

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

22 January 1986

EXAMINER HEARING

IN THE MATTER OF:

The disposition of cases called on  
Docket 3-86 but for which no testi-  
mony was presented.

CASE  
8635, 8782,  
8809, 8810,  
8773, 8811,  
8784, 8812,  
8806, 8689

*Transcript in  
Case 8812*

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

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

For the Applicant:

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 5 February 1986

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Sun Exploration and CASE  
10 Production Company for an unorthodox 8812  
11 gas well location, Lea County, New  
12 Mexico.

13 BEFORE: David R. Catanach, Examiner

14  
15 TRANSCRIPT OF HEARING

16  
17 A P P E A R A N C E S

18  
19 For the Division: Jeff Taylor  
20 Attorney at Law  
21 Legal Counsel to the Division  
22 State Land Office Bldg.  
Santa Fe, New Mexico 87501

23 For the Applicant: W. Thomas Kellahin  
24 Attorney at Law  
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## I N D E X

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MR. CATANACH: Call Case 8812.

MR. TAYLOR: The application of Sun Exploration and Production Company for an unorthodox gas well location, Lea County, New Mexico.

MR. CATANACH: Are there appearances in this case?

MR. KELLAHIN: Yes, Mr. Examiner.

I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant and I have two witnesses to be sworn.

MR. CATANACH: Are there other appearances in this case?

Will the witnesses please stand and be sworn?

(Witnesses sworn.)

JUDY ANN FERRIS,  
being called as a witness and being duly sworn upon her oath, testified as follows, to-wit:

## DIRECT EXAMINATION

1  
2 BY MR. KELLAHIN:

3 Q For the record would you please state  
4 your name and occupation?

5 A Judy Ann Ferris. I'm an exploration geo-  
6 logist.

7 Q Miss Ferris, have you previously testi-  
8 fied before the New Mexico Oil Conservation Division as an  
9 exploration geologist?

10 A No, I have not.

11 Q Would you tell the examiner when and  
12 where you obtained your degree in geology?

13 A I have a BS in geology which I received  
14 in 1975 from State University of New York, College at Cort-  
15 land.

16 Q Subsequent to graduation, Miss Ferris,  
17 would you summarize your work experience as an exploration  
18 geologist?

19 A I worked for four and a half years at  
20 Mobil Oil in Dallas in various positions relating to oil and  
21 gas exploration.

22 I've worked over six years at Sun as an  
23 oil and gas explorationist.

24 Q With the area of investigation in Lea  
25

1 County, New Mexico, have you conducted exploration geology  
2 for your company?

3 A Yes. I've been working this area for  
4 about three and half years.

5 Q During the course of your professional  
6 experience as an exploration geologist, Miss Ferris, can you  
7 approximate to the examiner what -- the number of prospects  
8 that you have developed in terms of exploration geology?

9 A At least 100.

10 Q With regards to this specific application  
11 by Sun, are you the exploration geologist that has developed  
12 this prospect?

13 A Yes, we worked it from the beginning.

14 MR. KELLAHIN: Mr. Examiner, I  
15 tender Miss Ferris as an expert exploration geologist.

16 MR. CATANACH: Miss Ferris is  
17 considered qualified.

18 Q Let me direct your attention to what is  
19 marked as Exhibit Number One and ask you to identify that  
20 exhibit.

21 A This is a subsurface structure map on the  
22 top of the Morrow formation.

23 Q Is this an exhibit that you prepared di-  
24 rectly?

25 A Yes, it is.

1           Q           Would you describe to the examiner what  
2 the proposed unorthodox location is for this well?

3           A           I'm not sure I understand your question.

4           Q           What is the footage location within the  
5 section for the well?

6           A           2080 feet from the north line and 600  
7 feet from the east line of Section 24.

8           Q           What is the proposed orientation of the  
9 spacing unit that will be dedicated to the well?

10          A           We would like a laydown unit in the north  
11 half of Section 24.

12          Q           Would you describe for us the information  
13 contained on Exhibit One? What does it show?

14          A           This is a subsurface structure map which  
15 means that the data which was used to derive this map comes  
16 only from well data. The wells shown are of various depths  
17 but the wells which penetrated Morrow are shown with circles  
18 around them. The remaining wells did not go deep enough to  
19 penetrate this horizon.

20          Q           Do you have an opinion as to what signi-  
21 ficance structure plays in making a decision or recommenda-  
22 tion as to a well location within this particular section?

23          A           Yes, I have a strong opinion about that  
24 and I believe that in this particular area, that structure  
25

1 is important in determining the well location.

2 Q Can you give us an approximation in terms  
3 of subsurface depth on structure and that relationship as  
4 determined by producing Morrow wells as shown on your Exhi-  
5 bit Number One?

6 A Okay. As relates to this first exhibit,  
7 we can start looking in Section 18 at a well which is high-  
8 lighted in green.

9 This well is in a structural low and al-  
10 though it had good Morrow sand, it was wet. It does not  
11 produced out of the Morrow.

12 Moving to the south you see three Morrow  
13 tests in 30, in Sections 30 and 29. These again are rela-  
14 tively low to our structure and of these, only one ever pro-  
15 duced out of the Morrow. It had a very low potential and in  
16 a course of four years has made only about a quarter of a  
17 BCF.

18 Again moving to the west in Section 36,  
19 another Morrow test had good sand but it was low and there-  
20 fore again had a low potential and has been plugged back to  
21 Bone Spring.

22 Moving to the west again, in Sections 27,  
23 28, 21, this is where we find good Morrow production, and  
24 you can see that relative to these other areas this is  
25 structurally high.

1                   And so we feel like that there is a cor-  
2 relation between structure and the quality of production.

3                   Q           Looking specifically within Section 24,  
4 now, can you identify for us the reasons you have proposed  
5 the unorthodox location as shown on the exhibit?

6                   A           We feel that the structure shown on this  
7 map which we're interested in, which includes, as shown, the  
8 west half of Section 18, west half of 19, and the east half  
9 of 24, is a fault block, and this fault -- the fault is lo-  
10 cated on the west side of the block causing the entire block  
11 -- or excuse me, the east side of the block, causing the en-  
12 tire block to slope to the west.

13                               And so by moving our location to the  
14 east, this is allowing to go -- allowing us to go up dip  
15 rather than down dip. We feel that if we went either north  
16 or south that we might be going in a strike direction rather  
17 than moving ourselves up dip.

18                   Q           And what if you move the well back to the  
19 west to a standard location?

20                   A           We feel like this would take us in a down  
21 dip direction and would be therefore a riskier location.

22                   Q           I see on Exhibit Number One that you have  
23 drawn between wells a line of cross section. Have you pre-  
24 pared a cross section?

25                   A           Yes, I have.

1           Q           Let me direct your attention, then, to  
2 Exhibit Number Two, and would you identify Exhibit Number  
3 Two for us?

4           A           This was a west/east structural cross  
5 section which showed the Atoka and Morrow formations.

6           Q           Would you, starting with the A and going  
7 ot A', starting on the west, would you identify the wells  
8 that are depicted on the cross section?

9           A           Okay. We're looking at four wells which  
10 are highlighted in green. If you'll look at the map you'll  
11 see the line of section and the four wells in green are the  
12 lines included on this cross section.

13                       Starting from the west we're starting up  
14 on the structure where we find our best production.

15                       Moving to the second well in Section 22,  
16 we've dropped down into a bit of a low and this well did not  
17 produce out of the Morrow. It's, in fact, completed out of  
18 the Strawn.

19                       We follow our line of section eastward  
20 from 22 into Section 24 to our proposed location, and you  
21 see that we drop into a broad low, which is shown on our  
22 structure map.

23                       We can see the reason why we have  
24 selected our unorthodox location to the east and we're mere-  
25 ly trying to move up dip on this structure.



1 my examination of Miss Ferris.

2 We move the introduction of  
3 Exhibits One and Two.

4 MR. CATANACH: Exhibits One and  
5 Two will be admitted into evidence.

6

7

CROSS EXAMINATION

8 BY MR. CATANACH:

9 Q Miss Ferris, was there any other  
10 geologic evidence that -- that helped you to map out this  
11 high structure?

12 A We have some geophysical data in the area  
13 which supported our interpretation.

14 Q Miss Ferris, on Exhibit Number One what  
15 does the yellow shaded area indicate?

16 A The yellow area represents the area in  
17 which Sun has an interest.

18 Q Miss Ferris, do you know how much of an  
19 interest Sun has in the west half of Section 19?

20 MR. KELLAHIN: Excuse me, Mr.  
21 Examiner, my second witness is the landman who provided the  
22 notices to the offset operators.

23 MR. CATANACH: Okay. I have no  
24 further questions, Miss Ferris.

25 MISS FERRIS: Thank you.

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DOUGLAS ALAN NOAH,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Sir, would you please state your name?

A Douglas Alan Noah. A-L-A-N N-O-A-H.

Q Mr. Noah, what is your occupation?

A Landman.

Q And for whom do you work?

A Sun Exploration and Production Company.

Q Have you previously testified before this  
Division --

A No.

Q -- as a landman?

A No, I have not.

Q Would you describe your educational back-  
ground and work experience as a petroleum landman?

A I have a BA in business administration I  
received in 1978 from Eastern Kentucky University, and for  
the past five and a half years I've worked for Sun as a  
landman in various areas of responsibility, Oklahoma, East  
Texas, West Texas, and for the past year and a half it has

1 been southeast New Mexico.

2 Q Does your area of responsibility as a  
3 landman include the acreage involved in this application?

4 A Yes, it does.

5 Q Are you familiar with the land ownership  
6 involved in Section 24 and have you made a determination of  
7 who the offset operators are within the area affected by the  
8 proposed location?

9 A Yes, I have.

10 MR. KELLAHIN: We tender Mr.  
11 Noah as an expert petroleum landman.

12 MR. CATANACH: He is considered  
13 qualified.

14 Q Let me direct your attention, Mr. Noah,  
15 to Exhibit Number Three, as well as Exhibit Number One, and  
16 let's start with Exhibit Number One and describe to the exa-  
17 miner what the significance is of the yellow area shaded on  
18 the exhibit.

19 A The yellow acreage are five leases, four  
20 Federal and one State lease, that Sun is record title owner  
21 to and we control a 45 percent interest in. There are three  
22 other owners that also own interest in that, in the shaded  
23 acreage.

24 Q Do those interest owners participate with  
25 Sun in the subject well?

1           A           Yes, sir.

2           Q           Have you made a determination of the own-  
3           ership of any other offset operators other than Sun towards  
4           which the proposed unorthodox location is moving?

5           A           Yes, I have. We have sent notice to Con-  
6           oco, who is the only owner that we affected by this applica-  
7           tion. Under my direction Dan Camp of Sun's Midland office  
8           sent Conoco a waiver. They have executed the waiver and we  
9           have received it back.

10          Q           And is that contained as part of the at-  
11          tachments to Exhibit Number Three?

12          A           Yes, it is.

13                               MR. KELLAHIN: That concludes  
14          my examination of Mr. Noah.

15                               We move the introduction of Ex-  
16          hibit Number Three.

17                               MR. CATANACH: Exhibit Number  
18          Three will be admitted in evidence.

19

20

CROSS EXAMINATION

21 BY MR. CATANACH:

22          Q           Mr. Noah, what acreage does Conoco hold?

23          A           They control the southwest quarter of  
24          Section 18.

25          Q           And the west half of Section 19 is -- you

1 say that Sun has a 45 percent in that?

2 A Yes, sir.

3 Q Who else besides Sun owns an interest in  
4 that?

5 A Santa Fe Energy Company, Santa Fe Explor-  
6 ation Corporation, is it company or corporation, Tenneco Oil  
7 Company are the other three. We are the designated operator  
8 of this particular block of acreage with those four, four of  
9 us.

10 Q And as the designated operator you would  
11 speak for this company as far as something like this is con-  
12 cerned.

13 A They are -- we are in agreement that this  
14 is the optimum location for the well and they have agreed to  
15 participate in the well.

16 MR. CATANACH: I have no fur-  
17 ther questions of Mr. Noah.

18 Are there any other questions?

19 MR. KELLAHIN: No, sir.

20 MR. CATANACH: Is there any-  
21 thing further in Case 8812?

22 MR. KELLAHIN: Not from us,  
23 sir.

24 MR. CATANACH: If not, it will  
25 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 the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) 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

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 8819 heard by me on February 5 1986.

David H. Catant, Examiner  
Oil Conservation Division