STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Docket No. DMA 1368X - Manganese

DATE: Sept. 4, 1952

FROM : Iron and Ferro-Alloy Division, DMEA

SUBJECT: Denial of exploration assistance
Docket No. DMA 1368X - Manganese
Norway Lode Manganese Company
Max Dercum, Partner
Summit County, Colorado

The applicant requested an exploration loan of $1,500.00 to construct two miles of access bulldozer-trail and to bulldozer trench an outcrop containing manganese and iron. Since no information was available in Washington on this deposit, it was referred to the field for an examination.

The field team agreed with Dercum that his estimate for determining the surface extent was correct. However, it recommended that a combination of trenching and diamond drilling or underground exploration would be required to determine the size of the deposit and its character.

The zinc content of the mineralized zone with traces of lead and copper indicated the exposures were gossan over probable small zinc deposits. The manganese ore is of low grade and contains Zn, Pb, and Cu in excess of that allowed. An average of four analyses follows:

Mn	Fe	SiO_2	Al_2O_3	S	Zn	Pb	Cu
24.2	23.7	8.9	1.3	0.07	2.29	0.1	0.05

A final report on the subject docket was received August 28, 1952, in which the application was denied. A letter of denial to the applicant was dated August 20.

The Iron and Ferro-Alloy Division, Defense Minerals Exploration Administration, after review of the docket, concurs with the action of the field team.

The subject docket, therefore, is being removed from the active files.

F. A. Rutledge

F. A. Rutledge

FILE COPY 400
SURNAME:

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

Docket No. DMA 1368X - Manganese Sept. 4, 1952

Rutledge
Martin

Iron and Ferro-Alloy Division, DMEA

Denial of exploration assistance
Docket No. DMA 1368X - Manganese
Norway Lode Manganese Company
Max Dereum, Partner
Summit County, Colorado

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Signed
F. A. Rutledge

FARutledge'lm
9/4/52

cc: Admn. Reading File
Docket
N. B. Melcher, USBM
M. D. Crittenden, USGS
W. S. Martin
F. A. Rutledge

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

224 New Customhouse
Denver 2, Colorado

August 20, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration, Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 1368X, Norway Lode Manganese Company, Summit County, Colorado

Enclosed are the original and three copies of the final report on DMEA 1368X, the original and one copy of Form 3b, and a copy of the letter of denial to the applicant.

for Robert F. Adler
W. H. King

A. N. Koschmann
A. N. Koschmann

Enclosures

C
O
P
Y

224 New Customhouse
Denver 2, Colorado

August 20, 1952

Norway Lode Manganese Company
e/o Mr. Max Dercum
Dillon, Colorado

Dear Mr. Dercum:

Reference is made to your application for Government aid in exploration work on the Norway Lode Manganese Claims.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding material of acceptable grade, and in quantities that will significantly improve the mineral supply position for the National Defense Program.

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise you that your application for Government aid is denied.

Very truly yours,

/s/ John F. Shaw
for W. H. King
Field Team, Region IV

/s/ A. H. Koschmann
A. H. Koschmann
Field Team, Region IV

HMC:jp
cc Actg. Administrator DMEA
WMTraver
Subject
Chron
AHKoschmann (2)

Mining Division
Region IV

August 20, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 1368X, Norway Lode Manganese Company, Summit County, Colorado

Enclosed are eight copies of the final report on DMEA 1368X by C.M. Harrer of the Bureau of Mines.

The examining engineer concludes that the manganese outcrops probably represent a gossan cap over a small underlying sulfide deposit and recommends that the exploration assistance be denied.

We concur in this recommendation.

for John F. Shaw
W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Colorado Minerals Administration
RECEIVED
AUG 28 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado

August 6, 1952

Memorandum

To: Executive Officer, Field Team, Region IV

From: Chief, Colorado Branch, Mining Division, Region IV

Subject: DMEA 1368X (Manganese), Norway Lode Manganese Company, Summit County, Colorado

Please find enclosed the original and eight copies of the "Summary, Conclusions, and Recommendations", by C. M. Harrer and D. R. MacLaren, and of Harrer's engineering report on the above docket.

Harrer, in his unnecessarily exhaustive engineering report, concludes from exposure and structural relationships which are not encouraging that the manganese outcrops probably represent a gossan capping over a small underlying sulfide deposit. Reserves are too small and low grade to be of economic importance and the loan requested is insufficient to explore the ore body properly. He recommends denial and I concur.

W. M. Traver, Jr.

W. M. Traver, Jr.

Enclosures

WMT/bam

cc: 8
DMEA 1368X
DMEA Chron.

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

200 New Customhouse
Denver 2, Colorado

August 19, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 1368X, The Norway Lode Manganese Claims, Summit County, Dillon, Colorado.

Attached are 8 copies of the geologic report by D. R. MacLaren covering DMEA Docket 1368X, The Norway Lode Manganese Claims, Summit County, Colorado.

The applicant has applied for a loan of $1500.00 to explore a vein of manganese and iron oxides by bulldozer trenching, and to build about 2 miles of access road suitable for the passage of a bulldozer and jeep.

Exploration work has been done at only 2 places on the subject property. At both places veins of manganese and iron oxide are exposed in shallow shafts. The vein material is vuggy. It carries small amounts of zinc and lead, and based on these features, MacLaren concludes that the exposures represent the shallow leached outcrop of a sulfide vein rather than a possible source of manganese ore. Although the proposed trenching may indicate the linear extent of the vein at the surface, it will not give any information as to depth of the oxidized vein or the changes in ore tenor. The operator is not prepared to spend the necessary funds to undertake ~~trenching~~ drilling or sinking a shaft. It is, therefore, recommended that this application for a loan be denied.

I concur in this recommendation.

The brochure is enclosed.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA 1368X, Norway Lode Manganese Company

Summit County, Colorado

Manganese

C. M. Harrer, Mining Engineer
Bureau of Mines

D. R. MacLaren, Geologist
U. S. Geological Survey

August 5, 1952

DMA 1368X

NORWAY LODE MANGANESE COMPANY
SUMMIT COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By C. M. Barker
Mining Engineer
Bureau of Mines

and

D. R. MacLaren
Geologist
U. S. Geological Survey

DMA 1368X

NORWAY LODE MANGANESE COMPANY
SUMMIT COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By C. M. Harrer and D. R. MacLaren

Max Dercum, manager of Norway Lode Manganese Company, of Dillon, Colo., applied for a Defense Minerals Exploration Administration loan to explore for manganese on the Norway claims 1 to 4, inclusive. He proposed to construct about 2 miles of access trail for jeep and bulldozer entry, and trench the surface over the deposits with the bulldozer at various locations, at a total cost of $1,500.00, Government participation 75 percent.

The company has, since the examination, combined the Norway claims with other property near Montezuma, Colo., and incorporated under the laws of Colorado as the Chihuahua Mining and Milling Company.

Oxides of manganese and iron occur as lens-like bodies in fissure and shear zones in pre-Pennsylvanian sediments. The presence of zinc in the assays suggests the possibility of shallow zinc sulfides which implies a very limited vertical range of manganese-iron oxides in shallow, leached outcrops.

Meager exposures and the structural relationships on the Norway Lode Manganese claims are not encouraging for the development of important manganese reserves, and analyses of the ore indicate low-grade material. Contaminants, particularly zinc, make the ore unacceptable

metallurgically. Inaccessibility of the deposits and curtailed operating season would interfere with production. Lack of concentration facilities, distance from potential markets, and very high costs make this an unattractive venture.

Reserves based on geologic inference probably would not exceed 9,000 tons with an assay from the average of two samples by the applicant and two samples by the examining team of:

Percent											
Mn	Fe	SiO_2	Al_2O_3	P	CaO	MgO	BaO	S	Zn	Pb	Cu
24.2	23.7	8.9	1.30	0.03	1.10	1.62	0.09	0.07	2.29	<.10	<.05

< less than

A program of diamond drilling or shaft sinking to gain the information necessary for a complete appraisal of the property will cost considerably more than the applicant was prepared to invest at the time of the examination.

The application for an exploration loan of $1,500.00, docket DMA 1368X, by Max Dercum to explore the Norway Lode Manganese claims is recommended for denial.

THE NORWAY LODE MANGANESE CLAIMS

SUMMIT COUNTY

DILLON, COLORADO

DMEA DOCKET 1368X

Geologic Report

By D. R. MacLaren
U. S. Geological Survey

THE NORWAY LODE MANGANESE CLAIMS
DILLON, SUMMIT COUNTY, COLORADO

INTRODUCTION

Max Dercum, Manager of the Norway Lode Manganese Company of Dillon, Summit County, Colorado, has applied to the Defense Mineral Exploration Administration for assistance to explore for manganese on 4 claims in the Upper Blue River area, 9 miles southwest of Breckenridge, Colorado. The applicant proposes to build about 2 miles of access road suitable for the passage of a bulldozer and jeep, and to trench by bulldozer in order to explore a vein of manganese and iron oxides. The applicant estimates that the cost will be $1,500, the Government's share to be 75 percent or $1,125.

The Norway claims are in the Pollock Mining District, sec. 26, T. 7 S., R. 78 W., Sixth Principal Meridian, at an altitude of 11,500 to 12,00 feet (fig. 1). Due to long winters and heavy snowfalls, the property is accessible for only a few months of the year. It may be reached by traveling 6 miles south of Breckenridge on State Highway 9, then three-quarters of a mile along a narrow dirt road that leads up McCullough Gulch and is passable, with difficulty, in a jeep. The southern boundary of the property is about a mile beyond the end of the road.

It is concluded that this is a poor manganese prospect, and it is recommended that this application for a loan be denied.

GEOLOGY

The rocks in the Upper Blue River area, as mapped by Q. D. Singewald (1947), are pre-Cambrian gneiss, schist, and granite; pre-Pennsylvanian

quartzite, shale, and dolomite; and unconsolidated alluvium, moraine, and terrace gravel.

On the Norway No. 1 claim (fig. 2), pre-Pennsylvanian sediments, dipping slightly to the east, are cut by a fairly strong mineralized fissure that strikes N. 37° W. and dips 62° NE. Near the north boundary of Norway No. 1 claim, the sediments are in contact with pre-Cambrian rocks. The contact is obscured by overburden, but it is inferred to be a fault. Farther north, near the boundary between Norway No. 2 and No. 4 claims, a second inferred fault again brings the sediments into contact with the pre-Cambrian rocks.

Exploration work has been done at only two places on the claims. On Norway No. 4 claim, a shallow shaft is said to be on a vein of manganese and iron oxides. At the time of the inspection, the bottom of the shaft was full of snow and the walls were tightly cribbed so that no vein was seen. Adjacent to the shaft slightly stained fractures strike N. 20° W. and dip nearly vertically. On the dump a small pile of oxidized material, reportedly from the vein in the shaft, was sampled as a check of the assays submitted by the applicant. The assays are:

	Mn	Fe	Zn	Pb	Cu	S
Examiner's sample	26.4	27.4	0.7	0.1	0.05	0.1
Applicant's sample	22.7	21.7	2.3	nil	nil	0.07

On Norway No. 1 claim a shaft ten feet deep exposes a mineralized fissure zone, five feet wide, in which three irregular veins containing oxides of manganese and iron are separated by horses of sandy shale. The veins, vuggy to spongy in texture, vary from 2 to 3 inches wide, and make up about one-quarter of the fissure width. A sample of the vein material

was taken as a check of the assays submitted by the applicant. The assays are:

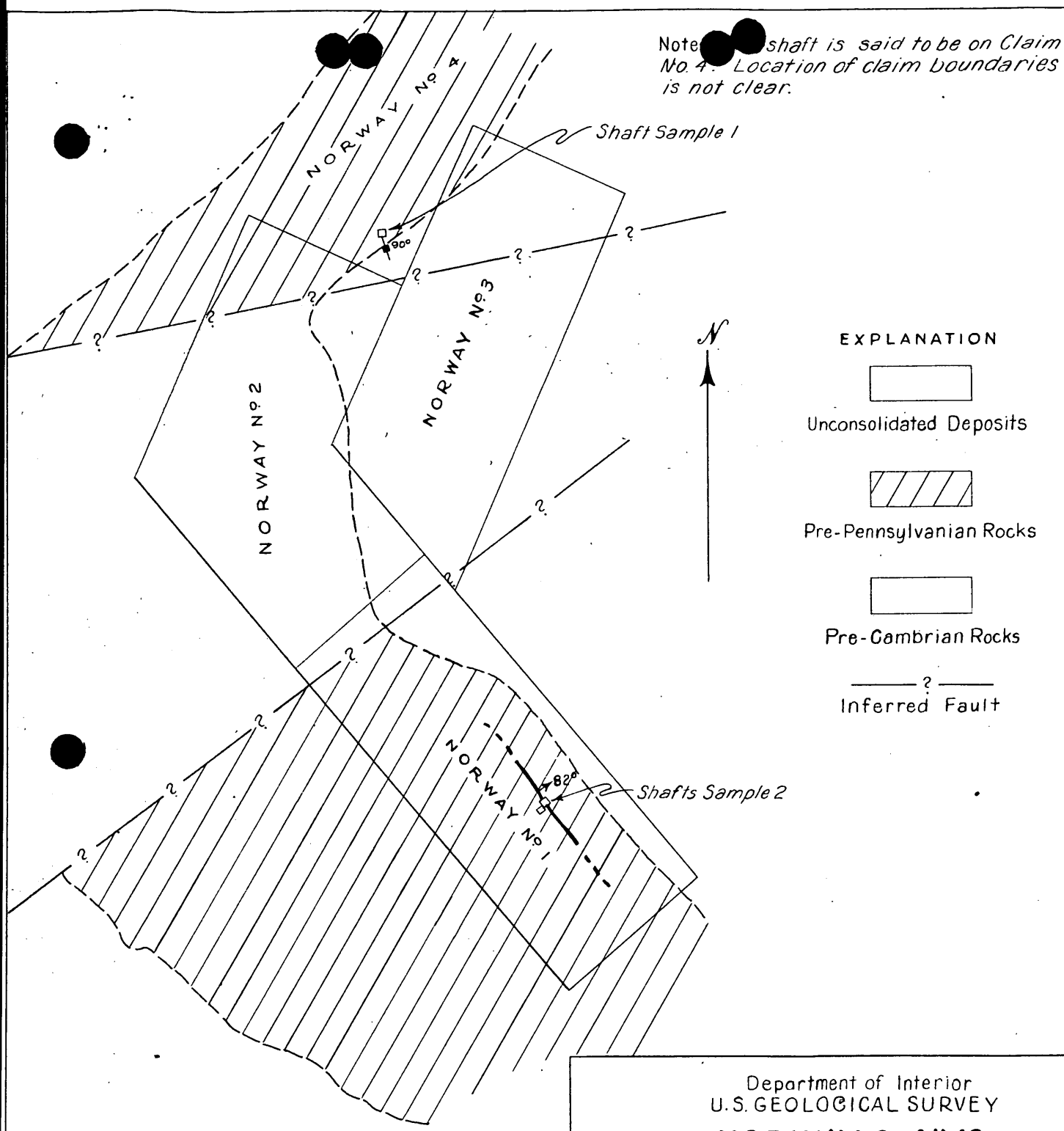
	Mn	Fe	Zn	Pb	Cu	S
Examiner's sample	21.6	23.8	3.85	0.1	0.05	0.1
Applicant's sample	25.1	33.0	2.3	nil	nil	Tr.

CONCLUSIONS AND RECOMMENDATIONS

Based on the vuggy texture and the high zinc content of the vein material, it is concluded that the exposure on the Norway No. 1 claim represents the shallow leached outcrop of a sulfide vein rather than a possible source of manganese ore. It is further concluded that although the proposed trenching may indicate the linear extent of the vein at the surface, it will not give any information as to the depth of the oxidized zone, or the changes in ore tenor that may be expected to take place in the sulfide zone. A program of drilling, or shaft sinking and drifting, such as would be needed to gain the information necessary for a proper appraisal of the value of this property will cost considerably more than the applicant was prepared to spend, at the time of the examination. It is therefore recommended that this application for a lease be denied.

REFERENCES

Singewald, Quentin D., Lead deposits of the Upper Blue River area, Summit County: State of Colorado mineral resources board, Mineral resources of Colorado, pp. 313-316, 1947.



Department of Interior
U.S. GEOLOGICAL SURVEY

NORWAY CLAIMS
Summit Co., Colo.

DMEA Docket 1368X

Claim map from applicant. Geology by D. R. MacLaren after Q. D. Singelwald

SCALE
500 0 500 FT.

July 1952

Fig. 2

DMA 1368X

NORWAY LODE MANGANESE COMPANY
SUMMIT COUNTY, COLORADO

Engineering Report

By C. M. Harrer
Mining Engineer
Bureau of Mines

DMA 1368X

NORWAY LODE MANGANESE COMPANY
SUMMIT COUNTY, COLORADO

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ILLUSTRATIONS

Figure	Follows Page
1. Location map, Norway Lode Manganese Company, Summit County, Colorado	2
2. Claim map, Norway claims, Summit County, Colorado	*

* See figure following Geologic Report.

DMA 1368X

NORWAY LODE MANGANESE COMPANY
SUMMIT COUNTY, COLORADO

ENGINEERING REPORT

By

C. M. Harrer

INTRODUCTION

Max Dercum, a partner in the Norway Lode Manganese Company, of Breckenridge, Colo., applied in the fall of 1951 for a Defense Minerals Administration loan of $1,500.00 to explore the manganese possibilities of the unpatented Norway claims 1 to 4, inclusive, by bulldozing through an access trail and trenching the surface over the deposits in various locations. The property now forms part of the newly incorporated Chihuahua Mining and Milling Company, of Montezuma, Colo., with the same and additional officers.

Field examination of surface exposures on all four claims was made July 1, 1952, by an examining team of the Defense Minerals Exploration Administration.

ACKNOWLEDGMENTS

Max Dercum and R. F. Mackie accompanied the examining team as guides and furnished all information available on the property. Publications and maps of the U. S. Geological Survey, by Q. D. Singewald, were referred to for general geological information on the area.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Norway Lode Manganese claims 1 to 4, inclusive, are in sec. 26, T. 7 S., R. 78 W., 6th P. M., Pollock Mining District, Summit County, Colo. (fig. 1), at altitudes ranging between 11,500 and 12,000 feet above sea level. The property lies across a rugged ridge between McCullough and Spruce gulches. At present there is no road or trail in to the property. Nearest access is from Breckenridge, south over Colorado State Highway 9 for 6.8 miles; thence west up McCullough Gulch 1.7 miles, and north for 1 mile to the property which is inaccessible for at least 5 months of the year under the best of conditions due to the high altitude, extreme cold, and heavy snows.

HISTORY AND PRODUCTION

Early history of the property is unknown. Two shallow shafts on the Norway No. 1 claim and one on the Norway No. 4 claim and the lack of an access road indicate that no manganese or other ore was removed from the property except as samples.

OWNERSHIP AND EXTENT

The property consists of four unpatented mining claims known as the Norway Lodes Nos. 1 to 4, inclusive, formerly owned in partnership by Max Dercum, Dillon, Colo., R. F. Mackie, Breckenridge, Colo., and R. C. Brown, Royal Oak, Mich.

Since the application for exploration assistance was made, the owners have incorporated these claims with others in the vicinity of Montezuma, Colo. The company is now known as the Chihuahua Mining and

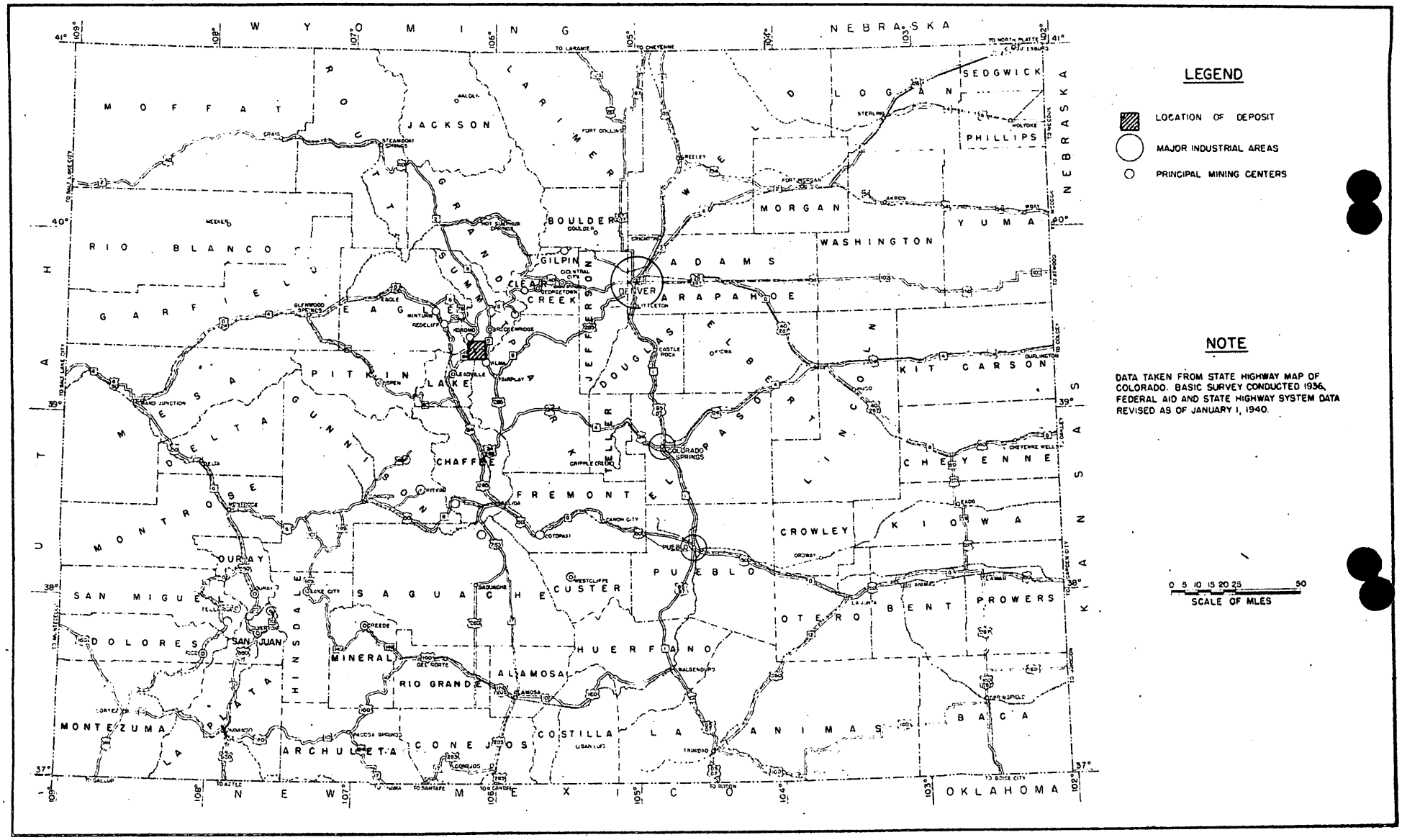

Figure 1. Location Map, Norway Manganese Lode Company, Summit County, Colorado, DMEA 1368X

Milling Company and is capitalized for $100,000.00 under the laws of the State of Colorado.

Officers are:

Max Dereum	Dillon, Colo.,	President
D. E. Leonard	Loveland, Colo.,	Vice President
Edna Dereum	Dillon, Colo.,	Secretary-Treasurer
R. F. Mackie	Breckenridge, Colo.,	Director
R. G. Brown	Royal Oak, Mich.,	Director

DESCRIPTION OF THE DEPOSITS

Manganese and iron oxides occur as fissure filling in nearly vertical shear zones in flat lying pre-Pennsylvanian limy sandstones. Outcrops are widely separated and apparently not connected, and are on opposite sides of a rugged ridge between McCullough and Spruce gulches. Surface exposures are traceable for very short distances due to almost complete masking by soil, glacial debris, and talus. Manganese is most prominently exposed in a shallow shaft on the Norway No. 1 claim. This exposure consists of narrow bands of iron and manganese oxides in limy sandstone. The accessible face was 7 feet wide and 10 feet deep. About 25 percent of the face is estimated as low-grade manganese ore. The ore zone strikes about N. 37° W. and dips 82° E. A shallow pit to the southwest shows very weak mineralization with staining. There is no other observable evidence of manganese on the claim.

The Norway No. 2 claim exhibits manganese and iron oxides as float in a talus slide near its northern boundary.

The Norway No. 3 claim shows no evidence of manganese.

The Norway No. 4 claim exposes manganese-iron oxides as float near its boundary with the Norway No. 2 claim, and a narrow shear zone

exhibits the same type of manganese-iron occurrence as exposed on the Norway No. 1 claim. The shear zone strikes roughly N. 20° W. and dips vertically. A small adjacent prospect shaft was inaccessible.

Development to date, as shown on figure 2 accompanying the geologic report, is very meager and insufficient for conclusive geologic analysis. The presence of excessive zinc in the concentrations of manganese and iron oxides and traces of lead and copper indicates that they may form the gossan over small zinc sulfide deposits.

The deposits appear to have very limited strike extent, and extension down the dip in the oxide zone is believed to be considerably less than 100 feet. As a consequence, the deposits would probably develop only very small reserves of manganese ore unacceptable in quality.

SAMPLING

Character samples of the ore by the applicant and by the examining team, separately, indicate comparable results. The former were analyzed by the Colorado Fuel and Iron Corporation, of Pueblo, Colo. Check samples numbers 1 and 2 taken by the examining team, shown on figure 2 with the geological report, were taken from the only exposures on the property. They and the applicant's samples were taken from the same approximate locations and the assays correspond with reasonable closeness. Analyses are in more detail than would ordinarily be required, to furnish information regarding the character of mineralization and to determine if the widely separated exposures were entirely similar petrologically and to conform with analyses submitted by the applicant.

Sample Data

Sample No.	Mn	Fe	SiO_2	Al_2O_3	P	CaO	MgO	BaO	S	Zn	Pb	Cu	Sample Location Figure 2
	Percent												
1 (Applicant)	25.1	23.0	8.2	1.0	0.026	1.1	1.9	nil	Tr.	2.3	nil	nil	2
1 (DMEA)	24.6	22.8	6.4	1.2	.02	1.4	1.65	0.06	0.1	3.85	<.1	<.05	2
2 (Applicant)	22.7	21.7	12.7	1.8	.074	1.1	1.8	.2	.7	2.3	nil	nil	1
2 (DMEA)	24.4	27.4	8.2	1.2	.01	.8	1.15	.03	.1	.7	<.1	<.05	1
Average	24.2	23.7	8.9	1.3	0.03	1.1	1.62	0.09	0.07	2.29	<.1	<.05	

MINEABLE ORE RESERVES

There are no mineable ore reserves available under the status of present development which classes the property as a border line prospect.

Reserves based on geologic inference probably would not exceed 9,000 tons of manganese-iron oxide ore assaying about as shown in the average shown under sampling.

Assumptions:

$$\frac{1,400 \text{ feet length} \times 5 \text{ feet width} \times 100 \text{ feet depth}}{10 \text{ cubic feet per ton}} = 70,000 \text{ tons vein matter}$$

70,000 tons x 1/4 (ore in vein) = 17,500 tons crude ore in vein

17,500 tons x 1/2 (sorting factor) = 8,750 tons possible shipping ore

PRESENT STATUS

Exploration and Development

Exploration is limited to two shallow shafts on the Norway Nos. 1 and 4 claims shown on figure 2 with the geologic report. They expose low-grade manganese and iron oxide mineralization insufficiently developed to indicate its extent.

Equipment and Facilities

There is no surface plant or any equipment on the property and no access road to it.

PROJECT PROPOSALS WITH COSTS

The applicant, Max Dereum, proposed to construct about 2 miles of exploration access bulldozer trail to the property and develop the Norway group of claims by trenching outcrops with a bulldozer to determine their extent. He estimated the work could be completed

within 12 working days at a cost of $1,500.00.

Dorsum's estimate is about correct to determine surface extent and whether further exploration is justified. It does not, however, add anything to information on the size of the deposit or its character which can only be determined by a combination of trenching and diamond drilling or by underground development.

PROPOSED FINANCING

The partners proposed furnishing their services as:

Supervisor at $15.00 per day
Bulldozer operator at $14.80 per day
Miner at $12.00 per day

In addition, they would furnish an Allis Chalmers HD-10 bulldozer at $64.00 per day and a jeep at $8.00 per day, supplies and tools to be purchased by them as required.

CONCLUSIONS

Meager exposures and the structural relationships on the Norway Lode Manganese properties are not encouraging for the development of important manganese reserves, and analyses of the ore indicate low-grade material and contaminants, particularly zinc, making it unacceptable metallurgically.

In addition, the inaccessibility of the deposits and curtailed operating season would interfere with production.

If the ore were acceptable, lack of concentration facilities, distance from potential markets, and high costs make this an unattractive venture.

Reserves based on geologic inference, totaling 9,000 tons, would require costly exploration, development, mining, and sorting charges to substantiate and bring into production. They are too unimportant and low grade to justify even the small loan requested.

The zinc content and traces of lead and copper accompanying the manganese and iron encourage the belief that exposures are the gossan over probable small zinc sulfide deposits. Their development would require construction of an access trail and diamond drilling or shaft sinking operations.

RECOMMENDATIONS

The application for an exploration loan of $1,500.00, docket DMA 1368X, by Max Dereum, to explore the Norway Lode Manganese claims for manganese is recommended for denial.

bam

Excerpt from Monthly Report, Region IV, June 21, 1952 to July 20, 1952

DMA 1368X - Norway Manganese (Manganese), Summit County, Colorado

A field examination was made July 1, 1952. Assays have been received and a denial report is being written.

Excerpt from Monthly Report, Region IV, March 21 to April 20, 1952

DMEA 1368X - Norway Manganese (Manganese), Summit County, Colorado

A letter from the applicant states that it will be impossible because of the location of the property at an altitude above 11,000 feet to make the examination before May, 1952.

June report said just awaiting USGS geologist selection to make exam.

Excerpt from Reg. IV report for March 1952

1368 - Colo. - Max Dercum, Norway Manganese Lodes (Manganese), Summit County. November 16, 1951 - Applicant states it will be impossible because of location of property at an altitude above 11,000 feet to make an examination before May 1952.

Excerpt from "DMEA Dockets Pending in Region IV Office for the Period Ending February 29, 1952", page 1

DMA 1368 - Colorado - Max Dercum. Norway Manganese Lodes (Manganese), Summit County. November 16, 1951.

Applicant states it will be impossible because of location of property at an altitude above 11,000 feet to make an examination before May, 1952.

Excerpt from Monthly Report, Region IV, January 21, 1952 to February 20, 1952

DMA 1368X - Norway Manganese - (Manganese), Summit County, Colorado

A letter from the applicant states that it will be impossible because of the location of the property at an altitude above 11,000 feet to make the examination before May, 1952.

Excerpt from Monthly Report, 12/21/51 - 1/20/52, Region IV, page 8

DMA 1368X - Norway Manganese, (Manganese), Summit County, Colo.

A letter from the applicant states that it will be impossible because of the location of the property at an altitude above 11,000 feet to make the examination before May, 1952.

Excerpt from page 9, Monthly Report, Region IV, Mining Division, dated Nov. 21, 1951, to Dec. 20, 1951.

DMA-1368X - Norway Manganese, (Manganese), Summit County, Colo.

A letter from the applicant states that it will be impossible because of the location of the property at an altitude above 11,000 feet to make the examination before May 1952.

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

Re: DMA-1363X-Manganese

Dear Mr. East:

The enclosed application is being referred to you for additional information. Neither the Bureau of Mines nor the Geological Survey have any data on this property.

Mr. Max Dercum of Dillon, Colorado, proposes to spend $1,500 in exploring the claims, Norway Lode 1, 2, 3, and 4 located in Sec. 26, T7S, R78W, 6 miles SSW of Breckenridge, Summit County, Colorado. His plans call for trenching the vein in various places with a bulldozer.

If Dercum is successful in his program, he would not demonstrate sufficient tonnages to warrant a mill or production loan. We suggest that Mr. Dercum be approached with the idea of sinking an inclined shaft in the ore to a depth sufficient so that lateral drifting may prove the quantity of material required.

In answer to question 1[illegible], Mr. Dercum reports 2.3% zinc in both assays submitted. This is very high. We would like check samples taken and assayed with the high zinc and iron content in mind. It would be well to establish a market for this ore before an exploration loan is approved.

Very truly yours,

CHJacoby:ll 10/1[illegible]/51
CC: DMA Docket File
Adm. Reading File
Mr. Crittenden
Mr. Melcher
Mr. Holderer

Tom Lyon, Chairman
Coordinating Committee

Enclosures

Bureau of Mines

Geological Survey

Index of File to Field Team
DMA 1368X Manganese

1 copy of MF-103 with attached 10/16/51
answers and maps

10/18/51

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : George B. Holderer

DATE: October 9, 1951

FROM : T. P. Thayer Thayer

SUBJECT: DMA 1368-X Norway Lode Manganese Co.

The Geological Survey has no information on the deposit, and a field referral will be necessary.

The analyses quoted show as much iron as manganese, and high zinc; the question of marketability must be gone into. A milling method is said to have been developed, and full information on this should be requested, in view of the relatively low grade of the ore - 22-25 percent Mn and 21-23 percent Fe.

Applicant has not provided map, but presumably plans series of cuts between the two shafts, without much need for a map.

The depth of overburden is not indicated, and should be checked for possibility that it is too great for bulldozer.

George B. Holderer October 9, 1951

T. P. Thayer

DMA 1368-X Norway Lode Manganese Co.

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T.Thayer:gt

FILE COPY
SURNAME:

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

June 19, 1951

Mr. Max Dercum, Manager
Norway Lode Manganese Company
Montezuma Road
Dillon, Colorado

Subject: DMA-1368X
Re: Exploration Loan -
Norway Lodes 1, 2, 3, 4

My dear Mr. Dercum:

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

The application was assigned Docket Number DMA-1368X and referred to Mr. George Holderer, Chief, Manganese Branch on June 1, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1368X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

L. F. Strobel:jc
cc: Strobel
File
Holderer
Lyon

June 19, 1951

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Montezuma Road
Dillon, Colorado

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Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

L. F. Strobel:jc
cc: Strobel
File
✓Holderer
Lyon

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1368X

Date received 5-3/-51

Participation

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application May 22, 1951

Estimated cost $1600

Mineral or metal Manganese

Percentage of Government participation 75%

Location of mine Approx. S.26 T7S R78W

6 miles S of Breckenridge, Summit County, Colorado

Date of filing MF-100

DMA Docket Number, if available 1368X

INSTRUCTIONS

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

THE APPLICANT

(R.C. Brown
(1133 Pinehurst Ave
(Royal Oak, Michigan.

*1. Is applicant an individual, partnership, or corporation? Partnership
*2. If a partnership, state names and addresses of partners. Max Dercum, Dillon, Colo.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. R.P. Mackie, Breckenridge, Colo.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property? Owner
6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None
7. If lessee, attach a copy of the lease and state if it is in good standing.

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

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. Cash on hand for project: $375
9. How much money is applicant prepared to invest in the proposed project? $375 Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? Yes

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

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. Norway Lodes 1, 2, 3, 4

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. Sects. 26, 27 & 28, T. 50 N., R. 9 W., Gunnison County, Colorado

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

*11. State the present and former names of the property, if any. Norway Lode Nos. 1, 2, 3, 4

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

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source. springs ½ mile streams 1 mile

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. none

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

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

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

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

*17. Production:

(*a*) If mine is in production, furnish the following information: Not in production.

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

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

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

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

(*c*) Give estimated tonnage and grade of each class of ore reserves. no estimates available

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

THE EXPLORATION

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

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

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

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. see answer to 18a,b.

THE REQUIREMENTS AND COSTS

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

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

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

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings. none

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings. none

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each. none

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

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

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

(*i*) Cost of power, water, utilities, and any other items not provided for above. none

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. 1 month after approval during months of July or August, 1951

CERTIFICATION

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

Norway Lode Manganese Co. (Name of company) By Max Dercum (Signature of authorized official)

May 22, 1951 (Date) Manager (Title)

Defense Minerals Administration RECEIVED MAY 31 1951 LAURAL E. STROBEL Executive Secretary

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

*Same as footnote on page 1.

Form MF-103
Supplemental

Norway Lode Manganese Co.
Dillon, Colorado

#4 Partnership is combination of a)active miner; b) logging engineer with background in mining, sawmilling, construction, now running own consulting business; c) businessman, vice-pres. of Brown Steel Corp.formerly in own trucking business.

#12 Location 6 miles SSW of Breckenridge, Colo.; lies 1½ miles west of Colorado Route 9; 14 miles south of Dillon; 54 miles south of Kremmling, Colo. D&RGW RR. 5 mile gravel road, 9mile blacktop to Dillon, 40 miles gravel to Kremmling.

#15 Truck haul; would necessitate mill as proposed and developed in pilot plant stage by Andrew Sweet, Jr. of Denver, Colorado(son of Andrew Sweet, Chief Metallurgist, Bureau of Mines, Denver, Colo.) Mill would probably be located in vicinity of Dillon, Colo. making 15 mile truck haul, requiring large trucks for tonnage production.

#16a.No previous production; the manganese showings are result of earlier prospecting for gold and silver; until the present time, no other developments or operations.
b.None for manganese in a district of gold, tungsten, zinc, and leadloads.

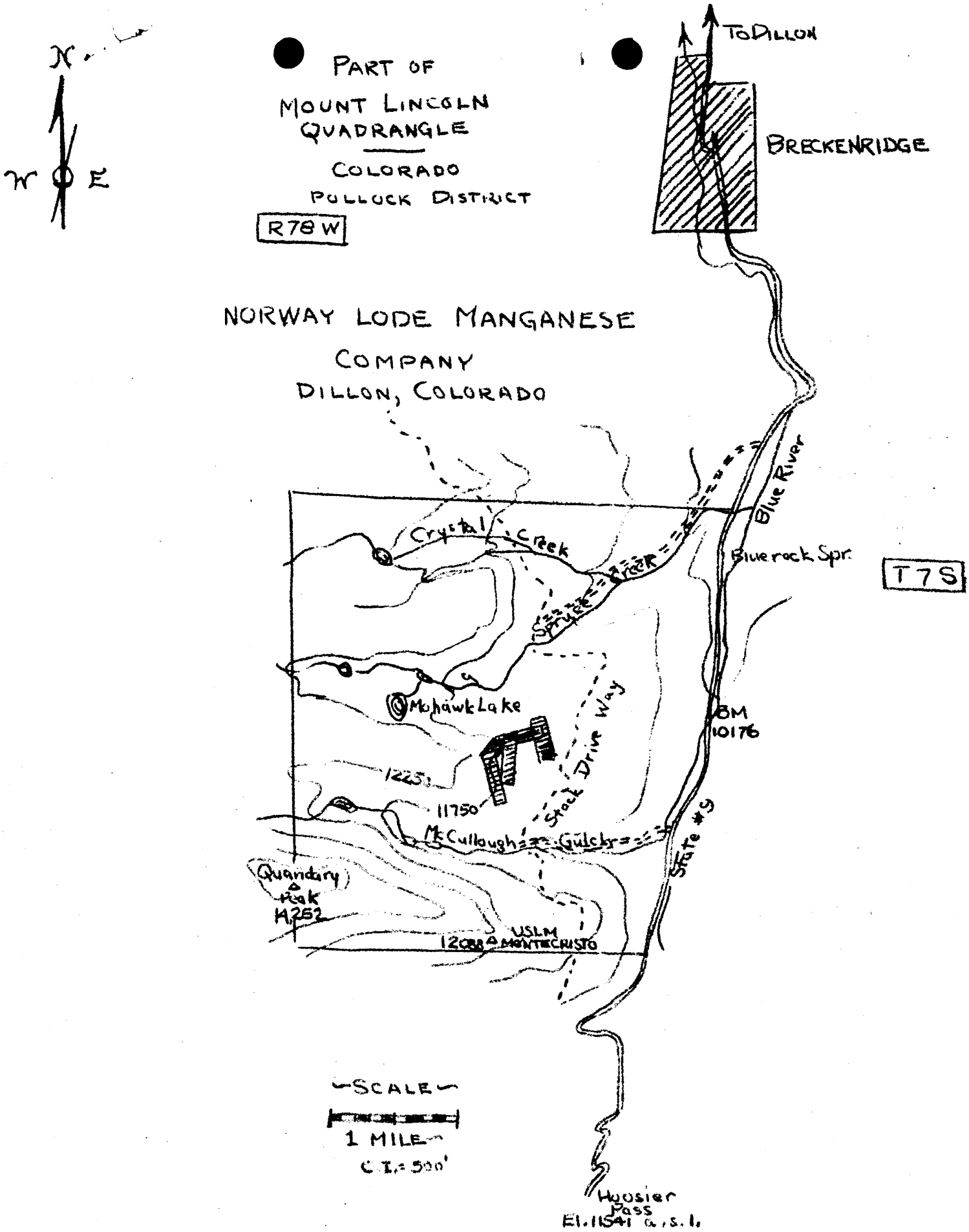
#18a.Manganese oxide(probably pyrolusite); also iron. (Ore is in contact with limestone beds, but due to dip, and overburden, not possible to now to estimate size of ore body. Vein approx. 10 feet wide at outcroppings)
b.Assay data:Prospect Nos. 1 & 2

#3	Fe.	Mn.	SiO_2	Al_2O_3	Phos	CaO	MgO	BaO	Sul.	Zn.	Pb.	Cu.
#1	23.0	25.1	8.2	1.0	.026	1.1	1.9	Nil	Tr.	2.3	Nil.	Nil
#2	21.7	22.7	12.7	1.8	.074	1.1	1.8	.2	.07	2.3	Nil.	Nil

#19 The two samples camp from separate croppings at the top of shafts approximately 2500 feet from each other, on opposite sides of a mountain ridge. These show substantially the same composition. Due to the overburden on the intervening area, this would be the most productive area for exploration. Altitude of properties, approx. 11,500' to 12,000' a.s.l.

#21 Building access trail for bulldozer and jeep for about 2 miles over relatively open ground to vein croppings; then making open cuts at various points to locate dipand strike of vein between known extremities, by bulldozing.

#23a.Labor:	1 Dozer operator	@ $1.85/hr....	100 hrs.....	$185.00
	1 Miner	1.50	12 days	144.00
b.	1 Supervisor	15.00/day	12 "	180.00
f.Bulldozer	@ $8/hr	8hrs/day	12 "	768.00
g.Jeep rental		$8/day	12 "	96.00
h.Tools, powder, caps, fuse, etc.				100.00
				$1473.00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QUADRANGLE
COLORADO
PULLOCK DISTRICT
R78W
NORWAY LODE MANGANESE
COMPANY
DILLON, COLORADO
TO DILLON
BRECKENRIDGE
Blue River
Blue rock Spr.
T7S
Crystal Creek
Spruce Creek
Mohawk Lake
Stock Drive Way
BM
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11750
McCullough Gulch
State #9
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M.D.
1951

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1368X

Date received 5-31-51

Participation

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application May 22, 1951

Estimated cost $1500

Mineral or metal Manganese

Percentage of Government participation 75%

Location of mine Approx. S.26 T7S R78W

6 miles SSW of Breckenridge, Summit County, Colorado

Date of filing MF-100

DMA Docket Number, if available 1368X

INSTRUCTIONS

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

THE APPLICANT

(R.C.Brown
(1133 Pinehurst Ave
(Royal Oak Michigan.

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

*2. If a partnership, state names and addresses of partners. Max Dercum, Dillon, Colo.
R.F.Mackie, Breckenridge, Colo.

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

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

*5. Are you the owner or the lessee of the property? None

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

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

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

Cash on hand for project: $375

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

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $375 -- yes

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

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. Norway Lodes 1,2,3,4

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. Sect. 26, T7S R78 W, Breckenridge, Colorado

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

*11. State the present and former names of the property, if any. Norway Lode Nos. 1,2,3,4

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

*13. State source and quantity of water available for operations and its sufficiency at all seasons. springs ½ mile
State amount of power to be used, rate per hour or other cost, and source. streams 1 mile

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. none

15. State in detail how the ore could be shipped and how and where milled. *

*16. History: *

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

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

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

*17. Production:

(*a*) If mine is in production, furnish the following information: Not in production.

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
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(*a*) Describe the ore or mineral deposits briefly. *

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19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. *

THE EXPLORATION

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

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

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

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24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. 1 month after approval during months of July or August, 1951

CERTIFICATION

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

Department of the Interior
Defense Minerals Administration
RECEIVED
MAY 31 1951
Executive Secretary

Norway Lode Manganese Co. By Max Dercum *Max Dercum*
(Name of company) (Signature of authorized official)

May 22, 1951 Manager
(Date) (Title)

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

*Same as footnote on page 1.

Form MF-103
Supplemental

Norway Lode Manganese Co.
Dillon, Colorado

#4 Partnership is combination of a)active miner; b) logging engineer with background in mining, sawmilling, construction, now running own consulting business; c) businessman, vice-pres. of Brown Steel Corp.formerly in own trucking business.

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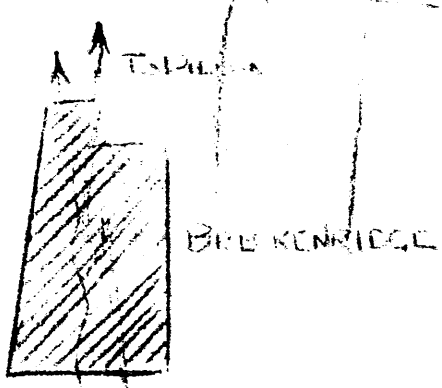
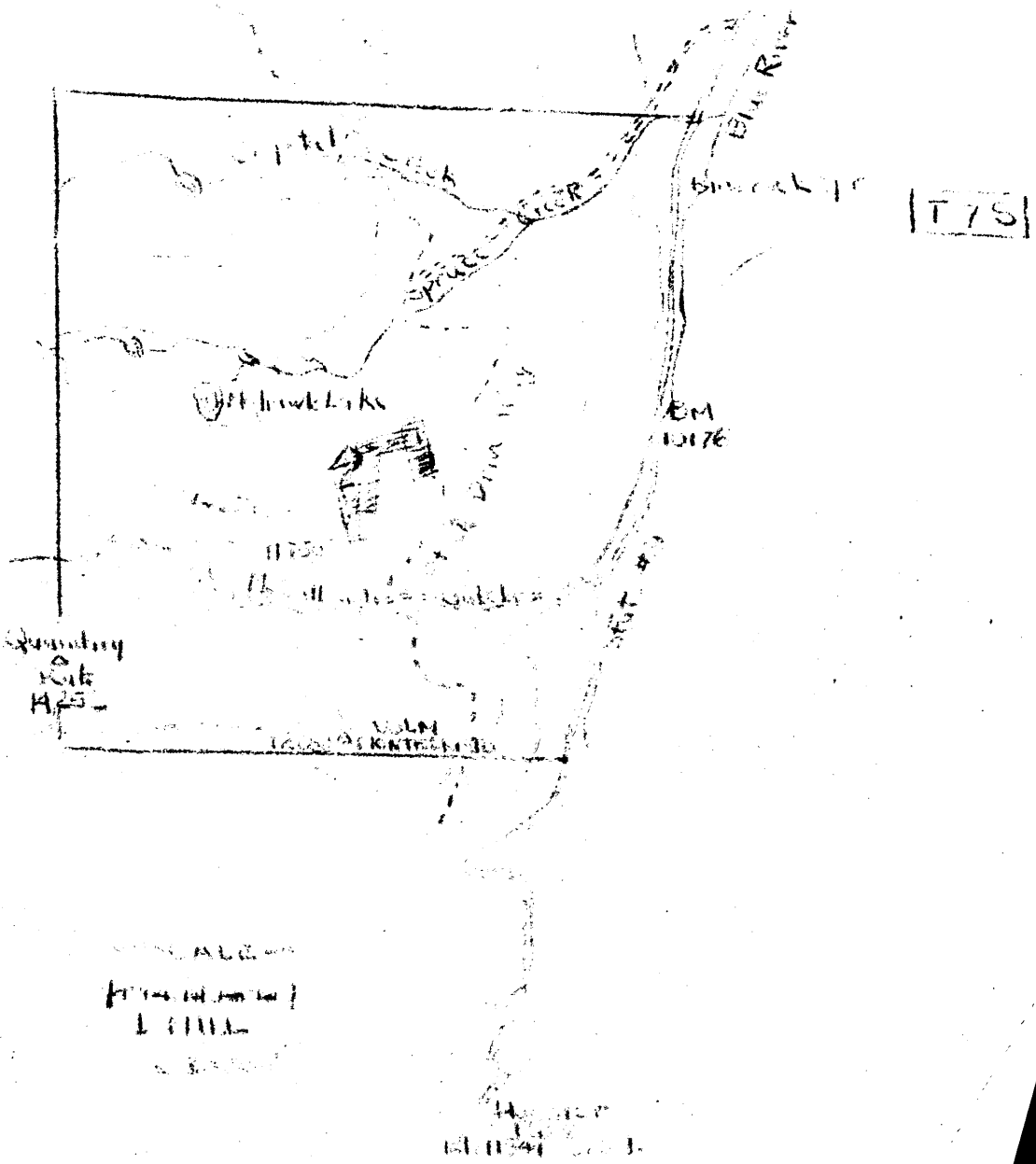
f.Bulldozer	$8/hr	8hrs/day	12 "	768.00
g.Jeep rental		$8/day	12 "	96.00
h.Tools, powder, caps, fuse, etc.				100.00
				$1473.00

PART OF
MOUNT LINCOLN
QUADRANGLE
COLORADO
PIKES PEAK DISTRICT

R 79 W



NORWAY LODE MANGANESE
COMPANY
DILLON, COLORADO



June 19, 1951

Mr. Max Dereum, Manager
Norway Lode Manganese Company
Montezuma Road
Dillon, Colorado

Subject: DMA-1368X
Re: Exploration Loan -
Norway Lodes 1, 2, 3, 4

My dear Mr. Dereum:

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

The application was assigned Docket Number DMA-1368X and referred to Mr. George Holderer, Chief, Manganese Branch on June 1, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1368X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

L. F. Strobel:jc
cc: Strobel
File
Holderer
Lyon

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1368X

Date received 5-31-51

Participation

Murray Lode
Manganese Co.

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application May 22, 1951

Estimated cost $1500

Mineral or metal Manganese

Percentage of Government participation 75%

Location of mine Approx. S.26 T7S R78W

6 miles SSW of Breckenridge, Summit County, Colorado

Date of filing MF-100

DMA Docket Number, if available 1368X

INSTRUCTIONS

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

THE APPLICANT

(R.C.Brown
(1133 Pinehurst Ave
(Royal Oak, Michigan.

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

*2. If a partnership, state names and addresses of partners. Max Dercum, Dillon, Colo.
R.F.Meckle, Breckenridge, Colo.

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

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

*5. Are you the owner or the lessee of the property? None

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

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

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

Claim on land for project: $375

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

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

$375 -- yes

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

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. Norway Lodes 1,2,3,4

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. Sect. 26, T7S, R78 W, Breckenridge, Colorado

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

*11. State the present and former names of the property, if any. Norway Lode Nos. 1,2,3,4

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

*13. State source and quantity of water available for operations and its sufficiency at all seasons. springs ½ mile
State amount of power to be used, rate per hour or other cost, and source. streams 1 mile

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. none

15. State in detail how the ore could be shipped and how and where milled. *

*16. History: *

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

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

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

*17. Production:

(*a*) If mine is in production, furnish the following information: Not in production.

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

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

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

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

(*c*) Give estimated tonnage and grade of each class of ore reserves. no estimates available

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. *

THE EXPLORATION

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

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

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

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. see answer to 18a,b.

THE REQUIREMENTS AND COSTS

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

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

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

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings. none

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings. none

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each. none

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

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

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

(*i*) Cost of power, water, utilities, and any other items not provided for above. none

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. 1 month after approval during months of July or August, 1951

CERTIFICATION

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

Norway Lode Manganese Co. By Max Dercum
(Name of company) (Signature of authorized official)

May 22, 1951 Manager
(Date) (Title)

DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
RECEIVED
MAY 31 1951
LANDON F. STROBEL
Executive Secretary

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

*Same as footnote on page 1.

Form MF-103
Supplemental

Norway Lode Manganese Co.
Dillon, Colorado

#4 Partnership is combination of a)active miner; b) logging engineer with background in mining, sawmilling, construction, now running own consulting business; c) businessman, vice-pres. of Brown Steel Corp.formerly in own trucking business.

#12 Location 6 miles S3W of Breckenridge, Colo.; lies 1½ miles west of Colorado Route 9; 14 miles south of Dillon; 54 miles south of Kremmling, Colo. D&RGW RR. 5 mile gravel road, 9mile blacktop to Dillon, 40 miles gravel to Kremmling.

#15 Truck haul; would necessitate mill as proposed and developed in pilot plant stage by Andrew Sweet, Jr. of Denver, Colorado(son of Andrew Sweet, Chief Metallurgist, Bureau of Mines, Denver, Colo.) Mill would probably be located in vicinity of Dillon, Colo. making 15 mile truck haul, requiring large trucks for tonnage production.

#16a.No previous production; the manganese showings are result of earlier prospecting for gold and silver; until the present time, no other developments or operations.
b.None for manganese in a district of gold, tungsten, zinc, and leadloads.

#18a.Manganese oxide(probably pyrolusite); also iron. (Ore is in contact with limestone beds, but due to dip, and overburden, not possible to now to estimate size of ore body. Vein approx. 10 feet wide at outcroppings)
b.Assay data:Prospect Nos. 1 & 2

	Fe.	Mn.	SiO_2	Al_2O_3	P_2O_5	CaO	MgO	BaO	SO3	Zn.	Pb.	Cu.
#1	23.0	25.1	8.2	1.0	.026	1.1	1.9	Nil	Tr.	2.3	Nil.	Nil.
#2	21.7	22.7	12.7	1.8	.074	1.1	1.8	.2	.07	2.3	Nil.	Nil.

#19 The two samples camp from separate croppings at the top of shafts approximately 2500 feet from each other, on opposite sides of a mountain ridge. These show substantially the same composition. Due to the overburden on the intervening area, this would be the most productive area for exploration. Altitude of properties, approx. 11,500' to 12,000' a.s.l.

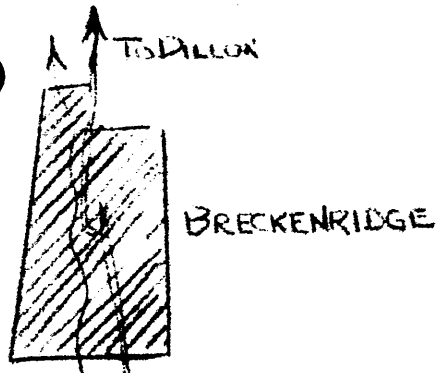
#21 Building access trail for bulldozer and jeep for about 2 miles over relatively open ground to vein croppings; then making open cuts at various points to locate dipand strike of vein between known extremities, by bulldozing.

#23a.Labor:	1 Dozer operator @	$1.85/hr....	100 hrs.....	$185.00
	1 Miner	1.50	12 days	144.00
b.	1 Supervisor	15.00/day	12 "	180.00
f.Bulldozer @	$8/hr	8hrs/day	12 "	768.00
g.Jeep rental		$8/day	12 "	96.00
h.Tools, powder, caps, fuse, etc.				100.00
				$1473.00

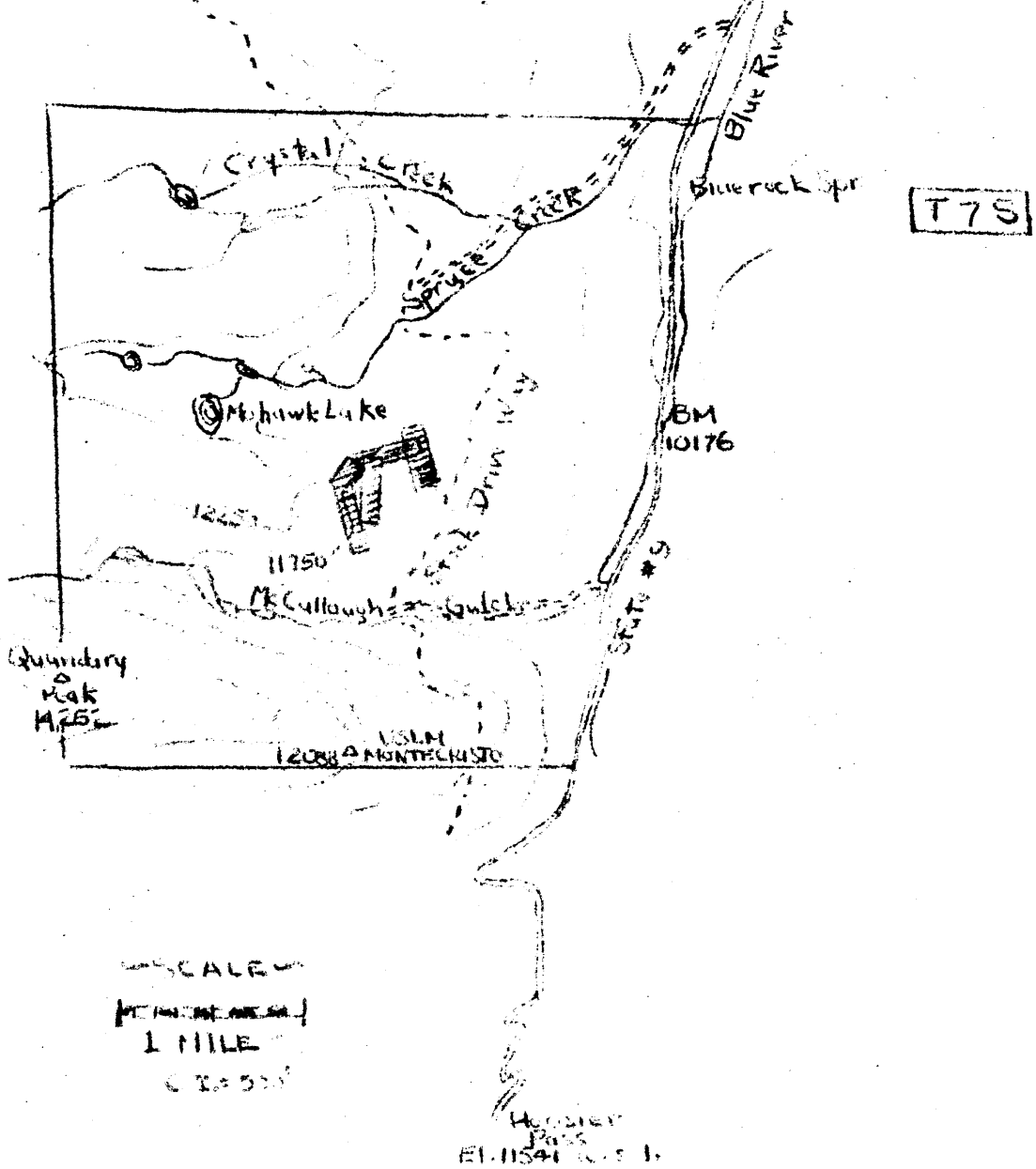
PART OF
MOUNT LINCOLN
QUADRANGLE

COLORADO
POLLOCK DISTRICT

R 78 W



NORWAY LODE MANGANESE
COMPANY
DILLON, COLORADO



SCALE
1 MILE