DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. DMEA-3189

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Exploration Assistance

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

lcy to USBM, USGS, DOCKET 1 retained in Reg.

Routing Slip

To:	400	Date	10-12-53
To:	Oper Com	Date	11-16-53
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CONTROLLED DOCUMENT

400

DOCKET
surname

Martin
Selfridge
Johnson
Attendorf

JUL 22 1954

Mr. A. T. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3189 - Manganese
Ketell Mining Corporation
Jewell Black Manganese Claims
Baker County, Oregon

Dear Mr. Weissenborn:

The Region II monthly report for June states in the "Remarks" column concerning the captioned docket: "Ltr. 3/22 to D. C. recommending withdrawal."

Unfortunately a copy of a memorandum of March 31, 1954, from the Iron and Ferro-Alloys Division to the Operations Control and Statistics Division, by which the subject docket was withdrawn from the active files of the commodity division, was not sent to you. Copies of that memorandum are attached in order that you may clear your records concerning this case.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (24A)

Enclosure

APPROVED:

J. H. Hedges

Member, Bureau of Mines (24A)

T. P. Thayer

Member, Geological Survey (24A)

cc: DOCKET
FIELD TEAM, REG. II
CODE 400
OPER. COMMITTEE
ADMIN. READING FILE
G. DeHUFF, USBM
Mr. Newcomb, USGS

7-16-65
LScott

R.C.S.

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : R. E. Adams, Chief, Oper. Control and Statistics Division, DMEA

DATE: 3-31-54

FROM : Chief, Iron and Ferro-Alloys Division, DMEA

SUBJECT: Removal of application from the active files
Docket No. DMEA 3189 - Manganese
Ketell Mining Corporation
Jewell Black Manganese claims
Baker County, Oregon

A field team examination of the subject property on December 9, 1953, was not conclusive because snow prevented a detailed study of the surface exposures. A new field examination was to be scheduled early this spring.

The applicant on March 4, 1954, requested that the referenced application be withdrawn.

Because the Field Team had written on March 9, 1954, to Ellis and Associates, who had an operating agrrement with the Ketell Mining Corporation to do the exploration, this Division has held the subject application in abeyance. By letter of March 22, 1954, the Field Team has now recommended that the docket be closed.

The subject docket is attached hereto.

W S Martin
W. S. Martin, Chief
Iron and Ferro-Alloys Division

Attachment

700

Docket
Surname
Rutledge
Martin

R. E. Adams, Chief, Oper. Control and
Statistics Division, DMEA

3-31-54

Chief, Iron and Ferro-Alloys Division, DMEA

Removal of application from the active files
Docket No. DMEA 3189 - Manganese
Ketell Mining Corporation
Jewell Black Manganese claims
Baker County, Oregon

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The subject docket is attached hereto.

SIGNED
W. S. Martin, Chief
Iron and Ferro-Alloys Division

Attachment

FARutledge:foc
3-31-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.

R.E.A.
3-31-54

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

March 22, 1954

WSM

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3189 (manganese)
Ketell Mining Corporation
Jewell Black Manganese Claims
Baker County, Oregon

Dear Mr. Selfridge:

On March 9, 1954, we forwarded a letter to you from Mr. H. R. Ketell, manager of the Ketell Mining Company, wherein he stated that he no longer had an interest in the Jewell Black Manganese Claims. We stated that we were contacting Mr. Jim Ellis of Ellis and Associates to determine if he was interested in further action on the application.

Our letter to Mr. Ellis was returned today with the note that he had moved from Baker, Oregon, and had left no forwarding address. Therefore, we doubt that he is now interested in the application.

Consequently, we believe that as Mr. Ketell no longer has an interest in the property and Mr. Ellis apparently doesn't, there is no longer any need to keep the application open. Thus, we believe no further action is necessary and the docket can be closed.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc: USBM (2)
Puffett

Docket

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

March 9, 1954

WSM

Mr. Jim Ellis
Ellis and Associates
1629 2nd Street
Baker, Oregon

Re: Docket No. DMEA-3189 (manganese)
Ketell Mining Corporation
Jewell Black Manganese Claims
Baker County, Oregon

Dear Mr. Ellis:

A few days ago we received a letter from Mr. H. R. Ketell, manager of the Ketell Mining Company, wherein he states that he has dropped his interest in the Jewell Black manganese claims. As a result we infer from this letter that the application for DMEA assistance is to be withdrawn.

Inasmuch as your group had an operating agreement with the Ketell Mining Company, we are wondering if you are still interested in obtaining DMEA assistance for exploring the Jewell Black claims for manganese. If so, please notify us when the property can be examined and we shall schedule an examination at which time we will discuss further details of the program.

If you did not retain an interest in the property or if you are no longer interested in obtaining DMEA assistance, please notify us so that we can close the docket.

Very truly yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc: DMEA (2)
USBM (2)
Puffett

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

March 9, 1954

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

WSM

Re: Docket No. DMEA-3189 (manganese)
Ketell Mining Corporation
Jewell Black Manganese Claims
Baker County, Oregon

Dear Mr. Selfridge:

Enclosed are copies of a letter dated March 4, 1954 from Mr. H. R. Ketell, manager of the Ketell Mining Company, wherein he states he no longer has an interest in the property covered by the subject application. As a result of this letter we infer that the application is to be withdrawn by the Ketell Mining Company.

However, we are writing Mr. Jim Ellis of Ellis and Associates Baker, Oregon, to determine if they are still interested in proceeding with the application. Ellis and Associates had some arrangement with the Ketell Mining Company as a result of which Ellis and Associates did the actual mining and Ketell Mining Company handled the financial affairs of the operation. Thus, there is a possibility that Ellis and Associates may still retain an interest in the manganese claims and may still be desirous of proceeding with the application for DMEA assistance.

As noted in our letter to you of December 23, 1953, we are not too optimistic concerning the possibilities of the Jewell Black manganese claim. Nonetheless we want to make certain that Ellis and Associates do not evince an active interest in obtaining DMEA assistance.

Sincerely yours,

A. E. Weissenborn
A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosure

cc: USBM (2)
Puffett

COPY

THE KETELL MINING COMPANY
DEVELOPING WESTERN MINES
Main Office: 224 Board of Trade Building
Portland 4, Oregon
Broadway 2529

March 4, 1954
Dictated March 3rd

U. S. Department of the Interior
Defense Minerals Exploration Admin.
S. 157 Howard Street
Spokane, Washington

Re: Docket No. DMEA-3189 (Manganese)
Ketell Mining Corporation
Jewell Black Manganese Claims
Baker County, Oregon
Attn: Mr. A. E. Weissenborn

Dear Mr. Weissenborn:

In regard to your letter of February 25th, I have dropped my interest in the claims in the Jewell Black Manganese mine in Baker, Oregon.

Very truly yours,

THE KETELL MINING COMPANY

By /s/ H. R. KETELL
H. R. Ketell, Manager

HRK/jw

RECEIVED
MAR 5 1954
U.S.G.S.
SPOKANE, WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
~~XXXXXXXXXXXXXXXXXX~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
MAR 12 1954

February 25, 1954

Mr. H. R. Ketell, President
The Ketell Mining Company
224 Board of Trade Building
Portland 4, Oregon

Re: Docket No. DMEA-3189 (Manganese)
Ketell Mining Corporation
Jewell Black Manganese Claims
Baker County, Oregon

Dear Mr. Ketell:

On December 9, 1953, representatives of DMEA attempted to conduct an examination of your manganese properties near Baker, Oregon, but as snow obscured the ground the examination was not completed. Mr. Jim Ellis, of Ellis and Associates, conferred with the DMEA examiners and furnished information concerning recent production from the mining of manganese from the Jewell Black Claims.

According to Mr. Ellis, average weather conditions in the vicinity of Baker are such that by the middle of March the snow conditions would be improved sufficiently to permit examination of the surface exposures on the claims. Mr. Ellis stated he would notify us when an examination could be successfully completed.

It is our information that the Ketell Mining Corporation's interest in the Jewell Black claims was to expire December 31, 1953. If this is true, then your company may no longer be interested in further processing its application for DMEA assistance.

Kindly let us know if you are still desirous of proceeding with the application. If you are, we will make plans to conduct an examination of your property as soon as weather conditions permit.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc: USBM (2)
DMEA (2) ✓

Docket

FEB 8 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

February 5, 1954

WSM

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 3189 (manganese)
Ketell Mining Corporation
Jewell Black Manganese Claims
Baker County, Oregon

Dear Mr. Selfridge:

We have your letter of January 15, 1954, requesting that we proceed with plans to schedule an examination of the subject property when weather conditions permit inspection of the surface.

We had hoped that our letter of December 23, with Puffett's memorandum detailing the grade of the shipments of manganese rock from the Jewell Black property would have been sufficient to justify denial of the application. Although the shipments averaged from 23 to 38 percent manganese, the SiO_2 content was from 26 percent to 51 percent, which we thought was excessively high.

Some of our men will be in Oregon this spring on other examinations or inspections of contracts, and in accordance with your letter, we will schedule an examination of the Jewell Black claims at that time provided the applicant is still desirous of proceeding with his application.

Yours very truly,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Copy retained 400

cc: USBM (2)
Puffett

400

Hope
Martin
DeAtuff
Pavlica
Selfridge
Jones
Whittenberg

JAN 15 1954

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3189—Manganese
Ketell Mining Corporation
Jewell Black Manganese claims
Baker County, Oregon

Dear Mr. Weissenborn:

Reference is made to the subject docket, your letter of December 23, 1953, and the Field Team report by Mr. W. P. Puffett, U. S. Geological Survey.

The Defense Minerals Exploration Administration, to conform to good practice, believes that no denial of an application for exploration assistance should be based on an examination made when the surface geology is concealed by snow. You should, therefore, in the present case, schedule another examination as early as possible in the spring.

Because of your comment that the Ketell Mining Corporation might cease to control the property after December 31, 1953, the Field Team should determine before making the examination whether the applicant still has control. At that time if the Ketell Mining Corporation has no further interest in the matter, please suggest to the applicant that he advise us accordingly. We could then place the docket in our inactive file.

One effective way the Operator could investigate whether the ore can be beneficiated to a product acceptable under existing General Services Administration regulations would be to ship a 200-ton lot to the Deming, New Mexico, Depot for tests.

R.C.H.
1-15-54

We have been told informally that some of the shippers who are paid on the basis of actual tests there are receiving better prices than those paid on the basis of estimated recovery.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

Approved:

J. H. Hedges

Member, Bureau of Mines (JHB)

T. P. Thayer

Member, Geological Survey (JHB)

JHopkins &WSMartin/ls
1/13/53

cc: DOCKET
CODE 400
OPERATING COMMITTEE
FIELD TEAM, REG. II
ADM. READ. FILE
GILBERT DEHUFF, USBM
LOUIS PAVLIDES, USGS

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

Received
DEC 28 1953

December 23, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3189 (manganese)
Ketell Mining Corporation
Baker County, Oregon

Dear Mr. Selfridge:

Enclosed are four copies of a report by Willard P. Puffett, U. S. Geological Survey, concerning the subject application. This report was prepared in response to a letter from the Operating Committee dated November 16, 1953, requesting a field examination of the applicant's property.

At the time of the examination, the applicant's property was overlain with snow, which prevented a detailed study of the property by the examining team. They were able, however, to meet with Mr. Jim Ellis who is associated with Ketell Mining Corporation on a co-ventureship basis, and who has been in charge of mining operations. Mr. Ellis was able to give them data on the shipments to Geneva Steel Corporation. The high silica content of the manganese ore, as indicated by these data, casts some doubt on the advisability of continued exploration of this deposit. There is even some question as to whether the ore can be beneficiated to a product acceptable under existing GSA regulations. In this respect we wish to call your attention to a letter from Charlton Laboratories concerning beneficiation of the ore, which is referred to in the application. This letter notes that ore assaying 34.7 percent manganese and 26 percent silica was upgraded to 45.1 percent manganese and that silica was reduced to 13.4 percent. On this basis, the silica was reduced in quantity about 50 percent; however, it should be noted that the 26 percent silica used in the test is considerably lower than the silica content of most of the shipments to Geneva Steel. Using the same reduction basis, silica content of the Geneva shipments could not be reduced to below the maximum of 15 percent as specified by GSA. Using the same comparison, there is some question as to whether the manganese content of ore shipped to Geneva could be upgraded to the minimum of 40 percent as specified by GSA. The 34.7 percent manganese ore used in the test is of higher grade than most of the ore shipped to Geneva.

copy returned to 400. 1/8/54

Thru O C 1/6/54

Mr. Ellis informed the examining team that the Ketell Mining Company might cease to have control of the property after December 31, 1953, as that is the expiration date of the 6-month lease under which the property is being held. He stated, however, that he and his associates would be interested in continuing exploration in the event Ketell withdrew his interest. Mr. Ellis had no plan in mind for exploration of the property other than testing the outcrop by bulldozing. Any bulldozing program would, of course, cost far less than the $100,000 suggested in the application. Whether other exploration could more advantageously explore the deposit could not be determined because of the snow-covered terrain.

If the Operating Committee believes that additional information should be gathered by another field examination, please advise and we shall schedule the examination as early as possible during the coming spring season, otherwise it is suggested that no further consideration be given this application.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

Thomas E Howard

Acting for M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosure

cc: USBM (2)
Puffett

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

December 10, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: Willard P. Puffett, Geologist, U. S. Geological Survey

Subject: Attempted examination of Jewell-Black manganese claims, Docket No. DMEA-3189 (manganese), Ketell Mining Corporation, Baker County, Oregon

On Wednesday, December 9, 1953, Mr. John Bowsher, mining engineer, U. S. Bureau of Mines, and myself accompanied Mr. Jim Ellis to the site of the open pit mining operations of the Ketell Mining Corporation near Pleasant Valley, Oregon. Mr. Frank DeMerritt preceded us to the property. To reach the property, one travels east on highway 30 for a distance of 10.7 miles from the Chevron service station near the east city limits of Baker. At this place, one turns to the left and follows a two-wheeled trail up the slope for 2.5 miles to the open pit, which is situated near the southern end of a flat-topped knoll. Recently drifted snow obscured the ground sufficiently to prevent an examination of the property.

The following information concerning the operation was obtained from Mr. Ellis. He stated that two groups are involved in the mining operation. Ellis and associates do the actual mining and Ketell Investment Corporation act as agents and sales representatives for them. Mr. Ellis also states that Mr. Ketell's organization has only 6-month lease which expires December 31, 1953, after which time Ellis and associates will assume control of the operation unless further financing is arranged by Mr. Ketell, or Ketell exercises his option to buy.

Mining operations were active over a 2½-month period late in the past summer. As a result of this operation, seven carloads of ore were shipped to the Geneva Steel Company, Geneva, Utah. Geneva Steel Company had entered into a purchase-contract agreement with the Ketell Mining Corporation for 1,000 tons of manganese ore to be shipped within a 3-month period. After the seven carloads, totalling 287 tons, were shipped, Geneva Steel Company cancelled their purchase agreement. According to Mr. Ellis, this cancellation was due to the

change in use by Geneva from crude ore to the "liquid oxides"(?). This change had been made to insure steady production at the steel plant inasmuch as their supply of crude ore had been too erratic and uncertain.

The mining operation consisted of fairly shallow stripping and quite careful hand sorting of the ore. Mr. Ellis stated that it was his experience to see very narrow bands of manganese ore widen abruptly to lenses from which as much as a carload was produced.

All machinery had been removed from the property for storage at Pendleton, Oregon. Mr. Ellis does not plan to resume operations until weather permits, probably late in February or in early March. He was hopeful that a short period of fair weather would permit sufficient thawing to remove the snow from the pit and thus allow adequate examination by DMEA personnel. Although Mr. Ellis and associates are not named in the application, Mr. Ellis is still desirous of following through with the application should Mr. Ketell's interest be terminated by the first of January.

Following is a tabulation of the contents of the seven carload shipments of ore that had been made. All assays were made by the Geneva Steel Chemical Laboratory.

Lot No.	As	Zn	P	Mn	SiO_2	Al_2O_3	CaO	MgO	S	Fe
1	0.01	0.01	0.030	31.2	34.95	1.84	1.16	0.46	0.12	2.1
2	0.01	0.01	0.018	22.9	46.67	1.94	0.96	ND	0.004	1.9
3	0.01	0.02	0.024	24.9	48.64	2.83	0.92	0.38	0.006	1.8
4	0.01	0.02	0.018	23.2	45.20	1.60	1.46	0.93	0.007	1.6
5	0.01	0.02	0.060	27.0	43.24	--	--	--	0.013	1.2
6	0.01	0.02	0.034	22.8	51.97	3.03	0.92	0.69	0.011	1.5
7	0.01	0.01	0.060	38.1	26.18	3.20	1.00	ND	0.019	1.9

It is to be noted that the ore contains a disproportionate high percentage of silica which, according to U. S. B. M. R. I. 4149, is difficult to separate from the manganese. Because of this high silica content of the ore, it is problematical whether this property merits further consideration for DMEA assistance.

Distribution:
DMEA (Orig.&3)
USBM(2)
Docket
Puffett

400

FILE COPY
SURNAME:

Rutledge
Martin
De Huff
Pavlides
Selfridge
Hedges

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

NOV 16 1953

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 3189, Manganese
Ketell Mining Corporation
Jewell Black Manganese claims
Baker County, Oregon

Dear Mr. Weissenborn:

Reference is made to the above-docketed application for exploration assistance, which is being referred to your office for a field examination of the property.

A review of the subject application and published reports on the area indicate that the property appears to have little merit. However, a field examination is being requested because of the applicant's record of shipments.

If the Field Team's recommendations are favorable, Owner's Consent to Lien from the several owners should be obtained.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Approved:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

cc: DOCKET
ADM. READ. FILE
FT. REG. II
CODE 400
OPER. COMMITTEE
GILBERT DE HUFF, USBM
LOUIS PAVLIDES, USGS

FARutledge/ls
11/12/53

R. C. G. 11-16-53

400

FILE COPY
SURNAME:

Rutledge
Martin
Weldon
Pavlides
Jewell
Sleffedge
Johnson

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

NOV 16 1953

Mr. H. R. Ketell, President
Ketell Mining Corporation
224 Board of Trade Building
Portland 4, Oregon

Re: Docket No. DMEA 3189, Manganese
Jewell Black Manganese claims
Baker County, Oregon

Dear Mr. Ketell:

Reference is made to the above-docketed application for exploration assistance, which has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration and referred to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region II, South 157 Howard Street, Spokane 4, Washington, for a field examination of the property.

The Regional Office will contact you at an early date with regard to an examination of your property. Any assistance that you can render the members of the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (for)
Administrator

FARutledge/ls
11/12/53

cc: DOCKET
CODE 400
FT, REG. 2
ADM. READ. FILE
GILBERT DE HUFF, USBM
LOUIS PAVLIDES, USGS

R.C.G.
11-16-53

Ketnell Mining Corp.
224 Board of Trade Building
Portland 4, Oregon

October 12, 1953

Subject: DMEA-3189
Re: Exploration Assistance
Jewell Black Manganese Claims

Dear Mr. Ketnell:

The receipt of your application dated September 28, 1953, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3189 and referred to the Iron & Ferro-Alloys Division.

Kindly refer to DMEA-3189 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Chief, Operations Control
and Statistics Division

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

October 12, 1953

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number DMEA-3189

There is listed below the assigned docket number to an application recently received from Region II.

DMEA -3189 - Jewell Black Manganese Claims

ROBERT E. ADAMS

Robert E. Adams
Chief, Operation's Control
and Statistics Division

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

October 2, 1953

Mr. George C. Selfridge
Chairman, Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: New application (manganese)
Ketell Mining Corporation
Baker County, Oregon

Dear Mr. Selfridge:

I am enclosing herewith an application received September 30 from Mr. H. L. Ketell, president, Ketell Mining Corporation for the exploration of some manganese properties in the Pleasant Valley area of Oregon.

Mr. Ketell called me from Portland today to discuss the application. I told him that we had not reviewed it thoroughly, but that in going over it, it was evident that he had not adequately described the exploration work which he intends to do and I suggested that we would need a great deal more data. He promised to send me more information, but I am rather doubtful as to whether this will be what we require. Upon receipt of the additional information promised, we will review the application in the light of data which may be available in the offices of the Bureau of Mines and the Geological Survey. Unless the information, which Mr. Ketell has promised to present, is more informative than that already contained in his application, I would like to see the application denied on the ground that no logical plan of exploration has been presented. If this cannot be done, it is probable that we will have to make a field examination.

Please note that in the application Mr. John Armstrong of Pacific Northwest Alloys, Inc., is quoted as stating that "with adequate prospecting, 10,000 to 100,000 tons of manganese ore could be opened." Attached are two copies of a letter dated October 1 from Mr. Armstrong to Mr. Ketell informing him that he does not remember ever making such a statement.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosure

cc: USBM (2)

P. S. Since writing this letter, the additional material has been received from Mr. Ketell, but I fear it doesn't add anything.
A. E. W.

COPY

PACIFIC NORTHWEST ALLOYS, INC.
Operating Plancor's 571 & 1008 for the United States Government

P. O. Box 6247 Hillyard Station
N. 8700 Crestline
Spokane 28, Washington

Telephone
Hudson 6431

October 1, 1953

Mr. H. R. Ketell
Ketell Investment Corporation
224 Board of Trade Building
Portland 4, Oregon

Dear Mr. Ketell:

I am in receipt of your letter dated September 28, 1953, addressed to the United States Department of the Interior, Defense Minerals Exploration Administration, South 157 Howard Street, Spokane 4, Washington, Attention: Thor N. Kiilsgaard, Acting Executive Officer, DMEA Field Team, Region II.

In your letter, page two, paragraph three, you quote Mr. Ellis as stating that I "felt with adequate prospecting we could probably open from 10,000 to 100,000 manganese ore in the near future."

I would like to state that I do not remember making such a statement to Mr. Ellis, nor do I feel such a statement is in order in a letter applying for a DMEA loan.

Very truly yours,

PACIFIC NORTHWEST ALLOYS, INC.

/s/ John Armstrong
John Armstrong
Mining Engineer

JA:eb
cc: Mr. J. V. Ellis
1029 Second Street
Baker, Oregon

Mr. Thor N. Kiilsgaard
United States Department of Interior
Spokane, Washington

RECEIVED
OCT 2 1953
U.S.G.S.
SPOKANE, WASH.

THE KETELL MINING COMPANY

DEVELOPING WESTERN MINES

MAIN OFFICE: 224 BOARD OF TRADE BUILDING
PORTLAND 4, OREGON
BROADWAY 2529

H. R. KETELL
MANAGER

RECEIVED
SEP 1953
U. S. C. C.
SPOKANE, WASH.

September 28, 1953

REFER TO	ACTION	NOTED	DATE
al			
ANSWERED			

United States Department of the Interior
Defense Minerals Exploration Administration
South 157 Howard Street
Spokane, 4, Washington

Attention: Thor H. Kiilsgaard
Acting Executive Officer
DMEA Field Team, Region II

Gentlemen:

We received your letter of September 23rd, 1953, and wish to thank you for same.

Enclosed herewith please find four signed copies of your form MF 103 and we respectfully request that you grant us a loan for exploration purposes for manganese.

If we are unable to obtain a loan from you to continue our exploration work, it appears at the present time that we will have to cease operations. We have, in the last two months, shipped six cars of ore to the United States Steel Corporation from our prospecting work in this Pleasant Valley area. It is vital that we open up some new, larger kidneys of manganese, or it will be economically unsound to continue operations.

The cost of obtaining these first six cars of ore was prohibitive due to great expense in exploring for substantial bodies of ore. The first car that we shipped was taken from stringers and lenses and from an old mine called the "Utah", which we understand shipped 400 tons of 40% or better manganese ore in 1907.

After a great deal of dynamiting and exploration work with our large D-8 Caterpillar and new D-4 Caterpillar with shovel attachment, we found and opened up another large lenses of good manganese, which averaged 22.9% to 43% manganese, and from this one large lens we were able to ship three cars of ore. We continued our exploration work and after going approximately 30 feet further we opened up another substantial body of ore from which we shipped one car to the U. S. Steel Corporation. We continued operations and shipped the last car from smaller lenses as we continued exploration work hoping to find another large body of ore.

It is not possible at the present time to continue operations because of the high exploration costs. We feel that if we had an exploration loan from your department we could afford to continue operations to find these larger bodies of ore, which undoubtedly can be found in the area, but which cost too much money to find without some exploratory financial help.

United States Department of the Interior
(2)

Sept. 28, 1953

Enclosed herewith please find the following:

(1) Copy of engineer's report concerning this area, written by John Arthur, registered engineer who for many years has been an expert in this area.

(2) Charlton Laboratories' analysis of six samples of the ore that we had sent to them.

(3) A copy of U. S. Steel Corporation's assay on the ore from the first car which was shipped to them.

(4) A letter from Charlton Laboratories showing that by beneficiation they increased the manganese content of the ore from 34.7 to 45.1% and also reduced the silica content from 26.0 to 13.4%.

We carefully checked the bulletin, No. 17, written by the Geology Department of the State of Oregon, called "Manganese in Oregon". We refer you to this bulletin. You can obtain a copy through U. S. Geological Survey, in Washington, D. C. We have one copy of the bulletin but it is out of print and we were unable to get any more. Several geologists state, in this bulletin, that they have inspected these properties and feel that further prospecting work would be fruitfull.

Mr. John Armstrong, Geologist with Pacific Northwest Alloys, Inc. of Spokane, also inspected the property and according to our superintendent, Mr. Ellis, Mr. Armstrong felt that with adequate prospecting we could probably open up 10,000 to 100,000 tons of manganese ore in the near future.

We also refer you to U. S. Department of Interior bulletin R.I.4149 of November, 1947 which is called "Report of Investigations, Concentrations of Oxide Manganese Ore from the Sheep Mountain property, Durkee District, Oregon". The Sheep Mountain property is an extension of our property and it appears that this whole area from our property on over to Sheep Mountain has considerable manganese outcroppings; and if properly prospected we could probably open up some very fine deposits of manganese. In the concluding paragraph of this bulletin it states as follows:

> "3. Jigging and tabling with retreatment of middlings recovered 81% of the manganese in a product that when concentered assayed 47.7 mn."

We would like to continue operations in an endeavor to open this ore up, but the cost of exploration is too great without some help from you.

We own and have submitted to U. S. Steel Corporation evidence of

ownership under a purchase-option agreement the claims that we are working in this Pleasant Valley area. We have, at the present time, 20 claims either filed directly in our own name or assigned under a purchase-option agreement. These assignments are recorded in the office of the county recorder of Baker County and you are at liberty to check these recordings.

The "Utah" mine and the claims surrounding it, which we are working now, are only two miles from the Union Pacific Railroad and two miles from the paved highway between Baker and Boise. It is a downhill haul and we can operate the mines throughout the winter because of the favorable location and downhill run from the mine to the railroad.

We have a loading ramp at Durkee, Oregon for loading this ore into the cars.

I also enclose herewith copy of the ore settlement sheet from the Columbia Geneva Steel Co., division of the U. S. Steel Corporation, on the first car of ore for which they paid us. We have been paid on one additional car and expect daily payments on other cars shipped. These other cars are full cars, where the first car proved not to be a full car.

We believe that there should be $100,000.00 set aside at this time for this exploration work, we to put up $25,000.00 and the Government to put up $75,000.00.

We have four men working on the property and there is plenty of manpower available. We ran an ad for some miners and got dozens of answers. Materials, supplies, and equipment are on the property and more is available should we need it, in Baker 11 miles away. Water is available from springs on the property, and we have generating equipment for power, and power lines are close by.

H. R. Ketell has had considerable experience in mining in California and in Oregon and is interested in a large mine in Alaska. James Ellis, the superintendent, at the property, has worked in mining for a considerable period of time. He is also an expert at handling dynamite and equipment. Frank DeMerritt, assistant manager at the property, is an old time mining expert who has many claims and who has a great deal of experience in dynamite work, jackhammer,work, and appraisal of minerals.

We intend to operate the property ourselves, although in some cases we may do some labor contracting. We are paying $500.00 a month to our mining superintendent. Miners are working for $50.00 a week, plus $30.00 a month for groceries. The equipment we have at the mine at present is as follows:

(1) 1950 Model D-8 Caterpillar with ripper attached, in

Sept. 28, 1953

perfect running condition, all overhauled within the last sixty days.

(2) Brand new D-4 Caterpillar with 8 foot wide bucket for overhead loading attached.

(3) Two Ford dump trucks, which are in excellent condition, plus a third smaller dump truck.

(4) A small tractor for miscellaneous clean-up work.

(5) No. 315 compressor, all overhauled and in perfect running condition, together with three jack hammers.

300 Ft. of hose, and two pavement breakers.

(6) We have a considerable number of small tools, equipment, dynamite and other items necessary for operations in mining.

(7) We have a 1953 Ford pick-up and a war surplus 4 wheel drive army truck available and being used at the mine.

(8) We have a small building at the mine for storing of materials and equipment.

Enclosed please find an operating statement for the first 75 days of our operation.

We plan to operate the exploration program without allowing any general overhead, corporate management, interest or taxes. All money which will be used for exploration work will be for actual work performed at the property. We are prepared to furnish our share of the costs of this exploration work.

Time is an important essence in this application to you because of the high cost of maintaining the men and the equipment on the property. We will greatly appreciate your prompt attention to this matter and wish to thank you for your cooperation.

Very truly yours,

KETELL MINING COMPANY
Division of KETELL INVESTMENT CORP.

By H R Ketell
H. R. Ketell, President

HRK/jw
cc Jas. V. Ellis
John Armstrong
encl.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

U. S. G. S.
SPOKANE, WASH.

Not to be filled in by applicant

Docket No. DMEA-3189
Metal or Mineral
Date Received 10-12-53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Ketell Mining Corp., H. R. Ketell, Pres., M.A.Moore, Vice-Pres.
224 Board of Trade Bldg. J. C. Porter, Sec.
Portland 4, Oregon

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Section 13, 17, 18, 26

(*b*) State any mine name by which the property is known. Jewell Black Manganese Claims

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
Purchaser under contract, Recorded in Baker County.

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Manganese

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated September 28, 1953

KETELL MINING CORP.
(Applicant)

By H. R. Ketell
H. R. Ketell, Manager

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.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

MINING REPORT.
(Manganese - Pleasant Valley Area.)

STATEMENT ON THE PYROLUSITE, BLACK MANGANESE AND FIVE TO ONE CLAIMS.

By: John Arthur, Reg. Eng.
P.O. Box 217
Baker, Oregon
March 4, 1953

The above claims are on the Manganese Deposits of the Lower Burnt River, Pleasant Valley Area, in Baker County, Oregon.

LOCATION -- The manganese belt has a general trend of N. 60 degrees West, which roughly parallels the railroad and highway, of Alder Creek valley. The length of this manganese belt is eight miles, with a width of about one-half mile, in which the manganese outcrops exposed by nature occur. The distance from Baker City is 12 to 20 miles. The distance from the Pleasant Valley depot is from 3 to 5 miles in a northerly direction.

ECONOMICS -- There are good mountain roads from the railway and highway to all of the manganese properties. Mining sized timbers can be obtained within 5 to 10 miles of the properties. Domestic and milling water can be developed close to the property with shallow wells - willows and cottonwood trees indicate water near the surface. Alder Creek is about three miles southerly. The properties are mostly on the south slope of gently sloping hills, and very little snowfall.

HISTORY -- Most of the claims were located prior to 1917, and supposedly for gold, but as World War I created a mild interest in manganese the District had a short manganese boom. This only lasted until manganese shipments were possible from foreign countries. Then, as usual, all interest was gone as far as manganese was concerned.

PRODUCTION -- It is said that some small shipments for test purposes were made from a few properties, but no records kept. But in 1917 it is reported that a shipment of 450 tons was made to a concern in Tacoma, Wash., and the requirements those days were 40%. The shipment was sorted and made 300 tons assaying 40% manganese. The shipment was made from the UTAH CLAIM, now called the PYROLUSITE. The deepest development in the District is on the old Utah, and that is 45 feet where the shipment came from.

GEOLOGY -- The formation in the District showing all the manganese is positively sedimentary flows consisting

of highly silicious hard dark quartzite flows, alternating with flows of a soft clay slate. We do not know how many of these alternating flows there are, but it was through these layers of flows that the fissure bringing in the manganese was made. Therefore, quite a depth could be expected of manganese ores and should be of better grade than those remaining on the surface, as erosion has removed all but the highly silicious ore that would be hard enough to resist erosion on the present surfaces.

The evidence so far showing is that the fissures are steep, or near vertical, and where the fissure opening is wide, or has been crushed, then the manganese would be wide, and very narrow ores are found in this hard quartzite where only a crack was made in the shearing action. But, there are evidences on the ground that where to expect the wider ore bodies would be in the softer soluble clay slates. In fact, the 400 tons taken out of the Utah Claim was mostly from replacement in one of the clay slate beds that the fissure which was the channel for manganese solutions came up through.

POSSIBILITIES - I am of a firm opinion that with the proper development, even of a modest nature, will open up larger and better ore bodies than any now shown. The fact is that in most new districts, the geologists do not have sufficient time to make a close study, especially where the prospector does not have sufficient funds to determine a pattern of the ore at a modest depth for engineers to examine.

ORE IN SIGHT OR DEVELOPED - There being no development work, other than small cuts on the ore made by the prospectors in gouging out ore shipments on the ore exposures that Nature kindly left that man might follow them, and expose hidden ores that were not exposed by erosion, which should be of larger bodies and better grades of manganese.

DEVELOPMENT ADVISED -- When exploration work is started, a few days' bull-dozing should be done on the three claims mentioned in this statement. This dozing would be for the purpose of endeavoring to expose the ores lower down, and have a bigger bite under the ore outcrops. This procedure would give you a pattern of the ore occurence, produce tonnage while developing, and show up more ore for extraction, and also guide you as to further work.

ORE TREATMENT
SORTING, ETC. - It would be a rare thing if all ores found would be of a shipping grade. However, I do think that 40% of ores owned would be of shipping grade, and should assay in manganese from 30 to 40%. Ores below 30% manganese and needing crushing to liberate the manganese from the quartz or gangue can be concentrated on tables and jigs -- rock crushers -- rolls. Sorting belts should be used to avoid slipping. A 30 or 40 ton daily capacity plant to start on would not be expensive.

OTHER OWNERS OF MANGANESE CLAIMS IN THE DISTRICT ARE

Strayer and Edwards have three claims adjoining the three claims mentioned above, and should be included in any deal. There is ore showing on all three claims.

Mr. Frank E. Defferitt of Baker, Oregon, has a number of interesting claims and very good ore showings.

Mr. Hal Bradley and associates have a number of attractive claims on the Belt, and I think that reasonable working options can be had. There are possibly others owning claims, but the above properties I have some knowledge of.

The ores of the District are of the Oxide, or pyrolusite type.

FOR SOME FURTHER INFORMATION - I refer you to OREGON METAL MINES BOOK, Bulletin No. 14-A, on page 71.

REGARDING THE OUTLOOK FOR MANGANESE -- Mr. F. E. Libbey, Director of the State of Oregon Department of Geology, made a talk in Baker and stated that manganese was one of the vitally needed defense metals which will grow to large demand.

MANGANESE BUYERS -- The Butte and Phillisburg, Montana, purchasing program is now taking the Oxides.

The Continental Chemical Co., Salem, Oregon, is in the market for a good tonnage.

The Geneva Steel Company of Geneva, Utah, requires a good tonnage.

The U.S. government purchasing depot at Deming, New Mexico, also one in Arizona, is in the market for tonnage.

I would be glad to show anyone interested, or explain further to parties who might be interested.

Yours very truly

John Arthur

John Arthur

TESTING • INSPECTION • CONSULTATION • RESEARCH
CL INC

LABORATORY CERTIFICATE

Charlton Laboratories

CHEMISTS — BACTERIOLOGISTS — ENGINEERS

2340 S. W. JEFFERSON ST. ATWATER 9663

P. O. BOX 1048

PORTLAND 7, OREGON

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AMERICAN PUBLIC HEALTH ASSN.
CERTIFIED MARINE CHEMISTS
AMERICAN OIL CHEMISTS SOCIETY
PACIFIC N. W. SECTION OF AMERICAN ASSN. OF CEREAL CHEMISTS
AMERICAN COUNCIL OF COMMERCIAL LABORATORIES
AMERICAN CONCRETE INSTITUTE

TO: Herbert R. Ketell
1825 S. W. Vista Avenue
Portland, Oregon

LABORATORY NO. 35836

DATE: April 16, 1953

SUBJECT: Manganese Ore

DATE RECEIVED: 4-13-53

Sample No.	1	2	3	4	5	6
Manganese (Mn) %	35.0	39.9	34.3	34.4	43.2	46.0
Silica (SiO_2)	30.3	25.0	22.9	33.8	20.4	7.8
Alumina (Al_2O_3)	1.7	2.3	5.3	1.2	2.3	3.3
Iron Oxide (Fe_2O_3)	2.9	3.2	6.6	3.4	2.9	4.4
Loss on Ignition	11.3	11.2	15.3	12.1	14.5	16.0

The manganese is present largely as the oxide. Determination of manganese present as pyrolusite gave the following:

Manganese (Mn)	34.0	37.1	31.5	32.1	39.9	42.9

CHARLTON LABORATORIES, INC.

By J. M. Hagel

JMH:ek
2c

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5M 3-53

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AMERICAN COUNCIL OF COMMERCIAL LABORATORIES
AMERICAN CONCRETE INSTITUTE

TO: Herbert R. Ketell
1825 S. W. Vista Avenue
Portland, Oregon

LABORATORY NO. 36073

DATE: May 15, 1953

SUBJECT: Manganese Ore

DATE RECEIVED:

As requested by you, we have made tests on a sample of Manganese Ore to determine whether the ore could be beneficiated by treatment with caustic soda.

The sample marked "Plateo Ext" was treated with 30% caustic at 200°F for 30 minutes and then washed with water. The remaining material was analyzed with results as follows:

	Before Treatment	After Treatment
Manganese	34.7 %	45.1 %
Silica	26.0 %	13.4 %

CHARLTON LABORATORIES, INC.

By J. M. Hayl

JMH:ek
2c

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SM 3-53

U. S. Steel Corp.

May 11, 1953

To: S. G. Sarpis, Supervisor Raw Materials

From: G. W. Madsen

Subject: Manganese Ore

Below is the analysis on a sample of manganese ore submitted by Kettle Investment Corp., Portland, Oregon:

5-XI-8-1

SiO_2	23.34
Al_2O_3	2.01
CaO	1.80
MgO	1.13
Fe	1.5
S	.019
P	.092
Mn	41.0
As	.01
Zn	.01
Cu	.02
Ni	.04

G. W. Madsen
Chief Chemist

GWM:jh

GS-P-418
12-19-44

GENEVA STEEL COMPANY

MANGANESE ORE SETTLEMENT

L 3935

PURCHASED FROM: H. R. Ketell
224 Board of Trade Building
Portland 4, Oregon

PUR. ORDER NO. 25683

GENEVA, UTAH. August 25, 1953

CAR NO. UP 66533

ANALYSIS:

Moisture	6.95	Fe	2.1
Insoluble		SiO_2	34.95
Manganese	31.2	Phos	.030
Sulphur	.012	As	.01
Zn.	.01		

WEIGHTS:

Gross	114,100
Tare	49,960
Net	64,140
Moisture	4,458
Dry Net (pounds)	59,682

26.644 Dry Net Tons @ $ 24.96 Base Price Per Net Ton $ 665.03

LESS: Freight as indicated below 99.39
Less Ute Ore Sampling Charge 56.25 Attached Hereto $

$ 509.39

Note: Vender failed to ship minimum carload in UP 66533. Difference between actual and minimum weight is vender's responsibility.

As Billed: 100 000# min. @ 4.68 N.T. plus 15% plus 3% FTT 277.17
Should be: 64 140# actual @ 4.68 N.T. plus 15% plus 3% FTT. 177.78

Difference 99.39

Approved

GS-MCI-398 REV.2

L 3935

CHEMICAL LABORATORY

CHEMICAL ANALYSIS OF RAW MATERIAL

DATE August 10, 19 53 RES. REPORT NO. _____ P.O. NO. _____

MATERIAL	MANGANESE ORE Lot 1	CAR NUMBERS	UP 66533 Ketell Inv. Corp.
SILICA	34.95	As	.01
ALUMINA	1.84	Zn	.01
LIME	1.16	H_2O	6.1
MAGNESIA	.46		
SULPHUR	.012		Screen Test
IRON	2.1		Size %
PHOSPHORUS	.030		+ 3 0.0
MANGANESE	31.2		+ 1/4 40.0
			- 1/4 60.0

REMARKS: _____

METALLURGICAL, CHEMICAL, & INSPECTION DEPARTMENT

BY _____

VOL. 161 PAGE 199

Option on Mineral Claims

THIS AGREEMENT, Made and concluded this 15th *day of* May *A. D. 19*53*, by and between* Nadie E. Strayer, unmarried, of Baker, Baker County, Oregon *party of the first part, and* Ketell Investment Corporation, party *of the second part*

WITNESSETH: That the said party of the first part hereby covenants and agrees that if the said party of the second part shall make the payments or perform the covenants hereinafter mentioned, on his part to be made or performed, the said party of the first part will convey and assure to the said party of the second part, clear of all incumbrance whatsoever, by good and sufficient deed, subject only to the paramount title of the United States of America, which will be placed in escrow at the request of the said party of the second part, the following described mining property, to-wit:

All of her undivided interest in the Kitty Quartz Mining Claim, recorded in Book 47, pages 614-615, of the Quartz Mining Records of Baker County, Oregon; comprising all of the KITTY claim; and
All of her undivided interest in the SUSAN Quartz Mining Claim, recorded in Book 47, pages 612-613 of the Quartz Mining Records of Baker County, comprising all of the SUSAN claim; and
All of her full one-fourth interest in the PYROLUSITE Quartz Mining Claim, recorded in Book 47, Page 580 of the Quartz Recordsof Baker County, Oregon; and all of her full one-fourth interest in the BLACK MANGANESE Quartz Mining Claim, recorded in Book 47, Page 582 of the Quartz Recordsof Baker County, Oregon.

And the said party of the second part hereby covenants and agrees to pay to the said party of the first part, the sum of One thousand eight hundred seventyfive dollars ($1,875) *Dollars, in the manner following: One dollar in hand, the receipt of which is hereby acknowledged and the balance on the dates as follows, to-wit:* The first payment to be the sum of $175 on or before May 20, 1953; the second payment of 25 % of the balance or $425 to be paid not later than 120 days from the date of May 20, 1953; and thereafter, payments of $425 to be made every 90 days until the full price is paid. Eight percent royalty shall be paid on all returns of shipments of ores or concentrates and the amounts of all royalties shall be applied on the purchase price and the said payments. Royalties shall be paid promptly as returns are received.

and agrees to perform the annual assessment work before June 15, 1953 and annually thereafter; and agrees to pay all bills promptly as they are incurred and to permit no liens to be filed against the property.

It being understood and agreed, that in case default is made in making any of said payments, that all sums paid heretofore shall be forfeited to and be retained by the party of the first part as liquidated damages, and that upon such default the parties of the second part, their heirs and assigns, shall not be liable for any unpaid portion of the purchase price. In case of failure of the said party of the second part to make the payments at the times and in the manner specified or perform the covenants hereinbefore stipulated, this contract may, at the option of the said party of the first part, be forfeited, on giving the said party of the second part notice in writing to that effect. It is mutually agreed that the covenants herein contained shall be obligatory upon the heirs and assigns of the respective parties.

IN WITNESS WHEREOF, The parties hereto have set their hands and seals the day and year first above written.

In presence of

[SEAL]

[SEAL]

VOL 161 PAGE 200

STATE OF OREGON,
County of Baker } *ss.*

BE IT REMEMBERED, That on this 22nd *day of* May *A. D. 19*53
before me, the undersigned, a Notary Public
in and for said County and State, personally appeared the within named
Nadie E. Strayer, unmarried,
who is *known*
to me to be the identical individual..... described in and who executed the within instrument and acknowledged to me that she *executed the same freely and voluntarily.*

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal the day and year last above written.

Notary Public for Oregon.

My Commission expires NOTARY PUBLIC FOR OREGON
My Commission Expires July 15, 1956

NOTARY PUBLIC

Option
on Mineral Claims
(FORM No. 297)

FROM

TO

State of Oregon } ss
County of Baker

I certify that the within instrument of writing was received for record on the 22nd day of May A.D. 1953 at 11:15 o'clock A.M. and recorded in Book No. ____ on Page ____ of Record of ____ Dated ____ 19____

WITNESS my hand and seal of County Clerk affixed

By ____ Deputy

Fee $____

Mail to

STEVENS-NESS LAW PUB. CO., PORTLAND 489

Mail to
H. R. Ketell
1825 SW Vaughn
Portland 1, Ore

Vol. 161 Page 203

Option on Mineral Claims

THIS AGREEMENT, Made and concluded this 16th *day of* May *A. D. 19*53*, by and between* John Arthur, unmarried, of Baker, Baker County, Oregon *party of the first part, and* The Ketell Investment Corporation, party *of the second part*

WITNESSETH: That the said party of the first part hereby covenants and agrees that if the said party of the second part shall make the payments or perform the covenants hereinafter mentioned, on his part to be made or performed, the said party of the first part will convey and assure to the said party of the second part, clear of all incumbrance whatsoever, by good and sufficient deed, subject only to the paramount title of the United States of America, which will be placed in escrow at the request of the said party of the second part, the following described mining property, to-wit:

All of the FIVE TO ONE quartz mining claim recorded in Book No. 48, Page 77, of the Quartz Records of Baker County, Oregon, the claim being situated in the Pleaant Valley Manganese District, Baker County, Oregon;

All of his full one-fourth interest in the PYROLUSITE Quartz Mining Claim, recorded in Book No. 47, Page 580, of the Quartz Records of Baker County, Oregon, the claim being situated in the Pleasant Valley Manganese District, Baker County, Oregon; and all of his full one-fourth interest in the BLACK MANGANESE Quartz Mining Claim, recorded in Book No. 47, Page 582 of the Quartz Records of Baker County, Oregon, being situated in the same Pleasant Valley Manganese District.

And the said party of the second part hereby covenants and agrees to pay to the said party of the first part, the sum of One thousand one hundred twenty five dollars ($1125) *Dollars, in the manner following: One dollar in hand, the receipt of which is hereby acknowledged and the balance on the dates as follows, to-wit:* The first payment to be the sum of $175 on or before May 20, 1953; the second payment of 25 % of the balance or $237.50 to be paid not later than 120 days from the date of May 20, 1953; and thereafter payments of $237.50 to be made every 90 days until the full price is paid. Eight percent royalty shall be paid on all returns of shipments of ores or concentrates and the amounts of all royalties shall be applied on the purchase price and the said payments. Royalties shall be paid promptly as returns are received.

and agrees to perform the annual assessment work before June 15, 1953 and annually thereafter; and agrees to pay all bills promptly as they are incurred and to permit no liens to be filed against the property.

It is agreed that time is of the essence of the agreement.

It being understood and agreed, that in case default is made in making any of said payments, that all sums paid heretofore shall be forfeited to and be retained by the party of the first part as liquidated damages, and that upon such default the parties of the second part, their heirs and assigns, shall not be liable for any unpaid portion of the purchase price. In case of failure of the said party of the second part to make the payments at the times and in the manner specified or perform the covenants hereinbefore stipulated, this contract may, at the option of the said party of the first part, be forfeited, on giving the said party of the second part notice in writing to that effect. It is mutually agreed that the covenants herein contained shall be obligatory upon the heirs and assigns of the respective parties.

IN WITNESS WHEREOF, The parties hereto have set their hands and seals the day and year first above written.

In presence of

John Arthur [SEAL]

[SEAL]

VOL. 161 PAGE 204

STATE OF OREGON,
County of Baker } ss.

BE IT REMEMBERED, That on this 22nd day of May A. D. 19 53 before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named John Arthur, unmarried who is known to me to be the identical individual described in and who executed the within instrument and acknowledged to me that he executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal the day and year last above written.

Notary Public for Oregon.

NOTARY PUBLIC FOR OREGON
My Commission expires My Commission Expires July 15, 1956

Option on Mineral Claims
(FORM No. 297)

FROM

TO

State of Oregon } ss
County of Baker

I hereby certify that the within instrument of writing was received for record on the 22nd day of May A. D. 19 53 at 11:15 o'clock A. M. and recorded Dated 19 Deputy

STEVENS-NESS LAW PUB. CO., PORTLAND 489

Record of of said County Clerk

Deputy

Fee $

Mail to
Mail to
H. R. Ricoll
1825 SW Vista Ave
Portland 1, Ore

VOL 101 PAGE 201

Option on Mineral Claims

THIS AGREEMENT, Made and concluded this 16the *day of* May *A. D.* 1953, *by and between* Frank H. DeMerritt, married, of Baker County, Oregon *party of the first part, and* the Ketell Investment Corporation, party *of the second part*

WITNESSETH: That the said party of the first part hereby covenants and agrees that if the said party of the second part shall make the payments or perform the covenants hereinafter mentioned, on his part to be made or performed, the said party of the first part will convey and assure to the said party of the second part, clear of all incumbrance whatsoever, by good and sufficient deed, subject only to the paramount title of the United States of America, which will be placed in escrow at the request of the said party of the second part, the following described mining property, to-wit:

All of his full one-half interest in the PYROLUSITE Quartz Mining Claim, recorded in Book No. 47, Page 580, of the Quartz Records of Baker County, Oregon; and All of his full one-half interest in the BLACK MANGANESE Quartz Mining Claim, recorded in Book No. 47, Page 582 of the Quartz Records of Baker County, Oregon.

And the said party of the second part hereby covenants and agrees to pay to the said party of the first part, the sum of Seven hundred fifty dollars ($750) *Dollars, in the manner following: One dollar in hand, the receipt of which is hereby acknowledged and the balance on the dates as follows, to-wit:* The first payment to be the sum of $150 on or before May 20, 1953; the second payment of 25 % of the balance or $150 to be aid not later than 120 days from the date of May 20, 1953; and thereafter, payments of $150 to be made every 90 days until the full price is paid. Eight percent royalty shall be paid on all returns of shipments of ores or concentrates and the amounts of all royalties shall be applied on the purchase price and the said payments. Royalties shall be paid promptly as returns are received.

and agrees to perform the anual assessment work before June 15, 1953 and annually thereafter; and agrees to pay all bills promptly as they are incurred and to permit no liens to be filed against the property.

It being understood and agreed, that in case default is made in making any of said payments, that all sums paid heretofore shall be forfeited to and be retained by the party of the first part as liquidated damages, and that upon such default the parties of the second part, their heirs and assigns, shall not be liable for any unpaid portion of the purchase price. In case of failure of the said party of the second part to make the payments at the times and in the manner specified or perform the covenants hereinbefore stipulated, this contract may, at the option of the said party of the first part, be forfeited, on giving the said party of the second part notice in writing to that effect. It is mutually agreed that the covenants herein contained shall be obligatory upon the heirs and assigns of the respective parties.

IN WITNESS WHEREOF, The parties hereto have set their hands and seals the day and year first above written.

In presence of

Frank H. DeMerritt [SEAL]

[SEAL]

STATE OF OREGON,
County of Baker } *ss.*

BE IT REMEMBERED, That on this 22nd *day of* May *A. D. 19*53

before me, the undersigned, a Notary Public

in and for said County and State, personally appeared the within named

Frank E. DeMerritt, married,

who is *known*

to me to be the identical individual..... described in and who executed the within instrument and acknowledged to me that he *executed the same freely and voluntarily.*

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal the day and year last above written.

Notary Public for Oregon.

My Commission expires NOTARY PUBLIC FOR OREGON
My Commission Expires July 15, 1956

NOTARY PUBLIC

Option
on Mineral Claims
(FORM No. 297)

FROM

State of Oregon, } ss.
County of Baker *TO*

I certify that the within instrument was received for record on the day of 19 53 at 11 o'clock A. M. and recorded in Book ____ on Page ____ of Record of Deeds. No. ____ of said County.

WITNESS my hand and seal of said County affixed.

By ____, Deputy

Fee $ ____

Mail to

Mail to
H. P. Kutell
1825 Sylvia Ave
Portland 1, Oregon

KETELL MINING COMPANY
Division of
KETELL INVESTMENT CORPORATION

CO-VENTURESHIP WITH ELLIS & ASSOCIATES - PROFIT AND LOSS STATEMENT
2⅔ Months ending 9/15/53

Account	July 1953	August 1953	September 15 days	2⅔ Months ending Sept. 15, 1953
INCOME:				
Gross Proceeds from Ore Sold	$ --oo--	$ --oo--	$ 509.39	$ 509.39
EXPENSES:				
Overhead Expense 5%	--oo--	--oo--	25.47	25.47
Equipment Payments	603.63	603.63	904.67	2,111.93
Equipment Rental	--oo--	289.95	--oo--	289.95
Dynamite and Caps	127.70	382.92	144.70	655.32
Small Tools Etc.	241.15	46.12	122.09	409.36
Gasoline and Oil	124.85	293.84	9.60	428.29
Telephone and Telegraph	17.00	71.31	60.00	148.31
Shipping Costs	--oo--	20.00	--oo--	20.00
Dues and Subscriptions	4.25	1.21	--oo--	5.46
Depreciation Expense	406.83	404.61	202.30	1,013.74
Taxes and Licenses	92.30	25.00	--oo--	117.30
Sampling and Weighing	--oo--	122.03	8.00	130.03
Freight Expense	488.66	1.78	1.29	491.73
Equipment Maintenance	175.23	62.11	94.41	331.75
Total Expense	$2,281.60	$2,324.51	$1,572.53	$6,178.64
NET PROFIT AND LOSS Ending Sept. 15, '53.	$2,281.60	$2,324.51	$1,063.14	$5,669.25

50% Ellis and Associates Share of Loss to 9/15/53 . . . . . $2,834.62
Amount advanced to Ellis & Associates to date of 9/15/53 . . . . . 2,177.62

Total of Loss and Liability by Ellis $5,012.24

P. S. There are four cars in transit @ $800.00 (Approx.) totaling $3,200.00
which will more or less absorb much of the loss.
50% share of $3.200.00 . . . . . 1,800.00

Balance of Liability & Loss $3,212.24

KETELL INVESTMENT CORPORATION

EQUIPMENT AND CONTRACT LIABILITY 9/15/53

ITEM		
D-4 Cat. Tractor - Empire Machinery Co.	$11,330.00	
Amount Paid to 9/15/53	5,039.10	
Balance Due & Payable		$ 6,290.90
Ferguson Tractor - 1st. National Bank	$ 1,850.00	
Amount Paid to 9/15/53	950.00	
Balance Due and Payable		900.00
D-8 Tractor, Dozer- C.I.T. Corporation . .	$13,881.01	
Amount Paid to 9/15/53	3,362.97	
Balance Due and Payable		10,518.04
'48 & '49 Dump Trucks -1st. National Bank.	$6,356.76	
Amount Paid to 9/15/53	2,500.53	
Balance Due and Payable		3,856.23
Compresser, Jack Hammers-Loggers & Contr.	$ 6,659.98	
Amount Paid to 9/15/53	2,219.98	
Balance Due and Payable		4,440.00
LIABILITY BALANCE 9/15/53		$26,005.17

DUE AEFILIATED COMPANIES

Ketell Construction Co. . . .	$3,426.11
The Ketell Corporation	12,000.00
Tapiola Park Corporation	5,157.54
TOTAL	$20,583.65

DURKEE LIME IS DRILLED

Morrison-Knudsen Company has been doing extensive exploration work this summer on a deposit of limestone near the lower end of Durkee Valley in Baker County, Oregon. Stripping and drilling has been carried on across an area more than two miles long. Testing is still under way and some carloads of crushed rock have been shipped for prospecting purposes.

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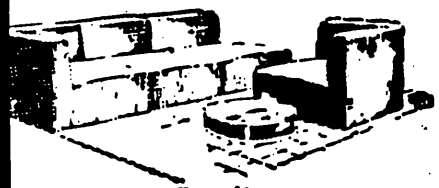

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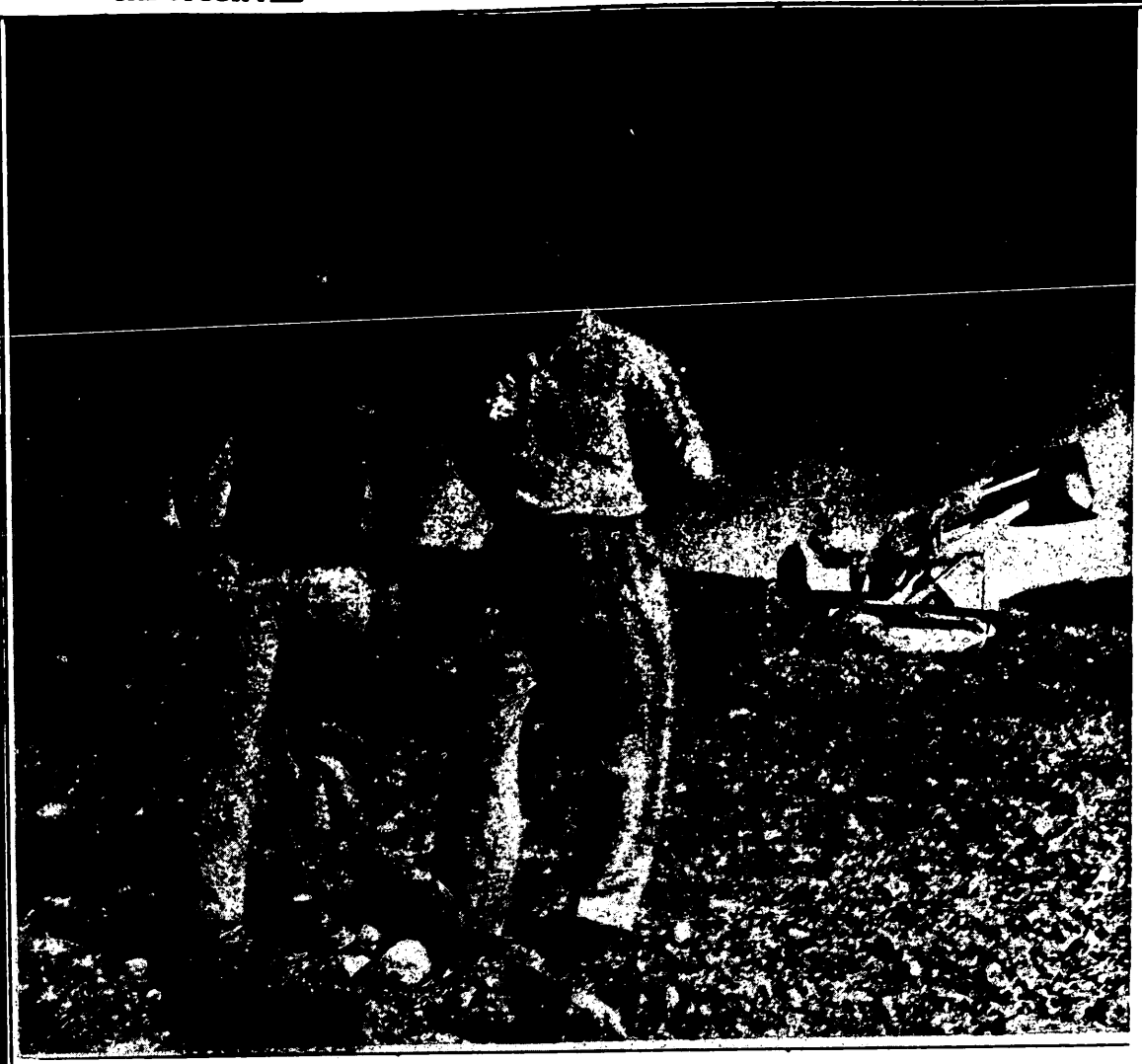


MANGANESE MINERS broke ground at Pleasant Valley in June. Herbert Ketell, (right) president of Ketell Investment Corporation, and Jim Ellis, head of Ellis and Associates, subsidiary group doing the actual mining are happy over prospects of tonnage and increasing good values of manganese oxide ore shown by the considerable bulldozing they have done during the past three months. Picture was taken when Mr Ketell was on an inspection trip, flying to Baker from Portland, where his office is located, to visit site of first stripping and mining operations on the old Utah property.

Ellis, a veteran of World War II, is a hard-driving expert with heavy equipment. Prior to tackling the manganese, he was in charge of construction projects at Pendleton, Portland and Astoria. He studies geology, metallurgy.

The men are standing on black manganese - pyrolusite - exposed at grass roots for width of bulldozer and length of 100 feet.

H. R. KETELL
MANAGER

THE KETELL MINING COMPANY

DEVELOPING WESTERN MINES
MAIN OFFICE: 224 BOARD OF TRADE BUILDING
PORTLAND 4, OREGON
BROADWAY 2529

October 3, 1953
Dictated October 2nd

United States Department of the Interior
Defense Minerals Exploration Administration
South 157 Howard Street
Spokane, 4, Washington

Attention: Thor H. Killsgaard
Acting Executive Officer
DMEA Field Team, Region II

Gentlemen:

Pursuant to our telephone conversation today, I am sending you herewith a photostatic copy of the Oregon State Mining Department's map of the manganese claims in this Pleasant Valley area.

Our intention is to open up the veins that are showing, with our equipment, and endeavor to find large kidneys or deposits of manganese. We plan to do exploratory work exclusively for the next few months, until we have opened up a number of substantial sized deposits.

We will appreciate receiving from you an agreement concerning this exploration program at your earliest convenience.

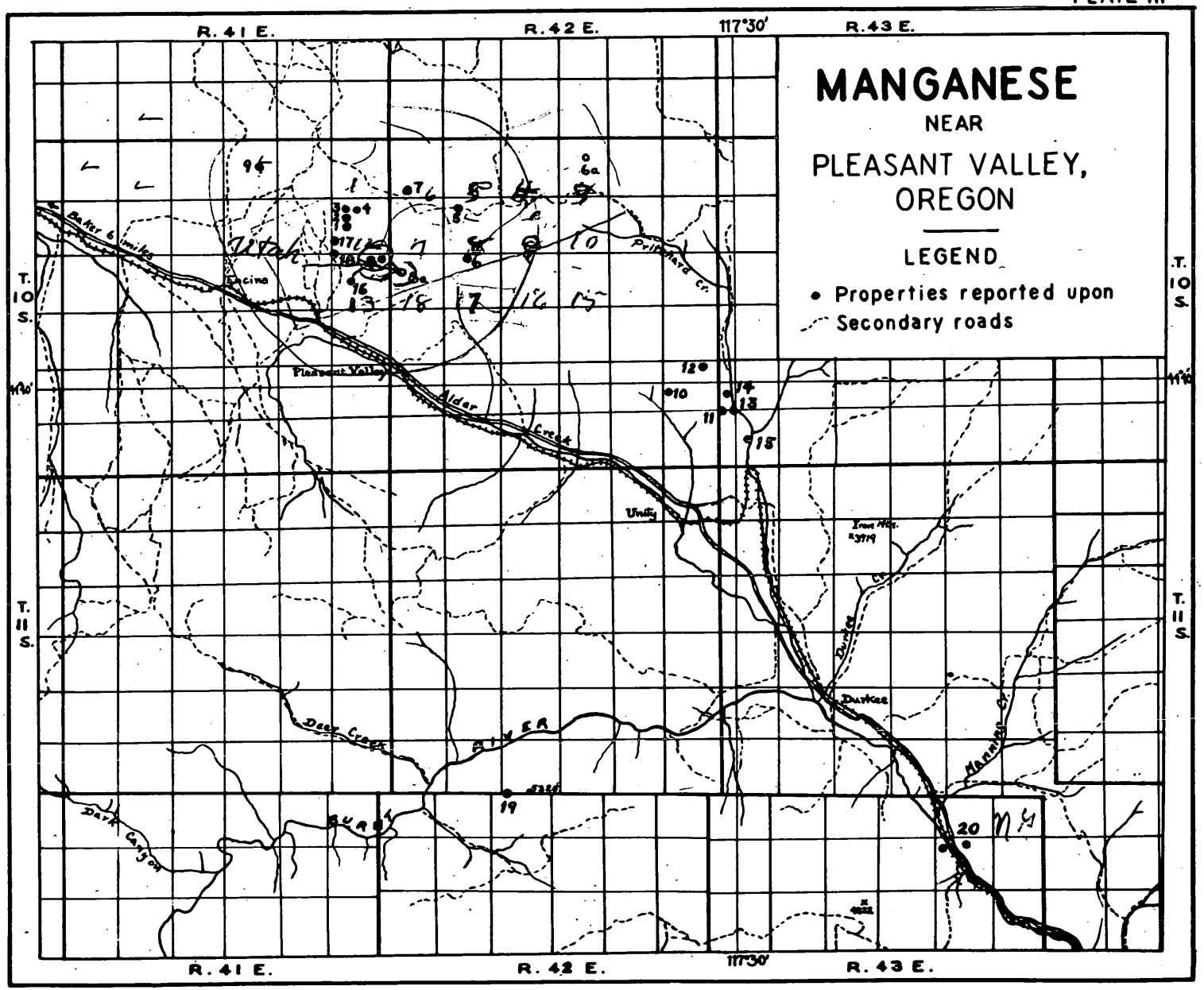
Very truly yours,

THE KETELL MINING COMPANY
Division of KETELL INVESTMENT CORP.

By H R Ketell
H. R. Ketell, President

HRK/jw
cc Jas. V. Ellis

PLATE III


MANGANESE
NEAR
PLEASANT VALLEY,
OREGON
LEGEND
• Properties reported upon
Secondary roads
R. 41 E.
R. 42 E.
117°30'
R. 43 E.
T. 10 S.
T. 11 S.
Baker 6 miles
Pleasant Valley
Alder Creek
Deer Creek
Dark Canyon
Unity
Durkee
Iron Hill
Pritchard Cr.
Burnt River

V. MANGANESE IN EASTERN OREGON

by

John Eliot Allen

Introduction

The distribution of manganese minerals of possible economic value is less widespread in eastern Oregon than in the southwestern part of the State. All but a few of the known deposits are found in central Baker County included within a circle with a radius of seven miles centered halfway between Pleasant Valley and Durkee. These occurrences are associated with cherts of Paleozoic age. Just west of Unity, southern Baker County, manganese is found in a pumice deposit. Two other deposits occur in tuff and rhyolite of early Tertiary age, 15 and 20 miles north of Burns in north-central Harney County; one occurs in chert 25 miles southwest of Canyon City on a branch of Murderers' Creek in southwestern Grant County; and two occur in rhyolite and tuff ten miles north of Hampton in southeastern Crook County.

Baker County

Pleasant Valley Area: According to Pardee, 21:213-214:

"Deposits near Pleasant Valley and Durkee, Baker County, are tentatively classified as resulting from replacement of the country rock by carbonate or silicate minerals that have become wholly or partly oxidized. They consist of irregular veins, lenses, and podlike bodies in siliceous argillite and limestone of Paleozoic age. Though their exposed parts contain oxide minerals, only their cavernous texture and some other features suggest that before oxidation they were dense bodies of carbonate and silicate minerals.

"The most abundant manganese minerals seen are pyrolusite, psilomelane, and manganite. There is more or less soft pulverulent oxide, of which part appears to be wad and part is an unidentified greasy lustered brown mineral. Fine-grained quartz is abundant, and kaolin is common. Iron oxides are abundant in one deposit but rather scarce generally. Several of the deposits are said to contain a little gold and silver, and some of those near Pleasant Valley contain a little tungsten.

"The bodies under consideration are similar in many features and are therefore thought to be similar in origin to the metalliferous quartz lodes of the surrounding region, which are generally regarded as deposited by solutions ascending from some intrusive body. A shade of doubt is cast over this interpretation by the fact that many of the deposits are alined with the general strike of the rocks, as if they were confined to a certain stratum and might therefore be of sedimentary origin. However, no other evidence to support such a conclusion was found.

"Practically no ore reserves are developed, but a rather large amount of highly siliceous manganiferous material that may be capable of beneficiation is in sight or in prospect.

"Location and Accessibility: Manganiferous deposits are found at several places near Pleasant Valley station on the Oregon-Washington Railroad & Navigation Co's. line, in an area that lies from 12 to 20 miles southeast of Baker and can be easily reached from that place by automobile. From Pleasant Valley the Stephens and Capitola groups of claims are respectively 2 miles and 3 miles north, the Black Prince group and the Black Nigger claims, respectively, 2 miles and 5 miles northeast, and other claims from 4 to 7 miles east. The Stephens and Black Prince groups and several of the other claims are distributed along a belt that trends about N. 60° W. This belt is approximately parallel to the valley of Alder Creek, through which the railroad goes, and from 1 to 2 miles northeast of it.

"Production: Most of the claims were located prior to 1917 for gold and silver though very little development work was done on them. In 1917, according to reports, 450 tons of manganiferous material was produced from the Utah claim of the Stephens group. Most of this material was shipped to Tacoma and after being reassorted yielded about 300 tons of 40 percent manganese ore that was used in making ferro-alloys. The Utah and other claims in the Stephens group were idle when visited by the writer, September 4, 1917. Development workings on the Utah had reached a depth of 45 feet; elsewhere they consisted of shallow pits. No production was reported in 1918.

"Occurrence of Tungsten: One feature of the Pleasant Valley deposits of more than ordinary interest is the association of tungsten with manganese as reported by Emil Melzer, of Baker, Oregon, who acquired control of the claims late in 1917. According to Mr. Melzer, a sample composed of material from four different bodies was tested for concentration by the Hendrie-Bolthoff Co., of Denver, Colorado, the assays being made by E. E. Burlingame & Co. Of several different concentrates produced, one that represented the final product and amounted to 3.69 percent of the composite sample carried 23.62 percent of tungstic acid (WO_3). This is equivalent to about 0.75 percent of tungstic acid in the crude ore. Whether the tungsten came from one or all of the four different deposits represented by the sample or in what proportion from each was not determined, and the tungsten-bearing mineral was not identified.

"Surface Features: The area through which the deposits are scattered has a general southwesterly slope toward Alder Creek and is crowded with ravines and small narrow valleys that range from 200 to 600 feet in depth. The sides of the valleys are rather steep, and the intervening summit areas flat or gently sloping. The altitude of Pleasant Valley is about 3,800 feet, and summits to the east are from 500 to 1,000 feet higher. Locally water is scarce, timber is absent, and the dominant vegetation is of the sagebrush type.

"Rock Formation: The prevailing rocks are thin-bedded gray argillite and cherty-appearing shale, with isolated lenses or blocks of crystalline limestone here and there. The whole forms part of a group of rocks that are

extensively developed in the surrounding region and are probably of Carboniferous age. They have undergone extreme deformation, as shown by the steeply inclined attitude of the beds, the multitude of small compressed folds, the erratic distribution of the limestone blocks, and the alteration of what were originally shale and limestone to argillite and marble. The general trend of the folds is about N. 60° W. In places, especially on the flat summits, these rocks are deeply weathered to a mantle of fine clayey soil that contains numerous fragments of the more resistant cherty or siliceous layers. Here and there the rocks and their residual mantle are overlain by gently inclined beds of lava and fresh-water sediments of Tertiary age.

"Ore Bodies: The ore bodies are of moderate to small size and irregular form. Most of them are found near the surface along bedding planes or joints in the argillite and are associated with tabular or lenslike masses of fine-grained quartz. Ore obtained from them, even by careful mining, runs high in silica. The sample of crude ore reported by Mr. Melzer assayed 36.06 percent of manganese, and the concentrate produced by reducing it about one-half contained 48.28 percent of manganese, 13.40 percent of silica, and 0.124 percent of phosphorus. The largest body found on the Utah claim is in general terms a flat lens 20 feet wide (stope length), 30 feet long (pitch length), and 5 feet thick in the middle. It extends from a point near the surface downward along a wavy gouge-lined bedding plane or seam that has an average dip of 20° E. Several smaller lenses are found below it to a depth of 60 feet on the slope, which is the limit of exploratory work. The ore is rather soft and cavernous and is composed chiefly of manganese oxides, clay, and quartz. The oxides are apparently an intimate mixture of pyrolusite, psilomelane, and wad.

"About 200 feet east of the deposit just described other bodies are developed by a 25-foot shaft, from which a drift runs east 63 feet and ends in a winze inclined southwestward 30 feet deep. Water stands in the bottom of the winze, at a level estimated to be about 45 feet below the surface. The shaft penetrates an irregular cylindrical body about 10 feet in diameter and 15 feet long, composed chiefly of quartzose or silicified argillite.

"A small part of it is made up of indistinct veinlets and bunches of manganese oxides, among which pyrolusite and manganite were identified. The body is cut by a few stringers of a coarser-textured quartz with manganese oxides, and from its lower end several seams filled with manganese oxides and clay lead off along bedding planes. The drift follows a seam that is normally 2 or 3 inches wide but swells here and there into bunches or pockets, the largest of which is 5 feet in diameter. Another seam with several small pockets is developed by the winze. Ore from these pockets is said to carry from 35 to 45 percent of manganese and 20 to 30 percent of silica and to be practically free from iron. A shallow cut 20 feet west of the shaft exposes an 18-inch vein of flinty-textured quartz and manganese oxides that dips 50° NE.

?
not good

"On the Black Joe claim about half a mile southeast of the Utah, a body of flinty-textured quartz with manganese oxides is exposed by shallow workings for a distance of 50 feet. This deposit is of tabular or vein form, is 4 feet wide, and strikes about east. Seams and small cavities in it are filled with the softer manganese oxides.

"Outcrops of many bodies similar to those in the Utah and Black Joe are reported in an area that extends from the vicinity of these claims southeastward for 6 or 8 miles. None are extensively developed. Several in the Capitola

group of claims are said to occur in the limestone and to be high in iron. A body of manganiferous quartz 10 feet wide is said to form a prominent outcrop on the Black Prince claim.

"The manganese oxides were probably derived from rhodonite and rhodochrosite. Oxidation of the rhodochrosite was accompanied by shrinkage that gave the ore its cavernous texture. The distribution of the siliceous manganiferous bodies for several miles along a course that coincides with the general strike of the bedded rocks suggests that they are of sedimentary origin. On the other hand, the presence of vein quartz and the reported occurrence of small amounts of gold, silver, and tungsten indicate that they are similar in origin to the metalliferous quartz lodes of the surrounding region, which are believed to have been deposited by solutions ascending from some deep-seated intrusive rock.

"No good basis exists for making an estimate of ore in reserve. Probably, however, small amounts that contain 35 percent or more of manganese are to be found, together with a comparatively large amount of highly siliceous material which is rather poor in manganese but which may possibly be capable of beneficiation."

Properties described above have been tentatively correlated with the following departmental reports:

	Map and Report No.
Stephens group	
Utah.....	8
Black Joe.....	(not visited) 8a
Capitola group.....	7 (?)
Black Prince.....	6
Black Nigger.....	(Not visited) 6a

The manganiferous deposits of the Pleasant Valley Area are located two to four miles east of U. S. Highway 30 and from 12 to 30 miles south of Baker. All of the deposits are accessible by automobile from U. S. Highway 30, which they roughly parallel. Numbers refer to locations on Plate III.

One group of claims is owned by A. L. Fugit, Merle Fugit, and Harley Haskins of Pleasant Valley, and the other by Carrol H. Kipp and Harry Donovan of Baker.

(1)
NO NAME:

NW¼ of sec. 12, T. 10 S., R. 41 E. Elevation (by aneroid) 4020 ft. A shaft 15 feet deep between two limestone lenses, shows no manganese stain or ore.

(2)
BLACK BIRD #1 CLAIM

Owner: A. L. Fugit.
Located one-fourth mile north of (1), on the SW side of a NW trending ridge.

Elevation 4130 feet. A lenticular chert zone partly replaced by manganese oxides strikes about N. 70° W. and apparently dips about 45° to the north. One large cut 10 ft. wide and about 10 ft. long exposes ore which occurs over a distance of several feet. Small pits along the zone for several hundred feet suggest a possible extension, but this has not been proven. The manganese is medium to low in grade, is highly siliceous, and contains much yellow limonitic material. A sample from the location pit ran 20 percent manganese.

(3)
BLACK BEAUTY CLAIM

Owner: A. L. Fugit.
Located 200 yards to the north of (2) on top of ridge at elevation 4200 ft. A pit 4 ft. square and 2 ft. deep exposes 4 ft. of manganite in lenticular chert. Strike N. 60° W. dip 65° SW. Sample from this location returned 44 percent manganese.

(4)
BLACK BIRD #2 CLAIM

Located about one-fourth mile easterly from (3) in west wall of gulch. Elevation 4020 ft. A well-defined outcrop of lenticular chert strikes N. 70° W. and dips 70° North. It is altered and replaced by manganese oxide only on the outside of the chert blocks. Pieces are black, indicating high grade manganese ore but when broken they show plainly that replacement by manganese oxide has been incomplete. This band of chert is up to 10 feet in width and at least 40 feet in length. Sample from location pit returned 21 percent manganese.

(5)
MANGANESE #5 CLAIM

Owner: A. L. Fugit.
Located in the NW¼ of sec. 8, T. 10 S., R. 42 E.; 100 yards S. of the summit of the hill on old road. A shaft was sunk and several open cuts were excavated at this point; 200 yards to the southeast across the creek there are four other open cuts. The only ore consists of crusts and thin stringers of manganese oxide in chert or other siliceous material which appears to strike N. 40° W. A sample returned 12 percent manganese.

(6)
BLACK PRINCE CLAIM

Located in center of N½ of sec. 17 on summit of ridge. Two large, shallow diggings have exposed manganese ore along the top of the ridge for about 75 feet in east-westerly direction. The manganese is of high grade and is not as siliceous as that in most of the other localities. This property should be developed further.

(6a)
BLACK NIGGER
Pardee (21-224) See quotations given above, p. 47. Not visited.

(7)
MANGANESE #3 CLAIM
(This may be the Capitola Claim of Pardee, 21:224.

Owner: A. L. Fugit.
Located near the north line of sec. 7, ¼ mile W. of main road on spur.

Apparently considerable work was done here in the past, but no ore of shipping grade was seen when visited. The bands of chert are only slightly altered and replaced. A sample of manganite interbedded in chert returned 11 percent manganese.

(8)
UTAH CLAIM

Located in NE¼ of NE¼ sec. 13. (This is the Utah claim noted by Pardee, 21:226, from which 450 tons were shipped). Two shafts, apparently developed some ore, but the main workings consist of a stope to the northwest down about 60 feet in an ore body which was from three to five feet in thickness and from 20 to 30 feet in length. The ore consists of replacements in gray, cherty material. There are further openings to the southeast across the gulch.

(8a)
BLACK JOE:

Pardee (21:226). See quotations given above, p.47. Not visited.

(9)
BLACK CAPS LODE CLAIM (Foster Claims)

Owner: R. S. Foster, 1118 Resort Street, Baker, Oregon.

Located about ¼ mile due south of Last Chance Quartz Claim, in sec. 3, T. 10 S., R. 41 E. W.M. One claim running N. 60° W., was located August 28, 1938. Country rock composed of banded lenticular cherts, interbedded with shale, more or less replaced and impregnated with manganite and other manganese oxides. Considerable clay-like and soap-stone-like material accompanies the ore as well as light yellow limonite stains. Ore can be sorted to 30-45 percent manganese. Mine run would be very low.

Banded chert bedrock strikes N. 60° S. Ore apparently has similar attitude and is at least 4 ft. wide, being exposed for 20 ft. with a depth of at least 5 ft. Some of the shale interbeds are partially replaced to give a black manganiferous shale. The ore is somewhat faulted and displaced. Several small open cuts and one trench about 20 ft. long have been made, but with one exception nothing but float is exposed in any of these cuts. At a point 100 ft. north of the SW corner post near the bottom of the gulch an inclined shaft trending southwest and sloping 35 degrees has been driven on a quartz vein 1-2½ ft. wide for a distance of 200 ft. This persistent vein was sampled but showed no values of importance. There is no timber on the property and little or no water. The railroad is 3 miles distant by dirt road. (Report by: Allen, 10/7/38.)

(10)
JAY BIRD CLAIM

Owner: A. L. Fugit.

Located 2½ miles north of Oxman Siding, near the center of the W½ sec. 25, T. 10 S., R. 42 E. Manganese oxide occurs in a bedded deposit striking N. 50° W. and dipping 20° W. The outcrop near the surface appears to be a glaze or stain. Better grade of manganese is exposed 4 feet below surface near the bottom of the location pit. Manganese occurs as manganite and is associated with limonite, quartz and minor amounts of chert. The location pit 3 ft. by 4 ft. by 4 ft. deep and another pit, partially filled, located 25 feet west of the location pit, constitute the total work on the claim. Sample from the location pit ran 41 percent manganese.