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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

19 September 1984

EXAMINER HEARING

IN THE MATTER OF:

Application of Sun Exploration and CASE
Produciton Company for an unortho- 8311
dox location, Lea County, New Mexico.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Jeff Taylor
Division: Attorney at Law
 Legal Counsel to the Division
 State Land Office Bldg.
 Santa Fe, New Mexico 87501

For the Applicant:

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MR. STOGNER: We'll call next Case Number 8311, which is the application of Sun Exploration and Production Company for an unorthodox location, Lea County, New Mexico.

This case was also heard on August 22nd, 1984, and due to an advertisement error at that time it was subsequently readvertised for today.

We will now call for any appearances or additional testimony at this time.

It appears that there is none. The case will be taken under advisement.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY
that the foregoing Transcript of Hearing before the Oil Con-
servation Division was reported by me; that the said tran-
script is a full, true, and correct record of the hearing,
prepared by me to the best of my ability.

Sally W. Boyd CSR

Oil Conservation Division
dated by: Sept. 19 84
Michael E. Segura
Oil Conservation Division

1 STATE OF NEW MEXICO
2 ENERGY AND MINERALS DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BLDG.
5 SANTA FE, NEW MEXICO

6 22 August 1984

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Sun Exploration and
10 Production Company for an unorthodox
11 oil well location, Lea County, New
12 Mexico.

CASE
8311

13 BEFORE: Michael E. Stogner, Examiner

14 TRANSCRIPT OF HEARING

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17 A P P E A R A N C E S

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20 For the Oil Conservation
21 Division:

W. Perry Pearce
Attorney at Law
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State Land Office Bldg.
Santa Fe, New Mexico 87501

22 For the Applicant:

23 W. Thomas Kellahin
24 Attorney at Law
KELLAHIN & KELLAHIN
25 P. O. Box 2265
Santa Fe, New Mexico 87501

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I N D E X

NAT SUBRAMANIAM

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E X H I B I T S

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Sun Exhibit Two, Cross Section	9

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3 MR. STOGNER: We will now call
4 Case 8311.

5 MR. PEARCE: That case is on
6 the application of Sun Exploration and Production Company
7 for an unorthodox oil well location, Lea County, New Mexico.

8 MR. KELLAHIN: If the Examiner
9 please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing
10 on behalf of the applicant and I have one witness to be
11 sworn.

12 MR. PEARCE: Are there other
13 appearances in this matter?

14 (Witness sworn.)

15 MR. KELLAHIN: Mr. Examiner, we
16 have an error in the application. We would like to present
17 our testimony and have the case readvertised for the docket
18 of September 19th, with a notation in the call of that case
19 that evidence has been presented and without objection it
20 might be approved.

21 The change is in the location.
22 The location should be 2630 from the north line and 1625
23 from the east line. That moves it into the southwest of the
24 northeast quarter, which is shown in the advertisement.

25 The primary oil objective is
the Crossroads Devonian Pool but we would also seek approval

1
2 to drill to a total depth of the Granite and potentially
3 have an unorthodox location not only in the Devonian but the
4 Montoya, the Simpson, and the Granite Wash.

5 MR. STOGNER: Mr. Kellahin,
6 would you please repeat the location figures that will be
7 readvertised for September 19th, 1984?

8 MR. KELLAHIN: It will be an
9 unorthodox oil well location, 2630 from the north line and
10 1625 from the east line of Section 27, 9 South, 36 East.

11 MR. STOGNER: That's 2630 feet
12 from the north line and 1625 from the east line.

13 MR. KELLAHIN: Yes, sir.

14 MR. STOGNER: Thank you, Mr.
15 Kellahin.

16 NAT SUBRAMANIAM,

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

19 DIRECT EXAMINATION

20 BY MR. KELLAHIN:

21 Q Mr. Subramaniam, would you please state
22 your name and occupation for the Examiner?

23 A My name is Natarajan Subramaniam. I'm a
24 geologist with Sun Exploration and Production Company in
25 Dallas, Texas. I'm a geologist.

Q Mr. Subramaniam, have you previously tes-

1
2 tified as a geologist on behalf of your company before the
3 Oil Conservation Division?

4 A Yes, I have.

5 Q And pursuant to your presentation today
6 have you prepared certain geologic exhibits for considera-
7 tion?

8 A Yes, I have.

9 MR. KELLAHIN: We tender Mr.
10 Subramaniam as an expert petroleum geologist.

11 MR. STOGNER: He is so quali-
12 fied.

13 Q Let me direct your attention to the exhi-
14 bit that's marked as Number One, Mr. Subramaniam, and have
15 you first of all generally identify what this exhibit is.

16 A The exhibit depicts parts of Township 9
17 South, Range 36 East, in Lea County, New Mexico. The cen-
18 tral attention of the exhibit focuses on the Section 27,
19 which is the better part of the Crossroads Devonian Field.

20 Q All right, what is indicated by the yel-
21 low area in the east half of Section 27?

22 A That east half is the Sawyer lease, which
23 is under lease to Sun Exploration and Production Company.

24 Q Is the working interest and royalty own-
25 ership for the east half of Section 27 common throughout
that half section?

 A Yes, it is.

 Q Would you identify for us the proposed

1
2 unorthodox location?

3 A The proposed unorthodox location will be
4 2630 feet from the north line and 1625 feet from the east
5 line of Section 27 in Township 9 South, Range 36 East, Lea
6 County, New Mexico, which will put it in the southwest of
7 the northeast quarter of the said section.

8 Q What have you drawn on this exhibit?
9 What is this?

10 A The exhibit depicts a structure map drawn
11 on the top of the Devonian formation, which underlies the
12 Woodford shale.

13 The top of the Devonian similar to the
14 one in the area is generally accepted to be to the base of
15 the Woodford shale and the subsea elevations of such a sur-
16 face has been mapped and is depicted on this exhibit.

17 Q Are the wells that you've shown on this
18 exhibit Devonian oil wells?

19 A All of them are, yes.

20 Q All right, sir, would you identify for us
21 the four wells that surround the proposed unorthodox loca-
22 tion and explain to us why you're seeking a location at this
23 point in the structure of the Devonian.

24 A The proposed location is surrounded by
25 Wells No. 2, 3, 7, and 9 of Sun Exploration and Production
Company in the Sawyer lease.

 Presently the status of Well No. 9 is a
plug and abandonment.

1
2 The No. 3 is under production presently,
3 making 70 barrels of oil per day.

4 Well No. 7 is making presently at 94 bar-
5 rels of oil per day.

6 And the Well No. 2 is making 51 barrels
7 of oil per day.

8 The reason for the location is to effec-
9 tively drain the undrained reserves which still are existent
10 under the Well No. 9 location.

11 The Well No. 9 was tried to be re-entered
12 back in 1979; was found to have a casing leak and could not
13 be effectively recompleted; had high water cut in that well
14 and hence was commercially nonproducable.

15 Q What was the cumulative production on the
16 No. 9 Well up to the time it experienced mechanical diffi-
17 culties?

18 A 470,000 barrels of oil, whereas the
19 wells, No. 3 had made 3-1/2 million barrels; Well No. 2 --
20 Well No. 2 had made 3.1 million barrels; and Well No. 7 has
21 made 1.2 million barrels.

22 Q When did the Well No. 9 last produce oil
23 from the Devonian?

24 A In 1979.

25 Q Where do you anticipate the oil/water
contact to be in this structure, Mr. Subramaniam?

A It will be at -7950. The old oil/water
contact was mapped at -8050 but due to the depletion of the

1
2 reservoir, and since the Crossroads reservoir is a very
3 strong water drive reservoir, the water encroachment upward
4 is expected to be around -7950.

5 Q For purposes of drilling a well in the
6 Crossroads Devonian Pool, what is a standard location?

7 A It's a 40-acre spacing with allowable
8 wells drilled on 80 acres.

9 Q All right, sir, and where would a stand-
10 ard location be, then, within that area?

11 A It would be 330 feet from the quarter
12 quarter of either side of the -- from the south line of the
13 northeast quarter and the west line of -- the east line of,
14 excuse me, of the southwest of the northeast quarter.

15 Q And why have you not proposed a standard,
16 orthodox location?

17 A The reason for that is based on geologi-
18 cal structure. We would -- the proposed location is optimum
19 for not only being very high up on the structure but also to
20 be -- to avoid the oil/water contact, which would make the
21 well produce more water than oil.

22 Q In your opinion, Mr. Subramaniam, would
23 approval of this application violate anyone's correlative
24 rights?

25 A Not that I know.

Q All right, sir, and would it prevent
waste by allowing Sun to recover oil out of the Devonian
that might not otherwise be produced?

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A I agree with you on that.

Q All right, sir, let's go to Exhibit Number Two and have you identify that for us.

A Exhibit Number Two is a generalized cross section which runs south from Township 8 South, Range 37 East, through Township 10 South, Range 36 East. Township 8 South, Range 37 East is in Roosevelt County, while 20 South, 36 East is in Lea County.

The cross section runs through the Crossroads Devonian Field to depict as to how the geological formations would be in the subsurface.

Q Are there any wells in the Crossroads Field, Mr. Subramaniam, that produce or have the capacity to produce out of the Montoya or the Simpson or the Granite Wash?

A No. None of the wells have been drilled deeper than the Devonian.

Q All right, and why do you propose to drill this well to that depth?

A The structure on the Crossroads Devonian Field depicts a geological high and we would like to take a look at both the Montoya, at Montoya, Simpson, and Granite Wash, which we expect a wedge out of the Simpson on top of the Crossroads structure and have porosity both in the Granite Wash and the Montoya, which we would like to test for potential for producing oil.

Q And if any of those formations or pools

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produce oil, then your well location would be an unorthodox well location for any of those fields.

A Yes.

Q All right, sir. Were Exhibits One and Two prepared by you?

A Yes, they were.

MR. KELLAHIN: Mr. Examiner, we move the introduction of Exhibits One and Two.

MR. STOGNER: Exhibits One and Two will be admitted into evidence.

MR. KELLAHIN: That concludes our examination of this witness.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Subramaniam, on your Exhibit Number Two, the Shell No. 2 Well up north from your proposed well, you show that penetrating the Granite Wash but it did not produce, is that right?

A Yes, you're -- that's correct. The well was drill stem tested and recovered 8300 feet of salt water with a flowing pressure, tubing pressure of 4925 pounds.

Q In what formation?

A Both the Montoya and the Granite Wash. It was a single drill stem test run all the way from the top of the Montoya to the bottom of the Granite Wash.

Q How about the Ralph Lowe --

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A The Ralph Lowe was never tested, even though it was drilled down to the Granite, to the Granite Wash.

Q Do you know if while they were drilling, if they showed any kicks?

A Yes, they had, by electric log they had porosity both in the Montoya as well as the Granite Wash. It is a surprise to me as to why they were never tested.

Q Is that well, the Ralph Lowe Well No. 1, is that still producing in the Devonian?

A Yes, it is producing from the Devonian.

Q What will be the name of this well?

A This will be U. D. Sawyer No. 11.

Q Mr. Subramaniam, as you drill deeper down to the Granite Wash, you're expecting to hit oil and not gas, is that right?

A Yes.

Q If you hit oil in any of those formations, the Montoya, Simpson, or Granite Wash, would that 40-acre spacing?

A Yes, it would be.

Q This will be a second well on the -- that 40-acre proration unit in the Devonian, is that not right?

A Yes, you're correct.

Q And that would be second well to the U. D. Sawyer No. 3, is that right?

A Yes, you're correct.

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MR. STOGNER: I have no further questions of Mr. Subramaniam at this time.

Are there any other questions of this witness? If not, he may be excused.

Mr. Kellahin, do you have anything further in Case Number 8311 this morning?

MR. KELLAHIN: No, sir.

MR. SUBRAMANIAM: Thank you, Mr. Examiner.

MR. STOGNER: You're welcome, Mr. Subramaniam.

Is there anything further in Case Number 8311 at this time?

If not, this case will be continued and readvertised for the Division Hearing scheduled for September 19th, 1984.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

Received by me for the Oil Conservation Division
on August 22 8311
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Michael E. Shyne Examiner
Oil Conservation Division