

dearnley, meier & mc cormick

209 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-0691 • ALBUQUERQUE, NEW MEXICO 87103  
1216 FIRST NATIONAL BANK BLDG. EAST • ALBUQUERQUE, NEW MEXICO 87108

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
CONFERENCE ROOM, STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO

August 9, 1972

EXAMINER HEARING

IN THE MATTER OF:

Application of Monsanto Company  
for a unit agreement, Eddy  
County, New Mexico.

Case No. 4791

BEFORE: Elvis A. Utz,  
Examiner.

TRANSCRIPT OF HEARING

1 MR. UTZ: Case 4791.

2 MR. HATCH: Case 4791: Application of Monsanto  
3 Company for a unit agreement, Eddy County, New Mexico.

4 MR. RICHARDSON: Randolph Richardson, appearing  
5 on behalf of the Applicant. We have one witness.

6 MR. UTZ: Are there other appearances in this case?

7 (No response)

8 MR. RICHARDSON: A copy of the unit agreement has  
9 already been furnished to the Commission, and I would now  
10 like to enter as Exhibits One through Eleven the geological  
11 reports.

12 (Whereupon Applicant's Exhibits One through Eleven  
13 were marked for identification.)

14 RICHARD JONS,  
15 was called as a witness, and after being duly sworn, testified  
16 as follows:

17 DIRECT EXAMINATION

18 BY MR. RICHARDSON:

19 Q Would you state your name and the spelling of your name,  
20 your present occupation, and by whom you are employed?

21 A Richard Jons, J-o-n-s, I am regional geologist for  
22 Monsanto Company, and headquartered in Midland.

23 Q Would you please state your education and professional  
24 background, which would enable you to testify as an  
25 expert witness in this case?

1 A I have given testimony before the Commission before,  
2 and my qualifications and background are a matter of  
3 record.

4 Q Are you familiar with the Burton Flat Deep Unit Area  
5 and the matters contained in the application for  
6 approval of this unit agreement?

7 A Yes, sir.

8 MR. RICHARDSON: Are the witness's qualifications  
9 accepted?

10 MR. UTZ: Yes, they are.

11 Q (By Mr. Richardson) Is the form of the unit agreement  
12 prescribed by federal regulations, and was it recently  
13 approved by the Commissioner of Public Land?

14 A Yes.

15 Q Has the unit area been designated by the U.S.D.A.?

16 A Yes, sir.

17 Q Would you please tell the Commission the number of  
18 acres within the unit area and the percentage of that  
19 acreage which is federal, state, and patent land?

20 A The proposed unit is 5,707 acres of land, of which  
21 73.23 percent is federal land, 21.26 of the unit is  
22 state land, and 5.51 percent of the unit is fee land.

23 Q Would you please tell the Commission the township and  
24 range in which the unit is located and the approximate  
25 location with reference to the nearest town?

1 A The acreage in the proposed unit is located in Sections  
2 22 and 27, and the South half of Section 28 in Sections  
3 33, 34, and 35, Township 20 South, Range 28 East; plus  
4 the West half of Section 1, Section 2, and Section 3  
5 of Township 21 South, Range 27 East. The unit is  
6 located approximately eight miles Northeast of the  
7 City of Carlsbad.

8 Q Would you please refer to the geological reports which  
9 have been introduced in this case as Exhibits One  
10 through Eleven?

11 A Yes, sir.

12 Q Were those reports prepared by you or other employees  
13 directly under your control and supervision?

14 A Yes, sir.

15 Q Please review the reports referring to the maps by name  
16 and indicate their significance.

17 A Exhibit Two is a topographic map showing the location  
18 of the proposed unit in reference to the City of  
19 Carlsbad and the general topography of the area is  
20 submitted on the reference map.

21 Exhibit Three shows that we have two primary  
22 objectives under the proposed unit, one is the Strawn  
23 Reef that is producing in the South Carlsbad field.  
24 Our proposed unit is on a trend between the Lusk and  
25 the South Carlsbad field.

1 Exhibit Two is an isopach of the Strawn unit  
2 which is productive in those two fields, and it shows  
3 our unit well located on that trend.

4 Exhibit Four is an isopach map of the effective  
5 porosity using a three percent cut-off. This map  
6 shows that the proposed unit would be located along the  
7 porosity trend.

8 Exhibit Five is a sub-surface map on the base of  
9 the Strawn showing a strong Southeastern plunging axis,  
10 and this is documented and supported by seismic  
11 information. The red dot on the exhibit is our proposed  
12 location.

13 Exhibit Six is an isopach map of the Morrow sand.  
14 This map uses an clean sand cut-off of thirty-seven  
15 and a half API radio active unit for cleanliness of  
16 the sand. There is about 500 feet of Morrow sand and  
17 shales alternating, this includes only basel sand, and  
18 it shows that there is good clean sand crossing the  
19 proposed unit.

20 Exhibit Seven is an isopach map of the net porosity  
21 of that basel sand zone, using the seven percent cut-off.  
22 There are several wells in the area which have good  
23 porosity as you will note. The Pan Am Well was tested  
24 and they have fine pressure, but did not recover any  
25 fluid or gas due to possibly a mechanical problem or

1 formation damage. The log calculations do indicate,  
2 however, that the zone would have been water bearing  
3 had they recovered any fluids. The Superior Government  
4 Unit was not tested, but did test gas and water in the  
5 sand above this zone. Our proposed location will be  
6 high structurally to these two wells, and we anticipate  
7 hydrocarbon production.

8 Exhibit Eight is a structure map of the base of  
9 the Morrow or the top of the Mississippi, again showing  
10 the structure axis underneath the proposed unit. This  
11 is supported by seismic information. This map also  
12 shows the DST in the wells in the vicinity.

13 Exhibit Nine is a structural cross section north-  
14 south to show the primary objective. The basal-Morrow  
15 zone is also shown on this cross section, and we  
16 anticipate that to be the gas reservoir under the  
17 proposed unit.

18 Exhibit Ten is another structural cross section,  
19 east- west, to the proposed unit showing the correlation  
20 of the Strawn and Morrow, and we anticipate getting  
21 the rock under our proposed unit as is illustrated on  
22 this cross section.

23 Exhibit Eleven is a geological report which goes  
24 into the geology a little more thoroughly and is submitted  
25 for future study by the Commission.

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1 Q Would you please tell the Commission your conclusions  
2 as to the formation you are likely to encounter and  
3 whether you consider it a prospect for production?

4 A I consider the Strawn and the Morrow sand as our primary  
5 objectives, and anticipate they will be productive.

6 Q Would you please tell the Commission the projected depth  
7 and location for your initial test well?

8 A The initial test well will be drilled 1,980 feet from  
9 the East line and 1,333 feet from the South line of  
10 Section 3, Township 21 South, Range 27 East. We  
11 anticipate drilling to 11,600 feet.

12 Q In your opinion, what percentage of the working  
13 interest will be committed, and what percentage of  
14 royalties will be committed to this unit?

15 A We anticipate 91.96 percent of the working interests  
16 will be committed to the unit, and 95 percent or more  
17 of the royalty interests will be committed.

18 Q In your opinion, will operations in this area of the  
19 proposed unit be in the interest of conservation and  
20 the prevention of waste?

21 A Yes, sir.

22 Q Will correlative rights be protected?

23 A Yes, sir.

24 Q Will the different institutions of the State receive  
25 their fair share of production?

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1 A Yes, sir.

2 MR. RICHARDSON: Does the Commission have any  
3 questions?

4 MR. UTZ: Does that 95 percent of royalties include  
5 overriding royalties?

6 THE WITNESS: Yes, sir.

7 MR. UTZ: Are there any further questions?

8 (No response)

9 MR. UTZ: If not, the witness may be excused.

10 (Witness excused.)

11 MR. UTZ: Are there any statements in this case?

12 (No response)

13 MR. UTZ: Case 4791 will be taken under advisement.  
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1 STATE OF NEW MEXICO )  
 2 COUNTY OF BERNALILLO ) ss

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I, RICHARD E. McCORMICK, a Certified Shorthand Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

*Richard E. McCormick*  
 CERTIFIED SHORTHAND REPORTER

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4791  
 Aug. 9 1972  
*[Signature]*

I N D E XWITNESSPAGE

RICHARD JONS

Direct Examination by Mr. Richardson

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Exhibit #2 Topographic map

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Exhibit #3

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Exhibit #4 Isopach map

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Exhibit #5 Sub-surface map

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Exhibit #6 Isopach map

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Exhibit #7 Isopach map

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Exhibit #8 Structure map

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Exhibit #9 Structural cross section

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Exhibit #10 Structural cross section

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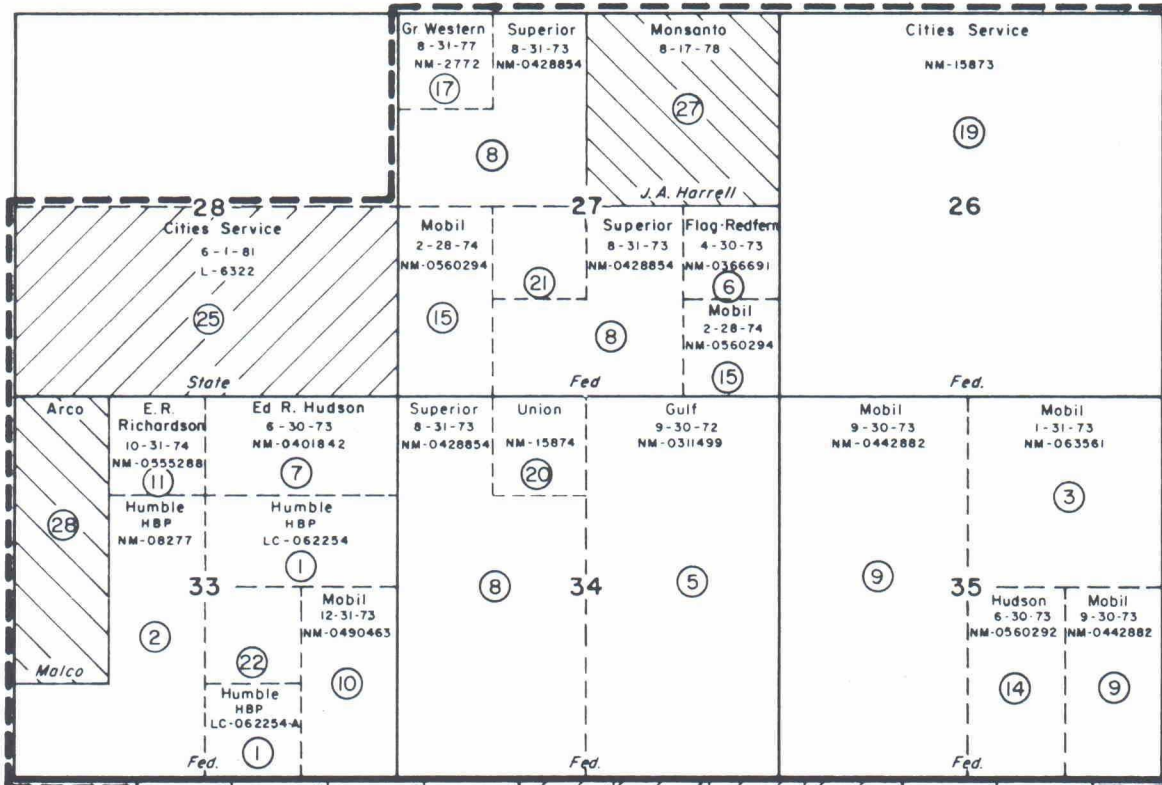
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Exhibit #11 Geological report

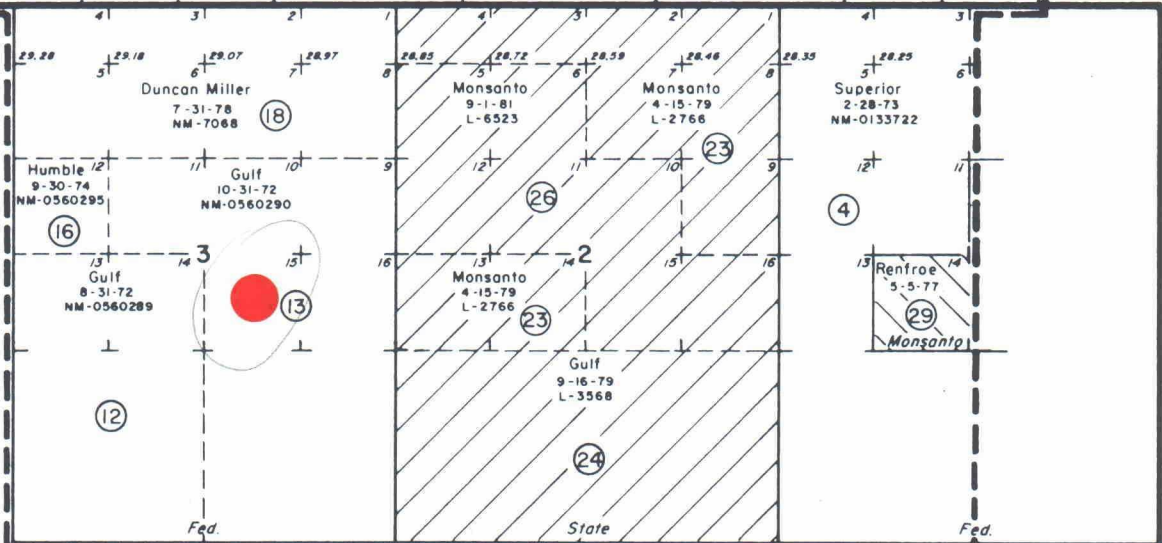
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- Unit Outline
  - ② --- Tract Number
  - Federal Lands  
4,253.10 Acres, 73.23 % Of Unit
  - State Of New Mexico Lands  
1,234.62 Acres, 21.26 % Of Unit
  - Patented (Fee) Lands  
320.00 Acres, 5.51 % Of Unit
- Unit Contains 5,807.72 Acres Of Land

## EXHIBIT "A"

**BURTON FLAT DEEP UNIT**  
**Eddy County, New Mexico**

BEFORE EXAMINER UIZ  
CIVIL DIVISION COLLECTION  
EIT NO. 1.  
4791  
Monsanto Company  
Hearing Date 8-9-72