UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri

January 29, 1957

Memorandum

To: DMEA Operating Committee, Department of the Interior, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region IV

Subject: Investigation and review of application, Docket DMEA-4405, (uranium, thorium, mica, rare earths, lead and zinc)
The Ozarks Explorations Company, Inc.
Camdenton, Missouri
Decaturville Dome area
Camden and Laclede Counties, Missouri

Based on an investigation made of this application as requested in your letter of August 21, 1956, this is to express Field concurrence with the recommendations in the copies of the reviews of the Commodity Group also furnished with your letter. Since reviewing the application and all pertinent data subsequently obtained, and making the investigation you requested, I am fully convinced that this application should be denied without Field re-examination of the Applicant's property. It was examined by Mullins(USGS, Platteville, Wis.) and Knox(USBM, Joplin, Mo.) August 30, 1955, upon Field referral of this Applicant's previous application Docket DMEA-3763. Available results of the great amount of prospect core drilling since indicates clearly that a worthwhile exploration target still is not evidenced.

The requested investigation under this new application was concluded after conferring with the following as the opportunites arose at places, and on the dates listed:

Name	Title	Place	Date
Mr. H. B. Hart	President of the Applicant Co.	Joplin	9-21-56
Mr. Philip Jones	Consulting Engineer	Joplin	10-24-56
Mr. Robert King	USGS-DMEA, Denver	Texas	9-12-56
and			
Dr. Thomas R. Beveridge	Missouri State Geologist	Rolla	10-15-56
Dr. Garrett A. Muilenburg	Assistant State Geologist	Rolla	10-15-56

Also by correspondence with:

Mr. Robert A. Laurence	Reg. V, Executive Officer	Knoxville, Tenn.	10-2-56
Mr. Tom E. Mullins	USGS	Platteville, Wis.	10-8-56

Personnel of the Missouri Geological Survey indicated that it had made all justifiable drill hole core examinations but could only report negative results. The Applicant alleged for a time that the office of the Missouri Geological Survey had been a source of some newspaper publicized adverse inferences regarding this Decaturville Dome prospecting venture. Prior to that, personnel of the Missouri Geological Survey had logged five churn-drill holes and nine core-drill holes, copies of the logs of which were furnished me with your letter of August 21 and are returned herewith as you requested (Incl.A) Later, however, the Applicant permitted and requested personnel of the Missouri Geological Survey to resume logging which has been done on at least six of the holes core-drilled during and since preparation of the subject application. Therefore, also enclosed herewith for your possible review and return as requested to the Applicant are the following copies of data obtained through it since the application was filed:

(1) Six more recent Missouri Geological Survey logs,
(2) The 5 core-drill hole logs by Mr. Philip Jones, furnished with your letter, and which you also requested returned,
(3) Eight furnished by Mr. Jones since,
(4) Three sections of diagramatic geologic concepts Mr. Jones had constructed from cursory examinations he had been engaged to make of selected core chip samples.
(5) Copy of a letter report Mr. Jones wrote to the Applicant regarding the three above-mentioned geologic structural diagrams,
(6) Copies of 12 spectrographic analyses of selected core chips, and
(7) The Applicant's 6 photostats of spectroscopic analyses tabulations.

During several more recent discussions here with Mr. Philip Jones, a Consulting Metallurgist in Joplin who was employed very infrequently by the Applicant, he explained, among other things, that the inferences drawn from page 4, paragraph 2, regarding lead-zinc mineralization in his report which was included with the Application, admittedly was a result of his unfortunate phrasing. Mr. Jones emphasized that he actually had no intent to imply that any mineable thicknesses of ore had been indicated by the analyses from the selected core chip samples. Mr. Jones also hastened to explain that he had not participated in, or been consulted on the "ore reserve" calculations or any of the other details written under the items of the Application Form MF-103.

All qualified persons contacted during this investigation indicated agreement that no significant radioactivity has been evidenced by any of the large amount of prospecting work which has been done on the Applicant's properties to-date, and no worthwhile-appearing exploration target is envisioned. It seems unreasonable to believe that any strategic mica would be present. The personnel I conferred with in the Rolla offices of the Missouri Geological Survey indicated their concurrence with my observation that this particular area related to the indicated Decaturville pegmatite, likewise appears virtually devoid of lead-zinc mineralization as compared with such occurrences commonly found throughout all the Central Missouri lead-zinc district.

From the standpoint of academic geology, this apparently intricately faulted Decaturville pegmatite offers a very interesting problem which should be solved; from the standpoint of mining economics and DMEA exploration assistance policies, however, it should be ignored. A graduate student at Missouri University reportedly is preparing a thesis on this Decaturville geologic curiosity,

Tentative arrangements by Mr. Philip Jones, on behalf of the Applicant, for Mr. Dan R. Stewart, Geologist-Geophysicists, American Zinc, Lead & Smelting Co., to make a magnetic survey of Decaturville done on a consulting basis, reportedly had to be cancelled recently because of exhaustion of the Applicant's prospecting funds and because of the winter weather. The Applicant indicated that while all work has been recessed, its stockholders plan to make funds available for resumption of some aspects of this prospecting venture next Spring.

In view of the fact that the data actually obtained by the Applicant seems to evidence lack of any systematic technological supervision during the large amount of prospecting of the past two years, and that the Applicant reportedly was unwilling to employ competent consultation except for very infrequent cursory examination work, and then obviously failed to heed their recommendations, I have concluded that the Applicant does not have adequate experience and ability to successfully conduct a mining exploration venture.

CCK/jd

Clinton C. Knox

Encl 8

cc: DMEA Op. Com(3) w/2 cc for AAG
Mr. Laurence,USGS,Knoxville(2) (X-tra for Mullins)
Mr. King,USGS,Denver
4405 file(2)

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 15 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

October 11, 1956

Mr. Thomas E. Mullens
U. S. Geological Survey
P. O. Box 165
Platteville, Wisconsin

Re: DMEA-4405 (uranium, thorium, mica, rare earths, lead and zinc)
Decaturville Dome Area
Camden and Laclede Counties, Mo.

Dear Tom:

Thanks for your comments on the Decaturville dome logs. I have forwarded them to Knox, in case he wants to incorporate any of them in his report.

As shown on the map, C-1 is way down in the southwest corner. This would put it in Section 5, T 36 N, although the log states that it is in Section 32, T 37 N. So it may be that D-1 is really C-1; I copied the map and so copied any errors which it may have contained; the original was returned to Knox last week.

I, too, wondered what Mr. Jones meant by "high-grade dolomite." The whole record seems dubious to me, and not worth wasting too much time on as it now stands.

Sincerely,

Bob.

Robert A. Laurence
Executive Officer
Region V

Box 165
Platteville, Wis.

October 8, 1956

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team - Region V
Room 13 - Post Office Building
Knoxville 2, Tennessee

Dear Bob:

Enclosed are the logs of the Decaturville Dome drill holes you sent me. Thanks for letting me have them.

The logs reveal that the geology of Decaturville Dome is complicated. In fact, the geology is so complicated that I wonder if somebody mixed the samples.

I tried to construct sections for some idea of the structure, but an electronic computer is needed to figure all possible structure pictures. Even a 200 jump between C-1 (I take this to be D-1 on the map) and C-3 is impossible, and C-1 is a normal hole.

The spectrographic analyses shown on Jones' logs bother me. Jones' logs "high grade dolomite," and then shows several percent potassium and sodium oxide. I think "high grade dolomite" should contain more than 95 percent magnesium and calcium carbonate, so Jones and I do not agree. Either he is calling a clayey dolomite "high grade" or else the potassium and sodium represent something besides clay. It may be possible that potassium and sodium were introduced by an intruding pegmatite. Other metals shown by spectrographic analysis also seem a little out of place in a normal dolomite, and this also may indicate an intrusion.

None of the above statements pertain to the lead and zinc potential at Decaturville Dome. The logs did not help me; so I will not make any guesses.

All this and I am still at the starting point. Geologically, Decaturville Dome is something to explore; economically, the dome should be avoided.

Sincerely yours,

T. E. Mullens

Enclosure

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

ROOM 151 U.S. CAP. BLDG.
KNOXVILLE 2, TENN.

October 2, 1956

Mr. Thomas E. Mullens
U. S. Geological Survey
P. O. Box 165
Platteville, Wisconsin

Re: DMEA-4405 (uranium, thorium, mica, rare earths, lead and zinc)
Decaturville Dome Area
Camden and Laclede Counties, Mo.

Dear Tom:

Here are copies of logs of several of the Decaturville drill holes. Some are by the Missouri Survey, others by the Applicant's consultant, Philip Jones. Also, a copy of a letter from Mr. Knox and a copy of a map showing locations of some of them.

To me, they indicate that too much money has already been spent--or rather misspent--on this prospect. Hole No. 2 is interesting, in that it started in pegmatite, left it and then intersected it again. The net result of all of them makes your suggestion of emplacement by faulting rather than dike intrusion seem reasonable, though it's still difficult to explain.

Please return the logs for our files, with any comment you may care to pass along on them.

Sincerely,

Bob

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

Enclosures 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

October 2, 1956

Mr. Clinton C. Knox
Executive Officer, Region IV
Defense Minerals Exploration Administration
P. O. Box 431
Joplin, Missouri

Re: DMEA-4405 (uranium, thorium, mica, rare earths, lead and zinc)
Ozarks Exploration Company
Decaturville Dome, Missouri

Dear Clint:

Thanks for the logs and other information on the Decaturville Dome application. I'm returning your copy of the map, and have sent the logs on to Tom Mullens so that he may look them over. The ones you sent are adequate for our present needs, so I will not write the Missouri Survey for colored logs.

I am amazed at the apparently unlimited funds this applicant seems to have available for unintelligent prospecting. As I get it, he has now drilled at least 31 holes and had nearly 200 spectrographic analyses. It's too bad that some of this money wasn't spent either (1) deepening diamond drill hole no. C-2, to see what's under the second pegmatite it intersected, (2) drilling one of the holes to basement, to see how it compares with the pegmatite and to learn the nature of the unexposed Cambrian formations in the area and (3) an angle hole under the pegmatite outcrop at, say 200 feet depth. Not that any of this would have been economically justifiable, but (at this distance, at least) it appears to me that more useful geologic information would have resulted.

To me, it still adds up to the same answer: denial without another field examination.

Sincerely,

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

RAL/mg
Enclosure
cc - Mullens
Kiilsgaard
File

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri

September 27, 1956

Mr. Robert A. Laurence, Executive Officer
Geological Survey - DMEA
Room 13 Post Office Building
Knoxville 2, Tennessee

Re: DMEA-4405 Ozarks Explorations
Decaturville, Missouri

Dear Bob:

This belatedly is to thank you for your letter of September 19 with the Interim report on Dewey Amos' September 14 inspection of the National Lead project. Please also pass my thanks on to Dewey for that good job, and to Tom Mullens for the copy of his letter to you on the cited Application.

Enclosed are copies of pertinent correspondence all of which I believe you will find self-explanatory. Also enclosed are black and white prints I was able to make here of the Missouri Surveys' strip logs you wanted on 14 holes, which you may find will suffice for your review of this Decaturville Dome. I am certain, however, that the Missouri Survey would furnish you the hand-colored copies of the logs if you so request, but I believe they must charge for that work. Mr. Philip Jones, a local consultant, kindly furnished for your use extra prints of the logs he had made on 5 additional holes. I also am sending you the sole copy of the project map he gave me last week showing the hole locations.

The Applicant, Mr. H. B. Hart, an associate, Mr. Lee Farmer, and their consultant, Mr. Philip Jones, spent last Friday morning discussing the Application here with me. I mentioned the absence of any significant mineralogical information on the logs forwarded to me with the Operating Committee's August 21 letter. That omission seemed so unusual to me because of the way the Missouri Survey always made note on their strip logs of all trace metallic minerals found in all hole samples furnished them from Bureau drilling in Missouri. Mr. Hart since sent me through Mr. Jones' Office the "originals" of those strip logs by the Missouri Survey on which notations of the lead, zinc, and copper traces were penned. I have copied those notations in pencil on the enclosed prints of those strip logs.

Mr. Hart also brought me single copies of new spectographic analyses on samples from holes C-28, C-29, and C-30 which are obviously as insignificant as all those previously furnished.

Mr. Jones called me again today to describe cores from the recent 8 or 10 holes which he saw for the first time at the project last Saturday. I agree with him that the drilling is indicating a very unusual structure for Missouri, but from my examinations of the past 12 years in that central Missouri plateau region, I doubt that many places can be found that are more devoid of zinc-lead minerals. Referring to the third paragraph of the August 10 Review by Nelson, USGS, upon my questioning, Mr. Jones expressed his regret that he inadvertently had made that mis-statement regarding averaging of the "7 spot samples".

Mr. Hart emphasized last Friday that 31 diamond drill holes now have been completed but because, as he alleged, the Missouri Survey had issued very unfavorable press releases on his project, its geologists have not been invited to come on the property or log any drill hole cores since the C-9 hole was completed. Evidently Mr. Hart made his own "ore reserve" calculations, has failed to heed the recommendations of his consultant, Mr. Jones, and employs him only infrequently. Thus there is no evidence that Mr. Hart's organization ever systemically recorded the drilling results.

I explained to Mr. Hart that it would have to be a very unusual case where I would recommend a DMEA project contract that did not have some endorsement of the A.E.C. in the case of radioactive minerals, or the Missouri Geological Survey in the case of lead and zinc minerals in Missouri.

As the Operating Committee suggested in its August 21 Field references, I discussed this Application with Robert King of your Denver Office during the recent ten day trip with him in Texas. Now with Tom Mullen's comments and yours I feel about prepared to write a Field Team memo and recommendations in concurrence with the denial suggested by the Bureau and Survey reviewers in Washington. However, since I expect to go through Rolla within two weeks I plan first to further discuss the Application with the Missouri Survey. I am certain they would not wish to furnish me the comments of their geologists in writing.

In the meantime, I hope I can be allowed to concentrate on some of the many other DMEA matters on hand which appear of much greater importance and urgency.

Sincerely,

CKnox

CCK/enn

Clinton C. Knox

cc: DMEA Op.Com.(2)
Laurence, USGS — x-tra copy
4405 file

Box 165
Platteville, Wis.

September 10, 1956

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team - Region V
Room 13 - Post Office Building
Knoxville 2, Tennessee

Re: DMEA 4405 (uranium, thorium, mica, rare earths, lead and zinc)
Decaturville Dome area
Camden and Laclade Counties, Mo.

Dear Bob:

Something new, lead and zinc, has been added to DMEA 4405. This puts a new light on the request for the dome has some potential for lead and zinc ore. And I am in no position to make a guess about this potential.

When Mr. Knox and I made the field examination we told Mr. Hart that lead and zinc were his best bets. Mr. Hart, however, was not interested in lead and zinc at that time. So, the field examination checked only the potential for uranium, thorium, mica, and rare earth elements.

The difficult part of the field examination was some bad logic by Mr. Hart. He knows that uranium, thorium, mica, and rare elements are found with some pegmatites. He has a pegmatite; therefore, his pegmatite must contain uranium, thorium, and rare earth elements. Mr. Knox and I could not convince Mr. Hart that some pegmatites do not contain anything that can be mined at a profit. Our main trouble was that pegmatites are rare in Missouri; if Mr. Hart were familiar with pegmatites in general he would realize that the Decaturville Dome pegmatite is a "prospect" and not necessarily a bonanza.

I infer from N. E. Nelson's review that the new holes did not strike any economic or near-economic deposits of uranium, thorium, or rare earth elements. If this is true, then the pegmatite is a worse bet this year than last. So, I would not change my original recommendation that DMEA assistance be denied to develop mica, uranium, thorium, and rare earth elements.

The straight geology side of this application puzzles me. I believe the pegmatite is a fault block, but I cannot conceive of a method of faulting a 100 x 80 foot block through the sedimentary cover. If the pegmatite is intruded, you still have a mechanical problem for the pegmatite was solid enough and cold enough to push the "basal conglomerate" through solid rock without assimilating the conglomerate.

Do the new holes shed any light on how the pegmatite got in place?

If the pegmatite started out as a small hill on the basement the lead and zinc potential may be better than if the pegmatite is a late intrusive. This gets into the lead and zinc side of the application and I would not make any recommendations until I studied the drill holes.

Sincerely yours,

T. E. Mullens

Copy to: C. C. Knox

Enclosure
(to Laurence)

TEM:rbg

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

DME A
4405

September 6, 1956

Mr. Thomas E. Mullens
U. S. Geological Survey
P. O. Box 165
Platteville, Wisconsin

Re: DMEA-4405 (uranium, thorium,
Mica, rare earths, lead and zinc)
Decaturville Dome area
Camden and Laclede Counties, Mo.

See also 3763

Dear Tom:

This doesn't require any action now, but I'd be interested in your ideas on the present status of this application, since you're the only Survey geologist who has seen the prospect.

Please return the correspondence.

Sincerely,

Bob.

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

Enclosures