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## NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE , NEW MEXICO

Hearing Date

<u>MARCH 30, 1983</u> **Time:**<u>9:00</u> A.M.

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1 1 2 STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT 3 OIL CONSERVATION DIVISION STATE LAND OFFICE BLDG. 4 SANTA FE, NEW MEXICO 30 March 1983 5 EXAMINER HEARING 6 7 IN THE MATTER OF: 8 Application of Randolph M. Richardson CASE for a unit agreement, Eddy County, 7833 New Mexico. 9 10 11 12 13 BEFORE: Michael E. Stogner, Examiner 14 15 TRANSCRIPT OF HEARING 16 17 APPEARANCES 18 19 For the Oil Conservation W. Perry Pearce, Esq. Division: Legal Counsel to the Division 20 State Land Office Bldg. Santa Fe, New Mexico 87501 21 22 Randolph M. Richardson For the Applicant: 23 Attorney at Law Roswell, New Mexico 88201 24 25

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| 2  | MR. STOGNER: Call next Case Number                            |
| 3  | 7833.   |
| 4  | MR. PEARCE: That case is on the appli-                        |
| 5  | cation of Randolph M. Richardson for a unit agreement, Eddy   |
| 6  | County, New Mexico.   |
| 7  | MR. RICHARDSON: Randolph M. Richard-                          |
| 8  | son, Roswell, New Mexico, appearing on behalf of applicant.   |
| 9  | I have one witness to be sworn.                               |
| 10 | MR. STOGNER: Are there other appear-                          |
| 11 | ances in this matter?   |
| 12 |   |
| 13 | (Witness sworn.)  |
| 14 |   |
| 15 | MR. RICHARDSON: I have already fur-                           |
| 16 | nished the Division a copy of the unit agreement. I'd like    |
| 17 | to hand you a copy of geological report marked Exhibits One   |
| 18 | through Four.   |
| 19 |   |
| 20 | GEORGE REDDY,   |
| 21 | being called as a witness and being duly sworn upon his oath, |
| 22 | testified as follows, to-wit:                                 |
| 23 |   |
| 24 |   |
| 25 |   |

1 4 2 DIRECT EXAMINATION 3 BY MR. RICHARDSON: 4 Q. Mr. Reddy, would you please state your name and 5 present occupation? 6 My name is George Reddy. I'm a consulting Α. 7 geologist in Roswell, New Mexico. 8 Mr. Reddy, would you please state your educa-0. 9 tional and professional background which will enable you to 10 testify as an expert witness in this case? 11 I'm a graduate of the University of New Mexico; A. 12 majored in geology; and been working full time as a petroleum 13 geologist since 1961. 14 Have you ever testified before the Oil Conser-0. 15 vation Division before? 16 Yes. Α. 17 Are you familiar with the Northeast Artesia Unit 0. 18 Area and the matters contained in the application to the Div-19 ision for approval of a unit agreement? 20 Α. Yes. 21 MR. RICHARDSON: Are the qualifications 22 acceptable? 23 MR. STOGNER: Mr. Reddy is qualified. 24 Is the form of unit agreement prescribed by 0. 25 State regulations and been recently approved by the Commissioner

1 5 2 of Public Lands? 3 A. Yes. Has a unit area been designated by the United 4 0. 5 States Geological Survey as an area logically suitable for 6 development under a unit plan of operation? 7 Α. No. 8 That is due to the fact, Mr. Reddy, that the 0. 9 unit area only contains seven percent of the -- of Federal 10 lands and the United States Geological Survey, or Minerals 11 Management Service, or Bureau of Land Management, does not 12 now need to approval the unit. 13 Could you please tell the Division the number 14 of acres within the unit area and the number of percentages 15 of the various acres of Federal, State, and patented or fee 16 lands? 17 A. There's a total of 2560 acres in the proposed 18 unit and 200 acres of that is Federal lands, or 7.81 percent; 19 640 acres, or 25 percent, is State lands; and 1720 acres, or 20 67.19 percent is patented fee lands. 21 Could you please tell the Division the township 0. 22 and range in which the unit is located and approximate loca-23 tion with reference to the nearest town? 24 It's in Township 16 South, Range 26 East, and A. 25 it's approximately 2-1/2 miles northeast of the town of Ar-

1 6 2 tesia in Eddy County. Mr. Reddy, please refer to the geological report, 3 0. which has been introduced in this case and marked Exhibits 4 One through Four. Was this report prepared by you? 5 A. 6 Yes. 7 Would you please briefly review the report, 0. 8 referring to the maps by name, indicating the significance of 9 such maps? The first map is labeled Figure 1. 10 A. It's a 11 structure map, top of Atoka. 12 Q. Mr. Reddy, let me put in there, I marked 13 the written report as Exhibit One. His Figure 1 is Exhibit 14 Two and so when he's referring to figures, they're one -- one 15 up. 16 The written report is Exhibit One. His 17 Figure 1 is Exhibit Two. 18 Go ahead, Mr. Reddy, I'm sorry. 19 A. The first of these is a structure map on 20 top of Atoka. This is a good mapping point in the area. It's 21 about 150 feet above the primary objective, which is the Mor-22 row Clastics interval. 23 This proposed unit is located on the north-24 west shelf of the Delaware Basin and the regional dip in this 25 area is to the southeast at about 200 feet per mile. The

| 1  | 7  |
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| 2  | proposed area lies across a general structural nose, which     |
| 3  | plunges southeastward.   |
| 4  | The color symbols on the map are Morrow and                    |
| 5  | Atoka gas wells, the blue being Atoka. Purple is Atoka-Morrow  |
| 6  | undifferentiated, and the red symbols are Morrow gas comple-   |
| 7  | tions.   |
| 8  | There's a general northeasterly trend to the                   |
| 9  | gas production in the area but when looked at on individual    |
| 10 | field basis, there seems to be an orientation to the north     |
| 11 | and northwest, as shown on the next figure, which would be     |
| 12 | Figure 2 or Exhibit Three.                                     |
| 13 | This is a net sandstone Isopach map of the                     |
| 14 | primary objective, the Morrow Clastics. The prospect has       |
| 15 | been drawn in an area similar to the fields that occur to the  |
| 16 | southwest and to the northeast of the proposed unit. There     |
| 17 | the orientation is northerly, or to the northwest, against     |
| 18 | regional strike. This situation is very favorable for trap-    |
| 19 | ping hydrocarbons, as can be seen in some of the fields in the |
| 20 | area, and the prospect is visualized as having a similar con-  |
| 21 | figuration as those fields. It's based on only a veiw points   |
| 22 | of control, one of which is the well in Section 31 of 16, 27,  |
| 23 | which is an abandoned Morrow producer and had about 19 feet    |
| 24 | of net sandstone.  |
| 25 | It's on that basis that a sandstone thick                      |

1 8 has been drawn in this proposed area. 2 The probably economic limit, well, has been 3 has been picked, an arbitrary thickness has been picked, of 4 5 10 feet as being a minimum economic limit for the sandstone thickness, and it's on that 10-foot contour interval that the 6 7 prospect limit has been drawn on the next figure, which is Exhibit Four. Prospect limit here, and the field limits on 8 either -- of the fields on either side of this are shown by 9 10 the 10-foot contour. 11 And it's on that basis that the unit boundary has been shown over the prospect zone, or prospect area. 12 This is an outline -- this is a Morrow pros-13 pect outline map. 14 15 Mr. Reddy, could you give the Division your 0. conclusions as to the formations likely to be encountered and 16 17 considered productive, or possibly productive? 18 Well, as mentioned, the primary objective Α. 19 is Morrow, but in the general area there has been good shows 20 and some production from Permian beds in the Queen, Grayburg, 21 San Andres, and Wolfcamp, and in Upper Pennsylvanian in the 22 Cisco Limes. All of these are considered prospective in the 23 area. 24 Could you please tell the Division the pro-0. 25 jected depth of an initial well and the proposed location?

9 1 2 A. The projected depth, TD would be 8400 feet. 3 That would be sufficient to encounter Mississippian, test the 4 full section of Morrow, and I consider it prospective through-5 out the area, but the proposed location is 660 from the north 6 line and 1980 from the west line of Section 36, Township 16 7 South, Range 26 East. 8 MR. RICHARDSON: I might interject 9 right there, Mr. Commissioner, that that location may be moved. 10 That puts us right in the middle of an irrigated field and 11 I anticipate a little trouble with the surface owner, although 12 it is State land. We may have to move it back further west. 13 It's being surveyed today for the 14 location, so in your record don't hold us to that -- to that 15 location. A Notice of Intention has not been filed yet. 16 Mr. Reddy, have the other working interest 0. 17 owners within the unit area been contacted? 18 Α. Yes. 19 In your opinion what percentage of the Q. 20 working interest will be committed and what percentage of the 21 royalty will be committed? 22 100 percent of the working interest and 98 Α. 23 percent of the royalty. 24 In your opinion will the operation of this 0. 25 area under the proposed unit plan of operation be in the in-

1 10 2 terest of conservation, the prevention of waste? 3 A. Yes. 4 Will the different institutions of the State, 0. 5 if any, receive their fair share of production, if established? 6 A. Yes. 7 0. In the event of production, will the corre-8 lative rights of all parties to the unit agreement be pro-9 tected? 10 Α. Yes. 11 MR. RICHARDSON: We would now like 12 to offer Exhibits One through Four into evidence. 13 MR. STOGNER: Exhibits One through 14 Four will be admitted into evidence. 15 MR. RICHARDSON: And I have no fur-16 ther questions of Mr. Reddy. Do you have any? 17 18 CROSS EXAMINATION 19 BY MR. STOGNER: 20 Mr. Reddy, on your maps here within the 0. 21 unit area, you show three P&A'd wells. Do you know what form-22 ation they tested in each one? 23 Those were all shallow tests. I could refer A. 24 to my depth here. 25 They would have tested the San Andres, all

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| 1  | 11   |
| 2  | three of those.  |
| 3  | Q. You mentioned that your proposed location                   |
| 4  | may be moved further west. Roughly speaking, how far to the    |
| 5  | west?  |
| 6  | MR. RICHARDSON: It's right on the                              |
| 7  | Pecos River and I would rather imagine that the location will  |
| 8  | be, probably, 660 from the north and around 1320 south. It's   |
| 9  | going to be, possibly, an unorthodox location.                 |
| 10 | We will not know until the surveyor                            |
| 11 | gets through today.  |
| 12 | MR. PEARCE: I think it will be nec-                            |
| 13 | cessary, when you find that location, if it's unorthodox, to   |
| 14 | come back administratively again. I don't think you can move   |
| 15 | an unorthodox without knowing exactly where it is and adver-   |
| 16 | tising it.   |
| 17 | MR. RICHARDSON: I was wondering                                |
| 18 | about that. On a fully participating unit like this, where     |
| 19 | your royalty and working interest is pooled and spread under   |
| 20 | the entire area, if your location actually does make that      |
| 21 | make any difference. In other words, the                       |
| 22 | MR. PEARCE: I think you'll need to                             |
| 23 | proceed administratively but I don't think you'll need to come |
| 24 | back up for a hearing. I don't believe so.                     |
| 25 | MR. STOGNER: I have no further                                 |

| r        |                          |                                 |       |
|----------|--------------------------|---------------------------------|-------|
| 1        |                          |                                 | 12    |
| 2        | questions for Mr. Reddy. | He may be excused.              |       |
| 3        |                          | Anything further in Case Number | 7833? |
| 4        |                          | If not, this case will be taken |       |
| 5        | under advisement.        |                                 |       |
| 6        |                          |                                 |       |
| 7        |                          | (Hearing concluded.)            |       |
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| 1  |  |
| 2  | CERTIFICATE  |
| 3  |  |
| 4  | I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that   |
| 5  | the foregoing Transcript of Hearing before the Oil Conserva-   |
| 6  | tion Division was reported by me; that the said transcript   |
| 7  | is a full, true, and correct record of the hearing, prepared   |
| 8  | by me to the best of my ability.   |
| 9  |  |
| 10 | Sally W. Boyd CSR  |
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SALLY ( ) OYD, C.S.R. Rt. 1 Box 193-B Santa Fe, New Mexico 67301 Phone (305) 435-7409