Prior to
Answered

AUG 27 1951

Re: DMA-919

Mr. J. J. Kiusella

Tungsten, Nevada

Dear Mr. Kiusella:

In our letter to you of April 12, signed by Otto Herres, it was pointed out that your application (DMA-919), for Federal aid to bring the Silver Tip mine into production might be eligible for assistance under the exploration program of the Defense Minerals Administration. This program calls for equal participation in exploration costs on the part of the applicant. Explanation of the plan and the necessary forms for making application were sent to you at that time.

As we have not received an application from you under the exploration program, we are transferring your original application for a loan to an inactive file. As explained in our letter of April 12 a straight development or mining loan cannot be approved unless there are adequate proven ore reserves to secure the loan, and your application does not indicate such reserves.

If at some future date you should care to explore your property under the Defense Minerals Administration's program, we will be glad to consider an application from you. We wish to thank you for bringing your property to our attention.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

Copy to Bailey 9/4

FJLee:gt
G 8/22/51
Copies to: H.C.Miller- Region 3

Full Loan Requ
III

Control Center, DMA

Through: Tom Lyon, Director Program Development Division DEC 1 9 1951

George B. Holderer, Chief, Ferro-Alloys Branch

DMA-723 - Tungsten - Direct Government Loan $60,000
L. A. Monteith, Box 32, Pine Pine, Inyo County, California

The subject applicant has not replied to our letter dated May 14, 1951, requesting supporting data for his application. Therefore, we are assuming his application is withdrawn and are so marking our docket.

The following pertaining to the file are enclosed:

2 - Form 146
1 - Inventory Form Pine
1 - Letter Commerce to DMA 7/9/51
1 - Copy letter Strobel to Monteith 4/6/51
2 - Copy letter Bradley to Monteith 5/14/51

George B. Holderer

George B. Holderer, Chief,
Ferro-Alloys Branch

Copy to Bradley 12/20

Attachments

Approved:

Director, Program Development Division

DEC 19 1951

Mr. A. E. Monteith
Box 32
Big Pine, Inyo County
California

In reply please refer to
DMA-923 - Tungsten

Dear Mr. Monteith:

We have had no reply to our letter dated May 14, 1951, requesting more information relative to your application for a $50,000 loan.

Therefore, we assume you are no longer interested in the application, and we are marking your docket closed.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Program Development Division

Refer to	Note	Date
	EBM	9/4
Answered		

300
DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
SEP - 1 1951
SAN FRANCISCO, CALIFORNIA

August 29, 1951

Miss Ann Butler Berner, President
Arizona-Nevada American International Corp.
4336 Beeman Avenue
North Hollywood, California

Re: DMA-926

Dear Miss Berner:

I am returning to you the Warranty Deed to your property in the Coahuila Mining District, Riverside County, California, together with the Proof of Labor, which you so kindly forwarded to the Department of Interior.

I wish to say that as far as I have been able to learn there is no way for the Government to accept the deed to your property; however, if accepted it would require a special act of Congress to deed it back to you. I fully appreciate your patriotic motive in presenting this property to the Government and wish to thank you for your thoughts and acts in this matter.

With kindest regards.

Sincerely yours,

Tom Lyon

Tom Lyon, Director
Supply Division

Enclosures - 2

TLyon:eh

cc: Admin. Reading File
Reports and Records
Field Team, REG. III
Mr. Barr
Files

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

Refer to	Name	Date
Answered		

July 31, 1951
Code 370

Arizona-Nevada American International
Corporation
4336 Beeman Avenue
North Hollywood, California

Gentlemen:

Subject: DMA-926 - Beryl

Your application for a Government loan to equip and operate a Beryl deposit near Hemit, California, docketed as DMA-926, has been reviewed by this office.

Projects approved by the Defense Minerals Administration must, in its judgment, show definite promise of yielding material of acceptable grade, physical character and specifications, in quantities that will significantly improve the mineral supply position for National defense. Where an operation loan is involved, an adequate reserve of ore must be proven to justify the loan and a sound working program presented which will assure the economic feasibility of the proposed program with respect to repayment.

A very careful study of your proposal revealed the following:

1. Although assay results on "grab samples" have been cited, no data has been presented which substantiates the existance of any mineable reserve of beryl ore in the deposit involved.

2. Details of the proposed program (mining methods, etc.) and data supporting its economic feasibility have not been supplied.

Under these circumstances your application for a Government loan in the amount of $150,000, is denied. Should additional information become available, we would be glad to have you resubmit your proposal for consideration.

You perhaps know that under certain circumstances Government aid for exploration projects is available. This applies, in general, to situations where no ore reserves have been proven but where there exists a good geologic probability of making a significant discovery of strategic mineral. For your information, we exclose Press Release of May 14, 1951, explaining the Exploration Aid Program; MO-5, Regulations covering the Program and five copies of MF-103, should you wish to apply.

Should you apply, we suggest that you submit samples of your Beryl ore as well as all of the information required in Form MF-103.

Sincerely Yours,

Tom Lyon

Tom Lyon, Director
Supply Division

Enclosures

RW:mas

cc: Reports and Records Unit
Mr. Lyon
Mr. Barr
DMA File
Field Team Region III (2)

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

DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
AUG 6 1951
SAN FRANCISCO, CALIFORNIA

July 30, 1951

Refer to	Noted	Date
	Nelee	8/6
Answered		

MEMORANDUM

To: Administrative Management Division

Through: Director, Supply Division

From: Minor and Rare Metals Branch

Subject: Uranium Prospect
Holt House Ranch
San Benito County, California
DMA docket 934X

Under date of March 30, 1951, Louis C. Bell, 1304 Oakland Avenue, Piedmont 11, California, applied for inspection of his property and assistance in applying for a government loan to develop it, said loan estimated at from $2,500 to $3,500.

Attached hereto find letter of even date addressed to Mr. Bell denying his application on grounds of too low a concentration of uranium and heavy minerals in the deposit.

This opinion is concurred in by DMA, U.S.G.S. and A.E.C.
Attached hereto is the complete docket, comprised of the following:

(a) Informal application, applicants' letter of submittal, and acknowledgement of receipt by DMA.

(b) Memoranda from Keiser, Hosted and Bryson.

(c) Letter of referral to field team and letter advising applicant of this step.

(d) Field Team report, letter of submittal and consultatory letter from L. U. Page.

Weston Bourret

Weston Bourret, Chief
Minor and Rare Metals Branch

Tom Lyon

Approved:

Director, Supply Division

Copy to S H Bailey 8/6

EGordon:ez Lyon, Administrator's Reading File,
Durrett, Reports & Records Branch, Hosted - Keiser, Field Team, Region III, Files

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

July 30, 1951

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] receipt of report from the [illegible], the [illegible] and [illegible] has completed a careful review of your application.

[illegible] regret to advise it has been decided to reject your application at this time, as the indicated concentration of uranium and heavy minerals in the deposit is too low to be of economic value under present conditions.

Yours very truly,

Tom Lyon

Tom Lyon, Director
Supply Division

[illegible]/ah
cc: [illegible] File
[illegible]
Lyon
[illegible]
[illegible]
Bourret
[illegible]

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

Office of
Executive Officer
DMA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

July 17, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee,
Defense Minerals Administration, Washington, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: DMA Docket 934, Holt House Ranch, San Benito County, Calif.; Uranium

Reference is to your subject letter dated June 1, concerning informal application of Louis G. Ball, 1304 Oakland Avenue, Piedmont, California, dated March 30, 1951, for a Defense Minerals Administration loan to develop his uranium deposit.

Transmitted herewith are four copies of a report entitled "DMA-934x, Holthouse Ranch Deposit, San Benito County, California, (Uranium)," by George W. Walker, Geologist, U. S. Geological Survey, dated July 16, 1951.

Mr. Walker concludes that the concentration of uranium and other heavy minerals in the deposit is too low to be of economic value and that the exploration loan should not be granted. Accordingly, we have not asked the applicant to submit a formal proposal on MF-103. Docket DMA-934 is returned herewith.

H. C. MILLER

H. C. Miller
Executive Officer, DMA Field Team
Region III

Attachments

Copy to: Edgar H. Bailey, Geological Survey

HCMiller:am
Files
Chrono

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

102 Old Mint Building
San Francisco 3, California

July 16, 1951

Subject: DMA-934x, Holthouse Ranch,
San Benito County, California

Mr. H. C. Miller
U. S. Bureau of Mines
870 Market Street
San Francisco 2, California

Dear Mr. Miller:

Transmitted herewith are five copies of a report on the "Holthouse Ranch Deposit, San Benito County, California" by George W. Walker, and the original application for an exploration loan.

I agree with Mr. Walker's conclusion that the concentration of uranium and other heavy minerals in the deposit is too low to be of economic value, and the exploration loan should not be granted.

Sincerely yours,

Edgar H. Bailey

Edgar H. Bailey

Enclosure (5)

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMA-934x, Holthouse Ranch Deposit

San Benito County, California

(Uranium)

George W. Walker, Geologist
U. S. Geological Survey

July 16, 1951

DMA-934x, Holthouse Ranch Deposit
San Benito County, California

(Uranium)

Summary and Conclusions

Proposed exploration on the Holthouse Ranch deposit, San Benito County, California is directed toward an economic evaluation of the heavy mineral content of a Tertiary sandstone formation. Locally, some layers of sandstone contain up to 15 percent of heavy minerals, including magnetite, ilmenite, zircon, and monazite. In places the cementing material of the sandstone is uranium-bearing, iron-stained carbonates.

Examination of the property on June 30, 1951, indicates that the concentration of these minerals is not sufficiently high to warrant Government participation in an exploration program.

Introduction

Docket DMA-934x, Holthouse Ranch deposit, San Benito County, California, proposes exploration of part of the San Lorenzo group (Oligocene sandstone) by detailed geologic mapping and by drilling to evaluate the content of economic heavy minerals, and specifically, uranium-bearing materials.

At the request of M. C. Miller, Executive Officer, Field Team, Region XII, a field examination of the property was made by George E. Walker on June 30, 1951. A geologic map on a scale of 1:62,500 and a report by J. E. Allen / of the San Juan Bautista quadrangle, was used

---

/ Allen, J. E., Geology of the San Juan Bautista quadrangle, California: California State Division Mines, Bull. 133, pl. 1 and pp. 27-33, 1946.

---

as a base for the examination.

Traverses were made with two Geiger-Mueller counters to ascertain areas which might conceivably contain economic quantities of fissionable minerals. Areas which contained noticeable quantities of other heavy minerals were studied in detail. A number of samples were collected to augment and check sample data submitted with the docket. At the time of the field examination no exploration or development work had been done on the property.

Location and Accessibility

The Holthouse Ranch deposit is in sec. 10, T. 13 S., R. 4 E., Mt. Diablo BM, about 3 miles south of San Juan Bautista, San Benito County, California. The area for which exploration has been requested is immediately adjacent to a paved, all-weather road which lies on the east bank of San Juan Creek. The Southern Pacific Railroad is located at Betabel, approximately 4 miles north of San Juan Bautista by paved highway.

Geology

The Holthouse Ranch deposit occurs in folded sedimentary rocks which have been mapped by J. E. Allen as part of the San Lorenzo group of Oligocene age. These rocks are well exposed in a series of roadcuts which cross the area; away from the roadcuts exposures are absent. In the immediate area of the deposit the sediments consist principally of sandstone and minor conglomerate beds. These beds represent the basal part of a Tertiary sedimentary section, which is structurally involved in an east-trending syncline that has been broken by faulting.

In detail the San Lorenzo sandstone is massive, friable, medium- to coarse-grained, and locally conglomeratic. It is buff in color and consists almost entirely of a heterogeneous and poorly sorted mixture of quartz, feldspar, and rock fragments. Crossbedding is prominent at several localities. Locally, a few irregular and apparently discontinuous darker sandstone layers, up to a few inches in thickness and containing up to 15 or 20 percent of heavy minerals, are interlayered with the feldspar- and quartz-rich sandstone. One zone containing approximately 5 to 15 percent of heavy minerals, including large quantities of iron oxides, some ilmenite, garnet, zircon, biotite, epidote, monazite, etc.—see sample data in accompanying docket—is exposed in roadcuts about 1 mile south of the Pacific Portland Cement Company plant, and about 3 miles south of San Juan Bautista. The total width of the zone is 40 to 50 feet. The light buff sandstone in which these darker layers occur, contains a much smaller proportion of heavy minerals; in most exposures it totals less than 5 percent of the rock.

It has been suggested in the docket that nearby faults and volcanic rocks are related to the mineralization. Neither the faults nor the volcanic rocks have appreciably affected the economic mineral content of the San Lorenzo sandsonts. Possible economic minerals, with the exception of negligible quantities of uranium in iron-stained carbonate cement, are present as heavy minerals in the form of detrital grains.

Evaluation of Radioactive Materials

In order to locate and evaluate areas containing radioactive material a number of Geiger-Mueller counter traverses were made both across the strike of the San Lorenzo sandstone and along layers that appeared favorable for sampling.

One detailed, northwest-trending traverse using two beta-gamma, El-tronics counters was made along the roadcuts which cross the area. Generally counter readings remained constant, and not noticeably above the background count. Locally, however, a few of the darker sandstone zones, mentioned above, gave counter readings slightly above the background count. Estimates of the content of radioactive materials as based on counter readings is comparable to assays listed in the docket; in terms of percent nothing was found that would be expected to run higher than a few hundredths percent of U_3O_8. Reconnaissance traverses with the Geiger counters were made along layers that appeared to contain slightly higher concentrations of heavy minerals. All traverses along these layers gave results that were similar to, or even less favorable, than the results obtained on the detailed, northwest-trending traverse. Assays listed in the docket and counter readings both indicate rock of no commercial value.

It has been noted that some of the uranium bearing materials are contained in an iron-stained carbonate cement. Part, or possibly all, of this cement would be lost during any normal concentration process. Some of the cement would adhere to grains that have a low specific gravity. It, therefore, would be associated with the rejects from concentrations based on specific gravity. Some of the cement would be so finely divided after disaggregation of the sandstone, that it would also be lost during concentration. This would effectively lower the overall uranium content of the sandstone.

Therefore, on the basis of the uranium content of the sandstone, a loan cannot be justified.

Evaluation of the Other Heavy Minerals

The San Lorenzo sandstone, and specifically the darker sandstone layers, contains limited quantities of economic heavy minerals. Rarely does the heavy mineral content exceed 15 percent, and commonly it is appreciably below this amount. Of this 15 percent, only a part consists of minerals that have value, so that the effective content of economic minerals, is probably consistently less than 10 percent.

Under present economic conditions it is highly doubtful that such a deposit can be economically exploited.

C O P Y

Air Mail

102 Old Mint Building
San Francisco 3, California

June 19, 1951

Mr. Lincoln R. Page
Box 7618, Lakewood Branch
U. S. Geological Survey
Denver 15, Colorado

Dear Linc:

As Ward is on leave I am writing regarding DMA Dockets 345X, 775x and 934x, all of which are familiar to you. Your letters indicate you are willing to supply us with a geologist to accompany one of our men in examining two of the three properties, although one of these seems to have little merit. In the interest of educating at least one of the men here as to what is wished on such examinations, the following proposal is submitted for your consideration.

George Walker is now here and, as I understand it, will be working for you after August 1, although he will remain stationed here for a while. He tells me he is going to have difficulty meeting the set deadline; however, it would make good sense for him to be broken in to this type of work by making a few examinations in company with one of your regular men. Thereafter he could advise our other men as to how to work a counter and cut samples. His current work is urgent only in that it should be completed prior to your deadline, and it is of such a character that he can leave it for a brief period without loss. Therefore, I would like to propose that you send one of your men here to go to some, if not all, of the three deposits with the prime objective of familiarizing George with technique and procedure.

George could make these examinations during any period after June 24. I estimate it would require no more than a week of his time, but if you approve of this interruption it probably would mean he would not be able to join your group on a full time basis until a week later than now planned. If this proposal meets with your approval please let us know when we can expect your geologist to arrive.

Sincerely yours,

Edgar H. Bailey

cc: H. C. Miller
cc: DMA 345x
DMA 775x
DMA 934x

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 7618, Lakewood Branch
Denver 15, Colorado

June 15, 1951

Air Mail

Subject: [illegible] 934

Mr. Ward [illegible]. Smith
U. S. Geological Survey
105 Old Mint Building
5th & Mission Streets
San Francisco, California

Dear Ward:

The attached docket which you have referred to me covers a property on which we have no information whatsoever. The equivalent uranium analyses noted in the docket, however, are less than 0.013. Therefore, it would appear to me that a loan could not be justified on the basis of uranium. There is nothing in the docket which allows one to judge the grade of monazite in the sand and to decide whether or not this could be justified on the basis of monazite.

I do not feel that you need the services of a member of the Reconnaissance Group in making the examination of this property. However, if you would like one of our men to accompany the field team on their examination, we will send someone.

Sincerely yours,

Lincoln R. Page

Copy to: V. E. McKelvey

Refer to	Noted	Date
	HCM	6/6
Answered		

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
102 Old Mint Building
San Francisco 3, California

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 6 1951
SAN FRANCISCO, CALIFORNIA

June 5, 1951

Air Mail

Memorandum

To: Lincoln R. Page, Box 7618, Lakewood Branch, Denver, Colo.

From: Ward C. Smith

Subject: DMA-934

The attached docket is referred to you for expert advice.

If you wish us to make this field examination, please so instruct us promptly. If you send a geologist from your group, please let us know a few days in advance so that we may have one of our geologists join him for the examination.

Please have your advice or instruction on the dockets typed as a separate letter for each one and return with the complete docket. Also please send with your original letter five carbons for the essential files of the Survey, Bureau of Mines, and DMA, here and in Washington.

Ward Smith

Attachment

CC: H. C. Miller

Refer to	Noted	Date
	Nell	6-4
Answered		

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 4 1951
SAN FRANCISCO, CALIFORNIA

Mr. Louis G. Ball
1364 Oakland Avenue
Piedmont, California

Re: DMA Docket 934
Malt House Ranch
Uranium

Dear Mr. Ball:

Your informal application, dated March 30, for government assistance under the provisions of the Defense Production Act, has been reviewed by the Minor and Rare Metals Branch of the Defense Minerals Administration.

Before final decision can be taken on your request, it will be necessary to obtain additional information on your prospect. Your application, therefore, has been referred to the Executive Officer of Field Team, Region III, Mr. H. C. Miller, 1415 Appraisers Building, San Francisco, California, with the request that the needed information be supplied to this office.

Yours very truly,

Tom Lyon, Director
Supply Division

WBourret/ad
cc: Files
Field Team, Region III (2)
Mr. Strobel
Adm.Read.File
Mr. Moon
Coordinating Committee
Mr. Bourret
Mr. Hosted - Mr. Kaiser - Room 3204 USGS
Mr. Kline, USBM, Bluemont, Va.

Ctg & Read Send
6/4

	Noted	
Answered		

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

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 4 1951
SAN FRANCISCO, CALIFORNIA

JUN 1 1951

Mr. H. C. Miller
Executive Officer, Field Team, Region III
1415 Appraisers Building
San Francisco, California

DMA Docket - 934
Re: Holt House Ranch
San Benito County,
California
Uranium

Dear Mr. Miller:

Ref 665.

I am transmitting herewith one copy of the informal application of Louis C. Ball, 1304 Oakland Avenue, Piedmont, California, dated March 30, 1951. You might ask the applicant to submit a formal proposal on MF-103 if you believe this is necessary at this time.

The A.E.C. does not have a field report on this prospect; while we do not think the proposition appears promising, a brief field examination is suggested in order to develop enough evidence to turn it down, or approve it.

In accordance with the instructions on fissionable material, outlined in Procedural Instruction No. 5, please contact Mr. Lincoln Page for expert geological advice in the event assistance is required.

Yours very truly,

Tom Lyon
Chairman, Coordinating Committee

Enclosure

Approved:

Lowell B. Moon
For the Bureau of Mines

Oliver E. Ross
For the Geological Survey

Copy to Wood Lincoln 6/4

For Field Office file

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
APR 2 1951
SAN FRANCISCO, CALIFORNIA

March 30, 1951

Refer to	Noted	Date
Answered		

Mr. H. C. Miller
U.S. Bureau of Mines
630 Sansome Street
San Francisco, California

Dear Mr. Miller:

At your suggestion, I have completed a preliminary report according to the outline for submission of information on strategic minerals to the Defense Minerals Administration. I believe the report is self explanatory.

Copies have been forwarded to Dr. Boyd in Washington for advice and further information.

Yours very truly,

Louis C. Ball

Louis C. Ball
Geologist

1304 Oakland Avenue
Piedmont 11, California

LCB:cm
Enclosure

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
APR 2 1951
SAN FRANCISCO, CALIFORNIA

APPLICATION FOR ASSISTANCE IN DEVELOPMENT OF STRATEGIC MINERALS

Name and Address of Applicant

Louis C. Ball
1304 Oakland Avenue
Piedmont 11, California

Name and Exact Location of Property, Metal, or Mineral

Holthouse Ranch, Portion of Sec.10 T13S, R4E, MDBM, San Benito County, California, three miles south of San Juan Bautista on east bank of San Juan Creek.

Mineralized Sandstone containing ilmenite, magnetite, and zircon-monazite complex.

Information as to Ownership, Leases, Directions for Reaching the Property from Nearest Town

Mineralized area is on property belonging to the Holthouse family, cattle ranchers of San Benito County. Lease on the property is held by Louis Channing Ball and Richard Smith Hall, Partners. Property may be reached by taking county road south from San Juan Bautista. This road follows the east bank of San Juan creek. By road, the mineralized area is three miles from San Juan and about one mile south of the cement works of The Pacific Portland Cement Company which are on the opposite side of the creek.

The following additional data are also offered regarding this mineral occurrence:

1. General Description of Mineral Showings

A mineralized sandstone outcrops at a turn in the county road and there is evidence that at this point the road has been benched or cut in the sandstone formation. The outcrop is of a coarse, dark, compact sandstone which in color and character differs noticeably from the formations with which it is in contact. The general area is approximately one mile west of the strike of the San Andreas fault. The sandstone is part of a fault block and the south end of the outcrop appears to be a fault plane normal to the strike of the San Andreas. The sandstone is thought to be in contact with a late (Miocene) volcanic rock along part of the length of the fault plane.

Interest in this mineral occurrence was first engendered when surface reconnaissance with a Geiger-Mueller Radioactivity Counter indicated the presence of radioactive materials. Inspection at night with a portable mineralight later showed the presence of fluorescent mineral.

2. Known Dimensions of the Deposit

The outcrop is approximately 50 feet long in a north-south direction and stands an average of eight feet above the present road level. It dips into a hillside to the east and is thought to extend over 1000 feet east along the fault plane mentioned above.

3. History of Deposit (Development Work, Ore Shipments, etc.)

The deposit was discovered by random prospecting in January, 1949. There have been no commercial shipments from the deposit other than a 300-pound metallurgical sample in February, 1950.

4. Description of Mine Workings

There are no mine or quarry workings on the deposit at this time.

5. Sampling and Assays (including maps or sketches, if available)

No formal sampling has been made of this deposit. Analyses of samples noted below in chronological order represent random surface or "grab" samples of the outcrop face.

The results of sampling done to date are as follows:

a. Six-pound sample for urnaium determination by Radioactivity Counter, January 22, 1949.

Radioactivity - none

Smith-Emery (Laboratory No. 303773)
920 Santee Street
Los Angeles 15, California

b. Six-pound sample for uranium, iron and titanium, and zirconium determinations, February 11 and March 31, 1949.

Uranium - none found
Iron - 53.92%
Titanium oxide - 7.01%
Zirconium oxide - 0.15%

Abbot A. Hanks, Inc. (Laboratory No. 4439)
624 Sacramento Street
San Francisco, California

c. Six-pound sample for radioactivity, percent equivalent uranium determination, March 28, 1949.

Sample No. 404 LCB-1

Radioactivity, percent equivalent uranium - 0.012%

Nature of sample--Hematite-bearing sandstone

U.S. Geological Survey (Mr. Arthur P. Butler, Jr.)
Trace Elements Office
Washington 25, D. C.

d. Six-pound samples, LCB-2 and LCB-3, for (A) Uranium equivalent and (B) qualitative mineralogic examinations

(A)

Sample No.	Radioactivity, Percent Equivalent Uranium	Nature of Sample
404, LCB-2	0.013	Limonitic Sandstone
404, LCB-3	0.005	Limonitic Sandstone

(B) Sample LCB-2 consists of the following minerals, in their order of abundance:

Magnetite 1/
Quartz
Heavy minerals (approximately 15% of the sample)
- Ilmenite 1/
- Zircon 1/
- Garnet
- Hematite 1/
- Biotite
- Epidote
- Muscovite
- Monazite 1/
- Allanite 1/

1/ A highly altered, iron-stained carbonate cement which reacts positively to a qualitative uranium test was found associated with these minerals.

Sample LCB-3 has the following mineral constituents in their order of abundance

Quartz
Altered feldspar
Heavy minerals (approximately 10% of sample)
- Hematite 2/
- Limonite 2/
- Garnet
- Zircon
- Ilmenite 2/
- Magnetite 2/
- Epidote
- Biotite
- Muscovite
- Monazite 2/
- Pyrite

2/ Mineral reacts positively to a uranium test

Dates of Determinations:
A. October 27, 1949
B. December 30, 1949

U. S. Geological Survey (Mr. Arthur P. Butler, Jr.)
Trace Elements Office
Washington 25, D. C.

e. Analysis of sample from 300-pound metallurgical shipment for Spiral concentrator testing, June 5, 1950.

Titanium Dioxide 5.60% (H. I. Co. Lot 566)

Humphrey Investment Corporation
First National Bank Building
Denver 2, Colorado

6. Engineer's or Geologist's Report, if available

There has been no specific investigation made of this property by an engineer or geologist; however, the general geology of the quandrangle within which the deposit occurs is covered in the following report:

"Geology of the San Juan Bautista Quadrangle, California," Bulletin 133, California Division of Mines, Ferry Building, San Francisco, 1946, by John Eliot Allen

The general geological setting is as follows:

The occurrence of sandstone is noted by Allen to be in the San Lorenzo Group of Oligocene Age. He describes it as "massive, poorly bedded, yellow arkosic sandstone, buff-colored sandstone and sandy shale, fossiliferous." The igneous rock with which the sandstone is in contact is described as "andesitic porphyry and agglomerate, interbedded with some arkosic sandstones (ss) and black basalt flow at base."

The area is in the low foothills of the Gabilan Range (Cienega del Gabilan). The Gabilan Range, of uncertain age but thought to be pre-Franciscan, is composed of biotite quartz diorite with aplite dikes.

Situated as it is on a fault and in contact with a volcanic rock, this deposit of sandstone satisfies two criteria for mineralization. The presence of contact minerals, such as garnet, lends further credence to this belief.

7. Description of Surface and Underground Installations and Equipment

At the present time, there are no installations of any kind of equipment on the property. It is to be noted, however, that during 1951 San Benito County plans to widen the county road whereon the sandstone outcrop occurs. Arrangements will be made with the county authorities to advise when this work is to be done in order that material which will be blasted from the face may be preserved for testing and/or inspection.

8. Description of Proposed Project, Including Types of Assistance Desired

The project now proposed for this property would be for a formal engineering and geologic investigation to be conducted to determine its value. Such a project should include mapping on a large scale, and diamond drilling to locate mineral values and determine reserves. The whole area should be cross-sectioned for the purpose of taking radioactivity readings, and counter probes should also be inserted in drill holes to ascertain gains or drops in radioactivity.

This investigation should include, or be coupled with, physical testing to determine optimum grind to unlock minerals, washing tests to remove oxidized iron stain, classification by flotation, tabling or spiral concentrators, magnetic separation (wet and dry) and electrostatic testing. It has previously been determined that 65% to 70% of the ore is in excess of 2.95 specific gravity and that 50% of the heavy mineral was magnetite.

In the case of assistance from the Government, a mining engineer from the U.S. Bureau of Mines and a geologist from the U.S. Geological Survey should be dispatched to examine the property and make their report and their recommendations. Depending upon results, a program of further metallurgical testing could follow the surface examination.

In the case of investigation by a private concern, an option to sub-lease or operate could be negotiated. An option period of from six to nine months is thought to be sufficient for such work.

9. Requirements of Proposed Project in Terms of Money, Manpower, Construction, Equipment, Supplies, Roads, Water Supply and Time to Carry Out Project

Two men and one diamond-drill crew working one month should be able to cover the requirements of proving this deposit from a tonnage and value location standpoint. Cost for such work is estimated at from $2,500 to $3,500. A concentrating plant for a volume production of fifteen to twenty tons of concentrate per day should have the following approximate flowsheet:

Quarrying

Crushing

Grinding

Screening and Washing

Concentration

By Specific Gravity variations	By Magnetic and electrostatic methods

It is felt that the purpose of the plant should be to concentrate marketable grades of ilmenite and magnetite. By-product values of zircon, monazite, and allanite might also be realized. No estimate of cost of installation of such a plant is estimated at this time. The closest rail shipping point is at Betabel on the Southern Pacific Railroad, a distance of six miles by paved highway.

Summary

An interesting occurrence of sandstone containing valuable minerals occurs in an easily accessible area. Geologic considerations point to the possibilities

of extensive mineralization. Economic factors, while not fully resolved, appear favorable at present mineral prices. Experimentation on the concentratability of mineral values through the use of two-stage, spiral classifiers and wet magnetic separation have been encouraging. Additional work on grinding is suggested by the results of concentrating experiments. The radioactive nature of the deposit, while not indicative of high-grade uranium concentration, should be thoroughly investigated since samples previously run for uranium determination were taken from the surface, oxidized portions of the deposit.

A ready market is available for the prime values of ilmenite and magnetite, and concentration of radioactive by-products should be pursued in the interest of developing new sources for National Defense.

Louis C. Bell