

Case No.

1028  
Large Exhibits

New Mexico Oil Conservation Commission  
Commissioner of Public Lands  
Santa Fe, New Mexico

Proposed South Mescalero Unit  
Section 34, T. 10 S., R. 32 E.,  
Lea County, New Mexico

**TRANSMITTAL:**

Monsanto Chemical Company is the owner of a State Lease consisting of 320 acres, situated in the above captioned proposed Unit area. It is desired by Monsanto to form a State Approved Unit as outlined in Exhibit A, consisting of 480 acres and described as being the W<sub>2</sub>, S<sub>2</sub>, Section 34, Township 10 South, Range 32 East, Lea County, New Mexico.

**UNIT MAP SUMMARY:**

The area is situated on the north central portion of the Northwestern Shelf Area of New Mexico, which is bounded on the north by the Waterman Arch and on the south by the Walker-Vacuum uplift. The Shelf Area, gently rising to the west, terminates into the Sacramento uplift which acts as its western boundary. The North Main Platform of Texas borders the area to the east.

Regional dip as reflected by shallow test structure is to the east-southeast at an average of 75 feet to the mile. The rate of dip increases to 300 feet to the mile in a south-westerly direction as revealed by deeper Mississippian structure.

As tests have penetrated pre-Devonian beds in the general area, the thickness of unit-Devonian units range from 1,000 feet to 13,000 feet and consist in the majority of Cambrian, Pennsylvanian and Devonian age sediments. Pennsylvanian and Devonian beds comprise in the general area from a section of north-south trending structural zones referred to as the Mescalero and the Mescalero-Devonian zones. Please refer to Exhibit A which shows the location of the proposed unit in relationship to the above mentioned structural zones.

LAW OFFICES  
HERVEY, DOW & HINKLE  
FLOOR FIFTH FLOOR  
ROSWELL, NEW MEXICO  
February 10, 1956

New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Gentlemen:

We hand you herewith in triplicate application of the Monsanto Chemical Company, Lion Division, Roswell, for approval of the proposed South Mescalero Unit Agreement, Lea County, New Mexico. We also enclose three copies of the proposed form of unit agreement.

Application has heretofore been made for approval of the unit by the Commissioner of Public Lands. All of the lands involved are state lands which are embraced in two separate state leases, one of which is owned by the Monsanto Chemical Company and the other by the Vickers Petroleum Company. We are advised by the land office that they have no objections to the formation of the unit. We would like for you to give your usual notice of hearing so that it can be set down as quickly as possible, as the Monsanto is ready to commence drilling operations on a deep Devonian test as soon as the unit agreement has been approved. We would like to have it set down before an examiner and have no objections to having the hearing at Hobbs. Please advise us as soon as possible the date set for the hearing.

Yours very truly,

HERVEY, DOW & HINKLE

*Hervey, Dow & Hinkle*

CEN:mp  
Encl.

**LOCAL GEOLOGY:**

Subsurface control is sparse in the area of interest and local structure is entirely dependent upon geophysical interpretation. At considerable expense, Monsanto undertook a seismic survey of the area which was completed in 1955. Results revealed a closed structure with a minimum of 200 foot closure in all directions. Please refer to the attached map indicated as Exhibit B.

The Mescalero Field, one-half mile north, and the Moore Field, two and one-half miles south, produce from both the Permian-Pennsylvanian and Devonian. Production may be expected under conditions similar to that of the aforementioned fields and from equivalent geological units. The Devonian is the primary objective and should be encountered at approximately 10,000 feet. However, an 11,000 foot Devonian test is contemplated, contingent upon the approval of the proposed subject unit.

**CONCLUSIONS:**

Development in subject area tends to be retarded due to the wide diversity of ownership. This, plus the fact that the individual tracts are small, results in a situation where no single operator owns sufficient acreage that would justify the expenditure of drilling a Devonian test. In the event development should be undertaken by the individual lessees, it would not be done in an orderly and scientific manner as would be desired. The proposed South Mescalero Unit, as outlined in Exhibit A, is apparently a simple anticlinal structure. It is therefore requested that this proposed unit be approved in order to bring portions of this diversified ownership together so that development may be carried out in an orderly manner and in the best interests of conservation.

Respectfully submitted,

*Willy B. Clifton*

Willy B. Clifton  
District Manager  
Monsanto Chemical Company  
Roswell, New Mexico, District

**THE OIL CONSERVATION COMMISSION  
STATE OF NEW MEXICO**

IN THE MATTER OF THE HEARING CALLED BY THE  
OIL CONSERVATION COMMISSION OF NEW MEXICO  
FOR THE PURPOSE OF CONSIDERING:

CASE NO. 1028

THE APPLICATION OF MONSANTO CHEMICAL  
COMPANY FOR APPROVAL OF THE SOUTH MESCALERO  
UNIT AGREEMENT EMBRACING 480 ACRES, MORE  
OR LESS, LEA COUNTY, NEW MEXICO, WITHIN  
TWP. 10 S., R. 32 E., N. 41 W.

New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Comes the undersigned, the Monsanto Chemical Company, a corporation with offices at El Dorado, Arkansas, and files herewith three copies of the proposed Unit Agreement for the development and operation of the South Mescalero Unit Area, Lea County, New Mexico, and hereby makes application for the approval of said Unit Agreement as provided by law, and in support thereof, shows:

1. That the proposed unit area covered by said agreement embraces 480 acres, more or less, more particularly described as follows:

NEW MEXICO PRINCIPAL MERIDIAN, NEW MEXICO

T. 10 S., R. 32 E.

Sec. 34, W<sub>2</sub>, S<sub>2</sub>

2. That the lands embraced within the proposed unit area are all State lands.

3. That applicant is informed and believes, and upon such information and belief, states: That the proposed unit area covers substantially all of the geological feature involved, and in the event of the discovery of oil or gas thereon, that said unit agreement will permit the producing area to be developed and operated in the interest of conservation and the prevention of waste of the unitized substances.

4. That the Monsanto Chemical Company is designated as unit operator in said unit agreement, and as such is given authority under the terms thereof to carry on all operations necessary for the development and operation of the unit area for oil and gas, subject to all applicable laws and regulations. That said unit agreement provides for the commencement of a test well for oil and gas upon some part of the lands embraced in the unit area within 90 days from the effective date of the unit agreement and for the drilling thereof with due diligence, to a depth sufficient to test the Devonian formation or to such a depth as unitized substances shall be discovered in paying quantities if at a lesser depth; provided, however, operator is not required in any event to drill said well to a depth in excess of 11,000 feet.

5. That said unit agreement is in substantially the same form as unit agreements heretofore approved by the Commissioners of Public Lands of the State of New Mexico and by the New Mexico Oil Conservation Commission, and it is believed that in the event oil or gas in paying quantities is discovered on the lands within the unit area, that the field or area can be developed more economically and efficiently under the terms of said agreement, to the end that the maximum recovery will be obtained, and that said unit agreement is in the interest of the conservation of oil and gas and the prevention of waste as contemplated by the New Mexico Oil Conservation Commission statutes.

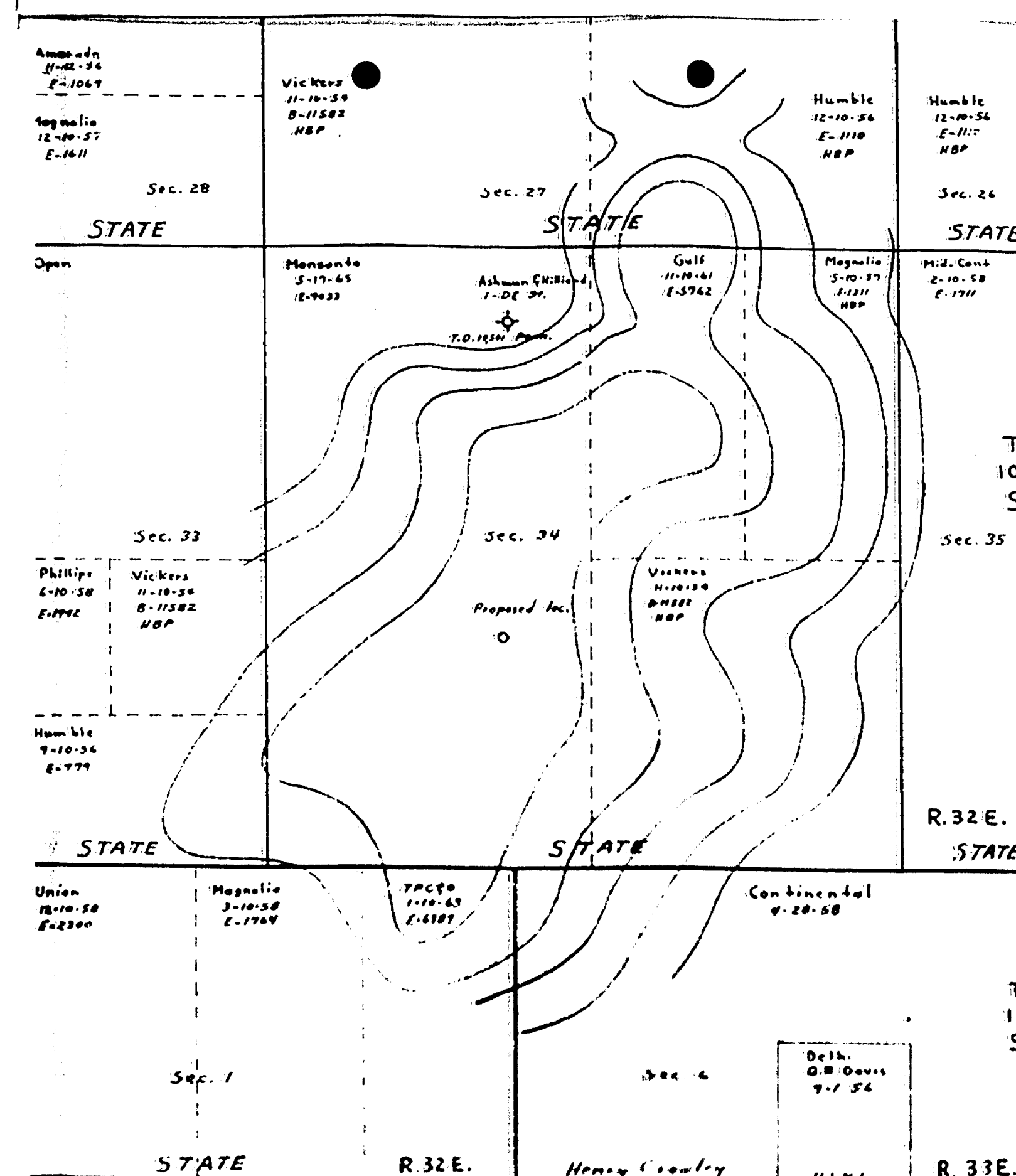


EXHIBIT B  
PROPOSED SOUTH MESCALERO UNIT  
SEC. 34, T. 10 S., R. 32 E.  
LEA CO., N. MEX.

**SEISMIC STRUCTURE MAP**

HORIZON - MISSISSIPPIAN  
1:1 - 200'  
1:2 - 400'  
1:3 - 600'  
1:4 - 800'  
1:5 - 1000'  
1:6 - 1200'  
1:7 - 1400'  
1:8 - 1600'  
1:9 - 1800'  
1:10 - 2000'  
1:11 - 2200'  
1:12 - 2400'  
1:13 - 2600'  
1:14 - 2800'  
1:15 - 3000'  
1:16 - 3200'  
1:17 - 3400'  
1:18 - 3600'  
1:19 - 3800'  
1:20 - 4000'

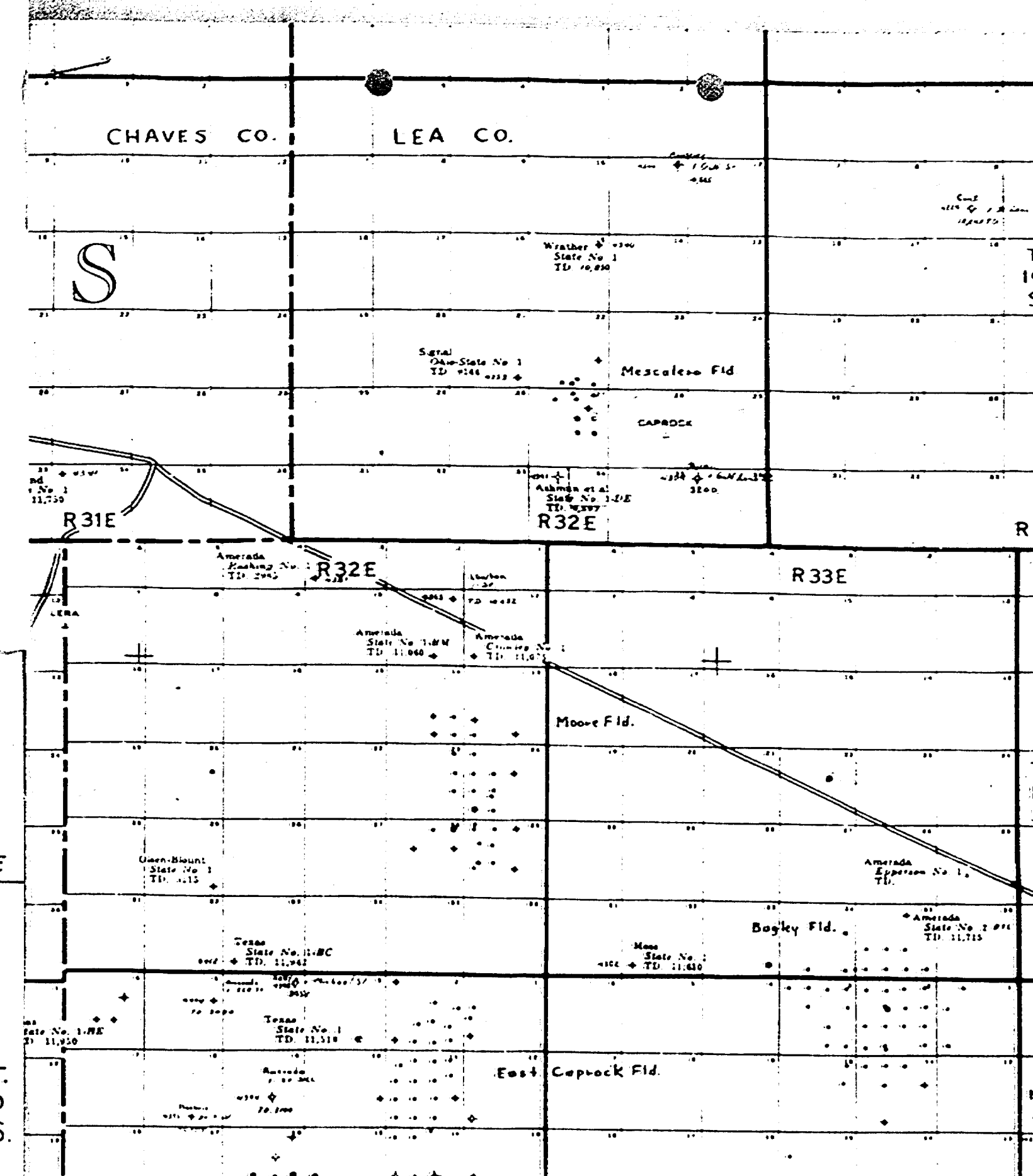


EXHIBIT A  
PROPOSED SOUTH MESCALERO UNIT  
SEC. 34, T. 10 S., R. 32 E.  
LEA CO., N. MEX.

**INDEX MAP**

SCALE 1" = 800'  
UNIT OUTLINE

LION OIL CO. A DIV OF  
MONSANTO CHEM. CO.  
ROSWELL, N. MEX.  
FEB. 1956

U.S.N.C.P. MICROGRAPHICS



BEST AVAILABLE COPY