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Denver 2, Colorado
224 New Customhouse

February 13, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket No. DMEA 3605 (Lead-Zinc), Contract No. Idm-8878, Burst Majors (Mineral Farm Group), Ouray County, Colorado - FINAL REPORT

Enclosed are the original and three copies of a joint final engineering and geologic report, dated January 23, 1957, by E. W. Buel, Mining Engineer, Bureau of Mines, and Walden P. Pratt, Geologist, Geological Survey, and transmittal thereof, dated January 25, 1957, from J. F. Shaw and E. N. Harshman, pertaining to work completed under the subject Contract.

Under the circumstances, it is recommended that the Operator's Report attached to form MF-104, Operator's Monthly Report and Voucher, for the month of November, 1955, be accepted as the Operator's final report.

The Contract was terminated before completion of the work provided for, by an Agreement, dated September 14, 1956, which was made effective November 15, 1955.

The exploration work completed consisted of one core drill hole, 153 feet and 10 inches in depth, at a total accepted cost of $738.40, toward which the Government contributed 50%, or an amount of $369.20.

Reimbursement to the Operator in processing form MF-104, Operator's Monthly Report and Voucher, for the month of November, 1955, constituted final payment to the Operator, which was verified by the Report of Review of reported project costs by the Contract Administration and Audit Division, DMEA, dated September 26, 1956.

Reviewed by
DMEA OPERATING COMMITTEE
2-25-57
(date)

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2-25-97

The exploration work completed did not result in the discovery or development of a significant quantity of lead-zinc ore. Therefore, certification of the project is not recommended.

DNRA Field Team, Region III

Original signed by
W. H. TRAVER

W. H. Traver

Original signed by
E. N. HARSHMAN

E. N. Harshman

Enclosures

JWT:prl

cc: Final Report File
Region III
Harshman
Shaw
Townsend
Corres. file
Chron.

w/copy of joint final engineering and geologic report.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

DMEA
DEPARTMENT OF THE INTERIOR
JAN 25 1957
REGION III
DENVER, COLORADO

January 25, 1957

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Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: J. F. Shaw
E. N. Harshman

Subject: DMEA Docket 3605 (Lead-zinc), Contract Idm-E 878, Hurst Majors (Mineral Farm group), Ouray County, Colorado

Enclosed are the original and eight copies of a joint final report on exploration completed under Contract Idm-E 878.

The authorized program consisted of 450 feet of diamond drilling (three holes) at a total cost of $2,200. The operator drilled one hole (no. 1) at a total accepted cost of $738.40, Government participation 50 percent or $369.20.

It is concluded that work completed did not prove or disprove the presence of ore in the target area, but that additional exploration assistance should not be granted to the present operator.

No ore was discovered, and a Certificate of Discovery should not be issued.

Original signed by
E. N. HARSHMAN
E. N. Harshman

E. N. Harshman for
J. F. Shaw

Reviewed by
DMEA OPERATING COMMITTEE
2-25-57
(date)

Enclosures

ENHarshman:arh

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UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3605

Contract Idm-3878

Burst Majors

Mineral Farm Group

Ouray County, Colorado

Lead-zinc

Joint Final Engineering and Geological Report

by

E. W. Deal, Mining Engineer
Bureau of Mines

Walden P. Pratt, Geologist
Geological Survey

January 23, 1957

Reviewed by
DMEA OPERATING COMMITTEE
2-25-57

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3.	Map showing location of proposed DMEA core holes, Mineral Farm mine, Ouray County, Colorado	14

TABLE

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DMEA 3605

Contract Idm-2578

EURST MAJORS
MINERAL FARM GROUP
OURAY COUNTY, COLORADO

INTRODUCTION

Eurst Majors, of Manhattan, Kansas, applied for Defense Minerals Exploration Administration assistance to explore for lead-zinc ore on the Mineral Farm group of patented claims, Ouray County, Colorado. The operator proposed reopening a caved adit crosscut, unwatering two underground workings, and drilling a total of 2,500 feet in 14 surface diamond drill holes. The estimated cost of this proposed exploration program was $10,500.

The property was examined for DMEA on June 21, 1955, by J. E. O'Rourke, U.S. Geological Survey, and Glen Walker, U.S. Bureau of Mines. The examining team recommended a modified exploration program consisting of three diamond drill holes.

Contract Idm-2578 was executed on September 21, 1955. It provided for three diamond drill holes to explore for lead-zinc ore at depth. The starting date was October 31, 1955, and the completion date January 1, 1956. The total cost of the program was estimated at $2,200 and the Government's share 50 percent, or $1,100.

LOCATION AND GEOGRAPHY

The Mineral Farm property is in sec. 6, T. 43 N., R. 7 W.; sec. 31, T. 44 N., R. 7 W.; and sec. 1, T. 43 N., R. 8 W., New Mexico principal meridian, Ouray County, Colorado (fig. 1); it is in the Uncompahgre (Ouray) mining district. The claims are in Canyon Creek gulch, less than a mile southwest of the small town of Ouray. A gravel road, locally known as the Camp Bird mine road, is followed for about half a mile from Ouray to a turnoff which provides easy access to the Mineral Farm property.

The Ouray mining district lies at the western margin of the San Juan Mountains, in a region of extremely rugged terrain consisting of high jagged peaks, serrated ridges, steep talus-covered slopes, and cirques. Altitudes range from 7,800 feet at Ouray to well over 13,000 feet atop some of the nearby peaks.

Precipitation in the region is heavy. Snowfalls cause the suspension of most small mining operations from the beginning of November to late June or early July; but county-maintained roads are, for the most part, kept open throughout the year, permitting access to many larger mining properties. Thunderstorms occur almost daily during the summer months. The heavy combined precipitation supports a dense growth of fir, spruce, and aspen in areas on the lower valley slopes containing a suitable soil mantle, and adequate timber for mining purposes is

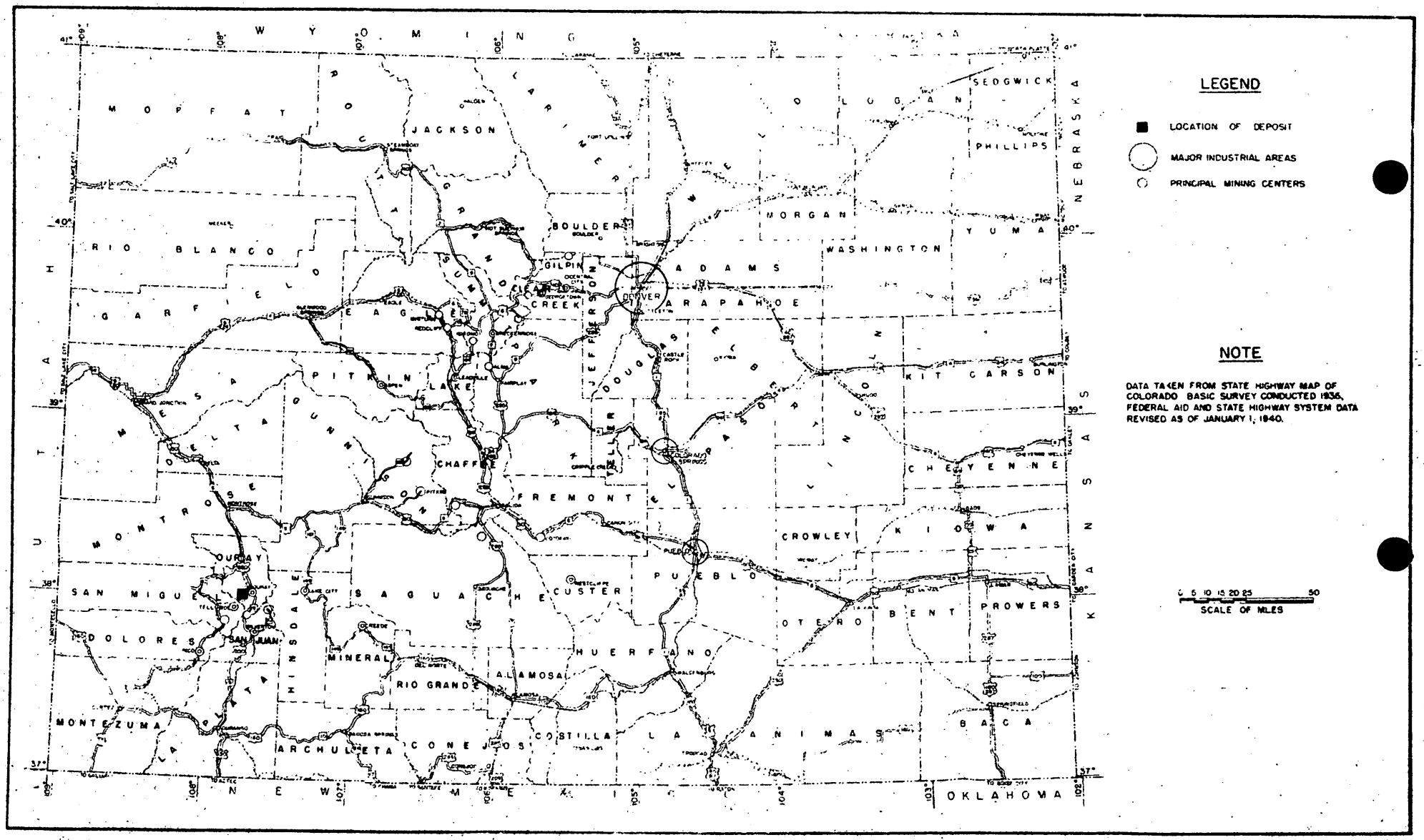


FIGURE 1 - MINERAL FARM GROUP, OURAY COUNTY, COLO. DMEA 3605

present on the Mineral Farm property. Water is plentiful in the area but because of the steep topography, which results in a rapid runoff, most of the streams are intermittent. There is little or no surface water on the Mineral Farm property, but water can be obtained from nearby Canyon Creek.

Electric power is transmitted to the Camp Bird mine by a power line from Ouray; but for a small operation on the Mineral Farm group, power needs would have to be met by portable equipment.

Abundant skilled mining labor can be obtained within the region. Mining equipment and supplies are available from Ouray and from Silverton, about 25 miles to the south.

HISTORY AND PRODUCTION

It is reported that ore was first discovered on the Mineral Farm property in 1876, and that two complete sets of workings were developed during the following quarter century; the first production was in 1879, and the ore produced from that time until 1900 was valued at $300,000. The property was neglected during the first part of this century, and most of the subsequent production has come from surface workings. Bureau of Mines statistics from 1900 through 1929 show the property as having a production of 2,071 tons of crude ore yielding 20.2 ounces gold, 25,000 ounces silver, 565,370 pounds lead, and 5,790 pounds copper. Since 1929 the property has been operated intermittently by lessees who produced a limited amount of ore.

OPERATOR'S PROPERTY RIGHTS

The Mineral Farm property consists of the following patented claims:

Claim	Survey No.
Mineral Farm No. 1	200
Mineral Farm No. 2	201
Mineral Farm No. 3	202
Mineral Farm No. 4	203
Miner's Dream	989
Midnight	1149A
Forest	1149A
Miner's Desire	6550

None of the claims are of standard size, all being less than 600 feet wide and slightly less than 1,500 feet long.

DESCRIPTION OF WORKINGS

The Mineral Farm property has been explored and developed by open cuts, surface and underground shafts, raises, winzes, and several crosscuts, drifts, and stopes (fig. 2). The principal stope is reported to measure 8 feet high, 90 feet wide, and 400 feet long.

The "main" or east workings are in very good condition except for a raise which is caved tight and a winze which is filled with waste rock resulting from the sorting of ore. The "lower" or west workings are inaccessible.

GEOLOGY

District setting

The geology of the Ouray district has been described by Burbank in two older publications _/. The geologic formations range from Precambrian to Tertiary in age, and comprise a thickness of about 8,000 feet of Precambrian quartzites and 5,000 feet of Paleozoic and Mesozoic limestones, sandstone, and shales, intruded by granodiorite or quartz monzonite porphyry of late Upper Cretaceous or early Eocene age, and overlain by some 5,000 feet of middle to late Tertiary volcanic rocks. The principal ore deposits are early Tertiary lodes, mantos, and pipes; they are related to the intrusives and were deposited chiefly in the Paleozoic and Mesozoic sedimentary rocks through a stratigraphic range of about 4,500 feet.

The broad controls of mineralization are the northwest-trending Uncompahgre axis of uplift and faulting, and a northeast-trending axis of doming along which quartz monzonite sheets and stocks have been intruded. The mineral deposits are zoned with respect to the intersection of these axes. The deposits in the central area are

---

_/ Burbank, W. S., 1939, Revision of geologic structure and stratigraphy in the Ouray district of Colorado, and its bearing on ore deposition: Colorado Sci. Soc. Proc., v. 12, no. 6, p. 151-232.

_____, 1940, Structural control of ore deposition in the Uncompahgre district, Ouray County, Colorado: U. S. Geol. Survey Bull. 906-E, p. 189-265.

contact-metamorphic types; those in the intermediate zone are pyritic, containing base metals, gold, and silver; farthest removed are the argentiferous lead-zinc deposits, and in this category belongs the deposit at Mineral Farm.

Mineral Farm deposit

The Mineral Farm ore deposit is a tubular pipe or channel in the upper part of the Leadville limestone and the lower part of the overlying Molas shale. The ore fills cavities in the country rock, and also replaces it near many of the larger ore shoots; it consists of galena, sphalerite, tetrahedrite, pyrite, and chalcopyrite, with a gangue of quartz, chalcedony, calcite, and barite.

Deposition of the ore was controlled by three types of structures and by one stratigraphic factor. The primary structural control of the pipe was apparently a zone of fractures striking N. 70° E. and dipping 60° SE, nearly parallel to the strike of the ore body. A further control was a well-developed set of steeply dipping fractures that strike N. 40° W.; ore shoots occur within the pipe where these fractures intersect the main fracture zone, and many small deposits outside the pipe, mined by open pits, were also localized by these fractures. A third structural control was shear zones caused by close spacing of the N. 40° W. fractures. Some of these zones are highly leached and are filled with short

typical of many beds of the Leadville limestone, and may be the "clastic dikes" described by earlier workers. In many mines these "dikes" were favorable loci for ore deposition; in the Mineral Farm mine numerous short drifts, a 75-foot winze, and an 80-foot shaft were driven on such "clastic dikes" or shear zones. In addition to these structural controls, ore deposition was localized in the limestone and in local, slump-fractured portions of the shale, by the relatively impervious beds of shale and conglomerate lying directly above.

The Mineral Farm ore pipe measures about 8 feet high, 20 feet wide, and 1,000 feet long, and plunges 15° S. 60° W., coinciding with the dip of the bedding. The trend of the pipe is continuous, with two interruptions. One is a sharp kink, probably related to the N. 40° W. fractures, in which the pipe is offset laterally about 100 feet (fig. 2). The other is a right lateral fault that cuts the pipe about 130 feet from its west end and has a strike slip of about 260 feet and a dip slip of 10 feet; the fault is not exposed directly, but is suggested by the identical width and orientation of the two segments and by a zone of intense fracturing or shearing at the west end of the east working (fig. 2). Displacement on the other fractures of the N. 40° W. set is probably less than a few feet.

Geologic basis for exploration

The exploration program recommended by the examining team was markedly different from that of the applicant, because it was based on different reasoning and was aimed at a different target. The applicant's proposal for exploration was based on the possibility of discovering additional silver-lead ore deposits at the same horizon as the main pipe, both laterally and down-dip from it, and on the suggestion by Burbank that the ore might change down-dip into a higher-grade copper zone, possibly containing some gold (1940, p. 240-241). The examining team did not concur with these ideas, since they interpreted the ore body in the west workings as the faulted extension of the main pipe, and therefore felt that the "down-dip extension" of the main pipe had already been mined out. They recommended instead a program based on the presence in the Leadville limestone of a bed of red shale estimated to be 100 to 150 feet below the top of the limestone, and the presumed continuation to depth of the controlling fractures; it was reasoned that the structures would be favorable for the deposition of ore as in the known ore body, and that the impervious red shale would have an effect similar to that of the Maiden formation farther above. The conclusion thus seemed justified that there might be another ore pipe in the Leadville limestone within a few feet below the red shale.

APPLICANT'S PROJECT PROPOSAL

The applicant proposed to explore the property with DMEA assistance by reopening the west or "lower" workings, by dewatering both the west workings and the lower end of the east or "main" workings, and by surface drilling of 14 core holes with a total combined length of 2,500 feet: ten of these holes, each 60 to 150 feet deep, were to explore possible extensions of the east workings; the four remaining holes, each 300 to 500 feet deep, were to explore possible extensions of the west workings. The applicant's cost estimate for this exploration program was $10,500 with Government assistance of 50 percent or $5,250.

PROJECT OPERATIONS

The DMEA examining team recommended a greatly modified program, to explore for ore in and under the red shale of the Leadville limestone, at an estimated cost of $2,203.50.

Description of contract work

DMEA contract Idm-2878 was approved on September 21, 1955, to explore for ores of lead and zinc on the Mineral Farm group of claims. The contract provided for core drilling of three AX holes with a total combined length of 450 feet, downward from the floor of the old east (main) stope, and for collection and assay of eight samples.

The work was to start October 31, 1955, and was to be completed not later than January 1, 1956. Total cost of the project under the contract was $2,200 with Government assistance of 50 percent, or $1,100.

Description of contract amendments

An amendment was prepared to allow the operator to reduce the size of the drilling from AX to NX, effective December 9, 1955.

A record amendment prepared by the Government and executed on January 12, 1956, provided for the following changes:

(1) The completion date was extended from January 1, 1956, to September 1, 1956.

(2) (a) Work under the contract was to be suspended during the period beginning November 15, 1955, and ending not later than July 1, 1956.

(b) No costs incurred by the operator during the period of suspension were allowable by the Government, nor was the Government to contribute to any rehabilitation or repair costs which in the Government's opinion would not have occurred if there had been no suspension of work.

(c) The operator, at his own cost and expense, without any Government contribution during the period of suspension, was obligated to preserve and protect the project work and any property in which the Government maintained an interest.

Description and results of work performed

A total of 153.8 feet of diamond drilling, in one hole, was completed under the contract, at a total accepted cost of $738.40, with Government participation of $369.20.

The three proposed drill holes were tentatively laid out by the DMEA examining team as follows (fig. 3):

Hole No.	Declination	Bearing	Depths
1	-90°	--	140± feet
2	-77°	S. 31° W.	160± feet
3	-59°	N. 45° E.	135± feet

Diamond drilling of an AX hole (No. 1) began October 21, 1955. This hole was drilled for 13 feet through quartz and a siliceous limestone, in which the operator experienced so much drilling difficulty that he requested permission to reduce his drilling from AX to EX. From 13 to 153.8 feet, the hole was drilled to EX size. The upper 15 feet of the hole penetrated small, sporadically distributed pods of sphalerite and galena, but the remainder of the

hole revealed no ore minerals. The hole bottomed in dark gray limestone. In addition to the DMEA hole, the operator drilled two non-contract holes to depths of 34 and 40 feet; these holes were also barren of ore minerals.

The following is a log of DMEA hole No. 1:

Depth (feet)	Lithology
0 - 13.0	(AX core) Light gray siliceous limestone
13.0- 53.0	(BX core) Gray crystalline limestone
53.0- 53.4	Salmon shale
53.4- 95.0	Gray finely crystalline limestone
95.0-108.0	Dark gray crystalline limestone
108.0-111.0	Light gray very fine grained limestone
111.0-122.5	Mostly light gray to buff very fine grained sandy limestone - some small dark bands From 116 to 116'10": reddish brown mud, no core
122.5-127.0	Dark gray crystalline to sandy limestone
127.0-129.0	Gray limestone with carbonaceous seams
129.0-133.0	Gray to light brown limestone
133.0-153.1	Dark gray very fine grained limestone, silty in places

Upon the completion of the one DMEA contract hole and the two independent holes, the operator suspended all drilling operations. In several letters to the DMEA Field Team, he complained that the unit cost of $4.80 per foot allowed for diamond drilling was entirely too low; he stated that commercial drillers submitted bids for the 450 feet of drilling for $14 to $16 per foot. In a letter of July 20, 1956, to the Field Team, the operator stated that he had no intention of resuming work under the contract because of the inequities of the unit cost established for the diamond drill work.

The DMEA examining team in a memorandum of August 8, 1956, recommended that the contract be terminated because of the operator's unwillingness to resume work and the unfavorable showing of the completed drilling. A termination agreement was issued on September 18, 1956, terminating the contract as of November 15, 1955.

COST OF THE PROJECT

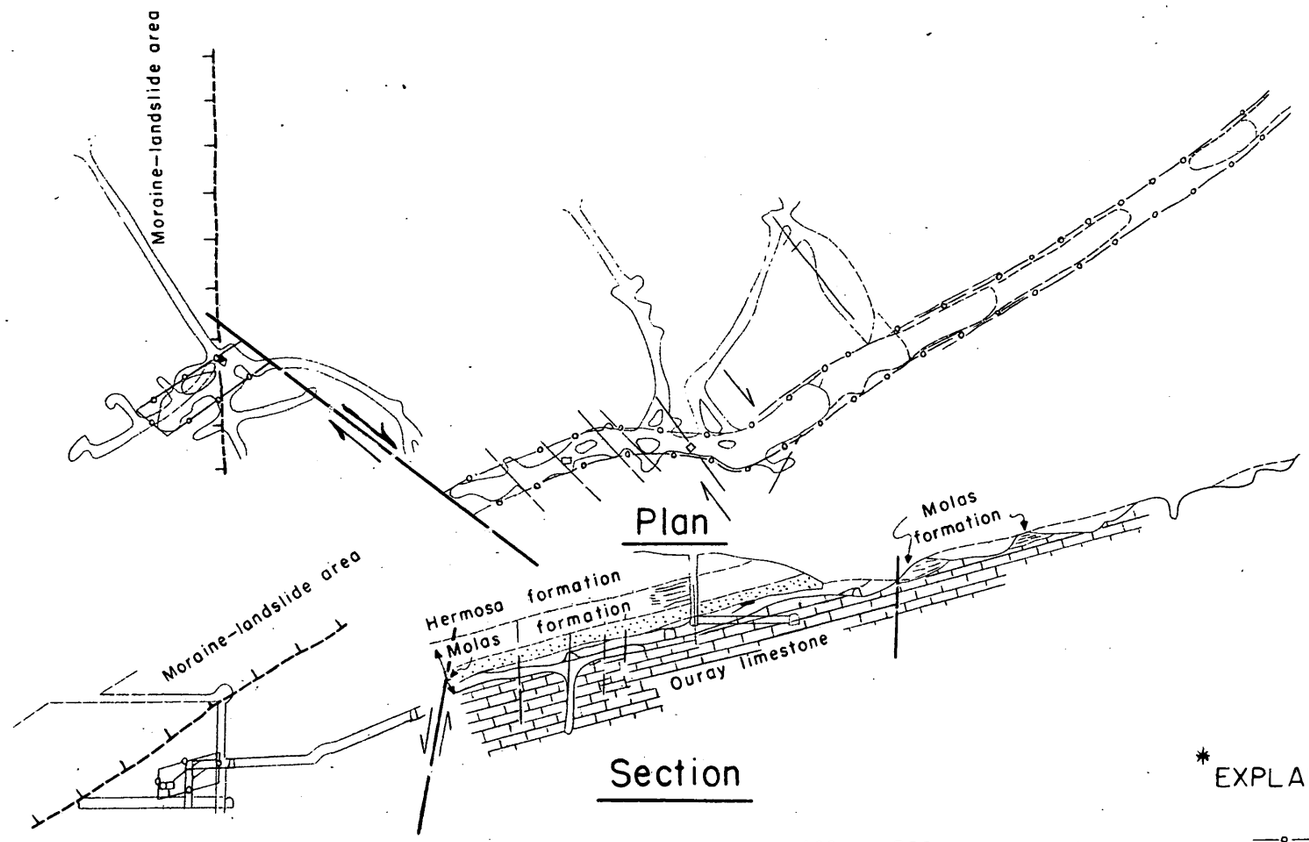
Exploration Project Contract IAm-2578 was a short form unit cost contract, Form MP-200 A (revised June 1954). Allowable fixed unit costs were $4.80 per foot for diamond drilling and $5 per sample assayed for gold, silver, copper, lead, and zinc. The units of work and costs authorized and completed under the contract are summarized in Table 1.

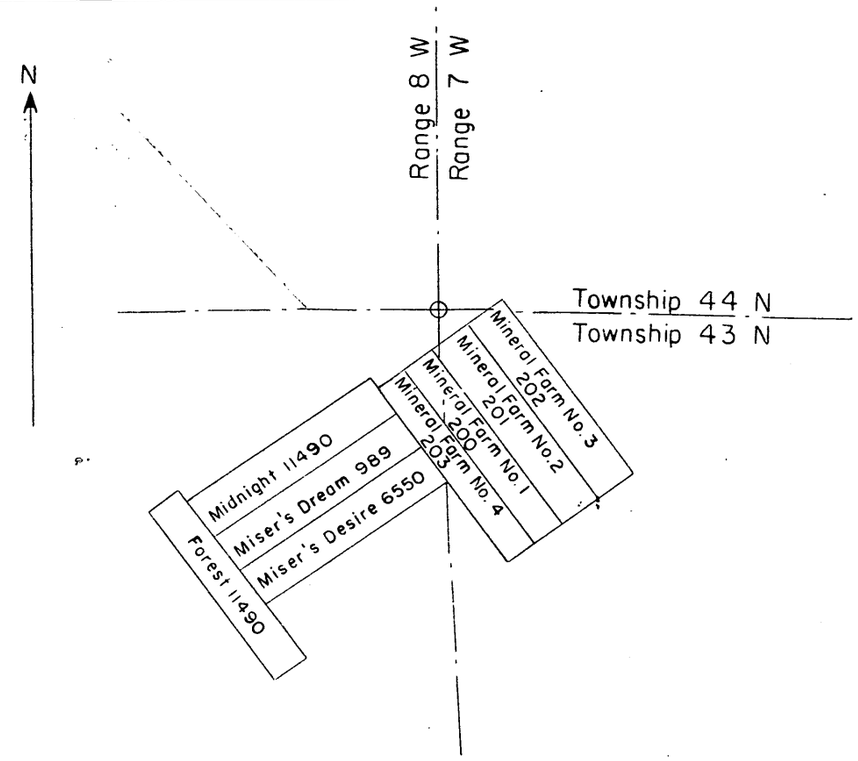
Table 1.--Summary of authorized and accepted costs of the project

Type of work	Authorized: Units	Authorized: Unit Cost	Authorized: Total Cost	Completed: Units	Completed: Total Accepted Cost
Diamond drilling	450 ft.	$4.80	$2,160.00	153.8 ft.	$738.40
Sample assays	8	5.00	40.00	--	--
Total			$2,200.00		$738.40
Government participation			$1,100.00		$369.20

CONCLUSIONS AND RECOMMENDATIONS

Exploratory drilling of one hole indicated the presence of only small pods of lead and zinc ores, distributed erratically near the top of the Leadville limestone; the limestone penetrated in two other holes was completely barren. Since the drilling did not reach its target - the base of the red shale bed within the Leadville limestone - the possibility of discovering lead and zinc ores at this horizon still remains. It is recommended, however, that while commercial possibilities of the property are not exhausted, the Government should not assist in any further exploration by the present owner. A certification of discovery should not be issued.





*EXPLANATION

Outline of ore channel

Fault

Location Plan of Claims

800 1600 2400 3200 4000
SCALE OF FEET

NOTES

1) Data for underground workings taken from map in Colorado Scientific Society proceedings, Volume 12, No. 6, Stratigraphy in the Ouray District of Colorado by W. S. Burbank.

2) Data for claim map taken from Claim Map of San Juan Region by Hotchkiss Map Co.

*Data added in DMEA Doc. 3605

FIGURE 2-PLAN, SECTION AND CLAIM MAP, MINERAL FARM MINE, OURAY COUNTY, COLORADO

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

RECEIVED
JAN 1 2 1956

Greenwald
Betty

224 New Customhouse
Denver 2, Colorado

January 16, 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3605 (Lead-Zinc) Contract Idm-E878, Hurst Majors Mineral Farm Mine, Ouray County, Colorado

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the period November 1955.

W. M. Traver

W. M. Traver

Enclosures

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

RECEIVED
JAN 19 1956

224 New Customhouse
Denver 2, Colorado

December 23, 1955

Memorandum

To: T. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3605 (Lead-Zinc) Contract Idm-E878, Hurst Majors Mineral Farm Mine, Ouray County, Colorado - Operator's Monthly Progress Report, for the period November 1955

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report- - - - - - - - - - - - December 3, 1955
Date Received in Field Office- - - - December 9, 1955
Date Received in Region Office- - - December 19, 1955

E. N. Harshman

E. N. Harshman

Enclosures
JDC:jy
cc: MF-104 File E878
Sec. Op. Comm. (2)
Shaw (2)
Chron.

RECEIVED
JAN 1 0 1955
BUREAU OF MINES
Denver, Colorado

Building 20
Denver Federal Center
Denver 2, Colorado
December 15, 1955

REGION III

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: C. M. Harrer

Subject: DMEA 3605, Contract Idm-2978 (Lead-zinc) Horst Majors Mineral Farm mine, Ouray County, Colorado - First progress report for November, 1955

Progress under the contract was examined in the company of John D. Crim of Ouray on December 7, 1955. Access to the property was gained by wading through hip-deep snow.

Hole No. 1, which is centrally located between proposed holes 2 and 3, was completed to a depth of 153 feet and 10 inches. This was verified by examination of the core which is stored underground in wooden core boxes. The hole was drilled vertically, starting on October 22. The first 13 feet were drilled size AX; the rest of the hole was drilled size EX. Overall core recovery averages about 72 percent. Principal losses were due to mud seams and vugs.

The hole penetrated siliceous limestone exhibiting vugs of silica to a depth of 139 feet 6½ inches where a dark shale was encountered which persisted to the bottom of the hole. The limestone proved barren to very weakly mineralized with very fine pyrite. The only evidence of strategic mineral was a few small spots of sphalerite with very little pyrite between depths of 8 to 13 feet.

In addition, the applicant has drilled two holes to the east, from the same set up. These holes dip -30° and -45° and are 34 and 40 feet deep. The core from both holes is barren of lead and zinc.

The applicant has removed all equipment from the mine for the season. Mr. Crim states that drilling will be resumed next year when the property is again accessible.

Payment is recommended for the hole completed to the depth reported as 153 feet and 10 inches at an overall cost of $738.40. Government participation of 50 percent is $369.20.

The forms MF-164A are in error as follows:

1. Unit cost of $4.80 per foot is not in unit cost column
2. Cost for the month should be duplicated in the cost to date column
3. Unit column should state feet and inches
4. 153 feet and 10 inches drilled should be in units this month column and units to date column
5. Total columns should be filled out
6. Remarks should state "Closed down for the winter"

C. M. Harrer

C. M. Harrer
Mining Engineer

CMH/mr
cc: 6
Idaho-[illegible]
Chrom.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JAN 19 1956

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1955 Docket No. DMEA-3605 Contract No. Idm E 878
Operator's Name Hurst Majors Minerals lead-zinc
Address Manhattan Kansas
Contract Amount, $ Government Participation: 50 % Amount, $

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	$738.40	none	$738.40	1/30/56	[illegible]	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$738.40	none	$738.40	738.40	None	738.40

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 12-3-55 *Payee Hurst Mayes

Per Title

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 369.20

Signature [illegible]
(Authorized Certifying Officer)

Date 1/13/56 Vou. No. [illegible] 56-57

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA-E878 in accordance with the terms of the contract.

Signature C. M. Harper $369.20 Title Mining Engineer Date 12-15-55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Acting Executive Officer Date DEC 23 1955

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JAN 19 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 195 5 Docket No. DMEA 3605 Contract No. Idm 878
Operator's Name Hurst Majors Minerals lead-zinc
Address Manhattan Kansas

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	153 ft	$4.80 per foot					153 ft	$738.40
~~Churn~~	10 in						10 in	
~~Auger~~		$738.40						
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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

Date 12-3-55 Operator Hurst Mayors

Per Title

REMARKS:

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

(Instructions on reverse)

(For Government use only)
C. M. Harris — See progress report.

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

MAJORS PRODUCE COMPANY
MANHATTAN, KANSAS

DISTRIBUTORS OF
"CHEMI-CA'PELLETS"
(CHEMICAL-CAPON PELLETS)

RECEIVED
DEC 9 - 1955

December 3d 1955

U.S. Department of Interior,
Denver, Colorado,
Gentlemen;

JAN 19 1956

Docket DMEA—3605 Contract E878

Herewith monthly progress reports on the work being done at Ouray, Colorado on my property.

Mr. Crim, the man in charge of the drilling operations, has prepared a log covering the depth of the hole, and I enclose his original copy. (His wife typed the report and spelled silicious "solicitous"

He also shows a graph of his experience drilling this hole.

The cores are stored in the workings at the mine.

There is new water drop on the property at Ouray. We were not able to get fuel to the property in late November, but finished the first hole to shown depth of 153 feet ten inches before we admitted we were in the dinor. I am advised that the men who the heaviest early on Ouray for forty years.

Before we left the location, we drilled two or three inches into the top quartz at different angles just to see what we could find. We did not start either of the other locations previously approved by your field man. I do not know when we can start those other holes. Certainly not within your time limitation of January first.

The first unit cost set by you—$4.60 per foot—is merely one-third of the actual cost of drilling in that formation up there.

Respectfully,

[signature]

Drillers log-Contract Ida-S 878-Mineral Farm-Ouray, Colorado

RECEIVED
JAN 19 1956

Hole Number 1 Total Depth 153 feet 10 inches

0 to 13 feet AXL size, 13 to 153'10" EXL size

0 to 38 inches drilled with jack hammer to start hole. AXL from 10", then 2 feet lime, then 4 inches quartz; slight mineralization. 2 inches lime, 6 inches quartz, 3 feet 7 inches lime; large cavity, several small ones. Then 4 inches quartz, slight mineralization.

Then 6 inches lime, then one foot 4 inches quartz, slight mineralization. Then 4 inches lime; small spots of galena. Then 11 inches lime, 6 inches quartz.

13 feet of hole less 18 inches for collar.

Start as E X core at 13 feet.

13' to 13'6" quartz. 13'6" to 15'3" silicious lime or lime with small stringers if quartz.

15'3" to 45' silicious lime. 45' to 69' silicious lime

From 68' to 68'10", lime of a very soft nature, blocked core as mud might do

69'10" to 73', lime. 73' to 77'9" lime, some a pale pink in color, maybe iron stain, miniature particles of pyrite.

77'9" to 116' silicious lime, then from 116' to 116'10" mud that blocked rod string in hole. When we got it out there was no core, drill water was a light brown color.

116'10", to 121'9" silicious lime

121'8" to 123'10", miniature fractures in the lime show some pyrite.

123'10" to 127(1" silicious lime of a slightly darker color

127'1" to 139'4" silicious lime

139'4" we hit a very dark shale, resembles a slate just like shale that is found in the canyon of Uncompahgre Creek, just east of drill site one-half mile.

139'3" to 153'10" dark shale.

Surface

Old Ore Channel

Collar of Hole #1

13 feet

Quartz and lime. Small amounts of galena & zinc

NIL

15 feet

Silicious lime No ore

73 feet

77'9"

Silicious lime some pale pink in color a little pyrite

116'

Silicious lime 10 inches of mud 116' to 116'10" no ore

123'

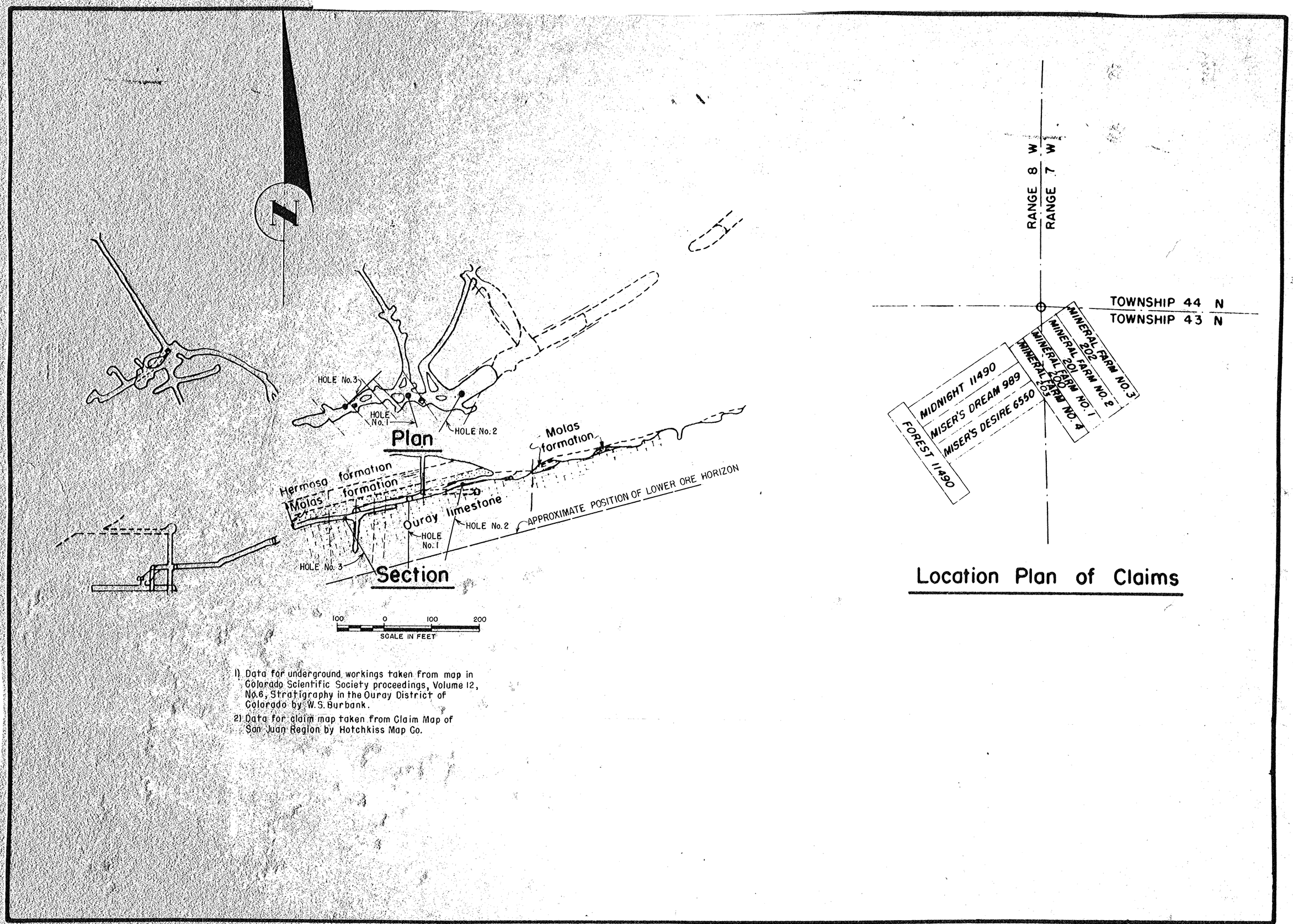
some pyrite in fractures of lime

139'

Silicious lime No ore

153' 10"

A very dark shale



1) Data for underground workings taken from map in Colorado Scientific Society proceedings, Volume 12, No.6, Stratigraphy in the Ouray District of Colorado by W.S. Burbank.

2) Data for claim map taken from Claim Map of San Juan Region by Hotchkiss Map Co.

FIGURE 3 - MAP SHOWING LOCATION OF PROPOSED DMEA CORE HOLES, MINERAL FARM MINE, OURAY COUNTY, COLO. DMEA 3605