DMA

MAR 3 1952

Messrs. Carl H. Field
and Theodore Haynes
Eureka, Utah

Re: Docket No. DMA 11[illegible]2 - Manganese
The Graphite, Hermoine, et al., claims
Utah County, Utah

Gentlemen:

A review of your application of May 31, 1951, for a $24,000.00 exploration contract, reveals that a letter dated January 21, 1952, by Mr. G. C. Selfridge, Chief, Iron and Ferro-Alloy Division, Defense Minerals Exploration Administration, requests additional information necessary to process your application. We have not received an answer from you and we assume that you no longer desire to proceed with the application.

We wish to cooperate with you in the matter of allowing ample time, but if the needed data have not been received by April 1, 1952, we will then remove the application from the active file and consider the matter closed.

Sincerely yours,

C. O. Mittenderf

Acting Administrator
Defense Minerals Exploration
Administration

W.H.K.

GGGentry:ls
2/29/52

cc: Docket
Admn. ReadingFile
Field Team, Region 4
N. B. Melcher, USBM
M. D. Crittenden, USGS
G. G. Gentry
G. C. Selfridge

FWO

J.F.S.

Mr. Sagi E. Fields
Mr. Theodore Haynes
Bureau, Utah

Re: Docket No. DMA 1162X - Manganese
The Graphite, Hermaine, et al claims
Utah County, Utah

Gentlemen:

We are unable to proceed with your application in the sum of $14,428.60, as revised by the Field Team from your original figure of $24,000.00, until we have your answer to our letter of October 2, 1951.

We note that your property is well located in respect to a local market which may be able to accept your ore as mined.

Please inform us whether or not you have had any success in making the financial arrangements necessary to cover your share of the proposed loan. If you find that it will be impossible to provide the required finances within the near future, we suggest that you withdraw your present application, without prejudice, and that you re-apply when funds are available, making reference to the present docket number.

Sincerely yours,

George C. Selfridge

G. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division

QLBrewer'lm
1/17/52

cc: Admn. Reading File
Docket
H. B. Melcher, USBM
M. D. Crittenden, USGS
✓ Field Team Reg. IV
EX G. C. Selfridge
Q. L. Brewer

224 New Customhouse
Denver 2, Colorado

October 22, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee
Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 1162, Fields-Haynes Manganese Deposit

Enclosed herewith are six copies of supplementary information prepared for the above report, as requested in your letter dated October 2, 1951.

F. T. Alleman, Alternate

Enclosures

JFS:LB

FIELLS-HAYES MANGANESE DEPOSIT

UTAH COUNTY, UTAH

MM-1162

SUPPLEMENTARY INDICATIONS

By H. H. Lowe

TWO SCHEMES

Project No. 1

250 feet trenching	2 days
Headframe construction	3 "
Hoisthouse (20 ft. by 12 ft. shed) construction	3 "
50 feet shaft sinking at 1-1/2 feet per day	34 days or 1-1/4 months
50 feet drifting at 3 feet per day	16 days or 3/4 "
Total	2-1/2 months

Project No. 2

50 feet shaft sinking at 1-1/2 feet per day	34 days or 1-1/4 months
100 feet drifting at 3 feet per day	34 days or 1-1/4 months
Total	2-1/2 months

Total time for both projects 5 months

ESTIMATED COSTS

Rental Costs Per Month

105 cu. ft. compressor (gasoline driven) with accessories	$ 181.00
Air driven Tugger hoist (2000 lb. capacity) with cable	73.00
Two sinking buckets at $10.00 each	20.00
45 lb.-jackhammer with drill steel	60.00
One mine car	18.00
Air pipe, mine rails, water pressure tank	18.00
Total	$350.00

Labor Costs

Three miners at $16.00 per day (includes overtime and insurance)	48.00
Supervision, sampling, bookkeeping, transportation, per day	6.00
Total	$ 54.00

Shaw

Six copies sent
Tom Lyon
10-22-51

Service on Gasoline-Driven Compressor

Fuel, lubrication, maintenance per day	$ 10.00

Tractor Bulldozer

Contract price per day	100.00

Costs Per Foot of Shaft Sinking and Drifting

Explosives	3.00
Shaft timber	6.00
Drift timber	1.00
Miscellaneous (drill bits, steel, etc.)	1.50

Project No. 1

Trenching (2 days)

Tractor bulldozer at $200.00 per day		$ 200.00

Headframe (3 days)

Material (timber, nails, etc.)	$ 128.60	
Labor - 3 men at $54.00 per day	162.00	290.60

Bointhouse (10 ft. by 12 ft. shed) (3 days)

Material (lumber, roofing, nails, etc.	125.00	
Labor - 3 men at $54.00 per day	162.00	287.00

Shaft Sinking (50 ft.) (34 days or 1-1/4 months)

Labor - 34 days at $54.00 per day	1,836.00	
Rentals - 1-1/4 months at $350.00 per month	437.50	
Compressor service - 34 days at $10 per day	340.00	
Explosives - 50 ft. sinking at $3.00 per ft.	150.00	
Timber - 50 ft. shaft at $6.00 per ft.	300.00	
Miscellaneous - 50 ft. shaft at $1.50 per ft.	75.00	3,138.50

Drifting (50 ft) (16 days or 1/2 month)

Labor - 16 days at $54.00 per day	864.00	
Rentals - 1/2 mo. at $350.00 per month	175.00	
Compressor service - 16 days at $10 per day	160.00	
Explosives - 50 ft. drifting at $3.00 per ft.	150.00	
Timber - 50 ft. drift at $1.00 per ft.	50.00	
Miscellaneous - 50 ft. drift at $1.50 per ft.	75.00	1,561.50

Total cost, project 1		$5,477.60
Government participation (75 percent)	4,108.20	
Applicant participation (25 percent)	1,369.40	$5,477.60

Project No. 2

Shaft Sinking (50 ft.) (34 days or 1-1/4 months)

Labor - 34 days at $54.00 per day	$1,836.00	
Rentals - 1-1/4 mo. at $350.00 per month	437.50	
Compressor service - 34 days at $20 per day	340.00	
Explosives - 50 ft. sinking at $3.00 per ft.	150.00	
Timber - 50 ft. shaft at $6.00 per ft.	300.00	
Miscellaneous - 50 ft. shaft at $1.50 per ft.	75.00	$3,138.50

Drifting (100 ft.) (34 days or 1-1/4 months)

Labor - 34 days at $54.00 per day	1,836.00	
Rentals - 1-1/4 mo. at $350.00 per mo.	437.50	
Compressor service - 34 days at $10 per day	340.00	
Explosives - 100 ft. drifting at $3.00 per ft.	300.00	
Timber - 100 ft. drift at $1.00 per ft.	100.00	
Miscellaneous - 100 ft. drift at $1.50 per ft.	150.00	3,161.00

Total cost, project 2		$6,302.00
Government participation (75 percent)	4,726.50	
Applicant participation (25 percent)	1,575.50	6,302.00

Total cost both projects		$11,779.60
Government participation (75 percent)	$8,834.70	
Applicant participation (25 percent)	2,944.90	11,779.60

FIELDS-BRYNES MANGANESE DEPOSIT

UTAH COUNTY, UTAH

IMA-2162

SUPPLEMENTARY INFORMATION

By K. R. Evans

TIME SCHEDULE

Project No. 1

250 feet trenching	2 days
Headframe construction	3 "
Bathhouse (30 ft. by 12 ft. shed) construction	3 "
50 feet shaft sinking at 1-1/2 feet per day	34 days or 1-1/4 months
50 feet drifting at 3 feet per day	16 days or 3/4 "
Total	2-1/3 months

Project No. 2

50 feet shaft sinking at 1-1/2 feet per day	34 days or 1-1/4 months
100 feet drifting at 3 feet per day	34 days or 1-1/4 months
Total	2-1/2 months

Total time for both projects 5 months

ESTIMATED COSTS

Rental Costs Per Month

105 cu. ft. compressor (gasoline driven) with accessories	$ 181.00
Air driven Tugger hoist (2000 lb. capacity) with cable	75.00
Two sinking buckets at $30.00 each	60.00
45 lb. jackhammer with drill steel	40.00
One mine car	18.00
Air pipe, mine rails, water pressure tank	16.00
Total	$350.00

Labor Costs

Three miners at $16.00 per day (includes overtime and insurance)	48.00
Supervision, sampling, bookkeeping, transportation, per day	6.00
Total	$ 54.00

Service on Gasoline-Driven Compressor

Fuel, lubrication, maintenance per day	$ 10.00

Tractor Bulldozer

Contract price per day	200.00

Costs Per Foot of Shaft Sinking and Drifting

Explosives	3.00
Shaft timber	6.00
Drift timber	1.00
Miscellaneous (drill bits, steel, etc.)	1.50

Project No. 1

Trenching (2 days)

Tractor bulldozer at $200.00 per day		$ 400.00

Headframe (3 days)

Material (timber, nails, etc.)	$ 126.60	
Labor - 3 men at $56.00 per day	168.00	294.60

Maintenance (20 ft. by 12 ft. shed) (3 days)

Material (lumber, roofing, nails, etc.	135.00	
Labor - 3 men at $56.00 per day	162.00	297.00

Shaft Sinking (50 ft.) (24 days or 1-1/4 months)

Labor - 24 days at $56.00 per day	1,336.00	
Rentals - 1-1/4 months at $350.00 per month	437.50	
Compressor service - 24 days at $20 per day	480.00	
Explosives - 50 ft. sinking at $3.00 per ft.	150.00	
Timber - 50 ft. shaft at $6.00 per ft.	300.00	
Miscellaneous - 50 ft. shaft at $1.50 per ft.	75.00	1,136.50

Drifting (50 ft) (16 days or 1/4 month)

Labor - 16 days at $56.00 per day	896.00	
Rentals - 1/4 mo. at $350.00 per month	87.50	
Compressor service - 16 days at $20 per day	320.00	
Explosives - 50 ft. drifting at $3.00 per ft.	150.00	
Timber - 50 ft. drift at $1.00 per ft.	50.00	
Miscellaneous - 50 ft. drift at $1.50 per ft.	75.00	1,561.50

Total cost, project 1		$5,477.60
Government participation (75 percent)	4,108.20	
Applicant participation (25 percent)	1,369.40	$5,477.60

Project No. 2

Shaft Sinking (50 ft.) (34 days or 1-1/4 months)

Labor - 34 days at $54.00 per day	$1,836.00	
Rentals - 1-1/4 mo. at $350.00 per month	437.50	
Compressor service - 34 days at $20 per day	680.00	
Explosives - 50 ft. sinking at $3.00 per ft.	150.00	
Timber - 50 ft. shaft at $6.00 per ft.	300.00	
Miscellaneous - 50 ft. shaft at $1.50 per ft.	75.00	$3,138.50

Drifting (100 ft.) (34 days or 1-1/4 months)

Labor - 34 days at $54.00 per day	1,836.00	
Rentals - 1-1/4 mo. at $350.00 per mo.	437.50	
Compressor service - 34 days at $20 per day	680.00	
Explosives - 100 ft. drifting at $3.00 per ft.	300.00	
Timber - 100 ft. drift at $1.00 per ft.	100.00	
Miscellaneous - 100 ft. drift at $1.50 per ft.	150.00	3,163.00

Total cost, project 2		$6,302.00
Government participation (75 percent)	4,726.50	
Applicant participation (25 percent)	1,575.50	6,302.00

Total cost both projects		$11,779.60
Government participation (75 percent)	$8,834.70	
Applicant participation (25 percent)	2,944.90	11,779.60

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

October 15, 1951

Mining Division
Date Rec'd.
OCT 17 1951
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Paul T. Allsman, Chief, Mining Division, Region IV

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: DMA 1162, Fields-Haynes manganese deposit, Utah County, Utah

Enclosed are 8 copies of supplementary information prepared for the subject report as requested in a memorandum from J. H. East, Jr., dated October 5, 1951.

The breakdown of costs is slightly lower than the cost given in the original report. The costs given in the report were estimated by U. S. Geological Survey as a result of conversations with the applicant.

Stephen R Wilson
Stephen R. Wilson

Enclosure

Mining Division
Date Rec'd.

OCT 17 1951

BUREAU OF MINES
Denver, Colorado

October 15, 1951

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Stephen R. Wilson

Enclosure

224 Mem Customhouse
Denver 2, Colorado

October 5, 1951

Memorandum

To: S. R. Wilson

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 1162 - Manganese, Carl H. Fields and Theodore Rayne, Eureka, Utah - Property, The Graphite Harmonine, Lexington and other claims in the Eureka district.

Attached herewith is copy of letter received from Mr. Tom Lyon, Chairman of the Coordinating Committee, under date of October 2, 1951, regarding the above subject docket. Please furnish the necessary information in order that a contract may be drawn up, as requested in said letter.

J. H. East, Jr.

J. H. East, Jr.

Attachment

WHK:oj

cc: DMA Subject and Chron
AHKoschmann

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

OCT 2 1951

REGIONAL DIRECTOR'S OFFICE REGION IV
OCT 5 1951
BUREAU OF MINES DENVER, COLORADO

Mr. J. H. East, Jr. Executive Officer
DMA Field Team, Region IV
224 New Customhouse Building
Denver, Colorado

Subject: DMA-1162 Manganese
Carl H. Fields and Theodore Hayne
Eureka, Utah - Property-The Graphite
Hermoine, Lexington and other claims
in the Eureka district.

Dear Mr. East:

We would like a breakdown of cost figures recently submitted by the Field Team on this property. A figure of $70 per foot for shaft sinking, $30 per foot for drifting, and $350 per month rental on necessary equipment was given in the Field Team Report. An itemization of equipment and rentals, together with a classification of labor and wages, is desired.

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Enclosure

Lowell B. Moon
Bureau of Mines

T. P. Thayer
Geological Survey

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
OCT 5 1951
BUREAU OF LAND MGMT.
DENVER, COLORADO

Mr. Carl [illegible] Fields
Eureka, Utah

In reply please refer to
[illegible]

Dear Mr. Fields:

In answer to your letter of September 17, 1951, we have in our files a letter stating that you are unable to pay your portion of the proposed project. Unless you are able to participate in some manner, it will be impossible for us to approve the loan. Enclosed is a copy of [illegible]-5, detailing various ways in which you may contribute your 25% to the project. Awards from four to six weeks may elapse before payments on your first vouchers can be made. Therefore, it will be necessary for you to finance the program for this period.

We would like to have a detailed list of all equipment which you have on hand for use in the exploration. It is also necessary that you submit a list of the equipment that you intend to rent and the rental to be paid for each item.

The figures you have submitted give no cost estimates for the proposed work. An itemized accounting of these costs, giving classifications of labor, rates of pay, prices of supplies and timber, is required.

Your application cannot be fully approved until we have received this information.

Very truly yours,

SIGNED

Lester E. Reiferer
Chief, Lawness Branch

Enclosure

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
OCT 5 1951
BUREAU OF MINES
DENVER, COLORADO

OCT 2 1951

Mr. Carl H. Fields
Eureka, Utah

In reply please refer to
[illegible]-1162

Dear Mr. Fields:

In answer to your letter of September 17, 1951, we have in our files a letter stating that you are unable to pay your portion of the proposed project. Unless you are able to participate in some manner, it will be impossible for us to approve the loan. Enclosed is a copy of [illegible]-5, detailing various ways in which you may contribute your 25% to the project. Awards from four to six weeks may elapse before payments on your first vouchers can be expected. Therefore, it will be necessary for you to finance the program for this period.

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The figures you have submitted give no cost estimates for the proposed work. An itemized accounting of these costs, giving classifications of labor, wages of each, prices of supplies and timber, is required.

Your application cannot be fully approved until we have received this information.

Very truly yours,

SIGNED
George D. Holderer
Chief, Nonmetals Branch

Enclosure

REGIONAL DIRECTOR'S OFFICE
REGION IV
SEP 21 1951
BUREAU OF MINES
DENVER, COLORADO

SEP 18 1951

Memorandum

To: Production Expansion Division

Through: Director, Supply Division

From: Chief, Manganese Branch

Subject: Carl H. Fields and Theodore Haynes
DMA-1162X, Manganese
Eureka, Utah
Exploration Loan: Government Participation $16,785.

Property: Fields-Haynes Manganese Deposit
Utah County, Utah

Conclusions:

The small size of the outcrop does not warrant the proposed amount of exploration. The need of the nearby Geneva Steel plant does justify some exploration on the property.

The ore thus far tested, assays 22,2% manganese, 2.1% iron, and 19.6% silica-dioxide. Metallurgical tests show that concentration to a high grade material involves excessive losses. The Geneva Steel plant will accept material of this manganese content.

Transportation is readily available and the deposit is approximately 30 miles from the Geneva Steel plant.

Recommendation:

The Manganese Branch recommends that a two-phase loan program be approved. This would include the following:

Phase #1

Sinking a 5'x 7' shaft in ore 50' or less if the manganese bed pinches out. Drifting 50' in ore in each direction or until the ore pinches out. The approximate costs are estimated as follows:

Surface trenches		$200.00
Shaft sinking 5'x7'x 50' @ $70/ft.		$3,500.00
Drifting 5'x 7'x 100' @ $30/ft.		$3,000.00
		$7,700.00
4 months rental @ $350/mo.	$1,400.00	
Timber costs	195.00	
	$1,595.00	$1,595.00
		$9,295.00
Bookeeping, Engineering and Assaying		705.00
Total Costs of Phase # 1		$10,000,00

If the first phase of the project is successful, the Manganese Branch recommends that the second phase be started. The second phase will consist of deepening the shaft to 100' overall depth and drifting 100 feet in each direction on the 100 foot level. The cost of this second phase is estimated as follows:

Deepening of shaft 5'x 7'x 50' @ $70/ft.		3,500.00
Drifting 200' at $30/ft.		6,000.00
Cost		$9,500.00
4 mo. rental @ $350/mo.	$1,400.00	
Timber	1,000.00	
	$ 2,400.00	$2,400.00
		$11,900.00
Bookeeping, Engineering and Asaying		600.00
Total cost of phase # 2		$12,500.00
Total cost of phase # 1		$10,000.00
Project total cost		$22,500.00

If at anytime shafts or drifts run out of the ore, exploration should be discontinued. With this foregoing understanding, the Manganese Branch approves a loan of $22,500.00.

Wm

George B. Holderer
Chief, Manganese Branch

Approved:

Tom Lyon

Director, Supply Division

August 24, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Project 1141, Fields Spring Manganese Deposit, Polk County, Wash

Enclosed herewith are original and two copies of the geological and mining report on the above application.

We agree with the consulting team that Project No. 1 be approved and that the recommendations regarding Project No. 2 be dependent upon the results of Project No. 1.

J. H. Eisch, Jr.

A. H. Kovalchuck
A. H. Kovalchuck

Enclosures

2d

Mining Division
Region IV

July 11, 1951

Mr. Carl H. Fields
Deputy Sheriff's Office
Juab County Court House
Lower end of Main Street
Eureka, Utah

Dear Mr. Fields:

This acknowledges receipt of your letter of July 2, 1951, giving your name as a contact for the field examination.

When the investigation of your application DMA-1162 is to be done, a copy of your letter will be sent to Mr. S. R. Wilson of Salt Lake City, Utah, in order that he will be advised of your wishes.

Sincerely yours,

Paul T. Allsman
Chief, Mining Division, Region IV

PTA:oj

cc: Mr. S. R. Wilson

cc: Sub.
Chron.

Eureka, Utah,
July 2, 1951

REGIONAL DIRECTOR'S
OFFICE
REGION IV
JUL 5 1951
BUREAU OF MINES
DENVER, COLORADO

Mr . J. H. East Jr.
Executive Officer
DMA Field Team, Region 1V
New Customhouse Building
Denver 2, Colorado

Dear Mr. East:

We are in receipt of a letter from Mr. Tom Lyon, Director Supply Division, Defense Minerals Administration, in which he advises us to contact you in regards to whom should be contacted for a field examination of our property. This field examination is in reference to an application for a loan and is numbered DMA-1162.

When you or your representatives are ready to make this field examination please contact Mr. Fields. He can be contacted at the following address:

Mr. Carl H. Fields
Deputy Sheriff's Office
Juab County Court House
Lower end of Main Street
Eureka, Utah

Mr. Fields will be available at your convenience and we would suggest that the examination take place as soon as possible so that the work could get started before the inclement fall weather sets in.

Respectfully yours,

Carl H. Fields
Carl H. Fields

Theodore Haynes
Theodore Haynes

Eureka, Utah
July 2, 1951

Mr. Tom Lyon
Director Supply Division
Department of the Interior
Defense Minerals Administration
Washington 25, D.C.

Dear Mr. Lyon:

We are in receipt of your kind letter of June 25, 1951 in regards to application DMA-1162.

In accordance with your instructions we have notified Mr. J. H. East who he is to contact in Eureka for a field examination of our property. Inclosed find a copy of our letter to him.

COPY

Respectfully yours,

Carl H. Fields

Carl H. Fields

Theodore Haynes

Theodore Haynes

224 New Customhouse
Denver, Colorado

June 28, 1951

Memorandum

To: S. R. Wilson (with brochure)

(Through Chief, Mining Division)

Ralph Roberts

From: DMA Field Team, Region IV

Subject: DMA 1162, Carl H. Fields and Theodore Haynes, Eureka, Utah

Herewith enclosed is the brochure on the above docket, together with a letter of instruction from the Chairman of the Coordinating Committee.

Because of the low grade of ore, 15 to 20 percent manganese, and the probable limited reserve, you are requested to discuss the matter with the applicant and prepare a program more in line with the conditions found.

It is suggested that the files of both the Bureau of Mines and the Geological Survey be checked before any field work is done because there may be sufficient information available to complete a report without field work being done.

P. T. Allsman, Alternate

A. H. Koschmann

Attachments
PTA/cl
cc-Koschmann, dma Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

August 24, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 1162, Fields-Haynes Manganese Deposit, Utah County, Utah

Enclosed herewith are original and two copies of the geological and mining report on the above application.

We agree with the examining team that Project No. 1 be approved and that the recommendations regarding Project No. 2 be dependent upon the results of Project No. 1.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Enclosures

jd

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

August 24, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: DMA Docket 1162, Fields-Haynes Manganese Deposit, Utah County, Utah

The engineering features of the attached report have been reviewed by the Mining Division and we concur with the recommendation that Project No. 1 be approved, and that recommendations regarding Project No. 2 be dependent upon the results of Project No. 1.

Paul T. Allsman
P. T. Allsman

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Administration
200 New Customhouse
Denver 2, Colorado

August 22, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1162, Fields-Haynes Manganese Deposit, Utah County, Utah

Enclosed are eight copies of the geologic and mining report by Paul Dean Proctor of the U. S. Geological Survey and M. H. Howes of the U. S. Bureau of Mines covering the above docket.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Room 307, 320 South Main
Salt Lake City 1, Utah
20 August 1951

Memorandum

To: A. H. Koschmann, Field Team, Region IV

From: Ralph J. Roberts

Subject: Docket DMA 1162, Fields-Haynes Manganese Deposit, Utah County, Utah

Enclosed are 8 copies of a geological and mining report of the Field-Haynes Manganese Deposit, Utah County, Utah made in response to a field examination request to Field Team IV with respect to an application loan for $24,000 to explore a manganese deposit.

The manganese deposit occurs on a replacement of limestone and jasperoid at a limestone and dolomite contact. Metallurgical tests run by the U. S. Bureau of Mines, shows the ore as not being amenable to metallurgical treatment and still remain of commercial grade. However, the need of Manganese by the nearby Geneva Steel Company may justify the modified exploration program presented herein.

It is recommended that the Defense Minerals Administration enter into a contract with the Field-Haynes Manganese Company for exploration work herein outlined at a total cost of $14,428.60.

I concur with the recommendation of the examining geologists and engineer that the loan of $14,428.60 be granted.

Bonnie M. Stagg
for - Ralph J. Roberts

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

Docket DMA 1162, Fields-Haynes Manganese Deposit, Utah County, Utah

M. H. Howes, Mining Engineer
U. S. Bureau of Mines

Paul Dean Proctor, Geologist
U. S. Geological Survey

August 20, 1951

Docket DMA 1162, Fields-Haynes Manganese Deposit

Utah County, Utah

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Mr. Carl H. Fields and Theodore Haynes of Eureka, Utah, have applied for a loan of $24,000 to explore and develop a manganese deposit north of Eureka, Utah. The applicants propose an exploratory drift, at a total cost of $14,750.00, to undercut the deposit at a depth of 250 feet. The remainder of the proposed loan to be applied to the purchase of equipment and margin.

On June 16, 1951, the deposit was examined by geologists of the U. S. Geological Survey to determine the merit of the proposed exploration project. A preliminary examination had previously been made by an engineer of the Bureau of Mines. The manganese deposit occurs as a replacement of limestone and jasperoid at a limestone and dolomite contact. The deposit measures approximately 18 by 25 feet in plan, and is exposed by an open cut 15 feet deep. No commercial production has been made from the deposit.

Two tons of ore assaying 22 percent manganese was shipped to the Metallurgical Division of the Bureau of Mines in Salt Lake City, for concentration tests. A product containing 51.2 percent manganese was made, but the recovery was only 34.7 percent. It appears that the ore cannot be economically concentrated to metallurgical grade.

The examining geologists do not believe the deposit warrants a program as extensive as that suggested by the applicants. However, the need of manganese by the nearby Geneva Steel plant may justify a small scale exploration program. It is recommended that two projects be considered: the first project consists of surface trenching of an alluvial area containing manganese float, shaft sinking in the deposit to a depth of 50 feet, and

drifting 50 feet from the shaft. Total cost of this project is estimated to be $6,378.60. If the first project is successful, a second project consisting of deepening the shaft to 100 feet, and then drifting 100 feet from the shaft is recommended. The second project is estimated to cost $8,050.00. The total estimated cost of both projects is $14,428.60. If, however, at the conclusion of the first project the ore deposit does not appear to justify further exploration, it is recommended that the exploratory work be discontinued.

Docket DMA 1162, Fields-Haynes Manganese Deposit, Eureka, Utah

INTRODUCTION

Docket DMA 1162, Fields-Haynes manganese deposit, Utah County, Utah, proposes a 500-foot drift to explore a manganese deposit north of Eureka, Utah. At the request of the Field Team Region IV, Paul Dean Proctor and C. T. Wrucke visited the property July 14, and 16, 1951, to evaluate the proposed exploration project. M. H. Howes of the Bureau of Mines made a previous preliminary examination.

Location and accessibility

The Fields-Haynes manganese deposit is in Utah County, Utah, approximately 3.2 miles northwest of Eureka, Utah, at an altitude of 7,200 feet (see fig. 1). The property is accessible by a poorly graded dirt road. In winter the road may be impassable when the area is covered by deep snow. Further road work will be necessary if year around access is required.

History and Ownership

The main Tintic district to the south of the property has been one of the most productive mining areas in Utah. Approximately $500,000,000 in silver-lead-zinc-gold-copper has been produced from the district since its discovery. The manganese prospect lies on the fringe of this mining district.

The deposit was discovered by Carl H. Fields in 1940. The property consists of four patented and six unpatented claims which are jointly owned by Carl H. Fields, Heber Fields, and Theodore Haynes, all of Eureka, Utah. The deposit occurs on the Graphite No. 2 claim.

The property was examined during World War II by the U. S. Bureau of Mines, and in 1946 by the U. S. Geological Survey. Two tons of ore were

shipped to the Bureau of Mines for Metallurgical tests, but no other production is reported from the deposit. The test ore averaged 22.2 percent Mn, 2.1 percent Fe, 19.6 percent SIO_2, 23.7 percent insol., 0.68 percent P, and 0.2 percent Zn. After flotation and sintering, 34.7 percent of the manganese was recovered, in a product assaying 51.2 percent Mn. Complete details of the tests are given in the attached Bureau of Mines report[1].

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[1] Ipsen, A. O., Snedden, H. D., and Gibbs, H. L., Concentration of Oxide Manganese Ores from the Tintic District, Eureka, Juab County, Utah; Bur. of Mines, Rpt. of Inves. 4545, 1949.

GEOLOGY

Sedimentary rocks of Ordovician to Devonian age crop out in the vicinity of the manganese prospect (see fig. 2). Recognizable formations include the Opohonga argillaceous blue limestone of Lower Ordovician age, and the Bluebell mottled gray dolomite of Devonian age. These formations trend N. 5°-20° W. and dip from 35° to 75° NE. One hundred feet south of the open cut pit, an inferred fault appears to offset the Opohonga limestone eastward 35 feet. No other faults were recognized.

Jasperoid replaces parts of the Bluebell dolomite south of the manganese deposit. These silicified zones trend generally northwestward and form prominent reddish-brown to dark red outcrops. Most of the jasperoid shows breccia-like characteristics, and is locally manganese stained and cut by veinlets of conspicuous manganese oxides. Almost all outcrops of the Bluebell dolomite north and west of the jasperoid are altered to calcareous dolomite. Near the silicified zones the rock is vuggy and locally brecciated. Manganese oxides occur in a few places as veinlets and stains on the low outcrops of the Bluebell formation.

Dark gray to tan jasperoid northwest of the manganese deposit is cut by manganese oxide veinlets. Float of Opohonga limestone stained by red iron oxides is intermixed with the siliceous rock.

Ore deposits

The manganese deposit is localized at the contact of the Opohonga and Bluebell formations and replaces both rocks (see figs. 2 and 3). The deposit is as much as 18 feet wide and 25 feet long.

Manganese replaces both the Opohonga limestone and silicified Bluebell dolomite. Pyrolusite and psilomelane are the ore minerals, and form soft and hard ores. The soft ore contains tan to brown clayey streaks and is considered to replace the Opohonga formation. The hard ore appears to replace jasperoid in both formations. Gradations from jasperoid to siliceous manganese ore were noted near the open cut.

The deposit is exposed in shallow workings. A partly caved winze in the open cut contains siliceous manganese to a depth of 12 feet from the original surface. A trench 2 1/2 feet deep in the open cut and 7 feet south of the winze exposes a white, clayey zone veined by manganese oxides. The zone appears to dip northward about 30 degrees. The west side of the deposit shows a layer of iron stained clay 13 feet thick that contains a little manganese oxide. Bulldozer trenches southwest of the open cut show only a little manganese oxide and abundant float of Opohonga limestone. The east and north cuts expose some manganese oxide. Extensive manganese showings, other than stains and small veinlets, are not visible beyond the open cut, but some of the jasperoid and alluvium may cover manganese-bearing rock.

Ore reserves

Approximately 300 tons of low grade manganese ore is indicated in the

open cut. If the deposit retains its surface dimensions in depth, 40 tons of ore would be developed per foot of depth. It is therefore inferred that 2,000 tons may be present to a depth of 50 feet.

This estimate does not include any ore in the alluvial covered area to the north. As there is no basis for calculation of ore reserves in this area, no estimate will be made until exploration work is completed.

PROPOSED EXPLORATION

The applicants, Messrs. Fields and Haynes, originally proposed a 500-foot drift to explore the deposit at depth. Such a drift would undercut the deposit approximately 250 feet vertically. The small size of the surface showings does not warrant such an extensive development program at present. However, the need for manganese at the nearby Geneva Steel plant may justify some exploratory work.

The examining geologists propose that two exploration projects be undertaken in cooperation with the applicants: (1) surface trenching of showings of manganese upslope from the main deposit, and a shaft and drift in the main deposit to determine the depth and lateral extent of the manganese ore. (2) If Project No. 1 indicates that the deposit has potentialities of a fair tonnage, then continued deepening of the shaft, and crosscutting is recommended.

The total amount of surface trenching required should approximate 250 feet. This work could be done by a large bulldozer in two or three days. The shaft should be sunk to 50 feet in the deposit and should take about 2 months to complete. A 50-foot drift from the bottom of the shaft would be completed in about a month. If good showings of manganese were found in the shaft and crosscut, more extensive exploration of this deposit would

be justified. The second project should then follow: deepen the shaft to 100 feet and drift 100 feet from the shaft bottom to outline the ore deposit. The time requirement would be approximately 3 months for this latter project.

Costs

It was suggested to the owners that rather than an outright purchase of equipment during the exploratory part of the project, rental of the following items is possible at considerable saving: Compressor, tugger, bucket, cable, jackhammer.....$350.00 a month. Direct purchase of timber supplies itemized below is also necessary:

Collar set, headframe, lagging.....	$128.60
10 8" x 8" x 14' @ $7.51	
50 lagging sets @ $1.07	

The following labor and supply costs are estimated by Field and Haynes who are familiar with these costs in the Eureka area:

Project No. 1

Surface trenches--across alluvium area.....		$ 200.00
Shaft sinking, 5' x 7' x 50' deep @ $70.00 a foot.....		3,500.00
Drift, 5' x 7' x 50' @ $30.00 a foot.....		1,500.00
Cost		$5,200.00
3 mo. rental @ $350.00 per mo.	$1,050.00	
Timber cost	128.60	
Equipment-Rental and Timber Cost		1,178.60
Total Cost Project No. 1		$6,378.60

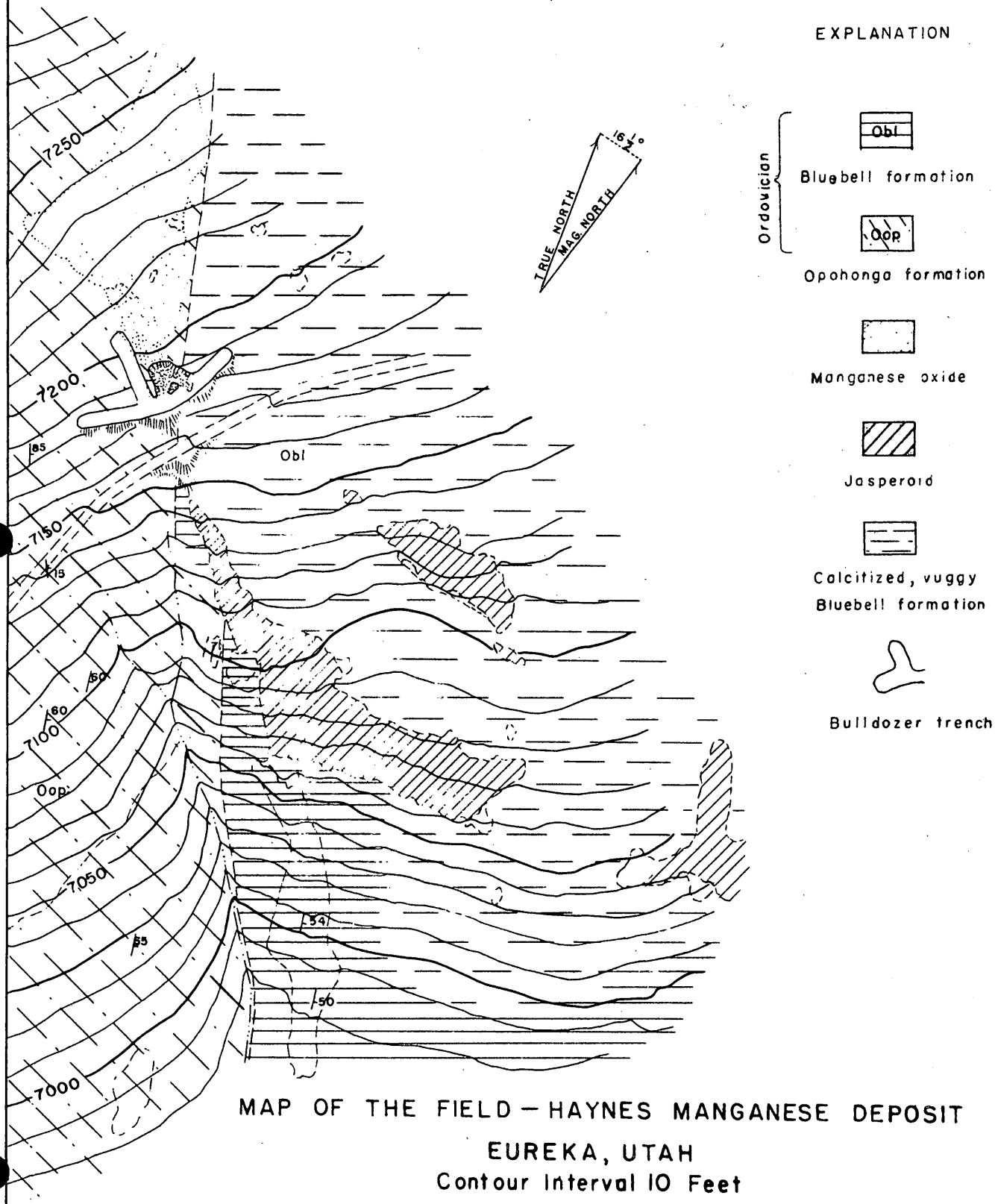
If at the conclusion of the above exploration program the deposit shows a sufficient grade of ore and continuity at depth, the second project can be undertaken:

Project No. 2

Deepen shaft 5' x 7' to 100' @ $70.00 a foot.....	$3,500.00
Drifting 100' @ $30.00 a foot.....	3,000.00
Cost	$6,500.00
3 mo. rental @ $350.00 per mo.	1,050.00
Margin for possible timbering, etc.	500.00
Total Cost Project No. 2	$8,050.00

Total costs for both the first and second projects exploration $14,428.60.

If at the end of the first exploration project, the deposit does not justify further exploration, it is recommended that the second project not be considered.



MAP OF THE FIELD — HAYNES MANGANESE DEPOSIT

EUREKA, UTAH

Contour Interval 10 Feet

0 50 100 150
Scale

FIG. 2 JULY 16, 1951 P. D. PROCTOR, C. T. WRUCKE