core Splitter

Duties - Sampling and splitting drill cores.

Cost - Stage I=90 days @ $21.66/day = $1949.40
Stage II=52 days @ $21.66/day = $1126.32

(c) Operating Materials and Supplies

1. Water

The Cortez Joint Venture intends to supply water for the underground drilling and mining program. It is assumed that one water haul per day will supply all mining requirements until underground drilling begins. Then, from past experience of high water loss, it will be necessary to make at least three water truck hauls per shift to keep the drill supplied with water. It is assumed that men working on other jobs can drive the water truck until the drilling starts. After that, a water truck driver will be required for each shift. One round trip from the mine to the water source is about ten miles. For surface drilling the drill contractor will supply his own water.

Mining Water Cost: Assume one load per day, six days per week for project life of 40 weeks;
Amex water truck rental @ 25¢/mile

how long to dump?

∴ 10 miles x 25¢ x 6 days x 40 weeks = $600 for total mining water cost.

Underground Drilling Water Cost: Assume one water truck driver per shift (3 men in triple shift) and three hauls per drill shift:

∴ Mileage 30 x 25¢ = $ 7.50
Driver's Wages (include P.T.& I.) 23.40
Total - $30.90

Cost per foot (@ 30' per shift) = $ 1.03

Total: Stage I - 4500 ft. @ $1.03/ft = $4,635.00
Stage II - 4400 ft. @ $1.03/ft = $4,532.00

(d) Operating Equipment

Major items of equipment will be furnished by the independent contractors as per the enclosed mining and drilling bids.

Amex will supply a G.M.C. 6x6 truck for hauling water rented to the Cortez Joint Venture at 25¢ per mile; one 1957 Jeep wagon and one 1964 Jeep wagon, both rented at 15¢ per mile, and one 1964 Chevrolet ½-ton pick-up rented at 10¢ per mile.

why?

1. Transportation of Personnel & Supplies

Stage I

Mileage per vehicle day = 70 miles
Total Mileage = 70x240 days = 16,800 miles
2 Jeeps @ 15¢/mile=2x16,800x0.15 = $5,040.00 ?
1 Pick-up @ 10¢/mile = 16,800x0.10=$1,680.00

rental if owned by Cortez

Total Transportation Cost $6,720.00

Stage II

Mileage per vehicle day = 70 miles
Total Mileage = 70x29 days = 2,030 miles
2 Jeeps @ 15¢/mile=2x2030x0.15 = $ 609.00
1 Pick-up @ 10¢/mile=2030x0.10 = 203.00
$ 812.00

(e) Initial Rehabilitation of Existing Buildings, etc.

There is no initial rehabilitation or repairs of existing buildings, fixtures or installations. Mine and dump rehabilitation is covered under (a) Independent Contracts.

(f) New Buildings, Fixtures or Installations, etc.

No new buildings, fixtures or installations or improvements to existing structures are to be provided for this project.

(g) Miscellaneous:

The cost of repairs and maintenance of the vehicles listed in 7 (d) is included in the mileage rates of 25¢/mile for the G.M.C. 6 x 6 truck, 15¢/mile for the two Jeeps and 10¢/mile for the ½-ton pickup.

The costs of assaying, sample sacks, freight on samples, core boxes, accounting, reproductions, road maintenance, supervisor's expenses, geologist's expenses, payroll taxes and employees' liability insurance (excluding Contractor's personnel) are itemized as follows:

1. Assaying:

Samples for assay will be taken from all diamond drill cores and new heading faces. All samples will be assayed for gold and silver at a cost of $2.50 per sample. Samples will be sent to Union Assay Office in Salt Lake City, Utah.

From the drill holes it is expected that samples will be cut every 10 feet. From the new underground headings it is expected that one chip face sample and one car sample will be taken for each 6-foot drift round. If a heading or a drill hole is being driven or drilled through barren ground then the amount of samples taken for assay would obviously be reduced.

Use Actual cost ?

The maximum number of samples that may be taken for assay is calculated as follows:

Stage I:

Drill Core Samples = $\frac{7550}{10}$ ft. = 755 assays

Cost of drill core assays = 755 x $2.50 = $1,887.50

Face and Car Samples = $\frac{2640}{6}$ ft. x 2 = 880 assays

Cost of heading assays = 880 x $2.50 = $2,200.00

Stage II:

Drill Core Samples = $\frac{4400}{10}$ ft. = 440 assays

Cost of drill core assays = 440 x $2.50 = $1,100.00

Face and Car Samples = $\frac{320}{6}$ ft. x 2 = 106 assays

Cost of heading assays = 106 x $2.50 = $265.00

2. Sample Sacks

Plastic sample sacks cost 3¢ per sack.

Stage I:

Cost of sample sacks = 1635 samples x 3¢ = $49.05

Stage II:

Cost of sample sacks = 546 samples x 3¢ = $16.38

3. Freight on Samples

Shipping charges on samples sent to Salt Lake City are based on postal rates of 10¢ per pound with each sample weighing approximately ½ pound.

Stage I:

Cost of freight on samples = 1635 x 5¢ = $81.75

Stage II:

Cost of freight on samples = 546 x 5¢ = $27.30

4. Core Boxes

Cardboard core boxes cost $1.00 per box. Each box will hold 10 feet of core.

Stage I:

Cost of core boxes = $\frac{7550}{10}$ ft. x $1.00 = $755.00

Stage II:

Cost of core boxes = $\frac{4400}{10}$ ft. x $1.00 = $440.00

5. Accounting

The cost of accounting applicable to this project is based on an estimate of $70.00 per month.

Stage I:

Cost of accounting: 11 months @ $70.00 = $770.00

Stage II:

Cost of accounting: 2 months @ 70.00 = $140.00

6. Prints, Reproductions and Reports

The costs of prints, etc. applicable to this project are based on an estimate of $50.00 per month.

Stage I:

Cost of prints etc.: 11 months @ $50.00 = $550.00

Stage II:

Cost of prints etc.: 2 months @ $50.00 = $100.00

7. Road Maintenance

Access roads to the property will require some maintenance including snow removal during winter months. An estimate of 180 hrs. of bulldozer operations is included herein.

Stage I:

Bulldozer operations: 180 hrs.@ $16.00/hr.= $2,880.00

8. Supervisor's Expenses

The supervisor's and geologist's expenses, including communications costs, are based on an average of such field expenses incurred on other similar projects.

Stage I:

15x22=$330

? Supervisor's Expenses: 11 mos. @ $200/mo. = $2,220.00

O'head Geologist's Expenses: 11 mos. @ $100/mo. = $1,100.00

Stage II:

? Supervisor's Expenses: 2 mos. @ $200/mo. = $ 400.00

" Geologist's Expenses: 2 mos. @ $100/mo. = $ 200.00

9. Payroll Taxes and Liability Insurance

The cost of payroll taxes etc. on salaries and wages and liability insurance (excluding Contractors' personnel) is based on 18% of total earnings.

Stage I:

Total Earnings of Amex Personnel = $22,562.88
Payroll Taxes & Insurance = 18% of $22,562.88 = $4,061.32

Stage II:

Total Earnings of Amex Personnel = $3,976.32
Payroll Taxes & Insurance = 18% of $3,976.32 = $715.74

SUMMARY OF ESTIMATE OF COSTS

Stage I:

(a) Independent Contracts

1. Mining Contract: (Table IV)

Mobilization and Demobilization (Lump Sum)	= $7,289.58	
Laying 300 ft. of dump tract @ $3.97/ft.	= 1,191.00	
Rehabilitation of 3590 ft. of workings @ $5.80/ft.	= 20,822.00	
Drifting 2,000 ft. @ $43.50/ft.	= 87,000.00	
Crosscutting 500 ft. @ $43.50/ft.	= 21,750.00	
Raising 40 ft. @ $32.90/ft.	= 1,316.00	
Drill Stations 100 ft. @ $42.60/ft.	= 4,260.00	
Timber Costs: 125 ft. @ $22.50/ft.	= 2,812.50	
Rock Bolt Costs: 100 ft. @ $7.50/ft.	= 750.00	
Total Mining Contract Cost	=	$147,191.08

2. Drilling Contract:

Underground Short-Hole Diamond Drilling: (Table V)

Mobilization and Demobilization, 1 drill	$ 535.00	
2700 ft. of core drilling	15,062.50	
Moving Drill:		
6 hrs/drill move @ $11.60/hr=$69.60		
10 drill moves @ $69.60/move	= 696.00	
Lost Casing:		
10 ft/hole @ $2.00/ft. =$20.00		
11 holes @ $20.00/hole	= 220.00	
Cementing:		
2700 feet @ 38¢/ft.	= 1,026.00	
Compressed Air:		
2700 feet @ 60¢/ft.	= 1,620.00	
Total Underground Short-Hole Drilling	=$19,159.50	

Underground Deep-Hole Diamond Drilling: (Table VI)

Mobilization and Demobilization, 1 drill	$ 830.00	
1800 feet of core drilling	11,805.00	
Lost Casing:		
150 ft. @ $2.00/ft.	= 300.00	
Cementing:		
1800 feet @ 38¢/ft.	= 684.00	
Mud and Lost Circulation Materials:		
1800 ft. @ 44¢/ft.	= 792.00	
Compressed Air:		
1800 ft. @ 60¢/ft.	= 1,080.00	
Total Underground Deep-Hole Drilling	=$15,491.00	

Surface Diamond Drilling: (Table VII)

Mobilization and Demobilization, 1 drill		$1,295.00
3050 feet of core drilling		22,775.00
Moving Drill:		
4 hrs/drill move @ $11.60/hr.=$46.40=		
2 drill moves @ $46.40/move	=	92.80
Lost Casing:		
150 ft./hole @ $2.00/ft. =$300.00		
3 holes @ $300/hole	=	900.00
Cementing:		
3050 feet @ 38¢/ft.	=	1,159.00
Mud and Lost Circulation Materials:		
3050 feet @ 44¢/ft.	=	1,342.00
Water Supply:		
3050 feet @ 42¢/ft.	=	1,281.00
Total Surface Diamond Drilling	=$28,844.80	
Total Drilling Contract Cost	=	$63,495.30

(b) Personal Services

1. One Supervisor-Geologist-Engineer: 11 months @ $800/month	$8,800.00	
2. One Geologist-Engineer: 11 months @ $625/month	6,875.00	
3. One Sampler 228 days @ $21.66/day spent all arms?	4,938.48	
4. One Sampler-Core Splitter 90 days @ $21.66/day	1,949.40	
Total Personal Services Costs		$22.562.88

(c) Operating Materials and Supplies

1. Water:		
Mining Water Cost	$ 600.00	
Underground Drilling Water Cost 4500 feet @ $1.03	4,635.00	
Total Operating Materials and Supplies Cost		$ 5,235.00

(d) Operating Equipment

1. Transportation of Personnel and Supplies		
? Two Jeeps: 33,600 miles @ 15¢/mile	= 5,040.00	
? One Pick-up: 16,800 miles @ 10¢/mile	= 1,680.00	
Total Operating Equipment Cost		$ 6,720.00

(g) Miscellaneous

1. Assaying:
   Drill Core Assays: 755 @ $2.50/assay= $1,887.50
   Mine Assays: 880 @ $2.50/assay= 2,200.00

2. Sample Sacks: 1635 @ 3¢/sack = 49.05

3. Freight on Samples: 1635 @ 5¢/sample = 81.75

4. Core Boxes: 755 @ $1.00/box = 755.00

5. Accounting: 11 months @ $70.00/mo. = 770.00

6. Prints, Reproductions, Reports:
   11 months @ $50.00/mo. = 550.00

7. Road Maintenance: incl snow removal
   180 hrs. @ $16.00/hr. = 2,880.00

8. Supervisor's and Geologist's Expenses:
   Supervisor-11 months @ $200.00/mo. = 2,200.00
   why? Geologist -11 months @ $100.00/mo. = 1,100.00

9. Payroll Taxes and Liability Insurance:
   Total Earnings (see (b)):$22,562.88 @
   18% = 4,061.32

Total Miscellaneous Costs $16,534.62

Total Stage I Cost:- $261,738.88

Stage II

(a) Independent Contracts

1. Mining Contract: (Table IV)

Crosscutting - 240 ft. @ $43.50/ft.	=	$10,440.00	
Raising - 80 feet @ $32.90/ft.	=	2,632.00	
Timber Costs - 10 feet @ $22.50/ft	=	225.00	
Rock Bolt Costs - 5 feet @ $7.50/ft.	=	37.50	
Total Mining Contract Cost	=		$13,334.50

2. Drilling Contract:

Underground Deep-Hole Diamond Drilling: (Table VI)

4400 ft. of core drilling	=	$31,110.00	
Moving Drill:			
12 hrs./ drill move @ $11.60/hr. = $139.20			
2 drill moves @ $139.20/move	=	278.40	
Lost Casing:			
150 ft./hole @ $2.00/ft. =$300.00			
2 holes @ $300.00/hole	=	600.00	
Cementing:			
4400 feet @ 38¢/ft.	=	1,672.00	
Mud and Lost Circulation Materials:			
4400 feet @ 44¢/ft.		1,936.00	
Compressed Air:			
4400 ft. @ 60¢/ft.		2,640.00	
Total Underground Deep Hole Drilling		$38,236.40	
Total Drilling Contract Cost			$38,236.40

(b) Personal Services

1. One Supervisor-Geologist Engineer: 2 months @ $800/month	=	$ 1,600.00	
2. One Geologist-Engineer: 2 months @ $625/month	=	1,250.00	
3. One Sampler-Core Splitter 52 days @ $21.66/day	=	1,126.32	
Total Personal Services Cost			$ 3,976.32

(c) Operating Materials and Supplies

1. Underground Drilling Water Cost
   4400 feet @ $1.03/ft. = $ 4,532.00

Total Operating Materials and Supplies = $4,532.00

(d) Operating Equipment

1. Transporation of Personnel and Supplies
   Two Jeeps: 4,060 miles @ 15¢/mile = $ 609.00
   okay One Pick-up: 2,030 miles @ 10¢/mile = 203.00

Total Operating Equipment Cost $ 812.00

(g) Miscellaneous

1. Assaying:
   Drill Core Assays: 440 @ $2.50/assay = $ 1,100.00
   Mine Assays: 106 @ $2.50/assay = 265.00

2. Sample Sacks: 546 @ 3¢/sack = 16.38

3. Freight on Samples: 546 @ 5¢/sample = 27.30

4. Core Boxes: 440 @ $1.00/box = 440.00

5. Accounting: 2 months @ $70.00/mo. = 140.00

6. Prints, Reproductions and Reports:
   2 months @ $50.00/mo. = 100.00

7. Road Maintenance - None.

8. Supervisor's and Geologist's Expenses:
   Supervisor - 2 months @ $200.00/mo. = 400.00
   Geologist - 2 months @ $100.00/mo. = 200.00

9. Payroll Taxes and Liability Insurance:
   Total Earnings (see (b)): $3,976.32 @ 18% = 715.74

Total Miscellaneous Costs = $3,404.42

Total Stage II Cost = $64,295.64

The application consists of two stages with Stage II in sequence but contingent on the results of Stage I. The total amount of the application is thus:

Stage I	-	$261,738.88
Stage II	-	64,295.64
TOTAL:	-	$326,034.52

326,000
81,500
245,500
± ¼ million
= 5 and 1/2 mil
250,000 tons

The Cortez Joint Venture, by

American Exploration & Mining Co.

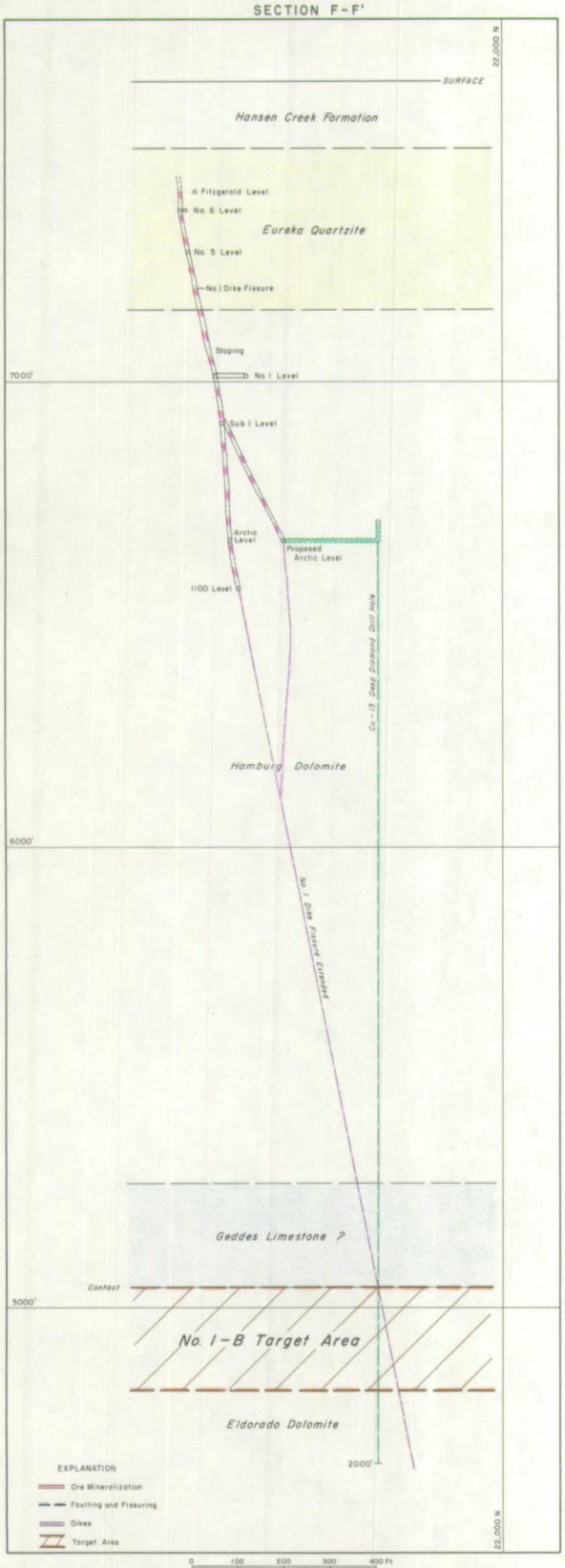
Managing Coventurer

R. G. Garwood pp. J. Birdwell
R. G. Garwood, Geological Engineer

J. B. Bush
J. B. Bush, Chief Geologist

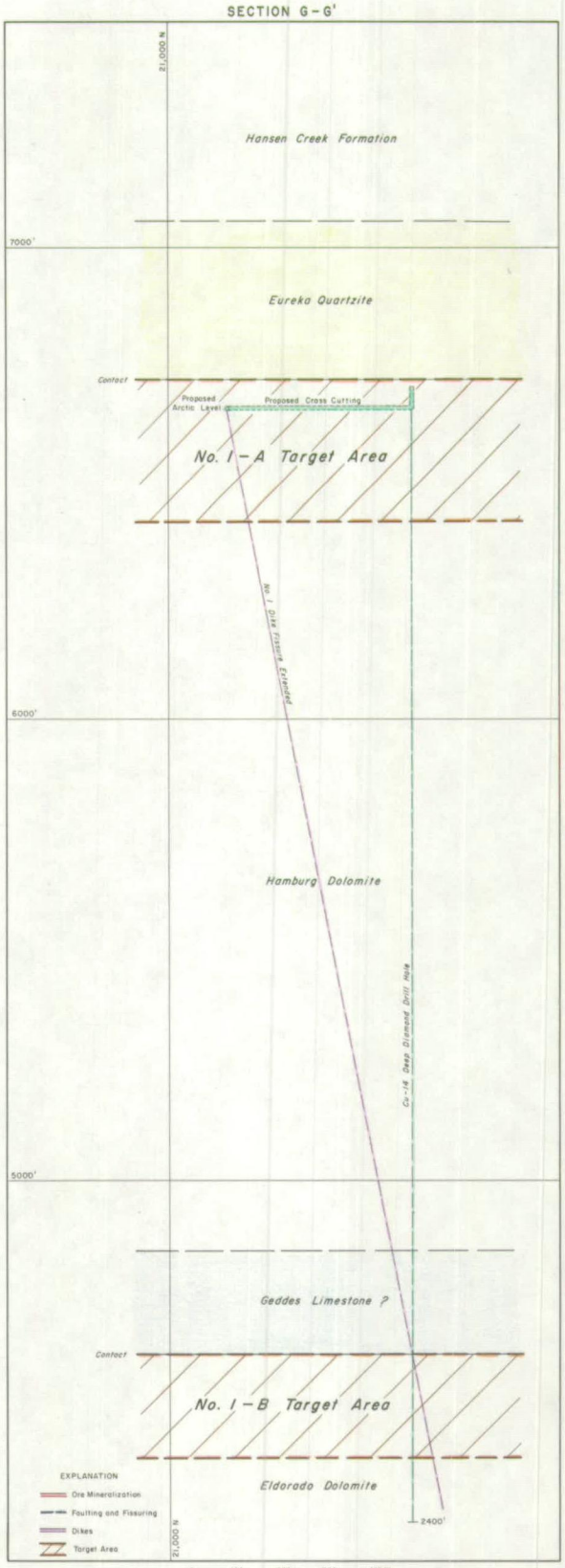
RGG,JBB:jb,gf

SECTION F-F'



CORTEZ JOINT VENTURE
CROSS SECTION THROUGH PROPOSED
DEEP DIAMOND DRILL HOLE Cu-13 (Stage II)
N 24° E, Looking Northwest

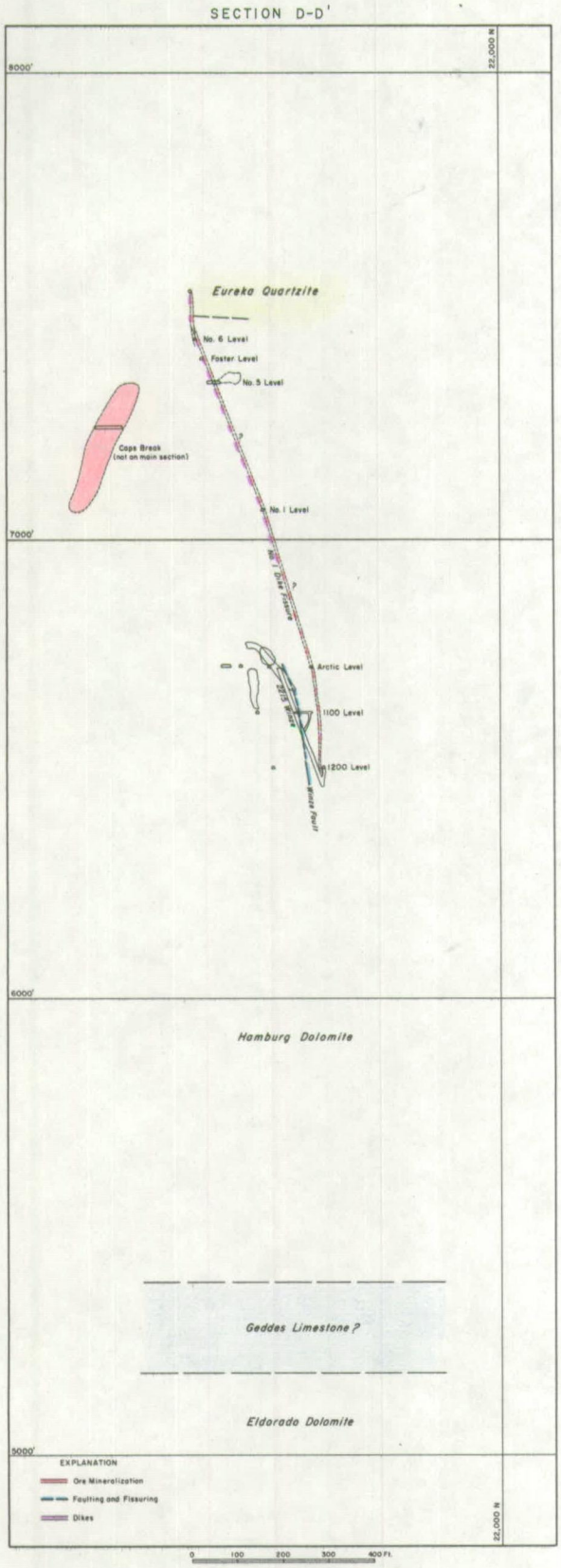
SECTION G-G'



CORTEZ JOINT VENTURE
CROSS SECTION THROUGH PROPOSED
DEEP DIAMOND DRILL HOLE Cu-14 (Stage II)
N 7° E, Looking Northwest

PLATE II

SECTION D-D'

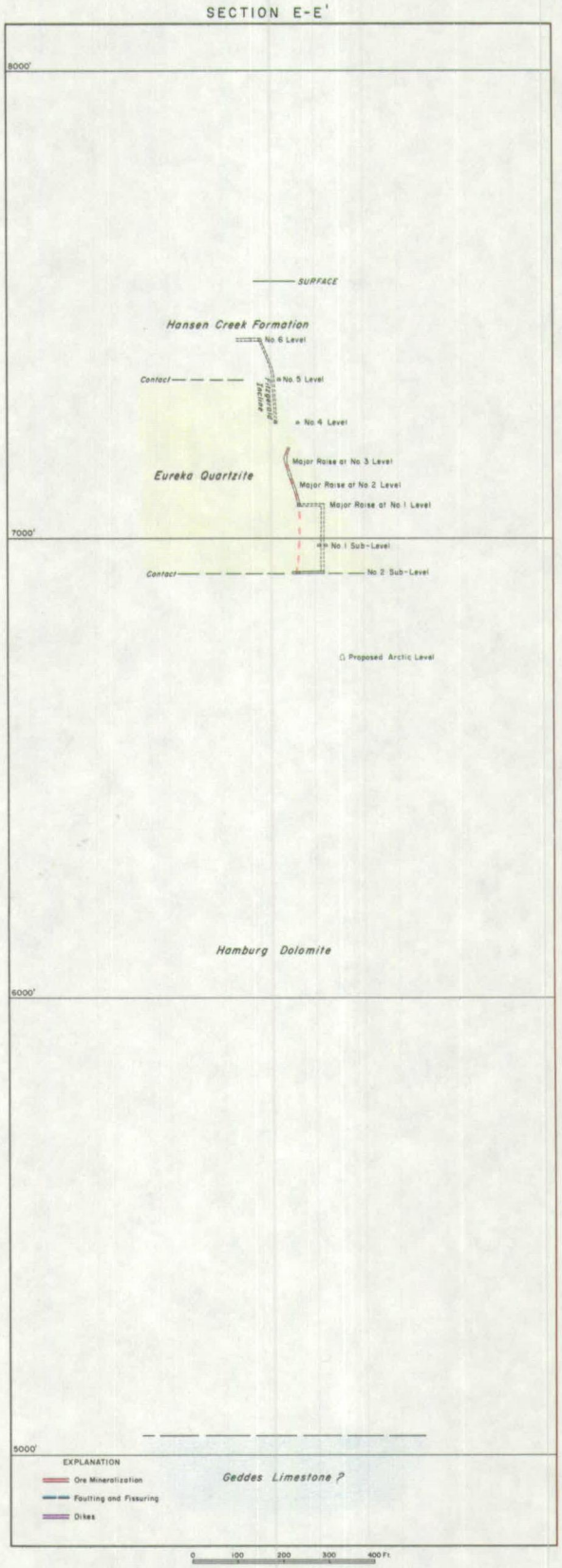


CORTEZ JOINT VENTURE

CROSS SECTION THROUGH 2215 SHAFT

N 43° E, Looking Northwest

SECTION E-E'



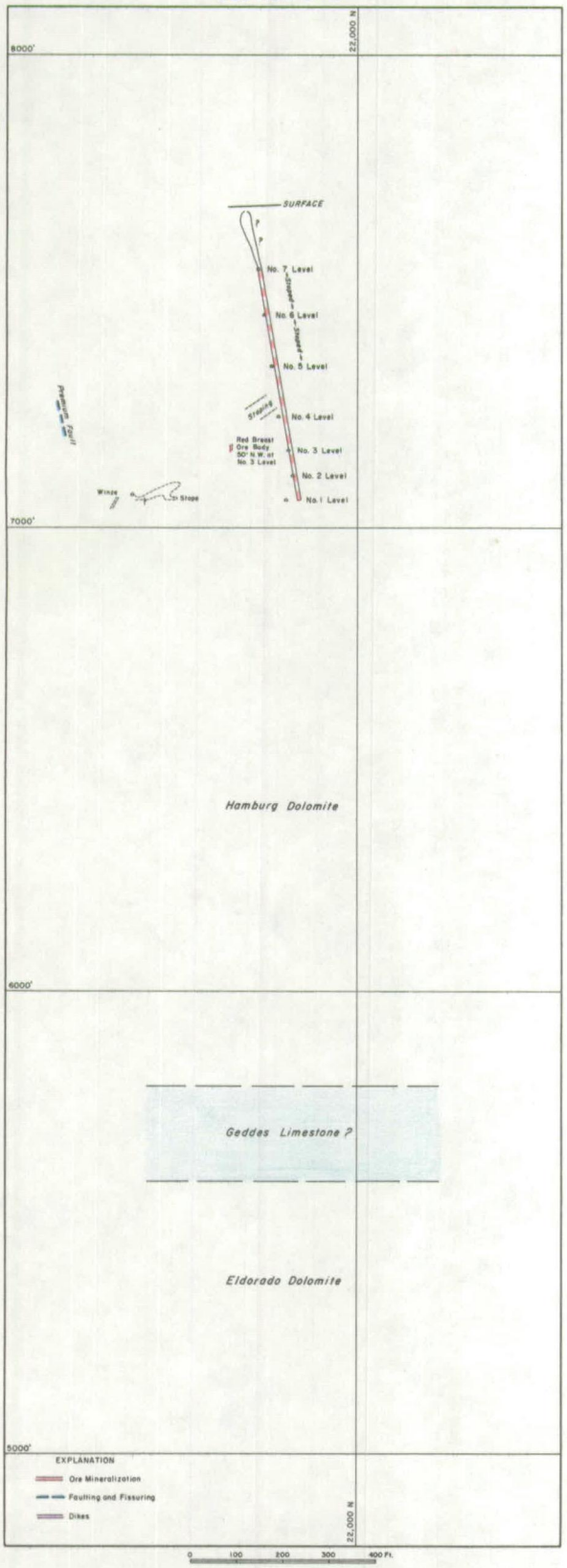
CORTEZ JOINT VENTURE

CROSS SECTION THROUGH NO. 1 INCLINE REGION AND FITZGERALD REGION

N 15° E, Looking Northwest

PLATE 8

SECTION B-B'

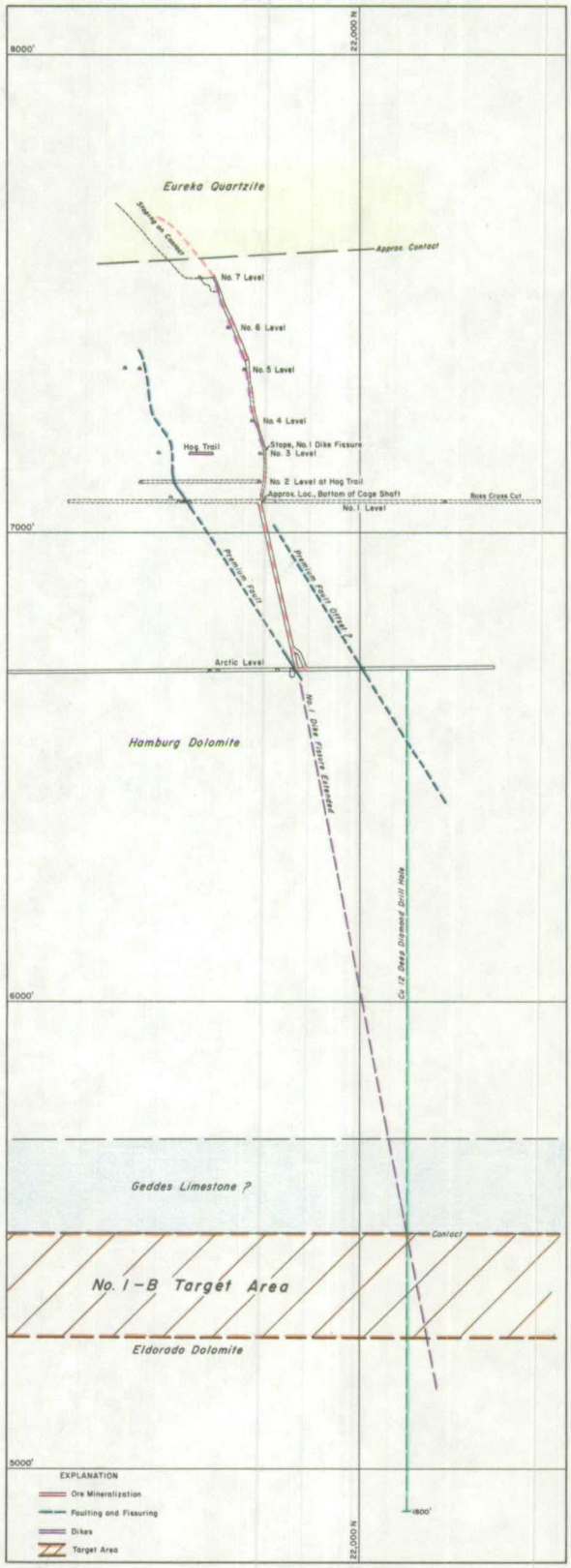


CORTEZ JOINT VENTURE

CROSS SECTION THROUGH CAGE SHAFT

N 18° E, Looking Northwest

SECTION C-C'



CORTEZ JOINT VENTURE

CROSS SECTION THROUGH ARCTIC RAISE

N 17° E, Looking Northwest

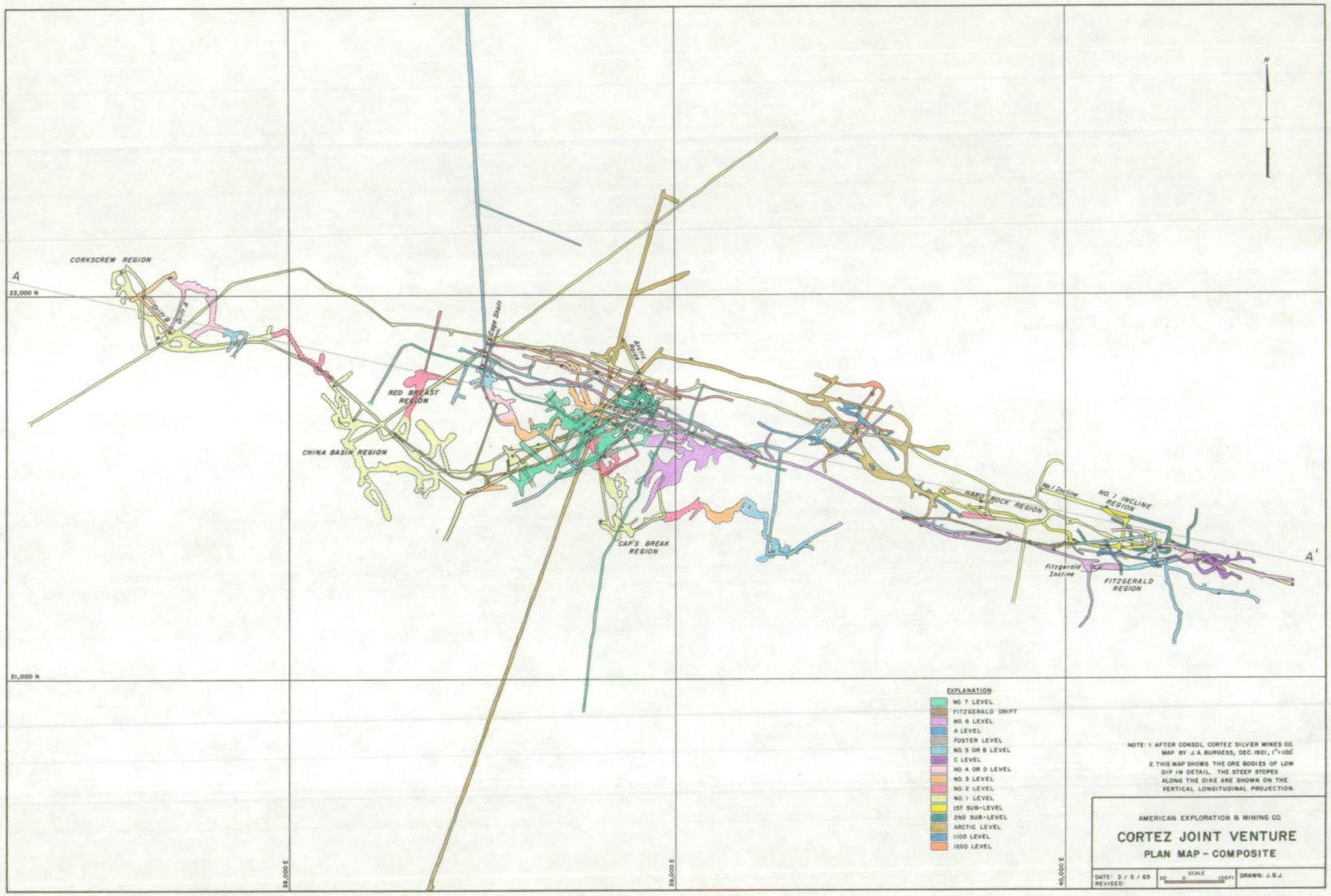

CORKSCREW REGION
A
22,000 N
Shaft B
Shaft A
RED BREAST REGION
CHINA BASIN REGION
Cow Shaft
Arctic Raise
CAP'S BREAK REGION
HARD ROCK REGION
No. 1 Incline
NO. 1 INCLINE REGION
Fitzgerald Incline
FITZGERALD REGION
A'
21,000 N
38,000 E
39,000 E
40,000 E
N
EXPLANATION
NO. 7 LEVEL
FITZGERALD DRIFT
NO. 6 LEVEL
A LEVEL
FOSTER LEVEL
NO. 5 OR B LEVEL
C LEVEL
NO. 4 OR D LEVEL
NO. 3 LEVEL
NO. 2 LEVEL
NO. 1 LEVEL
1ST SUB-LEVEL
2ND SUB-LEVEL
ARCTIC LEVEL
1100 LEVEL
1200 LEVEL
NOTE: 1. AFTER CONSOL. CORTEZ SILVER MINES CO. MAP BY J.A. BURGESS, DEC. 1921, 1"=100'.
2. THIS MAP SHOWS THE ORE BODIES OF LOW DIP IN DETAIL. THE STEEP STOPES ALONG THE DIKE ARE SHOWN ON THE VERTICAL LONGITUDINAL PROJECTION.
AMERICAN EXPLORATION & MINING CO.
CORTEZ JOINT VENTURE
PLAN MAP - COMPOSITE
DATE: 3 / 5 / 65
REVISED:
SCALE
50 0 100 FT.
DRAWN: J.B.J.

PLATE 5

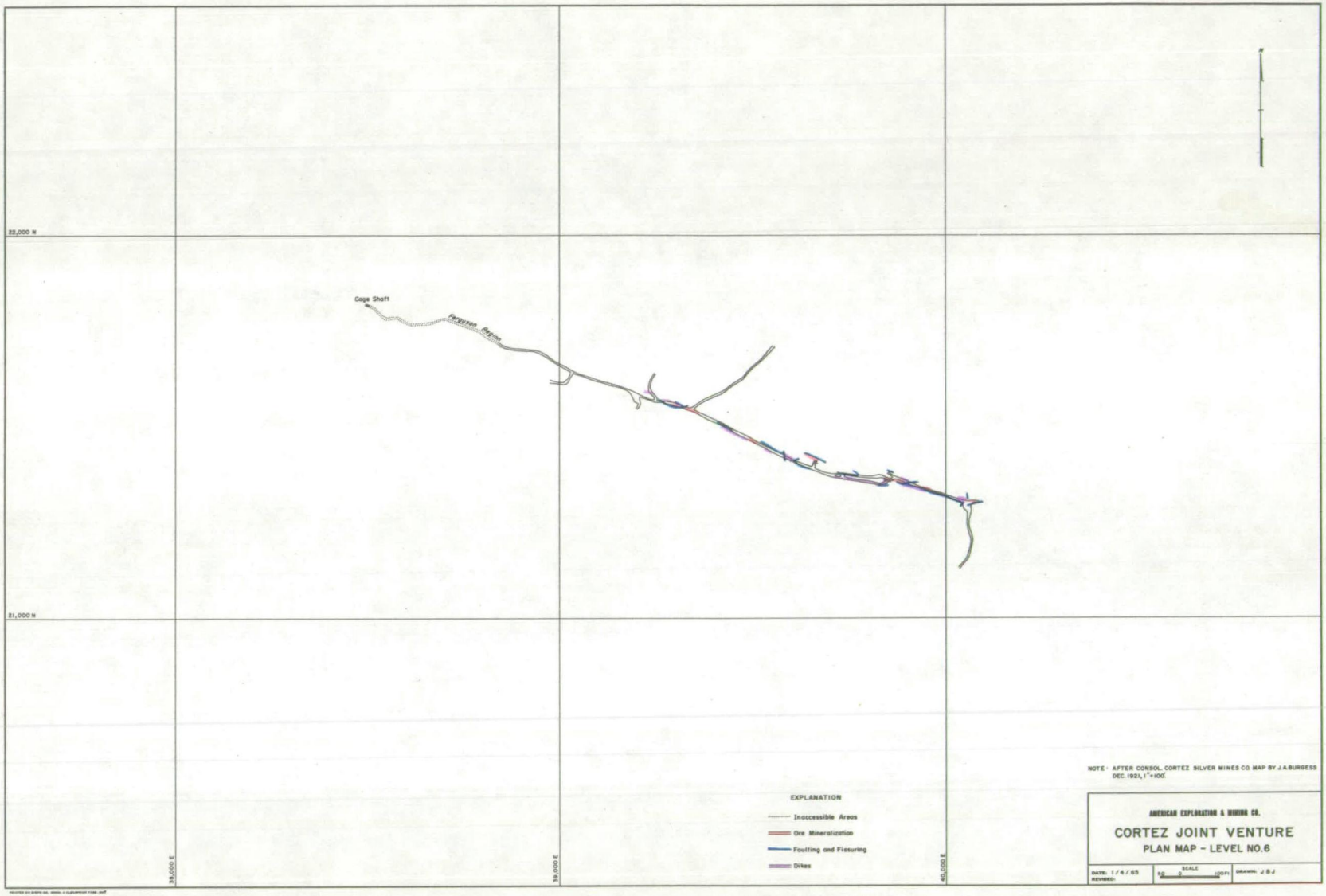

22,000 N
21,000 N
38,000 E
39,000 E
40,000 E
Cage Shaft
Ferguson Region
EXPLANATION
Inaccessible Areas
Ore Mineralization
Faulting and Fissuring
Dikes
NOTE: AFTER CONSOL. CORTEZ SILVER MINES CO. MAP BY J.A.BURGESS DEC. 1921, 1" = 100'.
AMERICAN EXPLORATION & MINING CO.
CORTEZ JOINT VENTURE
PLAN MAP - LEVEL NO.6
DATE: 1/4/65
REVISED:
SCALE
50 0 100 FT.
DRAWN: J.B.J.

PLATE 4

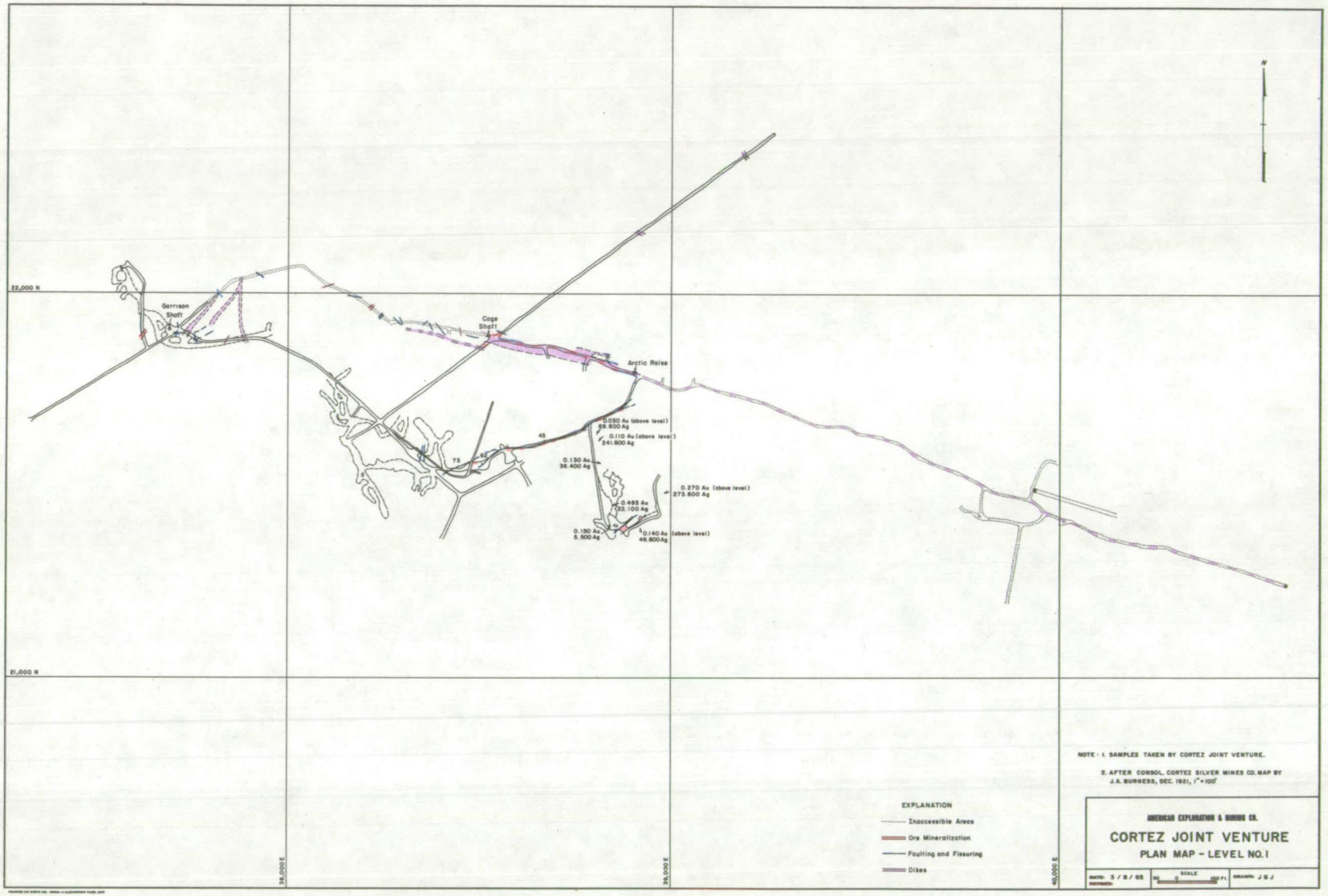

22,000 N
21,000 N
38,000 E
39,000 E
40,000 E
Garrison Shaft
Cage Shaft
Arctic Raise
0.030 Au (above level)
59.800 Ag
0.110 Au (above level)
241.800 Ag
0.130 Au
36.400 Ag
0.270 Au (above level)
273.600 Ag
0.485 Au
122.100 Ag
0.150 Au
5.900 Ag
0.140 Au (above level)
46.900 Ag
45
75
45
N
EXPLANATION
Inaccessible Areas
Ore Mineralization
Faulting and Fissuring
Dikes
NOTE: 1. SAMPLES TAKEN BY CORTEZ JOINT VENTURE.
2. AFTER CONSOL. CORTEZ SILVER MINES CO. MAP BY J.A. BURGESS, DEC. 1921, 1" = 100'
AMERICAN EXPLORATION & MINING CO.
CORTEZ JOINT VENTURE
PLAN MAP - LEVEL NO. 1
DATE: 3/8/65
REVISED:
SCALE
0
100 FT.
DRAWN: J.S.J.

PLATE 3

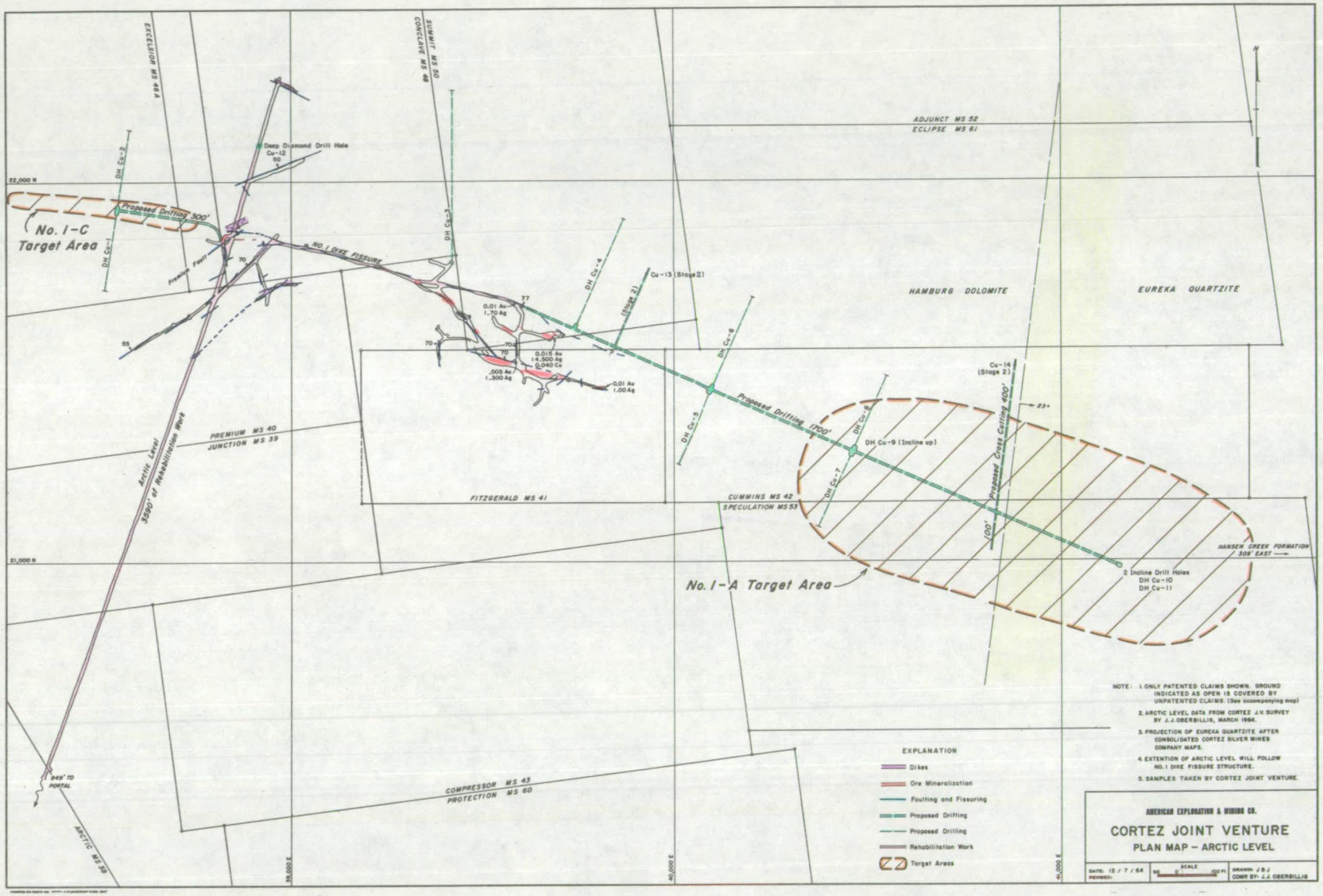

EXCELSIOR MS 44A
SUMMIT MS 50
CONCLAVE MS 48
ADJUNCT MS 52
ECLIPSE MS 61
HAMBURG DOLOMITE
EUREKA QUARTZITE
22,000 N
21,000 N
Deep Diamond Drill Hole
Cu-12
50
DH Cu-2
DH Cu-1
Proposed Drilling 300'
No. 1-C
Target Area
Previous Fault
70
55
NO. 1 DIKE FISSURE
DH Cu-3
DH Cu-4
(Stage 2)
Cu-13 (Stage II)
77
0.01 Au
1.70 Ag
70
70
70
0.015 Au
14.500 Ag
0.040 Cu
.005 Au
1.300 Ag
0.01 Au
1.00 Ag
DH Cu-6
Cu-14
(Stage 2)
Proposed Drifting 1700'
DH Cu-5
DH Cu-8
DH Cu-9 (Incline up)
DH Cu-7
Proposed Cross Cutting 400'
23°
100'
PREMIUM MS 40
JUNCTION MS 39
Arctic Level
3580' of Rehabilitation Work
FITZGERALD MS 41
CUMMINS MS 42
SPECULATION MS 53
No. 1-A Target Area
2 Incline Drill Holes
DH Cu-10
DH Cu-11
HANSEN CREEK FORMATION
309' EAST
949' TO
PORTAL
ARCTIC MS 58
COMPRESSOR MS 43
PROTECTION MS 60
38,000 E
40,000 E
42,000 E
EXPLANATION
Dikes
Ore Mineralization
Faulting and Fissuring
Proposed Drifting
Proposed Drilling
Rehabilitation Work
Target Areas
NOTE: 1. ONLY PATENTED CLAIMS SHOWN. GROUND INDICATED AS OPEN IS COVERED BY UNPATENTED CLAIMS. (See accompanying map)
2. ARCTIC LEVEL DATA FROM CORTEZ J.V. SURVEY BY J.J. OBERBILLIG, MARCH 1964.
3. PROJECTION OF EUREKA QUARTZITE AFTER CONSOLIDATED CORTEZ SILVER MINES COMPANY MAPS.
4. EXTENTION OF ARCTIC LEVEL WILL FOLLOW NO. 1 DIKE FISSURE STRUCTURE.
5. SAMPLES TAKEN BY CORTEZ JOINT VENTURE.
AMERICAN EXPLORATION & MINING CO.
CORTEZ JOINT VENTURE
PLAN MAP – ARCTIC LEVEL
DATE: 12 / 7 / 64
REVISED:
SCALE
50
0
100 Ft
DRAWN: J.B.J.
COMP BY: J.J. OBERBILLIG

PLATE 2

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 5 1965
INITIALS | CO E

APPLICATION FOR O.M.E. LOAN
Cortez Mine Exploration Project, Cortez, Nevada

Part "B" containing: Agreements
Assignments
Assay Certificates
Contractors' Bids
Letters to and Replies
from Banks regarding loans

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 5 1965
INITIALS | CODE

EXPLORATION, MINING, AND DEVELOPMENT AGREEMENT

WITH OPTION TO PURCHASE

THIS AGREEMENT, Made and entered into by and between LOUIS L. ROSSI, a single man, and ANTONIO A. AND BIRDIE ROSSI, husband and wife, hereinafter referred to as "Rossi" and AMERICAN EXPLORATION & MINING CO., a California corporation, hereinafter referred to as "Amex";

W I T N E S S E T H:

WHEREAS, Rossi is the owner of the following unpatented lode mining claims located in the Cortez Mining District, Eureka County, State of Nevada, Township 26N, Range 48E, more particularly described as follows:

Mockingbird No. 1	Recorded	Book K	Page 198,	11/17/59
Mockingbird No. 2		Boox K	Page 199,	11/17/59
Mockingbird No. 3		Book K	Page 199,	11/17/59
Mockingbird No. 4		Book K	Page 200,	11/17/59
Mockingbird No. 5		Book M	Page 1,	7/10/62
Mockingbird No. 6		Book M	Page 1,	7/10/62
Juniper No. 1		Book K	Page 197,	11/17/59
Juniper No. 2		Book K	Page 197,	11/17/59
Juniper No. 3		Book K	Page 197,	11/17/59
Juniper No. 4		Book K	Page 198,	11/17/59
Juniper No. 5		Book K	Page 340,	8/14/61
Juniper No. 6		Book K	Page 340,	8/14/61
Juniper No. 7		Book	Page	
Juniper No. 8		Book	Page	
Juniper No. 9		Book	Page	

WHEREAS, the parties hereto are desirous of entering into an agreement whereby Amex shall be allowed, under the term and conditions hereinafter stated, to explore, mine and develop the abovementioned property and whereby Amex shall be granted an option to purchase said property as herein stipulated;

NOW, THEREFORE, in consideration of the mutual promises, conditions and covenants hereinafter set forth, the parties hereto agree as follows:

SECTION 1. Rossi hereby leases the above described mining claims to Amex for a period of twenty (20) years from and after the date this agreement is executed, granting to Amex an option to renew this lease on the same terms and conditions as herein set forth for an additional twenty-year period. Amex intention to exercise such option to be given to Rossi in writing,addressed as provided in Section 14 hereof.

SECTION 2. Rossi grants to Amex during the term of Amex's possession hereunder, the full and exclusive right to explore, develop and mine said property; to mine, extract, remove, ship or further process ores and values from said property; to perform without restrictions such other activities on said property as may be necessary or desirable in the carrying out of the aforementioned activities, to determine the methods to be utilized in concentrating, purifying and processing the mining products; and to market and sell the same to such purchaser or purchasers and at such prices as Amex shall determine to be advantageous. In addition Amex shall have the right to utilize all the underground workings of the mines located on said property including the underground structure, machinery and equipment, if any, now located in said mines.

SECTION 3.

(1) Amex shall pay Rossi as mining royalties on all ores or concentrates sold from the property a sum equal to:

(a) 10% of net smelter returns from all direct shipping ore.

(b) 5% of net smelter returns from ores milled and concentrated prior to shipment.

(2) "Net smelter returns" as used herein means proceeds actually received by Amex after deductions for smelter treatment and after deduction for freight charges from Beowawe, Nevada, to smelter.

(3) The mining royalty payable to Rossi under this section shall become due and payable on the tenth day of each month. Such mining royalty shall be paid for on all ores or concentrates for which payment has been received by Amex during the prior month. At the time of making such royalty payment, Amex shall transmit to Rossi a true and correct statement of the amount, kind, and nature of the mining products for which the mining royalty is being paid, together with a duplicate statement from any purchaser to whom said ore has been sold by Amex.

(4) Amex shall pay a minimum royalty as follows: $120 per month on the first of each month beginning May 1, 1964, to and including July 1, 1965.

Beginning August 1, 1965, the minimum royalty shall be $600 per month payable on the first day of each month through and including July 1, 1970.

Beginning August 1, 1970, the minimum royalty shall be $20,000 per year, payable $5,000 August 1, $5,000 November 1, $5,000 February 1, $5,000 May.

If this agreement is executed after May 1, 1964, the May, 1964, payment shall be made on the date of the agreement.

(5) With respect to mining royalties due under Paragraphs (1), (2) and (3) of this Section 3, minimum royalties shall be considered advance payment of mining royalties for the month in which such mining royalties are due. On and after August 1, 1970, minimum royalty payments shall be considered advance payments on account of the 3-month period immediately following the day of payment.

Section 4. Amex agrees to keep an accurate record of all minerals and mined products which shall be mined and shipped from the above described property to which record Rossi shall have access at reasonable times for the purpose of determining that Amex is complying with the terms of this Agreement.

Section 5. Amex shall, during the term of this Agreement, perform at its expense the annual assessment work for all the above mentioned claims as required by law and shall cause to be made and recorded proof of completion of such annual assessment work, a copy of which proof Amex shall cause to be delivered to Rossi.

Section 6. Rossi shall have the right of entering upon said mining claims for the purpose of examining Amex's mining operations and explorations and shall have the right to use all passageways, ropes, ladders, hoists, and all other means of ingress and egress for such purpose, provided, however, that they do not interfere with the operations of Amex, and further provided that such entry and examination shall be at Rossi's risk and hazard and Rossi will hold Amex harmless from, and indemnify Amex against any and all liability to Rossi, his agents, employees, or

representatives for damages to personal property, or for personal injuries, including death, which damages and injuries, including death, arise as a result of Rossi's performing or causing to be performed the activities described in this Section. Amex shall not be responsible for the acts or conduct of the agents, employees, or representatives of Rossi while said agents, employees or representatives are on the premises.

SECTION 7. Rossi warrants that he is the owner of all the above described property and all the mineral rights therein, subject only to the paramount title of the United States of America, and that there are not now pending nor does Rossi have any knowledge of any adverse claims to said property. Rossi covenants further that Amex, complying with the terms and conditions hereof, shall have the right to peaceably and quietly hold and enjoy the use of said property at all times during the terms of this Agreement, and in the event that Rossi's title to such property, and/or the mineral rights therein, should be challenged by court action, Rossi covenants and agrees to defend, at his own expense, his title thereto to the end that Amex shall at all times be able to peaceably and lawfully conduct its operations on said property. Rossi, for himself and his heirs, executors, and administrators and assigns does further covenant and agree that he will forever defend his interest in and to all of said property and the mineral rights therein against any and all persons whomsoever claiming the same, or any interest therein. During the term hereof, should other parties assert ownership or right, title or interest in and to said property, or the mineral rights therein, of such nature if established, Rossi would not actually own the property herein described, or the mineral rights therein, then and in that event,

Amex shall have the privilege of paying royalties otherwise payable to Rossi hereunder into court through interpleader proceedings, or into escrow in any banking institution for ultimate payment to the persons or parties determined to be entitled thereto, and by so doing, Amex may continue its mining operations upon said property.

SECTION 8.

(1) Rossi covenants that there are, as of the date of this agreement, no liens or encumbrances on the above described property and that there are no debts or obligations which may be or may hereafter become a lien or encumbrance upon said property, or the minerals or mineral rights in connection therewith, including real property taxes and defaulted assessment work, and should any lien or encumbrance be made or filed thereon during the term of this agreement which shall not be as a direct result of Amex's activities in connection with said property, Rossi shall immediately secure the release and discharge thereof of record, and if Rossi shall not have secured the release and discharge thereof to the satisfaction of Amex within a reasonable time, Amex may, at its option but has no duty to do so, secure such discharge and release at its own expense and deduct the cost thereof from any royalty or advance royalty payment due Rossi.

(2) Amex agrees to pay all real property taxes levied and assessed against said property during the term of this agreement and to pay all property taxes levied and assessed upon the machinery, equipment, buildings and other property owned by Amex and utilized in connection with the above described property; Amex further agrees to pay all license taxes or severance taxes or use taxes which may be levied during the term of

this agreement either by the United States of America or the State of Nevada upon the mineral products produced from said property. In the event that the validity of such tax or taxes shall be contested, the failure of Amex to pay any such tax at the time the same shall become due, prior to the determination of the validity of such contest, shall not constitute a violation of the terms and conditions of this agreement. It is understood, however, that Amex shall not be liable for payment of that portion of the net proceeds tax assessed against Rossi as royalty holder.

(3) All charges and expenses incurred by Amex or those in privity with it shall be promptly paid by Amex, and if any valid lien or liens shall be filed against said premises by reason of any such charges and expenses, Amex agrees to promptly pay and discharge such lien or liens, including all costs or charges incurred or allowed in connection therewith, and further, agrees to hold Rossi harmless on account of any lien or claim for costs or expense.

SECTION 9.

(1) At its sole discretion and expense, Amex shall have the right to erect upon the property such buildings and structures and install thereon such machinery, mills or other mining plant equipment or property as it shall deem necessary or advisable to carry on its mining operations, and Amex shall have the full right to possession and use of water flowing upon such property for mining purposes, and shall have the right to construct ditches, roads, power and pipe lines, dikes, drains, or diversion works, and all other facilities upon or across any portion of said property, and to make such alterations, cuts, tunnels or excavations thereon as it may desire in connection with mining operations thereon and therein.

(2) It is agreed that the title to all machinery, equipment, mining plants, buildings, power and pipe lines and all other structures placed upon the above described property by Amex, shall be and remain the sole and exclusive property of Amex at all times, and Amex shall have the right and privilege to remove all or any of the same at any time, and in the event of a forfeiture, cancellation or termination of the Agreement, any or all of such mining plant machinery, equipment, buildings, structures, power and pipe lines, etc., may be removed by Amex within a period of twelve (12) months from the date of such forfeiture, cancellation or termination, provided, however, that such ownership and right of removal of Amex shall not include underground timbers, structure, or improvements supporting any underground portions of any mine or mines still workable and accessible for any underground mineral extraction, nor the timbers and ladders of the main shaft nor the rails, air or water pipe installed in the main shaft.

SECTION 10. It is understood and agreed that Amex may at any time relinquish to Rossi any or all of the aforementioned mining claims upon giving of thirty (30) days written notice of intention to terminate this Agreement as to such claim or claims, after which thirty-day period, Amex shall have no further liability or responsibility to perform hereunder as to such relinquished claim or claims except for the payment of mining royalty for ores, or concentrates, theretofore extracted from said claims and sold by Amex in accordance with Section 3 hereof, provided, however, that in the event that the date of termination as to such relinquished claim or claims occurs between July 1 and September 1 of any given year, Amex shall perform the assessment work on such relinquished claim or

claims for the assessment year ending on the next succeeding September 1 after the date of termination. It is further understood and agreed that should Amex relinquish such claim or claims, or should this Agreement be voluntarily terminated by Amex or forfeited by the failure of Amex to perform or its failure to make any of the royalty payments herein provided, then the sole and only remedy of Rossi shall be the retention as liquidated damages of the moneys theretofore paid to him by Amex, the recovery of royalties theretofore not paid to him by Amex for ores, or concentrates, extracted from the claim or claims and sold by Amex or further processed and marketed by Amex, and the recovery of full possession of the mining claims.

SECTION 11. It is agreed that within a reasonable time following the execution of this Agreement, Rossi shall secure and deliver to Amex at Rossi's expense an Abstract of Title covering the above described property, extended to the date of the delivery thereof and certified by a bonded abstracter of Eureka County, Nevada, or such other abstracter as the parties hereto may agree upon. Rossi agrees that such Abstract of Title shall show right of possession by legal location procedure of unpatented claims on the public domain to the mining products content within the above described property in Rossi free and clear of any interest of any other parties, except only to the paramount title of the United States of America, and free and clear of all liens and encumbrances. Upon examination of such Abstract of Title on behalf of Amex, should any defects, irregularities or objection be found of such nature that the occupancy and mining operations of Amex upon the mining claims may be interrupted, Rossi agrees to remove and correct such defects,

irregularities and objections to the end that such title shall be made safe for the continued occupancy and mining operations upon the above described mining claims by Amex, and if Rossi shall not have corrected such defects, irregularities, and objections to the satisfaction of Amex within a reasonable time thereafter, Amex may, but has no duty to do so, correct such matters at its own expense and deduct the costs thereof from the royalty payments due Rossi.

SECTION 12. In the event that Amex fails to make any of the payments as herein provided, or fails to perform any of the covenants hereof, then and in that event, Rossi shall have the option of declaring this Agreement forfeited by giving written notice to Amex by registered or certified mail, postage prepaid, return receipt requested, which notice shall specify the particulars wherein this agreement is not being carried out, and providing that unless the delinquent payment is made, or the failure to perform corrected within sixty (60) days from the date of such notice, said Agreement shall be immediately forfeited and terminated, and upon such forfeiture and termination, Amex shall be without right, title or interest in and to the above described property, but the buildings, structure or other plant machinery and equipment, etc., placed by Amex on said property may be removed by it as hereinbefore provided.

Section 13. It is agreed that Amex shall be excused and shall not be responsible hereunder for delays, failures, or omissions in performance of any of the terms, provisions and conditions of this

Agreement incumbent upon it to be kept and performed, where such is due to or the result of inclement or winter weather conditions which would make performance of this Agreement undesirable or impractical, or where the performance of mining operations would be unprofitable to Amex or where such is due to or the result of a cause of any kind beyond the control of Amex, including (but not limited to) fire, flood, war, governmental action or orders, strikes, lock-outs, injunctions, inability to obtain power, failure of transportation facilities, or breakage of machinery or equipment.

SECTION 14. All notices to be given hereunder to either party by the other shall be sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

(1) Notices to Rossi shall be addressed:

Mr. Louis L. Rossi
P.O. Box 164
Winnemucca, Nevada

(2) Notices to Amex shall be addressed:

American Exploration & Mining Co.
2300 Russ Building
San Francisco 4, California

(3) Either party may change such place of notice at any time by giving written notice thereof to the other party in the manner herein provided.

SECTION 15. This Agreement may be assigned by Amex to the Cortez Joint Venture, a joint venture consisting of Amex, The Bunker Hill Company, Vernon F. Taylor, Jr., and Webb Resources, Inc., and to any subsidiary or affiliated organization of any one or more of such joint venturers without the consent of Rossi; this agreement may be assigned

to any other organization or organizations, persons, or person with the consent of Rossi, and Rossi shall not unreasonably withhold his consent to such an assignment.

SECTION 16. This Agreement shall run with the above described mining claims and be binding upon the successors in title or in interest thereto, and shall be binding upon and shall also inure to the benefit of the respective successors and assigns of the parties hereto.

SECTION 17. Rossi hereby grants to Amex the exclusive option to purchase the above described mining claims at anytime on or before the expiration of twenty (20) years from the signing of this agreement, such purchase by Amex to be made subject to the following terms and conditions:

(1) The total purchase price shall be $500,000 payable no later than twenty (20) years after the date of the signing of this Agreement.

(2) Royalty payments (both mining royalty and minimum royalty) shall be credited against purchase price.

(3) Until Amex shall have paid the full purchase price, Amex shall continue to pay all minimum royalties and mining royalties, as the same become due.

(4) On or before November 1, 1965, Rossi shall execute and deliver to First National Bank of Nevada, Winnemucca Branch, Winnemucca, Nevada (herein designated "escrow agent") a good and sufficient Warranty Deed conveying all of Rossi's interest in and to the aforesaid property and their appurtenances to Amex free and clear of all liens and encumbrances, save and except those that have been placed thereon as a result of the actions of Amex. Rossi shall with such deed deliver irrevocable instructions to escrow agent to record the same on instructions from Amex when Amex shall have completed its payments under this Agreement.

(5) Amex may exercise this option to purchase by delivery to Rossi, with copy to escrow agent, of written notice of Amex's election to make said purchase.

(6) Amex may at any time make its royalty payments and/or purchase price payments to escrow agent for delivery to Rossi.

(7) Within a reasonable time following the delivery of the aforementioned notice of Amex's election to purchase, Rossi shall secure and deliver an Abstract of Title supplementing the Abstract of Title delivered in accordance with Section 11 herein which supplementary Abstract of Title shall be brought down to a date subsequent to the date of the delivery of the aforementioned notice of election to purchase and certified by a bonded abstracter of Eureka County, Nevada, or such other abstracter as the parties hereto may agree upon. Rossi agrees that such supplementary Abstract of Title shall show a good and merchantable title to the above described real property and the mining products content thereof in Rossi, subject only to the paramount title of the United States of America, free and clear of all liens and encumbrances, save and except current real estate taxes not in default, the rights of Amex under this Agreement, and such minor defects, if any as may be waived by Amex at the time of its examination of the supplementary Abstract of Title. Upon examination of such Abstract of Title on behalf of Amex, should any defects, irregularities or objections be found of such nature that the possession by Amex of the property may be interrupted, Rossi agrees to remove and correct such defects, irregularities and objections to the end that such title shall be made safe for the continued possession and mining operations upon the property by Amex, and if Rossi shall not have corrected such defects, irregularities and

objections to the satisfaction of Amex within a reasonable time thereafter, Amex may, but has no duty to do so, correct such matters at its own expense and deduct the costs thereof from the royalty payments due Rossi.

(8) In addition to the foregoing paragraphs of this Section, all the foregoing Sections of this Agreement shall remain in force and effect after the exercise by Amex of its option to purchase, provided, however, that after the delivery by Rossi to Amex of the aforementioned Warranty Deed, all obligations of Amex hereunder shall cease and terminate except the duty to pay royalties as provided above.

SECTION 18. To the best of his knowledge, Rossi's fifteen claims are all contiguous. Should subsequent surveys show that open fractions would occur in this group, Rossi will locate such fractional claims as may be necessary to make the group all contiguous and such claims will thereupon become part of and subject to this Agreement.

Amex's agreement with Cortez Metals Co. provides that if Amex locates mining claims within two miles of the property leased from Cortez Metals Co., Amex will locate such claims in the name of Cortez Metals Co. Subject to the terms of that agreement, Amex will locate any claims adjacent to the Rossi property in the name of Rossi during the term of the Rossi agreement.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed this 11th day of May, 1964.

LOUIS L. ROSSI

Louis L. Rossi

ANTONIO A. ROSSI

Antonio A. Rossi

BIRDIE ROSSI

Birdie Rossi

ATTEST:

Secretary

AMERICAN EXPLORATION & MINING CO.

BY

Its Vice President

STATE OF NEVADA)
) ss.
County of HUMBOLDT)

On this 11th day of May, 1964, A.D., personally appeared before me, James A. Callahan, a Notary Public in and for Humboldt County, LOUIS L. ROSSI, ANTONIO A. ROSSI, and BERDIE ROSSI, known to me to be the persons described in and who executed the foregoing instrument, who acknowledged to me that they executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Humboldt, the day and year in this certificate first above written.

My commission expires:
February 28, 1967

James A. Callahan
Notary Public in and for
the County of Humboldt
State of Nevada.

STATE OF CALIFORNIA)
) ss.
City and County of San Francisco)

On this 13th day of May, 1964, A.D., personally appeared before me, Kathryn J. Best, a Notary Public in and for the City and County of San Francisco, State of California, H. Gooder and Melvin H. Morgan known to me to be the Vice President and Secretary of the corporation that executed the foregoing instrument, and upon oath each did depose that he is the officer of said corporation as above designated; that he is acquainted with the seal of said corporation, and that the seal affixed to said instrument is the corporate seal of said corporation, and that the signatures to said instrument were made by the officers of said corporation as indicated after said signatures, and that the said corporation executed the said instrument freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My commission expires:
April 28, 1967

Kathryn J. Best
Notary Public in and for the
City and County of San Francisco
State of California.

MINING LEASE AND OPTION

THIS AGREEMENT made August 18, 1959, by and between CORTEZ METALS COMPANY, a Nevada corporation, Lessor, and AMERICAN EXPLORATION & MINING CO., a California corporation, Lessee,

W I T N E S S E T H:

That for and in consideration of the premises and of the due performance of the covenants herein to be by Lessee kept and performed, and the mutual promises herein contained, the parties hereto agree as follows:

ARTICLE I--LESSOR'S OWNERSHIP AND RIGHT OF POSSESSION:

Lessor owns and is entitled to the exclusive possession of and can convey a good title to each and all those certain patented lode mining claims situate in the Cortez Mining District, Eureka-Lander Counties, Nevada, listed and described in Exhibit A, annexed hereto and made a part hereof. Lessor also owns, subject only to the paramount title of the United States, and is entitled to the exclusive possession of and can convey a good title to each and all those certain unpatented lode mining claims situate in said District, Counties and State, listed and described in Exhibit B annexed hereto and made a part hereof, and each and all of such of those certain unpatented lode mining claims, situate in said District, Counties and State and listed and described in Exhibit C, annexed hereto and made a part hereof, as have not been validly and adversely relocated. Lessor also owns the patented third class grazing land listed on Exhibit D, annexed hereto and made a part hereof. Said claims (exclusive of any validly relocated Exhibit C claims) and appurtenances, together with all crude ore and tailings dumps located thereon and any rights, easements and privileges customarily used in

connection therewith, and said patented third class grazing land, will hereinafter be collectively referred to as "said property". Lessor agrees to defend its said titles and rights of possession to said property against the acts, claims, demands and litigation of third parties contesting the same or Lessee's exercise of the rights granted it hereunder.

ARTICLE II--ADDITIONAL PROPERTIES:

A. If Lessor owns other mineral lands or valuable deposits of minerals or materials or interests therein, intervening between the individual mining claims comprising said property or situate within two miles from the nearest exterior boundary of any of said claims, then the same shall be subject to all the terms and conditions hereof and be included by the reference to "said property" wherever used herein, as fully as if specifically described in this agreement.

B. If Lessor shall hereafter locate or otherwise acquire mining claims or valuable deposits of minerals or materials or interests therein within said two-mile limit, it shall notify Lessee of that fact and of the expense incurred by it in so doing; if Lessee, within 30 days after receipt of said notice, shall reimburse Lessor for the full amount of such expense, then the mining claims or valuable deposits of minerals or materials or interests therein, so located or acquired by Lessor, shall become subject to all the terms and conditions hereof and be included by the reference to "said property" wherever used herein, as fully as if specifically described in this agreement; provided, however, that in such event the full amount of such expense so paid by Lessee shall constitute an advance royalty paid Lessor and to be later reimbursed to Lessee as hereinafter provided out of production royalties becoming due Lessor.

C. If Lessee shall hereafter locate mining claims within said

two-mile limit or (as it may do if it determines an unpatented claim of Lessor to be defective or invalid) shall make an amended location of any of Lessor's said unpatented claims or a new location of the ground covered by the same, it shall do so at its own expense but in the name of Lessor, and shall be reimbursed for said expense, which shall constitute an advance royalty paid Lessor, out of production royalties becoming due Lessor. If Lessee shall hereafter acquire, otherwise than by location, mining locations or valuable deposits or interests therein within said two-mile limit, it shall notify Lessor of that fact and of the expense incurred by it in so doing; if Lessor, within 30 days after receipt of such notice shall, in writing, agree that Lessee be reimbursed for the full amount of such expense, as an advance royalty paid Lessor, out of production royalties becoming due Lessor, then Lessee shall forthwith execute and deliver its deed or assignment or other appropriate instrument, transferring to Lessor said mining claims or valuable deposits or interests therein so acquired by Lessee otherwise than by location. All mining claims, amended locations and new locations so located by Lessee in the name of Lessor and all mining claims or valuable deposits or interests therein so transferred by Lessee to Lessor shall become subject to all the terms and conditions hereof and be included by the reference to "said property" whenever used herein, as fully as if specifically described in this agreement.

ARTICLE III--LESSEE'S RIGHT TO EXCLUDE:

Anything herein to the contrary notwithstanding, Lessee may from time to time surrender its rights hereunder with respect to and remove and exclude from this agreement such of said Exhibit C unpatented lode mining claims and such of said "additional properties" as it shall from time to time decide to no longer hold under this agreement. From and after a written notice from Lessee to Lessor surrendering a

specified mining claim and/or parcel of additional property, Lessee shall have no further rights or interests hereunder with respect to such specified claim or parcel of additional property (but without affecting its rights and interests with respect to the remaining claims and parcels constituting "said property") and the same shall thereafter not be included by the reference to "said property" wherever used herein and Lessee shall not thereafter have any obligation for payment of taxes, performance of assessment work or otherwise with respect to the same, EXCEPT THAT as to any unpatented mining claim, listed and described in Exhibit B, so surrendered after March 1st of any assessment year, Lessee shall perform the assessment work for that year.

ARTICLE IV--LEASE TERM:

Lessor hereby leases said property to Lessee, which hereby takes the same, for the period of ten (10) years from date, upon and subject to the terms and conditions herein expressed.

ARTICLE V--ROYALTIES:

A. Production Royalties: During the life of this lease (that is, while it and the herein granted option to purchase remain in force and unterminated) Lessee shall pay to Lessor on or before the 15th day of each month (1) with respect to tailings and crude ore shipped and sold as such by Lessee from the present dumps thereof, without further treatment or concentration, a royalty of fifteen per cent (15%) of the net returns (hereinafter defined) actually received for the same by Lessee during the preceding month, OR twenty-five cents (25¢) per dry ton, whichever is higher, and (2) with respect to all other ores, concentrates, metals, minerals or other materials (including treated or concentrated tailings and crude ores from the present dumps) recovered and sold by Lessee from said property, a royalty of ten per cent (10%)

of the net returns actually received for the same by Lessee during the preceding month. "Net returns" shall mean the net amount remaining after deducting from the proceeds actually received by Lessee all not already deducted smelter, treatment or reduction charges, railroad freight charges and reasonable trucking charges, except that trucking charges shall not in any event exceed $2.50 per ton; provided however, that if such ores, concentrates, metals, minerals or other materials are transported to a smelter, treatment agency or purchaser owned or operated by Lessee, "net returns" shall mean the net amount remaining after deducting from the price which said smelter, treatment agency or purchaser would have paid a third party producer for the same, all smelter, treatment or reduction charges, railroad freight charges and reasonable trucking charges (which trucking charges shall not in any event exceed $2.50 per ton) not already deducted in determining the price which would have been payable to a third party, EXCEPT THAT in such event the royalties payable to Lessor shall never be less than the royalty it would have received with respect to such ores, concentrates, metals, minerals or other materials had the same been sold to the third party smelter, treatment agency or purchaser from which, considering price paid less the specified deductible charges, the highest net return could have been received.

B. Minimum Royalties: Commencing with the month immediately succeeding that in which the first anniversary date of this agreement occurs, and continuing during the life of this lease for eleven successive months thereafter, Lessee shall pay to Lessor by way of either production and/or advance royalties, a minimum of Two Hundred Dollars ($200.00) per month; thereafter during the life of this lease, Lessee shall pay to Lessor by way of either production and/or advance royalties, a minimum of Five Hundred Dollars ($500.00) per month. If in

any month the production royalties paid to Lessor, plus any "excess royalties" (hereinafter defined) theretofore paid Lessor and credited against the minimum royalty for that month, shall fail to equal the minimum due for that month, then Lessee, on or before the 15th day of that month, shall pay the deficiency to Lessor, in which event the deficiency paid shall constitute an "advance royalty" for which Lessee may reimburse itself as hereinafter provided. If in any month the production royalties payable to Lessor shall exceed the minimum royalty due for that month, then Lessee shall retain so much of such excess (herein referred to as "excess royalties") as shall be required to reimburse it for any advance royalties previously paid Lessor and then unreimbursed, and shall pay the balance, if any, to Lessor to be by it applied and credited toward the payment of the minimum royalties to become due in the succeeding month or months.

C. Place of Payment--Copies of Returns: All royalties shall be paid to Lessor in care of Mrs. C. A. O'Brien, P. O. Box 1063, Dunedin, Florida, or wherever else Lessor may from time to time designate in writing. All royalty payments shall be accompanied by a copy of all settlement sheets, returns, or statements issued by any mint, smelter, treatment agency or other purchaser with respect to the ores, concentrates, metals, minerals or other materials upon the proceeds of which such royalties were based.

ARTICLE VI--POSSESSION AND RIGHT TO MINE:

During the life of this lease, Lessee shall be entitled to the sole and exclusive possession and use of said property, subject only to the right of inspection and other rights herein reserved to Lessor, and shall have the sole and exclusive right to prospect, test and explore the same and to mine, extract, remove and sell the ores,

concentrates, metals, minerals and other materials therein or thereon and retain the proceeds thereof, subject, however, to its obligation to pay royalties to Lessor as herein provided, it being understood, however, that nothing herein shall be construed to obligate Lessee to mine more of said property than it deems advisable or any thereof which it may consider unprofitable to mine, and that Lessee may terminate this agreement and withdraw from said property at any time upon 30 days written notice to Lessor; further, Lessee shall have the right to use said property for any and all purposes reasonably necessary or incidental to its mining, milling and related operations thereon hereunder, including the erection and installation of structures, plants, facilities, machinery and equipment, the cutting of such timber as may be required in its operations and the right to explore, develop, or mine contiguous or adjacent lands through the mine workings existing or hereafter constructed by it thereon, and shall also have the right of ingress and egress to and from the same over any contiguous or nearby lands of Lessor and the right to construct, maintain and use thereon water ditches, flumes, conduits, pipe lines, power and telephone lines, roadways, and any other needed facilities running to said property.

ARTICLE VII--MINING METHODS, COMPLIANCE WITH LAWS:

All mining and other work done on said property by Lessee shall be done in a good and miner-like manner, with due regard to its safety, preservation and development as a workable mine. All operations of Lessee shall be conducted so as to fully comply with all laws, rules and regulations of the United States and the State of Nevada which may be applicable to its operations, and particularly, Lessee shall at all times fully comply with the Nevada Industrial Insurance Act and carry Nevada industrial insurance for any and all persons employed upon

in, or about its mining or other operations on said property; provided, however, that nothing herein shall be construed to require Lessee to comply with any law, ordinance, regulation, order or directive believed by it in good faith to be unconstitutional or for other reasons void. If Lessee, having applied for and been refused exemption from the requirements thereof, shall institute legal proceedings to determine the validity of any such law, rule, regulation, order or directive, or the legal propriety of its application to Lessee's operations hereunder, then during the period until all issues therein have been finally determined, Lessee shall have the right at any time and from time to time to suspend its mining and other operations hereunder, and during the period or periods of such suspension, all of Lessee's obligations hereunder, other than payment of taxes and performance of assessment work, shall be suspended and tolled and the time for performance of such obligations shall be extended for a period of time equal to that during which Lessee shall have so suspended its operations. Lessor, if so requested, but at the sole expense of Lessee, shall join in and affix its written consent to any application by Lessee for exemption of said property and Lessee's operations thereon from the provisions of any such law, rule, regulation, order or directive.

ARTICLE VIII--NON-RESPONSIBILITY OF LESSOR:

All work done on and materials furnished for or used upon said property by Lessee shall be at its sole expense and Lessee hereby indemnifies Lessor against and agrees to hold it and said property free of and harmless from any and all liens, encumbrances, charges and/or liability arising by reason of Lessee's operations hereunder. Lessee further agrees to promptly file with the County Recorder of either Eureka County or Lander County, Nevada, depending upon the county in which any affected claim is situated, or in both said counties in case

of doubt, a notice of Lessor's non-responsibility for any labor performed or materials or supplies furnished to Lessee, and in said, and all other respects, to take all such steps as may be required by law to free Lessor from liability in that behalf. Lessee hereby indemnifies Lessor against and agrees to hold it free of and harmless from any and all claims and liability for injury or damage to the person or property of others resulting from Lessor's possession and/or operation of said property.

ARTICLE IX--TAXES:

Lessee shall pay before their delinquent date all state and county taxes becoming due during the life of this lease upon said property or any improvements therein and thereon, and shall furnish proof of such payment to Lessor not less than ten days before the delinquent date of such taxes. Lessee shall also pay its proportion of any bullion and severance taxes assessed upon the output from said property during the life of this lease.

ARTICLE X--ASSESSMENT WORK AND PATENTING:

Lessee shall perform any annual assessment work required to hold the unpatented claims listed in Exhibit B and Lessee may at its sole option perform the annual assessment work required to hold the not validly relocated unpatented claims described in Exhibit C, for the assessment year ending September 1, 1959, and shall complete such work and prepare and file proper proofs thereof with the County Recorder of Eureka County or Lander County, Nevada, as the case may require, or in both said counties in case of doubt, on or before September 1, 1959, furnishing copies of such proofs to Lessor in care of Thomas A. Cooke, P. O. Box 2229, Reno, Nevada. Thereafter, during the life of this lease, Lessee shall perform any annual assessment work required to

hold said unpatented mining claims and complete such work and prepare and file proper proofs thereof with the appropriate County Recorder before July 1st of each year for which such work is required, furnishing copies thereof to Lessor in care of Mr. Cooke at the noted address; Provided, that Lessee shall not be obligated to perform such work for any assessment year in which this lease is forfeited or voluntarily terminated if such forfeiture or termination occurs prior to March 1st of any year, but shall in such event furnish to Lessor a record of the character, amount, cost and place of performance of any work done by it during such assessment year, and prior to such forfeiture or termination, which might be applied toward assessment work; and provided, further, that in any year in which Lessor shall be exempted by law from performing such work, Lessor shall prepare and file any notice of intention or other instrument required to take advantage of such exemption.

If Lessee shall desire to obtain patent in Lessor's name for any of such unpatented mining claims, Lessor, but at the sole expense of Lessee, shall fully assist and cooperate in the institution and conduct of such proceedings as shall be required for that purpose.

ARTICLE XI--RECORDS, INSPECTION:

Lessee shall keep full, true and correct books of account showing the amount and value of all ores, concentrates, metals, minerals and other materials removed, recovered and sold by it from said property during the life of this lease and the proceeds received therefor, and the same shall be open to the inspection of Lessor and its authorized agents at all reasonable times. Lessor and its authorized agents shall have the right to inspect said property and the operations of Lessee thereon at all reasonable times, but it shall not unwarrantably interfere with such operations, it being understood that the rights of Lessor's agents to enter said property and the plants, structures and

facilities of Lessee shall be at Lessor's sole risk and Lessor hereby indemnifies Lessee against and agrees to hold it free of and harmless from any claim, demand or liability arising by reason of injury to or the presence of Lessor's agents at said property, plants, structures, and facilities. — Copies mineral - leases to lessor, perf. death - at term. ify K.

ARTICLE XII--FEDERAL LOANS OR ADVANCES:

Lessor consents to and agrees to assist and cooperate in any application or effort by Lessee to obtain moneys from the Defense Minerals Exploration Agency of the United States or any successor to such agency for use in its operations on said property, and agrees to execute such applications, assurances, subordination agreements, security instruments, and other documents as such agency may require in this connection.

ARTICLE XIII--PAYMENT OF ANY DEBTS SECURED BY PROPERTY:

If Lessor shall fail to pay when due any payment upon any indebtedness which is secured by said property under a mortgage, deed of trust or other security instrument, or is a lien thereon, Lessee may, if so disposed, pay the same; also, if the obligee of any such secured indebtedness shall object to the mining of said property, Lessee may, if so disposed, fully pay and discharge said indebtedness. Any payment so made by Lessee shall constitute an advance royalty paid Lessor and to be later reimbursed to Lessee as herein provided out of production royalties thereafter becoming due to Lessor.

ARTICLE XIV--EXAMINATION OF TITLE:

Lessee has not had an adequate opportunity to examine the title to said property; accordingly, if its examinations reveals claims, liens, encumbrances or other title defects affecting such title, then on written request from Lessee, Lessor, at its sole cost and expense,

will cause the same to be cured and removed. Should Lessor fail to cure and remove such title defects within 90 days after such request, or satisfy Lessee within that period that it is proceeding adequately and with reasonable diligence to cure and remove the same, then Lessee may undertake to cure and remove the same and its costs and expenses in so doing, including the reasonable fees of its attorneys, shall constitute an advance royalty paid Lessor and to be later reimbursed to Lessee, as herein provided, out of production royalties thereafter becoming due to Lessor.

ARTICLE XV--CROSS AND PARALLEL LODES:

Lessee shall occupy and hold for the benefit of the Lessor any and all cross and parallel lodes, veins, spurs or mineral deposits whatsoever which may be discovered on the demised premises by the Lessee, or by any person holding under it during the life of this lease; provided, however, that Lessee shall have the privilege of working and mining the same as part and parcel of the demised premises and subject to all the terms of this agreement.

ARTICLE XVI--LEASE NOT A BANKRUPTCY ASSET:

In no event shall this lease or the leasehold estate become an asset of Lessee in bankruptcy, receivership or other judicial proceedings. In case Lessee be adjudged a bankrupt, or its business and assets be taken over by assignee for the benefit of creditors, or by a receiver or other court custodian, and be unreleased therefrom for 20 days, Lessor may at its option and without notice, terminate this lease.

ARTICLE XVII--OPTION TO PURCHASE:

In consideration of the premises and of the due and faithful performance by Lessee of the terms and conditions hereof to be by it

performed, Lessor hereby gives and grants to Lessee during the life of this lease the sole and exclusive option to purchase said property for a total purchase price of One Hundred and Fifty Thousand Dollars ($150,000.00).

1. Lessee may exercise its said option to purchase at any time during the life of this lease by written notice to that effect to Lessor's Nevada office, Room 312, First National Bank Building, 15 East First Street, Reno, Nevada, c/o Thomas A. Cooke.

2. Said purchase price shall be payable by way of royalties or otherwise in installments as follows, viz.:

(a) $5,000.00 concurrently with delivery of written notice of exercise of the option, payable in cash or by certified check to Lessor's order, and

(b) $25,000.00 on or before the expiration of one year from and after the date of said initial payment, and

(c) $25,000.00 on or before the same day of each year following until the entire purchase price shall have been paid.

(d) Provided, however, that all production royalties and then unreimbursed advance royalties paid by Lessee to Lessor prior to delivery of written notice of exercise of the option shall be applied upon and credited against said purchase price and said first and succeeding installment or installments thereof and shall reduce the balance payable thereon and on said installments accordingly; also that any and all production royalties and, if Lessee so elects, all advance royalties there-

after paid by Lessee to Lessor, shall apply upon and be credited against said purchase price and the next succeeding installment or installments thereof and shall reduce the balance payable on said purchase price and the next succeeding installment or installments thereof accordingly; also that Lessee may at any time pay the then unpaid balance of said purchase price and become entitled to a conveyance of said property forthwith.

(e) Anything herein to the contrary notwithstanding, from and after Lessee's exercise of the option to purchase and excepting only the payment to be made concurrently therewith, all royalty payments and other payments on said purchase price shall be paid by depositing the same to the account of Lessor with the First National Bank of Nevada, Reno, Nevada, as Escrow Agent, which Lessor hereby constitutes and appoints its agent to receive and receipt for the same.

3. (a) Within 15 days after Lessee makes said initial payment, Lessor shall deposit in escrow with said Escrow Agent (1) its duly executed and acknowledged and legally sufficient Grant Deed conveying to Lessee said patented mining claims described in annexed Exhibit A, free and clear of liens and encumbrances created or suffered by Lessor, and (2) its duly executed and acknowledged and legally sufficient quitclaim deed conveying to Lessee, free and clear of liens or encumbrances created or suffered by Lessor, all Lessor's then and thereafter to be acquired right, title and interest in and to said

unpatented mining claims and any other property constituting part of said property, together with instructions to said Escrow Agent to deliver the same to Lessee or order upon full payment of said purchase price in accordance with the terms of this agreement (a copy of which shall be deposited with said Escrow Agent for its information), but otherwise to return the same to Lessor.

(b) Concurrently, Lessee shall deposit in escrow with said Escrow Agent its duly executed and acknowledged and legally sufficient quitclaim deed releasing and conveying all its rights, titles and interests in said property to Lessor, together with instructions to deliver the same to Lessor upon any termination of this agreement other than as the result of Lessee's purchase of said property.

(c) Termination of this agreement shall be evidenced to said escrow agent either by a writing signed by both parties or, in the event of a dispute between the parties, by a final determination of the arbitrator or arbitrators, as hereinafter provided.

(d) Lessor shall pay for all documentary tax stamps required to be affixed to its said deeds, but otherwise Lessor and Lessee shall each pay one-half of all fees and charges of said Escrow Agent.

4. In the event Lessee exercises the option to purchase, its possession shall nevertheless continue to be that of a tenant and not

of a vendee, and this lease shall continue and Lessee shall be bound by and hereby agrees to comply with and perform all of the covenants and provisions of the lease during its life and until the purchase price is fully paid. It is understood and agreed that said lease and said option to purchase shall be construed as a single instrument and the failure of Lessee to perform the terms of the lease or option shall terminate both the lease and the option to purchase, at Lessor's option, as herein provided.

ARTICLE XVIII--CAUSES SUSPENDING AND TOLLING PERFORMANCE:

If and so long as governmental restrictions, war or the results thereof, labor disturbances, Acts of God or the elements, fire, floods, shortage of water, failure or rationing of electric power or voluntary shutdowns of mining operations in compliance with power or water conservation programs, inability to market the mined products or existence of a market price for the mined product so low that Lessee, operating efficiently, cannot profitably mine said property, or any cause, whether or not like those enumerated, beyond Lessee's control, shall prevent its operations on said property, or while litigation contesting Lessor's rights, titles or interests to said property or the rights granted Lessee hereunder shall be pending and undetermined, Lessee, without impairment of its rights hereunder, shall be excused from performance except as to payment of taxes and performance of assessment work and, with those exceptions, its obligations hereunder shall be suspended and tolled and the time for performance thereof shall be extended for a period of time equal to each such period during which Lessee is so excused. If Lessee shall elect to operate said property despite such litigation, then it shall have the right to pay all sums becoming due Lessor hereunder into Court or into some disinterested bank to be impounded until the final determination of such litigation

and then paid to Lessor and/or the other party or parties to such litigation according to their relative rights thereto as therein determined.

ARTICLE XIX--FORFEITURE AND VOLUNTARY TERMINATION:

A. Time is of the essence hereof. If Lessee shall fail at any time to well and truly perform the terms, covenants and conditions of this agreement, in accordance with its true intent and meaning, Lessee shall be deemed to be in default and Lessor shall thereupon give notice thereof to Lessee, and if such default is not remedied within 30 days from and after the date of Lessee's receipt of Lessor's written notice forwarded by certified mail, then, at Lessor's option, all of Lessee's rights and privileges arising hereunder shall thereupon terminate and the term of the lease herein granted and of said contemporaneous option right and privilege shall thereupon expire and be of no further force or effect and, subject only to Lessee's right of removal herein given, Lessor may thereupon, without further notice, enter upon and into possession of said demised premises and every part and parcel thereof, and Lessee shall deliver peaceable possession thereof to Lessor; Provided, however, that if Lessee contends in good faith that no breach or default has occurred, it shall so advise Lessor and the question shall be determined by the herein provided arbitration proceedings; if the arbitration decision is that Lessee was in default, then it shall have 30 days after such decision within which to cure the same, and if it shall do so then no forfeiture of its rights hereunder shall occur because of such default. It is understood that no waiver by Lessor of a breach of any covenant herein shall be construed to be a waiver of the covenant itself or of any subsequent breach thereof.

B. Anything to the contrary herein notwithstanding, it is expressly understood and agreed that this is and shall remain an optional agreement as to Lessee and not one binding Lessee to continue under this lease for any positive term or to mine more of said property than it shall elect to mine, nor one binding Lessee to purchase or complete the purchase of said property, and that Lessee, despite any prior exercise of its said option to purchase or prior payment or payments on account of said purchase price, may at any time upon 30 days' written notice to Lessor of its intention, terminate and surrender this agreement and discontinue its operations hereunder.

C. Upon termination of this agreement by either forfeiture of Lessee's rights or voluntary termination by Lessee or expiration of the term of this lease, the respective rights of the parties hereto shall be as follows:

1. Lessor shall be entitled to retain any and all payments of royalties or installments of purchase price theretofore made by Lessee to Lessor, and to demand and receive any additional production royalties that at the time of such termination may have accrued and remain unpaid; any any and all such payments shall be deemed as and be forfeited to Lessor as liquidated damages and rental for the use and occupancy of said premises by Lessee, and for the rights and privileges enjoyed by Lessee under said lease and option.

2. Lessee shall have the right for a period of 90 days following such termination within which to remove from the demised premises any and all mining or milling machinery and equipment, supplies, tools and parapher-

nalia (excepting buildings and mine timbers, air, water and vent pipes and like installations beneath the surface) purchased, installed or placed upon said premises by Lessee; provided, however, that any of said improvements not so removed within the time hereinabove limited shall thereupon be and become property of Lessor, without purchase or other consideration, and provided further, that if weather, road conditions, acts of God or other causes beyond Lessee's control shall prevent or interrupt such removal, then the time permitted for such removal shall be tolled for a period equal to each period during which such preventing or interrupting condition existed.

3. Lessee shall assume and pay to Lessor all accrued taxes, and shall pay and discharge all bills for labor, materials and supplies theretofore furnished to Lessee and remaining unpaid as of the date of such termination, and Lessee shall account for and pay to Lessor all accrued royalties on such ores, concentrates or mineral bearing products as may have been mined or produced prior to the date of termination and remain unpaid as of said date. Any ore mined and remaining on the property of Lessor at the expiration of said removal period shall belong to Lessor.

4. Lessee shall deliver said property to Lessor with all workings thereon actively used by Lessee and necessary to continued mining operations in good order and condition and ready for immediate use.

5. Lessee shall deliver to Lessor copies of all sampling, assaying, engineering and geological reports obtained by

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GEOLOGICAL SURVEY CIRCULAR 534

Gold Geochemical Anomaly in the Cortez District Nevada

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GEOLOGICAL SURVEY CIRCULAR 534

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United States Department of the Interior
STEWART L. UDALL, *Secretary*

Geological Survey
William T. Pecora, *Director*

Free on application to the U.S. Geological Survey, Washington, D.C. 20242

Gold geochemical anomaly in the Cortez district, Nevada

By R. L. Erickson, G. H. Van Sickle, H. M. Nakagawa, J. H. McCarthy, Jr., and K. W. Leong

Abstract

An area in the Cortez district, Nevada, previously established to be anomalous in arsenic, antimony, and tungsten has been found to be anomalous also in mercury and gold. Samples from narrow quartz veins, calcite veins, and shear zones in partially silicified limestone in the lower plate of the Roberts thrust fault (Cortez window) contain as much as 3.4 ounces gold per ton. The richest samples are from an outcrop, about 100 feet long, surrounded by gravels. Their economic significance is yet to be established.

INTRODUCTION

The geochemical association of arsenic, mercury, antimony, and tungsten with gold has been recognized at several low-grade open-pit mines—such as Getchell, Bootstrap, Carlin, and Gold Acres mines—in north-central Nevada (Erickson and others, 1964b; Engineering and Mining Journal, 1966). Geochemical prospecting in the Cortez district revealed anomalous amounts of arsenic, antimony, and tungsten and led to analysis of samples for mercury and gold. Development by Lakin and Nakagawa (1965) of a sensitive chemical method for rapid determination of gold in rocks and soils and by Vaughn and McCarthy (1964) of a mercury sniffer made such analysis possible in the field during geochemical prospecting.

The Carlin and Bootstrap mines in the Tuscarora Mountains, Elko and Eureka Counties, and the Gold Acres mine in the Shoshone Range, Lander County, are associated with windows in the Roberts thrust, a major structural feature of north-central Nevada along which a number of mining districts are situated (Roberts, 1960). Gold ore is chiefly in the thrust zone at Bootstrap and Gold Acres and is in and below the thrust zone at Carlin (Peter N. Lancar, Newmont's Carlin gold mine: Soc. Mining Engineers Fall Mtg. Rocky Mtn. Minerals Conf., Phoenix, Ariz., Oct. 1965). At the Getchell mine in the Osgood Mountains, Humboldt County, gold occurs in the high-angle Getchell fault zone, a zone that appears unrelated to the Roberts thrust (Hotz and Willden, 1964).

In early 1966 surface-rock and drill-hole samples collected in previous geochemical studies in the Cortez district were analyzed for gold by Nakagawa, using both chemical and atomic-absorption methods. Anomalous amounts of gold—5-14 ppm (parts per million), equivalent to 0.145-0.41 ounce per ton—were found in two surface rock samples; 2-8 ppm (0.06-0.23 oz per ton) gold was found in heavy-mineral concentrates of rotary-drill cuttings from two shallow holes drilled near the boundary of an arsenic-antimony-tungsten anomaly. These results prompted additional fieldwork in May 1966, which is reported here.

Analyses of newly collected samples showed gold concentrations as high as 3.4 ounces per ton. The samples are from narrow quartz veins, calcite veins, and shear zones in partially silicified limestone of Silurian and Devonian age in the lower plate of the Roberts thrust (Cortez window) near the Crescent fault about 4 miles north of Cortez, Nev. (fig. 1). The highest gold assays discovered in this investigation occur in samples from an outcrop, about 100 feet long, consisting of altered Devonian limestone near the east end of an arsenic-antimony-tungsten geochemical anomaly previously reported by Erickson, Masursky, Marranzino, Oda, and Janes (1964a).

The geology of the Cortez quadrangle is described by Gilluly and Masursky (1965), and the reader is referred to their report and to reports on the geochemical investigations (Erickson and others, 1961, 1964a) for a more complete discussion of the geology and geochemistry of the area.

Elwin Mosier, Howard Knight, Arthur Hubert, and Theodore Roemer, all of the U.S. Geological Survey, participated with the authors in this short but intensive field study.

RESULTS OF INVESTIGATION

For this investigation 238 rock samples were collected from 95 localities near the Crescent fault about 4 miles north of Cortez (fig. 1). Analytical results (table 1) are given only for those samples that, by at least one analytical method, contain significant amounts of gold (0.3 ppm, or 0.09 oz per ton). To check the gold values determined by colorimetric and atomic-absorption methods, 27 samples were analyzed by fire assay by C. O. Parker and Co., Denver, Colo. The results show good agreement (table 1) in view of the fact that only 1- and 2-gram samples were used in the colorimetric and atomic-absorption methods. Sample localities and localities with significant amounts of

gold are shown in figure 1. Sample localities and areas of anomalous concentrations of arsenic, antimony, tungsten, and mercury are shown in figures 2, 3, 4, and 5, respectively.

The highest gold assays were found in samples from locality 722 (fig. 1), an exposure of altered limestone that, as previously mentioned, is east of the area of the strong arsenic-antimony-tungsten anomaly. The limestone, which forms a dip slope on the east side of a ridge, strikes N. 5° E., dips 65° E., and is exposed for about 100 feet along strike. The base of the slope is covered by talus. The limestone is dark orange brown in overall appearance and contains nearly vertical white calcite veins and calcite-cemented breccia zones as much as 10 inches wide that strike westward into the ridge. Quartz stringers up to 2 inches wide are parallel or subparallel to a brick-red shear zone, 8 inches wide, that strikes N. 75° W. and dips 30° SW. Samples 722 through 722-K (table 1) are selected samples from the talus; all others are from narrow veins and shear zones in the limestone. All veins, shear zones, breccia zones, and fractures sampled at this locality are gold bearing. The type of material probably constitutes less than 10 percent of the outcrop area. We have no data at present on the gold content of limestone that is not sheared, brecciated, or veined.

Dark-brownish-black jasperoid masses that crop out discontinuously on the west side of the ridge above locality 722 (fig. 1, table 1) contain much smaller but nonetheless anomalous amounts of gold. Gravel deposits cover the area between these jasperoid masses and locality 722 and may conceal gold-bearing altered rocks.

At sample localities 601, 600, 700, 701, and 702 (fig. 1), a conspicuous brick-red breccia zone, about 8 feet wide, in skarn and altered limestone strikes N. 10° W. and dips steeply east. Gold was detected only at locality 600 and in only 2 of 21 samples collected there.

At locality 606 gold occurs in a zone of dark-maroon jasperoid and breccia that contains white calcite pods and stringers. No attempt was made to trace this jasperoid zone along strike.

Preliminary mineralogic work on one sample (722-D) suggests that most of the gold occurs as very tiny disseminated specks and fine lacework in oxidized pyrite crystals. The largest fragment of gold observed in this sample is only a few microns thick but measures 200 microns in largest dimension.

The silver content of all gold-bearing samples is very low (maximum assay, 0.16 oz per ton). Spectrographic analyses show that arsenic is the most abundant metal in the gold-bearing samples; arsenic and mercury contents show a direct correlation with gold content. Small amounts of antimony and tungsten may be present; although antimony and tungsten contents do not show a direct correlation with gold content, anomalously high concentrations of antimony and tungsten commonly occur in rocks in or adjacent to areas of gold mineralization. Lead, zinc, and copper are not present in significant amounts.

An entirely different suite of metals was detected at locality 759 (fig. 1). Here, a light-gray, pink-weathering fine-grained limestone with finely disseminated oxidized pyrite crystals contains 5,000 ppm zinc, 300 ppm copper, and 20 ppm bismuth. A thin white pyritic quartz veinlet cutting the limestone contains 3,000 ppm zinc, 500 ppm copper, 300 ppm lead, 70 ppm tin, 200 ppm bismuth, and 200 ppm antimony. Gold was not detected in these samples.

Caliche-cemented gravel was sampled at 12 localities (fig. 1) in the search for possible placer accumulations of gold. Gold content was below the limit of detection (0.1 ppm) in all samples.

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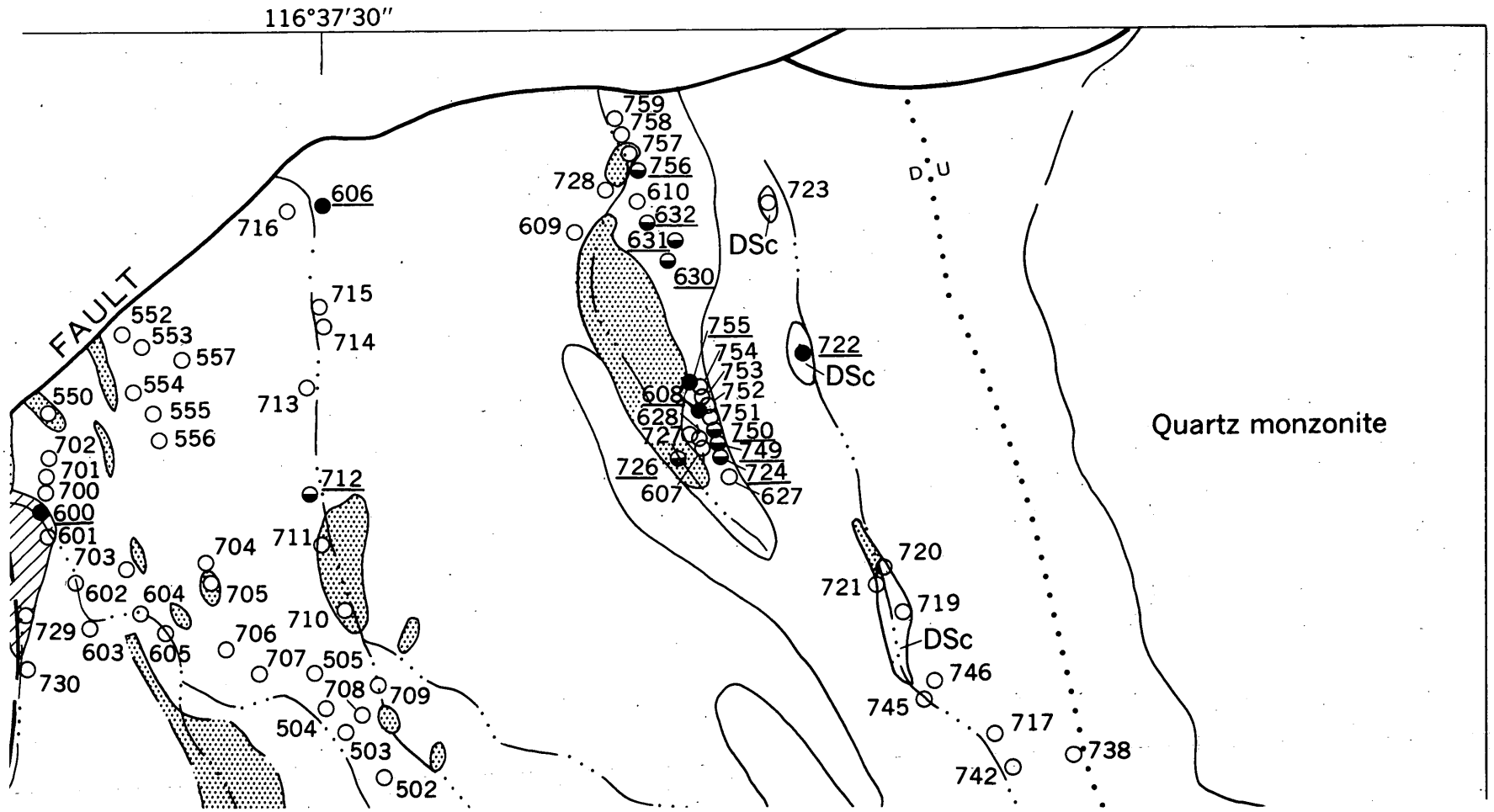
Vaughn, W. W., and McCarthy, J. H., Jr., 1964, An instrumental technique for the determination of submicrogram concentrations of mercury in soils, rocks, and gas, in Geological Survey Research 1964: U.S. Geol. Survey Prof. Paper 501-D, p. D123-D127.

Table 1.--Analyses of rocks from the lower plate of the Roberts thrust, Cortez window, Nevada. [Spectrographic analyses by Elwin Mosier; colorimetric analyses for gold by G. H. Van Sickle; atomic-absorption analyses for gold by H. M. Nakagawa, G. H. Van Sickle, K. W. Leong, and Arthur Hubert; and for mercury by W. W. Janes and J. H. McCarthy, Jr.; fire-assay analyses by Charles O. Parker and Co. tr., trace; n.d., not determined. Sample localities shown in fig. 1. Multiple samples from one locality indicated by letter suffix.]

Locality and Sample Nos.	Description	Fire assay analyses: Ounces per ton		Fire assay analyses: Parts per million		Atomic absorption analyses in parts per million		Colorimetric analyses in parts per million	Spectrographic analyses in parts per million		
		Au	Ag	Au	Ag	Au	Hg	Au	As	Sb	W
600-C	Iron-rich material, yellow brown in prominent, nearly vertical breccia zone	0.12	tr.	4.1	tr.	8.0	1.0	10.0	7,000	1,500	300
600-E	Limestone, brick-red, leached; in breccia zone	n.d.	n.d.	n.d.	n.d.	3.5	.55	n.d.	3,000	1,000	150
606	Jasperoid, yellow brown; contains calcite pods and stringers	.18	.10	6.1	3.4	5	.15	7.5	700	300	100
606-A	Jasperoid, maroon	n.d.	n.d.	n.d.	n.d.	1	.20	n.d.	700	300	200
606-B	Jasperoid, brick-red	n.d.	n.d.	n.d.	n.d.	.5	.13	n.d.	< 500	200	300
608	Jasperoid, gray; weathers brownish black	n.d.	n.d.	n.d.	n.d.	1.5	.15	n.d.	500	< 100	< 50
630-A	Limestone breccia, brown; cemented with white calcite	n.d.	n.d.	n.d.	n.d.	.5	.13	1	< 500	< 100	< 50
631	Limestone, silicified; contains seams of white calcite and iron-rich material; weathers dark brown to black	n.d.	n.d.	n.d.	n.d.	.5	.17	.75	< 500	150	< 50
632	Do	n.d.	n.d.	n.d.	n.d.	.6	.12	.5	< 500	100	< 50
712	Limestone, red-brown, altered	n.d.	n.d.	n.d.	n.d.	.7	.24	n.d.	2,000	200	200
722	Limestone, red-brown, partially silicified. Float in talus	1.74	.08	59	2.7	47	.85	15	1,500	< 100	< 50
722-A	Limestone, red-brown, with some faint green stain, leached; contains white calcite stringers	1.96	.10	67	3.4	49	3	60	1,500	100	< 50
722-B	Limestone, red-brown; cut by 1.5-in. white quartz vein with dark-brown iron oxide ribbon in center	1.60	.10	54	3.4	54	1.7	60	3,000	< 100	50
722-C	Limestone, red-brown, leached; from fracture zone	3.40	.16	116	5.5	63	1.2	125	3,000	100	< 50
722-D	Like 722-A	2.98	.12	101	4.1	88	.90	150	2,000	150	50
722-E	Calcite vein, white; with some red-brown altered limestone	.04	.10	1.4	3.4	4.5	.38	5	500	< 100	< 50
722-F	Like 722-B	.02	.10	.7	3.4	2.3	1.6	1.5	3,000	< 100	< 50
722-G	Limestone, red-brown; veined with white calcite and pyrite	1.12	.14	38	4.8	78	1.8	52	3,000	< 100	< 50
722-H	Like 722-B	.29	tr.	9.9	tr.	11.5	2.7	10	5,000	< 100	50
722-I	Limestone, brown; partially silicified	.08	tr.	2.7	tr.	2.6	1	2	1,000	< 100	< 50
722-J	Breccia zone, red, calcite-cemented	.06	tr.	2.04	tr.	4.5	2.8	2.5	1,500	< 100	< 50
722-K	Calcite, white; veins in limestone	.12	tr.	4.1	tr.	1.25	.30	3	< 500	< 100	< 50
722-L	Shear zone, brick-red; 8 in. wide	3.1	.16	105.4	5.5	111	.85	160	2,000	< 100	< 50
722-M	Quartz vein, white; 2 in. wide; 3 ft. above 722-L	.34	.14	11.56	4.8	16.5	1	25	1,000	< 100	< 50
722-N	Jasperoid, gray; weathers black brown	.30	.12	10.2	4.1	11.0	.90	15	1,000	< 100	< 50
722-O	Quartz seam, gray and red; in Jasperoid	.90	tr.	30.6	tr.	31.	3.2	50	3,000	< 100	< 50
722-P	Limestone, gray, partially silicified; with coarsely crystalline white calcite patches	.04	tr.	1.36	tr.	.1	.01	.35	< 500	< 100	< 50
722-Q	Like 722-J; 3 in. wide	.05	.15	1.7	5.1	4	.08	5	< 500	< 100	< 50
722-R	Limestone, gray; weathers brown	.01	tr.	.34	tr.	.1	.02	.05	< 500	< 100	< 50
722-S	Breccia zone in limestone, calcite-cemented; 10 in. wide	.10	tr.	3.4	tr.	1.6	.07	2	< 500	< 100	< 50
724	Limestone, dark-gray, silicified	n.d.	n.d.	n.d.	n.d.	1	.60	.75	< 500	2,000	< 50
724-A	Limestone, dark-gray, partially silicified	n.d.	n.d.	n.d.	n.d.	.35	.03	.35	< 500	< 100	< 50
726	Like 724-A; float piece	n.d.	n.d.	n.d.	n.d.	.25	.14	.75	1,000	300	< 50
749	Jasperoid, gray-brown	n.d.	n.d.	n.d.	n.d.	.6	.08	.75	700	200	< 50
749-A	Jasperoid, brown	n.d.	n.d.	n.d.	n.d.	.8	.07	.75	1,000	100	< 50
750	Jasperoid, brown	n.d.	n.d.	n.d.	n.d.	.25	.06	.5	< 500	< 100	< 50
755	Jasperoid, brown, slightly vuggy; some coarse gray quartz	n.d.	n.d.	n.d.	n.d.	4	.06	3.5	500	< 100	< 50
756	Calcite, white, and iron-stained limestone; in shear zone	n.d.	n.d.	n.d.	n.d.	.1	.09	1	< 500	150	50



Enlargement of northeast part of map area.

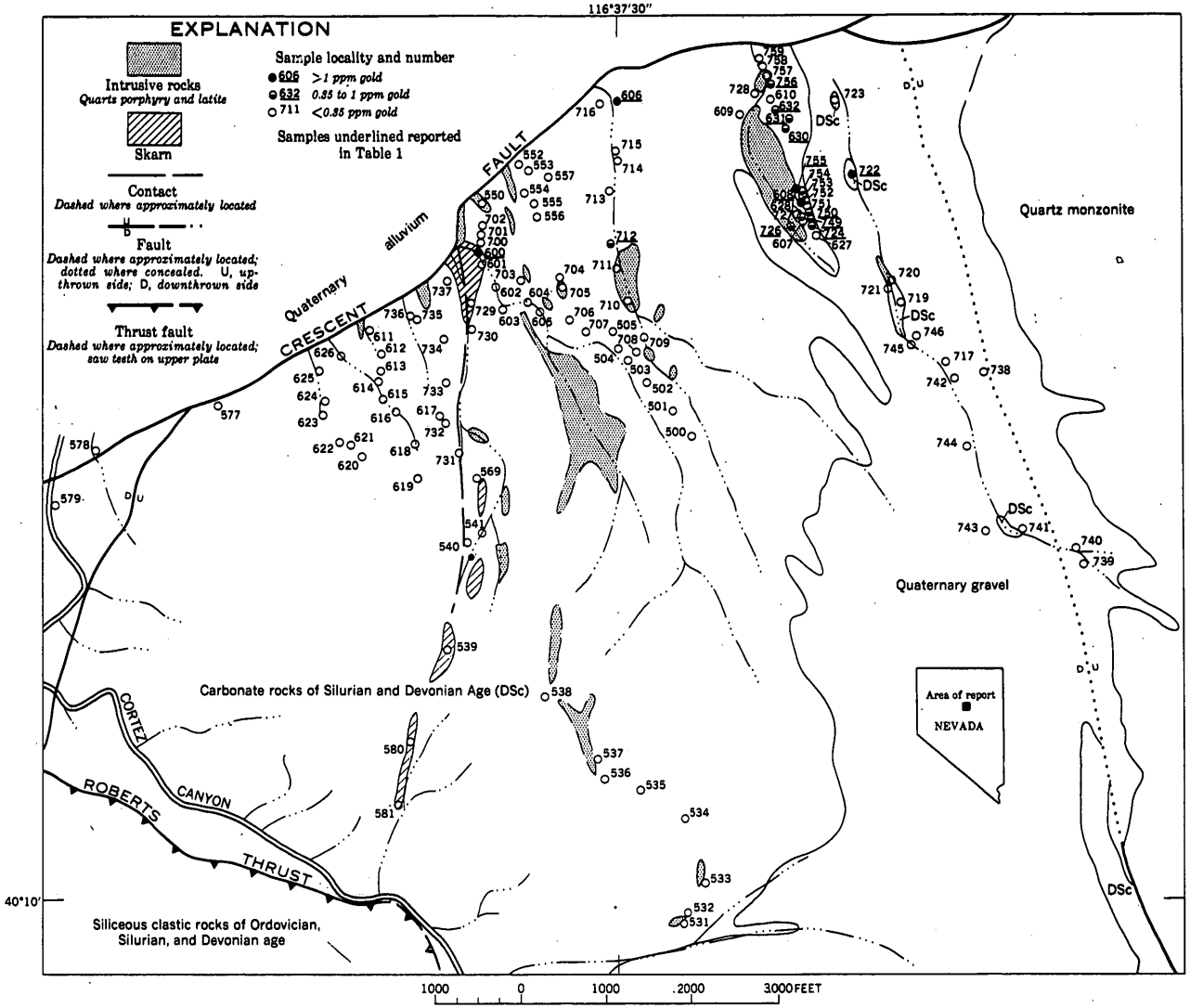


FIGURE 1.—Geochemical and geologic map of an area in the north-central part of the Cortez quadrangle, Nevada. Geology modified from Gilluly and Masursky (1965). Gold content of underlined samples shown in Table 1.

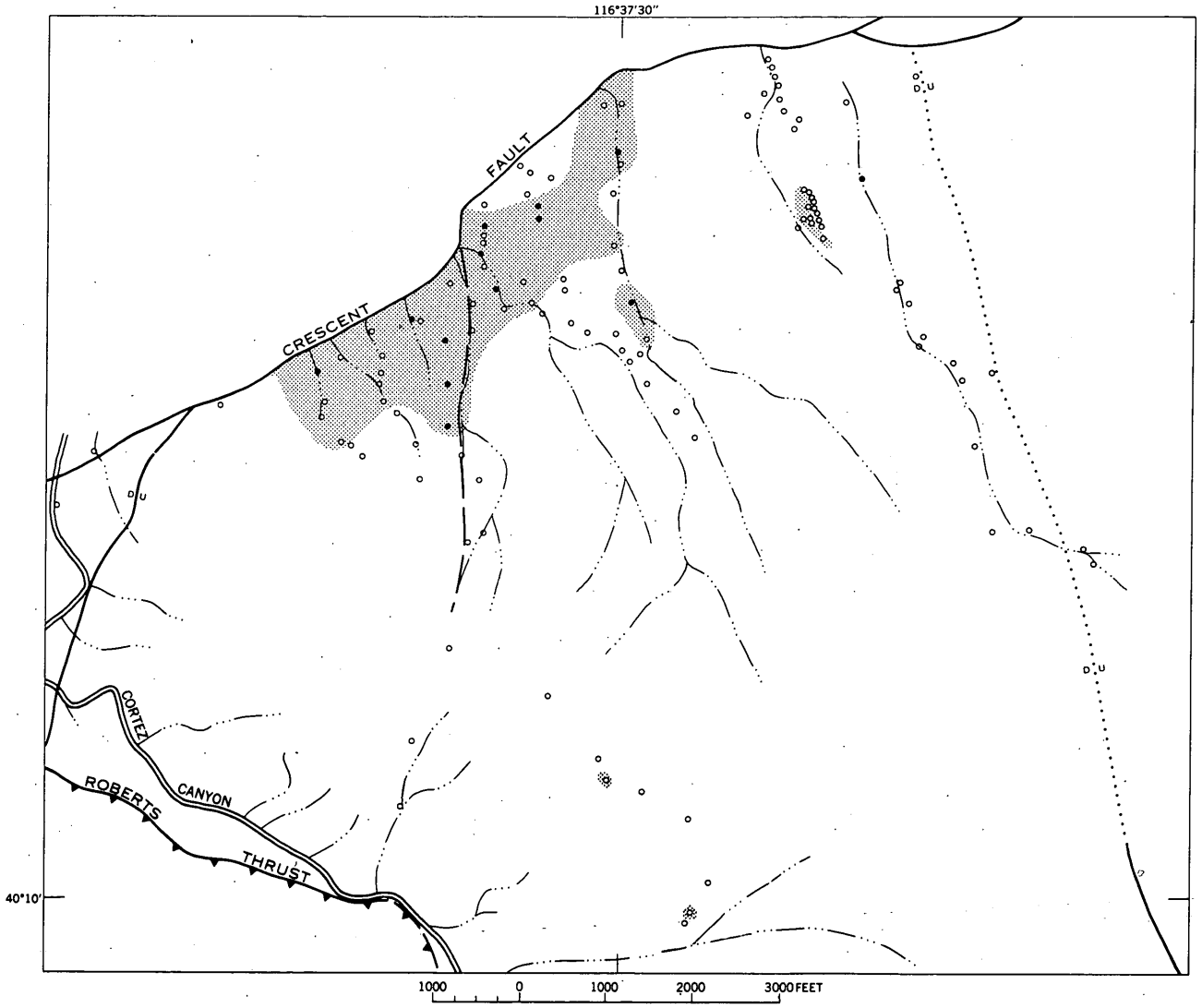


FIGURE 2.—Geochemical map showing distribution of arsenic. Samples of jasperoid, fracture fillings, and shear zones within shaded area contain at least 500 ppm. Solid circles are samples that contain at least 2,000 ppm.

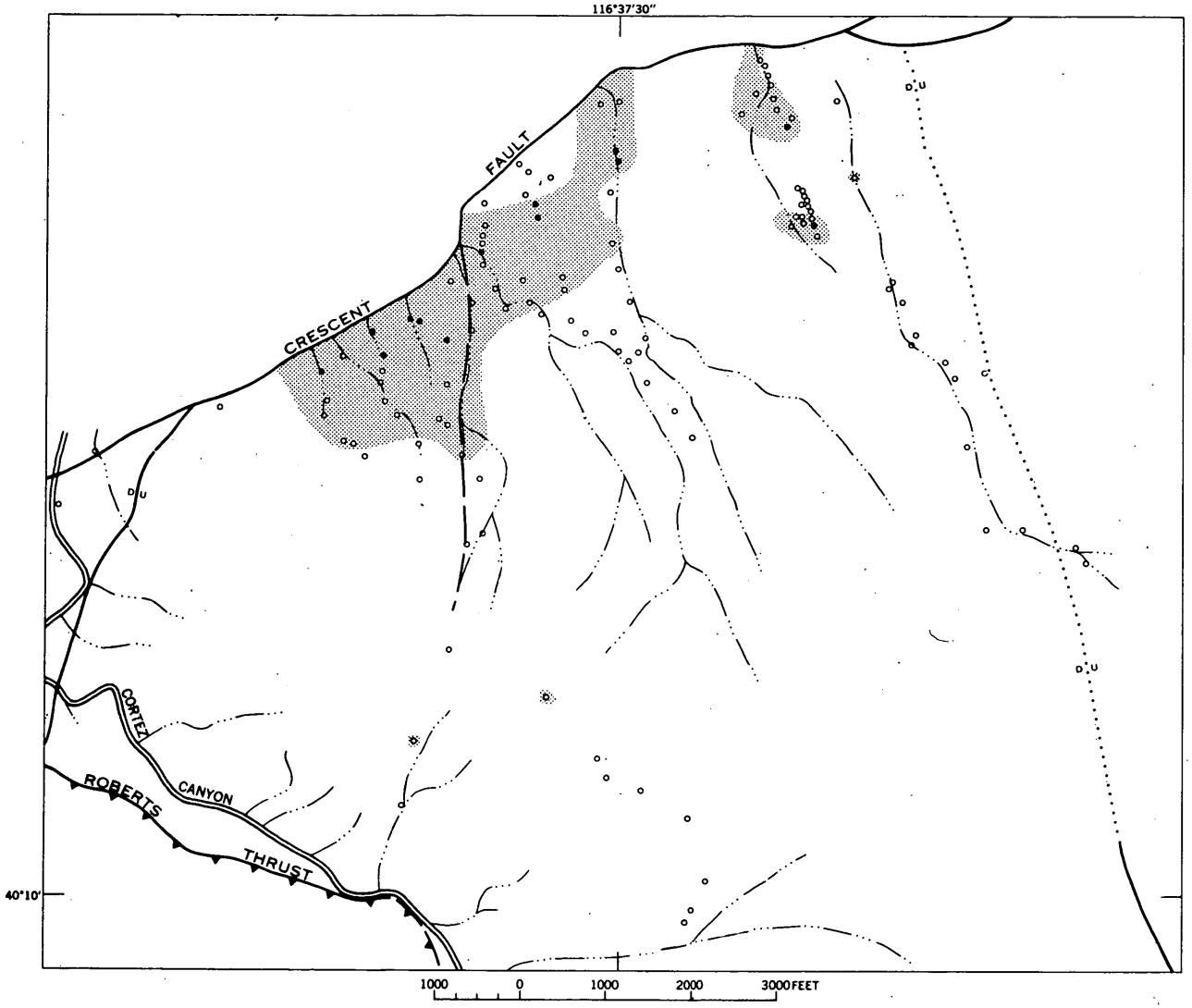


FIGURE 3.—Geochemical map showing distribution of antimony. Samples of jasperoid, fracture fillings, and shear zones within shaded area contain at least 100 ppm. Solid circles are samples that contain at least 1,000 ppm.

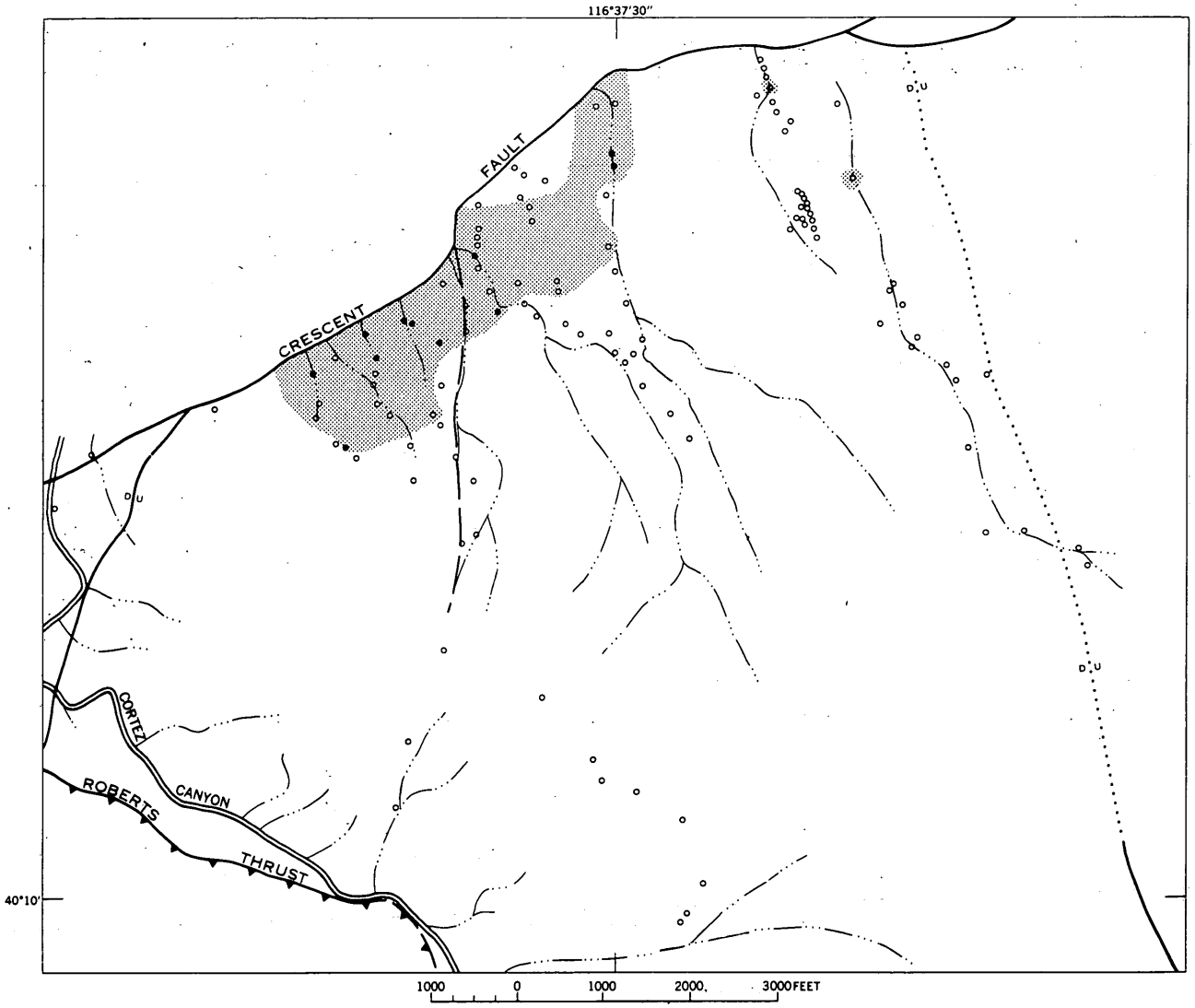


FIGURE 4.—Geochemical map showing distribution of tungsten. Samples of jasperoid, fracture fillings, and shear zones within shaded area contain at least 50 ppm. Solid circles are samples that contain at least 500 ppm.

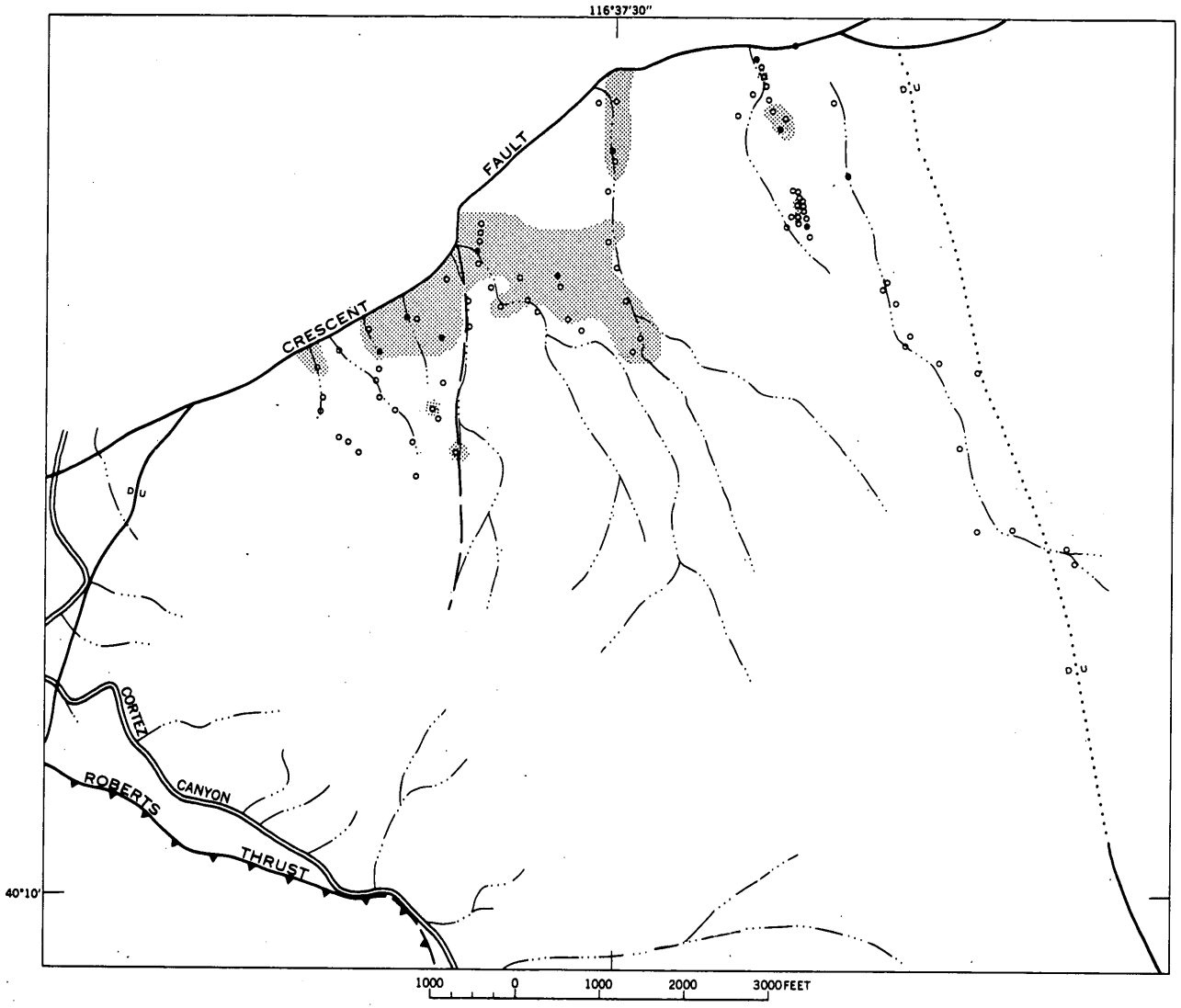


FIGURE 5.—Geochemical map showing distribution of mercury. Samples of jasperoid, fracture fillings, and shear zones within shaded area contain at least 0.1 ppm. Solid circles are samples that contain at least 0.5 ppm.

it on said property during the term hereof.

6. If Lessee has caused this agreement to be recorded in either Eureka or Lander County then, unless it shall have deposited its quitclaim deed in escrow deliverable to Lessor on termination of this agreement, Lessee shall duly execute, acknowledge and deliver to Lessor its legally sufficient quitclaim deed conveying all its rights, titles and interests in said property to Lessor.

ARTICLE XX--ARBITRATION:

If any dispute shall arise between the parties with respect to the meaning of this agreement or the performance hereof by Lessor or Lessee or the respective rights or liabilities of the parties, or with regard to any matter not provided for herein, such dispute shall be referred for arbitration to any person agreed upon by the parties, or if they cannot agree upon any one arbitrator, then Lessor and Lessee shall each select one person of its choice for arbitrator and the two arbitrators so appointed shall select a third, and the three arbitrators so appointed shall arbitrate, decide and determine the dispute and the decision of the individual arbitrator or of two out of three of the arbitrators, as the case may be, shall be final and binding upon the parties; provided, that if any party shall refuse to appoint or to join in the appointment of an arbitrator or arbitrators within ten days after notice that the other party has appointed an arbitrator, then the arbitrator appointed by such other party shall determine and decide the dispute and his decision shall likewise be final and binding upon both of the parties.

ARTICLE XXI--NOTICES:

Notices hereunder shall be in writing and delivered personally or deposited in the United States mail, registered or certified and postpaid, addressed to:

Lessor: Cortez Metals Company
c/o Thomas A. Cooke
P. O. Box 2229
Reno, Nevada

Lessee: American Exploration & Mining Co.
2300 Russ Building
San Francisco 4, California

or to such other places as the parties may from time to time specify in writing, and shall be considered to have been delivered at the expiration of 48 hours following their deposit in the mail.

ARTICLE XXII--ASSIGNMENT:

Lessee may assign this lease to any successor to all or substantially all of its property, or to any subsidiary, affiliate or entity controlled by it, or to M. M. Harcourt and Margaret C. Harcourt, his wife, of Nogales, Arizona, and any such assignee shall automatically assume and thereafter be solely responsible for the performance hereof, but otherwise Lessee may not assign this lease or any interest thereunder, nor sublet said property nor any part thereof without the prior written consent of Thomas A. Cooke, acting on behalf of the Lessor, and such consent will not be unreasonably withheld.

This lease and all of its terms and provisions shall extend to and bind the heirs, assigns, successors and personal representatives of the parties hereto respectively, and of the assignee of the Lessee if any there be, as herein permitted.

IN WITNESS WHEREOF, the Lessor and Lessee have, respectively, caused these presents to be signed and its corporate name and seal

to be affixed by its thereunto duly authorized officers, the day and year first above written.

CORTEZ METALS COMPANY

By Kathleen Coleman O'Brien
President

And Julia Reitze
Secretary

LESSOR

AMERICAN EXPLORATION & MINING CO.

By Edgar A. Scholz
VICE President

And D. de S. Duke
Secretary

LESSEE

APPROVED:

Kathleen Coleman O'Brien
Kathleen Coleman O'Brien
representing 421,540 shares of the capital stock of Cortez Metals Company

Julia Reitze
Julia Reitze,
representing 421,440 shares of the capital stock of Cortez Metals Company

Constituting a majority of the issued and outstanding capital stock of said Cortez Metals Company

STATE OF CALIFORNIA)
City and County of San Francisco) ss.

On this 1st day of September, 1959, before me, a notary public in and for the City and County of San Francisco, State of California, personally appeared Edgar A. Scholz and D. de S. Duke known to me to be, respectively, the VICE President and Secretary of AMERICAN EXPLORATION & MINING CO., the corporation described in and which executed the within instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal in the City and County of San Francisco, State of California, the day and year in this certificate first above written.

Kathryn J. Best
Notary Public in and for the City and County of San Francisco, State of California
MY COMMISSION EXPIRES: April 28, 1963

STATE OF Florida)
) ss.
County of Pinellas)

On this 17th day of August, 1959, before me, a notary public in and for said County and State, personally appeared _____ Kathleen Coleman O'Brien and _____, known to me to be the President and Secretary, respectively, of CORTEZ METALS COMPANY, the corporation described in and which executed the within instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal in said County and State, the day and year in this certificate first above written.

Shirley Kibler
Notary Public

My commission expires: _____

Notary Public, State of Florida at Large
My Commission Expires April 19, 1963
Bonded by American Surety Co. of N. Y.

EXHIBIT A

(To Cortez Metals Company-American Exploration & Mining Co. Mining Lease and Option)

Patented mining claims of Cortez Metals Company, situate in Eureka and/or Lander Counties, Nevada, and particularly described in the U. S. patent therefor recorded in the office of the County Recorder of the noted county, in the noted Book and Volume, and at the noted page of records, which records are hereby incorporated herein, viz.:

NAME OF CLAIM	COUNTY	PATENT RECORDED BOOK	VOLUME	PAGE
Artic	Eureka	11		595-97
Avalanche	"	12		558-60
Adjunct	"	13		544-45
Alta	"	13		546-47
Bewick	"	13		566-67
Cummings	"	11		586-88
Central Consolidated	"	13		50-52
Conclave	"	13		562-63
Compressor	"	13		44-46
Conjunction	"	13		570-71
Chance	"	20		276-79
DeValla	"	13		550-51
Equator	"	13		558-59
Eclipse	"	13		542-44
Excelsior	"	13		53-55
Fitzgerald	"	11		589-91
Garrison	"	11		583-85
Hidden Treasure	"	13		554-55
Idaho	"	11		598-600
Junction	"	11		580-82
Jeanette	"	13		47-49
Kingsbury	"	13		564-65
Lead	"	20		276-79
Moreang	"	13		556-57
Monarch	"	13		552-53
Meteor	"	13		585-86
Mt. Tenabo	"	13		560-61
Premium	"	11		592-94
Pontifex	"	13		548-49
Protection	"	13		574-75
Prevision	"	13		572-73
Quartzite	"	20		276-79
Rosebush	"	20		276-79
Remnant	"	13		587-88
St. Louis	"	11		601-03
Speculation	"	13		540-41
Summit	"	13		568-69
Millsite - Cortez	"	19		462-63

EXHIBIT B

(To Cortez Metals Company-American Exploration & Mining Co. Mining Lease and Option)

Unpatented mining claims of Cortez Metals Company, situate in Eureka and/or Lander Counties, Nevada, and particularly described in the Location Notice thereof recorded in the office of the County Recorder of the noted county, in the noted Book and Volume, and at the noted page of records, which records are hereby incorporated herein, viz.

NAME OF CLAIM	COUNTY	LOCATION NOTICE RECORDED BOOK	VOLUME	PAGE
Columbian	Eureka	H		271
Oversight	"	H		269
Bullion (Blue Streak Placer)	" Lander?	H		
Gamma	"	G		415
Residue	"	J		208
Residue #1	"	J		209
Residue #2	"	J		209
Cash In Placer				
Wheel of Fortune Placer				

EXHIBIT C

(To Cortez Metals Company-American Exploration & Mining Co. Mining Lease and Option)

Unpatented mining claims owned by Cortez Metals Company, unless relocated, situate in Eureka and/or Lander Counties, Nevada, and particularly described in the Location Notice thereof recorded in the office of the County Recorder of the noted county, in the noted Book and Volume, and at the noted page of records, which records are hereby incorporated herein, viz.:

NAME OF CLAIM	COUNTY	LOCATION NOTICE RECORDED BOOK	VOLUME	PAGE
Alert	Eureka	H		270
February	"	H		267
George	"	H		276
Gold Bug	"	H		273
Ivanhoe	"	H		266
Legal Tender	"	H		265
New	"	H		269
Queen	"	H		275
London	"	H		274
Silver State	"	H		268
Security	"	H		264
Tough	"	H		277
Alpha	"	G		416
Beta	"	G		416
Carlo	Lander	10		46
Delta	"			
Free Coinage	Eureka	H		272
Lizzie	"	G		216
John	Lander	10		48
Maiola	"	10		47
Tony	"	10		47
Louise	"	10		46
Martinez	"	10		46
Reno (Rene)	Eureka	G		315

EXHIBIT D

(To Cortez Metals Company-American Exploration & Mining Co. Mining Lease & Option)

Patented third class grazing land owned by Cortez Metals Company, situate in Eureka and/or Lander Counties, Nevada, described as follows:

NE¼; and NW¼ of SE¼ of Section 7; S½ of SW¼ of Sec. 18; N½ of NW¼; SE¼ of NW¼; and NW¼ of SE¼ of Sec. 19, Township 26 North, Range 48 E., M.D.B.&M., containing 540 acres.

Also all water and water rights in anywise appurtenant to Lessor's mining claims or land, or heretofore used in connection therewith, and particularly the Wenban Spring located in Sections 33 and 34, T. 26 N., R. 47 E., M.D.B.&M., covered by Lessor's Millsite Claim, Survey #46-B.

AMENDATORY AGREEMENT

CORTEZ METALS COMPANY, a Nevada corporation, Lessor, and AMERICAN EXPLORATION & MINING CO., a California corporation, Lessee, hereby agree that Article X of that certain Mining Lease and Option executed by and between them August 18, 1959, be and the same is hereby amended, retroactive to said date of execution, so as to read in full as follows, viz.:

"ARTICLE X--ASSESSMENT WORK AND PATENTING:

Lessee shall perform any annual assessment work required to hold the unpatented claims listed in Exhibit B for the assessment year ending September 1, 1959, and shall complete such work and prepare and file proper proofs thereof with the County Recorder of Eureka County or Lander County, Nevada, as the case may require, or in both said counties in case of doubt, within the time permitted by law, furnishing copies of such proofs to Lessor in care of Thomas A. Cooke, P. O. Box 2229, Reno, Nevada. Thereafter, during the life of this lease, Lessee shall perform any annual assessment work required to hold said unpatented mining claims listed in Exhibit B and complete such work and prepare and file proper proofs thereof with the appropriate county recorder before July 1st of each year for which such work is required, furnishing copies thereof to Lessor in care of Mr. Cooke at the noted address. Lessee shall not be obligated to perform any annual assessment work on or with respect to claims described in Exhibit C; nevertheless, if Lessee, at its sole option, shall desire to perform the annual assessment work required to hold any of such claims for any assessment year, it may do so, in which event it shall complete such work and prepare and file with the appropriate county recorder a proper proof thereof within the time permitted by law, as to the assessment year ending September 1, 1959, and on or before July 1st of any affected assessment year thereafter, furnishing a copy of such proof to Lessor in care of Mr. Cooke at the noted address, it being understood that performance of the work required to hold any such claim for one assessment year shall not obligate Lessee to perform the work required to hold the same claim or any other

of such Exhibit C claims for any subsequent assessment year or years.

Lessee shall not be obligated to perform annual assessment work on or with respect to any Exhibit B mining claim for any assessment year in which this lease is forfeited or voluntarily terminated if such forfeiture or termination occurs prior to March 1st of any year, but shall in such event furnish to Lessor a record of the character, amount, cost and place of performance of any work done by it during such assessment year and prior to such forfeiture or termination which might be applied toward assessment work; further, in any year in which Lessor shall be exempted by law from performing assessment work, Lessor shall prepare and file any notice of intention or other instrument required to take advantage of such exemption.

If Lessee shall desire to obtain patent in Lessor's name for any of such Exhibit B unpatented mining claims or for any not validly relocated unpatented claim described in Exhibit C, Lessor, but at the sole expense of Lessee, shall fully assist and cooperate in the institution and conduct of such proceedings as shall be required for that purpose."

IN WITNESS WHEREOF, the Lessor and Lessee have, respectively, caused these presents to be signed and its corporate name and seal to be affixed by its thereunto duly authorized officers, this 16 day of Sept, 1959.

CORTEZ METALS COMPANY

By Kathleen Coleman O'Brien, President

and Julia Reitze, Secretary

AMERICAN EXPLORATION & MINING CO.

By Edgar A. Scholz, VICE President

and [illegible], Secretary

APPROVED:

Kathleen Coleman O'Brien)
Kathleen Coleman O'Brien)
representing 421,540 shares of)
capital stock of Cortez Metals)
Company)
)
Julia Reitze)
Julia Reitze, representing)
421,440 shares of the capital)
stock of Cortez Metals Company) --Constituting a majority of the issued and outstanding capital stock of said Cortez Metals Company

A S S I G N M E N T

AMERICAN EXPLORATION & MINING CO., a California corporation (hereinafter sometimes called "AMEX") hereby assigns to the Cortez Joint Venture, a joint venture consisting of AMEX, The Bunker Hill Company, a Delaware Corporation, Webb Resources, Inc. a Colorado corporation, and Vernon F.Taylor, Jr. of Denver, Colorado, all of its rights, title and interest in and to the fifteen (15) unpatented claims under the following Agreement.

a. Agreement, dated May 11, 1964, between AMEX and Louis L. Rossi of Cortez, Nevada and Antonio A.Rossi and Birdie Rossi of Winnemucca, Nevada. An abstract of such Agreement was recorded May 25, 1964 in Book 4, at pages 152 and 153, Official Records of Eureka County, Nevada.

ATTEST

Secretary

AMERICAN EXPLORATION & MINING CO.

Vice President

February 20, 1965.

STATE OF CALIFORNIA)
) ss.
CITY AND COUNTY OF SAN FRANCISCO)

On this twentieth day of February, 1965, before me, the undersigned Notary Public, personally appear Hatfield Goudey and Melvin H. Morgan, known to me to be the Vice President and Secretary, respectively, of AMERICAN EXPLORATION & MINING CO., and that they as such officers, being authorized so to do, executed the foregoing Assignment for the purposes therein contained, by signing the name of the corporation by themselves in the capacities referred to.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Kathryn J. Bent
Notary Public

In and for the City and County of
San Francisco, State of California

My commission expires:
April 28, 1967

A S S I G N M E N T

AMERICAN EXPLORATION & MINING CO., a California corporation (hereinafter sometimes called "AMEX") hereby assigns to the Cortez Joint Venture, a joint venture consisting of AMEX, The Bunker Hill Company, a Delaware Corporation, Webb Resources, Inc., a Colorado corporation, and Vernon F. Taylor, Jr. of Denver, Colorado, all of its right, title and interest in and to the thirty-eight (38) patented claims, one hundred ninety-nine (199) unpatented claims and five hundred forty (540) acres of other patented lands under the following Agreements.

a. Agreement, dated August 18, 1959, between AMEX and Cortez Metals Company, a Nevada corporation, amended September 16, 1959.

b. Agreement, dated August 6, 1963, between AMEX and Idaho Mining Corporation, a Nevada corporation. An abstract of such Agreement was recorded September 9, 1963, in Book 2, at Page 1, Official Records of Lander County, Nevada.

c. Option and Agreement, dated July 6, 1963, between AMEX and D.P. Ward, Jr. and Helen F. Ward of Phoenix, Arizona. An abstract of such Option was recorded on July 16, 1963, in Book 1, at Page 33, Official Records of Lander County, Nevada.

d. Option and Agreement, dated July 9, 1963, between AMEX and D.P. Ward, Jr. and Helen F. Ward of Phoenix, Arizona, and Edmond F. Lawrence and Helen J. Lawrence of Reno, Nevada.

An abstract of such Option was recorded on July 23, 1963, in Book 1, at Page 44, Official Records of Lander County, Nevada.

ATTEST:

AMERICAN EXPLORATION & MINING CO.

Melvin H. Morgan
Secretary

Vice President

June 5, 1964

STATE OF CALIFORNIA)
) ss.
CITY AND COUNTY OF SAN FRANCISCO)

On this fifth day of June, 1964, before me, the undersigned Notary Public, personally appear Hatfield Goudey and Melvin H. Morgan, known to me to be the Vice President and Secretary, respectively, of AMERICAN EXPLORATION & MINING CO., and that they as such officers, being authorized so to do, executed the foregoing Assignment for the purposes therein contained, by signing the name of the corporation by themselves in the capacities referred to.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Kathryn Best Notary Public
In and for the City and County of
San Francisco, State of California

My commission expires:
April 28, 1967

CONSENT TO ASSIGNMENT

I, THOMAS A. COOKE, pursuant to the provisions of Article 22 of the Agreement dated August 18, 1959, between AMERICAN EXPLORATION & MINING COMPANY, a California corporation, Lessee, and CORTEZ METALS COMPANY, a Nevada corporation, Lessor, and pursuant to a resolution of the Board of Directors of CORTEZ METALS COMPANY dated December 16, 1963, do, on behalf of said Lessor, consent to the assignment of Lessee's interest in said lease to the CORTEZ JOINT VENTURE, a joint venture to be formed by AMERICAN EXPLORATION & MINING COMPANY, THE BUNKER HILL COMPANY, A Delaware corporation, WEBB RESOURCES, INC., a Colorado corporation, and VERNON F. TAYLOR, JR., or any entity which he controls, and should said Joint Venture elect to form a corporation which it would control, said consent is extended to a further assignment to said corporation. PROVIDED, HOWEVER, that consent to this assignment shall not be construed as a waiver of the provisions of paragraph 22 with respect to any further assignments, and as to any further assignments, the same shall be made only with the written consent of the undersigned.

Dated this 15 day of Jan, 1964.

Thomas A. Cooke

THOMAS A. COOKE

Telephone 363-3302

Hand[illegible]ple Serial 4047-50

ASSAY REPORT

UN[illegible]N ASSAY OFF[illegible]E, Inc.

W. C. WANLASS, President
L. G. HALL, Vice President
G. P. WILLIAMS, Treasurer
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine Cortez Joint Venture
2300 Russ Building
San Francisco, California 94104

RESULTS PER TON OF 2000 POUNDS

March 3, 1965

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
8047	0.010	1.7	Face, Start of proposed OME Drift -6' cut								
8048	0.005	1.3	-15' West Sta A-52 -6" chip								
8049	0.010	1.0	Face East Sta A-59 6' chip								
8050	0.015	14.5		0.044	- East wall Boitano stope North sta A-50				2' chip		

Remarks

Charges $ 11.50

W. C. Wanlass

Telephone EMpire 3-3302

Hand[redacted]ple Serial 11124-11136

ASSAY REPORT

UNION ASSAY OFF[redacted]E, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine American Exploration & Mining Co.
23rd Floor Russ Building
San Francisco 4, Calif.

RESULTS PER TON OF 2000 POUNDS

May 11, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
2349	0.155	4.15	No 1 level, W wall of XC 80' E Tag 6-15 2.6' Cut								
2350	0.035	49.5	1' Grab Sample Vein of Manto deposit Above Garrison shaft								
2351	0.270	13.3	Grab from hi-grade sacks top of Rs from No 1 level.								
2352	0.060	32.15	chip sample Vein ~~in pillar~~ 1000 level 2.6' 570 m from A-54 1.3' cut								
2353	0.012	0.75	chip sample Vein 5' E Tag A-54 (1000 level) 1.0' cut								
2354	0.180	58.9	chip Sample - Vein in pillar -15' South Tag A-29 (1000 level) 3.9' Cut.								
2355	0.030	16.5	S. face Inclined doghole North Tag A-72 - 9.6' cut. 1100 level								
2356	0.010	9.1	W face " " " " " " - 5.5' cut								
2357	0.055	17.05	W face stope 1 set above dr. 1100 level - 10' E Tag A-79 1.0' cut								
2358	0.055	16.85	Pillar E Tag A-80 1100 level 5.8' cut								
2359	0.015	4.8	1000 level - Vein 56' NE Tag A-64 - 0.5' cut								
2360	0.035	26.2		0.680	Grab of float near rock house above Edna Adit						
2361	0.005	None		0.050	Bank East of DDH 501 18' cut						

Remarks V-53-4307

Charges $ 35.50

W. C. Wanlass

Telephone EMpire 3-3302

Sample Serial 70059-83

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine American Exploration & Mining Co.
975 Panorama Drive
Elko, Nevada

RESULTS PER TON OF 2000 POUNDS

December 26, 1963

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
2004			0.2	0.01		0.4					
2005			0.2	0.01		None					
2006	Trace	0.1	None	Diamond Drill Hole No 1 See drill log							
2007	0.030	0.1	0.4			Trace					
2008	0.020	1.0	1.0			1.5					
2009	0.010	None	None								
2010	0.005	None	0.4								
2011	Trace	None	0.3								
2012	0.010	0.1	0.5			Trace					
2013	Trace	0.1	0.2								
2014	0.005	6.2	2.0								
2015	Trace	None	Trace								
2016	Trace	None	0.5								
7	0.025	None	0.4								
18	Trace	None	0.5			Trace					
2019	Trace	None	0.3			None					
2020	0.020	0.2	0.4								
2021	Trace	None	Trace								
2022	0.060	1.45	1.4			0.8					
2023	Trace	None	0.2			None					
4	Trace	None	0.4			None					
5	Trace	None	0.4								
6	Trace	None	0.2			None					
27	Trace	None	Trace			None					
	0.005	1.0	0.5			1.6					

Remarks

$117.50

W. C. Wanlass

Telephone EMpire 3-3302

Sample Serial 70084-108

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine American Exploration & Mining Co.
975 Panorama Drive
Elko, Nevada

RESULTS PER TON OF 2000 POUNDS

December 26, 1963

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
		Diamond		Drill	Hole	No 1					
				(See	drill	log)					
2029	Trace	None	None			None					
2030	0.020	None	Trace			Trace					
2031	Trace	None	None			Trace					
2032	0.030	7.2	3.0			4.8					
2033	Trace	None	None								
2034	Trace	None	None								
2035	Trace	None	None								
2036	Trace	None	None								
2037	Trace	None	Trace								
2038	Trace	None	Trace			Trace					
2039	Trace	None									
2040	Trace	None									
2041	Trace	None									
2042	Trace	None									
2043	Trace	None									
2044	Trace	None	None								
2045	Trace	0.1	None			None					
2046	Trace	0.7	0.8			None					
2047	Trace	None	None								
2048	0.005	None	None			Trace					
2049	0.010	None									
2050	Trace	None									
2051	0.005	None									
2052	0.005	None	None			Trace					
2053	Trace	None	None								

Remarks

Charges $ 101.50

W. C. Wanlass

Telephone EMpire 3-3302

Sample Serial 24317-24348

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine American Exploration & Mining Co.
975 Panorama Drive
Elko, Nevada

RESULTS PER TON OF 2000 POUNDS

August 24, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
7001	0.005	0.1									
7002	0.005	0.2									
7003	0.005	None									
7005	0.005	None	Rossi Surface Samples								
7006	0.005	None			↓						
7007	0.005	0.1									
7008	0.005	None									
7009	Trace	0.1									
7010	0.010	0.1									
7011	0.010	0.2									
7012	0.005	None									
7013	0.005	None									
7014	0.060	0.1									
7015	0.010	0.1									
7016	0.005	None									
7017	0.005	None									
7018	0.010	None									
7019	0.010	None									
7020	0.010	None									
7021	0.005	None									
7022	0.010	3.26	About 300' N 27E from AS - 5.5' cut, qtz, pbs.								
7023	0.005	None									
7024	0.005	None									
7025	0.005	0.1									
7026	0.005	0.1									
7027	0.015	None									
7028	0.005	0.2									
7029	0.005	None									
7030	0.005	None									
7031	0.005	None									
7032	0.005	None			↑						
7033	0.020	0.2	Rossi Surface								

Remarks Sample 7004 is missing.

Charges $ 80.00

W. C. Wanlass

Telephone EMpire 3-3302

Sample Serial ....26803-22.....

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
W. C. WANLASS, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City 10, Utah

Mine ....American Exploration & Mining Co.....
Box 73
Crescent Valley R.S. Beowawe, Nevada 89821

RESULTS PER TON OF 2000 POUNDS

Sept. 10, 1964

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
2464	0.005	0.2		0.063							
2465	0.005	0.1		0.604							
2466	0.035	0.1		0.037							
2467	0.010	0.2		0.163							
7034	0.095	1.6	No 2 Level								
7035	0.130	36.4	No 2 Level above Hoist Room								
7036	0.465	22.1	Right fork of Hog Trail 4' chip								
7037	0.150	5.5	Junction No 1 Level and Hog Trail								
7038	0.285	10.7	Old No 2740 - Top of Incline								
7039	0.140	46.8	Top of incline Level								
7040	0.048	20.0	100' SW of Access hole from No 1 Level								
7041	0.270	273.6	old No 2834 - No 1 level, north of incline								
7042	0.015	19.5	#1 Level - 100' East of Hog trail								
-7043	0.085	2.4	#2 Level, Bottom of incline to 3 Level								
7044	0.055	5.6	Bottom of incline to 3 Level								
-7045	0.110	241.6	Stope pillar - Bottom of No 3 incline								
-7046	0.030	69.8	Sublevel below # 3 Level								
7047	0.015	6.3		0.025	Rossi - 1150' N DS						
7048	0.005	4.4		0.037							
7049	0.005	0.1		0.037							

- 2440

Copy rec'd

to R. G. C. 9/15/64

Remarks.....

Charges $....60.50.....

W. C. Wanlass

E. J. LONGYEAR COMPANY
General Offices, 76 South 8th St.
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 9-7631 • CABLE LONGCO

RECEIVED

308 East Pima Street
Phoenix, Arizona 85004
March 9, 1965

Mr. J. B. Bush
American Exploration & Mining Company
2300 Russ Building
San Francisco, California 94104

Dear Mr. Bush:

In response to our telephone conversation today, I am setting forth below confirming prices on various items which may become a cost factor on your planned drilling program at the Cortez Mine at Cortez, Nevada.

We would expect the following price schedules to prevail on the items outlined below:

(a) Compressor rental charges can be expected to vary from a minimum of $550.00 per month to a maximum of $750.00 per month. We would expect to reinvoice the actual rental charges involved for furnishing this service.

(b) Drill mud, if consumed in the program: 50 lb. bag, minimum, $1.25 per bag.

(c) Cement, if consumed: Portland, $1.10 per bag - Calseal, $7.50 per bag - Lumnite, $6.50 per bag.

(d) Hole plugging agents: Bran, $4.50 per hundred - Fibertex, $4.00 per bag - Hy-Seal, $5.35 per bag.

(e) Pipe casing lost or left in drill holes: BX size, $1.75 per foot - NX size, $2.00 per foot.

We trust the above information will be suitable for your use in evaluating our proposal.

We look forward to receiving your decision concerning the award of this work and trust that we will be selected to perform this drilling program for your company.

Sincerely,

E. J. LONGYEAR COMPANY

J. R. Miller

Manager, Southwestern Zone
Contract Drilling Division

J.R.Miller:jag

E. J. LONGYEAR COMPANY
General Offices, 76 South 8th St.
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 9-7631 • CABLE LONGCO

FEB 1965
RECEIVED

February 16, 1965

American Exploration & Mining Company
23rd Floor Russ Building
San Francisco, California 94104

Attention Mr. J. B. Bush

Gentlemen:

Thank you very much for your letter of February 12, and invitations to bid on your diamond drilling and mining programs at the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada.

We would welcome the opportunity to submit our quotation for the diamond drilling portion of your project. Accordingly, we have forwarded your specifications to Mr. J. R. Miller, Manager of Operations - Southwestern Zone, who makes his headquarters at Phoenix, Arizona - 308 East Pima Street. He will contact you if he is in a position to bid on this work.

However, we do not have the personnel nor the equipment to perform the work required for your mining program. We have taken the liberty to forward that portion of your specifications to Mr. James Quigley, Centennial Development Company, Eureka, Utah, and recommend their services.

We appreciate your interest in our services, and hope that we will have the opportunity to work with you.

Sincerely,

E. J. LONGYEAR COMPANY

Allen P. Wicklund

Contract Engineer
Contract Drilling Division

APWicklund:BAL

(801) 328-4854

JOY MANUFACTURING COMPANY
998 SOUTH SIXTH WEST STREET · P. O. BOX 806 · SALT LAKE CITY, UTAH 84110

February 18, 1965

Mr. J. B. Bush
American Exploration & Mining Company
23rd Floor Russ Building
San Francisco, California 94104

Dear Jack:

We want to thank you for giving JOY the opportunity to bid your work.

I am sending job information onto John Murray, Michigan City, Indiana, and it is highly probable that someone from this office will look at your job.

I was glad to see that you are getting some exploration under way and I also want to say that Jack Oberbillig is a good friend of mine from Nichols Drilling Company, Boise, Idaho, and of course an old Boisian from way back, and would like to have you say hello the next time you see him.

Hope to be seeing you in Nevada, and of course hope that JOY will be successful in obtaining this work.

Very truly yours,

JOY MANUFACTURING COMPANY

Jack D. Powers/ms

Jack D. Powers
Sales Engineer

JDP:ms

cc: J. M. Murray - JOY Michigan City, Indiana
K. A. Lehner - JOY Salt Lake Office

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros.
DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS
General Offices and Plant
1624 Pioneer Road P. O. Box 58 HUnter 7-7595
SALT LAKE CITY 10, UTAH

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
ST. LOUIS

March 3, 1965

Reply to:

American Exploration & Mining Co.
2300 Russ Building
San Francisco, California

Attention: Mr. J. B. Bush

Gentlemen:

Attached is our bid for your mining program at the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada.

Our bid is to be qualified by the following provisions:

(1) Item (c): Our price per foot of advance does not include any ground support that may be necessary. If ground support is required, we will furnish and install timber for $225.00/MBFM, and 6-foot expansion-shell rock bolts for $7.50/bolt.

(2) We do not contemplate any salvage of mine track, air and water lines, or vent line. Consequently, there would be no cost to you for retaining these items at the completion of our work.

We appreciate this opportunity of bidding on your work, and hope that we may be favored with the award of a contract. If you have any questions concerning our bid, please let us know.

Very truly yours,

Frank E Peters

F. E. Peters

FEP:bg
Encl.
cc: V. L. Stevens

March 3, 1965

DRAFT AGREEMENT

This AGREEMENT, made this _____ day of _____,1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and Boyles Bros. Drilling Company (hereinafter called the Contractor), wherein it is mutually agreed as follows:

I WORK TO BE DONE:

The Contractor, as an independent contractor, will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for an underground rehabilitation, drifting, crosscutting and raising exploration program in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. This mining program will be running concurrently with an underground diamond drilling program which may or may not be carried out by another independent contractor. Therefore it will be essential to have the utmost cooperation between the Mining Contractor and the Drilling Contractor, both being equally responsible to the Operator. All work will be done in a miner-like manner and will conform to the mining laws of Nevada. Unemployment and compensation insurance will be specifically covered by the Contractor. Concerning the mining program, the following general specifications are set forth:

(a) LOCATION: On Arctic (adit) level of Cortez Mine (See Map)

(b) MINIMUM FOOTAGE OF WORK TO BE DONE: 3800 feet of drift and dump rehabilitation; 2500 feet of new drift and crosscut advance; 40 feet of raising.

(c) REHABILITATION: This work will consist of laying mine track, compressed air line, water line, a minor amount of vent duct and a minor amount of cleanup work for approximately 3500 feet of old mine drifts and crosscuts and 300 feet of track installation on dump outside portal.

(d) SIZE OF NEW HEADINGS: Minimum cross-sections of all new drifts and crosscuts will be six feet by eight feet. Over breakage will not be paid for.

(e) MINE TRACK: Rail weight will be no less than 20 lb per yard; track gauge will be 24 inches; tie spacing will be on 24 inch centers.

(f) WATER LINE: Water line to consist of a 1 inch (minimum) pipe. Plastic pipe to withstand existing wor g pressures may be used.

(g) AIR LINE: Air line to consist of 4 in (minimum) pipe to be hung along wall or placed along floor of drift at Contractor's option.

(h) GROUND SUPPORT: Contractor will supply all materials such as timber and roof bolts to provide any support which may be necessary for safe working conditions. The Operator or its authorized representative will have the decision as to ground support requirements or any safety measures not conforming to his interpretation of Nevada Mining Law.

(i) TYPE OF GROUND: Mostly minor to moderately fractured dolomite and limestone and some quartzite (See Map). It is intended that much of the drifting will be along fissure zones which may or may not contain silicified gangue material, sulfide ore minerals and/or altered dike rocks. The ground is generally strong, not requiring any support except for an estimated 5% of the total footage.

(j) WORK SCHEDULE: The minimum rate of work will be two shifts daily per six day work week. Target date set for completion of the entire mining program is 10 months from the date of the signing of this contract.

(k) For purposes of salvage evaluation the Contractor will submit to Operator upon completion of the contract a statement, with invoices attached, of all costs, fob mine, of materials such as rail, air pipe, water pipe, ventilation duct, etc. which were installed in the mine.

(l) Contractor will furnish capable mining personnel and adequate supervision to perform the above described work in an efficient and workmanlike manner.

II FEES FOR WORK

The Contractor shall receive for his service the following fees:

(a) Mobilization and Demobilization of all equipment, men and materials to perform the above described work.

* 1. Mobilization - Lump Sum $ 2,000.00

* 2. Demobilization - Lump Sum $ 2,000.00

(b)

1. Rehabilitation of approximately 3500 feet of old drifts,

* and crosscuts described above will be charged for at $ 10.00 per lineal foot.

2. Installation of approximately 300 feet of mine track

* on dump outside portal: $ 5.75 per lineal foot.

(c) Advance of approximately 2500 feet of new drifts and crosscuts complete with track, air line, water line ~~and ground support (where necessary)~~

* will be charged for at $ 61.75 per lineal foot.

(d) Raising for at least 40 feet with a minimum cross section

* of 6 feet by 6 feet will be charged for at $ 50.00 per lineal foot.

(e) Excavation of any opening not included in the categories

* of drifting, crosscutting or raising will be charged for at $ 1.00 per cu. foot.

(f) Drill Station Stub Drifts (See Map) Approximate aggregate

* footage of 80 feet. $ 55.00 per lineal foot.

(g) Standby Time of Contractor crews for purposes of surveys, etc. in excess of two hours at the request of the Operator will be

* charged for at $ 38.50 per hour. Any time loss due to breakdown of Contractor's equipment or applicable to Contractor will not be charged for.

(h) Contractor's Estimated Time of Completion for the above described mining program (bearing in mind the Operator's objective

* of 10 months) is: 8 months.

BOYLES BROS. DRILLING CO.

Frank E. Peters

III CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

IV INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

V EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

BOYLES BROS. DRILLING COMPANY

By: Frank E. Peters

F. E. Peters
Manager, Mining Division

Ponderosa Development Company, Ltd.

WRITE TO:
BOX 4800-N
TUCSON, ARIZONA

OFFICE
1440 EAST ADELAIDE DRIVE

TELEPHONE
EAst 6-1114

March 7, 1965

American Exploration & Mining Co.
23rd. Floor Russ Building
San Francisco, California 94104

Gentlemen:

Please accept the enclosed figures as my bid on your proposed project.
If you wish us to install track and one switch in a small cross cut, to a drill station, not marked on the map and estimated at about 100 feet, $5.30 per foot for materials and labor, should be added.

We thank you for the chance to bid on this job and should there be any questions, please call us.

Respectfully yours,

M. L. Tate

M.L.Tate, General Manager

CONTRACT MINE DEVELOPMENT AND MINERAL EXPLORATION
SURFACE AND UNDERGROUND • LOCATION AND ASSESSMENT WORK
DIVERSION TUNNELS • DAMS • ROADS • MINING AND LEASING
SURVEYING • MAPPING • CONSULTING • ENGINEERING • GEOLOGY

DRAFT AGREEMENT

This AGREEMENT, made this 7th day of March, 1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and Ponderosa Development Co., Ltd. (hereinafter called the Contractor), wherein it is mutually agreed as follows:

I WORK TO BE DONE:

The Contractor, as an independent contractor, will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for an underground rehabilitation, drifting, crosscutting and raising exploration program in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. This mining program will be running concurrently with an underground diamond drilling program which may or may not be carried out by another independent contractor. Therefore it will be essential to have the utmost cooperation between the Mining Contractor and the Drilling Contractor, both being equally responsible to the Operator. All work will be done in a miner-like manner and will conform to the mining laws of Nevada. Unemployment and compensation insurance will be specifically covered by the Contractor. Concerning the mining program, the following general specifications are set forth:

(a) LOCATION: On Arctic (adit) level of Cortez Mine (See Map)

(b) MINIMUM FOOTAGE OF WORK TO BE DONE: 3800 feet of drift and dump rehabilitation; 2500 feet of new drift and crosscut advance; 40 feet of raising.

(c) REHABILITATION: This work will consist of laying mine track, compressed air line, water line, a minor amount of vent duct and a minor amount of cleanup work for approximately 3500 feet of old mine drifts and crosscuts and 300 feet of track installation on dump outside portal.

(d) SIZE OF NEW HEADINGS: Minimum cross-sections of all new drifts and crosscuts will be six feet by eight feet. Over breakage will not be paid for.

(e) MINE TRACK: Rail weight will be no less than 20 lb per yard; track gauge will be 24 inches; tie spacing will be on 24 inch centers.

(f) WATER LINE: Water line to consist of a 1 inch (minimum) pipe. Plastic pipe to withstand existing working pressures may be used.

(g) AIR LINE: Air line to consist of 4 inch (minimum) pipe to be hung along wall or placed along floor of drift at Contractor's option.

(h) GROUND SUPPORT: Contractor will supply all materials such as timber and roof bolts to provide any support which may be necessary for safe working conditions. The Operator or its authorized representative will have the decision as to ground support requirements or any safety measures not conforming to his interpretation of Nevada Mining Law.

(i) TYPE OF GROUND: Mostly minor to moderately fractured dolomite and limestone and some quartzite (See Map). It is intended that much of the drifting will be along fissure zones which may or may not contain silicified gangue material, sulfide ore minerals and/or altered dike rocks. The ground is generally strong, not requiring any support except for an estimated 5% of the total footage.

(j) WORK SCHEDULE: The minimum rate of work will be two shifts daily per six day work week. Target date set for completion of the entire mining program is 10 months from the date of the signing of this contract.

(k) For purposes of salvage evaluation the Contractor will submit to Operator upon completion of the contract a statement, with invoices attached, of all costs, fob mine, of materials such as rail, air pipe, water pipe, ventilation duct, etc. which were installed in the mine.

(l) Contractor will furnish capable mining personnel and adequate supervision to perform the above described work in an efficient and workmanlike manner.

II FEES FOR WORK

The Contractor shall receive for his service the following fees:

(a) Mobilization and Demobilization of all equipment, men and materials to perform the above described work.

* 1. Mobilization - Lump Sum $ 5489.58

* 2. Demobilization - Lump Sum $ 1800.00

(b)

1. Rehabilitation of approximately 3500 feet of old drifts,

* and crosscuts described above will be charged for at $ 5.80 per lineal foot.

2. Installation of approximately 300 feet of mine track

* on dump outside portal: $ 3.97 per lineal foot.

(c) Advance of approximately 2500 feet of new drifts and crosscuts complete with track, air line, water line and ground support

* (where necessary) will be charged for at $ 43.50 per lineal foot.

(d) Raising for at least 40 feet with a minimum cross section

* of 6 feet by 6 feet will be charged for at $ 32.90 per lineal foot.

(e) Excavation of any opening not included in the categories

* of drifting, crosscutting or raising will be charged for at $ 1.00 per cu. foot.

(f) Drill Station Stub Drifts (See Map) Approximate aggregate

* footage of 80 feet. $ 42.60 per lineal foot.

(g) Standby Time of Contractor crews for purposes of surveys, etc. in excess of two hours at the request of the Operator will be

* charged for at $ 30.00 per hour. Any time loss due to breakdown of Contractor's equipment or applicable to Contractor will not be charged for.

(h) Contractor's Estimated Time of Completion for the above described mining program (bearing in mind the Operator's objective

* of 10 months) is: 8 months. (or less.)

III CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

IV INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

V EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

DRAFT AGREEMENT

This AGREEMENT, made this 3rd day of March, 1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and Centennial Development Co. (hereinafter called the Contractor), wherein it is mutually agreed as follows:

I WORK TO BE DONE:

The Contractor, as an independent contractor, will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for an underground rehabilitation, drifting, crosscutting and raising exploration program in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. This mining program will be running concurrently with an underground diamond drilling program which may or may not be carried out by another independent contractor. Therefore it will be essential to have the utmost cooperation between the Mining Contractor and the Drilling Contractor, both being equally responsible to the Operator. All work will be done in a miner-like manner and will conform to the mining laws of Nevada. Unemployment and compensation insurance will be specifically covered by the Contractor. Concerning the mining program, the following general specifications are set forth:

(a) LOCATION: On Arctic (adit) level of Cortez Mine (See Map)

(b) MINIMUM FOOTAGE OF WORK TO BE DONE: 3800 feet of drift and dump rehabilitation; 2500 feet of new drift and crosscut advance; 40 feet of raising.

(c) REHABILITATION: This work will consist of laying mine track, compressed air line, water line, a minor amount of vent duct and a minor amount of cleanup work for approximately 3500 feet of old mine drifts and crosscuts and 300 feet of track installation on dump outside portal.

(d) SIZE OF NEW HEADINGS: Minimum cross-sections of all new drifts and crosscuts will be six feet by eight feet. Over breakage will not be paid for.

(e) MINE TRACK: Rail weight will be no less than 20 lb per yard; track gauge will be 24 inches; tie spacing will be on 24 inch centers.

(f) WATER LINE: Water line to consist of a 1 inch (minimum) pipe. Plastic pipe to withstand existing working pressures may be used.

(g) AIR LINE: Air line to consist of 4 inch (minimum) pipe to be hung along wall or placed along floor of drift at Contractor's option.

(h) GROUND SUPPORT: Contractor will supply all materials such as timber and roof bolts to provide any support which may be necessary for safe working conditions. The Operator or its authorized representative will have the decision as to ground support requirements or any safety measures not conforming to his interpretation of Nevada Mining Law.

(i) TYPE OF GROUND: Mostly minor to moderately fractured dolomite and limestone and some quartzite (See Map). It is intended that much of the drifting will be along fissure zones which may or may not contain silicified gangue material, sulfide ore minerals and/or altered dike rocks. The ground is generally strong, not requiring any support except for an estimated 5% of the total footage.

(j) WORK SCHEDULE: The minimum rate of work will be two shifts daily per six day work week. Target date set for completion of the entire mining program is 10 months from the date of the signing of this contract.

(k) For purposes of salvage evaluation the Contractor will submit to Operator upon completion of the contract a statement, with invoices attached, of all costs, fob mine, of materials such as rail, air pipe, water pipe, ventilation duct, etc. which were installed in the mine.

(l) Contractor will furnish capable mining personnel and adequate supervision to perform the above described work in an efficient and workmanlike manner.

II FEES FOR WORK

The Contractor shall receive for his service the following fees:

✓ (a) Mobilization and Demobilization of all equipment, men and materials to perform the above described work.

* 1. Mobilization - Lump Sum $ 6,000.00

* 2. Demobilization - Lump Sum $2,000.00

(b)

1. Rehabilitation of approximately 3500 feet of old drifts,

* and crosscuts described above will be charged for at $ 5.00 per lineal foot.

2. Installation of approximately 300 feet of mine track

* on dump outside portal: $3.00 per lineal foot.

(c) Advance of approximately 2500 feet of new drifts and crosscuts complete with track, air line, water line and (ground support) See Note (i)

* (where necessary) will be charged for at $ 64.00 per lineal foot.

(d) Raising for at least 40 feet with a minimum cross section

* of 6 feet by 6 feet will be charged for at $50.00 per lineal foot.

(e) Excavation of any opening not included in the categories

* of drifting, crosscutting or raising will be charged for at $ 1.25 per cu. foot.

(f) Drill Station Stub Drifts (See Map) Approximate aggregate

* footage of 80 feet. $ 50.00 per lineal foot.

(g) Standby Time of Contractor crews for purposes of surveys, etc. in excess of two hours at the request of the Operator will be

* charged for at $ 30.00 per hour. Any time loss due to breakdown of Contractor's equipment or applicable to Contractor will not be charged for.

(h) Contractor's Estimated Time of Completion for the above described mining program (bearing in mind the Operator's objective

* of 10 months) is: Six (6) months.

(i) We stipulate that Item (c) does not include ground support. If ground requiring timber support is encountered, our prices for support, including necessary excavation to maintain size inside timber, are as follows:

1. Timber sets	$400.00 per MBM, installed
2. Rock Bolts	1.75 per ft. of bolt, "

III CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

IV INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

V EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

Centennial Development Co.

H B Spencer

H. B. Spencer

Nevada Contractor's License No. 3581

This AGREEMENT, made this 4th day of March, 1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and E. J. LONGYEAR COMPANY hereinafter called the Contractor), wherein it is mutually agreed as follows:

I. WORK TO BE DONE: The Contractor, as an independent contractor will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for diamond drilling on surface and underground in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. Concerning this drilling, the following general specifications are set forth. Because of different phases of the program as to location and types of drilling the specifications are listed under three Items:

ITEM I: (Shallow Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 2000 feet

c. Length and Inclination of Holes: Underground drilling consisting of several shallow holes mostly horizontal and about 200 feet in length but occasionally at moderate up or down angles and extending to 500 feet in length.

d. Material to be drilled: Mostly dolomite and limestone and occasionally quartzite and silicified zones with sulfide ore minerals.

e. Hole Size: Holes to be started BX or AX size depending on hole length.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Stations: Drill stations of sufficient size will be provided by the Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily for six-day work week; the minimum rate will be on a double shift per five day work week.

ITEM 2 (Deep Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 1800 feet

c. Length & Inclination of Hole: Underground drilling consisting of at least one deep, vertical, down hole to a depth of up to 2000 feet.

d. Material to be drilled: Dolomite and limestone with occasional silicified zones.

e. Hole size: Hole to be started at least NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless expressly authorized by Operator.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Station: Drill Station consisting of a vertical raise to provide 30 feet of tail room will be provided by Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily per six-day work week; the minimum rate will be on a double shift per five-day work week. The drilling of this deep hole will not be running concurrently with the shallow hole drilling under Item I.

ITEM 3 (Surface Drilling)

a. Location: On surface south of Cortez Mine.

b. Minimum Footage: 2000 feet

c. Length & Inclination of Holes: Surface drilling will consist of at least 3 vertical holes of depths up to 800 feet maximum.

d. Material to be Drilled: Mostly quartzite with some limestone and dolomite and occasional silicified zones.

e. Hole Size: Holes to be started NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless authorized by Operator.

f. Coring & Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Water: Water to be supplied by Contractor using own water truck haulage for distance of 4 miles.

h. Drill Sites: Drill Sites to be provided by Operator.

i. Work Schedules: The maximum rate of work will be one drill rig, three shifts per six-day work week; the minimum rate will be double shift per five-day work week. The surface drilling may run concurrently with the underground drilling.

II FEES FOR WORK:

The Contractor shall receive for his services, as per Items described above, the following fees:

ITEM 1: (Shallow hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Eureka Quartzite and Other Siliceous Materials		Non-Siliceous Dolomite and Limestones	
Footage	BX-BXWL	AX-AXWL	BX-BXWL	AX-AXWL
0-200	$6.25	$6.00	$5.25	$5.00
200-400	$6.60	$6.35	$5.50	$5.25
400-600	$7.10	$6.85	$5.75	$5.50

b. Reaming, any size, will be charged for at $2.25 per foot.

c. Cementing, where necessary, will be charged for at $11.60 per hour.

d. Standby time for surveying or other reasons requested by Operator will be charged for at $11.60 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on first hole: $535.00 per rig.

f. Moving between holes and setting up time: $5.80 per man hour.

g. Drilling mud, cement, cement substitutes and additives will be charged to Operator at cost plus handling charges, f.o.b. job site. Copies of invoices for materials consumed are to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, f.o.b. job site.

i. Air compressor to be furnished under the following conditions:

1. Rental charge to be billed at cost.

2. Any charges arising from trucking or other applicable mobilization and demobilization charges will be billed at our invoiced cost.

3. Operational charges involving diesel fuel and oil will be borne by the Longyear Company.

It is understood that the compressor will produce a minimum of 600 cu. ft. at its rated capacity and will supply air into a common air line which will have proper connections at the drill site for the drilling Contractor to use.

ITEM 2: (Deep hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Eureka Quartzite and Other Siliceous Materials			Non-Siliceous Dolomite and Limestones		
Footage	NX-NXWL	BX-BXWL	AX-AXWL	NX-NXWL	BX-BXWL	AX-AXWL
0-250	$6.60	$6.25	$6.00	$5.50	$5.25	$5.00
250-500	$7.10	$6.60	$6.35	$5.75	$5.50	$5.25
500-750	$7.75	$6.95	$6.70	$6.35	$5.75	$5.50
750-1000	$8.60	$7.70	$7.45	$7.10	$6.00	$5.75
1000-1250	--0--	$8.55	$8.30	--0--	$6.35	$6.10
1250-1500	--0--	$9.50	$9.25	--0--	$6.85	$6.60
1500-1750	--0--	$10.55	$10.30	--0--	$7.60	$7.35
1750-2000	--0--	$11.75	$11.50	--0--	$8.60	$8.35

b. Reaming, any size, will be charged for at $2.50 per foot.

c. Cementing, where necessary, will be charged for at $11.60 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by Operator will be charged for at $11.60 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setup on first hole: $830.00.

f. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, f.o.b. job site. Copies of invoices for these materials to accompany statement submitted to Operator.

g. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, f.o.b. job site.

h. Air compressor to be furnished under the following conditions:

1. Rental charge to be billed at cost.

2. Any charges arising from trucking or other applicable mobilization and demobilization charges will be billed at our invoiced cost.

3. Operational charges involving diesel fuel and oil will be borne by the Longyear Company.

It is understood that the compressor will produce a minimum of 600 cu. ft. at its rated capacity and will supply air into a common air line which will have proper connections at the drill site for the drilling Contractor to use.

ITEM 3: (Surface Drilling)

a. Core drilling will be charged for at the following rates per foot:

	Eureka Quartzite and Other Siliceous Materials			Non-Siliceous Dolomite and Limestones		
Footage	NX-NXWL	BX-BXWL	AX-AXWL	NX-NXWL	BX-BXWL	AX-AXWL
0-250	$7.45	$6.95	$6.70	$5.75	$5.50	$5.25
250-500	$7.95	$7.45	$7.20	$6.00	$5.75	$5.50
500-750	$8.60	$8.10	$7.85	$6.35	$6.10	$5.85
750-1000	$9.60	$8.85	$8.60	$6.85	$6.60	$6.35

b. Reaming, any size, will be charged for at $3.50 per foot in quartzite. $2.50 per foot in non-siliceous material.

c. Cementing, where necessary, will be charged for at $11.60 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by Operator will be charged for at $11.60 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on first hole: $1,295.00.

f. Moving between holes and setting up time: $5.80 per man hour.

g. Drilling mud, cement substitute and additives will be charged to Operator at cost plus handling charges, f.o.b. job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, f.o.b. job site.

i. Water truck service will be furnished on the following basis:

   1. Rental charge: $250.00 per month, plus $0.15 per mile.

   2. If necessary to hire a full time water truck driver for the purpose of supplying ample water to the drill, we propose to make a charge of $3.95 per hour to cover truck driver's wages and applicable payroll taxes.

   3. Operator will make a source of water available on a no-cost basis at the nearest available point.

j. Time spent by crew installing pipe line to inaccessible surface holes, if required, will be performed at $5.80 per man hour.

III MISCELLANEOUS ITEMS:

(a) Operator will either furnish without charge to drill Contractor all timbering required or will reimburse drill Contractor directly for the cost of timbers or timbering required for setting up and maintaining the necessary drill stations for performing the deep hole underground drilling.

(b) Operator will reimburse drill Contractor in full for any charges which mining Contractor may make for use of tramming facilities while moving drilling equipment between drill stations.

(c) Should either the shallow or deep hole underground drilling program be abandoned after the underground work has been initiated, it is understood and agreed that the drill Contractor would be reimbursed in full for mobilization and demobilization expenses incurred at the rate specified under Item 1, e and Item 2, e as listed under the Shallow Hole Program and the Deep Underground Program. The total payment required under these items will amount to $1,365.00.

IV CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

V INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

VI EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

VII

It is further understood and agreed that the drilling Contractor will accept the Operator's Engineer's classification of material drilled as a basis for preparing the invoice covering the drilling performed.

Bidder E. J. LONGYEAR COMPANY

By J. R. Miller

J. R. Miller

Title Manager, Southwestern Zone

Address 308 East Pima Street

Phoenix, Arizona 85004

III CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

IV INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

V EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

SPRAGUE & HENWOOD, INC.
Contract Division
REGIONAL OFFICE
2151 North Redwood Road (P.O. Box 2556)
Salt Lake City 10, Utah DAvis 8-4271
DIAMOND DRILLING • MINERAL EXPLORATION • SOIL SAMPLING • PRESSURE GROUTING
S & H SINCE 1883
EXECUTIVE OFFICES & PLANT
SCRANTON, PENNSYLVANIA

March 6, 1965

American Exploration & Mining Co.
2300 Russ Bldg.
San Francisco, Calif.

Attn: Mr. J. B. Bush

Gentlemen:

We attach herewith our proposal for diamond drilling at your Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada.

We wish to point out that we have added under Section II FEES FOR WORK: Items 1 (i) - 2 (h) - and 3 (i), providing for additional per foot prices for drilling in quartzite.

Your inquiry is appreciated.

Very truly yours,

SPRAGUE & HENWOOD, INC.

B. B. Williams
Ass't. Vice Pres.

BBW:vn

DRAFT AGREEMENT

This AGREEMENT, made this _____ day of _____, 1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and _____ hereinafter called the Contractor), wherein it is mutually agreed as follows:

I. WORK TO BE DONE: The Contractor, as an independent contractor will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for diamond drilling on surface and underground in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. Concerning this drilling, the following general specifications are set forth. Because of different phases of the program as to location and types of drilling the specifications are listed under three Items:

ITEM I: (Shallow Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 2000 feet

c. Length and Inclination of Holes: Underground drilling consisting of several shallow holes mostly horizontal and about 200 feet in length but occasionally at moderate up or down angles and extending to 500 feet in length.

d. Material to be drilled: Mostly dolomite and limestone and occasionally quartzite and silicified zones with sulfide ore minerals.

e. Hole Size: Holes to be started BX or AX size depending on hole length.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will [illegible] responsible for supplying own air compressor. Compre[illegible] be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Stations: Drill stations of sufficient size will be provided by the Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily for six-day work week; the minimum rate will be on a double shift per five day work week.

ITEM 2 (Deep Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 1800 feet

c. Length & Inclination of Hole: Underground drilling consisting of at least one deep, vertical, down hole to a depth of up to 2000 feet.

d. Material to be drilled: Dolomite and limestone with occasional silicified zones.

e. Hole size: Hole to be started at least NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless expressly authorized by Operator.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Station: Drill Station consisting of a vertical raise to provide 30 feet of tail room will be provided by Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily per six-day work week; the minimum rate will be on a double shift per five-day work week. The drilling of this deep hole will not be running concurrently with the shallow hole drilling under Item I.

ITEM 3 (Surface Drilling)

a. Location: On surface south of Cortez Mine.

b. Minimum Footage: 2000 feet

c. Length & Inclination of Holes: Surface drilling will consist of at least 3 vertical holes of depths up to 800 feet maximum.

d. Material to be Drilled: Mostly quartzite with some limestone and dolomite and occasional silicified zones.

e. Hole Size: Holes to be started NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless authorized by Operator.

f. Coring & Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Water: Water to be supplied by Contractor using own water truck haulage for distance of 4 miles.

h. Drill Sites: Drill Sites to be provided by Operator.

i. Work Schedules: The maximum rate of work will be one drill rig, three shifts per six-day work week; the minimum rate will be double shift per five-day work week. The surface drilling may run concurrently with the underground drilling.

II FEES FOR WORK:

The Contractor shall receive for his services, as per Items described above, the following fees:

ITEM 1: (Shallow hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	BX-BXWL	AX-AXWL
*	0-200	$ 5.50	$ 5.25
*	200-400	$ 5.50	$ 5.25
	400-600	$ 6.10	$ 5.85

* b. Reaming, any size, will be charged for at $ 3.00 per foot.

* c. Cementing, where necessary, will be charged for at $ 14.50 per hour, plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by

* Operator will be charged for at $ 12.50 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on first

* hole: $450.00 per rig.

* f. Moving between holes and setting up time: $ 10.00 per hour.

g. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

* i. Quartzite Drilling - $ 7.00 per foot in addition to prices in Item 1 (a), for corresponding size and depth.

ITEM 2: (Deep hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	NX-NXWL	BX-BXWL	AX-AXWL
*	0-250	$ 5.85	$ 5.50	$ 5.25
*	250-500	5.85	5.50	5.25
*	500-750	6.50	6.15	5.90
*	750-1000	6.50	6.15	5.90
*	1000-1250	7.25	6.90	6.65
*	1250-1500	7.25	6.90	6.65
*	1500-1750	8.00	7.65	7.40
*	1750-2000	9.00	8.65	8.40

* b. Reaming, any size, will be charged for at $3.00 per foot.

* c. Cementing, where necessary, will be charged for at $ 14.50 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by Operator

* will be charged for at $12.50 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on hole:

* $ 450.00 .

f. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

g. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

SEE ITEM 2 (h) below

ITEM 3: (Surface Drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	NX-NXWL	BX-BXWL	AX-AXWL
*	0-250	$ 6.65	$ 6.30	$ 6.05
*	250-500	6.65	6.30	6.05
*	500-750	7.75	7.40	7.15
*	750-1000	7.75	7.40	7.15

* b. Reaming, any size, will be charged for at $ 3.50 per foot.

* c. Cementing, where necessary, will be charged for at $ 16.00 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons

* requested by Operator will be charged for at $ 14.00 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on

* first hole: $ 650.00 .

* f. Moving between holes and setting up time: $ 12.00 per hour.

g. Drilling mud, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

* i. Quartzite drilling $7.00 per foot, in addition to prices in Item 3 (a), for corresponding size and depth.

ITEM 2 (h) - Quartzite drilling $ 7.00 per foot, in addition to prices for corresponding size and depth.

III CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

IV INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

V EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros. DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS

General Offices and Plant
1624 Pioneer Road P. O. Box 58 Phone 487-7595
SALT LAKE CITY, UTAH 84110

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
SANTIAGO, CHILE
LIMA, PERU

P. A. PARK
Manager—Drilling Division

March 2, 1965

Mr. J. B. Bush
American Exploration & Mining Company
2300 Russ Building
San Francisco, California 94104

Dear Mr. Bush:

Our District Manager, Mr. J. D. Fetterhoff, has asked that we submit prices for your drilling, surface and underground, at the Cortez Silver Mine, in Cortez Mining District, Nevada.

We have enclosed these prices as requested on your Draft Agreement. Also, we are submitting to you prices on the shallow holes underground, as discussed by Mr. Fetterhoff and yourself on the limestone drilling and the quartzite drilling on this phase of the work rather than the single price as suggested in your draft agreement.

Proposal for Shallow Hole Underground Drilling

	BX	AX
Limestone:		
0 - 200 feet	$ 4.70	$ 4.50
200 - 400 feet	5.20	5.00
400 - 600 feet	5.70	5.50
Quartzite:		
0 - 200 feet	$11.50	$11.20
200 - 400 feet	12.25	11.95
400 - 600 feet	13.00	12.70

We trust our prices will be helpful in your loan and are competative. Our experience, as yours, has been rather rough in quartzite.

If we can be of further help we will be glad to oblige.

Kindest personal regards.

Sincerely,

Paul A. Park

P. A. Park

PAP:bg
Encl.
cc: J. D. Fetterhoff

DRAFT AGREEMENT

This AGREEMENT, made this _____ day of _____, 1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and _____ hereinafter called the Contractor), wherein it is mutually agreed as follows:

I. WORK TO BE DONE: The Contractor, as an independent contractor will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for diamond drilling on surface and underground in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. Concerning this drilling, the following general specifications are set forth. Because of different phases of the program as to location and types of drilling the specifications are listed under three Items:

ITEM I: (Shallow Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 2000 feet

c. Length and Inclination of Holes: Underground drilling consisting of several shallow holes mostly horizontal and about 200 feet in length but occasionally at moderate up or down angles and extending to 500 feet in length.

d. Material to be drilled: Mostly dolomite and limestone and occasionally quartzite and silicified zones with sulfide ore minerals.

e. Hole Size: Holes to be started BX or AX size depending on hole length.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Stations: Drill stations of sufficient size will be provided by the Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily for six-day work week; the minimum rate will be on a double shift per five day work week.

ITEM 2 (Deep Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 1800 feet

c. Length & Inclination of Hole: Underground drilling consisting of at least one deep, vertical, down hole to a depth of up to 2000 feet.

d. Material to be drilled: Dolomite and limestone with occasional silicified zones.

e. Hole size: Hole to be started at least NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless expressly authorized by Operator.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Station: Drill Station consisting of a vertical raise to provide 30 feet of tail room will be provided by Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily per six-day work week; the minimum rate will be on a double shift per five-day work week. The drilling of this deep hole will not be running concurrently with the shallow hole drilling under Item I.

ITEM 3 (Surface Drilling)

a. Location: On surface south of Cortez Mine.

b. Minimum Footage: 2000 feet

c. Length & Inclination of Holes: Surface drilling will consist of at least 3 vertical holes of depths up to 800 feet maximum.

d. Material to be Drilled: Mostly quartzite with some limestone and dolomite and occasional silicified zones.

e. Hole Size: Holes to be started NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless authorized by Operator.

f. Coring & Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Water: Water to be supplied by Contractor using own water truck haulage for distance of 4 miles.

h. Drill Sites: Drill Sites to be provided by Operator.

i. Work Schedules: The maximum rate of work will be one drill rig, three shifts per six-day work week; the minimum rate will be double shift per five-day work week. The surface drilling may run concurrently with the underground drilling.

II FEES FOR WORK:

The Contractor shall receive for his services, as per Items described above, the following fees:

ITEM 1: (Shallow hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	BX-BXWL	AX-AXWL
*	0-200	$ 6.50	$ 6.20
*	200-400	$ 6.00	$ 6.60
*	400-600	$ 7.70	$ 7.40

* b. Reaming, any size, will be charged for at $ 2.25 per foot.

* c. Cementing, where necessary, will be charged for at $ 12.00 per hour, plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by

* Operator will be charged for at $ 12.00 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on first

* hole: $ 200.00 per rig.

* f. Moving between holes and setting up time: $ 12.00 per hour.

g. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

ITEM 2: (Deep hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	NX-NXWL	BX-BXWL	AX-AXWL
*	0-250	$ 5.00	$ 4.70	$ 4.70
*	250-500	5.50	5.20	5.20
*	500-750	6.00	5.70	5.70
*	750-1000	6.50	6.20	6.20
*	1000-1250	7.25	6.95	6.95
*	1250-1500	8.25	7.50	7.50
*	1500-1750	9.25	8.30	8.30
*	1750-2000	10.25	9.20	9.20

* b. Reaming, any size, will be charged for at $3.50 per foot.

* c. Cementing, where necessary, will be charged for at $ 12.00 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by Operator

* will be charged for at $ 12.00 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on hole:

* $ 400.00 .

f. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

g. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

ITEM 3: (Surface Drilling)

a. Core drilling will be charged for at the following rates per foot:

Footage	NX-NXWL	BX-BXWL	AX-AXWL
* 0-250	$10.25	$ 9.50	$ 8.50
* 250-500	11.00	10.25	9.50
* 500-750	11.75	11.00	11.00
* 750-1000	12.50	11.75	11.75

* b. Reaming, any size, will be charged for at $ 5.75 per foot.

* c. Cementing, where necessary, will be charged for at $12.00 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by Operator will be charged for at $ 12.00 per hour. Time loss due to breakdown of equipment will not be charged for.

* e. Mobilization and demobilization, including setting up on first hole: $ 350.00 .

* f. Moving between holes and setting up time: $ 12.00 per hour.

g. Drilling mud, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

JOY MANUFACTURING COMPANY
900 WOODLAND AVENUE
MICHIGAN CITY, INDIANA 46360

EXECUTIVE OFFICES
HENRY W. OLIVER BUILDING
PITTSBURGH, PA. 15222

March 3, 1965

AIR MAIL

American Exploration & Mining Company
2300 Russ Building
San Francisco, California #94104

Gentlemen:

I have enclosed our bid on your diamond drilling program at the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada.

You will note we have taken exception to Item #1-g and 1-h, and to Item 2-g and 2-h. Our prices are based on having an ample supply of air and an ample supply of water furnished free of any cost to us at the drill site. We would expect the mining contractor or the operator to furnish the air and water.

Thank you for asking us to quote on your requirements.

Yours truly,

JOY MANUFACTURING COMPANY

JMurray

J. M. Murray, Manager
Contract Drill Division

JMM/et

DRAFT AGREEMENT

This AGREEMENT, made this 3rd day of March, 1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and JOY MANUFACTURING COMPANY hereinafter called the Contractor), wherein it is mutually agreed as follows:

I. WORK TO BE DONE: The Contractor, as an independent contractor will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for diamond drilling on surface and underground in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. Concerning this drilling, the following general specifications are set forth. Because of different phases of the program as to location and types of drilling the specifications are listed under three Items:

ITEM I: (Shallow Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 2000 feet

c. Length and Inclination of Holes: Underground drilling consisting of several shallow holes mostly horizontal and about 200 feet in length but occasionally at moderate up or down angles and extending to 500 feet in length.

d. Material to be drilled: Mostly dolomite and limestone and occasionally quartzite and silicified zones with sulfide ore minerals.

e. Hole Size: Holes to be started BX or AX size depending on hole length.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

(*) g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

(*) Joy takes exception to 1-g. Joy bid based on ample air furnished at drill by mining contractor or American Exploration & Mining Co.

(*) h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

(*) Joy takes exception to 1-h. Joy bid based on ample water furnished at drill by mining contractor or American Exploration & Mining Co.

i. Drill Stations: Drill stations of sufficient size will be provided by the Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily for six-day work week; the minimum rate will be on a double shift per five day work week.

ITEM 2 (Deep Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 1800 feet

c. Length & Inclination of Hole: Underground drilling consisting of at least one deep, vertical, down hole to a depth of up to 2000 feet.

d. Material to be drilled: Dolomite and limestone with occasional silicified zones.

e. Hole size: Hole to be started at least NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless expressly authorized by Operator.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

(*) g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

(*) Joy takes exception to 2-g. Joy bid based on ample air furnished at drill by mining contractor or American Exploration & Mining Co.

(*) h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

(*) Joy takes exception to 2-h. Joy bid based on ample water furnished at drill by mining contractor or American Exploration & Mining Co.

i. Drill Station: Drill Station consisting of a vertical raise to provide 30 feet of tail room will be provided by Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily per six-day work week; the minimum rate will be on a double shift per five-day work week. The drilling of this deep hole will not be running concurrently with the shallow hole drilling under Item I.

ITEM 3 (Surface Drilling)

a. Location: On surface south of Cortez Mine.

b. Minimum Footage: 2000 feet

c. Length & Inclination of Holes: Surface drilling will consist of at least 3 vertical holes of depths up to 800 feet maximum.

d. Material to be Drilled: Mostly quartzite with some limestone and dolomite and occasional silicified zones.

e. Hole Size: Holes to be started NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless authorized by Operator.

f. Coring & Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Water: Water to be supplied by Contractor using own water truck haulage for distance of 4 miles.

h. Drill Sites: Drill Sites to be provided by Operator.

i. Work Schedules: The maximum rate of work will be one drill rig, three shifts per six-day work week; the minimum rate will be double shift per five-day work week. The surface drilling may run concurrently with the underground drilling.

II FEES FOR WORK:

The Contractor shall receive for his services, as per Items described above, the following fees:

ITEM 1: (Shallow hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	BX-~~BXWL~~	AX-~~AXWL~~
*	0-200	$ 9.50	$ 9.25
*	200-400	$ 9.75	$ 9.50
*	400-600	$ 10.00	$ 9.75

* b. Reaming, any size, will be charged for at $ 6.00 per foot.

* c. Cementing, where necessary, will be charged for at $ 12.00 per hour, plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by

* Operator will be charged for at $ 10.00 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on first

* hole: $ 400.00 per rig.

* f. Moving between holes and setting up time: $ 10.00 per hour.

g. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

ITEM 2: (Deep hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	NX-NXWL	BX-BXWL	AX-AXWL
*	0-250	$ 8.25	$ 8.00	$ 7.75
*	250-500	8.50	8.25	8.00
*	500-750	8.75	8.50	8.25
*	750-1000	9.00	8.75	8.50
*	1000-1250	9.50	9.25	9.00
*	1250-1500	10.00	9.75	9.50
*	1500-1750	10.75	10.50	10.25
*	1750-2000	11.50	11.25	11.00

* b. Reaming, any size, will be charged for at $ 6.00 per foot.

* c. Cementing, where necessary, will be charged for at $ 12.00 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by Operator

* will be charged for at $ 10.00 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on hole:

* $ 800.00 .

f. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

g. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

ITEM 3: (Surface Drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	NX-NXWL	BX-BXWL	AX-AXWL
*	0-250	$ 9.25	$ 9.00	$ 8.75
*	250-500	9.50	9.25	9.00
*	500-750	9.75	9.50	9.25
*	750-1000	10.00	9.75	9.50

* b. Reaming, any size, will be charged for at $ 6.00 per foot.

* c. Cementing, where necessary, will be charged for at $ 12.00 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons
* requested by Operator will be charged for at $ 10.00 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on
* first hole: $ 800.00 .

* f. Moving between holes and setting up time: $ 10.00 per hour.

g. Drilling mud, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

III CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

IV INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

V EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

Justice

DRAFT AGREEMENT

This AGREEMENT, made this 2nd day of March, 1965 by and between Cortez Joint Venture under the management of American Exploration & Mining Co. (hereinafter called the Operator) and Justice Core Drilling Co. hereinafter called the Contractor), wherein it is mutually agreed as follows:

I. WORK TO BE DONE: The Contractor, as an independent contractor will provide all labor, material, supplies and equipment to the extent herein specified and perform all things necessary for diamond drilling on surface and underground in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada. Concerning this drilling, the following general specifications are set forth. Because of different phases of the program as to location and types of drilling the specifications are listed under three Items:

ITEM I: (Shallow Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 2000 feet

c. Length and Inclination of Holes: Underground drilling consisting of several shallow holes mostly horizontal and about 200 feet in length but occasionally at moderate up or down angles and extending to 500 feet in length.

d. Material to be drilled: Mostly dolomite and limestone and occasionally quartzite and silicified zones with sulfide ore minerals.

e. Hole Size: Holes to be started BX or AX size depending on hole length.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Stations: Drill stations of sufficient size will be provided by the Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily for six-day work week; the minimum rate will be on a double shift per five day work week.

ITEM 2 (Deep Hole Underground Drilling)

a. Location: On Arctic Level of Cortez Mine

b. Minimum Footage: 1800 feet

c. Length & Inclination of Hole: Underground drilling consisting of at least one deep, vertical, down hole to a depth of up to 2000 feet.

d. Material to be drilled: Dolomite and limestone with occasional silicified zones.

e. Hole size: Hole to be started at least NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless expressly authorized by Operator.

f. Coring and Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Air: Drill Contractor will be responsible for supplying own air compressor. Compressed air will be transferred underground via air line installed by Mining Contractor. This air line will be used in common by Drill Contractor and Mining Contractor.

h. Water: Water will be supplied to Mine portal by Operator. Water will be supplied underground by water line installed by Mining Contractor. The water line will be used in common by Drilling Contractor and Mining Contractor.

i. Drill Station: Drill Station consisting of a vertical raise to provide 30 feet of tail room will be provided by Operator.

j. Work Schedule: The maximum rate of work will be one underground drill rig, three shifts daily per six-day work week; the minimum rate will be on a double shift per five-day work week. The drilling of this deep hole will not be running concurrently with the shallow hole drilling under Item I.

ITEM 3 (Surface Drilling)

a. Location: On surface south of Cortez Mine.

b. Minimum Footage: 2000 feet

c. Length & Inclination of Holes: Surface drilling will consist of at least 3 vertical holes of depths up to 800 feet maximum.

d. Material to be Drilled: Mostly quartzite with some limestone and dolomite and occasional silicified zones.

e. Hole Size: Holes to be started NXWL size and completed not smaller than BXWL size. Hole size will not be changed unless authorized by Operator.

f. Coring & Core Recovery: All drilling to be cored. All work to be performed in such a manner as to secure maximum core and sludge recovery. A minimum of 85% core recovery is acceptable. Samples of sludges to be collected by Contractor's personnel whenever requested by Operator.

g. Water: Water to be supplied by Contractor using own water truck haulage for distance of 4 miles.

h. Drill Sites: Drill Sites to be provided by Operator.

i. Work Schedules: The maximum rate of work will be one drill rig, three shifts per six-day work week; the minimum rate will be double shift per five-day work week. The surface drilling may run concurrently with the underground drilling.

II FEES FOR WORK:

The Contractor shall receive for his services, as per Items described above, the following fees:

ITEM 1: (Shallow hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	BX-BXWL	AX-AXWL
*	0-200	$ 6.50	$ 6.00
*	200-400	$ 7.00	$ 6.50
*	400-600	$ 7.50	$ 7.00

* b. Reaming, any size, will be charged for at $3.25 per foot.

* c. Cementing, where necessary, will be charged for at $12.50 per hour, plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by

* Operator will be charged for at $12.50 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on first

* hole: $500.00 per rig.

* f. Moving between holes and setting up time: $12.50 per hour.

g. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

ITEM 2: (Deep hole underground drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	NX-NXWL	BX-BXWL	AX-AXWL
*	0-250	$7.00	$6.50	$6.00
*	250-500	7.50	7.00	6.50
*	500-750	8.00	7.50	7.00
*	750-1000	8.50	8.00	7.50
*	1000-1250	9.25	8.75	8.25
*	1250-1500	10.00	9.50	9.00
*	1500-1750	10.75	10.25	9.75
*	1750-2000	11.75	11.25	10.75

* b. Reaming, any size, will be charged for at $3.50 per foot.

* c. Cementing, where necessary, will be charged for at $14.00 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons requested by Operator

* will be charged for at $12.50 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on hole:

* $750.00.

9.00
8172.75
22

f. Drilling mud, cement, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

g. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

ITEM 3: (Surface Drilling)

a. Core drilling will be charged for at the following rates per foot:

	Footage	NX-NXWL	BX-BXWL	AX-AXWL
*	0-250	$8.00	$7.50	$7.00
*	250-500	8.50	8.00	7.50
*	500-750	9.00	8.50	8.00
*	750-1000	9.50	9.00	8.50

* b. Reaming, any size, will be charged for at $3.50 per foot.

* c. Cementing, where necessary, will be charged for at $14.00 per hour plus the cost of cement or substitute.

d. Standby time for surveying or other reasons

* requested by Operator will be charged for at $14.00 per hour. Time loss due to breakdown of equipment will not be charged for.

e. Mobilization and demobilization, including setting up on

* first hole: $600.00.

* f. Moving between holes and setting up time: $12.50 per hour.

g. Drilling mud, cement substitute and additives will be charged to Operator at cost plus handling charges, fob job site. Copies of invoices for these materials to accompany statement submitted to Operator.

h. Casing lost in hole or left in hole at Operator's request will be charged to Operator at cost price, fob job site.

III CONTRACTOR INSURANCE PROVISION

Contractor shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

IV INVOICING AND PAYMENT

On or before the seventh day of each month while the agreement remains in effect, Contractor shall submit to Operator an invoice, in triplicate, adequately describing Contractor's charges for work performed hereunder according to the terms of this contract, during the preceeding calendar month. Upon receipt of said invoice and subject to approval, the Operator shall make payment in full to Contractor for such work described in said invoice.

V EQUAL OPPORTUNITY EMPLOYMENT

The Operator is an equal opportunity employer and it is expected that all Contractors while in the service of the Operator will also be equal opportunity employers.

Leonard A. Justice
Justice Core Drilling Co.
Rt. 2, Boise, Idaho

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

March 3, 1965

Mr. C.J. Ballew
Manager - Elko Branch
Nevada Bank of Commerce
Elko, Nevada

COPY

Dear Mr. Ballew:

Mr. R.G.Garwood of our staff has recently had a preliminary discussion with you regarding our financing requirements at Cortez, Nevada which lies about 70 miles south-west of Elko, Nevada and for which Elko is the major supply center. In general outline the circumstances are as follows:

The Cortez Joint Venture consisting of American Exploration & Mining Co. (the Managing Coventurer), The Bunker Hill Company, Vernon F. Taylor, Jr. and Webb Resources, Inc. have leases with options to purchase on the Cortez Metals Co. and adjoining Rossi properties at Cortez, Lander and Eureka Counties, Nevada. The Cortez Metals Co. property has a history of production of silver ore variously estimated at between $8,000,000 and $15,000,000. There are presently no known ore reserves on the property but by geological information recently developed we believe there is an excellent chance of developing new ore bodies by a reasonable amount of exploration. The forseeable future market for silver appears to be firm.

We have prepared a proposed exploration program which would cost approximately $335,000. The coventurers are disinclined to subscribe the entire cost of this program, but if a loan of $250,000 can be obtained, repayable out of production from any economic ore discoveries made, the coventurers will subscribe the balance of the cost. We hereby apply to the Nevada Bank of Commerce for such loan.

All details of the exploration program are available for your inspection along with supporting data including documents evidencing our rights in the properties. Our personnel are

available to discuss the entire program and terms in full detail if you will consider making this loan.

The Managing Coventurer, as well as associated coventurers, has a competent and highly experienced staff of exploration and operating personnel. Should the exploration phase yield one or more economic mineable ore bodies there is no question that we can arrange further financing to production.

Yours very truly,

H. Goudey

Vice President

HG: jb

cc: Mr.R.G.Garwood

MAR - 8 1965
RECEIVED

Nevada Bank of Commerce
STATEWIDE
ELKO BRANCH

March 5, 1965

H. Goudey, Vice President
American Exploration & Mining Company
23rd Floor, Russ Building
San Francisco, California 94104

Dear Mr. Goudey:

Your letter of March 3, 1965, applying for a loan of $250,000.00, has been received by our Loan Committee and has been declined because of the speculative nature of the adventure.

We certainly thank you for considering this bank and have enclosed our recently published statement for your reference.

We can give you statewide service and when your operation in this area starts, we would be very pleased to open an account for you.

Sincerely,

C. J. Ballew
Manager

CJB/jmm
Enclosure

401 RAILROAD STREET • TELEPHONE 738-3166
MAILING ADDRESS: POST OFFICE BOX 151 • ELKO, NEVADA 89801

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

March 3, 1965

Mr. K.G. House
President
The Canadian Bank of Commerce (California)
344 Pine Street
San Francisco, Calif.

COPY

Dear Mr. House:

The Cortez Joint Venture consisting of American Exploration & Mining Co. (the Managing Coventurer), The Bunker Hill Company, Vernon F. Taylor, Jr. and Webb Resources, Inc. have leases with options to purchase on the Cortez Metals Co. and adjoining Rossi properties at Cortez, Lander and Eureka Counties, Nevada. The Cortez Metals Co. property has a history of production of silver ore variously estimated at between $8,000,000 and $15,000,000. There are presently no known ore reserves on the property but by geological information recently developed we believe there is an excellent chance of developing new ore bodies by a reasonable amount of exploration. The forseeable market for silver appears to be firm.

We have prepared a proposed exploration program which would cost approximately $335,000. The coventurers are disinclined to subscribe the entire cost of this program but if a loan of $250,000 can be obtained, repayable out of production from any economic ore discoveries made, the coventurers will subscribe the balance of the cost. We hereby apply to The Canadian Bank of Commerce (California) for such loan.

All details of the exploration program are available for your inspection along with supporting data including documents evidencing our rights in the properties. Our personnel are available to discuss the entire program and terms in full detail if you will consider making this loan.

Sincerely yours,

H. Goudey

Vice President

HG: jb

cc: Mr. R.G.Garwood

MAR - 5 1965

RECEIVED

3/5

COMMERCIAL
SAVINGS

IN CALIFORNIA SINCE 1864

THE CANADIAN BANK OF COMMERCE

(CALIFORNIA)

344 PINE STREET

SAN FRANCISCO, CALIF. 94104

CABLE ADDRESS
"CANBANK"

TELEX NO. 03-4213
ANSWERBACK:
CANBANK SFO

March 4, 1965

American Exploration & Mining Co.
Russ Building, 23rd Floor
San Francisco 4, California

Attention: Mr. H. Goudey, Vice President

Gentlemen:

We acknowledge receipt of your letter of March 3 concerning the application for a bank loan to the Cortex Joint Venture Group in the amount of $250,000. We understand the proceeds of the loan will be utilized for exploration work with repayment to be provided from future production from the area.

In view of the nature of the project and the indefinite source and time of repayment, we do not feel we can advance the amount required and, accordingly, must decline the application.

Yours truly,

R. K. Hayes
Vice President

RKH:mw

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

June 30, 1977

Memorandum

To: Branch of Financial Reports

From: Chief, Office of Minerals Exploration

Subject: Recording of realized losses under OME contracts

Write off of losses on the listed OME contracts is authorized:

Contract	Docket	Operator	Write-off
2203	6436	Cortez Joint Venture	$118,863.22
2305	6850	The Alaskamin Company	1,500.00

Harold Kirkemo

Harold Kirkemo

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

June 30, 1977

Mr. John B. Bush
Vice President--Exploration
Placer Amex, Inc.
Suite 2500, One California Building
San Francisco, California 94111

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties
Nevada
Contract 2203

Dear Mr. Bush:

By the terms of OME Contract 2203, and the certification of discovery or development dated May 18, 1967, as amended by a letter dated July 26, 1967, all minerals mined or produced from June 29, 1965, to June 29, 1977, were subject to the Government's royalty as stated in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any production therefrom. We, therefore, are closing our books and records on this contract.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo, Chief
Office of Minerals Exploration

R.II

Rec'd 6/17/77

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

June 15, 1977

MEMORANDUM

To: Chief, Office of Minerals Exploration
Reston, Virginia

From: Field Officer, Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Annual Inspection

An annual inspection of the subject property was made by the Field Officer on June 10, 1977. A telephone conversation was also held with Mr. John B. Bush, Vice President in charge of exploration, in the San Francisco offices of Placer Amex, Inc.

There has been no mining or production from the property since the milling of old tailings in the Spring of 1973. All royalties due OME have been paid.

The Operator states that the grade and quantity of silver ore discovered by the OME Exploration in the old Cortez Silver Mine does not presently justify the cost of development and they do not have any plans for mining at this time.

The certification period for this property expires on June 29, 1977 and this is the last annual inspection. The Operator should be informed of the termination of the certification period at the following address:

Placer Amex, Inc.
Suite 2500, One California Building
San Francisco, CA 94111

H. K. Stager

A136

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

June 3, 1976

MEMORANDUM

To: Chief, Office of Minerals Exploration
Reston, Virginia

From: Field Officer, Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Annual Inspection

While in the vicinity of the subject property on May 26, 1976, local inquiry was made by the Field Officer regarding recent mining activity in the Cortez mining district. A telephone conversation was also held with Mr. John B. Bush, in the San Francisco offices of Placer Amex, Inc., concerning the Operator's future plans for mining the deposit.

There has been no mining or production from the subject property since the milling of 64,238 tons of old tailings in the spring of 1973. The OME royalties totaling $7,048.00 for this production were paid during April and June 1973.

The mill at the large open-pit Cortez Gold Mine is now closed down and only small low-grade leaching operations are going on at the Cortez Gold and Gold Acres Mines (not subject to OME royalties).

The Operator states that the grade and quantity of silver ore discovered by the OME exploration in the old Cortez Silver Mine does not presently justify the cost of development and that they do not have any plans for mining at this time.

The certification period for this property expires on June 29, 1977.

H. K. Stager

H. K. Stager

no 63 1976

JUL 2 - 1973

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

June 29, 1973

Mr. William C. Edie
Secretary - Treasurer
American Exploration & Mining Co.
Suite 2500, One California Street
San Francisco, California 94111

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties,
Nevada
Contract 2203

OFFICIAL COPY
C. M. E.
RECEIVED
JUL 20 1973

INITIALS	CODE
HK	120

Dear Mr. Edie:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Copy to Region II
with copy of attachment.

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since September 12, 1972, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since September 12, 1972, has there been any production from the land subject to the contract? Yes ☒ No ☐

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser *(name and address)*	Quantity	Value
Engelhard Minerals & Chemical Corporation 430 Mountain Ave., Murray Hill, New Jersey 07974	64,410.46 Oz.Ag	$140,959.98

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since September 12, 1972, has any production been transported through OME workings *(see* Art. 16 (Annex I) *of contract)*? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name [signature]	*Title* General Manager
Address Cortez Gold Mines, Cortez, Nevada 89821	*Date* July 13, 1973

CORTEZ GOLD MINES

TELEPHONE
WINNEMUCCA, NEVADA
CORTEZ 1 OR 2

CORTEZ, NEVADA 89821

April 27, 1973

Mr. H. K. Stager
United States Dept. of Interior
Office of Mineral Exploration
345 Middlefield Road
Menlo Park, California 94025

Dear Mr. Stager:

During March 1973 Cortez milled 31,981 tons of the "Old Cortez" tailings. Settlements have now been received on a portion of the bullion shipped to Engelhard Industries and I am enclosing a check to cover the 5% royalty on the settlements to date.

Settlements have been received as follows:

	Shipping Date	Ag ozs. Paid For	Price oz.	Gross Amount	Treatment	Net Return
Lot 170A	3/ 5/73	1954.34	2.284	$ 4,463.71	*	$ 4,463.71
Lot 170B	3/ 5/73	1834.95	2.284	4,191.03	*	4,191.03
Lot 171A	3/15/73	4180.21	2.2454	9,386.24	245.12	9,141.12
Lot 171B	3/15/73	3690.74	2.2454	8,287.19	209.79	8,077.40
Lot 171C-G	3/26-3/27/73	18415.12	2.16025	39,781.46	1031.59	38,749.87
				$66,109.63	$1486.50	$64,623.13

5% of $64,623.13 = $ 3,231.16

*Lot 170 was predominately gold from Cortez ore and treatment charge was applied against the gold only.

Very truly yours,

CORTEZ GOLD MINES

W. W. Richardson

W. W. Richardson
Chief Accountant

WWR/bn
Enc.

OFFICIAL
COPY
O. M. E.
RECEIVED
JUL 13 1973
INITIALS | CODE
HK | Kirk
| CC

PLACER AMEX INC.

July 10, 1973

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
United States Department of the Interior
Geological Survey
Washington, D.C. 20242

RE: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Kirkemo:

In response to your letter of June 29th to Mr. William C. Edie I must advise that Mr. Edic is no longer associated with our company and please note that the company name has been changed to PLACER AMEX INC.

I have discussed the contents of your letter with Mr. D. M. Duncan, General Manager, Cortez Gold Mines by telephone and today forwarded your letter to him for reply.

Very truly yours,

A. G. Horton
Executive Vice-President

AGH/lr

A subsidiary of Placer Development Limited
ONE CALIFORNIA BUILDING • SUITE 2500 • SAN FRANCISCO • CALIFORNIA 94111 • (415) 986-0740

JUL 1 1971

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

June 29, 1971

Mr. Hugh J. Matheson
Vice President - Exploration
American Exploration & Mining Co.
Suite 2500, One California Street
San Francisco, California 94111

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Matheson:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Copy to R-II

RECEIVED
JUL 12 1971

INITIALS	CODE
gfa	120
HK	120
	220

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since July 6, 1970, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since July 6, 1970, has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser *(name and address)*	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since July 6, 1970, has any production been transported through OME workings *(see* Art. 16 (Annex I) *of contract)*? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name Hugh J. Matheson	*Title* Vice President - Exploration
Address ~~Suite 2500~~ One California Building San Francisco, Calif. 94111	*Date* July 7, 1971

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

March 16, 1971

Mr. T. David Horton
P.O. Box 157
Battle Mountain, Nevada 89820

OFFICIAL COPY
O. M. E.
RECEIVED
MAR 18 1971

INITIALS	CODE
Zla	30
	120
	120
HK	120
	220

Re: OME-6350 (Silver)
Cortez Joint Venture
Pixie, et al., Claims
Lander County, Nevada
Contract 2195

and

OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Horton:

Returned herewith is your check No. 1078, for $10.00, dated March 4, 1971. As I informed you during our telephone conversations of March 15, 1971, we cannot provide you with copies of the subject applications, or information contained in the applications, without written authorization from the applicant. For your information the Government did not issue a Certification of Possible Production as a result of the exploration project on the Pixie, et al., Claims (OME-6350) and the Idaho Mining Corporation was informed on January 12, 1966, that the Government retained no claim or lien against the property covered by the Lien and Subordination Agreements executed by that company on June 13, 1964. None of the area covered by the Cortez Mine contract (OME-6436) belonged to the Idaho Mining Corporation and no Lien and Subordination Agreements were executed by that company for that project.

Enclosed is a booklet "Exploration Assistance" explaining the OME program and containing a copy of Title 30 regulations and application forms.

Mr. John D. Wells, U.S. Geological Survey, Federal Center, Denver, Colorado 80225, is the Survey geologist assigned to work in the Cortez area and can probably supply you with detailed information on the geology of the district.

If I can be of further assistance to you, please call or write again.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosures

cc: OME, Wash., D.C.
Dir. RF
ACG RF
MP RF
Dockets 6350
6436

HKStager:mkh

T. DAVID HORTON
ATTORNEY AT LAW

635-2536
(AREA CODE 702)

POST OFFICE BOX 157
BATTLE MOUNTAIN, NEVADA 89820

March 4, 1971

Office of Minerals Exploration
Department of the Interior
1605 Evans Avenue
Reno, Nevada

Dear Sirs:

Enclosed is my attorney account check for $10.00 for photocopies of the OME applications made in the years 1964, 1965 and 1966 by American Exploration and Mining Company in the Cortez area of Eureka and Lander Counties.

I am particularly interested in the title clearances for the properties involved in these loans. If the enclosed sum is insufficient, please let me know the balance.

Very truly yours,

T. David Horton

TDH:w
Encs.

RECEIVED
MAR 15 1971
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

June 29, 1970

Mr. Hugh J. Matheson
Vice President - Exploration
American Exploration & Mining Co.
Suite 2500, One California Street
San Francisco, California 94111

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties,
Nevada
Contract 2203

OFFICIAL COPY
O. M. E.
RECEIVED
JUL 9 1970

INITIALS	CODE
Zla	130
HK	120
	220

Dear Mr. Matheson:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since August 19, 1969, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since August 19, 1969, has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser (*name and address*)	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity (*tons*)	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since August 19, 1969, has any production been transported through OME workings (*see* Art. 16 (Annex I) *of contract*)? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name The Cortez Joint Venture by American Exploration & Mining Co., Managing Co-Venturer H. J. Matheson

Title Vice President

Address Suite 2500, One California Bldg. San Francisco, California 94111

Date 7/6/70

AMERICAN EXPLORATION & MINING CO.

August 28, 1969

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 3 1969

INITIALS	CODE
zfa	130
	~~120~~
HK	120
	220

OME-6436

Mr. Harold K. Stager
Office of Mineral Exploration
U. S. Geological Survey
345 Middlefield Road
Menlo Park, California 94025

Dear Hal:

My service as Vice President - Exploration will be terminated August 31, 1969. All Amex communications, formerly addressed to me, should thenceforth be addressed to Mr. Hugh J. Matheson, Vice President - Exploration.

On September 1st I am commencing a consulting minerals evaluation service at 2300 Russ Building, San Francisco, California 94104 (telephone: (415) 392-4994).

I expect to also continue on a part-time consulting basis with American Exploration & Mining Co.

Sincerely yours,

H. Goudey

HG:lfm

Noted on "63" file

RECEIVED
SEP 2, 1969
OF MINERALS EXPLORATION
S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

June 30, 1969

Cortez Joint Venture
c/o American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Gentlemen:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

OFFICIAL COPY
O. M. E.
RECEIVED
AUG 21 1969

INITIALS	CODE
gla	130
JHK	~~120~~
	220

Copy to R-II

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since July 31, 1968, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☒

2. Since July 31, 1969, has there been any production from the land subject to the contract? Yes ☐ No ☒

   A. If so and it was shipped, give quantity, value, and name and address of purchaser.

	Quantity	Value

   B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity		Estimated Grade	Location
Ore		Tons		
Concentrates		Tons		
Other		Tons		

3. Since July 31, 1968, has any production been transported through OME workings (see Art. 16 (Annex I of contract)? Yes ☐ No ☒

   If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name: Lee R. Stoiser
Title: Senior Engineer
Address: American Exploration & Mining Co.
Suite 2500
1 California Building
San Francisco, California 94111
Date: August 19, 1969

OFFICIAL
COPY
O. M. E.
RECEIVED
AUG 5 1969
INITIALS CODE
HK 20
220

AMERICAN EXPLORATION & MINING CO.

ANNOUNCES

THE REMOVAL OF THEIR OFFICES TO

TWENTY - FIFTH FLOOR

ONE CALIFORNIA BUILDING

SAN FRANCISCO, CALIFORNIA 94111

ON MONDAY, JUNE 16, 1969

TELEPHONE: (415) 986-0740

OME-6436

AMERICAN EXPLORATION & MINING CO.

July 31, 1969

OFFICIAL COPY
O. M. E.
RECEIVED
AUG 5 1969

INITIALS	CODE
gla	130
	~~140~~
	120
	220

Mr. Harold K. Stager
Office of Minerals Exploration
U.S. Geological Survey
345 Middlefield Road
Menlo Park, California 94025

Dear Mr. Stager:

Subject: OME 6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Confirming our telephone conversation yesterday, the addresses of The Cortez Joint Venture and American Exploration & Mining Co. have both been changed to

Suite 2500, One California Street
San Francisco, California 94111.

Effective November 1, 1968, The Cortez Joint Venture executed a purchase agreement (copy enclosed) with Cortez Metals Company by which it acquired all the properties of Cortez Metals Company in the Cortez District, Nevada. This agreement supersedes and replaces the agreement of August 18, 1959. All the lands incorporated in the August 18, 1959 agreement have been included in the purchase agreement plus some additional lands which were later acquired by Cortez Metals Company.

Sincerely,

H. Goudey
Vice President - Exploration

HG:lfm
encl.
cc/w/o J. B. Bush
R. A. Watts

RECEIVED
AUG 1 1969
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

PURCHASE AGREEMENT

CORTEZ METALS COMPANY, a Nevada corporation (Cortez Metals) and THE CORTEZ JOINT VENTURE (Joint Venture), a joint venture consisting of American Exploration & Mining Co., a California corporation (Amex), The Bunker Hill Company, a Delaware corporation, Webb Resources, Inc., a Colorado corporation, and Vernon Taylor, Jr., of Denver, Colorado, hereby agree as follows, effective as of and from and after November 1, 1968:

1. Under date of August 18, 1959, Cortez Metals executed to and with Amex a "Mining Lease and Option" with respect to the hereinafter described Eureka and Lander County, Nevada, properties. Amex, with Cortez Metals' consent, heretofore assigned all of its interests under said prior agreement to the Joint Venture, which now owns and holds the same. The Joint Venture and its predecessor Amex have fully performed said prior agreement to date and as part of such performance have paid to Cortez Metals $45,900.00 as part-payment of the purchase price of said hereinafter described property. The parties desire to supersede and replace said prior agreement with this agreement.

2. Cortez Metals hereby sells to the Joint Venture, which hereby purchases, all those certain Eureka and Lander County properties particularly described in Exhibits A, B, C, D and E, annexed hereto and hereby made a part hereof, together with the improvements and appurtenances and all crude ore and tailings dumps located thereon and all rights, easements and privileges customarily used in connection therewith, for a total purchase price of $150,000.00, payable in the

amounts and installments heretofore paid and hereafter to be paid as follows:

(a) $45,900.00 heretofore paid Cortez Metals, receipt of which it hereby acknowledges, and

(b) $5,000.00 payable concurrently with the execution hereof, receipt of which Cortez Metals hereby acknowledges, and

(c) $25,000.00 payable on November 1, 1969, and

(d) $25,000.00 payable on November 1, 1970, and

(e) $25,000.00 payable on November 1, 1971, and

(f) $24,100.00, the balance, payable on November 1, 1972.

All such purchase price payments shall be paid to Cortez Metals in care of Mrs. Kathleen Coleman O'Brien, 1517 Lakeside Drive, Dunedin, Florida 33528, or wherever else Cortez Metals may from time to time designate in writing.

3. Concurrently with the execution hereof, Cortez Metals shall deliver to the Joint Venture:

(a) Its duly executed and acknowledged and legally sufficient grant deed conveying to the Joint Venture the patented mining claims and millsite described in annexed Exhibit A, free and clear of liens and encumbrances created or suffered by Cortez Metals. Said deed shall be dated November 1, 1968, and shall have affixed thereto, at the sole expense of Cortez Metals, all transfer tax stamps or documentary tax stamps required by the laws of the State of Nevada or otherwise to be affixed.

(b) Its duly executed and acknowledged and legally sufficient quitclaim deed conveying to the Joint Venture, free and clear of liens and encumbrances created or

suffered by Cortez Metals, all of Cortez Metals' then and thereafter to be acquired right, title and interest in and to (i) each and all said unpatented mining claims described in annexed Exhibits B, C and E, and (ii) said patented third-class grazing land, water and water rights described in annexed Exhibit D, and (iii) all other mineral lands or valuable deposits of minerals or materials or interests therein owned by Cortez Metals and which intervene between or are situate within two miles from the nearest exterior boundary of any of the claims described in either annexed Exhibit A or annexed Exhibit B or annexed Exhibit C. Said deed shall be dated November 1, 1968, and shall have affixed thereto, at the sole expense of Cortez Metals, all transfer tax stamps or documentary tax stamps required by the laws of the State of Nevada or otherwise to be affixed.

4. Cortez Metals makes no representations or warranties of any kind with respect to any of the properties described in said annexed Exhibit E. On the other hand, if the Joint Venture's examination of Cortez Metals' title to the properties described in said annexed Exhibits A, B and D, and to such of the claims described in said annexed Exhibit C as have not been validly and adversely relocated, reveals claims, liens, encumbrances or other title defects affecting its title to said properties or any of them, then, on written request from the Joint Venture, Cortez Metals, at its sole cost and expense, will cause the same to be cured and removed. Should Cortez Metals fail to cure and remove such title defects within 90 days after such request, or satisfy the Joint Venture within that period that

it is proceeding adequately and with reasonable diligence to cure and remove the same, then the Joint Venture may undertake to cure and remove the same and its costs and expenses in so doing, including the reasonable fees of its attorneys, shall be credited and applied against and constitute part-payment of said purchase price and be deducted by the Joint Venture from the next succeeding purchase price installment payable hereunder to Cortez Metals.

5. Notices hereunder shall be in writing and delivered personally or deposited in the United States mail, registered or certified and postpaid, addressed to Cortez Metals Co., c/o Thomas A. Cooke, P. O. Box 2229, Reno, Nevada 89505, and to The Cortez Joint Venture, c/o American Exploration & Mining Co., 2300 Russ Building, San Francisco, California 94104, or to such other place or places as the respective parties may from time to time specify in writing, and shall be considered to have been delivered at the expiration of 48 hours following their deposit in the mail.

6. Said prior agreement of August 18, 1959, shall be and hereby is superseded and replaced by this agreement, which shall hereafter solely express and measure the respective rights and obligations of the parties hereto.

IN WITNESS WHEREOF, the parties have executed these presents effective as of November 1, 1968.

CORTEZ METALS COMPANY

By Kathleen O'Brien
President

And Margaret Monaghan
Secretary

THE CORTEZ JOINT VENTURE
By Managing Coventurer
American Exploration & Mining Co.

By [illegible]
Vice President

And [illegible]
Secretary

STATE OF CALIFORNIA)
) ss.
City and County of San Francisco)

On November 21, 1968, before me Jane Grunt a Notary Public in and for said City, County and State, personally appeared H. GOUDEY and R. A. WATTS, known to me to be, respectively, the Vice President and Secretary of AMERICAN EXPLORATION & MINING CO., a corporation, the joint venturer that executed the foregoing instrument in the name of and for the account of THE CORTEZ JOINT VENTURE, and the persons who executed it on behalf of such corporation, and each acknowledged that such corporation executed the same.

OFFICIAL SEAL
JANE GRUNT
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SAN FRANCISCO COUNTY
My Commission Expires July 24, 1972

Jane Grunt
NOTARY PUBLIC
In and for the City and County of San Francisco, State of California
My commission expires: JANE GRUNT
My Commission Expires July 24, 197

STATE OF FLORIDA)
) ss.
County of Pinellas)

On November 1, 1968, before me Mary D. Sharpe a Notary Public in and for said County and State, personally appeared KATHLEEN COLEMAN O'BRIEN, known to me to be the President of CORTEZ METALS COMPANY, the corporation described in and which executed the within instrument, and acknowledged to me that such corporation executed the same.

NOTARY PUBLIC

My commission expires:

NOTARY PUBLIC, STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES MAY 29, 1971
BONDED THROUGH FRED W. DIESTELHORST

STATE OF NEW JERSEY)
) ss.
County of Bergen)

On Nov 11, 1968, before me Daniel Vanderhoofd a Notary Public in and for said County and State, personally appeared MARGUERITE MENZENHAUER, known to me to be the Secretary of CORTEZ METALS COMPANY, the corporation described in and which executed the within instrument, and acknowledged to me that such corporation executed the same.

NOTARY PUBLIC

My commission expires:

DANIEL VANDERHOOF
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES MAY 26, 1972

EXHIBIT A

To November 1, 1968 Purchase Agreement
between
Cortez Metals Co. and The Cortez Joint Venture

Those certain patented mining claims and millsites situate in Eureka County and/or Lander County, Nevada, known and designated by the following names and more particularly described in the United States patents therefor recorded in the book and at the page of records of the County Recorder of Eureka County, Nevada, noted after the names of said claims respectively, each said recording being incorporated herein and made a part hereof:

NAME OF CLAIM	PATENT RECORDED Eureka County Records Book of Deeds	Page
Artic	11	595-97
Avalanche	12	558-60
Adjunct	13	544-45
Alta	13	546-47
Bewick	13	566-67
Cummings	11	586-88
Central Consolidated	13	50-52
Conclave	13	562-63
Compressor	13	44-46
Conjunction	13	570-71
Chance	20	276-79
DeValla	13	550-51
Equator	13	558-59
Eclipse	13	542-44
Excelsior	13	53-55
Fitzgerald	11	589-91
Garrison	11	583-85
Hidden Treasure	13	554-55
Idaho	11	598-600
Junction	11	580-82
Jeanette	13	47-49
Kingsbury	13	564-65
Lead	20	276-79
Moreang	13	556-57
Monarch	13	552-53
Meteor	13	585-86
Mt. Tenabo	13	560-61
Premium	11	592-94
Pontifex	13	548-49
Protection	13	574-75
Prevision	13	572-73
Quartzite	20	276-79
Rosebush	20	276-79
Remnant	13	587-88
St.Louis	11	601-03
Speculation	13	540-41
Summit	13	568-69
Millsite - Cortez	19	462-63

EXHIBIT B

To November 1, 1968 Purchase Agreement
between
Cortez Metals Co. and The Cortez Joint Venture

Those certain unpatented mining claims and millsites situate in Eureka County and/or Lander County, Nevada, known and designated by the following names and more particularly described in the Location Notices and Certificates of Location thereof recorded in the office of the County Recorder of the noted County, in the book and at the page of records set after the names of said claims respectively, each said recording being incorporated herein and made a part hereof.

NAME OF CLAIM	Recorded in Official Records LANDER COUNTY Orig. Not. Book DMN*	Page	Am. Notice Book DMN*	Page	Recorded in Official Records EUREKA COUNTY Orig. Not. Book OML*	Page	Add'l & Am. Cert. Book OML*	Page
Columbian					A	328	H	271
Oversite					A	235	H	269
Gamma					G	415		
Residue					J	208		
Residue #1					J	209		
Residue #2					J	209		
Cash in Placer	18	154						
Wheel of Fortune Placer	18	155						
Blue Stack Placer	18	155						
Buillion Lode			18	153	G	44		
Gamma Lode			18	154				
Excelsior Millsite					A	59		
Silver State Millsite					H	278		

*Identification of Books:
DMN--Duplicate Mining Notices
OML--Outside Mining Locations

EXHIBIT C

To November 1, 1968 Purchase Agreement
between
Cortez Metals Co. and The Cortez Joint Venture

Those certain unpatented mining claims situate in Eureka and/or Lander Counties, Nevada, known and designated by the following names and more particularly described in the Location Notices and Certificates of Location thereof recorded in the office of the County Recorder of the noted County, in the book and at the page of records set after the names of said claims respectively, each said recording being incorporated herein and made a part hereof:

Name of Claim	Recorded in Official Records LANDER COUNTY Orig. Not. Book DMN*	Page	Recorded in Official Records EUREKA COUNTY Orig. Not. or Cert. Book OML*	Page	Add'l & Am. Cert. Book OML*	Page
Alert			A	224	H	270
February			G	356	H	267
George			H	276		
Gold Bug			A	329	H	273
Ivanhoe			A	317	H	266
Legal Tender			A	63	H	265
New					H	269
Queen			A	62	H	275
London			A	61	H	274
Silver State			A	62	H	268
Security			A	61	H	264
Tough			H	277		
Alpha			G	416		
Beta			G	416		
Carlo	10	46				
Delta			(C CMD*)	189	H	272
Free Coinage			G	316		
Lizzie						
John	10	48				
Maiola	10	47				
Tony	10	47				
Louise	10	46				
Martinez	10	46				
Rene			G	315		

*Identification of Books:
DMN--Duplicate Mining Notices
OML--Outside Mining Locations
CMD--Cortez Mining District Records

EXHIBIT D

To November 1, 1968 Purchase Agreement
between
Cortez Metals Co. and The Cortez Joint Venture

Patented third-class grazing land and water and water rights situate in Eureka and/or Lander Counties, Nevada, described as follows:

NE-1/4; and NW-1/4 of SE-1/4 of Section 7; S-1/2 of SW-1/4 of Sec. 18; N-1/2 of NW-1/4, SE-1/4 of NW-1/4, NW-1/4 of SE-1/4 and S-1/2 of SE-1/4 of Sec. 19, Township 26 North Range 48 East, M. D. B. & M.

Also all water and water rights in anywise appurtenant to the mining claims or lands of Cortez Metals Company in Eureka and Lander Counties, Nevada, or heretofore used in connection therewith, and particularly the Wenban Spring located in Sections 33 and 34, T. 26 N., R. 47 E., M. D. B. & M., covered by Millsite claim, Survey #46-B of Cortez Metals Company.

EXHIBIT E

Unpatented Mining Claims owned of record by Cortez Metals Company, situate in Eureka and/or Lander Counties, Nevada, and particularly described in the Location Notices and Certificates of Location thereof recorded in the office of the County Recorder of the noted county, in the book and at the page of records set after the names of said claims respectively, each said recording being incorporated herein.

Name of Claim	Recorded in Official Records LANDER COUNTY						Recorded in Official Records EUREKA COUNTY					
	Orig. Cert.			Add'l.Cert.			Orig. Cert.			Add'l. Cert.		
	Book	Page	Date	Book	Page	Date	Book	Page	Date	Book	Page	Date
Tez 1	3	800	3/12/64	19	296	6/20/67						
Tez 2	"	801	"	"	297	"						
Tez 3	"	802	"	"	298	"						
Tez 4	"	803	"	"	299	"						
Tez 5	"	804	"	"	300	"						
Tez 6	"	805	"	"	301	"						
Tez 7	"	806	"	"	302	"						
Tez 8	"	807	"	"	303	"						
Tez 9	5	449	8/14/64	"	304	"						
Tez 10	"	450	"	"	305	"						
Tez 11	"	451	"	"	306	"						
Tez 12	"	452	"	"	307	"						
Tez 13	9	27	8/25/65	"	308	"						
Tez 14	10	119	11/16/65	"	309	"						
Tez 15	10	120	"	"	310	"						
Tez 16				"	311	"	9	148	11/16/65	19	534-5	7/20/67
Tez 17				"	312	"	"	149	"	"	536-7	"
Tez 18	23	403	12/13/67				21	433	12/13/67			
Ada 34	3	572	2/20/64	"	247	6/20/67						
Ada 35	"	573	"	"	248	"						
Ada 36	"	574	"	"	249	"						
Ada 37	"	575	"	"	250	"						
Ada 38	"	576	"	"	251	"						
Ada 39	"	577	"	"	252	"						
Ada 40	"	578	"	"	253	"						
Ada 41	"	579	"	"	254	"						
Ada 42	"	580	"	"	255	"						
Ada 43	"	581	"	"	256	"						
Ada 44	"	582	"	"	257	"						
Ada 45	"	583	"	"	258	"						
Ada 46	"	584	"	"	259	"						
Ada 47	"	585	"	"	260	"						
Ada 48	"	586	"	"	261	"						
Ada 54	5	483	8/14/64	"	267	"						
Ada 55	"	484	"	"	268	"						
Ada 56	"	485	"	"	269	"						
Ada 57	"	486	"	"	270	"						
Ada 58	"	487	"	"	271	"						
Ada 59	"	488	"	"	272	"						
Ada 65	"	489	"	"	278	"						
Ada 70	22	152	9/14/67									
Ada 71	"	153	"									
Ada 72	"	154	"									
Ada 73	"	155	"									
Ada 74	"	156	"									
Ada 75	"	157	"									
Ada 76	"	158	"									
Ada 77	"	159	"									
Ada 78	"	160	"									
Ada 79	"	161	"									
Ada 80	"	162	"									
Ada 81	"	163	"									
Ada 82	"	164	"									
Ada 83	"	165	"									
Ada 84	"	166	"									

Exhibit E

to November 1, 1968 Purchase Agreement
between Cortez Metals Co. and The Cortez Joint Venture

Name of Claim	Recorded in Official Records LANDER COUNTY						Recorded in Official Records EUREKA COUNTY					
	Orig. Cert.			Add'l.Cert.			Orig. Cert.			Add'l. Cert.		
	Book	Page	Date	Book	Page	Date	Book	Page	Date	Book	Page	Date
Ada 127	22	167	9/14/67									
Ada 128	"	168	"									
Ada 129	"	169	"									
Ada 130	"	170	"									
Ada 131	"	171	"									
Ada 132	"	172	"									
Ada 133	"	173	"									
Ada 134	"	174	"									
Ada 135	"	175	"									
Ada 136	"	176	"									
Ada 146	"	177	"									
Ada 147	"	178	"									
Ada 148	"	179	"									
Ada 149	"	180	"									
Ada 150	"	181	"									
Ada 151	"	182	"									
Ada 152	"	183	"									
Ada 153	"	184	"									
Ada 154	15	112	12/30/66	16	94	3/9/67						
Ada 155	"	113	"	"	95	"						
Ada 156	"	114	"	"	96	"						
Ada 157	"	115	"	"	97	"						
Ada 158	"	116	"	"	98	"						
Ada 159	"	117	"	"	99	"						
Ada 162	16	251	3/22/67									
Ion 14	22	146	9/14/67									
Ion 15	"	147	"									
Ion 16	"	148	"									
Ion 17	"	149	"									
Ion 18	"	150	"									
Ion 19	"	151	"									
Ion 20	15	56	12/30/66	"	87	"						
Ion 21	"	57	"	"	88	"						
CM 1	23	237	12/5/67				21	305	12/5/67			
CM 2	"	238	"				"	306	"			
CM 3	"	239	"				"	307	"			
CM 4	"	240	"				"	308	"			
CM 5	"	241	"				"	309	"			
CM 6	"	242	"				"	310	"			
CM 8	"	243	"				"	311	"			
CM 9	"	244	"				"	312	"			
CM 10	"	245	"				"	313	"			
CM 11	"	246	"				"	314	"			
CM 12	"	247	"				"	315	"			
CM 13	"	248	"				"	316	"			
CM 14	"	249	"				"	317	"			
CM 15	"	250	"				"	318	"			
CM 16	"	251	"				"	319	"			
CM 16-A	"	318	"				"	386	"			
CM 17	"	252	"				"	320	"			
CM 18	"	253	"				"	321	"			
CM 19	"	254	"				"	322	"			
CM 20	"	255	"				"	323	"			
CM 21	"	256	"				"	324	"			
CM 22	"	257	"				"	325	"			
CM 23	"	258	"				"	326	"			
CM 24	"	259	"				"	327	"			
CM 24-A	"	434	12/26/67				"	458	12/26/67			
CM 25	"	260	12/5/67				"	328	12/5/67			

Exhibit E

Name of Claim	Recorded in Official Records LANDER COUNTY Orig. Cert. Book	Page	Date	Add'l.Cert Book	Page	Date	Recorded in Official Records EUREKA COUNTY Orig. Cert. Book	Page	Date	Add'l. Cert. Book	Page	Date
CM 26	23	261	12/5/67				21	329	12/ 5/67			
CM 27	"	262	"				"	330	"			
CM 28	"	263	"				"	331	"			
CM 29	"	264	"				"	332	"			
CM 30	"	265	"				"	333	"			
CM 31	"	266	"				"	334	"			
CM 32	"	267	"				"	335	"			
CM 33	"	268	"				"	336	"			
CM 34	"	269	"				"	337	"			
CM 35	"	270	"				"	338	"			
CM 36	"	271	"				"	339	"			
CM 37	"	272	"				"	340	"			
CM 38	"	273	"				"	341	"			
CM 39	"	274	"				"	342	"			
CM 40	"	275	"				"	343	"			
CM 41	"	276	"				"	344	"			
CM 42	"	277	"				"	345	"			
CM 43	"	278	"				"	346	"			
CM 44	"	279	"				"	347	"			
CM 45	"	280	"				"	348	"			
CM 46	"	281	"				"	349	"			
CM 47	"	282	"				"	350	"			
CM 48	"	283	"				"	351	"			
CM 49	"	284	"				"	352	"			
CM 50	"	285	"				"	353	"			
CM 51	"	286	"				"	354	"			
CM 52	"	287	"				"	355	"			
CM 53	"	288	"				"	356	"			
CM 54	"	289	"				"	357	"			
CM 55	"	290	"				"	358	"			
CM 56	"	291	"				"	359	"			
CM 57	"	292	"				"	360	"			
CM 58	"	293	"				"	361	"			
CM 59	"	294	"				"	362	"			
CM 60	"	295	"				"	363	"			
CM 61	"	296	"				"	364	"			
CM 62	"	297	"				"	365	"			
CM 63	"	298	"				"	366	"			
CM 64	"	299	"				"	367	"			
CM 65	"	300	"				"	368	"			
CM 66	"	301	"				"	369	"			
CM 67	"	302	"				"	370	"			
CM 68	"	303	"				"	371	"			
CM 69	"	304	"				"	372	"			
CM 70	"	305	"				"	373	"			
CM 71	"	306	"				"	374	"			
CM 72	"	307	"				"	375	"			
CM 73	"	308	"				"	376	"			
CM 74	"	309	"				"	377	"			
CM 75	"	310	"				"	378	"			
CM 76	"	311	"				"	379	"			
CM 77	"	312	"				"	380	"			
CM 79	"	313	"				"	381	"			
CM 81	"	314	"				"	382	"			
CM 83	"	315	"				"	383	"			
CM 85	"	316	"				"	384	"			
CM 87	"	317	"				"	385	"			
CM 101	"	325	12/6/67				"	397	12/6/67			
CM 103	"	326	"				"	398	"			

Exhibit E

p.

Name of Claim	Recorded in Official Records LANDER COUNTY Orig. Cert. Book	Page	Date	Add'l. Cert. Book	Page	Date	Recorded in Official Records EUREKA COUNTY Orig. Cert. Book	Page	Date	Add'l. Cert. Book	Page	Date
CM 104	23	327	12/6/67				21	399	12/6/67			
CM 105	"	328	"				"	400	"			
CM 106	"	329	"				"	401	"			
CM 107	"	330	"				"	402	"			
CM 108	"	331	"				"	403	"			
CM 109	"	332	"				"	404	"			
Pixie 27	"	185-86	11/30/67									
Pixie 28	"	187-88	"									
Pixie 29	"	189-90	"									
Pixie 30	"	191-92	"									
Pixie 152	"	201-02	"									
Pixie 153	"	203-04	"									
Pixie 156	"	209-10	"									
CM 19-A												
CM 111												
CM 112												
CM 110												
CM 113												
CM 114												
CM 115												
CM 116												

Exhibit E

The foregoing purchase agreement of November 1, 1968 between Cortez Metals Company and the Cortez Joint Venture is hereby approved, ratified and confirmed by the following stockholders representing a majority of the outstanding capital stock of said Cortez Metals Company:

NAME	SHARES OF CAPITAL STOCK
Mrs. Kathleen Coleman O'Brien Mrs. Kathleen Coleman O'Brien	160,614
Mrs. Elizabeth Heitman Mrs. Elizabeth Heitman	200,820
Mrs. Marguerite Menzenhauer Mrs. Marguerite Menzenhauer	200,820
Estate of John F. Coleman, Dec. By Robert W. McCleaver, Jr. T.S.	281,026
Total outstanding shares represented	843,280
Total amount of outstanding stock:	1,000,000

The purchase agreement of November 1, 1968 between Cortez Metals Company and the Cortez Joint Venture is hereby approved, ratified and confirmed by the following stockholders of the outstanding capital stock of said Cortez Metals Company:

NAME	SHARES OF CAPITAL STOCK
B. C. YPARRAGUIRRE	100
Estate of H. R. COOKE, Dec. By THOMAS A. COOKE	100

The purchase agreement of November 1, 1968 between Cortez Metals Company and the Cortez Joint Venture is hereby approved, ratified and confirmed by the following stockholders of said Cortez Metals Company:

Estate of John F. Coleman, Dec.

By Kathleen Coleman O'Brien
Administratrix

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE (415) 392-4992

2300 RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

July 31, 1968

OFFICIAL COPY
O. M. E.
RECEIVED
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Mr. Frank E. Johnson
Chief, Office of Minerals Exploration
U. S. Department of the Interior
Bureau of Mines
Washington, D. C. 20240

Dear Mr. Johnson:

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

We are returning herewith the completed questionnaire transmitted by your letter of June 19th. There has been no change in the status of or production from the subject Cortez Mine since December 1966, except that a small tonnage resulting from assessment-development work has been stockpiled. As we at present have no market for this particular tonnage, I believe it does not meet the specification "if stockpiled awaiting sale".

For your information, in the District about three miles to the north of the Cortez Mine we have developed a gold discovery in siltstone to a viable ore deposit which we plan to put into production under the name Cortez Gold Mines. In interpretation of news items, there could be some confusion between this and the older Cortez Mine (silver).

While the Cortez Gold Mines deposit is on mining claims not subject to OME Contract 2203, the milling facility under construction on the Cortez Gold Mines deposit should improve the outlook for future production from the Cortez Mine.

Very truly yours,

H. Goudey
Vice President

copy with 63 to OME R-11

HG:lfm
Encl.

JUN 21 REC'D

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

June 19, 1968

Cortez Joint Venture
c/o American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

CIRCULATE TO:		
LB		
JBB	✓	JBB
WJC		✓
RGG		
HG	✓	
CEM		
RAR		
LRS		
RAW		

Gentlemen:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Frank E. Johnson

Frank E. Johnson
Chief, Office of
Minerals Exploration

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since December 1966, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes [ ] No [X]

2. Since December 1966, has there been any production from the land subject to the contract? Yes [ ] No [X]

   A. If so and it was shipped, give quantity, value, and name and address of purchaser.

	Quantity	Value

   B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity	Estimated Grade	Location
Ore	Tons		
Concentrates	Tons		
Other	Tons		

3. Since December 1966, has any production been transported through OME workings (see Art.16 (Annex 1) of contract)? Yes [ ] No [X]

   If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by: The Cortez Joint Venture by American Exploration & Mining Co., Managing Co-Venturer

Name H. Goudey Title Vice President

Address 2300 Russ Building, San Francisco, Calif. 94104 Date July 31, 1968

IN REPLY REFER TO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

April 29, 1968

OFFICIAL COPY
O. M. E.
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To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property (deleted)
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed is a summary-type Final Field Report on the subject project.

H. K. Stager

Enclosure

Field Final Report

FINAL FIELD REPORT - OME EXPLORATION PROJECT

By H. K. Stager, Field Officer, Region II

April 29, 1968

1. OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property (deleted)
Eureka and Lander Counties, Nevada
Contract No. 2203

Operator: Cortez Joint Venture
American Exploration & Mining Company
2300 Russ Building
San Francisco, California 94104

Property: Consists of 38 patented lode mining claims known as the Cortez Metals patented claims, 26 unpatented lode and placer mining claims known as the Cortez Metals unpatented claims, and 15 unpatented lode mining claims known as the Rossi claims, in secs. 4, 5, 7, and 8, T. 26 N., R. 48 E., MDBM, Cortez mining district, Eureka and Lander Counties, Nevada. A map showing the location of the claims was attached to the contract.

Note: The Rossi claims were deleted by Amendment No. 3.

Ownership: The Operator had rights to the patented claims and to the Cortez Metals unpatented claims under terms of an assignment from American Exploration & Mining Co., executed June 5, 1964. The Operator had rights to the Rossi claims under the terms of an assignment from American Exploration & Mining Co., executed February 20, 1965. The American Exploration Co. had rights to the patented claims and to the Cortez Metals unpatented claims under the terms of a mining lease and option executed August 18, 1959, and amended September 16, 1959, by the owner, Cortez Metals Co., c/o Thomas Cooke, P.O. Box 2229, Reno, Nevada. The American Exploration Co. had rights to the Rossi claims under the terms of a lease and option agreement executed May 11, 1964, by the owners, Louis L. Rossi, P.O. Box 569, Beowawe, Nevada 89821; Antonio A. Rossi; and Birdie Rossi, Winnemucca, Nevada 89445.

1. Ownership - Continued

Two Lien and Subordination Agreements, each covering the patented claims and the Cortez Metals unpatented claims, one executed March 25, 1965, by Cortez Metals Co. and the other May 18, 1965, by American Exploration & Mining Co., and two additional Lien and Subordination Agreements covering the Rossi claims, one executed February 20, 1965, by Louis, Tony, and Birdie Rossi, and the other March 15, 1965, by American Exploration & Mining Co., were attached to the contract.

2. Purpose of the Project: The purpose of the project was to explore by rehabilitation, drifting, crosscutting, and underground core drilling in and along the No. 1 dike-fissure zone on the Arctic level of the Cortez Mine for silver-bearing replacement ore bodies in the Cambrian Hamburg and the Ordovician Hanson Creek dolomites and for silver-bearing veins in the Ordovician Eureka Quartzite.

3. Contract: Dated June 29, 1965, for a term of 12 months.
Original contract amount - $174,860.00
Government participation - 75 percent - $131,145.00

Amendments

No. 1 - May 24, 1966, changed the description of the work under Exhibit A to make the sites, bearings, inclinations, and depths of individual holes subject to mutual agreement between the Operator and the Government.

No. 2 - November 15, 1966, extended the time for completion of the work from 12 to 16 months.

No. 3 - June 20, 1967, to delete the 15 unpatented lode mining claims known as the Rossi claims from the land covered by the contract.

4. Project Work: Started - August 10, 1965. Completed - August 31, 1966.

Cost Items	Authorized Units	Authorized Rate	Authorized Amount	Completed Units	Completed Amount
Mobilization and demobilization of equipment, men and materials	1	$5,000.00	$ 5,000.00	1	$ 5,000.00
Drifting and cross-cutting	2,640	$43.50/ft	114,840.00	2,497.6'	108,645.60
Crosscutting for drill stations	--	(42.60/ft)	---	112.5	4,792.50
Mobilization and demobilization of drill unit	1	$535.00	535.00	½	267.50
Core drilling	3,400	$5-$7.10/ft	21,500.00	3,125	16,018.88
Compressed air for drilling	3,400	60¢/ft	2,040.00	3,125	1,875.00
Cementing drill holes	110	$11.60/hr	1,276.00	0	0
Cement and additives	--	---	1,456.00	0	0
Reaming	500	$2.25/ft	1,125.00	256	576.00
Lost casing	150	$2/ft	300.00	185	314.50
Moving drill	50	$11.60/hr	580.00	115	1,334.00
Standby time	25	$11.60/hr	290.00	25	290.00
Supervisor-geologist-engineer	11	$800/mo	8,800.00	11	8,800.00
Laborer	110	$21.66/da	2,385.00	183.2	3,968.11
Core boxes	340	$1/ea	340.00	268	268.00
Payroll taxes, etc.	--	18% payroll	2,013.00	--	1,699.49
Bulldozing	180	$16/hr	2,880.00	11	176.00
Jeep rental	242	$9/da	2,178.00	266	2,394.00
Water truck rental	3,600	25¢/mi	900.00	10,792	2,698.00
Assaying for Au & Ag	1,220	$3/ea	3,660.00	514	1,542.00
Assaying for Cu, Pb, and/or Zn	880	$1.75/ea	1,540.00	38	66.50

4. Project Work - Continued

Cost Items	Authorized Units	Authorized Rate	Authorized Amount	Completed Units	Completed Completed
Transportation and sacks for samples	1,220	10¢/ea	$ 122.00	514	$ 51.40
Office expenses	11	$100/mo	1,100.00	10-1/3	1,033.33
Total amounts			$174,860.00		$158,484.29
Government participation at 75 percent			$131,145.00		$118,863.22
Paid to Operator					$118,863.22

The Government retained no equity in any of the equipment or supplies used.

Effectiveness of the Work - The favorable area was adequately explored.

Efficiency of Operation - The project was conducted in an efficient and thorough manner.

5. Reports:

Operator's Final Report - An acceptable final report was received from the Operator on March 3, 1967.

Cost Review - A Report of Review was issued by the Office of Survey and Review in December 1966, and noted several allowable cost items unclaimed by the Operator that were subsequently claimed. A second Report of Review was issued in March 1968.

Final Audit - A final audit was not requested inasmuch as no additional vouchers were submitted or paid after the Report of Review. The final voucher was paid on February 15, 1967.

Royalty Review - There was no ore produced during the period of the contract and no royalty was due the Government.

6. Project Results:

Discoveries - A small high-grade ore shoot was discovered near the beginning of the East Drift. This ore shoot contains an estimated 3,000 tons of indicated and inferred ore, with an average grade of about 42 ounces of silver per ton, and minor amounts of gold and lead. A quartz vein, south of and parallel to the No. 1 dike-fissure, was discovered by underground diamond drilling. This vein

6. Project Results - Continued

Discoveries - Continued

averages about 5 feet in thickness, is about 800 feet in strike length, and, where intersected by drill holes, contains from a trace to about 10 ounces of silver per ton. Shoots of minable silver ore are inferred in this vein but the tonnage and grade cannot be determined without additional exploration or mining of the vein. Complete and detailed maps and assay data are contained in the Operator's Final Report. Future production of the high-grade ore shoot is economically feasible and additional exploration and mining of the quartz vein is probable, either by the Operator or by leasers.

Certification- Certification was recommended on March 6, 1967, and a Certificate of Possible Production was issued on May 18, 1967. The Government's lien to insure payment of royalties expires on June 29, 1977.

Production - There was no ore mined or stockpiled during the period of the project, except for about 126 tons of material that averaged about 22.7 ounces of silver per ton that was removed as the East Drift was driven through the small ore shoot. This material was inadvertently diluted with waste and dumped outside the Arctic Level portal by the mining contractor.

Royalties - There was no ore sold and no royalties were paid or due the Government during the period of the project.

7. Geologic Summary: The silver-bearing ore bodies that have been mined at the Cortez Mine occur as shoots in veins in quartzite and dolomite and as replacement-type bodies in dolomite. The largest ore body was about 700 feet long, 200 feet in vertical extent, from 2 to 25 feet in width, and yielded about 150,000 tons of ore. The mine produced $12-$15 million in silver between 1863 and 1936. Between 1902 and 1936 the district produced 340,000 tons of ore that yielded 4,195,128 ounces of silver.

OME DISCOVERIES (Certified Projects)

Docket	Year found	Tons found*	Commodities	Grade	Units Contained	$/unit year found	Gross Value year found	Recovery factor**	Units Recoverable	Recov. Value year found
6436	1966	3,000	Silver	42 oz.	126,000	$1.29	$162,540	65%	81,960	$105,651
	Plus									
	1966	undeterminable (Vein, 5'x800'x?	Ag	?	?	"	?			

* Short tons--includes Production sold or stockpiled during project, and Measured, Indicated, Inferred ore and potential ore.

** Established by DMEA. Factors of 100% indicate that estimates are in terms of recoverable quantities.

n.a. Not available.

MME Form 7
(2/63)

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Date	Surname	Code
4/19/68	[illegible]	120
4/19/68	Kirkemo	120
		110
		220

APR 19 1968

Memorandum

To: Chief, Branch of Budget and Finance

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed is a copy of a letter dated April 5, 1968, from the Field Officer, Region II, transmitting to the Operator a copy of the Report of Review issued in March 1968 on the subject contract. A copy of said review also is enclosed.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Smith
R-II

BLong/1 4/19/68

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE (415) 392-4992

2300 RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

April 9, 1968

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APR 10 1968
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

Mr. H. K. Stager
Field Officer
OME, Region II
U. S. Department of the Interior
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

Dear Mr. Stager:

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

This acknowledges your letter of April 5 concerning a report of review of the above contract. This report conforms with our records.

As a clerical matter, the Rossi property named in the above subject has been relieved of application of the lien against production.

Sincerely yours,

CORTEZ JOINT VENTURE
American Exploration & Mining Co.,
Managing Co-Venturer

H. Goudey, Vice President

HG:lfm

cc: R. A. Watts

Orig. in Docket Menlo Park -

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

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Rmd

April 5, 1968

Mr. H. Goudey
Vice President
American Exploration & Mining Co.
Cortez Joint Venture
23d Floor - Russ Bldg.
San Francisco, Calif. 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Goudey:

Enclosed for your files is a copy of a Report of Review of the subject contract, issued by the Office of Survey and Review, Audit Operations, Washington, D. C., in March 1968. The facts as stated in the report agree with the information on file in the Field Office and I concur in the report.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosure

cc: Chief, OME, WDC (2)
Dir RF
ACG RF
MP RF
Docket
HKStager:mlb
4-5-68

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
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4/3/68	Kirkemo	120
		110
		220

AIRMAIL

APR 3 1968

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Enclosed are the Field Office's and Operator's copies of a Report of Review issued March 1968.

If you concur in the facts as stated in this report, one copy should be sent to the Operator with any comments you may care to make, and the other copy retained for your files. As evidence of your concurrence, two copies of your letter transmitting the Operator's copy of the report should be furnished this office. If for any reason you do not concur, both copies of the report should be returned to this office with appropriate comments.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Smith

BLong/1 4/2/68

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAR 18 1968

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Memorandum

To: Director, Geological Survey

From: Assistant Director, Contract and Grant Audit
Audit Operations, Office of Survey and Review

Subject: Report of review-Contract 2203
Docket No. OME-6436 (Silver)
Cortez Joint Venture (Operator)
Cortez Mine
Eureka and Lander Counties, Nevada

Pursuant to a request dated November 16, 1967, from the Chief, Office of Minerals Exploration (OME), we have made a cost review of Contract 2203, examining the contract and accounting records and files of OME and the Branch of Budget and Finance, Administrative Division, Geological Survey. Four copies of the report of review are enclosed.

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U.S. GEOLOGICAL SURVEY
MAR 20 11 33 AM 1968
OFFICE OF THE DIRECTOR

Enclosures

W. A. Wilkerson, Jr.
For Donald R. Moysey

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum July 17, 1967

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To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed are the original and one copy of Amendment No. 3 of the subject contract, properly executed by the Operator. The remaining copies of this amendment have been distributed in the usual manner.

Will you please write to Mr. Louis Rossi, Beowawe, Nevada 89821 and inform him of the release of these claims from the certification.

H. K. Stager

Enclosures(2)

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

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June 23, 1967

Mr. H. Goudey, Vice President
American Exploration & Mining Company
Managing Co-Venturer
Cortez Joint Venture
23rd Floor Russ Bldg.
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Goudey:

Enclosed are the original and three copies of proposed Amendment No. 3 to the subject contract, signed by the Chief, Office of Minerals Exploration for the Government.

If the proposed amendment meets with your approval, please sign and return the following copies to this office:

Government's copy
Budget and Finance's copy
Field Office's copy

The Operator's copy should be retained for your files.

If any part of the proposed amendment does not meet with your approval, the original and all copies should be returned to this office with your proposed changes for consideration.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosures (4)

cc: Chief, OME, WDC
Dir RF
ACG RF
MP RF
Docket HKS/mlb

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
6/14/67	[illegible]	120
6/15/67	Kirkemo	120
"	Johnson	110
6/16	Kalsgaard	220
6/16	Power	
6/19	[illegible]	
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6/20	cal	220

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AIRMAIL

JUN 20 1967

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract 2203

Referring to the letters of Mr. Louis Rossi, dated May 24, 1967, and Mr. H. Goudey, Vice President, American Exploration & Mining Company, dated May 31, 1967, copies of which were forwarded to you, enclosed are the original and three copies of proposed Amendment No. 3 (two pages) to the subject contract, signed for the Government. An extra copy is enclosed for field use.

If the proposed amendment is satisfactory to you and the Operator, all four copies should be signed by an authorized representative of the Operator and distributed in the usual manner.

If any part of the proposed amendment does not have your approval or that of the Operator, the original and all copies are to be returned to this office together with the proposed changes for consideration.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Mr. Smith
130

GLAult/a 6-14-67

23263

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

May 31, 1967

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Mr. Frank E. Johnson
Chief, Office of
Minerals Exploration
United States Department of Interior
Washington 25, D. C.

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Johnson:

On behalf of the Cortez Joint Venture we have received your letter of May 18 on the above subject certifying possible production.

With specific regard to the Rossi property our application included some work on the Rossi property. In the contract all of this work was disallowed with the consequence that there was no OME participation in any exploration work on the Rossi property and the entire government participation was on the Cortez Metals Company property. It was my understanding that under the circumstances the lien and subordination agreement on the Rossi property which had been submitted with the application would not be exercised.

We have received from Mr. Rossi a copy of your letter to him of May 18 in regard to the lien on his land and production therefrom.

I would appreciate your advice as to what steps we should take toward removing this cloud upon Mr. Rossi's property, which

Copy made for OME Region II sent 6/7

see letter 1/26/67 with certification left-hand side

is entirely separate from the Cortez Metals property.

Sincerely yours,

H. Goudey
Vice President
American Exploration &
Mining Company
Managing Co-Venturer
Cortez Joint Venture

HG:ml

Cc: Mr. Louis Rossi

6436

Beowawe, Nevada
(P. O. Box 569) 89821

May 24, 1967

Dear Mr. Johnson:-

Just received your letter of May 18, 1967 telling about this mining deal that I have made on this silver-lead property here at Cortez with the American Exploration & mining Co. 2300 Russ Building San Francisco, California 94104
Now you are all wrong on this deal, as you mentioned in your letter about this.
I would say for you to write or get in touch with Mr. Gouley, Vice President for the American Exploration & Mining Co. 23rd Floor Russ Building San Francisco, 4 California, U.S.A. and find out all about this, and get this straighten out.
I am forwarding this letter to him which you have sent me, to get this all straighten out. You have no right in doing anything of this sort with me.

Yours Truly,

Louis Rossi

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1/26/67
see reply on back side
filed left-hand side
with certification

Copy made for OME Region II rev 6/7

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/12	RM Smith	
5/12/67	Kirkwood	
5/15/67	Long	
5/17	Pelosaard	
5/18	Keys	

Cortez Metals Company
P. O. Box 2229
Reno, Nevada 89505

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Gentlemen:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract. This relates to the Lien and Subordination Agreements executed March 25, 1965, by Kathleen Coleman O'Brien, president of your company, under the Office of Minerals Exploration program.

The Government's prior lien on the land and upon any production therefrom will continue in existence for the length of time mentioned in the enclosed copy of the letter to the Operator. You are obligated during that period to commit no act and to assert no claim in conflict with the Government's rights under the agreement signed by Mrs. O'Brien, and to give advanced notice of the Government's rights to any transferee or lessee of any part of your interest in the land or the production therefrom.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosure

cc: Director's Reading File
Division File
Econ. Geol. File
OME File
OME Reading File
Region II
Smith/mm

RMSmith/mm (5/12/67)

MME Form 7
(2/63)

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5/12	RMSmith	
5/12/67	Kirkemo	
5/15/67	Long	
5/17	Rubsam	
5/18	Clyp	

MAY 18 1967

American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Gentlemen:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract. This relates to the two Lien and Subordination Agreements executed on March 15 and May 18, 1965, by Mr. H. Goudey, vice president of your company, under the Office of Minerals Exploration program.

The Government's prior lien on the land and upon any production therefrom will continue in existence for the length of time mentioned in the enclosed copy of the letter to the Operator. You are obligated during that period to commit no act and to assert no claim in conflict with the Government's rights under the agreements signed by Mr. Goudey, and to give advanced notice of the Government's rights to any transferee or lessee of any part of your interest in the land or the production therefrom.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosure

cc: Director's Reading File
Division File
Econ. Geology File
OME Docket
Region II
Mr. Smith

MMerrithew/mm (5/11/67)

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MME Form 7
(2/63)

OFFICIAL FILE COPY

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5/12/67	[illegible]	
5/12/67	[illegible]	
5/12/67	[illegible]	
5/17	[illegible]	
5/18	[illegible]	

Mr. Louis Rossi
Cortez
Via Beowawe, Nevada 89821

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Rossi:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract. This relates to the Lien and Subordination Agreements executed February 20, 1965, by you under the Office of Minerals Exploration program.

The Government's prior lien on the land and upon any production therefrom will continue in existence for the length of time mentioned in the enclosed copy of the letter to the Operator. You are obligated during that period to commit no act and to assert no claim in conflict with the Government's rights under the agreement signed by you, and to give advanced notice of the Government's rights to any transferee or lessee of any part of your interest in the land or the production therefrom.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosure

cc: Director's Reading File
Division File
Econ. Geol. File
OME Docket
OME Reading File
Region II
Mr. Smith

MMerrithew/mm (5/12/67)

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/12	R M Smith	
5/12/67	Kirkham	
5/17/67	Long	
5/17/67	Lebsack	
5/18	Mapp	

Mr. and Mrs. Tony Rossi

Winnemucca, Nevada 89445

MAY 18 1967

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. and Mrs. Rossi:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract. This relates to the Lien and Subordination Agreements executed February 20, 1965, by you under the Office of Minerals Exploration program.

The Government's prior lien on the land and upon any production therefrom will continue in existence for the length of time mentioned in the enclosed copy of the letter to the Operator. You are obligated during that period to commit no act and to assert no claim in conflict with the Government's rights under the agreement signed by you, and to give advanced notice of the Government's rights to any transferee or lessee of any part of your interest in the land or the production therefrom.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosure

cc: Director's Reading File
Division File
Econ. Geol. File
OME Docket
OME Reading File
Mr. Smith
Region II

MMerrithew/mm (5/12/67)

23263

Copy for OME

Standard Form No. 1047
Form approved by Comptroller General U. S.
September 20, 1927

PUBLIC VOUCHER FOR REFUNDS

Serial No. _____

D. O. Voucher No. 7643

U. S. Interior, Geological Survey
(Department or Establishment, Bureau or Office)

Location: Washington, D. C. 20242

Appropriation or Fund: 14X6875(08)

To
Address
Cortez Joint Venture
2300 Russ Building
San Francisco, Calif. 94104

PAID BY
(FOR USE OF PAYING OFFICE)

OFFICIAL COPY
O. M. E.
RECEIVED
MAR 30 1967
MINERALS OFFICE

Deposit received from the above-named depositor on _____, 19____

for Contract No. 2203 - Docket No. OME 6436

has been applied as herein stated and the balance indicated is returned herewith:

Amount ~~of deposit~~ withheld - Sch #4649-67 $ 200.00

Applied as explained in "Remarks" below _____

Balance authorized to be refunded $ 200.00

Remarks:

Payment of amount withheld from voucher for the month of August 1966 pending submission of final report by Operator. Payment authorized by memorandum from Chief, Office of Minerals Exploration, dated 3/16/67.

Date March 29, 1967

(Sign original only)

Title A. Gabor
Acctg. & Fiscal Supvr.

Refund by
Check No. _____, dated _____ for $ _____ on Treasurer of the U. S. in favor of payee named above.
Cash, $ _____ on _____ (Signature of payee) _____ (Sign original only)
Other method, $ _____, _____ (Describe)

MME Form 7
(2/63)

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Date	Surname	Code
3/16/67	RM Smith	120
3/16/67	Kirkham	120
		110
3/16	Cole	220
		120M

MAR 16 1967

Memorandum

To: Chief, Branch of Budget and Finance

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

A satisfactory final report has been submitted by the Operator under the subject contract. The Field Officer, OME Region II, has recommended that the $200.00 withheld from the August 1966 voucher now be paid to the Operator, in which we concur.

A Certificate of Possible Production will be prepared on this property in accordance with the Field Officer's recommendation.

FRANK E. JOHNSON

Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
OME Region II
Mr. Smith

GLAult/a 3-16-67

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MME Form 7
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		220
		120M

MAR 16 1967

Cortez Joint Venture
c/o American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine [and Rossi Property]
Eureka and Lander Counties, Nevada
Contract 2203

Gentlemen:

In accordance with the request at the bottom of page 2 of your General Statement of the Proposed Cortez Mine Exploration Project, which accompanied the subject application, dated March 30, 1965, the following documents are returned to you:

8. Report on results of mine sampling, Consolidated Cortez Silver Mines Company, by H. J. Evans, October 20, 1922.

9. Preliminary report Economic Geology of the Cortez mine, Cortez Joint Venture, by J. N. Faick, June 30, 1964.

10. Memorandum report on Cortez silver mine, by J. B. Bush, Dec. 28, 1964.

11. Drill log of hole No. 1, Aug. 21-Nov. 7, 1963.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Smith
OME Region II

RMSmith/gla 3-16-67

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

IN REPLY REFER TO:

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O. M. E.
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MAR 8 1967

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RMJ	120 S

Memorandum March 6, 1967

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed are two copies of the Operator's Final Report on the subject contract. The exploration resulted in the discovery of minable ore reserves, as well as other reserves of lower grade material, and I therefore recommend that a Certificate of Possible Production be issued.

For all [illegible] and tonnages

If this report is satisfactory to you the $200 being withheld from the August 1966 voucher can be paid to the Operator.

H. K. Stager

H. K. Stager

Enclosures

certification will be prepared in accordance with recommendations in Final Field Report which has not yet been received.
RMJ

Must be done promptly within 6 months from 3/3/67
gej

OPERATOR'S FINAL REPORT

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

March 2, 1967

Mr. Harold K. Stager
O.M.E.
U.S. Geological Survey
345 Middlefield Road
Menlo Park, California 94025

Re: O.M.E. No. 6436, Silver
Cortez Joint Venture
Contract No. 14-13-090-2203

Dear Mr. Stager:

Enclosed herewith are four copies of the Operator's Final Report, Cortez Joint Venture, Nevada, December 1966, OME No. 6436, Silver, Contract No. 14-13-090-2203, with maps and other supporting material.

Subject to your approval, we assume that this material will be forwarded to Washington. If any additional copies are required, please let us know.

It has been a real pleasure working with you on this project and we hope we will have the opportunity of working with you again sometime in the near future.

Very truly yours,

J. B. Bush
Chief Geologist

JBB/bl
Enclosures (4)

C.C. H. Goudey

RECEIVED
MAR 3 1967
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

OFFICIAL COPY
O. & E.
RECEIVED
MAR 8 1967
INITIALS | CODE

OPERATOR'S FINAL REPORT
Cortez Joint Venture, Nevada
December 1966

OME No. 6436, Silver
Contract No. 14-13-090-2203

OPERATOR'S FINAL REPORT
Cortez Joint Venture, Nevada
December 1966

1. OME No. 6436, Silver
   Contract No. 14-13-090-2203
   Cortez Joint Venture
   Cortez Silver Mine, Nevada

2. Summary of Project

The purpose of this project was to explore by drifting and diamond drilling for new silver-bearing orebodies in the old Cortez Silver Mine, Nevada.

Work commenced August 10, 1965, by the Cortez Joint Venture on OME Contract No. 6436 and was completed on August 31, 1966. The main target areas were adequately tested by underground openings and diamond drilling. This work resulted in the discovery of only one small lens of ore-grade material which was considered of insufficient size to be extracted at a profit. Upon near completion of the scheduled work no additional ore had been found and the indications for other discoveries were insufficient to warrant any continuation of the program.

The total work done on the project with OME participation consisted essentially of 2497.6 feet of drifting and crosscutting, 112.5 feet of drill station crosscuts and 3125 feet of core drilling.

Included with this report is a set of four plans which outlines the work done by the Cortez Joint Venture with OME participation.

Table I, attached hereto, summarizes the units of work and the costs per Contract -2203.

3. Geology of the Project Area:

The project area lies entirely within the Cortez Silver Mine which is located on the western slopes of Mount Tenabo at the southern end of the Cortez Mountain Range of north central Nevada.

The orebodies of the Cortez Mine occur mostly in fissure veins and manto-type replacements within the upper 400 feet of the moderately-dipping Cambrian Hamburg Dolomite and as fissure veins in the overlying Eureka quartzite. A few small replacement deposits were also mined from the basal section of the Hanson Creek dolomite which overlies the Eureka quartzite.

The predominating structures in the Cortez Mine are northeasterly-trending fault systems and southeasterly trending fissure-dike zones. Ore in fissure veins is associated with some of the southeast-striking structures and has been localized by the intersection of the northeast faults. In addition to the fissure veins, manto orebodies have been localized closely under or above the Eureka quartzite where it is intersected by the No. 1 dike-fissure zone.

Exploration Targets:

The current program consisted essentially of testing three target areas on the Arctic Level of the Cortez Mine. The objectives of these targets were:

(1) to test the westerly extension of the No. 1 dike-fissure zone and its intersection with the Premium fault by drifting and diamond drilling on the Arctic Level;

(2) to test the easterly extension of the No. 1 dike-fissure zone and its intersection with the Coleman fault and other northeasterly faults and cymoid loop structures; and

(3) to test for the occurrence of replacement orebodies under and above the Eureka quartzite at its intersection with the No. 1 dike-fissure zone.

Exploration Results:

The results of the work accomplished to test these three target areas are briefly described as follows:

(1) To test the westerly extension of the No. 1 dike fissure required a total of 298 feet of drifting and 400 feet of diamond drilling. No major structures or significant mineralization were encountered in this effort.

easterly?

(2) To test the westerly extension of the No. 1 dike-fissure zone required a total of 1613 feet of drifting and 2445 feet of diamond drilling. This work resulted in the discovery of a small lens of high-grade silver ore near the intersection of the northeasterly Coleman fault and a subsidiary northwesterly fissure with the No. 1 dike-fissure zone. This new ore shoot is discussed under "Ore Reserves." No additional significant mineralization was encountered along the No. 1 dike-fissure either within the Hamburg dolomite, or at its intersection with the overlying Eureka quartzite or within the Eureka quartzite formation itself.

A series of horizontal and low angle diamond drill holes were drilled to test for parallel and sub-parallel structures to the north and south of the No. 1 dike-fissure zone. This drilling resulted in the discovery of a structure, known as the Hardrock vein, which lies about 150 feet south of and strikes parallel to the No. 1 dike-fissure zone. Based on several drill hole intercepts the Hardrock vein averages about 5 feet in width and contains silver values averaging less than 10 oz. per ton. This vein is of too low a grade to be mined at a profit at present prices.

(3) To test the premise for the occurrence of replacement-type deposits under the Eureka quartzite formation required a total of 587 feet of crosscutting and drifting and 280 feet of diamond drilling. No significant mineralization was encountered in the crosscuts driven north and south in the vicinity of the Hamburg dolomite-Eureka quartzite contact on the Arctic Level. One inclined down hole, which was drilled from the end of the main East Drift, also failed to discover any mineralization dipping down under the quartzite.

According to the contract work schedule, two holes were planned to be drilled upwards from the end of the East Drift to test for mineralization in the Hanson Creek formation which overlies the Eureka quartzite. These scheduled holes were

not drilled because it was reasoned that the lack of mineralization of the No. 1 dike-fissure and the Hardrock structure on the underside of the quartzite probably precluded the possibility for the occurrence of orebodies on the upper contact of the quartzite.

The Hardrock vein was encountered in the South Crosscut. A 76-foot drift was run along this vein to test its zone of intersection with the dolomite-quartzite contact. No replacement mineralization was encountered and the vein material, which averages less than 10 oz. per ton in silver values, is of too low a grade to be economically extracted.

Ore Reserves

The above-mentioned high-grade ore shoot, which was exposed near the beginning of the East Drift, was further explored by a series of short percussion drill holes in the walls and back of the drift. This work disclosed that the ore shoot occupies a horizontal area of approximately 640 square feet. The up and down rake dimensions of this lens are undefined but, assuming that it could be mined for at least 40 feet above the sill and at least 25 feet below the sill, an ore block of approximately 3000 tons could be inferred. Based on assays of cut samples and drill cuttings this block, if very selectively mined, may average 42 oz./T. Ag with very minor amounts of gold and lead. This inferred ore tonnage is the total reserve resulting from the entire exploration project.

The Cortez Joint Venture does not consider the mining and shipping of this limited tonnage of ore to be an economic venture and currently there are no plans for its production.

Ore Production

Development ore produced while drifting through the high-grade area described above is calculated to be 126 tons averaging 22.7 oz./T. Ag. At $1.29 per ounce for silver the gross metal value of this tonnage is estimated

to be about $3,000. This material was dumped outside the Arctic Level portal, and was inadvertantly diluted with waste by the mining contractor before development of storage facilities could be arranged. No additional ore was produced as a result of the program.

(4) The overall progress of the project was quite satisfactory. In the early phases of the program the mining contractor fell behind schedule because of inadequacies in mining equipment and underground miners. These problems were finally resolved and the contract work was completed on schedule.

In summary, the results of the project are as follows:

(1) Discovery of a small ore shoot containing an inferred reserve of 3,000 tons averaging 42 oz./T. Ag.

(2) Discovery and testing of a five-foot wide, parallel vein (Hardrock) containing silver values of sub-economic (less than 10 oz./ton) grade.

(3) No replacement ore was discovered at the dolomite-quartzite contact.

(4) From the new work done a mass of additional geologic information was gained to better understand the geology and ore controls of the Cortez Mine.

Plans for future operations are unknown at this time. It appears, however, that the mine can sustain, at best, only a rather small tonnage, high cost, selective mining operation.

R. G. Garwood
Project Engineer

J. B. Bush
Chief Geologist

Attachments: Table I
4 maps

TABLE I

	ESTIMATED COSTS PER CONTRACT - 2203		CLAIMED & ACCEPTED COSTS	
Item	Units	Value	Units	Value
Actual				
Category (1) Independent Contracts				
Mobilization & demobilization, equipment, men & materials for driving drifts & crosscuts	1	$ 5,000		$ 5,000
Drifting & crosscutting @ $43.50	2,640	114,840	2,497.6'	108,645.60
Drill Station crosscutting @ $42.60			112.5'	4,792.50
Mobilization & demobilization, drill unit	1	535	1/2	267.50
Core drilling (various rates)	3,400	21,500	3,125	16,018.88
Compressed air @ $0.60/ft.	3,400	2,040	3,125	1,875.00
Cementing @ $11.60/hr.	110	1,276	-0-	-0-
Cement, etc.		1,456	-0-	-0-
Reaming @ $2.25/ft.	500	1,125	256	576.00
Lost casing @ $2.00/ft.	150	300	185	314.50
Moving drill @ $11.60/hr.	50	580	115	1,334.00
Standby Time @ $11.60/hr.	25	290	25	290.00
TOTAL CATEGORY (1)		$148,942		$139,113.98
Category (2) Personal Services				
(a) Supervision & Technical				
1. Supervisor - geologist @ $800/month	11	$8,800	11	$5,473.48
(b) Labor				
1. Laborer @ $21.66/day	110	2,385	183.2	3,968.11
TOTAL CATEGORY (2)		$11,185		$9,441.59

ESTIMATED COSTS PER CONTRACT - 2203			CLAIMED & ACCEPTED COSTS	
Item	Units	Value	Units	Value
Category (3) Operating Materials & Supplies				
Cardboard core boxes @ $1.00	340	340	268	268.00
Category (7) Miscellaneous				
Payroll taxes, FICA Insurance etc. 18% of payroll		$2,013		$1,699.49
TOTAL ACTUAL COSTS		$162,480		$150,523.06
FIXED-UNIT COSTS				
Bulldozer @ $16.00/hr.	180	$2,880	11	$ 176.00
Rental of Jeep @ $9.00/day	242	2,178	266	2,394.00
Rental of water truck @ 25¢/mile	3,600	900	10,792	2,698.00
Samples assayed for Au & Ag @ $3.00	1,220	3,660	514	1,542.00
Samples assayed for Cu & Pb & Zn @ $1.75	880	1,540	38	66.50
Transportation of samples & sacks @ .10 ea.	1,220	122	514	51.40
Office Expense @ $100/month	11	1,100	10 1/3	1,033.33
TOTAL FIXED UNIT COSTS		$12,380		$7,961.23
TOTAL ESTIMATED COSTS OF THE WORK		$174,860		$158,484.29
GOVERNMENT PARTICIPATION @ 75%		$131,145.00		$118,863.22
PAID TO OPERATOR		$118,863.22		$118,863.22
UNEXPENDED OBLIGATION		$ 12,281.78		-0-

M A P S

which accompany OPERATOR's FINAL REPORT
CORTEZ JOINT VENTURE, NEVADA
December 1966

OME No. 6436, Silver
Contract No. 14-13-090-2203

OPERATOR'S FINAL REPORT
Cortez Joint Venture, Nevada
December 1966

OME-6436 (Silver)
Contract 2203

MAPS

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
1/19	R McDuffy	
1/19	Kirkeano	
1/19	cal	210
		120M

JAN 19 1967

Memorandum

To: Chief, Branch of Budget and Finance

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Enclosed is a copy of a letter dated January 16, 1967, from the Field Officer, Region II, transmitting to the Operator a copy of a Report of Review issued in December 1966 covering costs under the subject contract. A copy of the report also is enclosed. Please continue to withhold the amount of $200.00 pending receipt of an acceptable Final Report from the Operator.

FRANK E JOHNSON

Frank E. Johnson

Enclosures

MMerrithew/mm (1/19/67)

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Region II

23263

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

OFFICIAL COPY
O. M. E.
RECEIVED
JAN 18 1967
MAIL ROOM CODE
gla 120 M
FKD 110
KMD 120 S

January 16, 1967

American Exploration & Mining Co.
23rd Floor - Russ Building
San Francisco, California 94104

Attention: Mr. Bush:

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Bush:

Enclosed is a copy, for your files, of a Report of Review of your OME contract through July 1966. You have since submitted your August voucher and it has been approved and paid. The facts presented agree with my records in the Field Office and I concur in the report.

You will note that there are several items that you are still entitled to claim reimbursement for and if you wish to submit an additional voucher you may do so. Please call me if you have any questions.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosure

cc: Chief, OME, WDC (2)
Director's RF
ACG RF
MP RF
Docket

HKStager:mlb
1-16-67

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

January 4, 1967

American Exploration & Mining Co.
23rd Floor - Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nev.
Contract No. 2203

Dear Mr. Bush:

Enclosed is a suggested outline for your guidance in preparing a Final Report on the subject contract. We would appreciate your prompt submittal of the report so that we can release the $200.00 still due you from your August voucher but withheld pending receipt of a satisfactory Final Report. If you have any questions please call me.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosure

cc:
D RF
Chief, OME, WDC
MP RF
ACG RF
File 6436
HKStager:mlb
1-4-67

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
1/4/67	RMSmith	120
1/4/67	Skobemo	120
		110
1/4	cac	220
		120M

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Enclosed are two copies of a Report of Review, issued December 1966, covering costs under the subject contract.

If you concur in the facts as stated in the report, one copy should be sent to the Operator with any comment you wish to make. The other copy is for your records. As evidence of your concurrence in the report, two copies of your letter transmitting the report to the Operator should be furnished this office.

If for any reason you do not concur in the report, both copies should be returned to this office with your comments.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Smith
130

RMSmith/gla 1-4-67

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

Rec'd. 12/29/66

DEC 23 1966

Memorandum

To: Director, U.S. Geological Survey

From: Assistant Director, Contract and Grant Audit, Audit Operations, Office of Survey and Review

Subject: Review of Contract 2203
Docket No. OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada

Pursuant to a request dated September 27, 1966, from the Chief, Office of Minerals Exploration, we have made a cost review of Contract 2203, examining the contract and accounting records and files of OME and the Branch of Budget and Finance, U.S. Geological Survey. Four copies of the report of review are attached.

This exploration contract is dated June 29, 1965, and provides for up to 2,640 feet of drifting and crosscutting and 3,400 feet of underground diamond core drilling together with assays for gold, silver, copper, lead, and zinc as necessary. The work was to be completed within 16 months from the date of the contract or by October 29, 1966.

No exceptions have been taken to the financial settlements made with the Operator to date; however, the report of review does indicate that the Operator has failed to claim certain costs for Government participation under provisions of the contract.

Donald R. Moysey

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

November 25, 1966

OFFICIAL COPY
O. M. E.
RECEIVED
NOV 28 1966

INITIALS	CODE
	120
	110
RM	1208

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed are the original and one copy of Amendment No. 2 of the subject contract, properly executed by the Operator. The remaining copies of this amendment have been distributed in the usual manner.

H.K. Stager

H. K. Stager

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

November 23, 1966

Mr. H.K.Stager
Field Officer
OME, Region II
U.S. Department of the Interior
Geological Survey
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, Calif. 94025

Dear Mr. Stager:

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

With reference to your letter of November 21 and enclosures the proposed Amendment No. 2 meets with our approval. The following copies have been signed and are returned herewith:

Government's copy
Budget and Finance's copy
Field Office's copy

Thank you very much for your cooperation and consideration in this matter.

Sincerely yours,

H. Goudey

HG: jb

Encl:

circ copy: J. B. Bush

RECEIVED
NOV 25 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

November 21, 1966

American Exploration & Mining Co.
23rd Floor - Russ Bldg.
San Francisco, California 94104

Attention: Mr. Goudey

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Goudey:

Enclosed are the original and three copies of proposed Amendment No. 2 signed by the Chief, Office of Minerals Exploration for the Government. This is the amendment that I discussed with Mr. Bush last week.

If the proposed amendment meets with your approval, please sign and return the following copies to this office:

Government's copy
Budget and Finance's copy
Field Office's copy

The Operator's copy should be retained for your files.

If any part of the proposed amendment does not meet with your approval, the original and all copies should be returned to this office with your proposed changes for consideration.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosures

cc:
Chief, OME, WDC
D RF
ACG RF
MP RF
File 6436
HKStager:mlb
11-21-66

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
11/10	R M Smith	120
11/10/66	Kirkemo	120
"	Johnson	110
11/15	Kilgore	220
11/15	Gowel	
11/15	Jones	
		110
11/15	cal	220

120M

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Enclosed are the original and three copies of a proposed Amendment No. 2 to the subject contract, signed for the Government. Also enclosed is an extra copy for field use.

If the proposed amendment is satisfactory to you and the Operator, all four copies should be signed by an authorized representative of the Operator. Thereafter, please distribute the copies in the usual manner.

If the proposed amendment does not have your approval or that of the Operator, the original and all copies are to be returned to this office together with the proposed changes for consideration.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Mr. Smith

GLAult/a 11-10-66

23263

RMS
~~130~~ 120
~~110~~ 98
130 m

DRAFT 11/7/66
RMSMITH/mm

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

AMENDMENT NO. 2

It is agreed this _____ day of _____, 1966, between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter called the "Government," and Cortez Joint Venture, hereinafter called the "Operator," that Exploration Contract 2203 (OME-6436), dated June 29, 1965, is amended effective June 29, 1966, as follows:

In Article 1(a) the time set for the completion of the work is extended from twelve (12) to sixteen (16) months from the date of the contract.

This amendment shall not be construed to increase the estimated total cost of the contract, the aggregate amount which the Government may be required to contribute, the amount of any item MX designated as maximum, nor the fixed unit cost of any item of work.

Executed in quadruplicate the day and year first above written.

UNITED STATES OF AMERICA

By _____
Chief, Office of Minerals Exploration
U. S. Geological Survey

THE CORTEZ JOINT VENTURE
By AMERICAN EXPLORATION & MINING CO.
CORTEZ JOINT VENTURE

By _____

Title _____

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

August 23, 1966

American Exploration and Mining Co.
23rd Floor - Russ Bldg.
San Francisco, California 94104

Attention: Mr. Bush

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Bush:

Enclosed are your vouchers for May and June to be corrected per our telephone conversations. Also enclosed are five copies each of Forms MME-60 and MME-61 for your use.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosures

cc: Chief, OME WDC
Director
ACG RF
MP RF
File 6436
HKStager:mlb

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

August 9, 1966

OFFICIAL COPY
O. M. E.
RECEIVED
AUG 11 1966
INITIALS | CODE
HR

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Interim Inspection

A conference was held in the Cortez Mine office, at Crescent Valley, Nevada, on August 2, 1966, with Mr. H. Goudey, vice president, Mr. J. B. Bush, geologist, and Mr. J. J. Oberbillig, mine engineer in charge.

The diamond drilling from underground sites is continuing. Holes Nos. 4 and 8 were drilled from the site of Hole No. 5 as proposed in the Operator's memo and letter of April 29th and my memo of May 3, 1966. Hole No. 4 cut the mineralized zone near the Coleman fault and contained only traces of quartz and silver mineralization. Hole No. 8 cut the mineralized zone between Holes Nos. 5 and 7 where it contained about 10 feet of quartz that assays about 5 ounces of silver per ton. Hole No. 7 was extended to a total depth of 330 feet but did not intersect any new mineralized structures south of the quartz vein at about 100 feet. Hole No. 9 was drilled upward and southeast from the site of Hole No. 7 and intersected the mineralized zone at about the Hamburg Dolomite-Eureka Quartzite contact. There was little quartz and no visible silver mineralization at this point. Hole No. 10 was drilled downward and southward from the end of the OME east drift and also cut the mineralized zone at the Hamburg Dolomite-Eureka Quartzite contact where it was again found to be barren as in Hole No. 9. For this reason it was decided to not drill the up hole from the site of Hole No. 10 that was planned to intersect the zone at the Eureka Quartzite-Hansen Creek Dolomite. Enough footage remains under the OME contract (about 650 ft) to drill two or three additional holes and it was decided, at the time

of the inspection, to use about 500 feet of this footage to drill two additional holes from the site of Hole No. 7. These holes will test the mineralized zone about 100 feet below the Arctic Level in what is believed to be the most favorable section of the vein. Verbal permission was given for the drilling of these holes and was confirmed by a letter to the Operator on August 8, 1966.

The Operator, on its own account, has drilled a large number of long holes to test the ore shoot intersected by the OME east drift in November 1965. Several hundred tons of ore assaying about 100 ounces of silver per ton have been outlined and the Operator is planning to do additional diamond drilling to further outline the ore shoot above and below the level before starting to mine the body. The ore contains abundant visible argentite and some native silver.

Certification of possible production will be recommended on the basis of the ore body discovered by the drift.

H. K. Stager

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

OFFICIAL
COPY
O. M. E.
RECEIVED
AUG 10 1966
INITIALS CODE
120 m
110
120 c

August 8, 1966

American Exploration and Mining Co.
23rd Floor - Russ Bldg.
San Francisco, California 94104

Attention: Mr. Bush

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Bush:

This letter will confirm the verbal permission I gave you in your mine office at Crescent Valley on August 2, 1966, to drill holes Nos. 11 and 12 from the site of hole No. 7 on the Arctic Level, Cortez Mine. These holes are to be about 250 feet in depth, one hole to be drilled about S. 70° W. at about -30° and the other to be drilled about S. 37° E. at about -30°.

This letter shall not be construed to increase the estimated total amount of diamond drilling allowed by the contract, nor the estimated total cost of the contract.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

cc: Chief, OME, WDC
cc: Dir RF
ACG RF
MP RF
Docket 6436
HKStager:mlb

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

May 31, 1966

OFFICIAL COPY
O. M. E.
RECEIVED
JUN 2 1966
INITIALS | CODE
120
110
130
120

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed are the original and one copy of Amendment No. 1 of the subject contract, properly executed by the Operator. The remaining copies of this amendment have been distributed in the usual manner.

H. K. Stager

Enclosures-2

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

OFFICIAL COPY
O. M. E.
RECEIVED
MAY 27 1966
RECORD
RMS 1208

May 26, 1966

American Exploration and Mining Co.
23rd Floor-Russ Bldg.
San Francisco, Calif. 94104

Attention: Mr. Goudy

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Goudy:

Enclosed are the original and three copies of proposed Amendment No. 1 signed by the Chief, Office of Minerals Exploration for the Government. This is the amendment that I discussed with you by telephone this date.

If the proposed amendment meets with your approval, please sign and return the following copies to this office:

Government's copy
Budget and Finance's copy
Field Office's copy

The Operator's copy should be retained for your files.

If any part of the proposed amendment does not meet with your approval, the original and all copies should be returned to this office with your proposed changes for consideration.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosures-4

cc: Chief, OME, WDC ✓
D RF
ACG RF
MP RF
File 6436
HKStager:mlb

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/19	R M Smith	120 S
5/20	Kirkham	120 K
"	Johnson	110
5/24	Cole	220
		120 M
5/23	Pilogaard	
5/23	Ivers	
5/23	Lyon	

MAY 24 1966

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Enclosed are the original and three copies of a proposed Amendment No. 1 (1 page) to the subject contract signed for the Government. An extra copy of the proposed amendment is enclosed for field use.

If the proposed amendment is satisfactory to you and the Operator, all four copies should be signed by an authorized representative of the Operator. Thereafter, please distribute the copies in the usual manner.

If any part of the proposed amendment does not have your approval or that of the Operator, the original and all copies are to be returned to this office together with the proposed changes for consideration.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
~~XXXXXXXX~~ 130

MMerrithew/mm (5/19/66)

23263

DRAFT
5/12/66
RMSmith/gla

Docket copy

R.M.S.
H.K.
F.J.

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

AMENDMENT NO. 1

It is agreed this _____ day of _____, 1966, between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter called the "Government," and Cortez Joint Venture, hereinafter called the "Operator," that Exploration Contract 2203 (OME-6436), dated June 29, 1965, is amended effective April 22, 1966, as follows:

In Exhibit A, under the heading Description of the Work, the fourth and fifth paragraphs are revised to read as follows:

From the drill stations drill a total of 13 core drill holes for an aggregate of not to exceed 3,400 feet. The holes shall be drilled to explore the walls of the No. 1 dike-fissure zone. The sites, bearings, inclinations, and depths of individual holes shall be mutually agreed upon by the Operator and the Government.

The locations of the drifts, crosscuts, and drill holes are indicated ~~schematically~~ provisionally in red on Figure 2, entitled ". . . Plan Map Arctic Level," and on Figure 3, entitled ". . . Longitudinal Section of Cortez Mine . . ." attached hereto and made part hereof.

This amendment shall not be construed to increase the estimated total cost of the contract, the aggregate amount which the Government may be required to contribute, the amount of any item designated as maximum, nor the fixed unit cost of any item of work.

MME FORM 6
REV. 2-5

REFERENCE SLIP
OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Assoc. Solicitor, -MR, Rm. 6554		
Through Room 6042		
2.		
Mr. Smith, Rm. 4459		
3.		
4.		
5.		
FROM: Chief, OME		

FOR: Check items for action desired

____ Action	____ Reply for signature of _____	
____ Approval	____ Investigate	____ Surname
____ Comment	____ Recommendations	____ Signature
____ Conference	____ Rewrite	____ File
____ Instructions	____ Your information	

REMARKS:

FROM: SOLICITOR
MAY 18 1966
FOR SIGNATURE

F. 65.2139.11

RECEIVED
MAY 17 1966
Division of Mineral Resources
General Legal Service

INTERIOR DEPT.
MAY 16 1966
SOLICITOR

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

M56300-62

Executed in quadruplicate the day and year first above written.

UNITED STATES OF AMERICA

By_____
Chief, Office of Minerals Exploration
U. S. Geological Survey

THE CORTEZ JOINT VENTURE
by AMERICAN EXPLORATION & MINING CO.
Managing Coventurer
CORTEZ JOINT VENTURE

By_____

Title_____

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

May 3, 1966

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C. I
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JR 110
HK 120 K
120 S

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed are a map and memorandum by Mr. R. G. Garwood, supervisor at the Cortez Mine, and a letter from Mr. J. B. Bush of the American Exploration and Mining Co., setting forth certain changes in the locations, bearings, inclinations, and lengths of holes remaining to be drilled under the subject contract. These changes are a result of discussions with Mr. Garwood at the mine on April 14, 1966, and further discussions with Mr. Bush and Mr. Garwood at the Operator's office on April 22, 1966. Also enclosed is a copy of my letter of May 3, 1966 to Mr. Bush confirming the verbal permission I gave them to proceed with the work as agreed upon. These are the changes I discussed with you by telephone on April 25, 1966, and with Mr. Kirkemo on May 2, 1966.

I do not believe these changes require an amendment to the contract. However, if an amendment is required to permit any part of the work as shown will you please prepare it and let me know if any additional justification is required.

H. K. Stager

Enclosures

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

May 3, 1966

American Exploration and Mining Co.
23rd Floor-Russ Building
San Francisco, California 94104

Attention: Mr. Bush

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Bush:

This letter will confirm the verbal permission I gave you in your office on April 22, 1966 to make certain changes in the locations, inclinations, and bearings of the underground diamond drilling planned for the subject contract. These changes are set forth in Mr. R. G. Garwood's memorandum to you dated April 26, 1966, and are shown on the map accompanying his memorandum.

This letter shall not be construed to increase the estimated total amount of diamond drilling allowed by the contract, nor the estimated total cost of the contract.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

cc: Chief, OME, WDC ✓
D RF
ACG RF
MP RF
File 6436
HKStager:mlb

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

April 29, 1966

Mr. Harold K. Stager
U. S. Geological Survey
345 Middlefield Road
Menlo Park, California 94025

Dear Mr. Stager:

Subject: O. M. E. No. 6436, Silver
Contract No. 14-23-090-2203
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada

In accordance with our discussion on April 22, 1966, concerning the proposed modification of certain work items under the O.M.E. contract, we are submitting herewith Mr. R. G. Garwood's memorandum, with map, in which he outlines the specific changes.

The proposed changes will not increase the estimated total amount of allowable diamond drilling footage nor the estimated total cost of the contract.

Sincerely,

J. B. Bush

JBB:cmr
Enclosure

RECEIVED
MAY 2 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

Elko, Nevada
April 26, 1966

MEMORANDUM TO: J. B. Bush

FROM: R. G. Garwood

SUBJECT: Proposed Changes in Cortez Joint Venture Program

Work completed to date under O.M.E. Contract No. 2203 indicates that a major mineralized zone occurs to the south of the new work and that no mineralization occurs within the distance of our programmed drilling to the north of this new work. Therefore, it is requested that Contract No. 2203 be modified to allow additional testing of this mineralized zone with remaining contract diamond drilling footage. The original target for which exploration funds were requested has not changed and this proposed modification of the drilling program will aid in determining the value of said mineralization. Proposed changes in locations, bearings and footages of drill holes are as follows:

1. Drill hole No. 9 will be drilled to intersect the vein, and Hamburg dolomite - Eureka quartzite contact at 100 feet above the Arctic level. This hole should be 280 feet in length and drilled S 40° E at an up angle of +23°.

2. Drill hole No. 10 should be changed to intersect the contact of the Hamburg Dolomite-Eureka quartzite with the vein and drill hole No. 11 should be changed to intersect the contact of the Eureka quartzite and Hansen Creek with the vein. Both holes will be collared at the east end of the east heading and will be drilled south 10° west. Hole No. 10 should be 380 feet long at a plus angle of 38° and hole No. 11 should be 280 feet long at a minus angle of 42°.

3. Change the bearing and position of hole No. 4 to be drilled from drill station No. 5 to intersect the vein at least 100 feet west of the intersection made by hole No. 5. This hole would be drilled S 75° W at a +2° angle for 250 feet.

4. Change the bearing and position of hole 8 to be drilled from drill station No. 5 to intersect the vein at least 100 feet east of the intersection made by hole No. 5. This change would allow hole 8 to be drilled S 43° E at a +2° angle for 250 feet.

5. Footage from holes 12 and 13 would be designed to test mineralization located by holes 10 and 11. Should no mineralization be found, footage from these holes would not be used in the program.

6. Extend hole Cu-7 100 feet to 330 feet to test the footwall of the dike fissure as originally programmed.

Drill footage remaining to be completed is 1900 feet and the proposed footage to which changes have been requested is 1570 feet. Thus, 330 feet of the original program remain to be scheduled.

Each proposed change is outlined on the enclosed map.

Sincerely yours,

R. G. Garwood pp J. Burdwell

R. G. Garwood
Project Supervisor

RGG: jb

Encl:

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Memorandum

April 21, 1966

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

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Interim Inspection

The Cortez Mine was inspected April 14, 1966, accompanied by Mr. Robert Garwood, engineer in charge.

The east drift has been completed about 300 feet into the Eureka Quartzite, and a drill station was being cut at the end to provide room for the planned diamond-drilling from this point. The north crosscut has been completed to about 150 feet along the Hamburg Dolomite and Eureka Quartzite contact. No significantly mineralized material has been cut in these headings. The south crosscut was 300 feet south of the main drift, and at about 100 feet had passed through 12 feet of mineralized quartz vein estimated to contain about 8 ounces of silver per ton. This is apparently the same quartz vein cut by drill holes Nos. 5 and 7. It was first believed to be the "Hardrock Vein," but further study indicates that it may be the No. 1 dike-fissure and the dike we have been following with the OME drift may be the No. 2 dike-fissure. Right-lateral displacement on the "Coleman" fault, at about 300 feet from the start of the OME east drift, has apparently shifted the No. 1 dike 100 feet to the south. On April 19, 1966, permission was given to the Operator to drift westerly on this mineralized structure, utilizing the 70 feet of footage remaining under the contract, in order to expose a segment for closer study and sampling.

After completion of drill hole No. 7 the OME underground drilling was recessed until completion of the drifting and crosscutting, about April 26, 1966. Drilling will be resumed about May 1, 1966, and the remaining seven holes should be completed by August 15, 1966, when the contract ends. Some shifting in the bearings and inclinations of the remaining holes may be requested by the Operator, based on the results of the work to date.

The deep hole being drilled (on the Operator's account) near the end of the Arctic Level main crosscut, to test the Eldorado Dolomite, was drilling at 700 feet. At about 665 feet the drill cut about 1 foot of highly mineralized dolomite, containing abundant galena, then passed through a dike 15-20 feet in thickness and again through several inches of mineralized dolomite before passing back into normal Hamburg Dolomite. This unexpected mineralization increases the expectations for finding significant ore deposits in the underlying Eldorado Dolomite. If this hole reveals ore, or favorable mineralization, in the Eldorado, the Operator will probably again request OME participation in drilling several additional deep test holes, one of which will probably be drilled from near the end of the new OME north crosscut.

The mining subcontractor, Ponderosa Development Co., has continued with the underground mining and apparently will finish the work by the end of April. The Operator intends to bring in its own equipment and personnel to drive any additional exploration or development workings for its own account.

H. K. Stager

H. K. Stager

Geological Survey
345 Middlefield Road
Menlo Park, California 94025

April 19, 1966

American Exploration and Mining Co.
23rd Floor - Russ Bldg.
San Francisco, California 94104

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O. M. E.
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Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Cos., Nev.
Contract No. 2203

Dear Mr. Bush:

This letter will confirm the verbal permission I gave you by telephone on this date to utilize the drifting and crosscutting footage remaining under the contract, estimated to be about 70 feet, to drift westerly from the south OME crosscut along the mineralized quartz vein discovered about 100 feet south of the OME east drift.

This letter shall not be construed to increase the estimated total amount of drifting and/or crosscutting allowed by the contract, nor the estimated total cost of the contract.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

cc: Chief, OME, WDC
D RF
ACG RF
MP RF
File 6436
HKStager:mlb

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Memorandum

March 2, 1966

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

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Interim Inspection

The Cortez Mine was inspected February 24, 1966, accompanied by Mr. Robert Garwood, engineer in charge.

The mining and underground diamond drilling is on a three-shifts-per-day basis and is progressing at a satisfactory rate. The east drift along the No. 1 dike-fissure has reached the Hamburg Dolomite and Eureka Quartzite contact and has penetrated about 40 feet into the quartzite. North and south crosscuts along the contact have progressed about 40 feet each way from the drift and are being driven partly in the quartzite and partly in a thin, highly carbonaceous shale that immediately underlies the quartzite. No significantly mineralized material has been cut by the drift since the 40-foot zone found in November 1965. Underground drill holes Nos. 1, 2, 3, 5, and 6 have been completed. Hole No. 7 was being drilled and was about 100 feet in depth. Inasmuch as Holes Nos. 3 and 6, drilled to the north of the drift did not reveal favorable structures Hole No. 4 may not be drilled. Hole No. 5 intersected about 10 feet of mineralized quartz vein (assays not yet received) about 90 feet south of the drift and Hole No. 7 was drilling in quartz at 100 feet. If the south crosscut reveals that this quartz vein represents a more favorable structure for exploration than the No. 1 dike-fissure zone some of the remaining drift footage may be shifted to drifting along this parallel structure.

At the time of the inspection the operators (on their own account) were putting in a 20- to 30-foot raise near the end of the Arctic level main crosscut, about 300 feet north of the OME drifts, in order to provide

head room for a large underground diamond drill. It is planned to drill a 2,000-foot vertical hole at this point to test the Eldorado Dolomite. This hole, and possibly several others, will be drilled by the drill contractor (E. J. Longyear Company).

The mining subcontractor, Ponderosa Development Co., is continuing the underground mining and apparently intends to complete the contract. The operators have agreed to pay (on their own account) a monthly footage bonus of $15 per foot for all footage driven in excess of 350 feet per month. The labor situation has apparently stabilized and the rate of advance per shift has improved. work?

The work is being done to contract specifications. Drifts and crosscuts are at least 6x8 feet in cross section, mine rail is 25-pound size and with good ballast is sufficient to carry the electric trammer and trains of 10-15 cars. Ventilation is by 12-inch diameter galvanized vent tube; air lines are 4-inch pipe; and water lines are 1-inch plastic hose.

H. K. Stager

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
U. S. Geological Survey
345 Middlefield Road
Menlo Park, California 94025

OFFICIAL COPY

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February 7, 1966

American Exploration & Mining Company
23d Floor - Russ Building
San Francisco, Calif. 94104

Attention: Mr. Bush

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nev.
Contract No. 2203

Dear Mr. Bush:

Enclosed is a copy of the letter from OME, Washington, D. C., that I discussed with you by telephone this morning.

If you decide to do the work yourself please let me know which type of amendment you desire.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosure

cc:
Director
Chief, OME, WDC
ACG RF
MP RF
File
HKStager:mlb

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
2/4	Selfridge	120
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2/4	Cec	220
		120M

FEB 4 1966

AIRMAIL

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

In reference to your memorandum of January 27, 1966, transmitting the Operator's letter of January 25 and the enclosures thereto, we cannot increase the price of $43.50 a foot for drifting as you have already informed Mr. Bush.

We can amend the contract so that the Operator can do the work on an actual cost basis at a maximum estimated cost of $43.50 a foot. This would entail the Operator submitting vouchers for the drifting which would break down all of the actual costs for the drifting into the seven categories of Article 6. Of course, the vouchers would have to be supported by invoices, et cetera. The Government would still have an interest in the salvage value of all of the pipe and rail.

On the other hand, we could amend the contract on a fixed unit cost basis for the remaining drifting at $41.50 a foot, which would automatically take care of any salvage item and thereby the Government would retain no interest in any pipe or rail placed by the Operator.

If the Operator desires to do the work itself, we shall prepare the necessary amendment based on your recommendation as to which possible method should be used.

(Signed) FRANK E. JOHNSON

Frank E. Johnson

cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Selfridge (2)

GCSelfridge/gla 2-4-66

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

FEB 2 1966

Memorandum

To: Bureau Compliance Officer

From: Chief, Office of Minerals Exploration

Subject: Equal Employment Opportunity under Government Contracts

Enclosed are two copies each of Parts I and II and one copy of Part III, Standard Form 41, Compliance Report--Construction, submitted by L-D Mines, OME-6460, Contract 2210, for the last quarter of 1965. Formerly, one copy of each of the parts was sent to the President's Committee on Equal Employment Opportunity.

Listed below are the contracts which are in excess of $100,000 and to which Standard Form 41 should probably be sent for the first quarter of 1966:

OME-6460 Contract 2210 L-D Mines
OME-6436 Contract 2203 Cortez Joint Venture
OME-6288 Contract 2166 Bulldog Mountain, Inc.
OME-6289 Contract 2169 Richmond Hill Exploration Company, Inc.

The exact status of OME-6308, Contract 2182, Ruby Silver Mines, Inc., is not presently known. Should further work be approved, it would also be necessary to send Standard Form 41 to the company. It is believed that you have the addresses of these companies.

(signed) FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc to: Director's Reading File
Division File
Economic Geology File
OME Docket 6460
OME Reading File
Mr. Selfridge

CCSelfridge/gla 2-2-66

(cys also: Dockets OME-6288, 6289, 6436, 6308, and OES EEO File)

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Memorandum

January 27, 1966

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To: Chief, OME
Washington, D. C.

From: Field Officer
OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Enclosed is the letter, with attachments, from the subject operator that I discussed with Mr. Selfridge over the telephone this date. Will you please give it immediate attention so that I can relay your decision to the operator as soon as possible.

I have talked to Mr. Bush, of American Exploration & Mining Company, this morning and told him that OME could not increase the agreed cost per foot. I also told him that any decision regarding an amendment to the contract to permit Am.Ex. to do the work themselves would be made by OME in Washington, D. C.

H. K. Stager

Enclosures

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

January 25, 1966

Mr. Harold K. Stager
U.S. Geological Survey
345 Middlefield Road
Menlo Park, Calif. 94025

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Stager:

Our mining contractor, Ponderosa Development Co., Ltd., under the above contract threatens to terminate his work unless he is immediately granted $10 per foot or more additional compensation. A copy of his letter of January 19 on this subject and a copy of his contract agreement with us dated July 26, 1965, are enclosed (Exhibit "D" has been excluded from your copy of the contract). Under the circumstances it appears that we have the following alternatives:

1. Accept Ponderosa's proposal.

2. Make a counter offer of a bonus for footage in excess of schedule based on our static cost of time during this contract. At best this would fall far short of his request.

3. Bring in another contractor. As the other two contractors were at $61.75 and $64.00 per foot respectively in bidding on this job and as Ponderosa has taken the cream of the footage this hardly seems feasible.

4. By the use of its own and rented equipment American Exploration & Mining Co. could complete the job at a cost which we estimate would be approximately $50 per foot.

In relation to alternatives 1 and 3 would the O.M.E. consider an adjustment in the contract price per foot under this contract. With regard to alternative number 4 would the O.M.E. continue the $43.50 per foot rate if we complete the work ourselves.

In the hope that you may have a chance to review this material by then I plan to telephone you in this regard on Thursday morning, January 27.

Sincerely yours,

H. Goudey

HG: jb

Encl: 2

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JAN 26 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

JAN 24 1966
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Ponderosa Development Company, Ltd.

NEVADA DIVISION

CRESCENT VALLEY STATION Via BEOWAWE, NEVADA

January 19, 1966

Mr. Hatfield Goudey
Cortez Joint Venture
American Exploration & Mining Co.
2300 Russ Building
San Francisco, Calif. 94104

Dear Mr. Goudey:

The following letter is in responseto our discussion earlier this month in regard to costs here at Cortez.
I have carefullycomputed the costs involved in the drifting up to Jan. 1,1966. At that date we had completed a total of 1018 ft. of new heading advance at a net loss to ourselves of $13,508.66.
This amounts to a cost to us of $13.27 per foot over the amount we recieved of $43.50 per foot, making a total cost of $56.77 per foot.
Please understand these are cost figures and do not contain any profit.

I propose that a $10.00 per foot addition be made to our original estimate of $43.50 per foot to help cover our costs and made retroactive to all work completed after January 1, 1966, and said $10.00 addition be included in each statement hereafter.
This addition will enable us to continue the work with all possible speed.

If we complete the original contract on or before May 26,1966, then at such time we shall be reimbursaddfor the balence of our costs in the additional amount of $3.27 per foot for all advance completed after Jan. 1,1966.

Farthermore, as an additional incentive to complete the work as soon as possible, I suggest that we be paid a bonus of $1.00 per foot of advance to apply on all total advance completed for the entire job. This bonus to be paid only if we complete the entire job on or before April 26, 1966.

We are presently working three shifts per day and must continue this schedule if we are to meet a April 26th. deadline. Certainly a third shift cost additional expense.

For any additional work that we are requested to do, with the exception of that as stipulated in the original contract, the time shall be extended for the amount of time expended on said additional work.

As of January 1, 1966, we had completed a total of 1018 feet of new heading advance, whereas 1293 feet was scheduled on the contract for completion. Therefore we were a total of 275 feet, or approx. 20 days behind schedule. At this writing we have gained and are only 16 days behind schedule and are still gaining daily.
The majority of the 20 days behind schedule were incurred before we ever commenced drifting.

We installed considerably more timber in and near the portal than we had originally anticipated, and excavated three safty zones for which our time element was not extended.

Even though we were constantly short of experienced miners and frequently missed shifts for that cause, we still managed to average 12.8 feet per day for the six week period from Oct. 18th to Jan. 8th.

If we only averaged 12.8 feet per day from Jan. 8th. we would still complete the 1662 feet balence by May 26th.

If we averaged 16 feet per day we would then complete the entire project by April 26th. and this is certainly possible and very likely since recently we have full crews of competant miners.

We are now averaging 19 feet per day. = 6⅓/shift
Maintaining an average of 19 feet advance per day would complete the job on April 12th.
It is probable that we will gain some advance and time with the crosscut as we will have additional crews on them while driving the main heading, also the raise can be driven while continueing the drift. We have sufficient equipment, with the addition of a second mucking maching, which we can rent for the necessary length of time to do this. Also we have extra miners available to make up an additional crew.

If the necessary requests to meet our costs as previously outlined are met, we certainly expect to complete the work before April 26th. and probably nearer the first part of April. We shall make every effort to maintain a schedule of three shifts per day, six days per week until original contract is completed.

Please understand that we are not asking for any profit from this job, nor have I personally drawn one cent in wages from it. It has been obvious from the beginning that our original estimate was low, however we have continued against great odds and high costs and have completed nearly half the job while loosing money constantly. This letter is not to be construed as an ultimatum. It is rather, a result of recently compiled, accruate set of cost figures based on actual costs and expenditures incurred on the job and realizing that with such loss it is'nt financially possible nor feasible to continue at the figure originally estimated.
I would of been very pleased, could the entire job of been accomplished at the low figure originally submitted, however many contributing and unforseen factors have made this impossible.

The chief detriment being of course, the unavailability of competant miners. Not for many years has the demand been so great for experienced, underground miners, over the entire mining areas, as it has this last fall.
Fortunately, the situation has greatly improved this winter and should remain favorable until spring at which time we expect to be completed. This project is quite isolated and before winter when employment was plentiful, the miners had thier choise of more favorable camps.

The time element requiring an early completion date as well as commencing the job in the fall and having to work all through the winter has all contributed to the increased costs.
On the original bid it was anticipated that work would start in the spring and would of been completed before bad weather.
Also the original bid had a time limit of 10 months and in the contract this was reduced to 8 months with a thirty day grace period.
On the original bid estimate where we estimated 8 months to do the job was only an estimate and was not to be construed as a maximum time limit.
Much of the material and equipment available and that we based our costs on at the time of the original bid was not available, or if so, at a much higher price when the job was finally ready to start, months later.
These are probably the main contributing factors, but there are also many smaller ones, too.

Therefore, I believe it only fair and right that since we are asking for no profit, that the amount requested be added to our original estimate to meet our costs and expenses and enable us to complete this job as quickly as possible.

I am enclosing a break-down on the cost per foot.
This was arrived at by a careful and accruate computation of invoices and checks showing expenditures.
I can bring these work sheets and invoices for your full inspection and will be happy to do so on only a few hours notice.

Respectfully yours,

M.L.Tate

M.L.Tate, Gen. Mgr.

P.S. I have enclosed a list of extra pay items per Jack Bush's request.

January 19, 1966

JAN 24 1966
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A per-item summary list of costs for drifting up to Jan. 1,1966.

Item	Cost per foot.
Labor	$ 20.70
Explosives	2.77
Drill Steel and Bits	2.56
Fuel	4.05
Track and Pipe	4.97
Equipment	14.31
Supplies,parts,tools, ins. etc.	6.72
Timber	.69
	$ 56.77

14.31
12
12879
14311
$271.8
25
13598
54372
$679.2

Note: If the equipment was all rented, the rental rates would more than double the amount we have charged to the job, figuring on a two shift per day basis.

January 19, 1966

JAN 24 1966
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A list of " Extra Pay" items that we have not been paid for to date:

(a) $120.00 for each car pass excavated area , three completed to date= and two more expected to be done during the balence of the drift. $ 360.00
Note; (These excavations for car passes are used by all personal as safty zones, similar to the three we excavated at the request of the company, alnng the main drift and are about the appropiate distance apart. While we excavate approx. 180 cubes for each car pass, we ask pay for only 120 cubes as that is the amount of the previously requested safty zones. We did get paid for the three original safty zones but did not recieve any extended time on our time limit for the time expended on them.

(b) 62 feet of rehabilitation to the number three drill site at $5.80 per foot. = 359.60

(c) an additional 6 feet on the North rehabilitation at $5.80/ft. = 34.80

(d) Pay for _____ feet of additional track on dump at $3.97/ft. =

(e) Pay for any pipe fittings, etc. at the end of the job, installed at drill stations, etc. for the benefit of the Diamond Drill Contractor.

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O. M. E.
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AGREEMENT

I.

PARTIES

1.1 PARTIES. The parties to this Agreement are THE CORTEZ JOINT VENTURE, a joint venture consisting of AMERICAN EXPLORATION & MINING CO. ("AMEX"), a California corporation, THE BUNKER HILL COMPANY, a Delaware corporation, WEBB RESOURCES, INC., a Colorado corporation, and VERNON F. TAYLOR, JR., of Denver, Colorado, acting through AMEX as manager and hereinafter sometimes called the "OPERATOR," and PONDEROSA DEVELOPMENT CO., LTD., a limited partnership, of which M. L. TATE is general partner, hereinafter sometimes called the "CONTRACTOR."

II.

SCOPE OF WORK

2.1 WORK TO BE DONE. The work to be performed under this Contract is underground rehabilitation, drifting, cross-cutting, and raising for the exploration program in the Cortez Silver Mine, Cortez Mining District, Eureka and Lander Counties, Nevada, all in accordance with plans set forth in the map attached hereto as Exhibit "A."

2.2 WORK SPECIFICATIONS.

(a) LOCATION: On Arctic (adit) level of Cortez Mine (See Map)

(b) MINIMUM FOOTAGE OF WORK TO BE DONE: 3800 feet of drift and dump rehabilitation; 2500 feet of new drift and crosscut advance; 40 feet of raising.

P.D.C. by [illegible]

(c) REHABILITATION: This work will consist of laying mine track, compressed air line, water line, a minor amount of vent duct and a minor amount of cleanup work for approximately 3500 feet of old mine drifts and crosscuts and approximately 300 feet of track installation on dump outside portal.

(d) SIZE OF NEW HEADINGS: Minimum inside cross-sections of all new drifts and crosscuts will be six feet by eight feet. Over breakage will not be paid for.

(e) MINE TRACK: Rail weight will be no less than 20 pounds per yard; track gauge will be 24 inches; tie spacing will be on 24-inch centers.

(f) WATER LINE: Water line to consist of a 1-inch (minimum) pipe. Plastic pipe to withstand existing working pressures may be used.

(g) AIR LINE: Air line to consist of 4-inch (minimum) pipe to be hung along wall or placed along floor of drift at CONTRACTOR's option.

(h) VENTILATION: Where necessary, drifts and crosscuts will be ventilated using pipe or tubing of not less than 12-inch diameter.

(i) GROUND SUPPORT: CONTRACTOR will supply all materials such as timber and roof bolts to provide any support which may be necessary for safe working conditions. Standard drift sets will consist of not less than 8- by 8-inch timber or

P.P.C. by: MLT

equivalent round timber. OPERATOR or its authorized representative will have the decision as to ground support requirements or any safety measures not conforming to his interpretation of Nevada Mining Law.

(j) TYPE OF GROUND: Mostly minor to moderately fractured dolomite and limestone and some quartzite (See Map). It is intended that much of the drifting will be along fissure zones which may or may not contain silicified gangue material, sulfide ore minerals, and/or altered dike rocks. The ground is generally strong, not requiring any support except for an estimated 5 per cent of the total footage.

III.

TIME FOR PERFORMANCE

3.1 COMPLETION. The total program is to be completed within nine months from the date of the execution of this Agreement.

3.2 INTERIM SCHEDULE. CONTRACTOR shall have completed not less than the amounts of work set forth in Exhibit "B" attached hereto by the dates set forth in said exhibit.

3.3 WORKWEEK. CONTRACTOR will provide equipment and personnel for not less than two daily shifts for not less than a six-day workweek, each week beginning on Monday.

IV.

PAYMENT

4.1 SCHEDULE OF CHARGES. The schedule of CONTRACTOR's charges shall be as set forth in Exhibit "C" attached hereto.

4.2 INVOICING. On or before the seventh day of each month CONTRACTOR shall supply OPERATOR with an invoice in triplicate (one of which shall be supplied directly to OPERATOR's

P.D.C. by M.J.T.

representative) for all work to be done during the previous month. The invoice shall adequately describe CONTRACTOR's charges and shall list the names of all subcontractors, material suppliers, and workmen who have supplied goods or services or both with respect to the invoiced items.

4.3 DIRECT PAYMENTS TO SUBCONTRACTORS, ETC. Unless CONTRACTOR shall have supplied with its invoice a waiver of lien or evidence of payment with respect to each subcontractor, material supplier, or workman referred to in the preceding paragraph, the OPERATOR may make payment direct to such subcontractors, material suppliers, or workmen in satisfaction of a like amount of payments due CONTRACTOR for such invoice.

V.

GENERAL CONTRACTOR OBLIGATIONS

5.1 CONTRACTOR shall perform all work hereunder in a proper, careful, workmanlike, and expeditious manner and in compliance with all federal, state, or municipal laws and regulations. Without limiting the generality of the foregoing, CONTRACTOR shall abide by all requirements for performing exploration contracts with the Office of Minerals Exploration of the Department of the Interior. A copy of Pages 2 through 7 and of Exhibit "B" to such Contract is attached hereto as Exhibit "D."

5.2 CONTRACTOR shall provide and continue in force during the period of this Contract, at the Contractor's expense, all insurance as specified under this section:

(a) Statutory Workmen's Compensation and/or Employer's Liability Insurance covering accidental injury or occupational disease (including death) sustained by employees during employment.

P.D.C. by M.S.T.

(b) Comprehensive Automobile Liability Insurance with bodily injury limits of $50,000 each person and $100,000 each accident, and with a property damage limit of $10,000.

(c) Comprehensive Public Liability Insurance, including Protective and Contractual Liability coverages, with bodily injury limits of $100,000 each person and $500,000 each accident, and property damage limits of $50,000 each accident and $100,000 aggregate operations.

5.3 CONTRACTOR shall, at all times, enforce strict discipline and maintain good order amongst its employees, and shall not retain on the work any unfit person.

5.4 CONTRACTOR shall indemnify and save harmless OPERATOR against and from all claims, actions, demands, and costs which might arise by reason of injury to persons or damage to property as a result of acts or omissions of the CONTRACTOR, its servants, or agents, or which might arise by reason of non-payment of wages, rentals, or purchase of goods and equipment.

5.5 CONTRACTOR shall work cooperatively with whatever drilling contractor is performing work on the subject property for OPERATOR.

5.6 Within two business days after the closing of each payroll period (which shall be not less frequently than semi-monthly), CONTRACTOR shall provide OPERATOR with a list of employees during the payroll period and acknowledgment by each such employee of payment. Such list shall be certified by CONTRACTOR's project supervisor. CONTRACTOR shall also supply OPERATOR from time to time with an up-to-date list of subcontractors and material suppliers.

P.D.C. by MH

5.7 In no event shall CONTRACTOR assign or delegate primary responsibility under this Contract without the written consent of OPERATOR.

5.8 O.M.E. REPORTS. CONTRACTOR will cooperate in supplying necessary information and documents for OPERATOR's requirements from the Office of Minerals Exploration of the Department of the Interior. Without limiting the generality of the foregoing, CONTRACTOR shall, for purposes of salvage evaluation, submit to OPERATOR, upon completion of the contract, a statement with invoices attached of all costs, f.o.b. mine, of materials such as rail, air pipe, water pipe, ventilation duct, etc., which were installed in the mine.

VI.

TERMINATION

6.1 TERMINATION FOR CAUSE. In the event of any material breach in this Contract by CONTRACTOR, OPERATOR shall give CONTRACTOR notice of such breach, and unless such breach is cured within three days from the date of such notice, OPERATOR may, in addition to all other rights granted by law, forthwith terminate this Contract and be under no further liability to CONTRACTOR. In addition to any other material breach, CONTRACTOR's falling behind schedule (as set forth in Exhibit "B") by thirty days or more shall be conclusively presumed to be a material breach. CONTRACTOR's failure to commence underground rehabilitation not later than August 10, 1965, shall be conclusively presumed to be a material breach of this Contract as of the close of business on August 10, 1965, without further notice of any kind. In the event of termination under this paragraph

P.D.C. by MET.

CONTRACTOR shall remove all personnel and equipment with due diligence, and in any event within ten days of the date of termination.

6.2 OTHER TERMINATION. After CONTRACTOR has performed underground rehabilitation and two thousand feet of new heading advance, OPERATOR may terminate this Contract without cause in the event OPERATOR bona fide determines that further work on the project would be economically not feasible. In the event of such termination, OPERATOR shall, as liquidated damages to CONTRACTOR, pay an amount equal to 30 per cent of the amount to which CONTRACTOR would be entitled for the unperformed work.

VII.

GENERAL

7.1 In the event any dispute arises under this Contract, it shall be settled under the rules of the American Arbitration Association in the City and County of San Francisco, State of California.

7.2 NOTICES. Notices hereunder shall be personally delivered or mailed, certified mail, postage prepaid, addressed as follows:

To OPERATOR:

The Cortez Joint Venture
c/o American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

To CONTRACTOR:

Ponderosa Development Co., Ltd.
P. O. Box 4800-N
Tucson, Arizona

or such other address as either party may, in writing, direct. Notices shall be deemed received on the day mailed.

P.D.C. by MLT

7.3 FORCE MAJEURE. The time in which the parties may perform hereunder shall be extended for the period during which performance is prevented by acts of God or the elements. This paragraph shall not, however, apply to CONTRACTOR's obligation to commence underground rehabilitation by August 10, 1965.

7.4 CONTRACTOR hereunder is an independent contractor, and this Agreement does not create any other kind of relationship between the parties hereto.

IN WITNESS WHEREOF the parties have executed this Agreement this 26th day of July, 1965.

THE CORTEZ JOINT VENTURE
BY AMERICAN EXPLORATION &
MINING CO., MANAGER

By _____
Vice President

PONDEROSA DEVELOPMENT CO., LTD.

By _____
General Partner

P.D.C.
by. Wilt

EXHIBIT "B"

DATE	WORK TO BE COMPLETED
Fifteen Days From Date Hereof	Mobilization
1 1/2 Months From Date Hereof	Underground Rehabilitation
Three Months From Date Hereof	Rehabilitation plus 525 feet of new heading advance
Four Months From Date Hereof	Rehabilitation plus 875 feet of new heading advance
Five Months From Date Hereof	Rehabilitation plus 1,225 feet of new heading advance
Six Months From Date Hereof	Rehabilitation plus 1,575 feet of new heading advance
Seven Months From Date Hereof	Rehabilitation plus 1,925 feet of new heading advance
Eight Months From Date Hereof	Rehabilitation plus 2,275 feet of new heading advance
Nine Months From Date Hereof	Completion

R.D.C. by JWH

EXHIBIT "C"

A. Mobilization and Demobilization of all equipment, men, and materials to perform the above-described work.

1. Mobilization - Lump Sum $5,489.58

2. Demobilization - Lump Sum $1,800.00

B. Rehabilitation

1. Rehabilitation of approximately 3,500 feet of old drifts and crosscuts as per Exhibit "A" will be charged for at $5.80 per lineal foot.

2. Installation of approximately 300 feet of mine track on dump outside portal: $3.97 per lineal foot.

C. Advance of approximately 2,500 feet of new drifts and crosscuts complete with track, air line, water line, and ground support (where necessary) will be charged for at $43.50 per lineal foot.

D. Raising for at least 40 feet with a minimum cross section of 6 feet by 6 feet will be charged for at $32.90 per lineal foot.

E. Excavation of any opening not included in the categories of drifting, crosscutting, or raising will be charged for at $1.00 per cubic foot.

F. Drill Station Stub Drifts (See Map) Approximate aggregate footage of 140 feet. $42.60 per lineal foot.

G. Standby Time of CONTRACTOR crews for purposes of surveys, etc., in excess of two hours at the request of

P.D.C. by MLT.

OPERATOR will be charged for at $30.00 per hour. Any time loss due to breakdown on CONTRACTOR's equipment or applicable to CONTRACTOR will not be charged for.

H. During first 2,500 feet of new advance, timbering in excess of 125 feet: $18.50 per five-foot set, plus cost of timber. = 3.70/ft labor

P.D.C. by MLF

345 Middlefield Road
Menlo Park, California 94025

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January 18, 1966

Mr. J. B. Bush
American Exploration & Mining Co.
23rd Floor - Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nev.
Contract 2203

Dear Mr. Bush:

In the future, when submitting your monthly vouchers for work performed under the OME contract, will you please give us a breakdown on the miles per day your Jeep is used on OME work. Page 5 of the contract provides that the rental of a Jeep is limited to 60 miles/day at 15¢/mile, 242 days at $9.00 a day. Each of these figures is a maximum and the item should be reported in miles per day which apply to the OME work.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

cc:
Director
Chief, OME, Wash., D. C.
ACG RF
MP RF
File 6436
HKStager:mlb

Form 7
(2/63)

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	Selfridge	130
12/3	Johnson	110
12/3	Lac	220
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AIRMAIL

Memorandum

DEC 3 1965

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Mr. Goudey stopped at the office the afternoon of December 2, and we discussed with him the letter sent you that day. However, it would be well to follow up on the present contract matters discussed. You might also verify in writing the rejection of their proposed deep drilling.

(signed) FRANK E. JOHNSON

Frank E. Johnson

GCSelfridge/mm (12/3/65)
cc: Director's Reading File
Division File
Economic Geology File
OME Reading
Mr. Selfridge (2)

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

December 1, 1965

Memorandum

To : Chief, Office of Minerals Exploration, Washington, D. C.

From : Field Officer, OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Ventures
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

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Enclosed is a copy of a letter from the subject chief geologist, J. B. Bush for your information and files. Mr. Bush has a point which should be considered in their supplemental OME application.

Paul V. Fillo

Paul V. Fillo

Enclosure

cc:
Chief, OME, Wash., D. C.

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

November 24, 1965

Mr. Paul Fillo
U.S. Department of the Interior
450 Golden Gate Avenue
San Francisco, Calif. 94102

Dear Mr. Fillo:

Subject: O.M.E. No. 6436, Silver
Contract No. 14-23-090-2203
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada

In regard to our "Supplement to O.M.E. Application, Docket No. O.M.E. 6436" it has been brought to my attention that we inadvertently failed to mention the fact that the major replacement orebodies at Eureka occur in the upper 500 feet of the Eldorado dolomite. Because the Eldorado formation could be up to 2500 feet thick I would like to point out that our proposed deep drilling at Cortez is designed to test only the upper 500 feet of the Eldorado which is the most favorable horizon in which replacement orebodies are likely to occur.

Yours very truly,

J. B. Bush

JBB: jb

cc: H. Goudey

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

December 2, 1965

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Memorandum

To : Chief, Office of Minerals Exploration, Washington, D. C.

From : Field Officer, OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Ventures
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Interim Inspection

The Cortez Mine was inspected November 18, 1965. The examining engineer was accompanied by Mr. Robert Garwood, engineer in charge, and Mr. Jack Oberbillig, mining engineer.

The mining operation consists of extending the east drift along the No. 1 dike-fissure zone in the Hamburg dolomite formation toward the contact with the Eureka quartzite. The drift was advanced 280 feet from the beginning of the OME contract. A favorable mineralized area of approximately 40 feet was disclosed along the drift from the 190-230-foot mark. The operator's assay report for this zone ranged from 35 to 94 ounces in silver. Four samples were taken for Government information and are being assayed at the Bureau of Mines office at the Reno Metallurgy Research Center, Area VI, Reno, Nevada.

The drift work, moving to the west along the No. 1 dike-fissure zone from the Arctic crosscut adit haulage level, was advanced 280 feet. The drift work and the drill station excavation should be completed in 3 or 4 days. The drift work exposed some mineralization, but nothing of real significance. The No. 2 fault was not intersected as it was hoped and it appears that the strike and dip change abruptly and probably dipped away from the west drift.

The mineralization disclosed in the east drift occurs as an irregular replacement along the bedding planes of the limestone and quartzite in and near the No. 1 dike-fissure zone. The ore is silver-bearing quartz, tetrahedrite, pyrite, and copper carbonate.

The sub-contractor's (Ponderosa Development Co., Ltd.) crew consists of 12 men working 2 shifts per day, 6 days per week. The contractor is having difficulty maintaining a steady crew--too many "boomers." The above subject operator has one geologist-engineer,and a laborer on the contract working 6 days per week. Cortez also has a mining engineer and two extra laborers working in the area assisting the geologist at times.

The operator is preparing an area for stockpiling ore about 200 feet from the portal of the Arctic tunnel to take care of any ore that may be encountered during the OME work. The operator has hopes that the long hole drilling program will get underway by the first of December. The E. J. Longyear Co. will conduct this program.

Paul V. Fillo

Paul V. Fillo

cc:
Chief, OME, Wash., D. C.

(OME-6436)

Form 7
(63)

Docket
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12/2	Johnson	110
12/2	Cal	220
		120

AIRMAIL

DEC 2 1965

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: CMM-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Reference is made to the subject contract and to the Operator's September voucher. For future action the adit and the drift headings were rehabilitated at the Operator's sole expense. Therefore, the Government will not participate in any salvage of pipe, rail, etc., therein. On the other hand, the drifting and crosscutting is being done by an independent contractor at $43.50 a foot, which includes everything. Ultimately there will be salvage for pipe, rail, etc., and the Government will participate in such salvage in proportion to its contribution.

On page 3 of the contract, $5,000, a maximum, was allotted for the mobilization and demobilization of equipment and materials for driving drifts and crosscuts. The independent contractor under date of August 6, 1965, billed the Operator for mobilization in a lump sum of $5,489.58. In turn, the Operator charged the contract $2,500 or one-half of the sum provided for this particular item. We would like to know if the independent contractor didn't provide the Operator with a breakdown of at least the major items in support of the lump sum. The $2,500 charged the contract should not have covered any rail, pipe, etc. used in rehabilitating the adit and headings. Later when the ratio of time for items such as labor or equipment used in rehabilitating to that used in driving the headings is known, an ultimate adjustment in the mobilization and demobilization charge should be made.

The Operator submitted Jeep rental at $9.00 a day. On page 5 of the contract, provision is made for rental of one Jeep, 60 miles/day

23263

@ 15¢/mile, 242 days at $9.00 a day. Each of the figures is a maximum, and the item should be reported in the miles per day which apply to the OME work in much the same fashion as the High Sierra Mining Company, Inc. submits its mileage. Will you please be sure that the Operator thoroughly understands the items discussed above.

In regard to the Operator's request of November 10, 1965, for the drilling of three long holes to test the Eldorado formation at depth, we wrote you on April 23, 1965, as follows:

> "Our review indicates that there is not enough evidence of a significant target in the 1-B target area to justify the Government's participation. Unless the Applicant has additional evidence, or wishes to obtain it by drilling the first hole at its own expense, we would not be inclined to consider the deep drilling favorably at this time. It appears to us that the work proposed here borders on prospecting. The "low-grade mineralization" at this horizon in DDH.No. 1 proves little, and the projections of the Premium and Coleman faults is conjectural. On the other hand, the best sample from DDH.No. 1 is from the lower strata of the Hamburg which in theory should be at least as favorable as the upper Eldorado."

We have carefully reviewed the entire matter and do not feel that the Operator has submitted any additional evidence which would warrant at this time the Government's participation in the proposed work.

As a matter of record and for your information, there follow a number of items noted during the review.

The Cortez mine as a major producer can be considered as an "orphan" in the area. On the other hand, there was more than one major mine at Eureka.

The area of the Cortez mine does not compare in structural complexity with the Eureka district. Seemingly, there has been only one important ore-bearing structure, the No. 1 Dike fissure, exposed to date. There are five concentrations of mines in the Eureka district, in three areas of which the Hamburg limestone contained ore.

On page 2 of J. B. Bush's memorandum of December 28, 1964 (see blue colored folder) mention is made that the structural intersection produced by the Premium fault and the No. 1 fault-dike-fissure zone is an important ore control in the vicinity of the Cage shaft from the No. 2 level upwards. Mention is also made that it appears the Premium fault merges with or is cut off by the No. 1 dike-fault-fissure zone and that it is seen only on the south side of the zone. Its existence on the north side of the No. 1 Dike is not known. The stoping in the vicinity of the intersection is shown on the map of Ferguson region, etc., found in the Evans report. Should the intersection, if such exists at depth, be favorable, it would seem that it should be to the northwest down the plunge of the intersection. It would take a very long hole to reach the Eldorado formation to test such a possibility.

Although it has been stated that the Premium fault is not known on the north side of the No. 1 Dike, Plate 7 shows it questionably, indicating that the No. 1 Dike represents a reverse fault but does not offset the Eureka quartzite as also shown on Plate 6.

Plate 6 shows the Premium fault reversing its dip in the upper 500 feet of the Hamburg formation. It could either flatten or steepen appreciably in the next thousand feet below the lowest mine workings. As presently shown on Plate 6, proposed hole Cu-12 would intersect the Eldorado dolomite some 300 feet away from the Premium fault.

On Plate 6 the second major stoped area, which is above and below the Arctic level, supposedly owes its origin to a split in the No. 1 Dike zone which closed both vertically and laterally and within which the stoped mineralization occurred. Thus this particular structure does not carry to depth. Hope is that there may be other similar ones.

Both Plates 7 and 8 show the variation in apparent dip of the No. 1 Dike fissure itself. Just what its strike, dip, and position at depth might be is unknown.

DDH-1 migrated 6 degrees by the time it had reached 1,450 feet. Just this much distance away from an ore-bearing structure could be too much. The hole indicated mineralization in the lower part of the Hamburg. While a vertical hole could be more easily wedged, why were vertical holes selected rather than inclined ones out in the walls but parallel to the No. 1 Dike fissure when the targets are mantos? An inclined hole would test the entire fissure dipwise.

At the Cortez mine the Secret Canyon shale is missing over the Eldorado dolomite. Usually such a formation has a bearing on ore deposition in underlying carbonate rocks.

In all, it would seem that the drilling of the requested holes, ranging from 1,800 to 2,400 feet in depth, would be on the wildcatting side rather than exploration which might be considered as reaching to depths of 600 to 800 feet.

(signed) FRANK E. JOHNSON

Frank E. Johnson

GCSelfridge/mm (11/30/65)
cc: Director's Reading File
Division File
Economic Geology File
OME Reading File
Mr. Selfridge (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

November 10, 1965

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Memorandum

To : Chief, Office of Minerals Exploration, Washington, D.C.

From : Field Officer, OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Ventures
Cortez Mine
Eureka and Lander Counties, Nev.
Contract No. 2203

Enclosed is a copy of a supplemental application with maps from the operator requesting an additional program be added to their present OME contract. In reviewing the geology of the Cortez property and the Eureka Mining District, Nevada, U.S.G.S. P.P. 406, I find these two properties are very similar geologically and recommend that the deep drilling project warrants the exploratory program as shown in the supplemental application.

The estimated cost appears to be in accordance with present day drilling costs. Your comments are welcome on the proposed deep drilling that they are requesting. We are in elephant country as the saying goes, Frank.

Paul V. Fillo

Paul V. Fillo

Enclosures

cc;
Chief, OME, Wash., D. C.

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

NOV 1965
BUREAU OF MINES
OFFICE OF
MINERALS EXPLORATION
REGION 11

November 10, 1965

U.S. Department of the Interior
Office of Minerals Exploration
450 Golden Gate Avenue
San Francisco, Calif. 94102

Attn: Mr. Paul Fillo

Dear Mr. Fillo:

Subject: O.M.E. No. 6436, Silver
Contract No. 14-23-090-2203
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada

We are submitting herewith for your review and approval two copies of "Supplement to O.M.E. Application, Docket No. O.M.E. 6436."

In the Supplement, reference is made to portions of and maps included with the original application which should be at hand when reviewing the Supplement.

Yours very truly,

J. B. Bush

JBB: jb

Encl: 2

SUPPLEMENT TO O.M.E. APPLICATION, DOCKET NO. O.M.E. - 6436

A. Review of O.M.E. Application and Resultant Contract No. 2203

In March, 1965, the Cortez Joint Venture applied to the Office of Minerals Exploration for financial assistance for a silver exploration program to be conducted by the Cortez Joint Venture at the Cortez Silver Mine, Eureka and Lander Counties, Nevada.

In the original application the co-venturers requested government participation in carrying out a program to test the following exploration targets:

	Target No.	Objective
1.	Target 1-A	To test the easterly extension of the No. 1 dike-fissure zone and its intersection with the Eureka quartzite by rehabilitation of, and drifting, crosscutting, and short-hole diamond drilling on, the Arctic Level of the Cortez Mine.
2.	Target 1-B	To test for manto-type ore in the favorable Eldorado dolomite at the down-rake projection of the No. 1 dike-fissure zone and the known Cortez orebodies by deep down drilling from the Arctic Level.
3.	Target 1-C	To test the westerly extension of the No. 1 dike-fissure zone and its intersection with the Premium fault by drifting and short hole drilling on the Arctic Level.
4.	Target 2	To test for manto-type orebodies under the Eureka quartzite by surface drilling on the Rossi property.

The estimated cost of the above work was $326,035.

Approval was granted by the government to provide financial assistance to carry out parts of two of the above four exploration tests. On June 29, 1965, a contract was executed between the Government and Cortez Joint Venture whereby the Government will participate to the extent of 75% in the cost of the following work:

1. Drifting and crosscutting on the Arctic Level to facilitate exploration of Targets 1-A and 1-C described above.

2. Underground short-hole diamond drilling on the Arctic Level to further test Targets 1-A and 1-C described above.

The total allowable cost of the above work is $174,860 of which the Government will contribute up to $131,145.

The contract does not include Government participation in the cost of the Arctic Level rehabilitation, the underground deep diamond drilling for manto-type ore in the Eldorado dolomite (Target 1-B), and the surface diamond drilling for manto-type ore on the Rossi property (Target 2). It was agreed between the Government and the Cortez Joint Venture that the rehabilitation work would be done at the sole expense of the Joint Venture. At this date the rehabilitation of the level has been completed and drifting is in progress under O.M.E. Contract No. 2203.

We consider that the scope of Target 1-B was not adequately set forth in the original application. Additionally, subsequent studies have been made of Targets 1-B and 2.

In the investigation of Target 2 on the Rossi property the Cortez Joint Venture, on its own account, recently completed one drill hole to test for manto-type orebodies in the Hamburg formation underlying the Eureka quartzite. The premise was that the small pockets of mineralization which occur in the Hansen Creek formation on the surface of the Rossi property are the result of leakage mineralization which has migrated upward through the Eureka quartzite from the underlying Hamburg formation.

The drill hole penetrated the Eureka quartzite, 50' of shale believed to be Dunderberg, and encountered the top of the Hamburg formation at 486 feet. From 486 feet to 754 feet the hole penetrated relatively fresh Hamburg dolomite with only minor mineralization. As a result of this work we believe further drilling on Target 2, the Rossi property, should be deferred.

Further investigation of exploration Target 1-B, however, has revealed sufficient justification to re-apply for O.M.E. assistance to test this target.

B. Re-application for O.M.E. assistance to test Target 1-B

(a) Reasons for Reconsideration of Target 1-B:

The search for manto-type orebodies in the Eldorado dolomite which underlies the Cortez Silver Mine is described

under Target 1-B on Page 17 and illustrated in Plate 6 of the original O.M.E. application. To more fully understand the significance of this exploration target, reference is made to the Eureka, Nevada, district which lies 50 miles southeast of Cortez.

At Eureka, Nevada, the two most important host rocks for ore are the Middle Cambrian Eldorado dolomite and the Middle and Upper Cambrian Hamburg dolomite. The deposition of ore appears to have favored the dolomite units rather than limestone or shaley units mainly because of the different physical characteristics of the rocks. When subjected to deformational stresses the dolomites, being more brittle rocks, will tend to fracture whereas the more plastic limestone and shales will tend to bend and flow. Fractured or brecciated carbonate rocks generally provide better host rock conditions for ore deposition.

A comparison of the stratigraphic sections at Eureka and Cortez is presented as follows:

Age	Formation	Stratigraphic Thickness Eureka	Stratigraphic Thickness Cortez
Middle-Late Ordovician	Eureka quartzite	300'	300'
Early-Middle Ordovician	Pogonip limestone	1700'	missing
Late Cambrian	Windfall limestone	625'	missing
Late Cambrian	Dunderberg shale	265'	50'
Middle-Late Cambrian	Hamburg dolomite	1000'	1700'
Middle Cambrian	Secret Canyon shale	625'	missing
Middle Cambrian	Geddes limestone	330'	200'
Middle Cambrian	Eldorado dolomite	2500'+	present, but thickness unknown

At Cortez the stratigraphic column of the Paleozoic section is not as complete as at Eureka. Starting at the top of the section the Eureka quartzite of the Eureka district is similar in lithology and thickness to the quartzite which is present in the mine area at Cortez. However, the Pogonip and Windfall limestone formations which

underly the quartzite at Eureka are missing at Cortez. About 50 feet of shale comparable to the Dunderberg occurs immediately below the Eureka quartzite on the Rossi property in the Cortez district. The Hamburg dolomite, which is 1000 feet thick at Eureka, is approximately 1700 feet thick at Cortez. Most of the known orebodies in the Cortez Silver mine occur within Hamburg dolomite with important mantos at and near the top of this formation.

In 1963, to gain stratigraphic information by probing for the Eldorado and intervening formations, a hole was core drilled from the surface near the portal of the Garrison (No. 1) tunnel of the Cortez mine to a depth of 1469 feet. As a probe for ore and stratigraphy combined, a drill hole from the Arctic Level would have been preferred but the cost of access and the then lack of information as to the thickness of the Hamburg at Cortez prevented this approach. Collared at a point in the Hamburg section about 900 feet down from the base of the Eureka quartzite the hole indicated that the Hamburg dolomite is about 1700 feet in stratigraphic thickness. (See Plate 6) Below the Hamburg the hole encountered 200 feet of limestone which is similar in lithology and thickness to the Geddes limestone. The Secret Canyon shale section is apparently missing in the Cortez mine area. Below the Geddes formation the hole cut approximately 400 feet of fractured dolomite which is lithologically similar to the Eldorado dolomite at Eureka.

From the above comparison with Eureka, Nevada it is reasonably assured that the two thick, highly productive dolomite horizons (Hamburg and Eldorado) of the Eureka mine area are also present in the Cortez mine area. The Eldorado dolomite at Eureka was by far the most productive formation in that district containing large irregular and manto-like replacement orebodies with great lateral dimensions ranging to over 2400 feet. The Eldorado, or its equivalent formation, has also been one of the most productive horizons in several other replacement deposit districts such as at Tintic, Utah and Pioche, Nevada. A fact which is common to all these districts is that this formation is the first carbonate formation to appear in the Paleozoic section above the Precambrian basement.

The gross production of the Eureka deposits, predominantly from the Eldorado horizon, has been in the order of 2 million tons valued at $122,000,000, a large part of which was attributable to silver values from ores containing additional values in gold, lead, zinc and copper. If similar orebodies occur within the Eldorado at Cortez it is not unreasonable to expect a minimum potential of 1,000,000 tons averaging about $50 per ton.

We believe that there is strong evidence for the existence of manto-type orebodies in the favorable Eldorado dolomite within a reasonable depth below the bottom levels of the Cortez mine. As at Eureka the size and grade of possible orebodies in the Eldorado at Cortez could far surpass any of the known orebodies occurring in the overlying Hamburg.

We conceive that large orebodies of size similar to those in the Eldorado at Eureka should occur in the upper part of the Eldorado below the Arctic Level of the Cortez mine and that they would most likely be found near the channelways which carried ore solutions to the deposits in the Hamburg. The most pronounced channelways in the Cortez mine are at the intersections of northeast faults with the Number 1 dike-fissure zone. We propose to explore the vicinity of the downward projection of these structures at the stratigraphic horizon of the upper Eldorado dolomite. Three drill holes, spaced 1,000 feet apart, from the Arctic Level should achieve penetration of target orebodies in the size we are seeking and can reasonably, by comparison with Eureka, expect to find. Such drill holes were described in the original application under Target 1-B and illustrated on Plate 6.

(b) Description of Proposed Additional Work:

The Cortez Joint Venture is herein applying for O.M.E. assistance to test Target 1-B by drilling the three deep holes, totalling 6200 feet, from the Arctic Level as outlined in the original application. The construction of drill stations for these holes will require an additional 240 feet of crosscutting and three 40-foot vertical raises as per the original application.

The approximate location of the three drill holes are indicated on the Plan Map (Plate 2) and the Longitudinal Section (Plate 6) included with the original application.

The work required to complete an adequate test of Target 1-B is summarized from the original application as follows:

	Item	Size	Bearing	Footage
*	DDH No.14	NX-BX	Vertical Down	1800'
*	DDH No.15	NX-BX	Vertical Down	2000'
*	DDH No.16	NX-BX	Vertical Down	2400'
	Drill Station X-cut	6' x 8'	N15°E	240'

Item	Size	Bearing	Footage
3 Drill Station Raises	6'x6'	Vertical Up	120'

* These holes were numbered Cu-11,-12 and -13 in the original application.

It is requested that all the above additional work be included as part of a one-stage program rather than divided into a two-stage program as indicated in the original application.

(c) Estimated Costs* of Proposed Additional Work

* Based on estimates presented and explained in the original application.

Actual Costs

Category (1) Independent Contracts:

Mobilization and demobilization one drill unit	$ 830.00
Core drilling, 6200 feet (as per following rates)	$42,915.00

Footage	NX-NXWL	BX-BXWL
0-250	$5.50	$ 5.25
250-500	$5.75	5.50
500-750	6.35	5.75
750-1000	7.10	6.00
1000-1250		6.35
1250-1500		6.85
1500-1750		7.60
1750-2000		8.60
2000-2250		9.70
2250-2500		10.90

Compressed air for core drilling 6,200 feet @ $0.60/ft.	$ 3,720.00
Cementing drill holes 200 hrs. @ $11.60/hr.	$ 2,320.00
Cement, mud and lost circulation materials	$ 2,665.00
Reaming, any size, 900 ft. @ $2.25/ft.	$ 2,025.00

Lost casing, 450 ft. @ $2.00/ft.	$ 900.00	
Moving drill between holes 32 hrs. @ $11.60/hr.	$ 371.00	
Standby time requested by Operator 25 hrs. @ $11.60/hr.	$ 290.00	
Crosscutting for drill stations 240 ft. @ $43.50/ft.	$10,440.00	
Raising for drill stations 120 ft. @ $32.90/ft.	$ 3,948.00	
		$70,424.00

Category (2) Personal Services

Subcategory (a) Supervision and Technical Services

1 Supervisor - geologist - engineer, 2 months @ $950/mo.	$ 1,900.00	

Subcategory (b) Labor

1 Laborer, 100 days @ $21.66/day	$ 2,166.00	
		$4,066.00

Category (3) Operating Materials & Supplies

Cardboard core boxes 620 @ $1.00 each	$ 620.00	
		$ 620.00

Category (7) Miscellaneous

Payroll taxes, FICA, insurance, etc. @ 18% of payroll (rounded)	$ 732.00	$ 732.00
Total Estimated Actual Costs		$75,842.00

Fixed Unit Costs

Rental of one jeep, 60 miles/day @ $0.15/mi: 52 days @ $9.00/day	$ 468.00
Rental of one water truck 6,180 miles @ $0.25/mile	$ 1,545.00

680 core samples assayed for gold & silver @ $3.00/sample	$ 2,040.00	
450 samples assayed for Cu, Pb and/or Zn @ $1.75/each element	$ 788.00	
Transportation and sacks, 680 samples @ $0.10/each sample	$ 68.00	
Total Estimated Fixed Unit Costs		$ 5,109.00
Total Estimated Costs of the Work		$80,951.00
Requested Government Participation @ 75%		$60,713.00

The Cortez Joint Venture, by

American Exploration & Mining Co.
Managing Coventurer

J.B. Bush, Chief Geologist

H. Goudey, Vice President

JBB:jb
11/9/65

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

November 5, 1965

OFFICIAL
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O. M. E.
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NOV 10 1965
MINERALS CODE
420
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Mr. H. Goudey, Vice President
American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Ventures
Cortez Mine
Eureka and Lander Counties, Nevada
Contract No. 2203

Dear Mr. Goudey:

A field trip in Nevada is tentatively scheduled for the week of November 15, 1965. An inspection of the Cortez mine will be made on November 18.

Sincerely yours,

Paul V. Fillo
Field Officer
OME, Region II

cc:
Chief, OME, Wash., D. C.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	Selfridge	120
11/1	Johnson	110
11/1	Coe	220
		120 M

NOV 1 1965

Memorandum

To: Bureau Compliance Officer - Contracts

From: Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Enclosed are one copy each of Parts II and III of Standard Form 41 Compliance Report - Construction with the transmittal letter which were recently submitted by the subcontractor under the subject contract.

Previously Part I submitted by the prime contractor, Cortez Joint Venture, was given to Mrs. Bunevich. All of these copies are the ones that normally would have been sent to the President's Committee on Equal Employment Opportunity.

(signed) FRANK E. JOHNSON (glc)

Frank E. Johnson

Enclosures

GCSelfridge/mm (11/1/65)
cc: Director's Reading File
Division File
Economic Geology File
OME Reading File
Region II
Mr. Selfridge (2)

23263

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

October 22, 1965

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OCT 25 1965
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130
~~120~~

Mr. Frank E. Johnson
Chief, Office of Minerals Exploration
U. S. Dept. of the Interior
Washington 25, D. C.

Dear Mr. Johnson:

We enclose, in duplicate, Part II and Part III of Standard Form 41, Compliance Report Construction. These reports have just been returned by the contractor, Ponderosa Development Company, Ltd.

Sincerely yours,

H. Goudey

H. Goudey

HG:cmr

cc: Mr. Paul Fillo

STANDARD FORM 41
(PART II)
January 1963
PRESIDENT'S COMMITTEE ON EQUAL EMPLOYMENT OPPORTUNITY
41 CFR CH. 60 41-202

COMPLIANCE REPORT—CONSTRUCTION
(Construction, Alteration and Repair Contracts)
NONDISCRIMINATION PROVISIONS OF U.S. GOVERNMENT CONTRACTS

IMPORTANT.—Please read the accompanying instruction sheet which tells you how to prepare and when to submit each part of this report.

SUBMIT REPORT IN TRIPLICATE TO

CONTRACTING AGENCY	ADDRESS
Department of the Interior	Washington, D. C. 20240
Office of Minerals Exploration	Washington, D. C. 20240
Care Acting Field Officer OME Region II	U. S. Department of the Interior Office of Minerals Exploration 450 Golden Gate Ave. Room 9007, Box 36012 San Francisco, Calif.94102

Part II.—EMPLOYMENT CONDITIONS AT THE PROJECT SITE

Section A.—CONTRACTOR AND PROJECT IDENTIFICATION

1. CONTRACTOR'S REPORTING STATUS (Check one block only to indicate your status for the project covered by this report) ☐ a. PRIME CONTRACTOR ☒ b. SUBCONTRACTOR

CROSS REFERENCE IDENTIFICATION	EMPLOYER IDENTIFICATION NO.	CODE (Leave blank)
2. NAME AND ADDRESS OF CONTRACTOR SUBMITTING THIS REPORT Ponderosa Development Co., Ltd. P. O. Box 4800-N Tucson, Arizona	86-0192380	

3. PROJECT NAME, LOCATION, AND CONTRACT NO.
Cortez Mine Exploration Project
Cortez, Nevada
OME Contract No. 2203 (Docket No. 6436)

4. PRIME CONTRACTOR'S NAME AND ADDRESS (Complete only when block 1b above is checked)
The Cortez Joint Venture
C/O American Exploration & Mining Co.
2300 Russ Building, San Francisco, California 94104

Section B.—ORGANIZATIONS OF WORKERS

	YES	NO
5. Has a collective bargaining agreement or other contract or understanding been made with a labor union (or unions) which covers the performance of any work on this project?		X
6. Has the notice (Standard Form 38) advising the union of the company's obligations under the nondiscrimination provisions of Government contracts been sent to each such union by you or your trade representative?		X
7. Has each such union notified you or your trade representative that its policies and practices are consistent with the nondiscrimination provisions?		X

8. If "No," identify such union(s) and describe efforts made to obtain such information.
N/A

	YES	NO
9. Are any workers for the project covered by this report being recruited through union locals?		X

10. If "Yes," identify such unions and indicate those unions with which you have collective bargaining agreements or other understandings involving the use of hiring halls.
N/A

Section C.—APPRENTICESHIP TRAINING

	YES	NO
11. Do you employ or intend to employ apprentices on this project?		X
12. If "Yes," are applicants for such employment employed without regard to race, creed, color, or national origin?	N/A	
13. Is your apprenticeship program registered with a State Apprenticeship Agency or the Bureau of Apprenticeship and Training, U.S. Department of Labor?	N/A	
14. Does your apprenticeship program contain an equal employment opportunity provision?	N/A	

Section D.—RECRUITMENT SOURCES

15. CHECK PRINCIPAL SOURCES FOR:	U.S. EMPL. SERV.	STATE EMPL. SERV.	DIRECT HIRING	UNION	OTHER
a. CONSTRUCTION WORKERS		X			
b. OTHER WORKERS			X		

Section E.—SUBCONTRACTS

	YES	NO
16. Have you awarded any subcontracts for work covered by your contract or subcontract for this project?		X
17. Has the nondiscrimination clause been included in all of your subcontracts subject to Executive Order 10925?	N/A	
18. Have all such subcontractors covered by these reporting requirements been instructed to file compliance reports and been furnished with report forms and instructions?	N/A	

(Continue on reverse)

Section F.—GENERAL

19. (Optional.) Describe briefly any actions other than those referred to in this report that have been taken which affect this project to assure that equal employment opportunity is given to all employees and applicants for employment without regard to race, creed, color, or national origin. Use this page if additional space is needed to fully answer the foregoing questions.

20. DATE	SIGNATURE AND TITLE	ADDRESS
[illegible]	[illegible] Sub Contractor	Box 4800-N TUCSON, ARIZONA

(Willfully false statements on this Report are punishable by law (U.S. Code, Title 18, Section 1001)

☆ U.S. GPO: 1963—O—653281

STANDARD FORM 41
(PART III)
January 1963
PRESIDENT'S COMMITTEE ON EQUAL EMPLOYMENT OPPORTUNITY
41 CFR CH. 60 41-301

COMPLIANCE REPORT—CONSTRUCTION

(Construction, Alteration and Repair Contracts)

NONDISCRIMINATION PROVISIONS OF U.S. GOVERNMENT CONTRACTS

IMPORTANT.—Please read the accompanying instruction sheet which tells you how to prepare and when to submit each part of this report.

SUBMIT REPORT IN DUPLICATE TO

CONTRACTING AGENCY	ADDRESS
Department of the Interior	Washington, D. C. 20240
Office of Minerals Exploration	Washington, D. C. 20240
Care Acting Field Officer OME Region II	U. S.Department of the Interior
	Office of Minerals Exploration
	450 Golden Gate Ave.
	Room 9007, Box 36012,
	San Francisco,Calif. 94102

Part III.—EMPLOYMENT DATA SUMMARY AT THE PROJECT SITE

Section A.—CONTRACTOR AND PROJECT IDENTIFICATION

1. CONTRACTOR'S REPORTING STATUS (*Check one block only to indicate your status for the project covered by this report.*) ☐ a. PRIME CONTRACTOR ☒ b. SUBCONTRACTOR

CROSS REFERENCE IDENTIFICATION	EMPLOYER IDENTIFICATION NO.	CODE (Leave blank)
2. NAME AND ADDRESS OF CONTRACTOR SUBMITTING THIS REPORT Ponderosa Development Co., Ltd. P. O. Box 4800-N Tucson, Arizona	86-0192380	

3. PROJECT NAME, LOCATION, AND CONTRACT NO.
Cortez Mine Exploration Project
Cortez, Nevada
OME Contract No. 2203 (Docket No. 6436)

4. CONSTRUCTION DATES (Estimated or Actual)

a. STARTING	b. COMPLETION
8/9/65	4/66

5. PRIME CONTRACTOR'S NAME AND ADDRESS (*Complete only when block 1b above is checked*)
The Cortez Joint Venture
C/O American Exploration & Mining Co.
2300 Russ Building, San Francisco, California 94104

6. CONTRACTOR'S SCOPE OF WORK (*Major activity*) UNDER CONTRACT AT THIS PROJECT
Drifting and Crosscutting

CODE (Leave blank)

Section B.—CURRENT EMPLOYMENT AT THE PROJECT SITE

7. BY RACE AND WORK CLASSIFICATIONS		TOTAL EMPLOYEES	MINORITY GROUPS (See Instruction 7) TOTAL NEGRO	TOTAL OTHER	TOTAL OTHER	CODE (Leave blank)
OTHER EMPLOYEES (See Instructions 2h & 3)	SUPERVISORS	1				
	PROFESSIONAL					
	TECHNICAL					
	OFFICE AND CLERICAL					
	SERVICE WORKERS					
CONSTRUCTION WORKERS (See Instruction 2g)	FOREMEN*	1				
	JOURNEYMEN AND MECHANICS*	6				
	HELPERS*	2				
	APPRENTICES*					
	LABORERS	2				
GRAND TOTALS		10				

If more than one trade is employed, separately tabulate each trade in item 8 on the reverse.

(Continue on reverse)

8. CONSTRUCTION WORKERS BY RACE AND TRADE (*Excluding Laborers*)

WORK CLASSIFICATIONS (Tabulate each trade separately and specify the applicable trade in each case)		TOTAL EMPLOYEES	MINORITY GROUPS (See Inst. 7)			CODE (Leave blank)
TRADE	LEVEL		TOTAL NEGRO	TOTAL OTHER _____	TOTAL OTHER _____	
a. Miners	FOREMEN	1				
	JOURNEYMEN & MECHANICS	6				
	HELPERS					
	APPRENTICES					
b.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
c.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
d.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
e.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
f.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
g.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
h.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
i.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					
j.	FOREMEN					
	JOURNEYMEN & MECHANICS					
	HELPERS					
	APPRENTICES					

9. DOES THE EMPLOYMENT REPORTED ABOVE REPRESENT PEAK EMPLOYMENT? ☐ YES ☒ NO

10. IF "NO," GIVE THE ACTUAL DATE PEAK EMPLOYMENT WAS REACHED OR THE ESTIMATED DATE PEAK EMPLOYMENT WILL BE REACHED.

a. ACT. DATE

b. EST. DATE Oct., 1965

11. MINORITY GROUP EMPLOYMENT STATISTICS WERE OBTAINED FROM WHICH SOURCE: ☐ RECORDS (*If available*) ☒ VISUAL CHECK ☐ OTHER (*Specify*) _____

12. GIVE CLOSING DATE OF PAYROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH IN WHICH THIS REPORT IS DUE October 16, 1965

13. REMARKS

14. DATE Oct. 18, 1965

SIGNATURE AND TITLE M. S. Tate. Sub-Contractor

ADDRESS Box 4800-N Tucson, Arizona

(Willfully false statements on this Report are punish[illegible] law (U.S. Code, Title 18, Section 1001))

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

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October 8, 1965

Mr. Frank E. Johnson
Chief, Office of Minerals Exploration
U.S. Dept. of the Interior
Washington 25, D.C.

Re: O.M.E.- 6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Johnson:

With reference to your letter of September 22 regarding Standard Form 41, Compliance Report, on September 20 we forwarded to the San Francisco local office of the Office of Minerals Exploration Part I on behalf of American Exploration & Mining Co. of such report. Inadvertently Parts II and III had not been forwarded to the contractor, Ponderosa Development Company, Ltd., until we were prompted by the receipt of your letter. They have now been forwarded to the contractor and will be forwarded to you as soon as he has returned them to us.

Sincerely yours,

H. Goudey

HG: jb

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

September 24, 1965

Memorandum

To : Chief, Office of Minerals Exploration, Washington, D. C.

From : Acting Field Officer, OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Ventures
Cortez Mine
Eureka and Lander Counties, Nev.
Contract No. 2203

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 27 1965

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Interim Inspection

The subject mine was inspected September 16, 1965 by the Acting Field Officer accompanied by Robert Garwood, a geologist who is in charge of this OME operation.

During the past 30 days, the mining contractor (Mr. Tate) has been rehabilitating the Arctic level from the portal to the starting point of the OME project. They have completed the laying of 3170 feet of track using 20 pound rail; the ties are placed on 2-foot centers and the 4-inch air line and 1-inch water line from the No. 1 level down to the 300-foot raise are installed.

The surface installation is 80 percent completed with the 600 and 315 compressors installed, and dumping facilities, shop, and change room buildings readied.

The contractor will experiment for a few days and decide whether to use a 2-machine jumbo or use jacklegs.

The actual work in starting the OME headings should be this week if everything is in order. The mining contractor has 10 men working and he mentioned that in the next 2 or 3 weeks there will be a period of hiring and firing of miners in order to establish a qualified group.

Paul V. Fillo

Paul V. Fillo

cc:
Chief, OME, Wash., D. C.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

September 22, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 24 1965

INITIALS	CODE
	120
	120

Memorandum

To : Chief, Office of Minerals Exploration, Washington, D. C.

From : Acting Field Officer, OME, Region II

Subject: ~~OME-6350 (Silver)~~ OME-6436 (Silver)
~~Cortez Joint Ventures~~ Cortez Joint Venture
~~Pixie, et al, Claims~~ Cortez Mine and Rossi Property
~~Lander County, Nevada~~ Eureka and Lander Counties, Nevada
~~Contract No. 2195~~ Contract 2203

Enclosed in duplicate is Part I of Standard Form 41, Compliance Report--Construction, for your information and files.

Paul V. Fillo

Paul V. Fillo

Enclosures

cc:
Chief, OME, Wash., D. C.

2nd copy & a duplicate given Mine Branch

STANDARD FORM 41
(PART 1)
January 1963
PRESIDENT'S COMMITTEE ON EQUAL EMPLOYMENT OPPORTUNITY
41 CFR CH. 60 41-102

COMPLIANCE REPORT—CONSTRUCTION
(Construction, Alteration and Repair Contracts)
NONDISCRIMINATION PROVISIONS OF U.S. GOVERNMENT CONTRACTS

IMPORTANT. — Please read the accompanying instruction sheet which tells you how to prepare and when to submit each part of this report.

SUBMIT REPORT IN TRIPLICATE TO	CONTRACTING AGENCY	ADDRESS
	Department of the Interior	Washington, D. C. 20240
	U. S. Geological Survey, OME	Washington, D. C. 20240
	Care Acting Field Officer, USGS-OME Region II	U. S. Dept. of the Interior, USGS-OME 450 Golden Gate Ave., Room 9007 P. O. Box 36012, San Francisco, Calif. 94102

Part I. — COMPANY-WIDE POLICIES AND EMPLOYMENT DATA

Section A. — CONTRACTOR AND PROJECT IDENTIFICATION

1. CONTRACTOR'S REPORTING STATUS *(Check one block only to indicate your status for the project covered by this report)* ☒ a. PRIME CONTRACTOR ☐ b. SUBCONTRACTOR

CROSS REFERENCE IDENTIFICATION	EMPLOYER IDENTIFICATION NO.	CODE (Leave blank)
2. NAME AND ADDRESS OF CONTRACTOR SUBMITTING THIS REPORT Cortez Joint Venture c/o American Exploration & Mining Co. 2300 Russ Building, San Francisco, California 94104	94-6109133	
3. NAME AND ADDRESS OF PRINCIPAL OFFICE OF THE COMPANY Cortez Joint Venture c/o American Exploration & Mining Co. 2300 Russ Building, San Francisco, California 94104	94-6109133	
4. NAME AND ADDRESS OF PARENT COMPANY IF AN AFFILIATED COMPANY 1. American Exploration & Mining Co. 2300 Russ Bldg. San Francisco, Calif. 2. Bunker Hill Co. Box 29, Kellogg, Idaho 3. Vernon F. Taylor, Jr. 1670 Denver Club Bldg. Denver 2, Colorado 4. Webb Resources, Inc. 1645 Court Place Denver 2, Colorado		
5. PROJECT NAME, LOCATION, AND CONTRACT NO. Cortez Joint Venture Cortez Mine Exploration Project Eureka and Lander Counties, Nevada Contract No - 2203		
6. PRIME CONTRACTOR'S NAME AND ADDRESS *(Complete only when block 1b above is checked)*		

Section B. — PREVIOUS COMPLIANCE REPORT CROSS REFERENCE (See Instructions 4a and 4d)

7. Have you filed a completed Part I of this report in connection with any other contract or subcontract during the current reporting period? ☒ YES ☐ NO

7a. If "Yes," give the following and then complete only item 18 on reverse.

(1) NAME AND ADDRESS OF CONTRACTING AGENCY WITH WHOM FILED	(2) PROJECT NAME AND LOCATION	
Department of the Interior U.S. Geological Survey, OME Care Acting Field Officer OME Reg II	Pixie Cortez Mining District Lander County, Nevada	
	(3) CONTRACT NO. 2195	(4) DATE FILED ~~August 24, 1964~~ MARCH 22 1965

7b. If "No," complete the balance of Part I.

Section C. — COMPANY EMPLOYMENT POLICY

	YES	NO
8. Have you established a company-wide employment policy to assure that equal employment opportunity is given to all persons without regard to race, creed, color, or national origin?		
9. Have you communicated such policy in writing to all departments, offices, and facilities? *(If communicated by other means, explain.)*		
10. Have you assigned responsibility and put into effect procedures to assure that company-wide employment policy is understood and implemented by managerial, administrative, and supervisory personnel?		
11. If you sponsor or finance educational or training programs for the benefit of any employees, or prospective employees, are all such persons given the opportunity to participate without regard to race, creed, color, or national origin?		

(Continue on reverse)

Section D. — RECRUITMENT AND ADVERTISEMENT	YES	NO
12. Have all of the company's recruitment sources (other than unions) been notified that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin?		
12a. Has this been done in writing?		
13. Has each such recruitment source advised the company that it will refer all qualified applicants for employment to the company without regard to race, creed, color, or national origin?		
14. If the company recruits employees through advertising, does such advertising make clear that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin?		

Section E. — COMPANY EMPLOYMENT DATA SUMMARY

This section pertains ONLY to employment at the employer's principal office and branch establishments and employment data furnished should include ALL employees at such office and establishments.

15. EMPLOYMENT BY WORK CLASSIFICATIONS, RACE, AND SEX
(For pay period nearest 15th of month preceding that in which this report is due.)

WORK CLASSIFICATIONS (See Instruction 3)	TOTAL ALL EMPLOYEES	MALE EMPLOYEES				FEMALE EMPLOYEES			
		TOTAL MALES	MINORITY GROUPS (See Inst. 7)			TOTAL FEMALES	MINORITY GROUPS (See Inst. 7)		
			NEGRO	OTHER _____	OTHER _____		NEGRO	OTHER _____	OTHER _____
OFFICIALS AND MANAGERS									
PROFESSIONAL									
TECHNICAL									
OFFICE AND CLERICAL									
SALES WORKERS									
JOURNEYMEN AND MECHANICS									
APPRENTICES									
LABORERS									
SERVICE WORKERS									
TOTALS									

16. EMPLOYMENT STATISTICS WERE OBTAINED FROM WHICH SOURCE: ☐ RECORDS (If available) ☐ VISUAL CHECK ☐ OTHER (Specify) _____

17. REMARKS

18. DATE	SIGNATURE AND TITLE	ADDRESS
September, 14,1965	Vice President Managing Coventurer	2300 Russ Building San Francisco, Calif.94104

(Willfully false statements on this Report are punishable by law (U.S. Code, Title 18, Section 1001)

ME Form 7
2/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/22		120
"	Johnson	110
9/22	cal	220
		120M

SEP 22 1965

Mr. H. Goudey
Vice President
American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Goudey:

Even though Cortez Joint Venture at present may not have any reportable expenses under the subject contract, will you please have executed and return to us all three parts of Standard Form 41, Compliance Report - Construction. The September 15 payroll date could be used.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

GCSelfridge/gla (9-22-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
OME Region II
Mr. Selfridge

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Date: Sept. 16, 1965

Memorandum

To : Compliance Officer

From : Acting Field Officer, Region II

Subject: Equal Employment Opportunity Under Government Contracts
OME- 6436 (Silver)
Operator: Cortez Joint Ventures
Name of Property: Cortez Mine
County-State: Eureka and Lander Counties, Nevada
Contract No.: 2203

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I have obtained the following information from my visit to the operating project under the subject contract:

		Contractor	Operator
1.	Number of all employees	10	2
2.	Number of women employees	none	
3.	Number of Negro employees	none	
4.	Number of other minority groups (Indian, Latin, Oriental, etc.)	none	
5.	Was employed through a union?	no	
6.	Distance to the closest union headquarters	60 miles	
7.	Are the discrimination posters prominently displayed?	yes	
8.	If employment was through a union, was the union furnished Standard Form 38?	---	
9.	If employment was not through a union, in what manner was employment made?	solicited through newspapers	
10.	Acts of intimidation matter has been discussed with	geologist representing the operator	

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

August 30, 1965

OFFICIAL COPY
O. M. E.
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Mr. Hatfield Goudey
Vice President
American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Ventures
Cortez Mine
Eureka and Lander Counties, Nev.
Contract No. 2203

Dear Mr. Goudey:

A field trip in Nevada is tentatively scheduled for the week of September 13, 1965. An inspection of the Cortez mine will be made on September 15, 1965.

Sincerely yours,

Paul V. Fillo
Acting Field Officer
OME, Region II

cc
Chief, OME, Wash., D. C.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
8/27	Selfridge	120
	Johnson	110
8/29	CAC	220
		120

AUG 27 1965

Mr. D. J. McLean
Treasurer
American Exploration & Mining Co.
23rd Floor Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. McLean:

Pursuant to your request of August 24, 1965, enclosed are two copies each of Parts II and III of Standard Form 41, Compliance Report - Construction.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

GCSelfridge/gla (8-27-65)
cc to: Division File
Director's Reading File
Economic Geology File
Dorothy A. Bunevich, Rm. 5231 GS Bldg. w/cy incoming letr.
OME File
OME Reading File
OME Region II w/cy incoming letr.
Mr. Selfridge

23263

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

August 24, 1965

OFFICIAL COPY
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Mr. Frank E. Johnson
Chief, Office of Minerals Exploration
U.S. Department of the Interior
Washington 25, D.C.

Dear Mr. Johnson:

Re: OME 6436 (Silver) Cortez Joint Venture
Contract 2203

Anticipating that two and possibly three independent contractors will be employed by the Cortez Joint Venture, would you kindly oblige and forward two additional sets of Parts II and III of Form 41, Compliance Report.

Yours truly,

D. J. McLean
Treasurer

DJMcL:mb

Form 7
(63)

OFFICIAL FILE COPY

Date	Surname	Code
	Selfridge	120
8/3		110
		120
		120M

AUG 4 1965

Mr. H. Goudey
Vice President
American Exploration & Mining Co.
2300 Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada
Contract 2203

Dear Mr. Goudey:

Enclosed is Standard Form 41, Compliance Report - Construction, Parts I, II, and III. Will you please submit the three parts in triplicate once the work has started at the Cortez mine. As heretofore under OME-6350, Part I should reflect the employees of the Joint Venture and Parts II and III of the independent contractor. If more than one independent contractor is employed, we shall send you additional Parts II and III on request.

The form should be returned through the Regional Office as indicated.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

GCSelfridge/gla (8-4-65)
cc to: Director's Reading File
Division File
Economic Geology File
Dorothy A. Bunevich, Rm. 5231 GS Bldg.
OME File
OME Reading File
OME Region II
George C. Selfridge

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JUL 26 1965

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MR FRANK E JOHNSON CHIEF OFFCE OF MINERALS EXPLORATION

DEPT OF THE INTERIOR WASHINGTON DC

RECEIVED SIGNED CONTRACT FROM CORTEZ JOINT VENTURE, SAN FRANCISCO, CALIF., CONTRACT 2203

PAUL V FILLO

2203

BEJ 1449U

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

July 23, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
JUL 26 1965

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Memorandum

To : Chief, Office of Minerals Exploration, Washington, D. C.

From : Acting Field Officer, OME, Region II

Subject: OME-6436 (Silver) New Contract: 2203
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nev.

We are enclosing the Government's, Fiscal Section's, and Audit's signed copies of the subject contract executed by the Operator.

Paul V. Fillo

Paul V. Fillo

Enclosures

cc:
Chief, OME, Wash., D. C.

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

OFFICIAL COPY
O. M. E.
RECEIVED
JUL 26 1965
INITIALS | CODE

July 23, 1965

Mr. Paul Fillo
U.S. Dept. of the Interior
Office of Minerals Exploration
450 Golden Gate Avenue
San Francisco, Calif. 94102

Dear Mr. Fillo:

Re: O.M.E. Contract No. 2203
O.M.E. Docket No. 6436
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada

We transmit herewith:

Government's copy
Fiscal Section's copy
Audit's copy
Field Officer's copy

of the above contract. These have been executed by the managing coventurer and ratified by all coventurers. As Vernon Taylor, Jr. is presently out of the country Jean Hinshaw as Attorney in Fact has signed on his behalf. A copy of her Power of Attorney is attached to each copy of the contract.

Sincerely yours,

H. Goudey

H. Goudey

HG: jb

Encl: 4

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	GCS	
7/16	Johnson	110
7/16	CAC	220
		120M

July 15, 1965

Memorandum

To: The File

From: Assistant Chief, Office of Minerals Exploration

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada

Mr. Hatfield Goudey, vice president of American Exploration and Mining Company, called the writer today to ask two questions about the proposed contract which had been sent them. He mentioned that the contract retained the Rossi claims although no work is presently scheduled on them. The writer told him that the claims had been included because it was our understanding that the Joint Venture was going to map the area and request additional work under the contract which would be done on said claims. He also mentioned that he had talked with Mr. Smith and understood why there had been some objections to the work proposed there. He mentioned that the mapping had been done by a student, and he distinctly remembered that the map showed one quartz vein which on the ground actually trended in an opposite direction.

The second question was whether the drilling of one hole on the Rossi claims would preclude the Government from participating in further drilling if the latter drilling would be considered as development drilling. The writer told him that it would not preclude Government participation, if warranted, and that a successful hole would add to the justification for further drilling. Mr. Goudey mentioned that there was some question regarding stratigraphic thicknesses which a hole drilled on their part might solve.

Mr. Goudey was told that if the Government did not eventually participate in any work on the Rossi claims they could be removed from the land in the contract by amendment.

George C. Selfridge

George C. Selfridge

GCSelfridge/mm (7/16/65)
cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Selfridge

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OFFICIAL COPY
O. M. E.
RECEIVED
JUL 12 1965

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July 9, 1965

Mr. Hatfield Goudey, Vice President
American Exploration & Mining Co.
23rd Floor Russ Building
San Francisco, California 94104

Re: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nev.

Dear Mr. Goudey:

Enclosed are the original and four copies of a proposed contract for the Cortez mine, signed by the Acting Director for the Government.

The contract consists of MME Form 50 (7 pages), Annex I (4 pages), four Lien and Subordination Agreements, Exhibit A (5 pages), Exhibit B (1 page), and three maps (Plate 1, Fig. 2, Fig. 3).

If the proposed contract meets with the approval of you and the other coventurers, please have the coventurers sign for their respective companies on page 8 and return the following copies to this office:

Government's copy
Fiscal Section's copy
Audit's copy
Field Office's copy

The operator's copy should be retained for your files.

If any part of the proposed contract does not meet with your approval, or that of the coventurers, the original and all copies should be returned to this office together with your proposed changes for consideration. Please note that the interest of 6¼ percent in Article 1(c) of the contract accrues from the dates on which the individual payments are made by the Government and like the principal is repayable from royalty on production.

Since this contract provides for supervision and engineering services on an actual cost basis, the monthly vouchers should be accompanied by a certified copy of the payroll.

Sincerely yours,

Paul V. Fillo

Paul V. Fillo
Acting Field Officer
OME, Region II

Enclosures

cc:
Chief, Div. of Field Operations, OME, Wash., D. C.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
6/29/65	R M Smith	120
	GCS	130
6/29	[illegible]	110
		100
29	COL	220
		120M

JUN 2 9 1965

Memorandum

To: Acting Field Officer, Region II

From: Chief, Division of Exploration Operations

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada

Enclosed are the original and four copies of a proposed contract for the subject mine. The contract consists of MME Form 50 (7 pages), Annex I (4 pages), 4 Lien and Subordination Agreements, Exhibit A (5 pages), Exhibit B (1 page), and three maps (Plate 1, Fig. 2, Fig. 3). An extra copy of the contract is also enclosed for field use. All copies have been signed by the Acting Director for the Government. The date for the commencement of the work has been inserted.

If the proposed contract is satisfactory to you and the Applicant, all five copies should be signed by an authorized representative of the Applicant. Thereafter, please distribute the copies in the usual manner.

Please advise the Applicant that the 6½ percent interest accrues from the dates on which the individual payments are made by the Government and like the principal is repayable from royalty on production.

Also please inform the Applicant that because this contract provides for supervision and engineering services on an actual cost basis, the monthly vouchers should be accompanied by a certified copy of the payroll.

You will note that in Exhibit A under Description of the Work, five crosscuts to the north are allowed for drill stations. We wonder whether such a crosscut will actually be needed for DDH-3.

If any part of the proposed contract does not have your approval or that of the Applicant and cannot be altered within your delegated authority, the original and all copies are to be returned to this office together with the proposed changes for consideration.

Enclosures

RMSmith/mm (6/29/65)
cc: Director's Reading File
Review Committee
Docket

23263

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

June 22, 1965

JUN 1965
BUREAU OF MINES
OFFICE OF
MINERALS EXPLORATION
REGION II

Mr. Paul Fillo
U.S.Dept. of the Interior
Office of Minerals Exploration
450 Golden Gate Avenue
San Francisco, Calif. 94102

Dear Mr.Fillo:

Re: OME Docket No. 6436
Cortez Mine Exploration
Program

We are enclosing a xeroxcopy of a revised price list from Union Assay Office effective July 1, 1965. You will note that the price for gold and silver has been increased from $2.50 to $3.00 and that the prices for copper, lead and zinc have been increased from $1.50 each to $1.75, $2.00 and $2.00 respectively. In the subject application the price for gold and silver only is applicable and it would be appreciated if consideration could be given to these increased prices.

Union Assay has, in the face of increased costs, held the line on assaying prices for several years and I don't begrudge them the present increase. To the best of my knowledge they remain the lowest priced competent assayers in the business.

Sincerely yours,

H. Goudey

H. Goudey

OFFICIAL COPY
O. M. E.
RECEIVED
JUN 24 1965
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HG: jb
Encl:

UNION ASSAY OFFICE, Inc.
ASSAYERS & CHEMISTS
P.O. Box 1528
269 Brooklyn Ave.
Salt Lake City, Utah, 84110

JUN 22 1965
RECEIVED

PRICE LIST July 1, 1965

HAND SAMPLES

Gold	$ 3.00
Silver	3.00
Gold & Silver	3.00
Aluminum	5.00
Antimony	5.00
Arsenic	5.00
Barium	6.00
Bismuth	6.00
Copper	1.75
Cadmium	6.00
Chromium	6.00
Cobalt	6.00
Iron	1.75
Insoluble	1.75
Lime	1.75
Lead	2.00
Loss on Ignition	1.75
Magnesium	5.00
Manganese	4.00
Mercury	5.00
Molybdenum	5.00
Nickel	6.00
Silica	5.00
Phosphorus	6.00
Sulphur	1.75
Elemental Sulphur	3.00
Tin	6.00
Titanium	6.00
Tungsten	6.00
Vanadium	6.00
Zinc	2.00

Calcium Fluoride Analysis

CaF_2	$ 6.00
SiO_2	5.00
R_2O_3	2.00
$CaCO_3$	2.00

Extra wet, or, samples over 10 lbs. subject to preparation charge.

In $1.75 assays—duplicate work per sample shall be $2.75, all others 1½ times quoted charge.

Mr. Selfridge :-

Re: OME - 6436

For your information and files. — Secretary on a week vacation.

Lillo

MME FORM 6 REFERENCE SLIP

REV. [illegible]59 OFFICE OF MINERALS EXPLORATIO[illegible]

TO:	DATE	INITIALS
1. Associate Solicitor, 6042		
2. R. M. Smith, 4450		
3.		
4.		
5.		
FROM: George C. Selfridge	6/21/65	

FOR: Check items for action desired

X Action	Reply for signature of	
X Approval	Investigate	Surname
Comment	Recommendations	Signature
Conference	Rewrite	File
Instructions	Your information	

REMARKS:

INTERIOR DEPT.
JUN 22 1965
SOLICITOR

RECEIVED
JUN 2[illegible] 1965
Division of Mineral Resources
and Genenral Legal Services

F 65-2139.11
FROM SOLICITOR

JUN 28 1965

INT.-DUP. SEC., WASH., D.C. M56300-62

ATT 6/21/65
AMSmith/mm

Docket

MME Form 50
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
(Long Form)

Counties
XXXXX

Docket No. 6436 Commodity Silver Contract No. Eureka and Lander County Nevada State

OME 14-23-090-

It is agreed _____ (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and Cortez Joint Venture

2300 Russ Building, San Francisco, California 94104,

whose mailing address is _____,
hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before August 15, 1965 (Date), and, subject to the provisions of Article 9 and Exhibit A, shall either have completed the work within 12 months from the date of the contract or shall have incurred allowable costs (see Article 6) in a sum not less than the total cost set forth in Exhibit A. 75 %

(b) The total allowable cost of the work set forth in Exhibit A is $174,860.00. The Government will contribute 50 percent of the allowable costs as they are incurred, in a total sum not in excess of $131,145.00 in accordance with the provisions of Articles 3, 4, 5, and 6. "Costs incurred" means costs that have been paid or have become due and payable, or that the Government determines have become obligations.

(c) Interest computation.--Simple interest at the rate of _____ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances: See Annex I

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the lien agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows: See Annex I

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 7 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Independent contracts.--To the extent that the allowable costs are estimated in Exhibit A with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed (see Article 6(a), Category (1)). Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract, the Government will participate in payments to the independent contractor only as to work performed in accordance with the provisions of this exploration contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.-- The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government; however, the original of the Operator's Monthly Voucher shall be supported by documentary evidence, such as certified copies or transcripts of payrolls and invoices, for all costs claimed under Article 6 (a) (1).)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the related costs.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of the same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Costs.--(a) Allowable costs.--The allowable costs of the work to which the Government will contribute are limited to:

(1) the necessary, reasonable, and direct actual costs that are estimated in Exhibit A by categories as specified in this article; and

(2) fixed costs for units of work to be performed (per foot, per hour, etc.) agreed upon in lieu of actual costs and set forth in Exhibit A.

The Government will not contribute to costs under any category or subcategory omitted from the estimate of costs in Exhibit A. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost; any excess over a fixed unit cost; and any excess over the total allowable cost of the work are not allowable. The Operator shall incur such excesses for his own account without contribution by the Government, but the Operator is not obligated to incur more than his agreed percentage of the total allowable cost of the work.

Any category or subcategory or element thereof not designated as a maximum in this article or in Exhibit A may be exceeded, provided that the total allowable cost of the work, which is a maximum, is not exceeded.

CATEGORY (1)--INDEPENDENT CONTRACTS.--(See Article 3(b)). The total of this category and the average unit cost estimated for each type of work to be performed under an independent contract are maximums.

CATEGORY (2)--PERSONAL SERVICES.

Subcategory (a)--Supervision and Technical Services--All elements of this subcategory (number of supervisors, technicians, outside consultants, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)--Labor.

CATEGORY (3)--OPERATING MATERIALS AND SUPPLIES.--Includes such items as drill bits and steel, explosives, fuel, pipe, power, timber, rail, and small tools costing less than $50 each.

CATEGORY (4)--OPERATING EQUIPMENT.

Subcategory (a)--Rental.--The number of each rented item [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)--Purchases.--The total of this subcategory is a maximum.

Subcategory (c)--Depreciation.--All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)--INITIAL REHABILITATION AND REPAIRS.--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

Subcategory (a)--Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).--The total of this subcategory is a maximum.

Subcategory (b)--Initial rehabilitation and repairs of operating equipment.--The total of this subcategory is a maximum.

CATEGORY (6)--NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

CATEGORY (7)--MISCELLANEOUS.--Includes requirements and costs that do not fall within any of the first six categories, such as repairs other than initial and maintenance of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, and communications.

(b) Nonallowable costs.--In addition to the limitations imposed by paragraph (a) of this Article 6 the Government will not contribute to the following costs:

(1) Costs of the land, such as rental, depreciation, depletion, or other costs of acquiring, owning, or holding possession;

(2) Indirect costs, such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) Previous work performed or costs incurred before the date of this contract; and

(4) Deferred payments.--Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods, unless the purchase agreement is approved by the Government in writing.

(c) Reductions in costs.--The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original total cost. The provision does not apply to receipts from production which are subject to the Government's royalty under the provisions of Article 7.

ARTICLE 7. Repayment by Operator.--(a) Certification.-- If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retains his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certicifation of possible production--from the date of the contract until the lapse of the time within which the government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of twelve years from the date of the contract, or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or Producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination or the market value, whichever is greater.

(e) Lien for payment.--To secure the payment of royalty (see Article 7(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be contrued as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 8. Interests in purchased property.--(a) Title and ownership.--All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions although title thereto shall be taken in the name of the Operator.

(b) Preservation of property.--Until the final disposal of any property in which the Government has an interest, the Operator shall preserve and protect same for the best interest of the Government, and any reasonable and necessary cost thereof will be treated as an allowable cost of the exploration. After the completion of the work, termination of the Government's obligation to contribute, or when such property is not being used for the work, the Operator shall not use it elsewhere without the written consent of the Government and without paying a reasonable rental to be fixed by the Government for its proportionate interest.

(c) Disposal of property.--Upon the completion of the work, termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, sale to others, purchase by the Operator, or sale or transfer to the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government, the Operator shall not sell at any price any item of property that cost more than $500, and shall not sell at less than 25 percent of the purchase price any item of property that cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or offers. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, explosives, pipe, or rail), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item, the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the exploration.

(d) Default of the Operator re disposal.--If within 90 days after the completion of the work, termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may:

(1) in writing extend the time within which the Operator must dispose of or liquidate the property;

(2) by written notice to the Operator, place upon such property what it determines to be a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; and

(3) enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 9. Termination of the Government's obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 9 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 13.

ARTICLE 10. Notices to be given by the Government may be delivered to the Operator, or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 11. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 12. Nondiscrimination in Employment. The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961 as amended and supplemented are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 13. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 14. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for

liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 15. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 16. Changes and added provisions.--

_____

_____

_____

_____

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

_____
(Operator)
CORTEZ JOINT VENTURE

By_____

By_____

Title_____

_____

I, _____, certify that I am the
(Name)

_____ secretary of the corporation named as Operator herein; that

_____, who signed this contract on behalf of the Operator, was then
(Name)

_____ of said corporation; that said contract was duly signed for
(Title)

and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

_____

[CORPORATE SEAL]

Docket

SECOND DRAFT
6/21/65

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

ANNEX I

The land, including all rights pertaining thereto, referred to in Article 2 of the contract consists of thirty-eight (38) patented lode mining claims, known as the Cortez Metals patented claims, twenty-six (26) unpatented lode and placer mining claims, known as the Cortez Metals unpatented claims, and fifteen (15) unpatented lode mining claims known as the Rossi claims, in secs. 4, 5, 7, and 8, T. 26 N., R. 48 E., and in adjoining unsurveyed sections in T. 27 N., R. 48 E., MDB&M, Cortez mining district, Eureka and Lander Counties, Nevada. The outer boundary of the claims is outlined in green on Plate 1, entitled " . . . "Cortez Joint Venture . . . Area of proposed Cortez mine exploration . . . ," attached hereto and made part hereof.

The patented claims are recorded in the Office of the County Clerk and Recorder, Eureka, Nevada, as follows:

		Book	Pages
Arctic	Eureka	11	595-97
Avalanche	"	12	558-60
Adjunct	"	13	544-45
Alta	"	13	546-47
Bewick	"	13	566-67
Cummings	"	11	586-88
Central Consolidated	"	13	50-52
Conclave	"	13	562-63
Compressor	"	13	44-46
Conjunction	"	13	570-71
Chance	"	20	276-79
DeValla	"	13	550-51
Equator	"	13	558-59
Eclipse	"	13	542-44
Excelsior	"	13	53-55
Fitzgerald	"	11	589-91
Garrison	"	11	583-85
Hidden Treasure	"	13	554-55
Idaho	"	11	598-600
Junction	"	11	580-82
Jeanette	"	13	47-49
Kingsbury	"	13	564-65
Lead	"	20	276-79
Moreang	"	13	556-57
Monarch	"	13	552-53
Meteor	"	13	585-86
Mt. Tenabo	"	13	560-61
Premium	"	11	592-94
Pontifex	"	13	548-49
Protection	"	13	574-75
Prevision	"	13	572-73
Quartzite	"	20	276-79
Rosebush	"	20	276-79
Remnant	Eureka	13	587 ~~587~~-88
St. Louis	"	11	601-03
Speculation	"	13	540-41
Summit	"	13	568-69
Millsite - Cortez	"	19	462-63

2

The Cortez Metals unpatented claims are partly in Eureka County and partly in Lander County. They are recorded as appropriate either in the Office of the Eureka County Clerk and Recorder, Eureka, Nevada, or in the Office of the Lander County Clerk and Recorder, Austin, Nevada, as follows:

Claim	County	Book	Page
Alert	Eureka	H	270
Alpha	"	G	416
Beta	"	G	416
Bullion	Lander	18	153
Columbian	Eureka	H	271
February	"	H	267
Free Coinage	"	H	272
Gamma	"	G	415
George	"	H	276
Gold Bug	"	H	273
Ivanhoe	"	H	266
Legal Tender	"	H	265
London	"	H	274
Martinez	Lander	10	46
New	Eureka	H	269
Oversight	"	H	269
Queen	"	H	275
Residue	"	J	208
Residue No. 1	"	J	209

Residue No. 2	Eureka	J	209
Security	"	H	264
Silver State	"	H	268
Tough Lode	"	H	277
Blue Streak Placer	Lander	18	155
Cash In Placer	"	18	154
Wheel of Fortune Placer	"	18	155

The Rossi claims are recorded in the Office of the County Clerk and Recorder, Eureka, Nevada, as follows:

Claim	Book	Page
Mockingbird No. 1	K	198
Mockingbird No. 2	K	199
Mockingbird No. 3	K	199
Mockingbird No. 4	K	200
Mockingbird No. 5	M	1
Mockingbird No. 6	M	1
Juniper No. 1	K	197
Juniper No. 2	K	197
Juniper No. 3	K	197
Juniper No. 4	K	198
Juniper No. 5	K	340
Juniper No. 6	K	340
Juniper No. 7	4	118
Juniper No. 8	4	119
Juniper No. 9	4	120

The Operator has rights to the patented claims and to the Cortez Metals unpatented claims under the terms of an assignment from American Exploration and Mining Co. executed June 5, 1964. The Operator has rights to the Rossi claims under the terms of an assignment from American Exploration and Mining Co. executed February 20, 1965.

The American Exploration Co. has rights to the patented claims and to the Cortez Metals unpatented claims under the terms of a mining lease and option executed August 18, 1959, and amended September 16, 1959, by the owner, Cortez Metals Company, c/o Thomas Cooke, P. O. Box 2229, Reno, Nevada. The American Exploration Co. has rights to the Rossi claims under the terms of a lease and option agreement executed May 11, 1964, by the owners, Louis L. Rossi, P. O. Box 164, Winnemucca, Nevada, Antonio A. Rossi, and Birdie Rossi, Winnemucca, Nevada.

Copies of the two assignments and of the two lease and option agreements cited above are contained in the docket of this contract and are made a part hereof by reference.

Two Lien and Subordination Agreements, each covering the patented claims and the Cortez Metals unpatented claims, one executed March 25, 1965, by Cortez Metals Company, and the other May 18, 1965, by American Exploration and Mining Co., and two additional Lien and Subordination Agreements covering the Rossi claims, one executed February 20, 1965, by Louis, Tony, and Birdie Rossi, and the other March 15, 1965, by American Exploration and Mining Co. are attached hereto and made part hereof.

A special "Agreement Concerning Royalty" is added as follows:

"Notwithstanding the certification provisions of Article 7, and with no further action required on the part of the Government, the Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, or his successor, shall pay to the Government a royalty on any production, regardless of origin, that is transported through any new workings to the cost of which the Government has contributed, or any portion of said workings, for the same period as is described in Article 7(b)(2) of the contract and pursuant to the terms of Article 7(c) et seq. However, in no event shall more than one royalty be due or paid on the same production.

"In the event that production from outside the boundaries of the land described in Article 2 is transported through the workings described above, and neither the Operator nor any subsidiary or affiliate thereof has an interest in said production, the Government shall be paid by the Operator the fixed rate of 5 percent of the total transportation charges received by the Operator."

SECOND DRAFT 6/21/65

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

EXHIBIT A

The purpose of this project is to explore by rehabilitation, drifting, crosscutting, and underground core drilling in and along the No. I dike-fissure zone on the Arctic level of the Cortez mine for silver-bearing replacement ore bodies in the Cambrian Hamburg and the Ordovician Hanson Creek dolomites, and for silver-bearing veins in the Ordovician Eureka quartzite.

It is agreed that the Operator at its sole expense will complete the rehabilitation hereinafter mentioned; upon completion of which, the Government will participate to the extent of 75 percent in the approved costs of not to exceed 2,640 feet of drifting and crosscutting, 3,400 feet of underground diamond core drilling, and 1,220 and 880 assays for gold and silver and for copper, lead, and/or zinc, respectively.

General Provisions

All drifts and crosscuts shall be not less than 6 by 8 feet in cross section in the clear of timber and shall be timbered as necessary, using standard drift sets of not less than 8- by 8-inch timber, or equivalent round timber, and/or appropriate roof bolts. The drifts and crosscuts shall be ventilated using pipe or tubing of not less than 12-inch diameter. Mine rails shall be of not less than 20-pound size, air lines of not less than 4-inch diameter, and water lines of not less than 1-inch diameter.

All significantly mineralized areas traversed by the drifts or crosscuts shall be sampled normal to their trends at linear intervals of not more than ten feet. In addition, a representative bulk sample may be taken of each round broken. Each sample shall be split as necessary and one split shall be assayed for gold and silver, and for copper, lead, and/or zinc as warranted. The remaining split shall be stored in a suitable container for Government inspection and possible use.

All core drill holes shall be completed not less than standard AX core size (approximately 1-1/8") or equivalent wireline size. Facilities shall be provided for recovering drill sludge, and such sludge shall be retained when drilling in significantly mineralized ground. The drill core shall be stored in boxes identified by hole number with markers in the core sections indicating the depths represented.

Significantly mineralized core shall be split and one split shall be assayed in the manner previously mentioned. Whenever the core recovery is found to be less than 60 percent, a split of the corresponding retained sludge and a split of such core as may have been recovered shall be assayed separately and the assay results combined according to standard practice to represent a single sample. The remaining core shall be stored in proper sequence with any unsampled core, and the remaining sludge shall be stored in suitable containers properly identified as to source

and location. The stored core and sludge samples shall be made available for Government inspection and possible use. The Operator may dispose of the stored samples, from whatever source, with prior Government approval, confirmed in writing.

All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing assays shall be furnished monthly to the Government.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly report which shall also include a map or sketch showing the work completed during the reporting period, the locations of all samples taken, and the general geological formations and structures traversed by the work performed.

The Operator shall employ a full-time supervisor-engineer-geologist and such labor as may be required to complete the work in a satisfactory manner. The Government will contribute only to that portion of monthly salaries or daily wages representing the time spent on the project work by the various employees.

No work under this contract shall be performed closer than 200 feet to the outer boundary of the land outlined on Plate 1.

The location, direction, and extent of each work item shall be subject to Government approval.

Description of the Work

The initial work under this project shall consist of rehabilitating the Arctic crosscut adit, the Arctic raise, and the east and west drifts along the No. 1 dike-fissure zone on the Arctic level.

From its present face continue the East drift ~~XXXX~~ on or if ground conditions necessitate along side of the No. 1 dike-fissure zone for approximately 1,700 feet or about 300 feet beyond the contact of the Eureka quartzite. Continue the West drift similiarly for approximately 300 feet.

Starting near the contact of the Eureka quartzite in the East drift, drive crosscuts both northerly and southerly an aggregate distance of approximately 500 feet. In addition, from the ends of the completed drifts and from four intermediate points at about 400-foot intervals along the East drift, drive five crosscuts northerly and three southerly an aggregate of approximately 140 feet for drill stations. The station at the east end of the East drift shall consist of a crosscut 15 feet long or the equivalent volume of raising.

From the drill stations drill a total of 13 core drill holes for an aggregate of not to exceed 3,400 feet. The holes will range from 200 to 450 feet in length to explore the walls of the No. 1 dike-fissure zone; and in addition, five of the holes will explore the carbonate rocks above and below the Eureka quartzite. The holes are to be drilled ~~XXXXXXXXXXXXXXXX~~ approximately as follows:

Drill Hole Numbers	Bearing ~~XXXXXXXXXX~~	Inclination ~~XXXXXX~~	Depth
DDH- 1	S. 9 W.	Horizontal	200'
DDH- 2	N. 9 E.	"	200'
DDH- 3	North	"	450'
DDH- 4	N. 15 E.	"	300'
DDH- 5	S. 14 W.	"	200'
DDH- 6	N. 14 E.	"	250'
DDH- 7	S. 15 W.	"	200'
DDH- 8	N. 15 E.	"	200'
DDH- 9	S. 65 E.	+45°	200'
DDH-10	N. 65 E.	-45°	250'
DDH-11	Vertical	-90°	250'
DDH-12	S. 65 E.	+65°	300'

The approximate locations of the drifts, crosscuts, and drill holes are indicated in red on Figure 2, entitled " . . . Plan Map Arctic Level," and on Figure 3, entitled " . . . Longitudinal Section of Cortez Mine . . . ," attached hereto and made part hereof.

Estimated Cost of the Project

* - Indicates a maximum

Actual Costs

Category (1) Independent Contracts

Mobilization and demobilization, equipment, men, and materials for driving drifts and crosscuts	$ 5,000.00*
Supported drifting and crosscutting, 2,640 feet @ $43.50/ft.	114,840.00
Mobilization and demobilization - one drill unit	535.00
Core drilling, 3,400 feet	21,500.00

Depth	Size	Carbonate rock	Siliceous rock
0 - 200'	BX	$5.25/ft.	$6.25/ft.
	AX	5.00	6.00
200 - 400'	BX	5.50	6.60
	AX	5.25	6.35
400 - 600'	BX	5.75	7.10
	AX	5.50	6.85

Compressed air for core drilling 3,400 feet @ $0.60/ft.	2,040.00
Cementing drill holes, 110 hours @ $11.60/hr.	1,276.00

Cement, mud, lost circulating materials used in drilling	1,456.00	
Reaming - any size, 500 feet @ $2.25/ft.	1,125.00	
Lost casing, 150 feet @ $2.00/ft. 1/	300.00	
Moving drill between holes, 50 hours @ $11.60/hr.	580.00	
Standby time requested by Operator, 25 hours @ $11.60/hr.	290.00	
		$148,942.00

Category (2) Personal Services

None except:

Subcategory (a) Supervision and Technical Services

1 Supervisor-geologist-engineer,	8,800.00	

Subcategory (b) Labor

1 Laborer, 110 days @ $21.66/day (rounded)	2,385.00	$11,185.00

Category (3) Operating Materials and Supplies

None except:

Cardboard core boxes, 340 @ $1.00/each	340.00	$ 340.00

Category (7) Miscellaneous

None except:

Payroll taxes, F.I.C.A., insurance, etc. @ 18% of payroll (rounded)	2,013.00	$2,013.00
Total Estimated Actual Costs		$162,480.00

Fixed Unit Costs

Bulldozer for road maintenance,		
180 hours @ $16.00/hr.	$ 2,880.00	
Rental of one Jeep 60 miles/day @ $0.15/mile,		
242 days @ $9.00/day	2,178.00	
Rental of one water truck, 3,600 miles		
@ $0.25/mile	900.00	
1,220 samples assayed for gold and silver		
@ $3.00/each sample	3,660.00	
880 samples assayed for copper, lead, and/or		
zinc @ $1.75/each element	1,540.00	
Transportation and sacks, 1,220 samples		
@ $0.10/each sample	122.00	
Office expenses, 11 months @ $100.00/mo.	1,100.00	
Total Estimated Fixed Unit Costs		$ 12,380.00
Total Estimated Costs of the Work		$174,860.00
Government Participation @ 75%		$131,145.00

1/ The Government will not contribute to the cost of casing left in place at the request of the Operator.

DRAFT 6/14/65
R. M. Smith/mm

Use Long Form

Docket Copy

MME Form 51
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
~~(Short Form)~~

Docket No.	Commodity	Contract No.	County	State
OME -6436	Silver	14-23-090-	Eureka and Lander	Nevada

It is agreed _____ (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Cortez Joint Venture,

whose mailing address is 2300 Russ Building, San Francisco, California, 94104, hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before ~~July 1, 1965~~ August 15, 1965 (Date), and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within 12 months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the work is $ ~~169,000.00~~ 174,860.00 The Government will contribute ~~50~~ 75 percent of the total fixed unit costs of the work performed, not in excess of $ ~~126,750.00~~ 131,145.00 in accordance with the provisions of Articles 4 and 5.

(c) Interest computation.-- Simple interest at the rate of _____ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

See Annex I

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the Lien Agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

See Annex I

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.--The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. To the extent that amounts in excess of fixed unit costs or in excess of the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such amounts for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Repayment by Operator.--(a) Certification.--If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retain his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certification of possible production--from the date of the contract until the lapse of the time within which the Government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ~~ten~~ 12 years from the date of the contract or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used in integrated manufacturing or fabricating operations (for instance if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) Lien for payment.--To secure the payment of royalty (see Article 6(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such pruchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 7. Termination of the Government's Obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to pay on account of units of work not then performed; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 7 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 11.

ARTICLE 8. Notices to be given by the Government may be delivered to the Operator or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 9. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. Nondiscrimination in Employment.--The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961, as amended and supplemented, are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 11. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 12. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 13. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 14. Changes and added provisions.--

_____

_____

_____

_____

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

_____
(Operator)

By_____

Title_____

By_____

I, _____, certify that I am the
(Name)

_____ secretary of the corporation named as Operator herein; that

_____, who signed this contract on behalf of the Operator, was then
(Name)

_____ of said corporation; that said contract was duly signed for
(Title)

and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

_____

[CORPORATE SEAL]

INT.-DUP. SEC., WASH., D.C. 31011

DRAFT RMSmith/mm
6/11/65

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

ANNEX I

The land, including all rights pertaining thereto, referred to in Article 2 of the contract consists of thirty-eight (38) patented lode mining claims, known as the Cortez Metals Patented Claims, twenty-six (26) unpatented lode and placer mining claims, known as the Cortez Metals unpatented Claims, and fifteen (15) unpatented lode mining claims known as the Rossi Claims, in secs. 4, 5, 7, and 8, T. 26 N., R. 48 E., and in adjoining unsurveyed sections in T. 27 N., R. 48 E., MDB&M, Cortez mining district, Eureka and Lander Counties, Nevada.

The patented claims are recorded in the Office of the County Clerk and Recorder, Eureka, Nevada, as follows:

Pl

The outer boundary of the claims listed above is outlined in green on Plate 1, entitled " . . . Cortez Joint Venture . . . Area of proposed Cortez mine exploration . . .," attached hereto and made part hereof.

DRAFT 6/14/65
RMSmith/mm

EXPLORATION CONTRACT
CORTEZ JOINT VENTURE
OME-6436

EXHIBIT A

The purpose of this project is to explore by rehabilitation, drifting, crosscutting, and underground core drilling in and along the ~~Cortez~~ dike-fissure zone for silver-bearing replacement ore bodies in the Cambrian Hamburg and Ordovician Hanson Creek dolomites, and for silver-bearing veins in the Ordovician Eureka quartzite.

General Provisions

The Government will contribute only to that part of the rehabilitation which immediately precedes the drifting and only to the extent shown as a Fixed Unit Cost in the Estimated Cost of Project.

All drifts and crosscuts shall be not less than 6 by 8 feet in cross section in the clear of timber and shall be timbered as necessary, using drift sets of not less than 8-by 8-inch timber, or equivalent round timber. The drifts and crosscuts shall be ventilated using pipe or tubing not less than 12-inches in diameter. Mine rails shall be of not less than 20-pound size, air lines of not less than 4-inch diameter, and water lines of not less than 1-inch diameter.

All core drill holes shall be completed not less than standard AX core size (approximately 1-1/8"). Facilities shall be provided for recovering drill sludge, and such sludge shall be retained when drilling in significantly mineralized ground. The drill core shall be stored in boxes identified by hole number with markers in the core sections indicating the depths represented.

All significantly mineralized areas traversed by the drifts or crosscuts shall be sampled normal to their trends at linear intervals of not more than ten feet. In addition, a representative bulk sample may be taken of each round broken. In no event shall an individual sample represent more than ten linear feet of the areas traversed by the drifts and crosscuts. Each sample shall be split and one split shall be assayed. The remaining split shall be stored in a suitable container for Government inspection and possible use.

Significantly mineralized core shall be split and one split shall be assayed. Whenever the core recovery is found to be less than 60 percent, a split of the corresponding retained sludge and a split of such core as may have been recovered shall be assayed separately and the assay results combined according to standard practice to represent a single sample. The remaining core shall be stored in proper sequence with any unsampled core, and the remaining sludge shall be stored in suitable containers properly identified as to source and location. The stored core and the sludge samples shall be made available for Government inspection and possible use. The Operator may dispose of the stored samples, from whatever source, with prior Government approval, confirmed in writing.

Each sample, from whatever source, shall be assayed for gold and silver, and for ~~base metals~~ as warranted.

water

Insert I

It is agreed that the Operator at its sole expense will complete the rehabilitation hereinafter mentioned; ~~after~~ upon completion of which, the Government will participate to the extent of 75 percent in the approved costs of not to exceed 2,640 feet of drifting and crosscutting, 3,400 feet of underground diamond core drilling, and 1,220 and 880 assays for gold and silver and for copper, lead, and/or zinc, respectively.

Insert II The Operator shall employ a full time supervisor-engineer-geologist and such labor as may be required to complete the work in a satisfactory manner. The Government will contribute only to that portion of monthly salaries or daily wages representing the time spent on the project work by the various employees.

5489
1800 equipment
3689 materials

3600
1800
5400

1800

2640
43.50
132000
7920
105600

5489
800
7289

7300
5300
2000

3800
2500
1300

50 miles

40% OME
60% A

114,840.00

60
13 | 800
78

3800
5.80
30400
19000
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200
13
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200
2600 @ 6.25
800 @ 6.60
5280.00

6.25
2600
375000
1250
16250.00
5280
21,530

48
11.60
2880
48
5568.0

3400
.60
2040.00

11.60
25
58000
2320
2900.00

22
5
110

880
880
680

500
2.25
1125.00

21.66
110
21660
21660
2382.60

30
80
2400 miles
2400
$600

2400 miles
1200 miles
3600

1.5
60
90.0

242
9
2178

22
11
22
22
22
242

8800
2382.60
11,182.60
18
89460800
11182600
2012.8680

All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing assays shall be furnished monthly to the Government.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly report which shall also include a map or sketch showing the work completed during the reporting period, the locations of all samples taken, and the general geological formations and structures traversed by the work performed.

Insert II

~~The Operator shall provide such supervisory and technical services as may be required to complete the work in a satisfactory manner.~~

No work under this contract shall be performed closer than 200 feet to the outer boundary of the land outlined on Plate 1.

The location, direction, and extent of each work item shall be subject to Government approval.

Description of the Work

The initial work under this project shall consist of rehabilitating the Arctic crosscut adit, the Arctic raise, and the east and west drifts along the No. 1 dike-fissure on the Arctic level.

From the face of the east drift continue the drift eastward approximately 1,400 feet to and approximately 300 feet beyond the contact of the Eureka quartzite.

From the present face continue the East drift on or underground conditions necessitate along side of the No. 1 dike-fissure zone for approximately 1,700 feet or about 300 feet beyond the contact of the Eureka Quartzite.

Continue the West drift similarly for approximately 300 feet.

From the face of the west drift continue the drift approximately 300 feet westward along the No. 1 dike-fissure zone.

Starting near the contact of the Eureka quartzite in the east drift, drive crosscuts both northerly and southerly an aggregate distance of approximately 500 feet. In addition, from the ends of the completed drifts and from four intermediate points at about along the east drift, drive five crosscuts northerly and three southerly an aggregate of approximately 140 feet for drill stations. The station at the east end of the east drift shall consist of a crosscut 15 feet long or the equivalent volume of raising.

From the drill stations drill a total of 13 core drill holes for an aggregate ~~distance of~~ 3,400 feet. The holes shall explore the walls of the No. 1 dike-fissure zone and in addition, five of the holes shall explore the carbonate rocks above and below the Eureka quartzite. The holes are to be drilled approximately as follows:

The approximate locations of the drifts, crosscuts, and drill holes are indicated in red on Figure 2, entitled " ,. . Plan Map Arctic Level," and on Figure 3, entitled ". . .Longitudinal Section of Cortez Mine . . .," attached hereto and made part hereof.

Estimated Cost of Project

Fixed Unit Costs

Mobilization and demobilization, mining equipment	$ 3,000.00
Mobilization and demobilization, 1 drill unit	535.00
Rehabilitation Arctic level and Arctic raise	4,375.00
Drifting and crosscutting, 2,640 feet @ $40.00/ft.	105,600.00
Incidental allowance for drifting and crosscutting 2,640 feet @ $1.50/ft.	3,960.00
Core drilling, 13 holes, 3,400 feet	19,618.00

Depth	Size	Carbonate rock	Siliceous rock
0 - 200'	AX - AXWL	$5.00/ft.	$6.00/ft.
	BX - BXWL	5.25	6.25
200 - 400'	AX - AXWL	5.25	6.35
	BX - BXWL	5.50	6.60
400 - 600'	AX - AXWL	5.50	6.85
	BX - BXWL	5.75	7.10

Moving drill between holes, 50 hrs. @ $11.60/hr.	580.00
Cementing drill holes, 110 hrs. @ $11.60/hr.	1,276.00
Core drilling materials (cement, lost casing, mud, etc.)	1,756.00
Core drilling water and compressed air 3,400 feet @ $1.00/ft.	3,400.00
Core drilling incidentals, 3,400 feet @ $0.30/ft.	1,020.00
Road maintenance, 180 hrs. @ $16.00/hr.	2,880.00
Personal services, 11 months @ $880/month	8,800.00
Personal services, 120 days @ $21.66/day	2,600.00

Table of drill holes Informational ID-24

Estimated Cost of the Project.
*- Indicates of maximum

Actual Costs

Category (1) Independent Contracts.

Mobilization and demobilization, equipment, men, and materials for drawing drifts and crosscuts $5,000.00*

Supported drifting and crosscutting 2,640 feet @ $43.50/ft 114,840.00

1 Mobilization and demobilization, one drill unit 535.00

2 Core drilling 3,400 feet 21,500.00

Copy these from p5 Estimated costs

8 Moving drill between holes, 50 hrs. @ $11.60/hr. 580.00

6 Reaming-any size, 500 feet @ $2.25/ft. 1,125.00

7 Lost casing, 150 feet @ $2.00/ft. 300.00

4 Cementing drill holes, 110 hours @ $11.60/hr. 1,276.00

9 Standby time requested by Operator, 25 hours @ $11.60/hr. 290.00

5 Cement, mud, lost circulating materials used in drilling 1456.00

3 Compressed air for core drilling-3400 feet @ $0.60/ft. 2,040.00

~~Total estimated actual cost~~

~~Bulldozing, road maintenance 80 hrs @ $16.00/hr.~~ 148,942.00

Category (2) Personal Services

None except:

OVER.

18%
1/2 of 1% under over. bulldozer stove
water
love

Subcategory (a) Supervision and Technical Services
1- Supervisor-geologist-engineer
11 months @ $800.00/month 8,800.00

Subcategory (b) Labor
1- Laborer, 110 days @ $21.66/day (rounded) 2,385.00 $11,185.00
~~$11,182.00~~

Category (3) Operating Materials and Supplies
None except:
Cardboard core boxes, 340 @ $1.00/each 340.00 $340.00

Category (7) Miscellaneous
None except:
Payroll taxes, F.I.C.A. insurance, etc.
@ 18% of payroll (rounded) 2,013.00 $2,013.00
Total Estimated Actual Costs 162,480.00

accounting 90 .25/mile 8800 2385

480.00
477.47
2.53
2.13
2.40
382.60
2.40
00

Fixed Unit Costs

Bulldozer for road maintenance,
180 hours @ $16.00/hr. 2,880.00

Rental of one Jeep 60 miles/day @ $0.15/mile,
242 days @ $9.00/day 2178.00

Rental of one water truck, 3,600 miles
@ $0.25/mile 900.00

1,220 samples assayed for gold and
silver @ $3.00/each sample 3,660.00

880 samples assayed for copper,
lead, and/or zinc @ $1.75/each element 1,540.00

Transportation and sacks, 1220 samples
@ $0.10/each sample 122.00

Office expenses, 11 months @ $100.00/mo. 1100.0

12,380.00

Total Estimated Fixed Unit Costs

174,860.00

Total Estimated Costs of the Work

Government Participation @ 75% 131,145.00

1 The Government will not contribute to the cost of casing left in place at the request of the Operator

Transportation, 11 months @ $400/month	4,400.00
Assays for gold and silver, 1,220 @ $3.00/assay	3,660.00
" " base metals, 880 @ $1.75/assay	1,540.00
Total Estimated Cost of Project	$169,000.00
Government Participation @ 75%	$126,750.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

May 27, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
MAY 28 1965

INITIALS	CODE
	130
	120

AIR MAIL

Memorandum

To : Chief, Division of Field Operations, OME, Washington, D. C.

From : Acting Field Officer, OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada

Enclosed are the original and one copy of the Field Examination Report on the subject application. The primary objectives are: (1) to explore along the strike of the No. 1 dike-fissure fault in an easterly direction in hopes of encountering a cymoid loop of ore localization; (2) to test the area where the intersection of the No. 1 dike-fissure and the Eureka quartzite occurs by crosscutting and diamond drill, short, horizontal holes from the Arctic level; and, (3) to test the westerly extension of the No. 1 dike-fissure zone and its intersection with the Premium fault by drifting and drilling short, horizontal, diamond drill holes.

The program will cost about $191,749.00 of which the Government's share at 75 percent will be $143,811.75.

With reference to your letter of April 23, 1965 on the above subject, we are enclosing the Lien and Subordination Agreements for the Arctic, et al, claims signed by Amex. In my report I have allowed some monies for rehabilitation of the mine, and for mobilization and demobilization of the mining equipment.

In regards to the 15-foot drill station, the applicant felt the area required for a drill station would be equivalent in cubic feet to a drift 15' X 6' X 8'.

The applicant believes that the one deep drill hole, which he had scheduled under Stage I, should be included to test the area for mineralization where the Premium fault intersects with the Hamburg and Eldorado formations. This deep drill hole continues to be under discussion. I gave the information to the applicant for his consideration as you instructed.

The Rossi property will be re-studied and re-evaluated by the applicant with hopes of preparing a more comprehensive geological map that would indicate a favorable target area to explore.

Under personal services one sampler was dropped from the program. It was

decided to split and assay all the core drilling because the possibility ? of finding ore is highly favorable in that formation.

The air line will be 4 inches in diameter; the rail, 20-pound; the water line, 1 inch in diameter; and the ties will be 3-foot centers.

Since the deep drilling is disallowed, it is felt that three trips per day with the water truck would be adequate for the mining and the short-hole diamond drilling operations.

Under Operating Equipment, the applicant feels that three vehicles are needed because the supervisor has extra duties pertaining to the project other than those that occur during the regular hours. what?

The size bulldozer being considered by the applicant is an International TD-24. I have used the item of incidental cost of $.15 per foot of drilling for miscellaneous costs for your consideration. It appears that very little, if any, roof bolting will be required for this program.

The applicant has received a notice from Union assay office in Salt Lake City that a new price on assaying will be in effect June 1, 1965. Gold and silver will be $3.00 per assay and base metals assays will be $1.75 each. The exploration work warrants a program with Government assistance.

Paul V. Fillo

Paul V. Fillo

Enclosures

cc:
Chief, Div. of Field Operations, OME, Washington, D. C.

UNITED STATES
DEPARTMENT OF THE INTERIOR
STEWART L. UDALL, SECRETARY

OFFICE OF MINERALS EXPLORATION

REPORT OF EXAMINATION

by

ACTING FIELD OFFICER
REGION II

APPLICATION REPORT

OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada

by

Paul V. Fillo
Acting Field Officer
Office of Minerals Exploration

May 26, 1965

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I L L U S T R A T I O N S

Figure 1----------Location Map

Figure 2----------Plan Map of Arctic Level

Figure 3----------Longitudinal Section of Cortez Mine

INTRODUCTION

An application for OME assistance was submitted by Cortez Joint Venture, 2300 Russ Building, San Francisco, California, 94104, in which a loan is requested for further exploration of the Cortez mine located approximately 38 miles southeast of Beowawe in Lander and Eureka Counties, Nevada. The application was assigned Docket No. 6436, and referred to this office on March 30, 1965 for consideration.

The application includes an estimated total cost of $326,034.52 to perform exploration work that is programed in two stages. The work under Stage I consists of 3,890 feet of rehabilitation; 2,000 feet of drifting; 500 feet of crosscutting; 2,700 feet of underground, short, horizontal, diamond drill holes; one 1,800 foot underground, vertical, diamond drill hole; and three surface diamond drill holes located southeast of the adjoining Cortez mine property, known as the Rossi property. Under Stage II, the work consists of two deep, vertical, diamond drill holes totaling 4,800 feet; 240 feet of crosscut for a drill station; and two 40-foot raises for drill stations.

A field examination was made by Paul V. Fillo, Acting Field Officer, OME, Region II, on March 19, 1965, accompanied by Robert G. Garwood, geologist, and Jack Oberbillig, mining engineer, representatives of the Cortez Joint Venture.

SUMMARY

The Cortez mine is located within a thick section of moderately dipping, Paleozoic formations which crop out in prominent relief along the western front of Mount Tenabo. The ore bodies occur mostly in fissure

veins and manto-type replacements within the upper 400 feet of the Cambrian Hamburg dolomite, and as fissure veins in the overlying Eureka quartzite. Some ore was mined from the replacement deposits near the basal section of the Hansen Creek dolomite which overlies the Eureka quartzite. The most productive sedimentary host rock to date at the Cortez mine is the Hamburg dolomite. The Eldorado dolomite was found by deep diamond drilling, and there is a possibility that this can also be a major host rock for ore as was proven in the Eureka district, Eureka, Nevada.

The important structures in the mine are the northeasterly trending fault systems and southeasterly trending fault and/or dike systems. Ore in fissure veins is associated with some of the southeast striking structures. Manto ore bodies and pipe-like high-grade ore bodies have been localized closely under or above the Eureka quartzite where it is intersected by the No. 1 dike-fissure zone. The character samples taken of the No. 1 dike-fissure zone assay a silver average of about 26 oz. per ton.

i.e. ore is along NW faults & dikes

The applicant proposes to explore the easterly extension of No. 1 dike-fissure zone and its intersection with the Eureka quartzite by drifting, crosscutting, and short-hole diamond drilling on the Arctic level; by deep diamond drilling from the Arctic level to test the Eldorado dolomite at the down-rake projection of the No. 1 dike-fissure; and by surface diamond drilling on the adjoining Rossi property to test for manto-type ore bodies under the Eureka quartzite. The chances of finding ore bodies on the Arctic level, along the strike of the No. 1 dike-fissure, and on the Hamburg Eureka quartzite contact, near the

intersection with the No. 1 dike-fissure, are favorable.

RECOMMENDATIONS

The program of exploring the occurrences of relatively high-grade silver ore along the strike of the No. 1 dike-fissure appears reasonably justified. I recommend that the Government enter into an OME contract with Cortez Joint Venture to provide 75 percent of the costs of a program consisting of:

3,400 feet of underground diamond drilling

2,500 feet of crosscutting and drifting (6' X 8' in the clear)

9 underground drill stations (140' drift)

The total cost is estimated to be about $191,749.01 of which the Government's share at 75 percent would be $143,811.76. Eleven months will be required to complete the contract. To facilitate administration of the contract, the work should be based on footage fixed unit costs.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The Cortez mine is located near the middle of the boundary line between Lander and Eureka counties, approximately 38 miles by road from the nearest settlement, Beowawe, Nevada (Fig. 1). Truck transportation and Southern Pacific and Western Pacific rail facilities are available there.

The property may be reached from Beowawe by traveling south on paved State Highway 21, 20.6 miles; then turn left (posted sign, "Dean Ranch") on a graded, gravel road and travel in an easterly direction; then take the right fork of the road and travel to the south 9.5 miles (mouth of Cortez Canyon), continue on through the canyon 3.2 miles; then turn left onto an ungraded, dirt road and travel 1.6 miles to the property of the old Cortez camp.

The property is located in secs. 4, 5, 7, and 8, T. 26 N., R. 48 E.,

MDBM, near the middle of the boundary line between Eureka and Lander counties, Nevada. Experienced mine labor and supplies are available in Battle Mountain and Elko, 60 miles northwest and 80 miles northeast respectively. Winter operation in the area is sometimes impeded because of snow; access may be difficult, but year-round operation is considered feasible. Water for mining and diamond-drilling operations is available from diamond drill holes, Nos. 7 and 8, on the Pixie claims five miles from the Arctic portal tunnel.

PROPERTY 1/ 2/

History and Production

The first mineral discovery of the Cortez ore zone was made on the west end of the property in 1863. One of the original locators was Simeon Wenban, and shortly after his discovery he sold half of his holdings to Hearst and operated under the name of the Tenabo Mill and Mines Company. Later, Wenban and Hearst acquired several mining properties, including the Fitzgerald and Arctic mines, totaling approximately 690 acres of mineral land.

An eight stamp mill was built in Mill Canyon a year after the discovery of the Cortez ore zone; subsequently, it was enlarged to 16 stamps and four roasting furnaces. In 1864 a discovery was made near the present Garrison shaft, and by 1886 a chloridizing roasting plant, followed by leaching with sodium hyposulphite solution, was constructed near the Garrison Mine and operated continuously to about 1903. The production of the Cortez

1/ Vanderburg, W. O. U.S. Dept. of Interior, Bureau of Mines, I.C. 7022 June 1938, pp. 22-26.

2/ Applicant's report.

district from 1863 to 1903, according to the records, was about $10 million. From 1903 through 1936, the property was worked intermittently by different owners and lessors. Records by the Bureau of Mines show that over 4 million ounces were produced during this period.

The Garrison tailings dump, reported to contain 125,000 tons, was retreated by cyanidation from 1908 to 1915. From 1923 through 1930, Consolidated Cortez Silver Mines Co. mined and milled about 185,000 tons of silver ore which averaged over 13 ounces per ton. In recent years (1941 - 1959), small scale leasing operations have been carried on intermittently. Since 1959 the American Exploration and Mining Co. and Cortez Joint Venture have reopened many of the workings and have partly rehabilitated the No. 1 level.

Ownership

The Cortez Joint Venture controls seven parcels of mineral land in the Cortez Mining District, but the OME exploration program only covers the Cortez Metals Co.'s property and the adjacent Rossi group of claims. The Cortez Metals Co.'s property, c/o Thomas Cooke, P.O. Box 229, Reno, Nevada, is controlled by the Cortez Joint Venture through an assignment from American Exploration and Mining Co., dated June 5, 1964. Amex acquired control by a mining lease and option dated August 18, 1959, amended September 16, 1959.

The Rossi property is controlled by the Cortez Joint Venture through an assignment from American Exploration and Mining Co. dated February 20, 1965. Amex acquired control of this property by an option and agreement dated May 11, 1964. The address of the owner of the Rossi property is:

Mr. Louis L. Rossi, P.O. Box 164, Winnemucca, Nevada. Since the patented and unpatented claims lie near the middle of the boundary line between Eureka and Lander counties, the claims in Lander County are recorded in the Office of the County Clerk and Recorder in Austin, Nevada. For Eureka County, the claims are recorded in the Office of the County Clerk and Recorder in Eureka, Nevada. In the proposed exploratory work, the following claims would be subject to Government royalty and liens:

Patented Mining Claims	County	Book	Page
Arctic	Eureka	11	595-97
Avalanche	"	12	558-60
Adjunct	"	13	544-45
Alta	"	13	546-47
Bewick	"	13	566-67
Cummings	"	11	586-88
Central Consolidated	"	13	50-52
Conclave	"	13	562-63
Compressor	"	13	44-46
Conjunction	"	13	570-71
Chance	"	20	276-79
DeValla	"	13	550-51
Equator	"	13	558-59
Eclipse	"	13	542-44
Excelsior	"	13	53-55
Fitzgerald	"	11	589-91
Garrison	"	11	583-85
Hidden Treasure	"	13	554-55
Idaho	"	11	598-600
Junction	"	11	580-82
Jeanette	"	13	47-49
Kingsbury	"	13	564-65
Lead	"	20	276-79
Moreang	"	13	556-57
Monarch	"	13	552-53
Meteor	"	13	585-86
Mt. Tenabo	"	13	560-61
Premium	"	11	592-94
Pontifex	"	13	548-49
Protection	"	13	574-75
Prevision	"	13	572-73
Quartzite	"	20	276-79
Rosebush	"	20	276-79

Patented Mining Claims	County	Book	Page
Remnant	Eureka	13	287-88
St. Louis	"	11	601-03
Speculation	"	13	540-41
Summit	"	13	568-69
Millsite - Cortez	"	19	462-63

Unpatented mining claims of Cortez Metals are as follows:

Unpatented Mining Claims	County	Book	Page
Alert	Eureka	H	270
Alpha	"	G	416
Beta	"	G	416
Bullion	Lander	18	153
Columbian	Eureka	H	271
February	"	H	267
Free Coinage	"	H	272
Gamma	"	G	415
George	"	H	276
Gold Bug	"	H	273
Ivanhoe	"	H	266
Legal Tender	"	H	265
London	"	H	274
Martinez	Lander	10	46
New	Eureka	H	269
Oversight	"	H	269
Queen	"	H	275
Residue	"	J	208
Residue No. 1	"	J	209
Residue No. 2	"	J	209
Security	"	H	264
Silver State	"	H	268
Tough Lode	"	H	277
Blue Stack Placer	Lander	18	155
Cash In Placer	"	18	154
Wheel of Fortune Placer	"	18	155

Unpatented mining claims of the Rossi Property are as follows:

Unpatented Mining Claims	County	Book	Page
Mockingbird No. 1	Eureka	K	198
Mockingbird No. 2	"	K	199
Mockingbird No. 3	"	K	199
Mockingbird No. 4	"	K	200
Mockingbird No. 5	"	M	1
Mockingbird No. 6	"	M	1
Juniper No. 1	"	K	197
Juniper No. 2	"	K	197

Unpatented Mining Claims	County	Book	Page
Juniper No. 3	Eureka	K	197
Juniper No. 4	"	K	198
Juniper No. 5	"	K	340
Juniper No. 6	"	K	340
Juniper No. 7	"	4	118
Juniper No. 8	"	4	119
Juniper No. 9	"	4	120

Financial Eligibility

Accompanying the application, the applicant submitted evidence showing that they were unsuccessful in securing a loan from two banking institutions for exploration purposes. The applicant (Cortez Joint Venture) is comprised of four associates and each of them has agreed to furnish only their share of the 25 percent of $326,034.52 as his contribution to the cost of the proposed OME project.

Mine Development

The property was developed extensively by a number of adits, shafts, and lateral workings. Entry to the lower portion of the mine is made by two adits, namely the Garrison or No. 1 level and the Arctic level. A vertical distance in excess of 1,000 feet was developed, starting from the top of the No. 7 level and extending downward from levels No. 6 through No. 1 and the Arctic level (1,000 foot level). From the Arctic level, an incline shaft extends 240 feet vertically below the level. From this shaft, two levels have been established, 98 and 217 feet vertically below the collar. At various levels there are several minor sub-levels.

The No. 1 level and the Arctic level are accessible, dry, and in good operating condition. Timber is required only for chutes, winzes, and occasional support in stopes. No mining machinery nor equipment of any value is on the Cortez property. There are three small buildings in

dilapidated condition, but they have no significant value for mine use.

GEOLOGY 3/

Geologic Setting

The property is located in the southwest end of the Cortez Range, on the southwest slope of Tenabo Peak. The Cortez mine lies within the Cortez window or fenster. Cambrian to Devonian rocks have been positioned by localized doming and then exposed by basin and range faulting (Crescent Valley and Cortez faults). The movement along the Cortez vault develops a series of northeast and southeast striking, and north to east dipping, faults. The northeast and southeast striking structure probably have been cut and displaced by the Cortez north-south striking fault, which in turn has been displaced by the east-west striking Crescent Valley fault. The district is underlain principally by lower Paleozoic rocks all of which are Devonian or older. The rocks include limestone, quartzite, and shale which were intruded by a variety of igneous rocks and overlain by basalts and rhyolites. The intruded rocks include granodiorites, quartz monzonites, quartz diorites, dacites, and andesites.

Tenobo Peak is composed of limestone and quartzite which are intruded by granitic rocks and porphyries. The main ore production was mined in the Hamburg dolomite formation and the balance was mined in the Eureka quartzite and the overlying Hanson Creek limestone formations.

The stratigraphic sequence is as follows:

Age	Formation	Thickness in feet	Character
Ordovician	Hansen Creek	300 +	Limestone with thin beds of dolomite
Ordovician	Eureka	300 +	Quartzite

3/ Emmons, W. H. Reconnaissance of Mining Camps in Elko, Lander and Eureka Counties, Nevada. U.S.G.S. Bull. 408, 1910, pp. 99-110.

Age (Contd.)	Formation	Thickness in feet	Character
Cambrian	Hamburg	1800	Dark gray massive dolomite
Cambrian	Secret Canyon	200 (?)	Limestone
Cambrian	Eldorado	1000 +	Dolomite

The formations mentioned above form a monocline which is exposed in the cliffs above the Cortez mine. The strike is north and the dip is about 30° east. The monoclinal structure has been cut by several minor fractures and faults having relatively small throw, but along a considerably low angle a strike slip movement seems to have taken place. The important faults occur in a zone along with most of the main ore bodies and some dikes are found. It appears that these faults extend throughout the entire length of the mine which is several thousand feet. The average strike of these is about N 60° west and the dip is about 70° - 75° to the northeast although in places the faults are vertical. There are also numerous minor faults, fractures and joints where little or no displacement occurs and does not seem to fit any particular fracture system or pattern. These are usually near the main fault zone. In the Cortez mine, the structures are northeasterly trending fault systems and southeasterly trending fault and/or dike systems.

Ore Deposits

The ore occurs in an irregular replacement and most of the ore produced from the Cortez mine was obtained along the main fault or fracture zone, referred to as the No. 1 dike-fissure ore zone. The ore bodies are localized principally along dikes and faults and to some extent form mantos at the base of the Eureka quartzite. Vein-like deposits are formed in the quartzite formation.

The mineralization in the Cortez mine consists of fine-grained, light gray, or milky white quartz, which in some places contains galena, sphalerite, and tetrahedrite with silver values. The oxidized ore is composed of silver chloride, copper carbonates, and iron and manganese oxides. Values are chiefly in silver.

Sampling

For the record, samples were taken along the No. 1 dike-fissure zone on the No. 1, No. 2, Arctic levels, and the Hog Trail raise. The assay results are shown below:

Sample No.	Charcter Sample:	Percent Pb.	Ounces Au.	Ounces Ag.
5601	From No. 1 level near Caps Break	0.4	0.015	0.30
5602	From No. 1 level near Rutledge incline	1.3	0.020	78.60
5603	From No. 2 level near Hog Trail raise	2.9	0.140	1.10
5604	From above No. 2 level near Hog Trail raise	14.8	0.080	55.30
5605	In the Hog Trail raise between Nos. 1 & 2	12.4	0.080	144.40
5606	4-foot chip sample as shown on Fig. 2	0.4	0.020	2.60
5607	At the face where drifting will start,Fig.2	0.3	0.010	3.40
5608	From the Arctic level, Fig. 2	0.4	0.015	22.60
5609	From the Arctic level, Fig. 2	0.3	0.005	5.10
5610	Grab sample from dump on Rossi property	4.8	0.050	20.30
5611	Of tailings from chloridizing, roasting	1.7	0.030	7.70
5612	" " " "	2.1	0.030	16.20
5613	" " " "	1.8	0.010	5.50
5614	" " " "	2.3	0.010	5.80

Ore Reserves

No reserves of any class are estimated for the Cortez mine in the workings now open for inspection. Future production will be dependent upon the discovery and development of new manto-type ore bodies and the drifting along the No. 1 dike-fissure zone in the limestone of new ore bodies. Below the old Cortez mill site, it is stated by the applicant that there is estimated to be 150,000 tons of tailings averaging from 3 to 5 ounces of silver.

EXPLORATION

The applicant proposes to test four target areas in or near the old Cortez silver mine. The areas are designated in the application on Plates 2, 6, and 10.

The project is in two stages. Under Stage I, the work consists of mobilization and demobilization of mining equipment, 3,890 feet of underground rehabilitation, the laying of dump track, 2,000 feet of drifting, 500 feet of crosscutting, 40 feet of raising for the No. 12 deep diamond drill hole, 125 feet of timbering, 8 underground diamond drill stations which are estimated to be equivalent to 100 feet of drifting with a 6' X 8' opening, 2,700 feet of underground short-hole diamond drilling, and 3 surface diamond drill holes on the adjacent property (Rossi) for a total of 3,050 feet. The Stage II program will depend on the results of the deep diamond drill hole under Stage I. The work consists of two deep, underground, diamond drill holes totaling 4,400 feet.

The proposed division of this work is as follows:

Stage I:

Mining Contract

3,890 feet of rehabilitation	
2,000 feet of drifting and crosscutting	
40 feet of raising	
100 feet of drifting (drill stations)	
Total	$147,191.08

Drilling Contract

2,700 feet of underground diamond drilling--short holes	
Total	19,159.50

Drilling Contract (Contd.)

1,800 feet of underground diamond drilling--deep hole		
	Total	$ 15,491.00
3,050 feet of surface diamond drill holes		
	Total	63,495.30
Personal Services		22,562.88
Operating Services		5,235.00
Operating Equipment		6,720.00
Miscellaneous		16,534.62
	Total Cost of Stage I	$261,738.88

Stage II:

Mining Contract

240 feet of crosscutting 80 feet of raising		
	Total	$13,334.00

Drilling Contract

4,400 feet of underground diamond drilling--deep holes		
	Total	38,236.40
Personal Services		3,976.32
Operating Material & Supplies		4,532.00
Operating Equipment		812.00
Miscellaneous		3,404.42
	Total Cost of Stage II	$64,295.64

The total amount of the applicant's proposed project is:

Stage I	$261,738.88
Stage II	64,295.64
TOTAL	$326,034.52

The above costs for drilling are based on one diamond drill unit for the underground short-hole diamond drilling, one diamond drill unit for underground deep-hole drilling, and one diamond drill unit for surface deep-hole drilling. The minimum work-week rate on the contract is a double shift per five-day work week. Since the mining operation is scheduled for two shifts per day, a six-day work week including the drilling work is being considered.

The applicant's estimated costs for drifting, crosscutting, and raising appears to be satisfactory, although the independent contractor did not show how his cost per foot was derived. The E. J. Longyear drill bid was the lowest bid submitted. It stated that the work will be completed to the standards set forth and that the job will be completed without undue delay.

The applicant's cost estimate was calculated on straight footage basis. The rehabilitation work on cost per foot is reasonable, but number of units is so large that OME cannot justify it as an exploration cost. The underground and surface deep drilling is considered prospecting and will also be disallowed. The drifting, crosscutting, and underground short-hole diamond drilling will be considered for OME assistance in this report.

The following table shows the drill hole number, inclination, estimated depth, and the objective; (Figs. 2, 3): size BX to AX.

Proposed Drilling Schedule

Stage I

Applicant's Drill Hole Numbers	Bearing		Depth	Objective
DDH- 1	Horizon	S 9 W	200'	To test the extension of No. 1 dike-fissure zone and its intersection with the Eureka quartzite.
DDH- 2	"	N 9 E	200'	"
DDH- 3	"	North	450'	"
DDH- 4	"	N 15 E	300'	"
DDH- 5	"	S 14 W	200'	"
DDH- 6	"	N 14 E	250'	"
DDH- 7	"	S 15 W	200'	"
DDH- 8	"	N 15 E	200'	"
DDH- 9	+45°	S 65 E	200'	"
DDH-10	-45°	N 65 E	250'	"
DDH-11	-90°	Vertical	250'	"
DDH-12	+65°	S 65 E	300'	To test the Hanson Creek formation from the Eureka formation.
DDH-13	+25°	S 65 E	400'	"
	Total Footage		3,400'	

The applicant's cost estimate on drifting and crosscutting appears to be satisfactory in warranting an exploration program. The work involved consists of 2,000 feet of drifting, 500 feet of crosscutting, and 9 drill stations which are equivalent to approximately 140 feet of drifting. The applicant's interpretation of a 15-foot drill station is the cubic footage of 6 X 8 X 15 = 720 cu. ft.

The drift work will be along the No. 1 dike-fissure zone in an easterly direction for 1,700 feet, 300 feet in a westerly direction in the vicinity of the Premium fault, and 500 feet of crosscutting along or near the contact of the Hamburg dolomite and the Eureka quartzite to

explore for manto-type ore bodies.

Cost Estimate

The following estimated costs of drifting, crosscutting, and diamond core drilling are suggested for two shifts per day, 6-day week:

Independent Contracts

Mining Contract

Detailed Labor Cost

	per hour	per day
Miner	$3.00	$24.00
Trammer	2.75	22.00
Surface man	2.50	20.00
Mechanic	3.30	26.40
Supt.	4.50	36.00

Arctic level 2,640 feet, 2 shifts per day, 6-day week, 37 weeks: = 6 ft/shift = 8½ mo.

	per week		37 weeks	
6 Miners	$1,036.00	588	$38,332.00	21,756.00
2 Trammers	272.80	275	10,093.60	10,175.00
1 Surfaceman	130.00	✓	4,810.00	✓
1 Mechanic	171.60	✓	6,349.20	✓
OK Supt.	196.00		7,252.00	✓
			$66,836.80	50,342.20

$$\frac{66,836.80}{2640 \text{ ft.}} = \$25.31 \text{ per foot}$$

Drifting and crosscutting, materials and supplies, 2,640 feet:

Rail, #20, (5,000 ft.) (24' lengths) 16 2/3 tons ✓ @ 225/T, 2500' track @ $.90?? 3751 @ 50% salvage =	$ 2,250.00	1,875.50
Ties, (4'X 6' X 4) 3' centers, $100/bdft. 8 bdft./tie, 833 X 8 = 8,364	836.40	✓
Fish plates, 262 pairs @ $.46 = 92 @ 50% sal.	120.52	✓
Track bolts, 1048 @ $.055 no salvage	57.64	✓
Track spikes (5,500) 13.13/cwt. 9.16 X 13.13 low ?	120.27	✓ ?
4" air line @ $1.06/ft. = $2.12 X 50% sal high ?	2,650.00	✓
1" water line @ $.16/ft. = .32 X 50% sal. "	400.00	✓
	$ 6,434.83	6,060.33

16.67 T
$ 225
$ 3750.75

$17/cwt
incl. coup., hangers
" " "

(Contd.) (carried over) $ 6,434.83 6060.33

Vent tube, 12" @ $.65/ft. = 50%			1,625.00
Switches, 2 @ $25.00 = 50%			50.00
Timber (125 ft.),			
2 posts,	8 X 8 X 7'	70 bdft.	
1 cap,	8 X 8 X 6'	32 "	
21 lagging,	2 X 12 X 5'	210 "	
2 spreaders,	6 X 8 X 5'	40 "	
		352 "	
	10% waste	35 "	
		387 "	
25 X 387 =	9,675 bdft. @ $100/Mbdft.		967.50
Wedges @ $2.20/bundle X 6			13.20
Drill steel, $1.25/ft.			3,300.00
Bits, $.65/ft.			1,716.00
Powder (22-hole round), @ $3.85 per foot			10,164.00
Caps (22 @ $.035) .128/ft.			337.92
Safty fuse, 10'/hole, 220 ft., 1.50/c' @ .55/ft.			1,452.00
Diesel fuel - for power @ $1.00/ft. gallons ?			2,640.00 ?
Gasoline, motor oil, drill lube. @ $.33/ft. ?			871.20 ?
Small tools			300.00
		Total	$29,871.65 29,497.15

$$\frac{29,871.65}{2640 \text{ ft.}} \doteq \$11.31 \text{ per foot}$$

Operating equipment to be furnished by the independent contractor,

Ponderosa Development Company, Ltd.: Bid = $ 43.50/foot including Timber (est. 5% = 132 ft.)

	315	
3 months	1	600 c.f.m. Compressor Drill
11 months	1	315 c.f.m. Compressor Mining
	1	Eimco 21 Mucking machine
	1	7-ton Battery Locomotive with charger
	12	2½- to 3-ton side dump cars
	1	2-drill Jumbo complete
	4	Jack legs, complete spares ?
	15	Elect. lamps with charger
	1	Single Drum Tugger
"		600-ft. air hose
		600-ft. water hose
	2	Fans
	1	Elect. generator, size unknown
	1	Arc Welder
	1	Acetylene Welding set
	1	Timber car

1-Air saw
1-Chain saw
2-Jim Crows
2-Air Receivers, size unknown

4,800 for 3 months $240.00
19,200 for 9 months 2880
$3,120.00

Depreciation:

Estimated value of the equipment is $24,000.

$$\frac{24,000}{60} = \$400 \times 8 = \$3,200$$

$$\frac{\$3,200}{2640 \text{ ft.}} = \$1.21 \text{ per foot}$$

Miscellaneous

Repair parts	$800.00	800.00
out Accounting, phones, $50/mo.	400.00	0
Workman's Compensation payroll, F.I.C.A., Unemployment Compensation, 18% X $66,836.80	12,030.62	9,061.60
50,342.20	$13,230.62	9,861.60

$$\frac{\$13,230.62}{2640 \text{ ft.}} = \$5.01 \text{ per foot}$$

Summary of Mining Costs

2640 feet of Crosscutting and Drifting

	per foot	Total	
Labor	$25.31	66,836.80	50,342.20
Supplies & Materials	11.30	29,872.25	29,497.15
Depreciation	1.21	3,200.00	3,120.00
Repairs, Acc't. Compensation, etc.	5.01	13,230.62	9,861.60
Low Bid 43.50	$42.83	$113,139.67	92,820.95
actual cost	35.18		
Profit 15%	5.28		
	40.46		

Mining Contract

Mobilization & Demobilization Bid = $7,289.58	3,000.00	3,000.00
750' @ $5.80 Rehabilitation, second exit (300' raise) and Arctic level Bid = $22,013 (5.80/ft)	4,375.00	4,350.00
Drifting 2,000 feet @ $42.83/ft. Bid = $43.50	85,660.00	
Crosscutting 500 feet @ $42.83/ft.	21,415.00	
9 drill stations equiv. to 140' of drifting @ 42.83/ft.	5,996.20	
excluding profit transport, accounting Total Cost	$120,446.20	

Diamond Drilling Contract -- E. J. Longyear, 13 holes (3,400 ft.): = 262' ea.

Mobilization and demobiliation, 1 drill unit Bid 535 $ 673.60 535.00
incl. 1 set set up.

BX

Footage Rates	Dolomite 2400 feet	Quartzite 1000 feet
0' - 200'	$5.25	$6.25
200' - 400'	5.50	6.60
400' - 600'	5.75	7.10

max { 2400' @ $5.50 = 13,200
1000 @ 6.60 6,600

19,542.50

9 stations
8 moves

Moving onto hole, 6 hrs/hole, ~~78~~ 48 hrs. @ $11.60/hr. $ 904.80 556.80 556.80

Lost casing, 10 ft./hole @ $2.00/ft. (13 holes) 260.00 260.00

Cementing @ $.38/ft. 340 feet 1,292.00 1,292.00

Mud and lost circulation materials used in drilling .44/ft. 1,496.00 1,496.00

Compressed air @ .60/ft. (too low) 2,040.00 2,040.00

Reaming for casing — none

Drilling out cement — included above

5,992.80 5,644.80

Personal Services

see Mining supv.

1 Supervisor, Geol., & Engr. 11 mos. X 880/mo. 8,800.00 8800 Mining 8,935.10

1 Geologist-Engr. ~~11~~ 2 mos. X 625/mo. 6,875.00 1250 Drilling -2,414.90

1 Sampler 228 @ $21.66/day 4,938.48 1300
core-splitter 60 days

11,350 20,613.48

Prorate Mining 87 Drilling 10

Operating Materials & Supplies

Water, (Mining) (2640 ft.)
1 load/day, 6 days/week, 40 weeks X 6 = 240 lds.

$$\frac{240}{3} = 80 \text{ days}$$

30 mi. X .25 = $7.50

Driver's wages (Incl. P.T. & I.) = $23.40

$30.90

80 X 30.90 = $2,472.00 2,472.00 mining

$$\frac{2,472.00}{2640 \text{ ft.}} = \$.93 \text{ per foot}$$

add to misc.

Water, 3,400 feet of underground
short-hole diamond drilling
2 loads/day, 6 days/week, 10 weeks X 12 = 120 loads

$$\frac{120}{3} = 40 \text{ days}$$

40 X 30.90 = $1,236.00 — 1,236.00 Drilling

$$\frac{1,236}{3,400 \text{ ft.}} = \$.36 \text{ per foot}$$

Operating equipment

Transportation of personnel and supplies
Vehicles average 70 miles, 240 days = 40 weeks : 9 1/4 mo.

out	2 Jeeps, 33,600 mi. X .15 =	$5,040.00	
	1 Pickup 16,800 mi. X .10 =	1,680.00	
	1 Jeep 16,800 mi. X .15	2,520.00	6,720.00 4,200.00

Miscellaneous

	Assaying		
	Gold and silver @ $3.00		
	Drill core sample 340 X 3.00 =	1,020.00	
	Mine assays 880 X $3.00 =	2,640.00	separate
	Base metal assay @ $1.75, 880 X 1.75 =	1,540.00	
		(Sub-total)	(5,200.00)
	Sample Sacks		
2500	1150 X 0.03 =	34.50	75.00
1220	Freight on samples, 1150 X 0.05 =	57.50	61.00
	Core boxes, 340 X 1.00 =	340.00	
	Accounting, 11 mos. @ ~~$70~~ 36/mo. =	770.00	396.00
	Prints, Reproduction, Reports, 11 mos. X $50 =	550.00	
Bids?	Road Maintenance 5hrs/week? 180 hrs. @ $16/hr. =	2,880.00	separate
indicate of what contingency? what for	Payroll taxes, Compensation, etc. 18% X ~~20,613.48~~ 11,350 =	3,710.43	2,043.00
	Incidental allowance for each foot of hole completed, 3,400' 3,400 @ 0.15 =	510.00	No

$ 14,052.43

Summary of Total Costs

Mining	$120,446.20
Diamond Drilling	26,208.90
Personal Services	20,613.48
Operating Services	3,708.00
Operating Equipment	6,720.00
Miscellaneous	14,052.43
Estimated Total Cost	$191,749.01

Incidental Costs as used in contract

	Drift & XC	Drill	Total
	2640 ft.	3400 ft.	
	6 ft/shift		
	2 shifts/day		
	6 days/week		
	37 weeks	10 weeks	
Prorate	3.7 ::	1	
Water haulage	$ 2472	(sep. unit cost)	
Sample sacks	52	$ 23	
Express	44	17	
Core boxes		340	
Accounting			$ 396
Reports			550
Payroll charges			2043
Prorata	3354	635	2989
Total	4,922	1,015	
Est. Cost/foot	$ 1.49	$ 0.30	
rounded to	1.50		

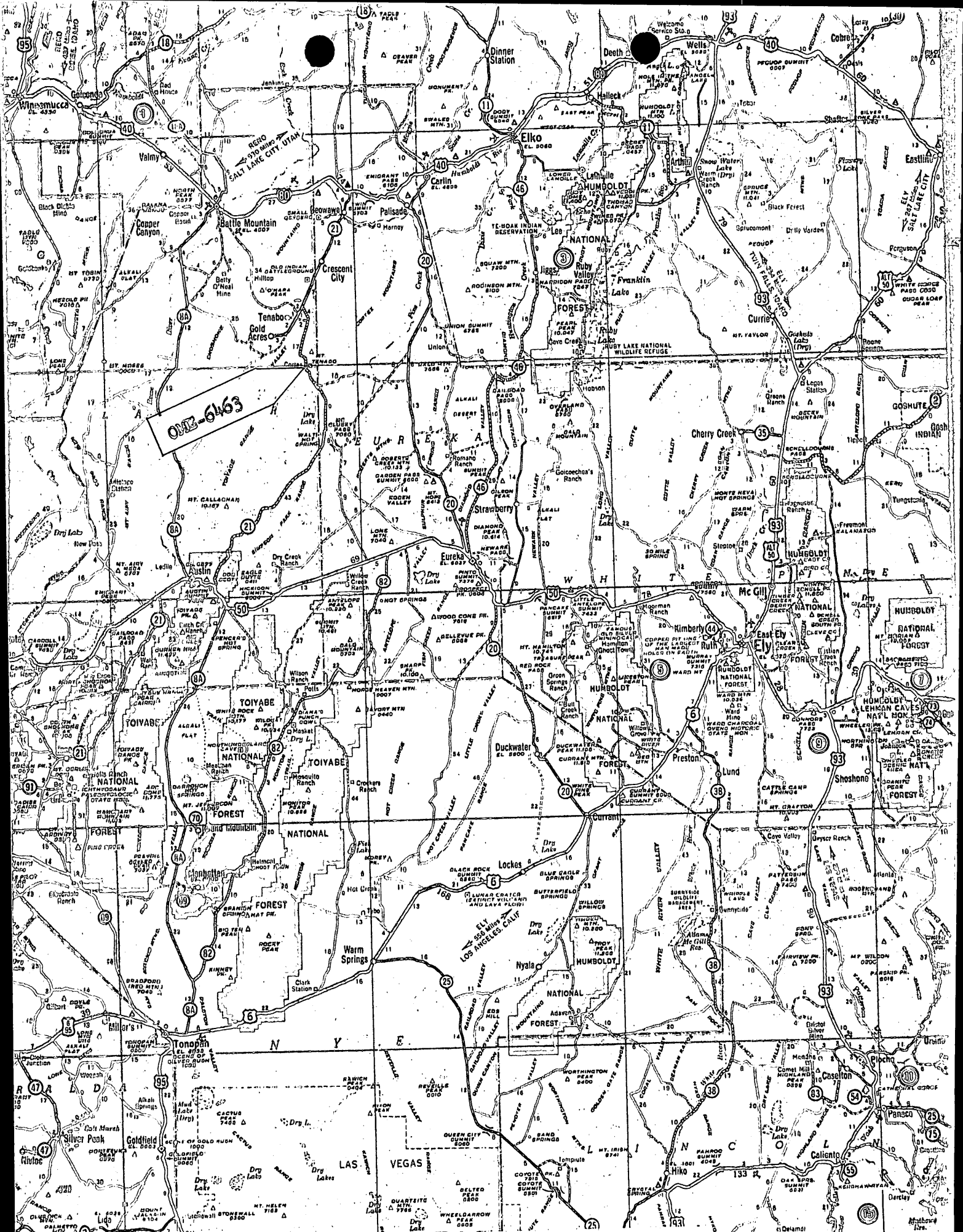

FIGURE 1 - LOCATION MAP

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

May 17, 1965

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120

Memorandum

To : Chief, Division of Field Operations, OME, Washington, D. C.

From : Acting Field Officer, OME, Region II

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine
Eureka and Lander Counties, Nevada

Enclosed are copies of letters from each of the joint venture members, stating that they would not participate to a greater extent than their proportionate share. The examination report is in preparation and it should be completed within 10 days with a favorable recommendation.

Paul V. Fillo

Paul V. Fillo

Enclosures

cc:
Chief, Div. of Field Operations, OME, Wash., D. C.

THE BUNKER HILL COMPANY

BOX 29, KELLOGG, IDAHO 83837 TELEPHONE SU 4-1261 AREA CODE 208

May 3, 1965

American Exploration and Mining Company
23rd Floor Russ Building
San Francisco 4, California

Gentlemen:

Considering the proposed additional cost of $326,034.52 for exploring the ore potential of the Cortez Mine and the Rosse' property. Bunker Hill is of the opinion that the venture should seek OME funds to the extent of 75% of the above figure.

While the results of the previous venture expenditures on the Cortez and Rosse' properties have been encouraging Bunker Hill is not inclined to put up more than 25% of its 2/9 share of this $325,034.52 program.

Yours truly,

Robert J. McRae

R. J. McRae
Senior Exploration Engineer

RJMcR/jh
cc: CARL

WEBB resources, inc.
1645 COURT PLACE
DENVER, COLORADO 80202
PHONE: 266-3751

May 4, 1965

American Exploration & Mining Co.
23rd Floor Russ Building
San Francisco, California 94104

Re: Cortez Joint Venture
OME Docket No. 6434

Gentlemen:

While we believe the Cortez mine has excellent exploration targets, we are in agreement with the other joint venturers that OME assistance should be applied for. We are willing to provide our 25% of 2/9ths of $326,034.52 as our contribution to the cost of the proposed OME project.

Due to the speculative nature of the program and notwithstanding the excellent exploration possibilities, we would not finance the proposed further exploration in an amount in excess of our proportionate part of the expenditure under the OME project and our proportionate part of minor expenditures during the program which cannot be covered thereunder.

Very truly yours,

J. H. Cazier
President

JHC/ayg

5/10

MAY - 7 1965
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CHAPMAN, WOOD AND GRISWOLD LTD.
MINING ENGINEERS AND GEOLOGISTS
133 EAST 14TH STREET
NORTH VANCOUVER, BRITISH COLUMBIA

E. P. CHAPMAN, JR.
JOHN A. WOOD
G. R. GRISWOLD

TELEPHONE: 987-9371
CABLE ADDRESS: CHAPWOLD

May 5, 1965

Mr. H. Goudey, Vice President
American Exploration & Mining Co.
23rd Floor Russ Bldg.
San Francisco, California 94104

Dear Mr. Goudey:

Re: Cortez Joint Venture
Eureka and Lander Counties, Nevada

On behalf of Mr. Vernon Taylor, Jr., who is participating in the venture in the proportion of 2/9 of the whole, I have reviewed the proposed program and budget forecast for 1965.

In regard to the proposed expenditure of $326,000 on the Cortez Mine Exploration Project, it is my opinion that, although the underground exploration targets are reasonably attractive prospects, expenditure of the proposed total amount by the Venture Partners is not presently justified due to the high speculative nature of the project.

I would not be inclined at present to approve expenditure by the Venture Partners in excess of approximately one-fourth of the $326,000 requested.

Sincerely yours,

John A. Wood

John A. Wood

Representing Mr. Vernon F. Taylor, Jr.
Cortez Joint Venture Management Committee

5/10

AMERICAN EXPLORATION & MINING CO.

CABLE ADDRESS: "DRAGA"
TELEPHONE EXBROOK 2-4992

23RD FLOOR RUSS BUILDING
SAN FRANCISCO, CALIF. 94104

MAY 1965
BUREAU OF MINES
OFFICE OF
MINERALS EXPLORATION
REGION 11

May 10, 1965

Mr. Paul Fillo
U.S.Dept. of the Interior
Office of Minerals Exploration
450 Golden Gate Avenue
San Francisco, Calif. 94102

Dear Mr.Fillo:

Re: O.M.E. Docket No. 6434
Cortez Mine Exploration
Program

We are enclosing for your information xerox copies of the letters we have received from the three other coventurers regarding expenditure on the above named exploration program.

Yours sincerely,

Joan Birdwell

Joan Birdwell

Secretary to Mr. Goudey

jb

Encl:3

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
4/23	R.M. Smith	120
		130
4/23	Johnson	110
		~~100~~
"	Hill	220
		120M

AIRMAIL

APR 23 1965

Memorandum

To: Acting Field Officer, Region II

From: Chief, Division of Exploration Operations

Subject: OME-6436 (Silver)
Cortez Joint Venture
Cortez Mine and Rossi Property
Eureka and Lander Counties, Nevada

In reply to your memorandum of April 2, 1965, transmitting the subject application and indicating a favorable recommendation, we wish to raise the following questions for consideration in your report of examination.

Lien and Subordination Agreements. We are returning two sets of agreements for the Mockingbird, et al., claims, one set of which also includes the Alert, et al., Claims. Both sets are signed by Cortez Joint Venture, but we do not require Lien and Subordination Agreements from the Applicant. Missing from the application is one set of agreements for the Arctic, et al., claims signed by Amex. If a contract is granted, they will be required.

Rehabilitation. Although the cost per foot is reasonable, the number of units is so large that we cannot justify it as a cost of exploration. While rehabilitation is often a necessary prerequisite to exploration, we must draw the line somewhere short of total rehabilitation. Our policy in this matter cannot be reduced to a formula, but in this instance we consider the distance to be excessive. If the Applicant wishes to provide access to the area of exploration, we could participate in the exploratory work itself.

Drifting. From the present information we conclude that the proposed drifting meets OME requirements. If you consider it to be warranted on a geologic basis, we would go along with this part of the proposed project, and also with the proposed short drill holes on both sides of the drifts. The size of the 15-foot drill stations should be specified.

Underground Drilling, Target Area 1-A. Although the upper strata of the Hamburg dolomite have yielded most of the ore, there were also significant ore bodies in the lower strata of the Hanson Creek formation just above the Eureka quartzite. Since the proposed drift into this

23263

target area would extend into the quartzite to a point about 200 feet below the Hanson Creek, would it be advisable to drill one or two up-holes to test the Hanson Creek? These holes would be in addition to those in the walls and to the inclined holes in the 1-A target area.

Crosscutting, Raising, Deep Drilling. Our review indicates that there is not enough evidence of a significant target in the 1-B target area to justify the Government's participation. Unless the Applicant has additional evidence, or wishes to obtain it by drilling the first hole at its own expense, we would not be inclined to consider the deep drilling favorably at this time. It appears to us that the work proposed here borders on prospecting. The "low-grade mineralization" at this horizon in DDH.No. 1 proves little, and the projections of the Premium and Coleman faults is conjectural. On the other hand, the best sample from DDH.No. 1 is from the lower strata of the Hamburg which in theory should be at least as favorable as the upper Eldorado.

Rossi Property, Surface Drilling, Target Area 2. From the data contained in the application, this project is prospecting. However, the Applicant may have additional information to indicate the existence of a target, but the geologic map of the Rossi property does not indicate that the alleged target area is any more favorable than the surface exposure of the upper Hamburg, which is unmineralized. (See Sec. R-1, 2, 3). Perhaps the Applicant should drill the first hole at its own expense to prove that there is a target to explore, or perhaps it can submit a more detailed map which indicates that specific intersections of favorable structures can be projected into the target area.

Personal Services. There appears to be one more Sampler than needed. Please clarify. Is all the core to be split and assayed?

Operating Materials and Supplies. The sizes of rail, airline, and waterline should be specified so that salvage can be estimated. For roof bolting, the cost per bolt should be specified. Do three trips with the water truck require a full shift?

Operating Equipment. Are three vehicles really necessary for transportation?

Miscellaneous. The owner, make, and size of the bulldozer should be specified. Supervisor's expenses on a job this long are considered to be overhead in which we may not participate.

Enclosures

George C. Selfridge (gla)

RMSmith/gla (4-23-65)
cc to: Director's Reading File
Docket
Review Committee

Target intersection:
Premium fault with Hamburg & Eldorado fms.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

April 8, 1965

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Memorandum

To : Chief, Division of Field Operations, OME, Washington, D. C.

From : Acting Field Officer, OME, Region II

Subject: New Application (Silver) (6436)
Cortez Joint Ventures
Cortez Mine
Eureka and Lander Counties, Nevada

Enclosed are six signed copies of MME Form 52, Lien and Subordination Agreements, from Kathleen Coleman O'Brien to be attached to the applicant's application for further processing.

Paul V. Fillo

Paul. V. Fillo

Enclosures

cc:
Chief, Division of Field Operations, OME, Wash., D. C.

April 5, 1965

Mr. Hatfield Goudey
Cortez Joint Venture
2300 Russ Building
San Francisco, California 94104

Subject: OME - 6436

Gentlemen:

Your application for exploration assistance, dated March 30, 1965 submitted to our office at San Francisco, California has been assigned Docket Number OME - 6436.

Please identify all future correspondence relating to your application by this docket number.

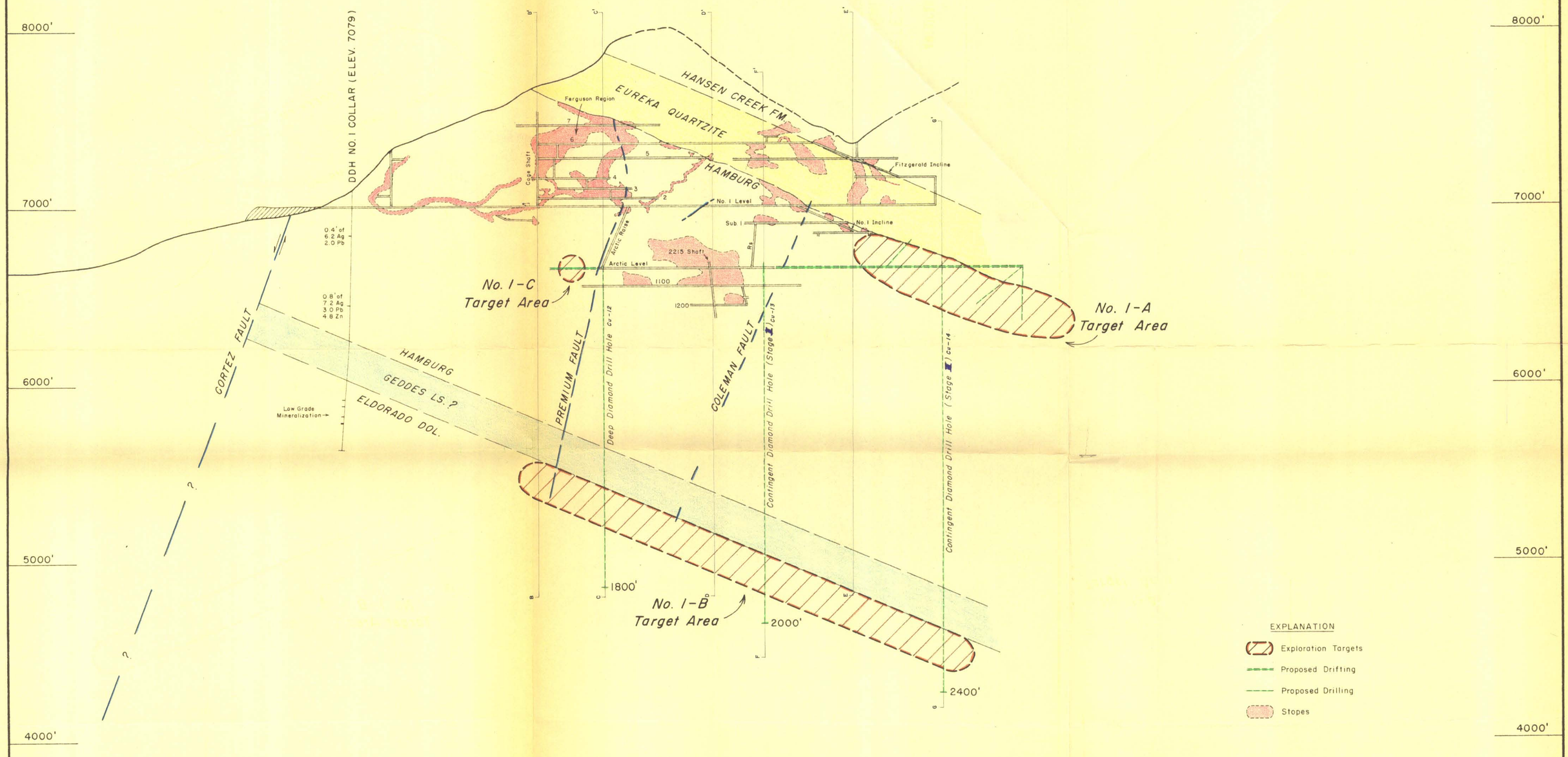
Sincerely yours,

George C. Selfridge, Chief
Division of Exploration
Operations

Copy to Region II

EXCELSIOR MS 46A
SUMMIT MS 50
CONCLAVE MS 48
ADJUNCT MS 52
ECLIPSE MS 61
N
22,000 N
DH Cu-2
Deep Diamond Drill Hole
Cu-12
50
Proposed Drifting 300'
No. 1-C
Target Area
DH Cu-1
Premium Fault
70
NO. 1 DIKE FISSURE
DH Cu-3
DH Cu-4
Cu-13 (Stage I)
(Stage 2)
HAMBURG DOLOMITE
EUREKA QUARTZITE
77
0.01 Au
1.70 Ag
55
70
70
70
0.015 Au
14.500 Ag
0.040 Cu
.005 Au
1.300 Ag
0.01 Au
1.00 Ag
DH Cu-6
Cu-14
(Stage I)
Proposed Drifting 1700'
23°
Proposed Cross Cutting 400'
DH Cu-5
DH Cu-8
DH Cu-9 (Incline up)
DH Cu-7
100'
Arctic Level
3590' of Rehabilitation Work
PREMIUM MS 40
JUNCTION MS 39
FITZGERALD MS 41
CUMMINS MS 42
SPECULATION MS 53
HANSEN CREEK FORMATION
309' EAST
21,000 N
2 Incline Drill Holes
DH Cu-10
DH Cu-11
No. 1-A Target Area
949' TO
PORTAL
ARCTIC MS 38
COMPRESSOR MS 43
PROTECTION MS 60
39,000 E
40,000 E
41,000 E
EXPLANATION
Dikes
Ore Mineralization
Faulting and Fissuring
Proposed Drifting
Proposed Drilling
Rehabilitation Work
Target Areas
Cu = Cortez underground
NOTE: 1. ONLY PATENTED CLAIMS SHOWN. GROUND INDICATED AS OPEN IS COVERED BY UNPATENTED CLAIMS. (See accompanying map)
2. ARCTIC LEVEL DATA FROM CORTEZ J.V. SURVEY BY J. J. OBERBILLIG, MARCH 1964.
3. PROJECTION OF EUREKA QUARTZITE AFTER CONSOLIDATED CORTEZ SILVER MINES COMPANY MAPS.
4. EXTENTION OF ARCTIC LEVEL WILL FOLLOW NO. 1 DIKE FISSURE STRUCTURE.
5. SAMPLES TAKEN BY CORTEZ JOINT VENTURE.
OFFICIAL COPY O. M. E. RECEIVED NOV 12 1965
INITIALS CODE
AMERICAN EXPLORATION & MINING CO.
CORTEZ JOINT VENTURE
PLAN MAP – ARCTIC LEVEL
DATE: 12 / 7 / 64
REVISED:
SCALE
50 0 100 Ft
DRAWN: J B J
COMP. BY: J. J. OBERBILLIG

PLATE 2



SECTION A-A'

AMERICAN EXPLORATION & MINING CO.

CORTEZ JOINT VENTURE

LONGITUDINAL SECTION OF CORTEZ MINE
LOOKING NORTHEAST

DATE: 12 / 5 / 64 REVISED:	SCALE: 1" = 400'	DRAWN: J B J

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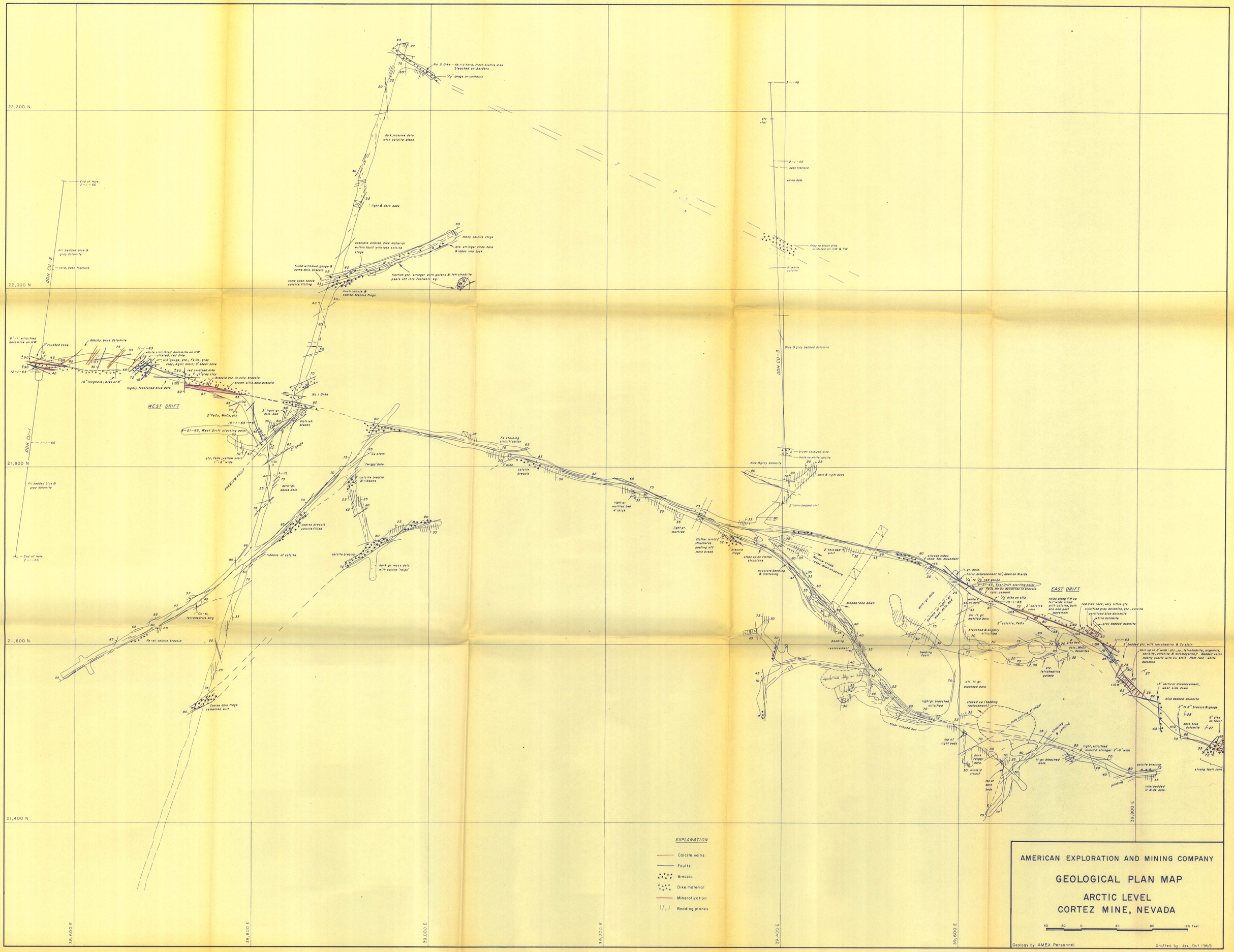
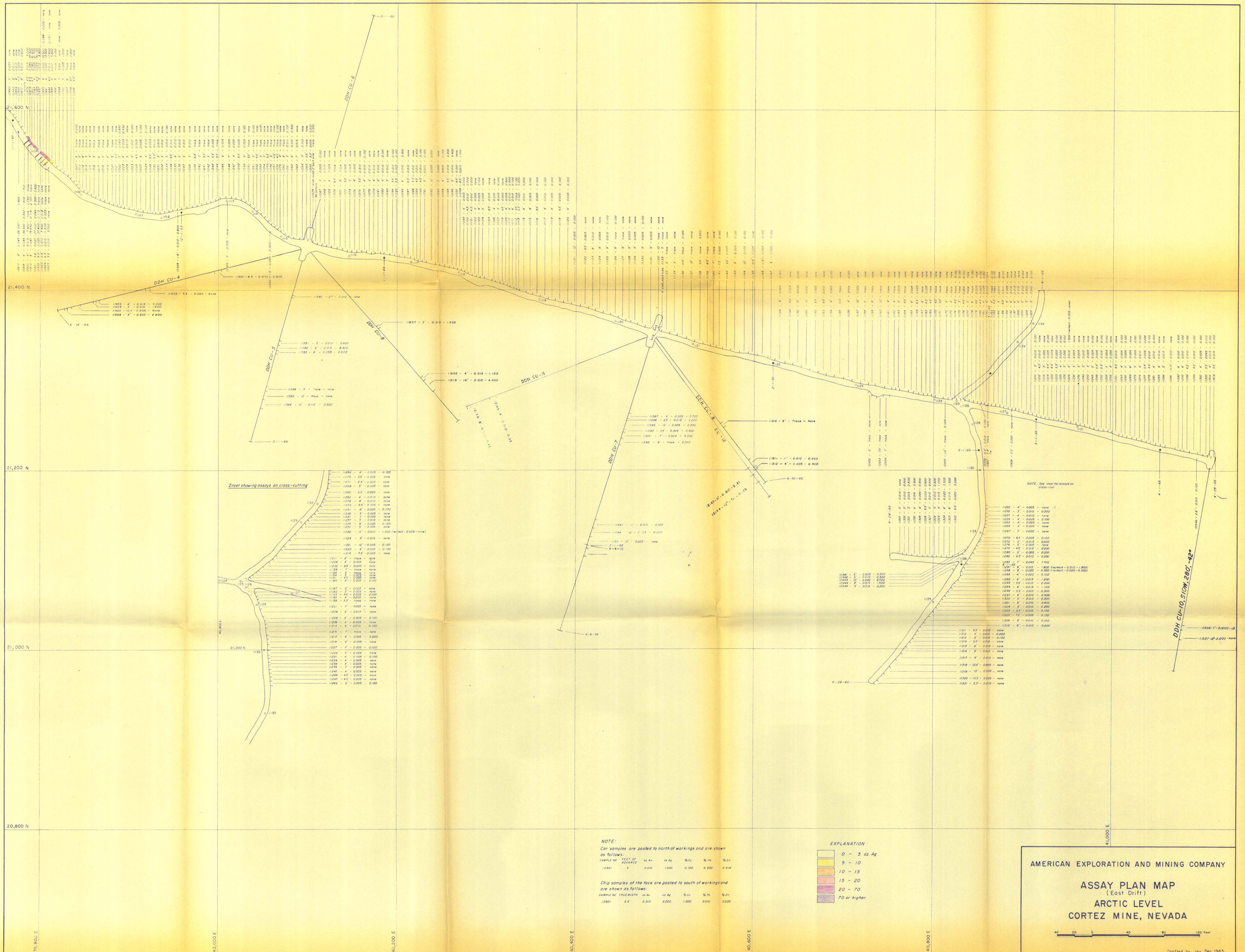
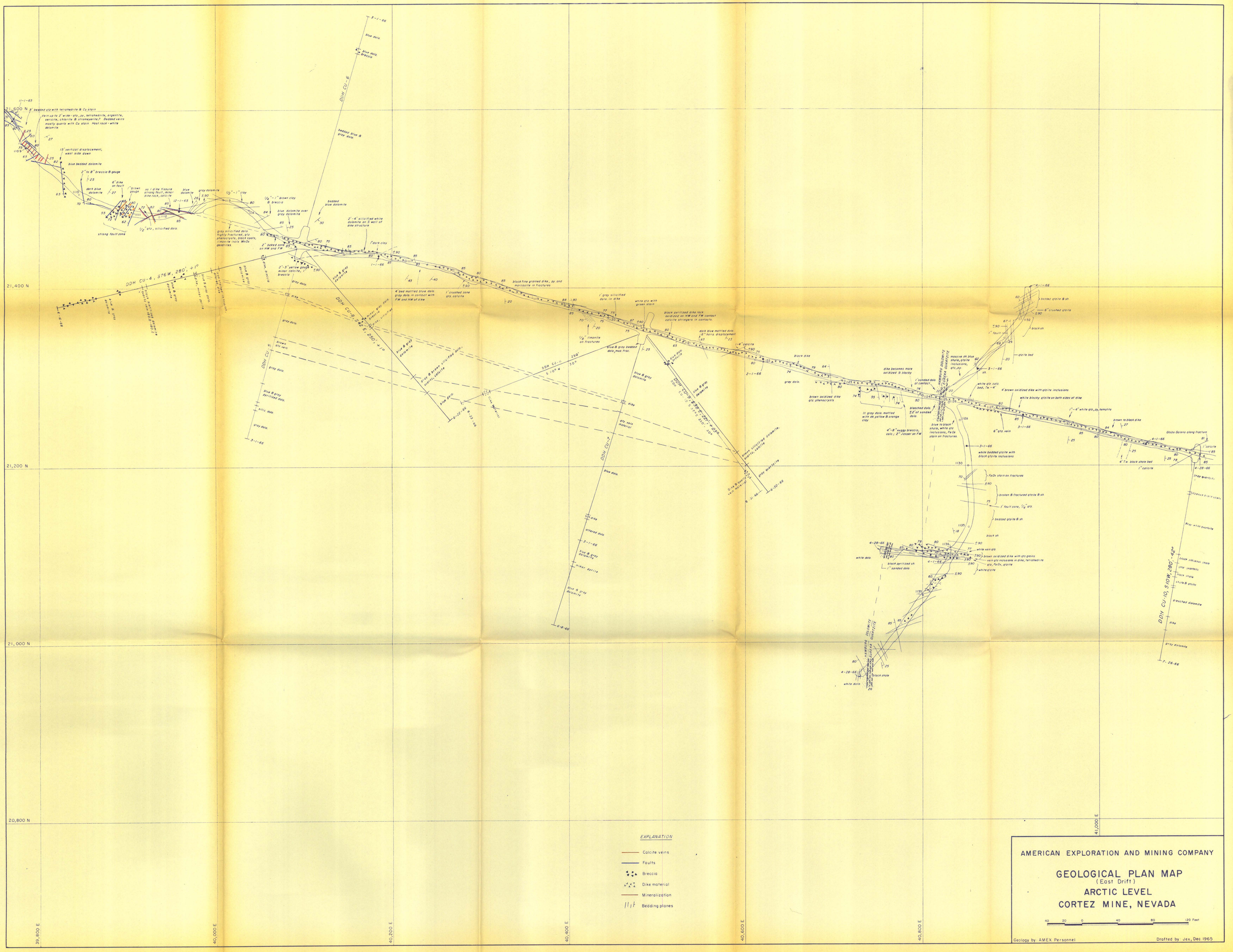
O. M. E.
RECEIVED
NOV 12 1965

PRINTED ON DIEPO NO. 1000H-4 CLEARPRINT FADE-OUT

22,000 N
21,000 N
39,000 E
40,000 E
41,000 E
DDH CU-1
DDH CU-2
DDH CU-3
DDH CU-4
DDH CU-5
DDH CU-6
DDH CU-7
DDH CU-8
DDH CU-9 (incline up)
DDH CU-10
DDH CU-11
DDH CU-12
DDH CU-13
2-1-66, 200'
12-1-65, 297.8'
11-1-65, 183.8'
10-1-65, 26.4'
WEST DRIFT Starting Point, 9-21-65
DDH (Raise, 3-1-66, 22')
Proposed Drifting 300'
1-1-66, 70'
2-1-65, 21.0'
3-1-66, 448'
2-1-66, 360'
EAST DRIFT Starting Point, 9-21-65
10-1-65, 30.0'
11-1-65, 181.0'
12-1-65, 412.0'
3-1-66, 246'
1-1-66, 654.0'
3-1-66, 209'
3-1-66, 230'
2-1-66, 110.7.5'
3-1-66, 485'
3-1-66, 520'
4-1-66, 158.6'
3-1-66, 1406.5'
4-1-66, 1548.0'
Proposed Cross Cutting 400'
Proposed Drifting 1700'
100'
DDH CU-4 250' 0°
DDH CU-9 250' 0°
MINERALIZED ZONE
DDH CU-7 +33°
DDH CU-8 +38°
DDH CU-10 280' -42°
DDH CU-11
DELETE
1 Vertical Drill Hole
3 Incline Drill Holes
DDH CU-10
DDH CU-11
DDH CU-12
DDH CU-13
Arctic Level
3590' of Rehabilitation Work
949' to portal
PROPOSED FOOTAGE
Proposed Drifting
Proposed Drilling
PROPOSED MODIFICATION IN DRILLING AND DRIFTING PROGRAM
ACTUAL MONTHLY FOOTAGE
Drift Station
Drifting
X-Cutting
Drilling
X-Cutting
Raising
September, 1965 - 56.4'
October -308.4'
November -345.0' 34.0'
December -242.0' 32.0' 70.0'
January, 1966 -453.5' 31.5' 690.0'
February -299.0' 773.0' 100.5' 22.0'
March -141.5' 241.6'
April
May
AMERICAN EXPLORATION & MINING CO.
PROGRESS PLAN MAP
ARCTIC LEVEL
CORTEZ MINE, NEVADA
DATE: 7-16-65
SCALE: 1" = 100'
DRAWN: Jex
PRINTED ON DIEPS NO. 1004N 4 CLEARPRINT FADE-OUT


AMERICAN EXPLORATION AND MINING COMPANY
GEOLOGICAL PLAN MAP
ARCTIC LEVEL
CORTEZ MINE, NEVADA
EXPLANATION
Calcite veins
Faults
Breccia
Dike material
Mineralization
Bedding planes
WEST DRIFT
EAST DRIFT
DDH CU-1
DDH CU-2
DDH CU-3
22,200 N
22,000 N
21,800 N
21,600 N
21,400 N
38,600 E
38,800 E
39,000 E
39,200 E
39,400 E
39,600 E
39,800 E
Geology by AMEX Personnel
Drafted by Jex, Oct 1965


21,600 N
21,400 N
21,200 N
21,000 N
20,800 N
39,800 E
40,000 E
40,200 E
40,400 E
40,600 E
40,800 E
41,000 E
DDH CU-4
DDH CU-5
DDH CU-6
DDH CU-7
DDH CU-8
DDH CU-11
DDH CU-12
DDH CU-10, S10W, 280'-42°
Inset showing assays on cross-cutting
NOTE: See inset for assays on cross-cut
NOTE:
Car samples are posted to north of workings and are shown as follows:
SAMPLE NO | FEET OF ADVANCE | oz Au | oz Ag | % Cu | % Pb | % Zn
10901 | 5 | 0.010 | 1.000 | 0.100 | 0.200 | 0.010
Chip samples of the face are posted to south of workings and are shown as follows:
SAMPLE NO | TRUE WIDTH | oz Au | oz Ag | % Cu | % Pb | % Zn
10901 | 3.6 | 0.010 | 2.000 | 1.000 | 0.010 | 0.020
EXPLANATION
0 - 5 oz Ag
5 - 10
10 - 15
15 - 20
20 - 70
70 or higher
AMERICAN EXPLORATION AND MINING COMPANY
ASSAY PLAN MAP
(East Drift)
ARCTIC LEVEL
CORTEZ MINE, NEVADA
40 20 0 40 80 120 Feet
Drafted by Jex, Dec. 1965


21,600 N
21,400 N
21,200 N
21,000 N
20,800 N
39,800 E
40,000 E
40,200 E
40,400 E
40,600 E
40,800 E
41,000 E
DDH CU-4, S76W, 280', +10°
DDH CU-8, S62E, 280', +10°
DDH CU-9, S38E, 280', +20°
DDH CU-10, S10W, 280', -42°
DDH CU-5
DDH CU-6
DDH CU-7
EXPLANATION
Calcite veins
Faults
Breccia
Dike material
Mineralization
Bedding planes
AMERICAN EXPLORATION AND MINING COMPANY
GEOLOGICAL PLAN MAP
(East Drift)
ARCTIC LEVEL
CORTEZ MINE, NEVADA
40 20 0 40 80 120 Feet
Geology by AMEX Personnel
Drafted by Jex, Dec 1965

ACTUAL MONTHLY FOOTAGE

	Drifting	Drill Station X-Cutting	Drilling	X-Cutting	Raising
September, 1965	- 56.4'				
October	-308.4'				
November	-345.0'	34.0'			
December	-242.0'	32.0'	70.0'		
January, 1966	-453.5'	31.5'	690.0'		
February	-299.0'		773.0'	100.5'	22.0'
March	-141.5'			241.6'	
April	-141.0'	15.0'		168.5'	
May					
June	-		851.0'		
July			280.0		
August			500.0		

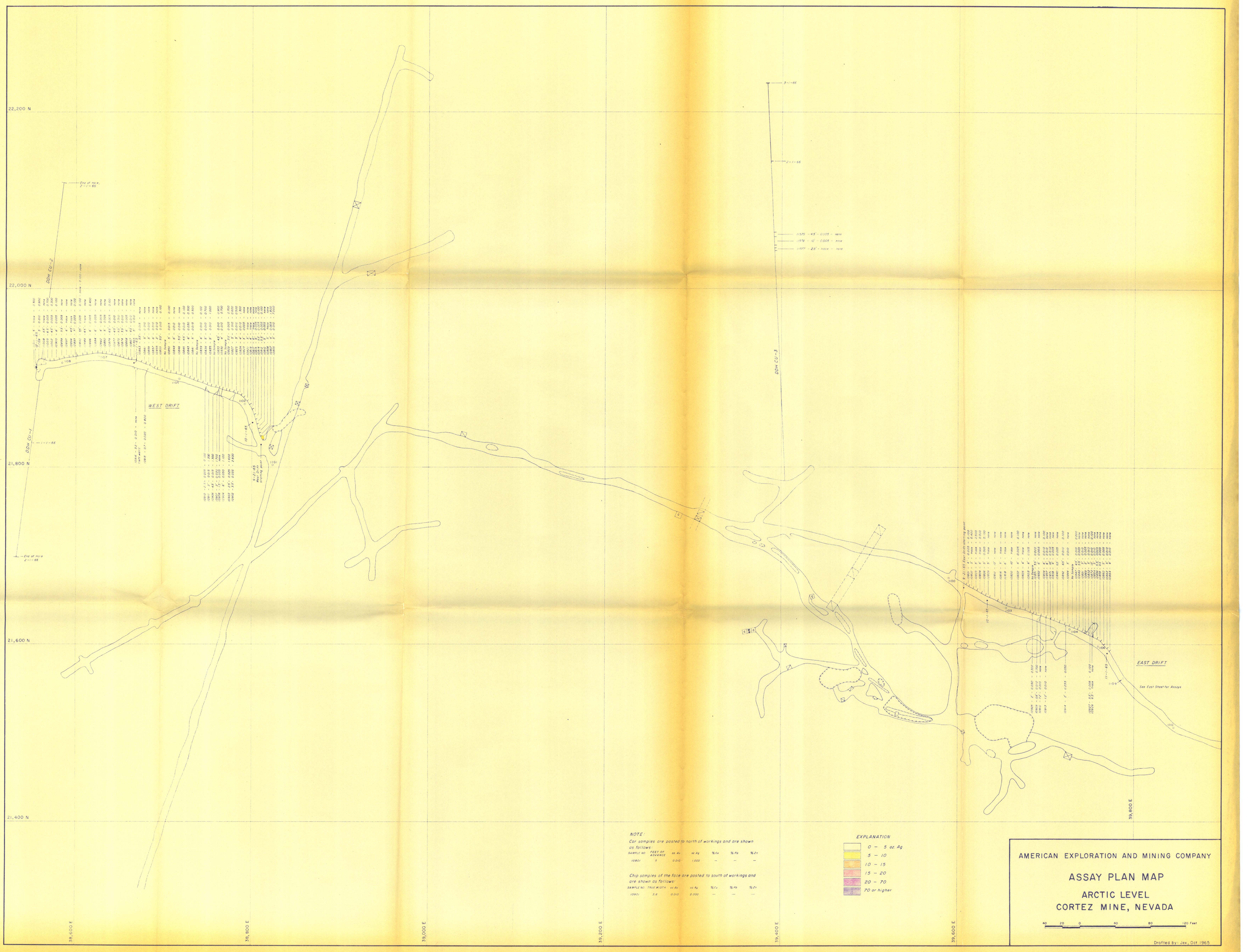
AMERICAN EXPLORATION & MINING CO.

PROGRESS PLAN MAP

ARCTIC LEVEL

CORTEZ MINE, NEVADA

DATE: 7-16-65 | SCALE: 1" = 100' | DRAWN: Jex


22,200 N
22,000 N
21,800 N
21,600 N
21,400 N
38,600 E
38,800 E
39,000 E
39,200 E
39,400 E
39,600 E
39,800 E
DDH CU-1
DDH CU-2
DDH CU-3
WEST DRIFT
EAST DRIFT
See East Sheet for Assays
NOTE:
Car samples are posted to north of workings and are shown as follows:
SAMPLE NO FEET OF ADVANCE oz Au oz Ag % Cu % Pb % Zn
10801 5 0.010 1.000 — — —
Chip samples of the face are posted to south of workings and are shown as follows:
SAMPLE NO TRUE WIDTH oz Au oz Ag % Cu % Pb % Zn
10901 3.8 0.010 2.000 — — —
EXPLANATION
0 – 5 oz Ag
5 – 10
10 – 15
15 – 20
20 – 70
70 or higher
AMERICAN EXPLORATION AND MINING COMPANY
ASSAY PLAN MAP
ARCTIC LEVEL
CORTEZ MINE, NEVADA
40 20 0 40 80 120 Feet
Drafted by: Jex, Oct 1965