

CASE 6239

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STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
State Land Office Building  
Santa Fe, New Mexico  
7 June, 1978

EXAMINER HEARING

-----  
IN THE MATTER OF: )

Application of Robert N. Enfield for ) CASE  
a unit agreement, Eddy County, New ) 6239  
Mexico. )  
-----

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.  
Legal Counsel for the Division  
State Land Office Building  
Santa Fe, New Mexico 87501

For the Applicant: Paul Eaton, Esq.  
HINKLE, COX, EATON, COFFIELD &  
HENSLEY  
600 Hinkle Building  
Roswell, New Mexico

SALLY WALTON BOYD  
CERTIFIED SHORTHAND REPORTER  
730 Bishop's Lodge Road • Phone (505) 988-3404  
Santa Fe, New Mexico 87501

I N D E X

ROBERT N. ENFIELD

|                                 |   |
|---------------------------------|---|
| Direct Examination by Mr. Eaton | 3 |
| Cross Examination by Mr. Nutter | 7 |

EDWARD K. DAVID

|                                 |    |
|---------------------------------|----|
| Direct Examination by Mr. Eaton | 10 |
| Cross Examination by Mr. Nutter | 16 |

E X H I B I T S

|                                       |    |
|---------------------------------------|----|
| Applicant Exhibit One, Plat           | 7  |
| Applicant Exhibit Two, Unit Agreement | 7  |
| Applicant Exhibit Three, Letter       | 7  |
| Applicant Exhibit Four, Map           | 16 |
| Applicant Exhibit Five, Cross Section | 16 |
| Applicant Exhibit Six, Cross Section  | 16 |

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MR. NUTTER: Call Case 6239.

MS. TESCHENDORF: Case 6239. Application of Robert N. Enfield for a unit agreement, Eddy County, New Mexico.

MR. EATON: Paul Eaton, from the firm of Hinkle, Cox, Eaton, Coffield and Hensley, Roswell, New Mexico, representing the Applicant. I have two witnesses.

(Witnesses sworn.)

ROBERT N. ENFIELD

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. EATON:

Q Will you please state your name and your residence?

A Robert N. Enfield, Santa Fe, New Mexico.

Q What is your occupation, Mr. Enfield?

A Independent Oil and Gas Operator.

Q As an independent oil and gas operator have you on occasions formed exploratory units?

A Federal exploratory units.

Q Yes, sir.

A Yes, sir.

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1 Q Are you familiar with unit agreements?

2 A Yes, sir.

3 Q Have you previously testified before the Oil  
4 Conservation Division?

5 A Yes.

6 Q Would you please refer to what has been marked  
7 for identification as Applicant's Exhibit Number One and  
8 state what that exhibit shows?

9 A It is a land plat with the unit outlined in  
10 red, unit area outlined in red.

11 Q Approximately where is that unit area located?

12 A It's approximately two miles northeast of  
13 Lakewood, New Mexico, and approximately fifteen miles  
14 southeast of Artesia.

15 Q Mr. Enfield, would you refer to what has been  
16 marked for identification as Exhibit Two and state what  
17 that exhibit is?

18 A It's a copy of the proposed unit agreement  
19 with Exhibits A and B, setting out the ownership of the  
20 lands within the proposed unit area.

21 Q All right. Would you refer to Exhibit A that  
22 is attached. You reflect patented and Federal lands in  
23 the unit, is that correct?

24 A The hatched marked lands are patented. The  
25 open lands are Federal lands. Correct.

1 Q How many acres do each comprise, each type of  
2 land?

3 A Just one moment. There are 1783.58 acres of  
4 Federal lands, being 55.83 percent of the unit area. The  
5 balance being fee lands, as there is no State acreage.

6 The fee lands total 1410.88 acres, or 44.17  
7 percent of the unit area.

8 Q Now, Mr. Enfield, has this form of unit agree-  
9 ment, to your knowledge, previously been approved by the --  
10 the form previously been approved by the United States  
11 Geological Survey and by this Division?

12 A Yes, it is a standard from unit agreement with  
13 no changes.

14 Q Does it provide for commencement of the test  
15 well within six months after the effective date of the  
16 unit agreement?

17 A Correct.

18 Q After completion of a commercial well, does  
19 it provide for submission of a plan of further development  
20 to both the USGS and this Commission for their approval?

21 A Yes, sir.

22 Q Does the agreement provide for the establishment  
23 of participating areas with the approval of this Division  
24 and the USGS?

25 A Yes, sir.

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1 Q Does it provide for the automatic elimination  
2 from the unit of all lands that are not within a partici-  
3 pating area within a certain time after the establishment  
4 of the first participating area?

5 A Correct, if there's not further development.

6 Q And does it also provide for expansion or  
7 contraction of the unit with the approval of this Division?

8 A Yes, sir.

9 Q And the USGS?

10 Who is designated as the unit operator?

11 A Robert N. Enfield.

12 Q Are all formations being unitized?

13 A Yes, sir.

14 Q What is the present status of commitment of  
15 working interests in the unit area to the unit?

16 A 87-1/2 percent is either committed to join the  
17 unit or to farm-out to the operator, myself.

18 Q Will that --

19 A Being verbal commitments, not all of them are  
20 written.

21 Q Yes, sir. In your opinion will that commitment  
22 afford you effective control of operations within the unit  
23 area?

24 A Yes, sir.

25 Q Has the proposed unit area been designated by

1 the United States Geological Survey as logically subject  
2 to exploration and development?

3 A Yes, by letter dated February 21st, 1978.

4 Q Is that letter your Exhibit Three?

5 A Yes, sir.

6 Q Mr. Enfield, in your opinion is the proposed  
7 unit in the interest of conservation, prevention of waste,  
8 and protection of correlative rights?

9 A Yes.

10 Q Were Exhibits One and Two prepared by you?

11 A Yes, they were, or under my supervision.

12 Q Yes, sir.

13 A The unit agreement was prepared by your firm.

14 MR. EATON: We offer Exhibits One, Two, and  
15 Three into evidence.

16 MR. NUTTER: Applicant's Exhibits One, Two,  
17 Three will be admitted in evidence.

18 MR. EATON: I have no further questions of  
19 this witness.

20

21

CROSS EXAMINATION

22

BY MR. NUTTER:

23

Q Mr. Enfield, you say that 87-1/2 percent of

24

the working interest is committed or has verbally agreed

25

to commit or farm-out.

1 A Correct.

2 Q What about the other 12-1/2 percent, any  
3 trouble with getting them in?

4 A No, sir, one company owns 12.2 percent and I  
5 do not anticipate that they will join.

6 Q Would you identify that company and what tracts  
7 they control, please?

8 A Gulf Oil Corporation. I would have to go  
9 through --

10 Q Okay, is Gulf's -- is that the only company?

11 A Well, I have not heard from them. I guess I  
12 do not know what they're going to do for sure. They have  
13 been notified three weeks ago.

14 Q I see, so --

15 A And I have had no --

16 Q I see, they haven't really declined as of now?  
17 You just haven't heard from them?

18 A Well, within the framework of my letter I'd  
19 say they declined; I asked for an answer.

20 Their tracts are scattered through the unit.  
21 They are fee tracts. In no proration unit do they have  
22 in excess of eighty acres -- I mean assuming a 320 pro-  
23 ration unit.

24 Q I see.

25 A And most places they have very minor interests.

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Santa Fe, New Mexico 87501

1 Q Now, you do have the letter from the USGS,  
2 which represents the royalty on the Federal lands under  
3 the unit. How about the royalty interests under the fee  
4 lands? Have they agreed to the unit, or do they have to?

5 A They do not have to. I would not anticipate  
6 too many would be in disagreement.

7 Q I see. The purpose of the unit is to drill a  
8 test well to the Morrow formation, is that correct?

9 A Correct.

10 Q Do you know where that location will be, Mr.  
11 Enfield?

12 A Probably in the south half of Section 12.

13 Q I suppose the other witness is going to testify  
14 to the geology of the unit.

15 A Right.

16 Q And the location of the well.

17 A I think that one thing I forgot to mention.  
18 This is a standard unit form but there are Bureau of Re-  
19 clamation Lands, Federal lands, in here, which do cause  
20 a stipulation that is not in every Federal lien, and it  
21 isn't anything that affects the Commission.

22 Q Because the Federal government, in effect,  
23 owns some land in here, so --

24 A Well, yes. The Bureau of Reclamation has some  
25 acquired lands within this unit, which is a little bit

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1 different in one -- one phrase of the unit as opposed to  
2 a regular one.

3 MR. NUTTER: Are there any further questions  
4 of Mr. Enfield? He may be excused.

5  
6 EDWARD K. DAVID  
7 being called as a witness and having been duly sworn upon  
8 his oath, testified as follows, to-wit:

9  
10 DIRECT EXAMINATION

11 BY MR. EATON:

12 Q Would you please state your name and your  
13 residence and your occupation?

14 A Edward K. David, Consulting Geologist, Roswell,  
15 New Mexico.

16 Q Mr. David, have you previously testified  
17 before this Commission in the capacity as a consulting  
18 geologist, or geologist, and were your qualifications  
19 accepted by the Commission?

20 A Yes, I have testified before this group and  
21 my credentials were accepted.

22 Q Were you employed by Mr. Enfield to make a  
23 geological study of the area where the proposed unit is  
24 located?

25 A Yes, I was.

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CERTIFIED SHORTHAND REPORTER  
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1 Q Have you prepared Exhibits Four, Five and Six  
2 in connection with your testimony?

3 A Yes, I did.

4 Q Would you refer to Exhibit Number Four and  
5 state what that exhibit portrays?

6 A This is a structure map, which is contoured  
7 on top of the Morrow formation, using a contour interval  
8 of 100 feet. The scale is one inch to one mile.

9 Also in this area are superimposed the nearby  
10 fields. For example, the unit is approximately two miles  
11 south of the Red Lake-Morrow Field, due north. We're  
12 approximately three miles southeast of the Atoka-Morrow  
13 Field that's shown in red. We're also approximately five  
14 miles north of the McMillan-Morrow Gas Field. And the  
15 unit is shown and outlined in green.

16 The structure map shows an indicated structural  
17 anomaly in the area that is designated the proposed North  
18 Lake McMillan Unit.

19 Approximately the -6000 foot closing contour  
20 coincides with the unit outline.

21 Based on this interpretation we feel that  
22 there will be a structural closure in here and in addition  
23 we would find that the Morrow would be highly prospective  
24 over this structure. We've also designated two sands in  
25 this area, an A-sand, which is the Upper Morrow sand and

1 the B-sand, which is the Lower sand.

2 We feel that both of these sands trend in a  
3 north-south direction and feel that there's a good possi-  
4 bility both of these sands could be developed and productive  
5 over the structure.

6 The Upper sand designated Morrow A sand, is  
7 shown in lavender color, designated on each well site;  
8 Also the Morrow B sand is shown in orange at each completed  
9 well.

10 Q Mr. David, the unit has been outlined on the  
11 exhibit, has it not, by a green -- black and green line?

12 A A green outline, that's correct.

13 Q Okay. Would you refer next to your Exhibit  
14 Number Five and state what that exhibit portrays?

15 A Exhibit Number Five is a cross section, which  
16 is designated Cross Section A. It extends from the west,  
17 starting with Well A-1, continues to the northeast and  
18 eventually to the southeast, with the cross section ter-  
19 minating with Well A-5 to the southeast.

20 This cross section is used primarily to show  
21 the Upper Morrow A sand in this area.

22 The cross section is hung on top of the Morrow,  
23 which would be the datum. There again the vertical scale  
24 would be 1 inch to 100 feet. There is no horizontal  
25 scale.

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1           The wells which produce out of the Upper Morrow  
2 A sand are designated by Well A-1, A-3, and A-5.

3           Well No. A-1 is a Kerr McGee Mex, which would  
4 be immediately west of the unit.

5           Well A-3 is a Coquina No. 1 Gulf Federal.  
6 This well would be located immediately northeast of the  
7 unit.

8           Q       Both of those wells are approximately what,  
9 within one mile of the --

10          A       That's correct, they're both --

11          Q       -- outer boundaries of the unit?

12          A       Right. They would all -- both wells would be  
13 within one mile of the outer boundaries. Both wells pro-  
14 duce out of the A sand. Neither well is a strong well  
15 but they are productive from this interval.

16                The other well which produces out of this  
17 would be Well A-5, which would be to the southeast of the  
18 unit in Section 28 of 19, 27, and that well is a Yates No.  
19 1 Pecos River Deep unit. That well is completed both out  
20 of the A zone and the B zone. This well has produced  
21 approximately 700-million cubic feet of gas out of the  
22 Morrow.

23                There are other wells on the cross section  
24 which show the Morrow B sand. In particular we might  
25 refer to Well 8, which is a Read & Stevens No. 1 Scroggins

1 Deep Unit. It's located in Section 31 at 18, 27. That  
2 well had a drill stem test over the Lower sand, the B sand,  
3 which was extremely well developed. They had gas at the  
4 surface and substantial formation water, which exceeded  
5 7000 feet of formation water, with good pressures.

6 So we find that both sands are developed in  
7 this general area, as shown on Cross Section A.

8 Q All right. Would you now refer to Exhibit Six  
9 and state what that exhibit portrays?

10 A Cross Section Six was constructed, as was  
11 Cross Section A, that is, the datum is top of the Morrow;  
12 vertical scale of 1 inch to 100 feet. There is no hori-  
13 zontal scale.

14 This particular Cross Section B extends from  
15 west to east across the McMillan-Morrow Gas Field. The  
16 McMillan-Morrow Gas Field, and where this cross section is  
17 located, is approximately seven miles south of the unit.

18 This cross section extends from west to east,  
19 from left to right, that is. We find that the main pro-  
20 ducing sand in this field would be the Lower sand, the B  
21 sand.

22 One of the better wells is designated as Well  
23 B-1, which is the Harvey Yates No. 1 Hondo Spindler C.  
24 It's located --

25 Q That's -- you're talking about B-3?

1           A           B-3, it's located in Section 18, Township 20  
2 South, Range 27 East. This had a well developed sand and  
3 it produced over six billion cubic feet of gas and over  
4 26,000 barrels of condensate from the B sand.

5                       We also find that there were small shows of  
6 gas in the A sand in Well B-2, which is Yates No. 3 Pecos  
7 River Deep Unit, located in Section 13, Township 20 South,  
8 Range 26 East. It had a drill stem test over the Upper  
9 sand, which is A sand. They had gas at the surface which  
10 was estimated at 50,000 cubic feet of gas per day.

11                      And we also find evidence that the Morrow  
12 sand might be extending southward towards this field.

13           Q           Is that the purpose of this exhibit to show  
14 that?

15           A           That's one of the purposes. The purpose is  
16 primarily to show the presence of the B sand and also the  
17 fact that the A sand is partially developed in this area  
18 and does contain gas flow not in commercial quantities.

19           Q           Now, Mr. David, I assume then that the Morrow  
20 A and the Morrow B sands are the primary objectives of  
21 Mr. Enfield, is that correct, in the unit area?

22           A           That would be the primary drilling objective.

23           Q           What is your opinion, Mr David, as to whether  
24 or not the proposed unit area contains recoverable gas  
25 or oil reserves?

1 A I feel that it has a good chance to make a  
2 discovery in this area for gas.

3 Q Were Exhibits Three, Four, and Five prepared  
4 by you or under your supervision?

5 A That is correct, they were prepared by me.

6 MR. EATON: We offer Exhibits Three, Four, and --  
7 I mean, Four, Five, and Six. Excuse me. Were Exhibits  
8 Four, Five, and Six prepared by you?

9 A They were, right.

10 MR. EATON: We offer Exhibits Four, Five, and  
11 Six into evidence.

12 MR. NUTTER: Exhibits Four through Six will  
13 be admitted in evidence.

14 MR. EATON: I have no further questions of  
15 Mr. David.

16  
17 CROSS EXAMINATION

18 BY MR. NUTTER:

19 Q Mr. David, examination of your Exhibit Number  
20 Four would indicate that the unit outline fairly well  
21 conforms to the maximum closure line, which is your -6000  
22 feet. It also indicates that a great deal of the unit  
23 area appears to be under ain by -- or overlain by Lake  
24 McMillan.

25 Now, has this resulted in you having to com-

1 promise as far as your surface location for the initial  
2 test well is concerned?

3 A Somewhat, but basically it still coincides  
4 roughly with where we propose to drill.

5 Q Now, Mr. Enfield had indicated that the test  
6 well would probably be located in the south half of  
7 Section 12.

8 A That's correct.

9 Q And you do feel you've got a decent location  
10 there in the south half in which to test this structure  
11 without reverting to offshore drilling?

12 A Yes, an initial well.

13 Q Further development might result in offshore  
14 drilling, though.

15 A Right.

16 MR. NUTTER: Are there any further questions  
17 of Mr. David? He may be excused.

18 Do you have anything further, Mr. Eaton?

19 MR. EATON: No, sir.

20 MR. NUTTER: Does anyone have anything further  
21 they wish to offer in Case Number 6239?

22 We'll take the case under advisement.

23 (Hearing concluded.)  
24  
25

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill from my notes taken at the time of the hearing.

Sally Walton Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6237 heard by me on 6/7, 1978.

[Signature], Examiner  
New Mexico Oil Conservation Commission

SALLY WALTON BOYD  
CERTIFIED SHORTHAND REPORTER  
730 Bishop's Lodge Road • Phone (505) 988-3404  
Santa Fe, New Mexico 87501

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