STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
Santa Fe, New Mexico

18 March 1987

EXAMINER HEARING

IN THE MATTER OF:

Application of Sage Energy Company for an unorthodox oil well location, Lea County, New Mexico. CASE 9105

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

For the Applicant: W. Thomas Kellahin
Attorney at Law
KELLAHIN, KELLAHIN & AUBREY
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I N D E X

E X H I B I T S

MR. CATANACH: Call next Case Number 9105.

MR. TAYLOR: The application of Sage Energy Company for an unorthodox oil well location, Lea County, New Mexico.

MR. CATANACH: Are there appearances in this case?

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of Sage Energy Company and Mr. Jay Hardy is my engineering witness.

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

Will the witness please stand and be sworn in?

(Witness sworn.)

JAY HARDY,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Hardy, for the record would you please state your name and occupation?

A My name is Jay Hardy and I'm a petroleum engineer for Sage Energy Company in Midland, Texas.

Q Mr. Hardy, have you previously testified before the Division as a petroleum engineer and had your qualifications accepted and made a matter of record?

A Yes, I have.

Q Would you summarize for the examiner -- let's turn to Exhibit Number One and perhaps use that as an example.

First of all, summarize for the examiner approximately where the well is located and what the potential producing formation is for the well.

A The proposed well is the John Etcheverry No. 2, located by the red dot in Section 29, Township 14 South, 34 East, and it's located 1100 feet from the west line, 560 feet from the south line in Section 29.

Q What is the pool to which this well will be dedicated?

A This is the Tres Papalotes West Penn Field.

Q All right, sir, West Tres Papalotes Penn,

I think.

A Yes.

Q All right. And what is the spacing in that pool, Mr. Hardy?

A It's 160 acre spacing.

Q Would you describe for the Examiner what the well location rules are for the West Tres Papalotes Penn Pool?

A Right. The standard location is 150 feet from the center of a quarter quarter.

Q And your proposed location is at what footage location?

A It's 1100 feet from the west line and 560 from the south line.

Q That location will make it too close to one of the interior quarter quarter section lines within your 160-acre spaced unit.

A That's correct.

Q All right, you're not moving closer to an outer boundary than permitted by the rules.

A That's correct.

Q As a result of not crowding an outer boundary, are there any other operators or working interest owners that you're encroaching towards or to which you might affect?

A No, sir.

Q Have you made a study of the facts that surround your application?

A Yes, I have.

MR. KELLAHIN: At this point, Mr. Examiner, we tender Mr. Hardy as an expert petroleum engineer.

MR. CATANACH: Mr. Hardy is so qualified.

MR. KELLAHIN: Mr. Examiner, it is our understanding that because Sage Energy is moving closer to an internal 40-acre boundary and is not encroaching on an outer boundary, we have not notified any of the offsetting operators that have wells adjacent to the 160-acre tract. We believe that's a correct understanding of the notice rules. If it is not, then we'll have to provide some notice which we have not yet done.

MR. CATANACH: That's correct, Mr. Kellahin.

Q Mr. Hardy, let's turn now to Exhibit Number Two. Again locate for us the well.

A The proposed well is listed there as No. 2 and it's shown as the red dot, which is located once again 1100 feet from the west line and 560 feet from the south line.

Q All right, let's use Exhibit Number Two, then, to identify the exhibit and to show specifically where the well location is in reference to the 40-acre line that separates the southwest of the southwest from the southeast of the southwest.

A I believe it would be 220 feet from that particular line.

Q All right, and -- and the rule would require that you be 510 to that line and so if you take 510 and subtract the 220 from it, you're going to get the difference for the encroachment.

A That's correct.

Q All right. You're 290 feet too close, I understand.

All right, describe for the examiner what it is that you're showing on the structure map.

A This is structure map that really shows that structure does not play a great part in the development of this field. This field is mainly a stratigraphic trap.

Q Okay. Let's turn to Exhibit Number Three and look at the information depicted on that exhibit. Would you again identify for us how you've located the subject well?

A Well, once again the subject well is the red dot in Section 29 in the southwest of the southwest.

Q What is Exhibit Number Three?

A Exhibit Number Three is an Isopach of the main Tres Papalotes zone, our contour interval being two feet; the porosity cutoff is 5 percent or greater, and also on this map is some drainage radius -- the map also shows the drainage radius circles based on the cumulative production of the wells that are in the center of the circle. And inside the circle there's a number there, which is also inside a circle, and that's the cumulative production of the well itself.

Q If you were at the closest standard location for a well in this 40-acre tract, where would that place you on the Ispach?

A I would be at 660 out of the corner there or on the -- about the 16-foot contour.

Q What is your reason for not wanting to locate the well at that position?

A We feel that that well at that position would be too close to a well which is in the southeast of the southeast of 30 and has produced 156,000 barrels of oil and has been plugged. We're afraid that we might encounter too much drainage by being too close to that particular well.

Q If you had to go to the 40-acre tract in the southeast of the southwest, would you have a drillable

location at the closest standard location within that 40-acre tract?

A You have have a drillable location but we don't particularly like that one, either.

Q All right, that puts it in proximity to that dry hole that's indicated to the east on the plat?

A That's correct.

Q With regards tothe 160-acre unit then, the optimum location is the proposed unorthodox location?

A In our opinion it is.

Q All right, and what can you accomplish at that location?

A Well, at that location there we feel that we will recover approximately 50,000 barrels of oil remaining, which has not been recovered by any of the offsetting wells.

Q And is that additional recovery that you, in your opinion as a petroleum engineer, believe cannot and will not be recovered by current wells?

A In my opinion that's correct.

Q Let's turn to Exhibit Number Four, Mr. Hardy, and have you identify that exhibit.

A Exhibit Number Four is a cross section going --

Q Did you prepare this exhibit?

A No, I didn't but someone prepared it at my direction.

Q And have you reviewed the information contained on this exhibit and satisfied yourself that it's true and accurate to the best of your knowledge?

A Yes, I have.

Q And have you relied upon this exhibit in formulating your opinions and conclusions?

A Yes, I have.

Q First of all, would you help orient us by showing us the -- taking the schematic or the plat on the right side and showing us the location of each of the wells as we go across the cross section and then come back and tell us the information that you want to draw our attention to?

A Okay. The cross section starts down in there in Section 30 on the southeast of the southeast. It goes to the well producing in the northwest of the southwest of Section 29, the John Etcheverry No. 1, and then we have our projected location, which is shown just as a borehole.

And then it, the cross section goes up to A', which is a dry hole, the John Etcheverry No. 1-A, which is also A' on the cross section.

Q What's the significance of the red shading on two of the logs on the cross section?

A The -- that red shading designates the porosity cutoff of approximately 5 percent that we call the cutoff, and in following it from the wells from left to right you can see it goes to zero on the dry holes.

Q What opinions do you draw as an engineer form the information contained on the cross section?

A Well, that this particular field here is a stratigraphic play and it's limited by the dry hole that we have up there on the far righthand side of the cross section, and which is also shown on the Isopach.

And so projecting that down to our location here, we're fairly close to a dry hole and that's why we don't want to go any further to the east of this thing.

Q As you move east, then you become more standard in your location yet the geologic and engineering data available to you demonstrates to you that's less favorable than the proposed location.

A It's definitely more risky, yes.

Q All right. In order to minimize the risk involved for your company, Mr. Hardy, in your opinion will approval of this application prevent waste and protect correlative rights?

A I believe it will.

Q Will it allow you an opportunity to recover oil that you might not otherwise produce?

A That's correct.

Q Were Exhibits One through Four prepared by you or compiled under your direction and supervision?

A Yes, they were.

Q When do you propose to commence your well, Mr. Hardy?

A We would like to commence this well Monday.

Q All right. This is on fee acreage?

A Yes, it is.

MR. KELLAHIN: That concludes my examination of Mr. Hardy. We would move the introduction of his Exhibits One through Four.

MR. CATANACH: Exhibits One through Four will be admitted into evidence.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Hardy, you indicated that there were approximately 50,000 barrels of reserves. Is that total reserves?

A That's total reserves.

Q How did you calculate this?

A Just with volumetrics based on the area that is outside those circles.

Q The area that is outside the two drainage circles --

A Right.

Q -- that you have indicated?

A Right, uh-huh.

Q Have you calculated the drainage area for the well located in the southeast southeast of 30?

A No, I haven't, but it would be -- as you can see, it would intercept the circles I do have there.

Q So with your proposed location you are moving towards a less net pay zone, right?

A That's correct.

Q Is that well in the southeast quarter, the southeast of Section 30, is that still producing?

A No, it's not. It's plugged.

Q How long did it produce, do you know?

A It produced until '84, from 1972 to '84.

Q Mr. Hardy, what's the current status of the well located in that same quarter section, Section 29, the --

A The John Etcheverry No. 1?

Q Yes, sir.

A Right, that's producing. It's making 5 barrels a day, no water.

Q Who's the operator of that well?

A We are.

Q Are you going to continue producing that well?

A If we can. If I have to shut it in, I'll shut it in.

Q But you would -- would you like to simultaneously dedicate those two wells to the proration unit?

A Yes, I would.

Q Mr. Hardy, have you done a calculation that shows the additional amount of oil you would recover at the proposed location rather than drilling a standard location at the southwest quarter southwest quarter?

A No, I haven't.

Q Do you have any idea what that -- you say you don't know what that might be?

A No, I don't, but I'm really afraid of the drainage that has taken place from the well in the southeast of the southeast.

Q Do you think that well actually drained 160 acres?

A I don't think it drained 160 acres but it came over into Section 29.

MR. CATANACH: I have no further questions of the witness. He may be excused.

Is there anything further in

Case 9105?

If not, it will be taken under advisement.

(Hearing concluded.)

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. 905, heard by me on March 18 1987.

David L. Catanach, Examiner
Oil Conservation Division

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

March 26, 1987

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Re: CASE NO. 9105
ORDER NO. R-8418

Applicant:

Sage Energy Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

FLORENE DAVIDSON
OC Staff Specialist

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other