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STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
Oil Conservation Division  
State Land Office Building  
Santa Fe, New Mexico  
13 June 1979

EXAMINER HEARING

-----  
IN THE MATTER OF: )  
 )  
 )  
Application of Harper Oil Company ) CASE  
for a unit agreement, Lea County, ) 6537  
New Mexico. )  
 )  
-----

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.  
Legal Counsel for the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87503

For the Applicant: Conrad Coffield, Esq.  
HINKLE, COX, EATON, COFFIELD &  
HENSLEY  
Midland, Texas

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E X H I B I T S

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MR. NUTTER: Call Case 6537.

MR. PADILLA: Application of Harper Oil Company for a unit agreement, Lea County, New Mexico.

MR. COFFIELD: Conrad Coffield with the Hinkle Law Firm of Midland, Texas, appearing on behalf of the applicant, and I have two witnesses in this case.

(Witnesses sworn.)

ROBERT G. WARFIELD

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

DIRECT EXAMINATION

BY MR. COFFIELD:

Q. All right, Mr. Warfield, would you state your name, address, occupation, and employer, please?

A. Robert G. Warfield. I'm a consulting geologist located in Midland, Texas, on a retainer for Harper Oil Company.

Q. Mr. Warfield, have you previously testified before the Oil Conservation Division as a geologist?

A. Yes, I have.

Q. And were your qualifications in that made a matter of record and accepted by the Oil Conservation

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Division?

A. They were.

Q. And are you familiar with Harper's application in this particular case?

A. I am.

Q. And as well, the property and the proposed unit area involved?

A. Yes.

MR. COFFIELD: Mr. Examiner, is the witness considered qualified?

MR. NUTTER: Yes, he is.

Q. (Mr. Coffield continuing.) Mr. Warfield, please state briefly what Harper seeks by this application.

A. Harper seeks approval of an 1120-acre unit located in Township 12 South, 34 East, of Lea County, New Mexico, for the purpose of drilling an 11,500 foot wildcat test to test the Pennsylvanian zones producing in the area.

Excuse me, did I say 11,500? 10,500 it should be, I'm sorry.

MR. NUTTER: Okay, I can make a zero out of a one.

Q. Okay, Mr. Warfield, please refer to what's been marked as Exhibit One and explain what this represents, this exhibit.

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1           A           Exhibit One is a land plat to locate the  
2 unit for you. It shows the unit outlined in red and the  
3 proposed location for the initial test is also indicated  
4 in red. The location is about twelve miles west of Tatum,  
5 New Mexico; about three miles west of the Ranger Lake Field;  
6 and about two miles northeast of Hightower East Field, as  
7 indicated by this plat.

8           Q           Okay, go to Exhibit Two and please ex-  
9 plain to the Examiner what that shows.

10           A           Exhibit Two is a structure map contoured  
11 on the top of the Bough A zone, or Pennsylvanian A, which  
12 shows our structural interpretation on which the unit  
13 outline is based and on which the initial location is based.

14                       Also indicated on this plat is a cross  
15 section, A-A', a west/east cross section along the north  
16 side of the unit, which will be a later exhibit.

17                       This map also indicates an expected poro-  
18 sity pinchout up-dip to the west and an oil/water contact  
19 through the key well, which we consider to be the Sunray  
20 No. 1 East Bagley unit, an older well located in Section  
21 9.

22                       I have some more discussion of the pros-  
23 pect, but we will need to refer to the cross section on  
24 that.

25           Q           Okay, then go on to Exhibit Three and ex-

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1 plain that, please, which is your cross section.

2 A Exhibit Three is a cross section in the  
3 north of the unit. It's a structural cross section hung  
4 on a subsea datum, which reflects the structural position  
5 of the various wells.

6 The third well from the left is the Sun-  
7 ray No. 1 East Bagley Unit Well. This well was initially  
8 drilled in 1955 and produced approximately 18,000 barrels  
9 of oil from the Bough C Zone, which on this section is  
10 colored lavender, or light purple.

11 Perforations are shown on the log. The  
12 other Bough Zones are also colored on this cross section.  
13 The A Zone, on which we are mapping, is colored red; the  
14 B Zone is colored orange.

15 Of these zones we consider the B Zone and  
16 the C Zone to both be potential pay zones for this test.  
17 Also, about 400 feet deeper is the Ranger Lake Zone. The  
18 perforations are also shown for some testing done by Sun-  
19 ray on this zone. This is colored green. This is the zone  
20 that produces in a large number of wells two to three miles  
21 east, on the east side of the map. Most of the Ranger  
22 Lake wells are older wells now, in Ranger Lake Field.  
23 These are either depleted or near depletion, and some of  
24 the wells to the east are now being plugged back for  
25 Bough C completions.

1 MR. NUTTER: Will your proposed well go  
2 to the Range Lake or just the Bough C?

3 A. It will go to the Ranger Lake. My anti-  
4 cipated depth is 10,500 feet, and 10,300 was about -- or  
5 about 290, I guess, was the top in the Sunray well. We  
6 expect to be 40 to 60 feet high to this well.

7 We're regionally up-dip. Regional dip  
8 is to the east in the area. The basis of the prospect,  
9 really, we expect to pinchout of the porosity in the Bough  
10 C Zone on the up-dip side of the prospect. This line is  
11 indicated on the map.

12 The evidence for this is the Stoltz (sic)  
13 well, which is immediately to the left on the cross section.  
14 The well had clean carbonates developed in the potential  
15 B and C Zones but tested gas-cut-mud on a drill stem test,  
16 as shown; however, pressures were fairly good on the drill  
17 stem test, so we think that well is close to the pinchout.

18 The well on the right was drilled by  
19 Western States subsequent to the Sunray well and was some  
20 40 feet lower structurally. This well tested only water  
21 in the zones that produced oil in the Sunray well and that  
22 had oil shows in the Sunray well.

23 The reason we expect actually three zones  
24 to be potentially productive is that the C Zone actually  
25 produced oil in the Sunray well, which I mentioned was a

1 total of 18,000 barrels. The well was later re-entered by  
2 Western States and perforated in essentially the same zone,  
3 produced another 16,000 barrels of oil, for a total of  
4 34,000 barrels, and then plugged.

5 In both cases a high volume of water was  
6 encountered along with the oil.

7 The Sunray well also drill stem tested,  
8 as shown on the cross section, 1500 feet of free oil in  
9 the top of the Ranger Lake Zone, which produces to the  
10 east, and as we expect to be structurally high and have  
11 porosity in all three zones, we believe one or more of  
12 these zones will produce at this location.

13 Q All right. Let's go on to Exhibit Four,  
14 then, Mr. Warfield, and discuss that exhibit.

15 A Exhibit Four was included to -- to show  
16 the producing horizons in the area, what wells have pro-  
17 duced from or are producing from. This map is color-coded  
18 identically to the cross section for ease of identification.  
19 There is a legend at the bottom. There's only one Bough  
20 A Zone producer in the area; this is in Hightower East.

21 The Bough B Zone is a common producer to  
22 the south in Hightower Field and, of course, Bough C has  
23 produced to the north in Four Lakes Field, which is in  
24 the upper righthand corner, and in wells currently being  
25 plugged back in Ranger Lake Field. The Ranger Lake Zone

1 wells are colored green.

2 Also on this map is indicated the cumu-  
3 lative production to 1-1-78 from these wells. There are  
4 good wells and poor wells but the lower half of the fraction  
5 is the cumulative production.

6 Above the fraction line was the 1977  
7 year's production. We didn't update this another year  
8 because the production hasn't changed that much. This  
9 gives a substantially accurate predictor or picture of the  
10 quality of the production in the area.

11 We expect reserves on 80-acre spacing in  
12 the Bough C and B Zones to be about 2000 barrels per acre  
13 or 160,000 barrels per zone from 80 acres.

14 The Ranger Lake Zone wells to the east,  
15 we have a fairly long production history on these wells  
16 and they have averaged right at 143,000 barrels per well.  
17 And we would have to be fortunate, I guess, to have all  
18 three zones produce in any well, but as you notice, the  
19 southwestern Hightower Field, there have been a number of  
20 wells that have produced from more than one zone and as  
21 far as I can determine, production in these wells has been  
22 commingled in some cases.

23 Q Okay, Mr. Warfield, in your study of the  
24 area and the structure which we propose -- or which Harper  
25 proposes to involve in this particular unit, is it your

1 opinion that the unit outline covers all, or substantially  
2 all, of the structure with which we're concerned?

3 A. Yes.

4 Q. Mr. Warfield, were these Exhibits One  
5 through Five either prepared by you or under your super-  
6 vision?

7 A. All of the exhibits were my own work ex-  
8 cept for the drafting and then that was under my super-  
9 vision.

10 Q. All right, and then in your opinion will  
11 the approval of this application of Harper Oil Company be  
12 in the interests of prevention of drilling of unnecessary  
13 wells, and otherwise prevent waste and protect correlative  
14 rights?

15 A. Yes.

16 MR. COFFIELD: Mr. Examiner, I move the  
17 admission of Exhibits One through Five.

18 MR. NUTTER: Exhibits one through Five  
19 will be admitted in evidence.

20 MR. COFFIELD: And I have no further  
21 questions of Mr. Warfield on direct examination.

22 MR. NUTTER: Are there any questions of  
23 Mr. Warfield? He may be excused.  
24  
25

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CLEM L. WARE

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

DIRECT EXAMINATION

BY MR. COFFIELD:

Q Mr. Ware, would you state your name and address.

A My name is Clem L. Ware, W-A-R-E.

Q And your address?

A I'm a District Landman for Clure (sic) Oil and Gas Corporation. I'm appearing at this hearing at the authority and in behalf of Harper Oil Company. I reside at Midland.

Q Mr. Ware, have you previously testified before the Oil Conservation Division as a landman?

A No.

Q Okay, for the benefit of the Examiner would you please give a brief resume of your educational background and your work -- employment experience?

A I completed my schooling at Wichita Falls, Texas, and I've been an operating landman for more than thirty years. I operated primarily, basically, for the last ten years as District Landman for Clure. Prior to that I was staff landman of Saguaro Petroleum Company.

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1 Prior to that I was landman, head of the Land Department,  
2 Assistant to the Vice President and President and Chairman  
3 of the Board of Neville G. Penrose, Incorporated.

4 And I've acted as an independent landman.

5 Q Mr. Ware, are you familiar with Harper  
6 Oil Company's application in this particular case?

7 A I am.

8 Q Are you familiar with the ownership of  
9 the lands involved and the property in the proposed unit  
10 area?

11 A I am.

12 MR. COFFIELD: Mr. Examiner, is the wit-  
13 ness considered qualified?

14 MR. NUTTER: Yes, he is.

15 Q (Mr. Coffield continuing.) Mr. Ware,  
16 would you please refer to what we've marked as Exhibit Six  
17 and Seven and explain these to the Examiner?

18 A Exhibit Six is a unit agreement for the  
19 development and operation of the West Ranger Lake Unit  
20 Area. It's prepared on the form presently approved by the  
21 Office of the Commissioner of Public Lands for the State  
22 of New Mexico.

23 The unit agreement provides for the com-  
24 mencement of a well on the unit area within 60 days from  
25 the date of approval of the unit. It provides for the

1 distribution of proceeds of production from the unit in  
2 an orderly manner.

3 This is a unit comprised of 1120 acres,  
4 consisting of entirely State-owned mineral fees. The  
5 leases have no particular problem timewise. The earliest  
6 expiration is 1982. We have a commencement date under a  
7 farmout agreement of July 15, 1979.

8 In between Exhibits Six and Seven is a  
9 series of ratifications indicating the agreement to and  
10 joinder of all of the owners of record title to these leases,  
11 plus the joinder of the only overriding royalty owner in  
12 the unit area.

13 We have attached as Exhibit Seven the  
14 unit operating agreement providing for the operation and  
15 development of the West Ranger Lake Unit Area.

16 I might point out to the Examiner that in  
17 the operating agreement there is a date of May 15, '79,  
18 which had by consensus of agreement been extended to July  
19 15, '79.

20 Q. That being for the commencement of the  
21 initial well?

22 A. That's for the commencement of the initial  
23 well.

24 MR. NUTTER: What page is that on, Mr.  
25 Ware?

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A. That would be on page four.

MR. NUTTER: Right. That's extended to --

A. July 15th, '79.

MR. NUTTER: July 15th. Thank you, all right.

A. Exhibit Seven is on the form commonly known as AAPL 19 -- AAPL-610, 1977 version.

Contained is an exhibit which shows a distribution of production on a beneficial interest basis.

Exhibit Six has attached to it an exhibit A which shows the outline of the unit area with the lessees of record and the current expiration dates of the leases involved.

It also has attached to Exhibit Six an exhibit C which describes the lands, the acres and serial numbers and expiration dates of the leases, the ownership and percentage of basic royalties, the lessees of record, and their current ownerships.

Q. Okay. Mr. Ware, has this unit agreement, proposed unit agreement, and the joinders, and so forth, been submitted to the -- to the office of the Commissioner of Public Lands for the State of New Mexico?

A. Yes, it has.

Q. And what has been the result of that submittal?

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1           A.           The Office of the Commissioner of Public  
2 Lands for the State of New Mexico has approved this unit  
3 agreement, subject to the contingent approval of the OCD.

4           Q.           Now, Mr. Ware, were you instrumental in  
5 the preparation of the unit agreement, unit operating  
6 agreement, and the ratifications otherwise identified as  
7 Exhibits Six and Seven?

8           A.           Yes.

9           Q.           In your opinion will the approval of this  
10 application be in the interest of the prevention of waste  
11 and protection of correlative rights?

12          A.           It will.

13                       MR. COFFIELD: I move the admission of  
14 Exhibits Six and Seven, Mr. Examiner.

15                       MR. NUTTER: Applicant's Exhibits Six and  
16 Seven will be admitted in evidence.

17

18                                       CROSS EXAMINATION

19 BY MR. NUTTER:

20           Q.           Mr. Ware, what number of the working in-  
21 terest owners have executed the unit agreement to date?  
22 What percentage?

23          A.           100 percent.

24           Q.           100 percent, and the overriding royalty  
25 owners?

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A. 100 percent.

Q. And you have consent from the royalty owner, so you're in good shape, then, as far as your unit agreements.

A. Yes, sir.

MR. NUTTER: Are there any further questions of the witness? He may be excused.

Do you have anything further, Mr. Coffield?

MR. COFFIELD: No, sir, I do not.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 6537?

We'll take the case under advisement.

(Hearing concluded.)

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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.

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Sally W. Boyd C.S.R.  
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete and true transcript of the proceedings in the Examiner's hearing of Case no. 6537 heard by me on 6/13 1979.

[Signature], Examiner  
Oil Conservation Division