STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	)	CASE NO. 11,367
APPLICATION OF CHEVRON U.S.A., INC.	)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

ORIGINAL

BEFORE: DAVID R. CATANACH, Hearing Examiner

August 24th, 1995

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, August 24th, 1995, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

August 24th, 1995
Examiner Hearing
CASE NO. 11,367

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E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	7	13
Exhibit 2	8	13
Exhibit 3	9	13
Exhibit 4	10	13
Exhibit 5	10	13
Exhibit 6	11	13
Exhibit 7	12	13

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APPEARANCES

FOR THE DIVISION:

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FOR THE APPLICANT:

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By: WILLIAM F. CARR

* * *

WHEREUPON, the following proceedings were had at 9:09 a.m.:

EXAMINER CATANACH: At this time we'll call Case Number 11,367.

MR. CARROLL: Application of Chevron U.S.A., Inc., for directional drilling, an unorthodox bottomhole oil well location, and a nonstandard oil proration unit, Lea County, New Mexico.

EXAMINER CATANACH: Are there appearances in this case?

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm Campbell, Carr and Berge.

We represent Chevron U.S.A. in this matter, and I have one witness.

EXAMINER CATANACH: Any additional appearances?

Will the witness please stand to be sworn in?

(Thereupon, the witness was sworn.)

DAVE RITTERSBACHER,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

Q. Will you state your name for the record, please?

A. My name is Dave Rittersbacher.

Q. Mr. Rittersbacher, by whom are you employed?

A. I'm employed by Chevron U.S.A. in Midland, Texas.

Q. And what is your current position with Chevron?

A. I'm a petroleum geologist.

Q. Have you previously testified before this Division?

A. Yes, I have.

Q. At the time of that testimony, were your credentials as a petroleum geologist accepted and made a matter of record?

A. Yes, they were.

Q. Are you familiar with Chevron's plans to directionally drill its Lea "YL" State Well Number 2?

A. I am.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER CATANACH: Yes, they are.

Q. (By Mr. Carr) Mr. Rittersbacher, would you first summarize for the Examiner what Chevron seeks in this case?

A. Chevron proposes to re-enter our Lea "YL" State Number 2 well, which is located 2230 feet from the south line, 2310 feet from the east line. This is Unit Letter J in Section 2 of Township 17 South, Range 37 East.

Q. Now, that is an unorthodox surface location, is it not?

A. That's right, we plan to directionally drill to an unorthodox bottomhole location 2600 feet from the north line, 1700 feet from the east line. We propose that our bottomhole location be within 50 feet of the 2600-from-north and 1700-from-east directions.

Q. The original unorthodox location for the Lea "YL" State Well Number 2 was previously approved by the Division, was it not?

A. Yes, it was.

Q. And that was Order Number R-9325?

A. Right.

Q. Are you also seeking approval of a nonstandard oil proration unit for this well?

A. Yes, we are. We're seeking approval of an 80-acre proration unit. It would be comprised of the southwest of the northeast quarter of Section 2 and the northwest of the southeast quarter of Section 2.

Q. In what pool will this well be completed?

A. This will be completed in the Shipp-Strawn Pool.

Q. And what are the well-location and acreage-dedication requirements for this pool?

A. Standard locations for this pool require that wells be within 150 feet of the center of a governmental quarter-quarter section, and it requires that a standard proration unit be 80 acres within a quarter section and

that 80 acres be the north half, south half, east half or west half of a quarter section.

Q. And so your nonstandard proration unit isn't that you don't have the appropriate number of acres; it's that you are extending it across a quarter section line?

A. That's right.

Q. Have you prepared certain exhibits for presentation here today?

A. Yes, we have seven exhibits to present today.

Q. Could you refer to what has been marked for identification as Chevron Exhibit Number 1, identify the exhibit and review the information on this exhibit for Mr. Catanach?

A. Chevron Exhibit Number 1 is a map showing the existing proration units in Section 2. It's labeled "Proration Unit Map". It encompasses all of Section 2 of 17 South, 37 East. It shows three active proration units within the section. They are outlined by the heavy black line.

It shows our Lea "YL" State Number 2 well, which is located in the northwest of the southeast, and it shows a line showing our directional drilling plans to a location 2600 feet from the north, 1700 feet from the east within Section 2.

Q. Bottomhole location is actually 130 feet closer

to the east line of the dedicated acreage than authorized by the field rules?

A. That's right. The well location would encroach to the east 130 feet.

Q. Other wells have been directionally drilled in this section, have they not?

A. Right, we have two other wells within this section that have been directionally drilled.

The first one that I'll reference is in the northwest of the southwest. The State 2 Number 1 was directionally drilled to an unorthodox location to the southwest where it was drilled from a dryhole location to a producer. That's an active proration unit.

The other well that was directionally drilled to a nonstandard location is in the northeast of the southeast of Section 2, and it was drilled from a dryhole location to the northeast, to a well that produced from the Strawn and is now plugged and abandoned.

Q. All right, Mr. Rittersbacher, let's go to Exhibit Number 2. Can you identify and review that exhibit?

A. Exhibit Number 2 shows the same section 2 of 17 South, 37 East. It's labeled "Operator Map", and it shows the operators and working interest owners in Section 2.

It shows the Lea "YL" State Number 2 well, which is located in the northwest of the southeast, and our

directional drilling location 2600 feet from the north and 1700 feet from the east.

It also shows the proposed proration unit as a dashed line that's 80 acres in the southwest of the northeast and the northwest of the southeast.

All of the operators shown on this map have been notified of today's hearing.

Q. Would you generally describe for the Examiner the characteristics of the Strawn formation in this area?

A. The Strawn formation, our interpretation of its reservoir characteristics is that it's an algal mound buildup, it's a limestone, and reservoir is found in the thickest portions of these buildups. We try to target a well location within the thickest part of the mound, because we feel you have the best chance of reservoir development there.

Q. Let's go to Exhibit 3. Will you identify that, please?

A. Exhibit 3 again shows Section 2. It's labeled "Strawn Isopach Map". This isopach map is contoured on a 20-foot contour interval and the contour map was constructed by a 3-D seismic shoot. We have a 3-D seismic grid that covers all of Section 2, with data points spaced every 110 feet.

The mound that we're targeting begins with a 200-

foot contour and increases in 20-foot increments where we feel the maximum thickness is 260 feet in thickness, and that's where we've targeted our bottomhole location, within this mound.

The proposed 80-acre proration unit was chosen because we feel that that proration unit best represents the majority of the mound's volume.

Q. All right, let's go to Exhibit Number 4. Can you explain what this is?

A. Exhibit Number 4 is titled "Target Strawn Mound Volumetrics", and it's a follow-up to Exhibit Number 3, where we have calculated the acre-foot volume of the mound that we had contoured.

The total contour volume is 537 acre-feet. Within the proposed proration unit exists 445 acre-feet. And then the last line is a calculation, 445 acre-feet divided by 537 acre-feet, shows that 83 percent of the mound as contoured would be within the proposed proration unit.

Q. Now, Mr. Rittersbacher, I'd ask you now to review how Chevron proposes to drill the well, and I think you should refer to Chevron's Exhibit Number 5.

A. Figure Number 5 was prepared for Chevron by Baker-Hughes, a directional drilling company.

What we plan to do with the Lea "YL" State Number

2 is pull the existing 5-1/2-inch casing, then we'd like to kick off in the open hole at a depth of 9500 feet and begin to build angle. We'd like to build our angle out to about 22 degrees and continue on down to a bottomhole location of 11,800 feet true vertical depth. And that would put us at the proposed bottomhole location of 2600 feet from the north line, 1700 feet from the east line.

We plan on taking directional surveys a minimum of every 100 feet, and we'll take them more frequently if we feel that our directional program is not going the way that we anticipate.

Q. When the well reaches total depth, you will have a survey of the entire wellbore, will you not?

A. Yes, we will.

Q. And will you provide a copy of that to the Oil Conservation Division?

A. Yes, we will.

Q. Is Exhibit Number 6 a copy of an affidavit confirming that notice of this Application has been provided to all affected offsetting operators, as required by Oil Conservation Division rules?

A. yes, it is, and within it are copies of the certified mail green cards showing that each of the offset operators has been notified.

Q. Have you received waivers to this proposal from

offsetting operators?

A. Yes, we have. The two non-Chevron working interest owners to the east upon which we are encroaching have both provided waivers, and that is Exhibit Number 7 of copies of waivers provided by Conoco and Bechtel.

Q. And so if we look back at Exhibit Number 2, that shows that you're actually encroaching on the tract, the working interest in which is owned by Conoco, Chevron and Bechtel, correct?

A. That's correct. Chevron owns a 25-percent working interest in the tract to the east.

Q. And so the only interest owners who could be adversely affected by the unorthodox location have waived objection to it?

A. That's correct.

Q. In your opinion, will approval of this Application and the directional drilling of the subject well result in the production of hydrocarbons that otherwise would be left in the ground?

A. It will.

Q. In your opinion, will approval of this Application be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes, it will.

Q. Were Exhibits 1 through 7 either prepared by you or compiled at your direction?

A. They were.

MR. CARR: At this time, Mr. Catanach, we move the admission into evidence of Chevron USA Exhibits 1 through 7.

EXAMINER CATANACH: Exhibits 1 through 7 will be admitted as evidence.

MR. CARR: And that concludes my direct examination of Mr. Rittersbacher.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Rittersbacher, was this well drilled by Chevron?

A. Yes, the Lea "YL" State Number 2 was originally a Chevron well.

Q. And was it drilled as a dryhole?

A. No, sir, it produced from the unit below the target mound, called the Strawn sandstone, and that's just Chevron terminology. It produced 5000 barrels of oil and has been shut in since 1993.

Q. Did it just not encounter any of the algal mounds?

A. It encountered -- If we move to Exhibit Number 3, which is the isopach, you'll see that it encountered a

thickness of 179 feet of total Strawn section, but that section was tight and was not capable of production.

What we hope for is that by moving towards the thicker mound to the east, we will encounter better reservoir development.

Q. The offset well to the east, the State MTS Number 1, did that produce from this same mound?

A. No, it again produced from what we call the Strawn sandstone. It made about 25,000 barrels of oil and is currently plugged and abandoned.

Q. Has Chevron used 3-D seismic in this area to map these algal mounds before?

A. No, this is our first 3-D shoot in the Shipp area.

Q. Do you know if 3-D seismic is effective in mapping these mounds?

A. Well, we feel that it is because we can correlate the producing wells that you see on this map with fixed Strawn intervals.

Q. Is it accurate enough to tell you where that thickest portion of that mound is?

A. Within reason, it is. We can't tell, you know, within several feet. But again we're on 110-foot spacing, so we have a data point every 110 feet, and there could be variability in between that. But it gives us a pretty

reasonable idea, on that kind of grid, of where the thickest portion is.

Q. Do you know what kind of reserves you're looking at recovering if you encounter production?

A. We're looking at -- We're generally going by analogy of other features of this size, and we hope that we'll be in the range of 100,000 to 200,000 barrels of oil.

Q. The 5-1/2-inch casing is set at TD at this point in time?

A. Right, and the top of cement is about 10,500 feet.

Q. So you're going to cut the 5-1/2 above that depth and pull it --

A. Yes, sir, that's our plan.

Q. -- and kick off from the vertical at 9500 feet?

A. Right.

EXAMINER CATANACH: I have nothing further, Mr. Carr.

MR. CARR: That concludes our presentation in this case.

EXAMINER CATANACH: There being nothing further, Case 11,367 will be taken under advisement.

(Thereupon, these proceedings were concluded at 9:23 a.m.)

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CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL August 27th, 1995.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11367, heard by me on 8/24 1995.

David R. Catanach, Examiner
Oil Conservation Division