DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 5010

Application
- [X] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [X] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [X] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1/46)

1. Use blocks consecutively, one at a time
2. Void previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
Mr. [illegible] 5227 Interior	RUN / STOP		RUN / STOP
E. W. Ellis D.M.E.A. 4449 Interior	RUN / STOP		RUN / STOP
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Send surplus envelopes to supply room for reissue.

Use other side

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Use RUN and STOP only when messenger service between Government buildings in Washington is required. Your mail room has RUN and STOP information.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 8 1958

224 New Customhouse
Denver 2, Colorado
May 5, 1958

Memorandum

To: Secretary to the Operating Committee

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Food Machinery and Chemical Corporation (NE$\frac{1}{4}$ NW$\frac{1}{4}$ and all of east half of section except W$\frac{1}{2}$ NW$\frac{1}{4}$ SE$\frac{1}{4}$ and SW$\frac{1}{4}$ SW$\frac{1}{4}$ NE$\frac{1}{4}$, S. 29 T. 13 N. R. 9 W.) McKinley County, New Mexico

Enclosed are the original and one copy of the subject application in the amount of $39,872.00. One copy of the application is being forwarded the Grand Junction Office, DMEA and one copy is being retained in our file.

E. N. Harshman

E. N. Harshman

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/26/58	Ching	700
6/27	Kuous	700
		130
6/30	Johnson	110
"	Mittendorf	100
		220
		225
6/30	McMahon	130
6/30	Hillsgaard	132

JUN 30 1958

Mr. William N. Williams, Vice President
Food Machinery and Chemical Corporation
(Westvaco Mineral Products Division)
161 East 42nd Street
New York 17, New York

Re: Docket No. DMEA-5010 (Uranium)
Sec. 29, T. 13 N., R. 9 W.
McKinley County, New Mexico

Dear Mr. Williams:

Reference is made to your application, dated May 2, 1958, for aid in an exploration project on portions of the subject property. Since the proposed work is designed to explore land that is covered by Contract No. Idm-E933 (Docket No. DMEA-3989) with your corporation, your application was considered as a request for additional work and funds under that contract.

Under the new policy announced on June 6, copy enclosed, we are unable to increase the Government's financial commitment in any existing contract where a certification of discovery or development has been issued.

Since a certification has been issued under Contract No. Idm-E933, the subject application falls within the restricted category. We regret to advise you that, under these circumstances, your application for additional work and funds is denied.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

Enclosure

MChing:gla
6-26-58
cc to: Admr.'s Reading File
Operating Committee
THKillsgaard, 5224
Mr. Ching
DMEA Field Team, Region III (2)

8623

OFFICIAL FILE COPY
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RECEIVED MAY 8 1959

224 New Customhouse
Denver 2, Colorado
May 5, 1958

Memorandum

To: J. W. Hasler

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA aid (Uranium) Food Machinery and Chemical Corporation (NE¼ NW¼ and all of east half of section except NW¼ NW¼ and SW¼ SW¼ NW¼, S. 29 T. 13 N., R. 9 W.) Sandoval County, New Mexico

Enclosed is one copy of the subject application which was received from the Applicant May 5, 1958.

Original signed by
E. N. HARSHMAN

E. N. Harshman

EHC:dp

cc: Sec. Op. Comm. (2)
Harshman
Salsbury
Docket
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

DMEA
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IN REPLY REFER TO:

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Memorandum

June 11, 1958

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of Field Examination Report, DMEA 5010 (Uranium), Food Machinery and Chemical Corporation, E½ of Section 29, T. 13 N., R. 9 W., McKinley County, New Mexico.

The field examiners conclude that the probability for making a significant discovery on the applicant's property is sufficiently promising to justify Government participation in exploration costs. They recommend that the applicant's work proposal be approved as modified by them.

The applicant company has completed a successful DMEA contract Idm-E933, DMEA Docket 3989, on the west half of the section and has established the presence of several ore bodies totalling 32,558 tons of uranium ore averaging 0.28 percent U_3O_8. These ore bodies are now being mined. None of the previously drilled holes are located in the area covered by the subject application. Best recommendation for the property appears to be the results obtained by the exploration drilling in the western half of Section 29. The examining team concludes that a reasonable possibility exists of finding similar ore bodies in the eastern half of the section.

I agree with the recommendations of the Field Team for approval of a DMEA contract that would provide for exploration work as outlined in the examining team's report.

W. P. Williams

W. P. Williams

Form MF-103
Revised Oct. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1035.3
Approval expires June 30, 1958

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

Food Machinery and Chemical Corporation
(Westvaco Mineral Products Division)
161 East 42nd Street
New York 17, New York

DMEA
DEPARTMENT OF THE INTERIOR
MAY 5 1958
REGION III
DENVER, COLORADO

APPLICANT NOT TO USE THIS BLOCK

Docket Number	DMEA-5010
Date Received	5-8-58
Government Participation %	
Region	III
Division Code	700

BUSINESS ORGANIZATION (Check one)

- Individual [ ]
- Corporation [x]
- Partnership [ ]
- Other (Specify) [ ]

State in which firm is organized

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
Paul F. Davies	San Jose, Calif.	Chairman of Board
Ernest Hart	San Jose, Calif.	President
Benjamin C. Carter	San Jose, Calif.	Exec. Vice Pres.
J. D. Fennebresque	San Jose, Calif.	Exec. Vice Pres.
James M. Hait	San Jose, Calif.	Exec. Vice Pres.
Carl F. Prutton	New York, N. Y.	Exec. Vice Pres.
Wm. N. Williams	New York, N. Y.	Vice Pres.

Mineral(s) for which you wish to explore

Estimated Cost of Project
$ 39,872.00

LOCATION OF PROPERTY

Name	County	State
NE¼ NW¼ and all of east half of section except W½ NW¼ SE¼ & SW¼ SW¼ NE¼, Sec.29,T.13 N.,R 9 W, N.M.M., McKinley County, New Mexico		

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order-I, Revised, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

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.

MAY 2 - 1958
Dated

W. N. Williams
BY *(Signature)*

Vice-President
Title

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

OFFICIAL FILE COPY
DMEA
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

Date June 10, 1958

DMEA Docket No. 5010
DMEA Contract No.
Commodity Uranium
Name of Applicant Food Machinery & Chemical Corp.
Name of Property E½ of Section 29, T. 13 N., R. 9 W.
Location of Property McKinley County, New Mexico
Estimated cost of proj. $39,568.88

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee
From: James Paone, Bureau of Mines Member
Uranium Commodity Committee
Subject: Report of Field Team Report
(Application, DMEA Form, etc.)

1. Date of application (docket) 5/3/58 2. Date received by DMEA 6/5/58
3. Prior reports on this property known to exist: Yes [ ] No [ ]
4. Prior reports on nearby properties known to exist: Yes [ ] No [ ]
5. Information available on land ownership: Yes [ ] No [ ]
6. Other pertinent factors known to exist: Yes [ ] No [ ]
7. Explain items marked "yes" above.

8. Recommendations special considerations:

a. Loan [ ]
b. Guaranty [ ]
c. Validation of classification [ ]
d. Geology [ ]
e. Proposed exploration plan [ ]
f. Alternate exploration plan [ ]
g. Other
h. [ ]

9. Action taken:

a. Return information from applicant [ ]
b. Refer to Field Team [ ]
c. Defer [ ]
d. Refer back Field Team [x]
e. Reject [ ]
f. Approve [ ]
g. Recommend for Grant [ ]
h. Approval [x]
i. Certify back to

10. Remarks (use back of page if necessary)

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the lands, including existing mine workings. Describe all production facilities.

(b) State your interest, if any, in operations stated in 2*(a)*.

(c) State, as far as you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves on the property giving quantities and grades and sampling methods used, supporting your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you may have, indicating on each whether you require its return to you.

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

(a) Describe fully the proposed exploration project giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and longitudinal and cross sections as necessary. Show the location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *property boundaries* or to the closest identifiable corner.

(b) If an access road to the project must be built, show the location on the property map and state the length, type, and construction methods proposed.

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State your anticipated average daily or monthly rate of progress for each type of work.

5. *Experience:*

State your operating experience and background with relation to your ability to carry out this exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of Costs:*

Furnish detailed estimates of the costs *for each item of the work proposed in 4(a)* under the headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in detail under categories *(b)* through *(g)*.

(a) Independent contracts. State the cost of any proposed independent contract for the performance of all or any part of the work, expressed in units of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. *(Note* – If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available.

(c) Operating materials and supplies. List items of material and supplies with their cost. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of necessary *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant, which will be used on the exploration project.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration project stating specifications and cost including labor, materials and supervision.

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

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)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Revised.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

INT.-DUP. SEC., WASH., D.C. 25960

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado
June 3, 1958

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AIR PARCEL POST

Memorandum

To: Secretary to the Operating Committee

From: Alternate Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 5010 (Uranium) Food Machinery and Chemical Corporation (E½ of Section 29, T. 13 N., R. 9 W.) McKinley County, New Mexico - Joint Report of Examination

Enclosed are the original and two copies of the Joint Report of Examination on the subject property by F. R. Shawe, USGS, and H. F. Robertson, USBM.

The field examiners conclude that the probability for making a significant discovery is sufficiently promising to justify Government participation. They recommend that the Applicant's work proposal be approved as modified by them, in which the Field Team concurs.

Although the examiners recommend only Gamma-ray logging for this project, we believe that they intended to recommend Gamma-ray and resistivity logging; in any event we recommend that both be used on this project.

If you will refer to a letter from Century Geophysical Corporation to Mr. C. O. Mittendorf, dated March 12, 1958, regarding costs of hole probing, you will note that their costs for combined Gamma-ray - resistivity logging in the area of this project (Zone 1, Schedule III attached to the letter) is 7½ cents per foot with one hour of stand by time at no additional cost. We recommend that the cost of 10 cents per foot recommended in the attached report be reduced to 7½ cents per foot as currently charged by Century.

Also enclosed are eight extra copies of Figure 3 for use in the contract.

J. W. Townsend

J. W. Townsend

Reviewed by
DMEA OPERATING COMMITTEE
6-9-58
(date)

ON-SITE EXAM. REPORT

Food Machinery and Chemical Corporation
(Westvaco Mineral Products Division)
161 East 42nd Street
New York 17, New York

Attachment to DMEA Form MF-103

PROPERTY STATUS

The property concerned in this application is described as:

> NE¼ NW¼ and all of east half of section except W½ NW¼ SE¼ and SW¼ SW¼ NE¼, Section 29, Township 13 North, Range 9 West, New Mexico Meridian, McKinley County, New Mexico.

All property is leased from the Santa Fe Pacific Railroad Company (see attached lease agreement). Adjacent lands also leased by Westvaco are Sections 17, 21, and 33, T. 13 N., R. 9 W.

This property is known by no other name than the section number.

ACCESSIBILITY

Section 29 is easily accessible and can be reached by paved highways. From the junction of U. S. Highway 66 and New Mexico State Highway 53, proceed north on N. M. 53 for 11.8 miles. At this point, the southern boundary of Section 29 is marked by the cattleguard across the highway. By continuing another 1.2 miles, the east boundary will be crossed at a point just south of the northeast section corner.

Company offices are maintained on Section 29, T. 13 N., R. 9 W., next to the Faith Mine. The mailing address is -- P. O. Box 327, Grants, New Mexico.

Shipping, supply, living, and other facilities are available in Grants.

GEOLOGY

Topographically, the section is relatively flat and from the northwest quarter, the surface slopes downward gently to the east and to the south. Relief is of minor proportions.

Stratigraphy

The stratigraphy encountered on this section is comprised of only four formations. The Bluff sandstone or blow sand derived therefrom, covers the entire section surface. In descending order, the stratigraphic column is as follows:

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IN REPLY REFER TO:
MINERAL DEPOSITS
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JUN 2 1958
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF THE GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

DMEA
JUN 2 - 1958
REGION III
DENVER, COLORADO

May 29, 1958

Memorandum

To: Alternate Acting Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: J. William Hasler

Subject: Transmittal of a joint engineering and geologic report of examination on DMEA Docket 5010 (Uranium), Food Machinery & Chemical Corporation (East ½ of sec. 29, T. 13 N., R. 9 W.), McKinley County, New Mexico.

Enclosed are 10 copies of a joint geologic and engineering report by F. R. Shawe, U. S. Geological Survey, and H. F. Robertson, U. S. Bureau of Mines on Section 29, T. 13 N., R. 9 W., NMPM, McKinley County, New Mexico and accompanying maps and related material.

The Westvaco Mineral Products Division of Food Machinery and Chemical Corporation applied for Government assistance to explore for uranium on the east half of section 29, T. 13 N., R. 9 W. The application was referred to the field for an examination and appraisal, however, the examination was made while the examining team was in the area on other DMEA business.

Food Machinery and Chemical Corporation has completed a successful DMEA contract (Idm-E 933, DMEA docket 3989), on the west half of the section and established the presence of several ore bodies totalling 32,558 tons of uranium ore averaging 0.287 percent U_3O_8 in the Todilto formation. These ore bodies are now being mined.

The examining team concluded that the chances of finding additional uranium ore bodies similar in size and grade on the east ½ of sec. 29 are good and therefore recommend that the alternate program presented herein be prepared for a DMEA contract.

I concur with the conclusions and recommendations of the examining team. Enclosed are eleven additional copies of figure 3, map of sec. 29, T. 13 N., R. 9 W., NMPM, showing existing drill holes and proposed Stage I drill hole locations, Food Machinery & Chemical Corporation, McKinley County, New Mexico, for the preparation of a contract.

TRANSMITTED
JUN 3 1958

Reviewed by
DMEA OPERATING COMMITTEE
6-9-58
(date)

Bluff -- Upper Jurassic -- A light buff, fine grained, massive sandstone, the Bluff grades upward into the overlying Morrison Shales. Varying from 200 to 230 feet in thickness, the soft friable sandstone outcrops in the northwestern and southeastern quarters of the section.

Summerville -- Upper Jurassic -- An interstratified formation of fine grained buff sandstones and red shales, the Summerville ranges in thickness from 70 to 230 feet and is comformable with the overlying Bluff. Toward the base the sediments become increasingly calcareous and argillaceous. Thin limestone lenses frequently are present in the zone immediately above the underlying Todilto.

Todilto -- Upper Jurassic -- Dark gray and fine grained, the Todilto limestone varies from 20 to 30 feet in thickness. The upper surface is very irregular due to either an ancient erosion surface or a Karst type of dissolution. A textural criteria can be used to differentitate between the upper crinkled limestone and the massive and platy lower limestone.

Entrada -- Upper Jurassic -- Underlying the Todilto limestone are the buff to red Entrada sandstones.

Structure

Regionally, the section is on the northeast flank of the Zuni Uplift and locally, on the southern rim of the Ambrosia Lake Basin. The sediments dip gently to the northeast at an average of 3 to 4° and strike N. 25° W.

Structural contouring and detailed underground mapping show both upper and lower surfaces of the Todilto to be irregular due to small rolls and warps. Deformation is more acute on the upper surface and is enhanced by numerous small faults. Structural trends strike roughly N 10 to 20° W.

The only major known fault is the San Mateo fault which strikes approximately N. 35° E. and possibly extends through the extreme southeast corner of the section.

MINERALOGY

The Todilto is the potential ore-bearing formation with the mineralization usually being localized in the upper half of the limestone. Structural control tends to concentrate the deposition along the flanks and crests of the roll structures.

Previous drilling under another DMEA contract - Docket 3989, Contract Idm-E933 - and additional company drilling delineated two ore bodies plus numerous mineralized areas. However, this drilling tested only 50% of the section, leaving large areas in the east and northeast unexplored.

The Atomic Energy Commission was consulted relative to the appraisal of the property and memoranda of review of James Pacne, U.S.B.M., and W. P. Williams, U.S.G.S., were noted.

Enclosed is the applicant's brochure and other pertinent data.

J. William Hasler

J. William Hasler,
Geologist

JWH/bh
Enclosures

In addition to the mineralization on Section 29, extensive Todilto mineralization has been found on adjoining sections - 30, 31, and 33, T. 13 N., R. 9 W.

At present, one ore body in the center of the section is being mined by a shaft-type operation.

PROPOSED EXPLORATION

Westvaco proposes exploration drilling of the stated land parcels because of the excellent potential for ore discovery. The most favorable indication is the wide spread occurrence of ore and mineralization over the remainder of the section.

The exploration program proposed contains 74 holes with a total footage of 32,000.

Average hole depth would be approximately 432 feet, although depths would range from 240 feet to 640 feet. All holes would penetrate to the top of the Entrada sandstone. Drilling would be non-core and all holes would be electrically and radiometrically logged.

All drill sites are accessible. Work would commence soon after contract approval, and would take an estimated six weeks to complete.

EXPERIENCE

Westvaco is well qualified to conduct a DMEA exploration program for uranium. During the past two years, the company has received and completed three DMEA Uranium Exploration Contracts, one of which was successful in locating a commercial ore deposit. A fourth contract - Docket 4845, Contract Idm-E1167 - is now in progress.

The company personnel who would conduct the program are well experienced in uranium exploration. In addition to two competent geologists, the Grants office is also staffed by a secretary and an assay laboratory technician. Facilities are available for radiometric assaying and analytical work would be performed in the laboratories of the parent corporation -- Food Machinery and Chemical Corporation.

ESTIMATE OF COSTS

Item	Dollars per foot
Contract Drilling (tri-cone rotary)	$ 0.700
Site preparation	0.001
Probing	0.075
Core boxes, sample sacks, etc.	0.005
Salaries	0.226
Living costs	0.064
Labor	0.001
Office Rental	0.005
Car Rental	0.006
Car Repairs	0.003

FOR GOVERNMENT USE ONLY

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UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

TRANSMITTED

JUN 3 1958

DMEA 5010

Food Machinery and Chemical Corporation

Section 29, T. 13 N., R. 9 W.

McKinley County, New Mexico

Uranium

Joint Geologic and Engineering Report

by

F. R. Shawe
U.S. Geological Survey

H. F. Robertson
U.S. Bureau of Mines

May 1958

Reviewed by
DMEA OPERATING COMMITTEE
6-9-58
(date)

ESTIMATE OF COSTS - Continued

Item	Dollars per foot
Gas and Oil	$ 0.009
Office Supplies	0.010
Telephone and Telegraph	0.007
Bookkeeping, clerical, etc.	0.004
Mapping	0.011
Drafting and Printing	0.006
	$ 1.133
Contingency at 10%	.113
	$ 1.246

Estimated cost for 32,000 at $1.246 per foot -- $39,872.00

SPECIAL CONTRACT PROVISIONS

Under the original DMEA exploration loan on Section 29 - Docket 3989, Contract Idm-E933 - the entire section is made liable for DMEA royalty payments. However, as stated above and as shown on the accompanying map, 50% of the section was and is unexplored.

In order that the loan and land covered in this application not be liable for royalties under the first loan, Westvaco must request a special contract provision eliminating any such royalties.

DMEA 5010
FOOD MACHINERY AND CHEMICAL CORPORATION
(WESTVACO MINERAL PRODUCTS DIVISION)
SECTION 29, T. 13 N., R. 9 W.
McKINLEY COUNTY, NEW MEXICO

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W. T. Myers Drilling Co.
P. O. BOX 154
GRANTS, NEW MEXICO

April 26, 1958

Westvaco Mineral Products Co.
Box 24, Star Route
Grants, New Mexico

Dear Sirs:

With pleasure, we submit the following bid on drilling 20,000 feet on your Section 29, T13N, R9W, McKinly County, N. M.

Plug Drilling

0 - 500 feet @ 80¢ per foot

Core Drilling

0 - 500 feet @ $3.75 per foot

Thank you for this opportunity, and we would be pleased to work with you on this job.

Yours very truly,
W. T. Myers Drilling Co.

W. T. Myers

W. T. Myers

DMEA 5010
FOOD MACHINERY AND CHEMICAL CORPORATION
(WESTVACO MINERAL PRODUCTS DIVISION)
SECTION 29, T. 13 N., R. 9 W.
McKINLEY COUNTY, NEW MEXICO

INTRODUCTION

The Westvaco Mineral Products Division of Food Machinery and Chemical Corporation, 161 East 42nd Street, New York 17, New York, requested assistance in an exploration program on section 29, T. 13 N., R. 9 W., McKinley County, New Mexico. The proposed program would explore essentially the eastern half of a section previously subordinated under DMEA Contract Idm-E 933. Certification of discovery or development was issued as a result of the project and the entire section 29, T. 13 N., R. 9 W., NMPM, is subject to the Government's lien until March 21, 1966. As of April 30, 1958, the operator had repaid $1,880.36 to the Government, as royalty on the production from ore bodies discovered in the central part of section 29. Since all holes drilled under Contract Idm-E 933 were located in essentially the western part of the section, the operator now proposes, under DMEA docket no. 5010, to explore the eastern part of the section for additional ore bodies of the type and size discovered by drilling under the previous contract.

The applicant's proposed single-stage exploration program would consist of 74 non-core rotary drill holes totaling 32,000 feet, all located in the area not previously explored. The average hole depth would be 432 feet, ranging from 240 feet to 640 feet. The objective of the project is to discover additional uranium ore bodies in the upper part of the Todilto formation of Upper Jurassic age by utilizing the 74 holes in a staggered 400 x 400-foot grid covering the entire unexplored area.

STEWART BROS. & PARKER DRILLING COMPANY
EXPLORATION DRILLING CONTRACTORS
P. O. BOX 154 PHONE AT7-4416
Grants, New Mexico

April 26, 1958

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DATE ... CODE

Westvaco Mineral Products
Box 24, Star Route
Grants, New Mexico

Gentlemen:

In compliance with your request for bid on Section 29, Township 13 North, Range 9 West, McKinley County, New Mexico, we respectfully submit the following:

NonCore Drilling, 0 - 500'	70¢ per foot
Diamond Core Drilling, 0 - 500'	$3.50 per foot

We understand that the majority of this drilling will be done in the East half of the section.

We appreciate the opportunity of bidding on this work.

Sincerely yours,

H. M. Stewart,
Partner

A field examination was made on May 6, 1958, by a DMEA examining team consisting of H. F. Robertson, Bureau of Mines and F. R. Shawe, Geological Survey, accompanied by W. S. Cavender, the applicant's geologist.

The ore deposits in the Todilto limestone range in size from small tabular masses to large irregularly shaped masses that may average on the order of 100,000 square feet in area. The deposits, however, are commonly elongate and present rather difficult targets for exploratory drilling; they may range from a few feet to a hundred or more feet wide and the length may be many times the width. The deposits are relatively thick, commonly ranging up to 6 or 7 feet, so that considerable tonnages are developed in deposits of small areal extent. The grade of the ore ranges from 0.10 percent to 0.50 percent U_3O_8 and will commonly average above 0.30 percent. Vanadium content of the ore is seldom high enough to be considered in the evaluation of a deposit in the Todilto limestone.

The completed drilling project on section 29, T. 13 N., R. 9 W., under DMEA Contract Idm-E 933, resulted in the discovery of two large ore bodies and several small ones containing a total indicated reserve of 32,558 tons with an average grade of 0.287 percent U_3O_8. This ore is currently being mined through a 2-compartment shaft.

Considering the fact that sizeable ore bodies are known on the explored western part of the section and deposits of similar size and grade could exist in the unexplored eastern part, the examining team recommends approval of further exploration on section 29 even though the entire section was subordinated under a previous DMEA contract. The examining team, however, did not consider the applicant's proposed program adequate to conclusively explore the project area and discussed an alternate program with the company

C. C. SMITH DRILLING CO.

EXPLORATION DRILLING CONTRACTOR

PORTABLE ROTARY AND SPUDDER
DRILLING MACHINES

DIAL 2-3452
P. O. BOX 325

LUBBOCK, TEXAS

April 26,1958

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Drilling Bid To:

Westvaco Minerals Products Co.
Grants, New Mexico.

For drilling to be done on Section 29, 13 N. R. 9 W. McKinley County, New Mexico. Estimated 20,000 ft. plugg drilling.

0 to 500 ft..... @ $ 0.75 per foot.

C.C. Smith Drilling Co.
200 Leach Ave.
Grants, New Mexico.

Signed: C. L. Sutton

C.L. Sutton : Drilling Supt.

geologist. Agreement was reached on a two-stage, non-core drilling program consisting of 99 holes totaling 42,768 feet at an estimated overall cost of $39,568.88. Government participation in the recommended program would be a maximum of $19,784.44.

ACKNOWLEDGMENTS

Food Machinery and Chemical Corporation (Westvaco Mineral Products Division) submitted with the application a brief report with a map showing the proposed exploration, 3 drilling bids from independent contractors, appropriate legal documents, and a cost estimate. Data from a previous project on section 29, T. 13 N., R. 9 W., from Geological Survey and A.E.C. investigations, and from A.E.C. production and reserve records were available to the examining team.

Memoranda of review from James Paone, U.S.B.M., and W. P. Williams, U.S.G.S., were noted.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

In detail, the project area is described as follows: NE$\frac{1}{4}$ NW$\frac{1}{4}$ and all of east half of section except W$\frac{1}{2}$ NW$\frac{1}{4}$ SE$\frac{1}{4}$ and SW$\frac{1}{4}$ SW$\frac{1}{4}$ NE$\frac{1}{4}$, section 29, T. 13 N., R. 9 W., NMPM, McKinley County, New Mexico (figs. 1 & 3). The area is readily accessible from Grants, New Mexico, a rail point, by traveling west about 2 miles on U. S. Highway 66, then turning north onto New Mexico Highway 53 and proceeding 11.8 miles. At this point, the southern boundary of section 29 is marked by a cattleguard across the highway. The paved highway leaves the property at a point just south of the northeast section corner. Company offices are maintained at the Faith mine in the central part of the section.

Lease No. 94[illegible]

SUPPLEMENT to [illegible] Mining Lease [illegible]
[illegible] Jupiter [illegible]
[illegible] between [illegible]
RAILROAD COMPANY [illegible]
[illegible] 1957, [illegible]
office [illegible]
[illegible] 17, [illegible]
WHEREAS [illegible] TION [illegible]
[illegible]

WHEREAS [illegible] actually [illegible]
[illegible] twelve (12) months [illegible]
[illegible] Lease [illegible] twenty (20) years
[illegible] are on [illegible] in only [illegible]
[illegible]

IT IS, THEREFORE, MUTUALLY AGREED that the words "twelve (12) months" appearing on the [illegible] line of Paragraph 1 and in the second line [illegible] Paragraph 2 are changed to read "twenty-four months", and that Paragraph 4, on page 5, shall read as follows:

> 4. In addition to the payments hereinabove mentioned, Lessee shall pay Lessor as rental for the leased premises upon the execution of this lease the sum of One Dollar ($1.00) per term, and commencing March 16, 1957, the sum of One Dollar ($1.00) per acre a year for each year this lease may be in effect, to be paid annually, in advance; provided, however, that beginning with March 16, 1957, and each year thereafter the rental as paid for any one year shall be credited on the royalty due to Lessor for that year."

Except as altered hereby, all of the terms, covenants and agreements of said original lease shall remain in full force and effect.

The surface of the section is flat to gently rolling but with a definite drainage to the southeast and is covered only with native grasses, cacti, and an occasional cedar. Timber for underground operations is usually obtained either in the vicinity of Mt. Taylor or from sawmills in Grants.

Extreme ranges of temperature and precipitation during both winter and summer are experienced in the Grants area, but year-round operations are generally feasible except for periods during and following storms when roads may become impassable. The area is subject to infrequent flash-floods with subsequent road destruction during the summer months.

There are no unusual problems of supply, power, labor, or transportation involved in exploration work on the subject area. Water for mining or exploration is available from the applicant's Faith mine. Domestic water is obtained from nearby wells. Water requirements of the proposed drilling project should, however, be small since dry, non-core methods of drilling will be utilized in the work.

The proposed drilling would be done by independent contractors who maintain equipment and personnel in the Grants area. Supervisory and technical work would be done by personnel presently employed by the applicant.

Uranium ore produced from the section is committed to the Anaconda Copper Company processing plant at Bluewater, New Mexico.

HISTORY, PRODUCTION, AND OWNERSHIP

Uranium minerals were first recognized in the district by a geologic field party from the University of California in the spring of 1949. In 1951 a sheepherder, Paddy Martinez, found a yellow uranium mineral on a Jurassic Todilto limestone outcrop. This discovery led to the development

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DATE	INITIALS

IN WITNESS WHEREOF, this supplemental agreement has been executed in duplicate by the parties thereunto duly authorized this _____ day of January, 1956.

SANTA FE PACIFIC RAILROAD COMPANY

BY _____

VICE-PRESIDENT

LESSOR

ATTEST:

_____

ASST. SECRETARY

FOOD MACHINERY AND CHEMICAL CORPORATION

BY _____

EXECUTIVE VICE PRESIDENT

LESSEE

ATTEST:

_____

ASST. SECRETARY

of the Haystack Butte deposit of the Santa Fe Pacific Railroad Company. Numerous outcrops of various geologic ages have since been prospected with the result that ore bodies have been found in formations ranging in age from Cretaceous to Jurassic.

On March 21, 1956, a contract authorizing an exploration project on the west half of section 29, T. 13 N., R. 9 W. was signed between the Government and the operator. This project resulted in the discovery of two large ore deposits near the center of the section. Total indicated reserves are 32,588 tons averaging 0.287 percent U_3O_8. Westvaco subsequently sunk a shaft to the ore bodies and, as of April 1, 1958, has mined 645 tons of ore averaging 0.294 percent U_3O_8.

The applicant's property rights are vested in a lease, No. 9442, dated March 16, 1955, covering section 29, T. 13 N., R. 9 W., granted by the owner, the Santa Fe Pacific Railroad Company. A supplement to the original Uranium Mining Lease and Agreement was signed by the lessee and lessor on January 9, 1956, extending the period of time during which the lessee may search and explore for uranium-bearing ore on the leased section. The supplemental agreement was in effect until March 16, 1957. From that date on, rental payments of one dollar per acre a year is paid for each year the lease is kept in effect. The rental paid for any one year is credited on the royalty due to the lessor for that year. In effect, the lease is subject to extension at the option of the lessee. The applicant has carried on previous DMEA exploration under the same type of lease.

It is assumed that Performance Bonds in lieu of Consent to Lien and Subordination Agreements will be furnished as in all other DMEA contracts with the applicant.

Lease No. [illegible]

[illegible] MINERAL LEASE AND AGREEMENT

THIS INDENTURE, entered into in duplicate this [illegible] day of March, 1955, by and between SANTA FE PACIFIC RAILROAD COMPANY, a corporation created by Act of Congress approved March 3, 1897, with its principal offices at Albuquerque, New Mexico, first party, hereinafter called the "Lessor," and FOOD MACHINERY AND CHEMICAL CORPORATION ([illegible] CHEMICAL PRODUCTS DIVISION), a Delaware corporation, second party, hereinafter called the "Lessee,"

WITNESSETH, that the parties hereto, for the consideration hereinafter expressed, covenant and agree as follows:

1. Lessor, upon the terms and conditions and subject to the reservations hereinafter set forth, hereby grants to Lessee the exclusive right and privilege for a period of twelve (12) months, beginning with the date hereof, to prospect and explore for potash-bearing ore by methods and procedures in the industry and, thereafter for a period of [illegible] years, to continue mining operations on proved [illegible] ore in accordance with the following described [illegible] in the Territory of Arizona, Southern and Central, State of New Mexico:

NEW MEXICO PRINCIPAL, NEW MEXICO

Township [illegible] South, Range [illegible] East

W½ and SE¼ section 17 and W½ and SE¼ section 21.

Township [illegible] South, Range [illegible] East

Lots 1, 2 and [illegible] 13 sections 1, 2 and [illegible] section 12.

Township [illegible] South, Range [illegible] East

Section 3, all that part section 9 lying north of the [illegible] of the Atchison, Topeka and Santa Fe Railway Company, subject to reservation of the right of way granted December 1, 1910, for highway right of way, and [illegible] section 15.

Township [illegible] South, Range [illegible] East

Sections 17, 21, [illegible]

It should be noted that the entire section 29, T. 13 N., R. 9 W., was subordinated under Contract Idm-E 933. A certification of discovery or development was issued on January 17, 1957 as a result of the exploration work and production from the section is subject to the Government's royalty until March 21, 1966.

PRESENT STATUS

Exploration and Development

The western part of section 29 was thoroughly explored under DMEA Contract Idm-E 933 and subsequent close-spaced drilling by the applicant. None of the previously drilled holes are located in the area concerned by the subject application.

The exploration in the western part of the section resulted in the discovery of ore bodies large enough to be commercially recoverable. To develop the indicated ore bodies, the operator established a 450-foot, 2-compartment shaft near the center of the section. The mine is now completely equipped and in production. The first ore shipment was made on February 14, 1958.

Mining Equipment and Other Facilities

The applicant has no equipment on the eastern part of section 29. The proposed exploration work would be done by independent contractors furnishing their own equipment and personnel. Facilities such as access roads, field offices, and housing for personnel are maintained by Westvaco in conjunction with other company activities in the Grants area.

Township thirteen North, Range nine West

Sections 7, 9, 17, 21, 29 and 33.

Township thirteen North, Range ten West

Sections 1, 3, 5, 7, 9, 11, 13, 15 and 17.

Containing in the aggregate thirteen thousand, nine hundred seventy-one and three hundredths (13,971.03) acres,

including the right to construct and maintain thereon at the sole cost and expense of Lessee all works, buildings, plants, waterways, roads, telegraph or telephone lines or other structures necessary and desirable in the exploration, development or conduct of mining operations upon said lands.

SUBJECT to the rights of grantees, vendees and licensees of the surface of said lands under deeds, contracts of purchase or other agreements heretofore made by Lessor and to the obligations of Lessor under the provisions thereof.

SUBJECT ALSO to all leases or agreements now outstanding for use of said lands, or any portion thereof, for agricultural, horticultural, grazing, mining or other purposes, but Lessor represents that there are no such leases or agreements valid and outstanding made by Lessor for the development and production of uranium-bearing ore and associated minerals, as hereinafter defined.

SUBJECT ALSO to the right of Lessor (which right is hereby expressly reserved) to enter into leases, permits, or other agreements with others covering said lands or any portion thereof for any purpose whatsoever not inconsistent with the rights of Lessee hereunder.

SUBJECT ALSO to all existing easements, servitudes and rights of way for canals, ditches, levees, roads, highways, telegraph, telephone and electric power lines, railroads, pipe lines and any other purposes, to any public roads heretofore laid out or established, and to rights of way for ditches and canals which may be constructed under authority of the United States.

Lessee accepts this lease subject to and agrees to comply with the provisions of that certain Purchase Agreement between Anaconda Copper Mining Company and Santa Fe Pacific Railroad Company, dated July 14, 1952, which gives Anaconda the first right to purchase any limestone gangue, low-vanadium ores produced by Santa Fe.

GEOLOGY

Introduction

Section 29, T. 13 N., R. 9 W., NMPM, is in Mt. Taylor mining district, near the town of Grants, McKinley County, New Mexico.

Marine and non-marine sedimentary rocks ranging in age from Permian to late Cretaceous, and volcanic rocks of late Tertiary age are exposed in the district. On the proposed project area, only the Bluff sandstone and the Summerville formation, both of late Jurassic age, crop out and the Todilto limestone, also of late Jurassic age, underlies the area at depths ranging from about 250 to about 650 feet.

The proposed project area is on the southwest flank of San Juan Basin and the northeast flank of the Zuni uplift; the regional dip is about 5°. In the immediate vicinity of the property, dips are modified by faulting, and, in the Todilto limestone, by small, tight anticlines.

Uranium ore is mined in the Grants area from the Dakota sandstone, the Morrison formation, and the Todilto limestone. The Dakota sandstone and the Morrison formation are not present on the project area and the Todilto limestone is the ore-bearing horizon.

Stratigraphy

Four formations are involved in mining and exploration operations on the subject property; these four formations are, from oldest to youngest, the Entrada sandstone, the Todilto limestone, the Summerville formation, and the Bluff sandstone, all of late Jurassic age. With the exception of the Todilto limestone, these formations consist of interbedded sandstone, shale, conglomerate and siltstone. Table I below is a generalized stratigraphic section of these four formations.

It is understood that the Lessee is hereby granted the right to mine only within the exterior boundaries, extended vertically downward, of the land hereby leased.

2. Lessee agrees on or before the expiration of the first twelve (12) months period above mentioned to surrender to Lessor by an appropriate instrument, in writing, all of the land described above on which uranium ore has not been discovered, retaining only such lands as appear to contain uranium-bearing ore in commercial quantities. Lessee further agrees the retained lands shall be divided into units, to be designated by Lessee, of not to exceed six hundred and forty (640) acres each, conforming as nearly as possible to legal subdivisions, and that all of the terms and covenants of this lease shall separately apply to each such unit as fully as if covered by a separate lease.

3. Lessee agrees to enter into and upon the said premises within sixty (60) days from the date hereof and to work and operate on the leased premises steadily and continuously during the period of this lease in accordance with approved methods so as to discover, mine and remove the greatest amount of uranium-bearing ore possible in a manner proper and necessary to good and economical mining with due regard to the development and preservation of the said premises as mining ground. Lessee further agrees that all work done in and upon said premises and property shall be done in full compliance with the mining laws and regulations of the State, the United States and any other competent public authority.

4. Lessor reserves the right through its agents or representatives to enter from time to time into and upon all parts of said premises and workings thereon for the purpose of inspection, surveys, or taking samples therefrom, and Lessee agrees to render said agents or representatives proper assistance in making said inspection, surveys or examinations. Lessee shall furnish quarterly reports to the Lessor, including maps, showing all exploration data and all of the mining and exploration work done, or in progress, upon the property, together with assays of the ore encountered, during the preceding quarter.

5. On all ores mined or removed from demised premises for the purpose of milling, treatment, stockpiling, sale, or other disposition, Lessee shall pay to the Lessor a percentage royalty of the mined value per dry ton as set forth in the following schedules:

(a) Lessee shall pay Lessor on all underground

Table I.--Generalized stratigraphic section of Late Jurassic rocks, Section 29, T. 13 N., R. 9 W., NMPM, Westvaco Mineral Products Division of Food Machinery and Chemical Corporation, McKinley County, New Mexico.

Age	Formation	Approximate Thickness	Description
	Bluff	230'	Massive light colored cross-bedded sandstone.
	Summerville	230'	Reddish brown, thinly-bedded siltstone.
	Todilto	20' - 40'	Dense, dark gray limestone. Thinly-bedded to massive. Often recrystallized. Ore-bearing.
	Entrada	?	Massive, light reddish brown sandstone.

The Todilto limestone is a gray, fine to coarsely crystaline limestone ranging in thickness from 15 to 40 feet. Three units are present: an upper massive unit, a middle unit of thin, tightly folded beds that have a crinkly appearance, and a lower thin-bedded, silty limestone. These units are locally called the "Massive", "Crinkly", and "Platy" units. All three units are not always present at a specific place, but where two or three of them are present they are always in the same relative stratigraphic position. The thickness of an individual unit may vary considerably over a relatively short distance, one unit may be absent at one place and be over 10 feet thick 100 feet away. Both the "Crinkly" bedding of the middle unit and several narrow, abrupt folds that are not reflected in the underlying and overlying formations are suggestive of penecontemporaneous movement in the limestone.

mined from the demised premises through shaft or tunnel the following royalty schedule:

Percentage Royalty Schedule

Mine Value Per Dry Ton	Royalty Percentage of Mine Value Per Dry Ton
$ 0.01 to $10.01	10%
$10.01 to $20.01	11%
$20.01 to $30.01	12%
$30.01 to $40.01	13%
$40.01 to $50.01	14%
$50.01 or more	15%

(b) Lessee shall pay Lessor on all open pit ore mined by surface mining methods on the following royalty schedule:

Percentage Royalty Schedule

Mine Value Per Dry Ton	Royalty Percentage of Mine Value Per Dry Ton
$ 0.01 to $10.01	10%
$10.01 to $20.01	14%
$20.01 to $30.01	18%
$30.01 to $40.01	22%
$40.01 to $50.01	26%
$50.01 or more	30%

"MINE VALUE PER DRY TON," wherever used herein, is hereby defined as the dollar value per dry ton of crude ores at the mine as determined by the application to the valuable metal content of such ore of the price schedules for such ores established and currently in effect by the Atomic Energy Commission or other government authorized agencies, but excluding any allowance for transportation or development, and all mine production bonuses. However, if the Government at any time hereafter does not establish or have in effect a price schedule for the purchase of such ores on a fixed or scheduled dollar value per dry ton of crude ores at the mine, or said ores contain salable minerals, some, or all, of which are disposed of to a custom treatment plant or smelter for treatment and sale, then mine value per dry ton shall be the gross value per dry ton of said crude ores paid therefor by the Atomic Energy Commission, or other Government authorized agency, or by a mill or other buyer, less any allowances or reimbursements for the following specific items:

(1) Transportation of ores.

Structure

The principal regional structural feature of the area is the northwesterly striking and gently northeasterly dipping northeast limb of the Zuni uplift. Superimposed upon this feature are many long, narrow, and asymmetrical anticlines. These folds may be quite abrupt; folds of an amplitude of 5 to 10 feet and a width of 15 to 25 feet are common. Strike lengths range from about 75 to about 3,000 feet. Three types are present: (1) anticlines folding the Todilto limestone only; (2) anticlines involving the Todilto limestone and a few beds of the overlying and/or underlying formations; and (3) anticlines in individual beds of the limestone with no expression in adjacent limestone beds. Those folds entirely within the Todilto are probably penecontemporaneous with the limestone deposition; origin of the other types is not certain.

Normal faults of minor displacement cut the subject area. The most important of these faults is the southern extension of the San Mateo fault which probably crosses the northwest corner of section 29. None of these faults have been mapped and have only been seen in mine workings.

ORE DEPOSITS

Ore deposits in the Todilto limestone are usually long, narrow, relatively thick, and sinuous, and range from small tabular masses containing a few tons to deposits as much as 200 feet wide and 2,000 feet long. An average size would be about 25 feet wide, 15 feet thick, and 200 feet long. The deposits generally trend from N.E. to N.W., seldom is the trend E.W.

(2) Allowances paid to Lessee by the Atomic Energy Commission or other Government authorized agency for exploration for or development of ores.

Wherever minerals or other products associated with uranium-bearing ore are recovered from the ores which are not included in determining "mine value per dry ton" as heretofore defined, there shall be paid by Lessee to the Lessor for such minerals or other products, a royalty of ten per cent (10%) of the gross value of such products, less milling cost charged to Lessee therein.

All royalty payments to be made by Lessee to Lessor shall be made on or before the twentieth day of the month next following receipt by Lessee of payments for the products sold or disposed of.

Lessee shall keep accurate account of all mining operations, showing the sales, prices, dates, purchasers, and the whole amount of minerals mined, the amount removed and the gross receipts derived therefrom, together with any bonus or other payments, and furnish to Lessor sworn monthly reports thereon not later than the twentieth day of the succeeding month.

6. In addition to the payments hereinabove mentioned, Lessee shall pay Lessor as rental for the leased premises upon the execution of this lease the sum of One Dollar ($1.00) per acre and thereafter One Dollar ($1.00) per acre a year for each year this lease may be in effect, to be paid annually in advance; provided, however, that beginning with the second year and each year thereafter the rental so paid for any one year shall be credited on the royalty due to Lessor for that year.

7. Lessee shall not subject Lessor or the leased premises to any liability or lien for or on account of any work done or improvements made or materials placed on or used upon said premises, and if by reason of the failure of Lessee to pay bills or expenses incurred by Lessee any lien or liens shall be filed against the leased premises, Lessor may forthwith pay and discharge the same and hold Lessee bound to repay to Lessor all sums so advanced or paid to clear said premises from liens which may be filed as foresaid, and Lessor may also at its election declare a forfeiture of this lease. Lessee agrees to post forthwith and keep posted on said property in all places required by law, a notice of nonliability of the Lessor for labor or materials furnished the Lessee, and the Lessor agrees to furnish such notices.

The ore is localized along faults or, more commonly, along the small, tight folds in the limestone. In a few places ore is concentrated at or very near the intersection of a fault and a fold.

Carnotite is the chief ore mineral at shallow depths and uraninite is the chief ore mineral below the zone of oxidation. The grade of Todilto deposits is relatively high for uranium ore, and may have an average grade of 0.35 percent to 0.40 percent U_3O_8. However, production from sections 29 and 30, T. 13 N., R. 9 W. averages only 0.25 percent U_3O_8. Vanadium content of these ores is low, seldom being high enough to be considered in the evaluation of an ore deposit.

Production and Reserves

Section 29 and the adjoining section 30 have produced and have considerable reserves of Todilto ore. Figure 2 gives the location of the known ore deposits and Table II below shows the production and reserves of these deposits.

Table II.--Ore production and reserves 1/ from sections 29 and 30, Westvaco Mineral Products Division of Food Machinery, McKinley County, New Mexico.

Section	Mine	Production		Reserves			
				Indicated		Inferred	
		Tons	% U_3O_8	Tons	%U_3O_8	Tons	%U_3O_8
29	Westvaco	645	0.29	50,000	0.23	43,000	0.21
30	2/	24,200	0.24				
	D-2	1,470	0.26	8,930	0.34	2,000	0.34
	2/	31,941	0.30				
	Flat Top	29,443	0.22				
	Barbara J	8,691	0.29				

1/ From the production and reserve section of the A.E.C., Grand Junction, Colorado.

2/ No mine name listed.

8. Lessee shall file returns with the proper taxing authorities covering the mineral estate hereby leased, the uranium-bearing ore or other minerals produced from the leased premises, and all personal property which may be placed upon said premises by Lessee; and shall pay, before the same shall become delinquent, all taxes, charges, rates and assessments which may, during the term of this lease, be levied upon or assessed in any respect upon or against said mineral estate, ore, mineral products or personal property, together with all increases in such charges, rates or assessments upon the land, by reason of the discovery or production of such minerals or on account of improvements erected upon said land, including buildings, machinery and other fixtures placed thereon by Lessee. Where any such taxes, charges, rates or assessments may be embraced in the general amount of taxes charged upon the leased premises, separately or in conjunction with other property of the Lessor or of the surface owner, and the Lessor shall pay such taxes or refund the same to the surface owner, then Lessee shall promptly repay or refund to Lessor the amount or part of the tax, charge, rate or assessment attributable under this lease to Lessee. All such payments by Lessor on account of Lessee shall bear interest at the rate of eight per cent (8%) per annum until paid.

9. Lessee shall save harmless and indemnify Lessor against all claims, demands, suits, judgments, expenses and costs of any kind or nature on account of the injury to or death of persons or loss of or damage to property arising in any manner out of or in connection with the operations of Lessee hereunder and Lessee shall at Lessee's sole cost and expense defend all such claims, demands or suits; and if at any time Lessee employs any persons to work upon the leased premises, Lessee shall comply with the provisions of the Workmen's Compensation Act of New Mexico and all regulations and requirements of competent public authority.

10. At the expiration of this lease, or upon its earlier termination as herein provided, Lessee shall surrender the leased premises in good order and condition and remove therefrom all machinery, tools, and improvements, except such as may become the property of the Lessor under this lease by purchase or otherwise; provided, however, that no such tools, machinery, or improvements shall be removed while Lessee may be in any manner indebted to Lessor under any obligation incurred under this lease. Lessee shall not, however, remove any timbers or improvements which may be necessary or desirable to leave in the workings to protect same from subsidence or as a mining property unless requested by Lessor to do so.

Mining operations on section 29 to date have shown the original reserve figures are too high, but as yet no recalculation of ore reserves has been made. Work concluded recently under DMEA 4665, Contract Idm-E 1127, has disclosed the presence of at least 2 more ore deposits in section 30. No reserve calculations have been made on this ore and it is not included in Table II.

PROPOSED EXPLORATION

Applicant's Proposal

The applicant submitted a proposed exploration program as a single stage, consisting of drilling 74 holes totaling 32,000 feet at a cost of $39,872.00. Drill holes would range from 240 to 640 feet deep and would average 432 feet deep. They were to have been drilled on a staggered 400 x 400 foot grid covering the entire unexplored area.

The applicant's cost estimate for the program, consisting of 74 holes totaling 32,000 feet of non-core drilling, to be completed in an estimated six weeks is rather excessive for most items. A summary of the estimate is as follows:

Item	Unit Cost/ft.	Amount
Contract drilling	$0.700	$22,400.00
Site preparation	0.001	32.00
Probing	0.075	2,400.00
Core boxes, sample sacks, etc.	0.005	160.00
Salaries	0.226	7,232.00
Living costs	0.064	2,048.00
Labor	0.001	32.00
Office rental	0.005	160.00
Car rental	0.006	192.00
Car repairs	0.003	96.00
Gas and oil	0.009	288.00
Office supplies	0.010	320.00

11. Any notice to be given by Lessor to Lessee hereunder shall be deemed to be properly served if the same be deposited in a United States post office, registered mail postpaid, return receipt requested, addressed to Westvaco Mineral Products Division, Food Machinery and Chemical Corporation, 161 East 42nd Street, New York 17, New York, and any notice to be given by Lessee to Lessor hereunder shall be deemed to be properly served if the same be deposited in a United States post office, registered mail postpaid, return receipt requested, addressed to Lessor at 314 First Street SW, Albuquerque, New Mexico, or at such other address as Lessor may request.

12. Lessor does not warrant the quiet possession of said lands by the Lessee and Lessor shall in no event become liable for damage arising from any lack or failure of title in the Lessor to said lands or eviction of the Lessee therefrom by title paramount to the title of the Lessor. The Lessor covenants, however, and warrants that it has made no agreement on its part in reference to said lands, or any conveyance thereof which will give to third parties right to interfere in any way with the operations of the Lessee under this lease.

Lessor has, however, sold and conveyed all of said lands by deed, in which it has expressly reserved and excepted all oil, gas, coal and minerals whatsoever, already found or which may be found upon or under said lands, with the right to prospect for, mine and remove the same, and to use so much of the surface of said lands as shall be necessary and convenient for shafts, wells, tanks, pipe lines, rights of way, railroad tracks, storage purposes and other and different structures and purposes necessary and convenient for the digging, drilling, and working of any mines or wells which may be operated on said lands. Lessee accepts this lease and agreement subject to the terms and provisions of said deed reservation.

Lessee agrees (a) to pay all damages to the surface owner's buildings and growing crops caused by the erection or construction of facilities to be used in connection with mining operations; (b) that all pipe lines shall be buried below plow depth where such lines cross cultivated lands; and (c) that where there are fences, to construct gates or cattle guards therein where necessary for Lessee to cross the same, and to keep such gates and cattle guards in repair and the gates closed.

Lessee will also indemnify and save Lessor harmless from any and all claims of or liability to the owner or owners of the surface of the land leased by reason of the

Item	Unit Cost/ft.	Amount
Telephone and telegraph	$0.007	$ 224.00
Bookkeeping, clerical, etc.	0.004	128.00
Mapping	0.011	352.00
Drafting and printing	0.006	192.00
Contingencies	0.113	3,616.00
Totals	$1.246	$39,872.00

[illegible] Lessee to perform the requirements [illegible] conditions of [illegible] and (7) hereof.

[illegible]

[illegible] Lessee may at any time surrender any unit [illegible] leased premises [illegible] by an appropriate instrument in writing, duly executed and acknowledged so as to [illegible] the same to be released, and thereupon all rights [illegible]

EXAMINING TEAM'S ALTERNATE PROGRAM

The DMEA examining team did not consider that the applicant's program was adequate to explore the project area. The company's representative concurred with an alternate proposal as follows: Stage I would be identical to the original proposal. Seventy-four holes would be drilled in a staggered 400 by 400 foot grid as shown on figure 3. Stage II will consist of 25 holes drilled to offset, on 100-foot centers, any previously drilled hole that penetrated ore or significantly mineralized rock in the Todilto limestone.

All holes will be drilled non-core to not more than 5 feet below the base of the Todilto limestone. Holes will range in depth from 240 to 640 feet and will average about 432 feet deep. Throughout the Todilto limestone interval, the cuttings will be collected over 2-foot intervals, the samples marked and saved for Government use. Any sample showing significant radioactivity will be split; one-half will be chemically assayed for U_3O_8 and one-half saved for Government disposition.

The use of a logging service to supply strip logs of gamma-ray readings on all holes as proposed by the applicant is recommended as the information obtained is considered to be essential in identifying formations penetrated and determining formational contacts. This type of log has been found to be reliable and easily interpreted.

Estimated Cost of Recommended Project

The applicant's brochure included three independent contractor's bids on the proposed drilling. The bids are summarized below.

[redacted]

[redacted]

Stewart Bros. & Parker Drilling Company

Non-core drilling, 0-500 feet	$0.70 per foot
Core drilling, 0-500 feet	3.50 per foot

C. C. Smith Drilling Company

Non-core drilling, 0-500 feet	$0.75 per foot
Core drilling	no bid

W. T. Meyers Drilling Company

Non-core drilling, 0-500 feet	$0.80 per foot
Core drilling, 0-500 feet	3.75 per foot

The unit prices of Stewart Bros. & Parker Drilling Company are the lowest and are used as the basis for computation of the estimated cost of the proposed project. Two of the rotary type drill rigs should be used, each rig capable of completing an average of 300 feet of hole per day. Assuming that the drills will operate 25 days per month, the drilling should progress at a rate of about 15,000 feet per month. An estimated 3 months, including preliminary work and evaluation between stages, should be sufficient to complete the project.

The estimated cost of the recommended project is shown below. Some revisions have been made in unit costs where the applicant's estimate was excessive.

(1) Independent Contracts:

Drilling, non-core 42,768 feet at $0.70/ft.	$29,937.60	
Bulldozing, Caterpillar D-6 or equiv. 25 hours at $12.00/hr.	300.00	
Logging, gamma-ray 42,768 feet at $0.10/ft.	4,276.80	
Total independent contracts		$34,514.40

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DMEA
RECEIVED MAY 8 1958

DATE	INITIALS	CODE

PARTIAL QUITCLAIM OF URANIUM MINING LEASE AND AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, Uranium Mining Lease and Agreement No. 9442, dated March 16, 1955, entered into by and between SANTA FE PACIFIC RAILROAD COMPANY, a corporation created by Act of Congress approved March 3, 1897, as Lessor, and FOOD MACHINERY AND CHEMICAL CORPORATION (WESTVACO MINERAL PRODUCTS DIVISION), a Delaware corporation, as Lessee, covered certain lands situate in the Counties of McKinley, Sandoval and Valencia, State of New Mexico, more particularly described as follows, to wit:

NEW MEXICO MERIDIAN, NEW MEXICO

Township twelve North, Range three West

NW/4 and SE/4 of Section 19, and NW/4 and SE/4 of Section 31;

Township twelve North, Range four West

Lots 1, 2 and NE/4 of Section 13, and Lots 1, 2 and E/2 NW/4 of Section 25;

Township ten North, Range nine West

Section 5, all that part of Section 9 lying north and east of the right of way of The Atchison, Topeka and Santa Fe Railway Company, subject to easement to the State of New Mexico dated December 1, 1933, for highway right of way, and NE/4 NE/4 of Section 15;

Township eleven North, Range nine West

Sections 17, 21, 29 and 33;

Township thirteen North, Range nine West

Sections 7, 9, 17, 21, 29 and 33;

Township thirteen North, Range ten West

Sections 1, 3, 5, 7, 9, 11, 13, 15 and 17;

Containing in the aggregate thirteen thousand, nine hundred seventy-one and three hundredths (13,971.03) acres;

and

WHEREAS, by Supplement to Uranium Mining Lease and Agreement No. 9442, dated January 9, 1956, Santa Fe Pacific Railroad Company granted to Food Machinery and Chemical Corporation (Westvaco Mineral Products Division) a twelve (12) months' extended exploratory period of said lease to March 15, 1957; and

WHEREAS, Food Machinery and Chemical Corporation (Westvaco Mineral

(2) Supervision and Technical Services:

1 supervising engineer-geologist 3 months at $600.00/mo.	$ 1,800.00	
1 assistant 3 months at $400.00/mo.	1,200.00	
Total supervision and technical services		$ 3,000.00

(3) Operating Materials and Supplies:

Office and field supplies (including fuel and repairs on vehicles) 3 months at $75.00/mo.	$ 225.00	
Sample sacks (paper) 3,000 at $11.20/thousand	33.60	
Total operating materials and supplies		$ 258.60

(4) Operating Equipment:

Depreciation - 2 vehicles valued at $1,800 each, depreciated on 60 month basis, 3 mos. at $30.00/mo./vehicle	$ 180.00	
Total operating equipment		$ 180.00

(5) and (6) Rehabilitation, Repairs, New Buildings, etc.

None

(7) Miscellaneous:

Direct accounting costs 3 months at $50.00/mo.	$ 150.00	
Payroll taxes and insurance at 7 percent of $3,000	210.00	
New Mexico school tax at 2 percent of $34,964.40	699.29	
Chemical assays, 100 samples analyzed for U_3O_8 at $3.50 each	350.00	
Total miscellaneous		$ 1,409.29
Total estimated cost of Project		$39,362.29
Overall cost per foot of drilling $\frac{\$39,362.29}{42,768 \text{ ft.}}$ =		$ 0.92
Incidental allowance (all costs less independent contracts and chemical assays) per foot $\frac{\$4,497.89}{42,768 \text{ ft.}}$ =		$ 0.11

Products Division), desires to surrender said Lease No. 9442 except as to certain lands hereinafter described.

NOW, THEREFORE, for and in consideration of the premises, Food Machinery and Chemical Corporation (Westvaco Mineral Products Division), effective March 15, 1957, does hereby remise, release and forever quitclaim to Santa Fe Pacific Railroad Company, its successors and assigns, all of the right, title and interest acquired and held by Food Machinery and Chemical Corporation (Westvaco Mineral Products Division), under and pursuant to said Uranium Mining Lease and Agreement No. 9442, except as to the following described lands situated in McKinley County, State of New Mexico:

NEW MEXICO MERIDIAN, NEW MEXICO

Township thirteen North, Range nine West

Section 29;

Township thirteen North, Range ten West

Section 5;

containing in the aggregate one thousand, two hundred seventy-nine and thirty-six hundredths (1,279.36) acres;

and said Uranium Mining Lease and Agreement No. 9442 shall continue in full force and effect with respect to said described lands.

Food Machinery and Chemical Corporation (Westvaco Mineral Products Division), does hereby warrant that no contractual rights exist in favor of any persons claiming under said Uranium Mining Lease and Agreement No. 9442 by, through, or under Food Machinery and Chemical Corporation (Westvaco Mineral Products Division), as to any of the property hereby surrendered, except such contractual rights as may exist in favor of the U. S. Government with respect to Sections 7 and 9 of Township Thirteen North, Range Nine West under Contracts Nos. Ilm-8 952 and 953 dated March 21, 1956. Food Machinery and Chemical Corporation hereby agrees to indemnify and hold harmless Santa Fe Pacific Railroad Company from and against all loss, cost, damage and expense arising in any way in connection with said contractual rights.

IN WITNESS WHEREOF, Food Machinery and Chemical Corporation (Westvaco Mineral Products Division), by its duly authorized officers, has caused this

Summary of Costs Suggested for Contract Use

Stage I - 74 holes - Estimated time for completion - 2 months

Actual Cost Items:

Drilling, non-core 32,000 feet at $0.70/ft.	$22,400.00	
Logging (gamma-ray) 32,000 feet at $0.10/ft.	3,200.00	
Bulldozing, Caterpillar D-6 or equiv. 19 hours at $12.00/hr.	228.00	
Total actual cost items, Stage I		$25,828.00

Fixed Unit Cost Items:

Chemical assays for U_3O_8 75 samples at $3.50 each	$ 262.50	
Incidental allowance 32,000 feet at $0.11/ft.	3,520.00	
Total fixed unit cost items, Stage I		$ 3,782.50
Total Stage I		$29,610.50

Stage II - 25 holes - Estimated time for completion - 1 month

Actual Cost Items:

Drilling, non-core 10,768 feet at $0.70/ft.	$ 7,537.60	
Logging (gamma-ray) 10,768 feet at $0.10/ft.	1,076.80	
Bulldozing, Caterpillar D-6 or equiv. 6 hours at $12.00/hr.	72.00	
Total actual cost items, Stage II		$ 8,686.40

Fixed Unit Cost Items:

Chemical assays for U_3O_8 25 samples at $3.50 each	$ 87.50	
Incidental allowance 10,768 feet at $0.11/ft.	1,184.48	
Total fixed unit cost items, Stage II		$ 1,271.98
Total Stage II		$ 9,958.38
Total for Project		$39,568.88
Government participation at 50 percent		$19,784.44

Instrument to be executed and its corporate seal to be affixed this _____ day of _____, 1957.

FOOD MACHINERY AND CHEMICAL CORPORATION
(WESTVACO MINERAL PRODUCTS DIVISION)

By _____
President

ATTEST:

_____
Secretary

STATE OF _____)
:ss
COUNTY OF _____)

THE FOREGOING INSTRUMENT was acknowledged before me this _____ day of _____, 1957, by _____, _____ of FOOD MACHINERY AND CHEMICAL CORPORATION (WESTVACO MINERAL PRODUCTS DIVISION), a Delaware corporation, on behalf of said corporation.

_____
Notary Public
My Commission Expires:

_____

CONCLUSIONS AND RECOMMENDATIONS

On consideration of the results obtained by the exploration drilling in the western half of section 29, the examining team concludes that a reasonable possibility exists of finding similar ore bodies in the eastern half of the section. A two-stage drilling program as outlined in this report is recommended for approval at an estimated maximum cost of $39,568.88. Government participation at 50 percent would be $19,784.44.

The usual provisions governing exploration procedures should be incorporated. Inasmuch as no drill core is to be obtained, graphically-recorded probing logs should be required, and samples of cuttings representing not more than 5-foot sections should be taken for radiometric and visual examination. Portions of cutting samples which show significant radioactivity should be preserved and assayed for comparison with probing results. Chief reliance for evaluation of holes is placed, however, on probing results.

Stage II drilling should require prior written Government authorization.

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
MAY 1958
DOCKET 5010

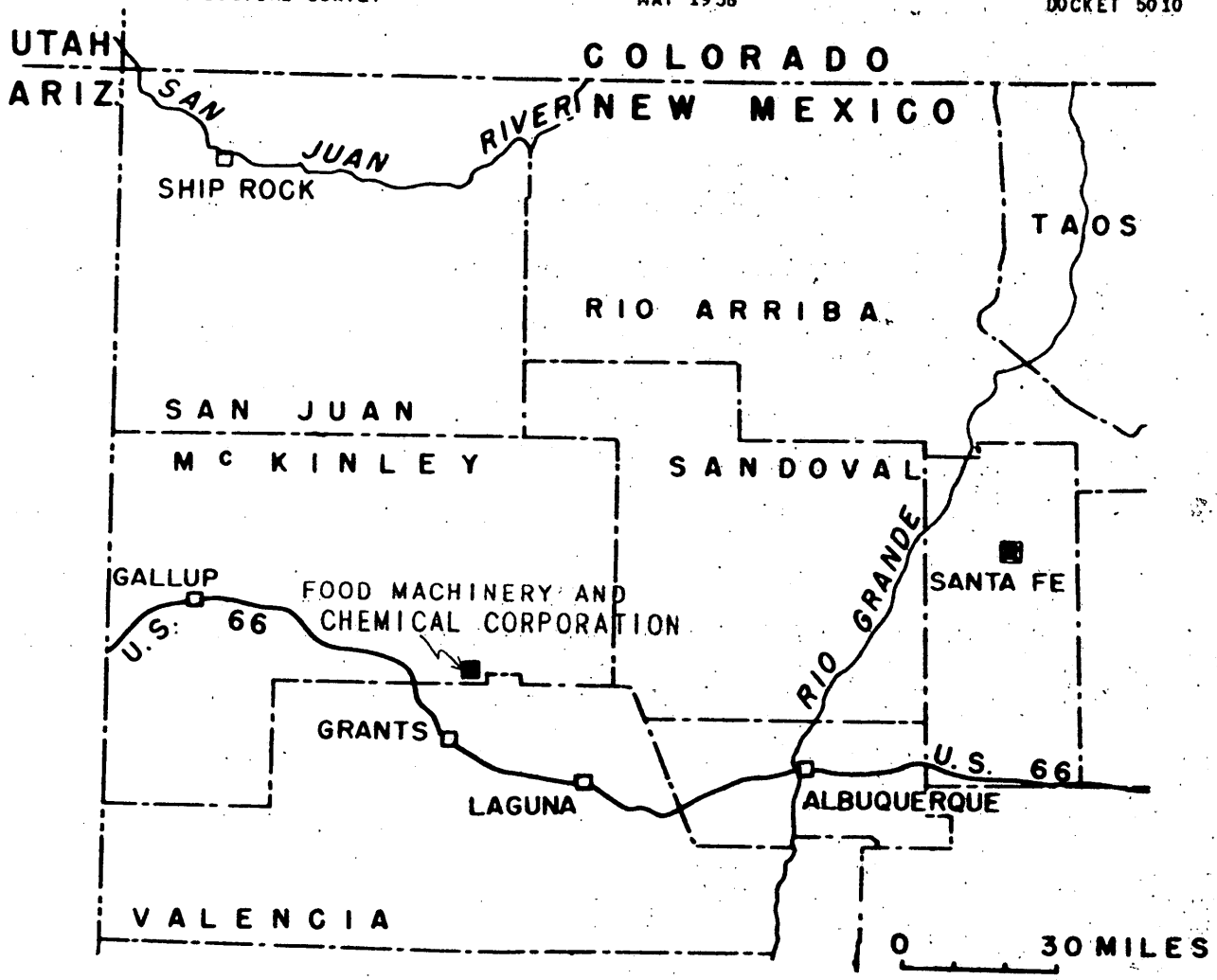

FIGURE 1.--INDEX MAP SHOWING THE LOCATION OF SECTION 29, T.13 N., R.9 W., N.M.P.M., WESTVACO MINERAL PRODUCTS DIVISION, FOOD MACHINERY AND CHEMICAL CORPORATION, McKINLEY COUNTY, NEW MEXICO.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
MAY 1958
DOCKET 5010

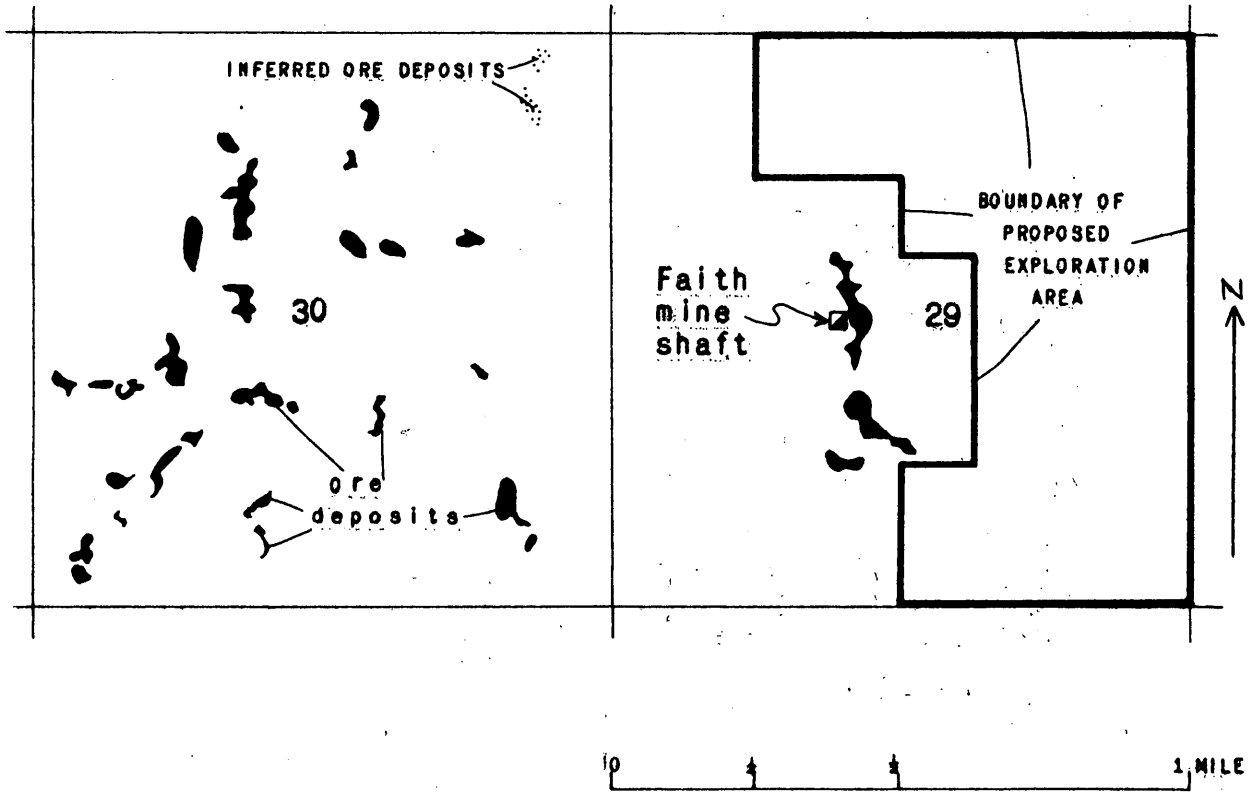

FIGURE 2.—MAP OF SECTIONS 29 AND 30, T.13 N., R.9 W., N.M.P.M. SHOWING THE LOCATIONS OF TODILTO ORE DEPOSITS, WESTVACO MINERAL PRODUCTS DIVISION, FOOD MACHINERY AND CHEMICAL CORPORATION, McKINLEY COUNTY, NEW MEXICO.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 22 1958

DATE	INITIALS	CODE
5/22	C	220
"	MC	700

20th Rev Customhouse
Denver 2, Colorado
May 20, 1958

Memorandum

To: J. W. Hasler w/enclosures 1-4
M. H. Salsbury w/enclosures 1-7

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 5040 (Uranium) Food Machinery and Chemical Corporation, Westvaco Mineral Products Division (S. 29, T. 13 N., R. 9 W.) McKinley County, New Mexico

For your information, enclosed are the following:

1. Memorandum of Review of the application by James Paone, USGS.

2. Memorandum of Review of the application by W. P. Williams, USGS.

3. Letter of transmittal of the foregoing from the Chairman, Operating Committee dated May 16, 1958.

4. Routing control sheet.

5. Copy of the application.

Original signed by
E. N. HARSHMAN

E. N. Harshman

ENH:dp

cc: Sub. Op. Comm. 2
Harshman
DMEA/DFC
Boehm
Crown.

FOOD MACHINERY AND CHEMICAL CORPORATION

WESTVACO MINERAL PRODUCTS DIVISION

[illegible] BUILDING [illegible]
[illegible] EAST [illegible] STREET
NEW YORK [illegible] N. Y.

May 20, 1958

CABLE "CAUSTIC" NEW YORK
TELEPHONE MURRAY HILL 7-7600

Mr. E.E. Harshman,
Acting Executive Officer,
DMEA Field Team, Region III,
204 New Customhouse Building,
Denver 2, Colorado.

Re: Docket No. DMEA 5000
Docket No. DMEA 5010

Dear Mr. Harshman:

Replying to your inquiry of May 16th, we plan to furnish Performance Bonds in lieu of owner's Consent to Lien and Subordination Agreements, in event the Government contracts with us to participate in the exploration described by subject dockets.

No doubt we should have included statements along this line with our applications, and we appreciate your having written us about them.

Very truly yours,

R.C. Moeman

RCMcal

cc: Defense Minerals Exploration Administration,
U.S. Department of the Interior,
Washington 25, D.C.
Attention: Mr. C.S. Mittendorf, Administrator

[illegible] New Customhouse
Denver 2, Colorado
May 16, 1958

Mr. H. C. Meesman
Food Machinery and Chemical Corporation
(Westvaco Mineral Products Division)
161 East 42nd Street
New York 17, New York

Re: Docket No. DMRA 5009
Docket No. DMRA 5010

Dear Mr. Meesman:

Your company has had several DMRA contracts to date and in all cases Performance Bonds were submitted in lieu of owner's Consent to Lien and Subordination Agreements. Should the Government agree to participate with you in the captioned dockets, we assume you will furnish Performance Bonds in lieu of Consent to Lien and Subordination Agreements. Will you please advise.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMRA Field Team, Region XII

EEH:dp

cc: Chron. Op. Comm. 2
Harshman
Kesler
Salisbury
Docket 5009
Docket 5010
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
5/15	Ching	700
5/15	Ellis	700
5/16	[illegible]	1340
"	Johnson	110
"	Chatterton	100
		~~340~~
		220
		700

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

MAY 16 1958

Re: Docket No. DMEA-5010 (Uranium)
Food Machinery and Chemical Corporation
Westvaco Mineral Products Division
Sec. 29, T. 13 N., R. 9 W.
McKinley County, New Mexico

Dear Mr. Harshman:

The subject application is being referred to you for investigation, a field examination if warranted, and recommendations.

Enclosed for your information are memoranda, dated May 13, 1958, by James Paone, USGS, and W. P. Williams, USGS, relating to the application. Also enclosed is a copy of the application for the use of the Field Team.

As in former applications, we can expect the Applicant to furnish, when required, an extension to the exploration period of the Mining Lease and a Performance Bond in lieu of a Consent to Lien.

You will note that this application covers a part of the land already subordinated under Docket 3989, Contract No. Idm-2933. If a project is recommended, we will probably incorporate it with the old contract.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures
APPROVED:

Frank D. Lamb (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

MChing/izm 5-15-58
cc: Mr. Ching
Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
5/15	Ching	700
5/15	Ellis	710
5/16	Selfridge	030
5/16	Jordan	110
5/16	Mittendorf	100
5/16	Lambert	130
5/16	Logan	230
5/19	C.	220
		700

MAY 16 1958

Mr. William N. Williams, Vice President
Food Machinery and Chemical Corporation
(Westvaco Mineral Products Division)
161 East 42nd Street
New York 17, New York

Re: Docket No. DMEA-5010 (Uranium)
Sec. 29, T. 13 N., R. 9 W.
McKinley County, New Mexico

Dear Mr. Williams:

The application for assistance in exploring your property, under the captioned docket number, has been reviewed by the Division of Rare and Miscellaneous Metals of the Defense Minerals Exploration Administration. It has been referred to:

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

MChing/izm
cc: Mr. Ching
Admr.'s Reading File
DMEA FT Reg. 3 (2)

8623

MAY 15 1958

Food Machinery and Chemical Corporation
Chrysler Building East
161 East 42nd Street
New York 17, New York

Attention: Mr. E. C. Hessman

Dear Sir:

Thank you for calling our attention to the ambiguity in our acknowledgment letter of May 12th.

Docket No. 5009 is assigned to the application covering exploration on parts of Section 21 and Docket No. 5010 applies to the application for work in Section 29.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

ASDakan:kb - May 14, 1958

Copy to Admin. Reading File

Chron.

Docket No. 5010

FOOD MACHINERY AND CHEMICAL CORPORATION

WESTVACO MINERAL PRODUCTS DIVISION

CHRYSLER BUILDING EAST
161 EAST 42ND STREET
NEW YORK 17, N. Y.

CABLE "CAUSTIC" NEW YORK
TELEPHONE MURRAY HILL 7-7400

RECEIVED MAY 14 1958
DATE | INITIAL | CODE

May 13, 1958

Defense Minerals Exploration Administration,
U.S. Department of the Interior,
Washington, 25, D.C.

Attention: Operations, Control and Statistics Division

Gentlemen:

Ref: DMEA 5009 and 5010 Parts of sec 29 T13 N R 9 W.

Many thanks for your letters dated May 12th, reporting assignment of subject docket numbers. We are unable to determine which of these numbers applies to our application covering a portion of section 21 and which to the application on part of section 29 (both in Twp. 13N., R. 9W, NMM, McKinley County, New Mexico).

It will be very much appreciated if you can clarify these designations for us.

Very truly yours,

H.C. Mossman

HCM:al

cc: Executive Officer, Region III
Defense Minerals Exploration Administration,
224 New Customhouse,
Denver, 2, Colo.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

IN REPLY REFER TO:

CENTRAL FILE COPY
DMEA
RECEIVED MAY 14 1958

DATE	INITIALS	CODE
5/14	C	220
"	EWE	700
	MC	

May 13, 1958

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 5010 (Uranium) Food Machinery and Chemical Corporation, Parts of Sec. 29 T.13 N.R. 9 W., McKinley County, New Mexico

The applicant proposes to explore for uranium ore deposits on essentially a half section of land that lies adjacent to the tract covered under Docket DMEA 3989, Contract Idm-E933. The proposed project would consist of a total of 74 drill holes, a total of 32,000 feet of drilling, at a total estimated cost of $39,879.00.

The applicant's property is located on the northeast flank of the Zuni Uplift and on the southern rim of the Ambrosia Lake Basin. The objective of the proposed drilling project is to seek for ore deposits in the Todilto limestone of Upper Jurassic Age. The Todilto limestone ore deposits are known to have a long, tenuous shape. The applicant proposes to arrange his drill holes on a staggered grid pattern, where the holes average 450 feet apart. It seems possible that such a pattern could miss the elongated ore bodies in the Todilto formation.

I recommend that the application be referred to the Field Team for further analysis and report.

W. P. Williams

W. P. Williams

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DMEA
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

Date May 13, 1958

DMEA Docket No. 5010
DMEA Contract No.
Commodity Uranium
Name of Applicant Food Machinery & Chemical Corp.
Name of property
Location of property McKinley County, N. Mex.
Estimated cost of project $39,872.00

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Member JP
Uranium Commodity Committee

Subject: Review of Application
(Application, Field Team Report, etc.)

1. Date of subject document: 5/2/58. 2. Date received by reviewer: 5/12/58

3. Prior reports on this property known to reviewer: Yes [x] No [ ]

4. Prior reports on nearby properties known to reviewer: Yes [x] No [ ]

5. Information available on past production: Yes [ ] No [x]

6. Other pertinent factors known to reviewer: Yes [x] No [ ]

7. Explain items marked 'yes' above:

DMEA Docket 39~~28~~ 89 Contract Idm-E93~~3~~

8. Factors meeting special consideration:
   a. Location [ ]
   b. Ownership [ ]
   c. Evidence of mineralization [ ]
   d. Geology [ ]
   e. Proposed exploration method [ ]
   f. Alternate exploration method [ ]
   g. Costs [ ]
   h. [ ]

9. Action advised:
   a. Obtain information from applicant [ ]
   b. Refer to Field Team [x]
   c. Denial [ ]
   d. Agree with Field Team [ ]
   e. Disagree with Field Team [ ]
   f. Suggest alternate plan [ ]
   g. Request another examination [ ]
   h. Approval [ ]
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)

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

May 8, 1958

Food Machinery & Chemical Corporation
(Westvaco Mineral Products Division)
161 East 42nd Street
New York 17, New York

Subject: DMEA-5010

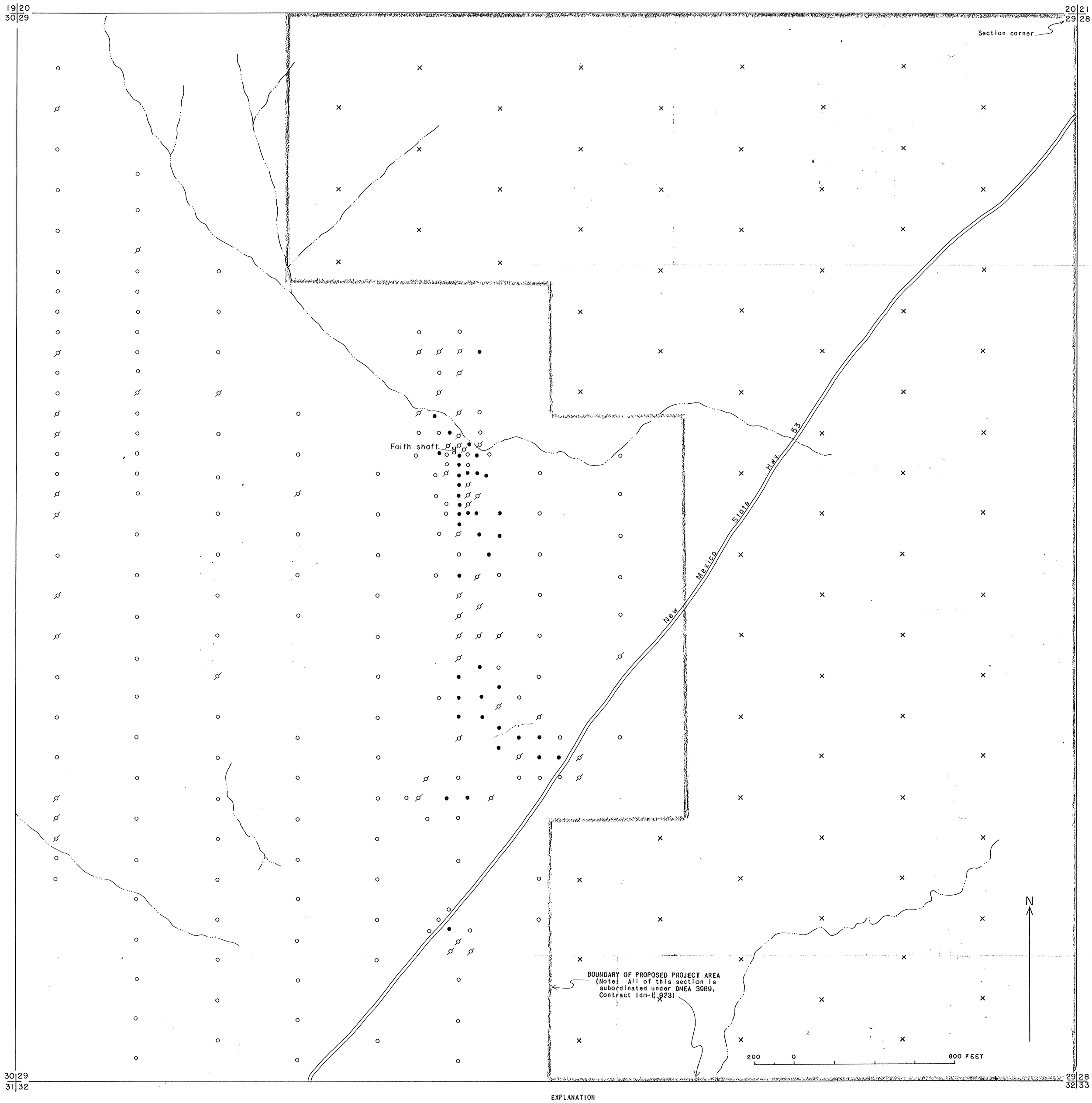
Gentlemen:

Your application for exploration assistance, dated May 2, 1958 submitted to our office at Denver, Colorado has been assigned Docket Number DMEA-5010 and referred to the Rare and Miscellaneous Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to: III.

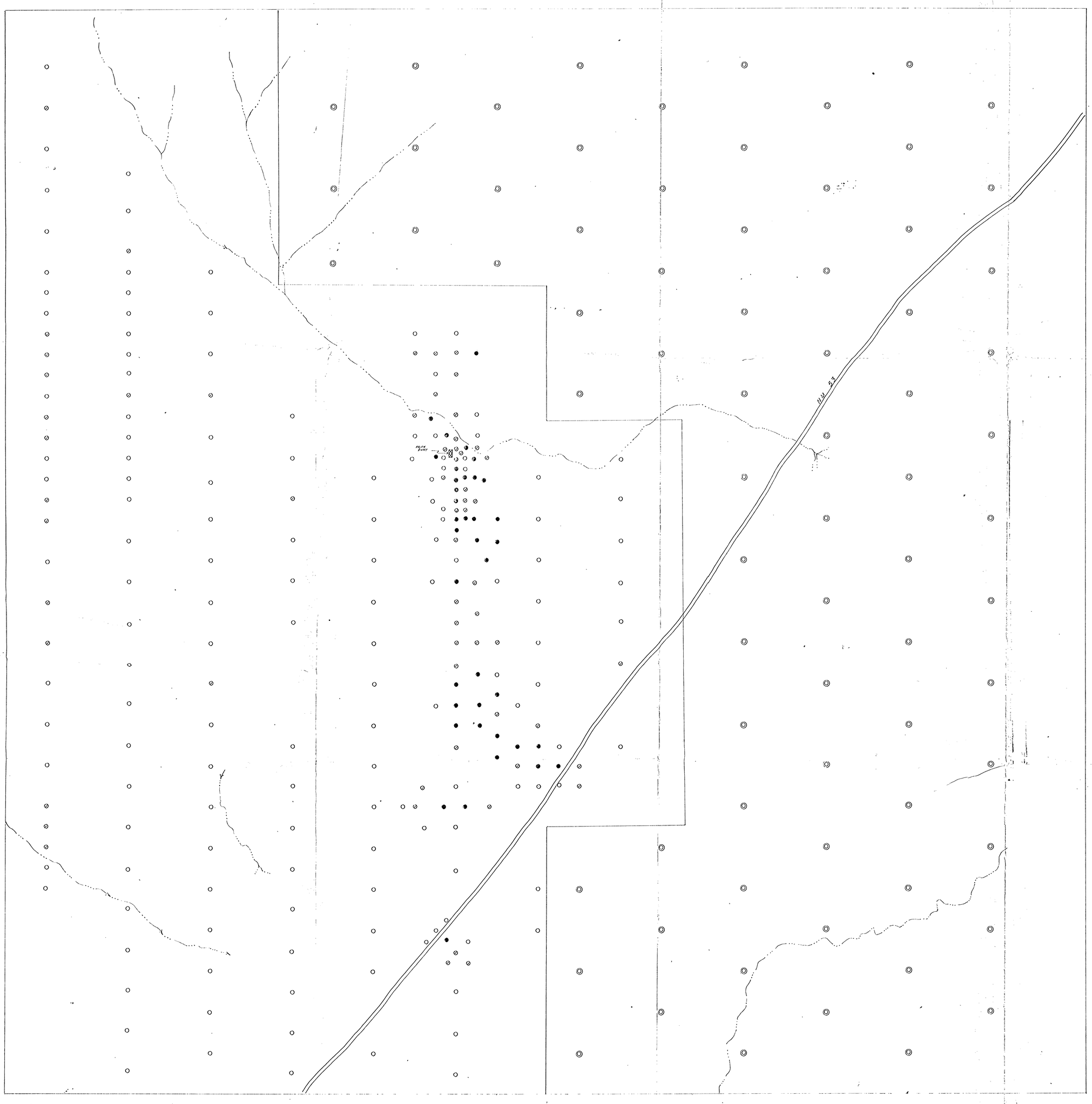


EXPLANATION

DRILL HOLES

- ○ BARREN
- ⊘ MINERALIZED, AT LEAST 1 FOOT OF 0.02 PERCENT U_3O_8
- ● ORE, AT LEAST 1 FOOT OF 0.10 PERCENT U_3O_8
- × PROPOSED STAGE I DRILL HOLE

Figure 3.--PROPERTY MAP OF SECTION 29, T.13 N., R.9 W., N.M.P.M. SHOWING THE LOCATION OF EXISTING DRILL HOLES AND LOCATIONS OF PROPOSED STAGE I DRILL HOLES, WESTVACO MINERAL PRODUCTS DIVISION, FOOD MACHINERY AND CHEMICAL CORPORATION, McKINLEY COUNTY, NEW MEXICO.



○ BARREN HOLES
⊘ MINERALIZED HOLES
● ORE HOLES
◎ PROPOSED HOLES

0 200 400 600
SCALE FEET

PROPOSED D.M.E.A. DRILL HOLES
SECTION 29, T. 13 N., R. 9 W.
MC-KINLEY COUNTY, NEW MEXICO

4-27-59
RRB