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. 12,340
APPLICATION OF DAVID PETROLEUM CORPORATION FOR AN UNORTHODOX OIL WELL LOCATION, LEA COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

February 3rd, 2000

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, February 3rd, 2000, 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

February 3rd, 2000
Examiner Hearing
CASE NO. 12,340

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E X H I B I T S

Applicant's	Identified	Admitted
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A P P E A R A N C E S

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By: WILLIAM F. CARR

* * *

WHEREUPON, the following proceedings were had at 9:02 a.m.:

EXAMINER CATANACH: All right, at this time we'll call Case 12,340.

MS. HEBERT: Application of David Petroleum Corporation for an unorthodox oil well location, Lea County, New Mexico.

EXAMINER CATANACH: Call for appearances in this case.

MR. CARR: May it please the Examiner, my name is William F. Carr. I'm with the Santa Fe law firm Campbell, Carr, Berge and Sheridan. We represent David Petroleum Corporation in this matter, and I have potentially three witnesses.

EXAMINER CATANACH: Okay, call for additional appearances.

Okay, will the three witness please stand to be sworn in?

(Thereupon, the witnesses were sworn.)

MR. CARR: Mr. Examiner, initially just a couple of things to be sure we don't get confused partway through.

The well is at a proposed unorthodox location 1330 feet from the south line and 1150 feet from the west line of Section 11. This well is an unorthodox location for a Strawn oil well, but it will be at a standard

location in the deeper zone.

This well has also been the subject of a couple of administrative applications. Initially, in October of 1999, Yates Petroleum Corporation filed an administrative application for the well. The location was a little different than the location being sought today. The original location proposed was 1330 from the south line, but it was 1080 feet from the west line.

That application was denied. David Petroleum Corporation refiled at a new location. The Division set that application for hearing, but inadvertently used the old well location. So just to be sure that -- There is some variation in the well location as set forth in some of the exhibits, but it is correctly advertised and it is correctly on the docket, and it is 1330 feet from the south line and 1150 feet from the west line.

EXAMINER CATANACH: So noted.

MR. CARR: All right. Our first witness is Mr. Bill Owen.

BILL OWEN,

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 full name for the record,

please?

A. Bill Owen.

Q. And where do you reside?

A. Roswell, New Mexico.

Q. By whom are you employed?

A. David Petroleum Corp.

Q. What is your position with David Petroleum?

A. Land manager.

Q. Mr. Owen, have you previously testified before this Division?

A. Yes.

Q. At the time of that testimony, were your credentials as an expert in petroleum land matters accepted and made a matter of record?

A. Yes.

Q. Are you familiar with the Application filed in this case?

A. Yes.

Q. Are you familiar with the proposed unorthodox well location and the status of the lands in this area?

A. Yes.

MR. CARR: We tender Mr. Owen as an expert witness in petroleum land matters.

EXAMINER CATANACH: Mr. Owen is so qualified.

Q. (By Mr. Carr) Would you briefly state what David

Petroleum Corporation seeks with this Application?

A. It's an order approving an unorthodox oil well location for our proposed C.O. Jones "ATK" State Com Well Number 1, which is a well to be drilled at this unorthodox well location in the Strawn formation, 1330 feet from the south line, 1150 feet from the west line, which is in Unit L of Section 11, Township 16 South, Range 35 East, Lea County, New Mexico.

Q. Mr. Owen, would you identify what has been marked as David Petroleum Exhibit Number 1?

A. Exhibit Number 1 is a series of letters, a correspondence between either David Petroleum or Yates Petroleum and the OCD. The first item is Item Number A, is the original application filed by Yates, back on October the 7th of 1999.

The second one is Number B, which was a letter of denial to Yates Petroleum.

Item Number C is an application by David Petroleum to the OCD which shows the currently proposed location. That was an application by David Petroleum for an administrative approval.

And then Item Number D is a letter back from the OCD to David Petroleum dated January the 3rd, which set this particular case for hearing today.

Q. Let's go to David Petroleum Exhibit Number 2.

Identify and review that, please.

A. This is a land plat showing our well location. It shows the dedicated spacing unit that we are proposing, which is the north half of the southwest quarter, and it shows the location of the well, which is again just ten feet from the southern boundary of this 80-acre spacing unit.

Q. Is the south half of the southwest of Section 11 dedicated to a well?

A. Yes, there's currently a well that's being drilled in the south half of this particular quarter section, which is the same name well, but it's the Number 2 well.

Q. And so the only acreage available in this 160-acre tract is the north half of the southwest?

A. That's correct.

Q. Mr. Owen, are there any affected parties to whom notice of this Application should be provided pursuant to Oil Conservation Division Rules?

A. Well, this particular tract of land, it's a state lease, a State of New Mexico lease, which covers the entire southwest quarter, and the working interest and the royalty interest ownership in the offsetting acreage to the south is identical to that of the acreage that we're drilling in the north half of the southwest.

Q. And there are no affected parties to whom notice should be provided?

A. No, that's correct.

Q. Is all working interest voluntarily committed to the well?

A. Yes.

Q. Will David Petroleum call a geological witness to review the technical portions of this Application?

A. Yes, we will.

Q. Were Exhibits 1 and 2 either prepared by you or compiled at your direction?

A. Yes, they were.

MR. CARR: At this time, Mr. Catanach, we move the admission into evidence of David Petroleum Corporation Exhibits 1 and 2.

EXAMINER CATANACH: Exhibits 1 and 2 will be admitted as evidence.

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

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Owen, this well location was amended at some point. Do you know why that occurred?

A. Basically just additional geological and geophysical review. When the Application was originally

sent in by Yates Petroleum, the location that everybody felt most comfortable with was the 1330 from the south, but that part of it has never changed, and was 1080 feet from the west line, and scientists have just -- subsequent to that, just did additional review. When we knew we were going to have to propose the location again, we went ahead and revised the location to its current location.

Q. Now, this Application was originally filed by Yates Petroleum. What is your association with this?

A. We're partners with Yates Petroleum, and in this particular prospect, this area right here, we own the majority interest.

Q. And will David Petroleum be drilling this well?

A. Yates Petroleum will be the actual operator.

Q. Yates will operate. And drill?

A. Yes.

Q. And you said there's currently a well being drilled in the south half of that quarter section?

A. Yes, sir, that's the -- It's the same well, same named well, except it's the Number 2. It's the C.O. Jones "ATK" State Com Number 2 well, which is currently being drilled in the south half, southwest quarter.

Q. That's being drilled by Yates?

A. Yes, sir.

Q. And is that at a standard location, do you know?

A. No, it's not. Actually, it's a directional well that's being drilled from east -- excuse me, from west to east. It's --

MR. CARR: Mr. Catanach, that is at a standard location.

THE WITNESS: Did we end up starting that standard?

MR. CARR: Yes, 300, 330.

EXAMINER CATANACH: Okay.

THE WITNESS: Yeah, I would make sure that you understood that. That is -- The surface location is a standard location. It's unusual in a sense because it's a directionally horizontal well being drilled in there.

Q. (By Examiner Catanach) Okay. And within the southwest quarter, that is a single state lease?

A. Yes, sir.

Q. And the interests in the south half and north half of that quarter section are exactly the same?

A. Yes, sir.

Q. There seemed to be some question, at least in Mr. Stogner's opinion, of what pool this might be in. Do you know that this, in fact, is going to be placed in an 80-acre pool?

A. This -- That part of the testimony actually will be covered by our geologist.

EXAMINER CATANACH: Okay. That's all the questions I have of this witness.

MR. CARR: At this time we call Mr. McKamey.

KEITH E. McKAMEY,

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 full name for the record?

A. Keith E. McKamey.

Q. Mr. McKamey, where do you reside?

Q. By whom are you employed?

A. David Petroleum.

Q. And what is your position with David Petroleum Corporation?

A. Senior geologist.

Q. Have you previously testified before this Division?

A. Yes, I have.

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

A. Yes, they were.

Q. Are you familiar with the Application filed in this case?

A. Yes, I am.

Q. Have you made a geological study of the area surrounding the proposed well?

A. Yes, I have.

Q. And are you prepared to share the results of your work with the Division?

A. Yes, I will.

MR. CARR: We tender Mr. McKamey as an expert witness in petroleum geology.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Carr) Mr. McKamey, what is the primary objective in the proposed well?

A. The primary objective is the Strawn zone.

Q. And what pool do you believe this well is properly in?

A. Big Dog-Strawn South.

Q. Could you explain to the Examiner -- and you may want to refer to your Exhibit Number 3 -- explain to Mr. Catanach why the well has been designated as a South Big Dog-Strawn Pool well?

A. Certainly. The closest producing well, Mr. Catanach, is the Lusk Number 2 in the northwest corner of our map. That is located -- That proration unit is the south half, northwest, and we will be drilling adjacent to that in the north half of the southwest of 11.

The closest 40-acre pool, which is the Shoe Bar-Strawn Shoe Bar feature, is down in the lower left-hand corner, which is Section 15, and the bottom part of the map, which is Section 14.

Q. This spacing unit is actually contiguous with the spacing unit in the South Big Dog-Strawn?

A. Correct, whereas --

Q. And it would not be with the 40-acre pool?

A. That's correct.

Q. Is the South Big Dog-Strawn operated under special pool rules?

A. There is special pool rules in that 80-acre field.

Q. And they provide for the 80-acre spacing?

A. They do provide for the 80-acre spacing.

Q. And do they also provide that wells shall be located no closer than 330 feet to the outer boundary of the dedicated acreage?

A. That's correct.

Q. So we're seeking an exception to that, correct?

A. That's correct.

Q. Are there secondary objectives in this well?

A. Yes, there are secondary objectives. The Cisco zone, which the closest well is also the Lusk Number 2, it's in the Townsend-Permo-Upper Penn field, and we do have

an Atoka-Morrow objective, which the closest well is the Lusk Number 1, which is just due north of our proposed location, and it's a wildcat Atoka field.

Q. Let's go now and look at Exhibit Number 3, and I would ask that -- the Strawn gross isopach, and I'd ask you to review the information, the geological information, on the exhibit for the Examiner.

A. This is a gross isopach map on the Strawn interval. The thickest portions of the map represent the best wells. As you can see, 140 feet is the thickest part of the interval, and all the 140-foot thicks have been drilled with the exception of our initial location. The Lusk Number 2 is a thick at 140 feet of Strawn interval. The Runnels Number 2, which is in the southeast of 11, is also a producing Strawn well with 140 feet of thickness. And the wells down in Section 14, which is on the south end of the map, are also 140 feet of thickness or better, and I'm referring to the Mayfly Number 2 as the producer there.

So the only 140-foot thickness well that has not been drilled is the C.O. Jones Number 1, located in the north half of the southwest of 11.

Q. And if we look at this exhibit, we can see that all the other thicks have a well in them; is that right?

A. That's correct.

Q. Is there any other well in this reservoir that

could drain this particular thick?

A. Not in this reservoir, and we will get to that in the next exhibit, which is a map that outlines the geometry of that reservoir.

Q. Are you ready to go to the --

A. Yes, sir.

Q. -- seismic information? Let's go to Exhibit Number 4. Identify this exhibit and the various component parts of it, and then review it for Mr. Catanach.

A. This is a 3-D seismic trace map, accompanied with a Strawn-Atoka isochron in the lower left-hand corner. The top left-hand corner is a base map that shows you the orientation of the line and the trace on the right.

The north-south line is Line 227, which is the trace section on the left. The east-west line is Trace Number 37, and it's the line on the right.

Typically, this reservoir is explored by using isochron thicknesses, using 3-D, and the map in the lower left-hand corner represents that isochron thickness and the geometry of that reservoir. And the yellow portion of that reservoir geometry represents the thickest in the commercial part of the reservoir that I have identified as 140 feet of thickness on Exhibit Number 3.

Q. If we look at the proposed location and compare it to the isochron, in fact, you are on the northern edge

of the thickest portion of the reservoir; is that not right?

A. That is correct.

Q. And that is the reason you must go as far south with this well as possible?

A. That's exactly right. Any well drilled further north increases risk and potentially less porosity and less thickness.

Q. To make a successful well here, you must get into the thickest part of the reservoir?

A. That's correct.

Q. And that's the objective here?

A. That's the objective, to eliminate risk.

Q. What impact does this location have on the risk associated with the drilling of the well, other than just the thickness of the Strawn? Are there other formations?

A. There is an Atoka-Morrow formation that reduces the risk in this location. Our Atoka-Morrow objective is only prospective in this location, and you can see that in the seismic lines. The Atoka-Morrow formation is a zone that you look for in the troughs of these lows, and the north-south line and the east-west line exhibits that trough.

You do not find a trough to the west in an L location, but rather this location here will test that, and

that substantially reduces the risk for this location.

Q. And this would be in the Atoka-Morrow and infill well as provided by the Rule 104; isn't that right?

A. That's correct.

Q. What conclusions have you reached from your study of the area?

A. Well, this is economically more feasible to drill the well in this location for the sense that you have two reservoirs that's potentially productive. And the seismic, 3-D seismic, indicates that this is the only place in that 80-acre proration unit that a well could be made.

Q. If you're unable to drill this well to test the Strawn, is it possible that reserves would be left in the ground and therefore wasted?

A. Yes, we would probably not drill it.

Q. If you had to move to the north, would you not drill the well?

A. Probably would not drill it.

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

A. Absolutely.

Q. Were Exhibits 3 and 4 either prepared by you or compiled under your direction?

A. Yes, they were.

MR. CARR: Mr. Catanach, at this time we would move the admission into evidence of David Petroleum Corporation Exhibits 3 and 4.

EXAMINER CATANACH: Exhibits 3 and 4 will be admitted as evidence.

MR. CARR: That concludes my direct of Mr. McKamey.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. McKamey, this well will be drilled to what depth?

A. I think the proposed TD is 12,700 foot, thereabouts. It's actually to top the Mississippian, to completely penetrate all Atoka-Morrow zones.

Q. If you were to encounter Atoka-Morrow production, do you know if that would be a south-half 320-acre dedication?

A. West half, Mr. Catanach --

Q. West half?

A. -- and we will be sharing allowable with another well in the southeast northwest, so it's an infield sharing allowable type of well.

Q. On Exhibit Number 3, am I correct in understanding that the wells that have the solid green dots

in the middle, are those actually producing wells in the Strawn?

A. That's correct.

Q. And those are wells that have essentially drilled into the thick -- 140-feet-thick gross isopach?

A. That's correct. The wells that are currently being drilled are the C.O. Jones Number 2, which we have just finished logging on. The Mayfly 1 well has been completed as a gas well. They have moved -- a new location in the Mayfly 5, which is due east of that; that is currently being drilled. The Mayfly 3 well is being completed, or attempting completion, as we understand it. And the Mayfly 2 is a completed oil well. The Runnels 2 north of that, in the southeast of 11, is a completed oil well in the Strawn. And the Lusk 2 is a completed oil. The "AQK" Number 2 re-entry, which is west of the Lusk 2, is an old Townsend-Wolfcamp well that's currently inactive.

Q. On the C.O. Jones Number 2 well, that was -- That's a directional well, right?

A. Correct.

Q. And that started -- The surface location is shown as the western location?

A. That's correct, 330 from the south and west, which is standard.

Q. And that was drilled directionally to the east

portion of that proration unit?

A. That's correct.

Q. Is that well productive, or is it --

A. We don't know yet. We've just run logs. We anticipate that we may have some productive interval in that well.

Q. So the main objective in that well was to penetrate -- or to target the 140-foot-thick Strawn?

A. There is, as you can see, a thick ridge running kind of northwest-southeast, running through from the Lusk 2 down to the Jones Number 1, through the Jones Number 2, lateral projection into the Mayfly wells in Section 14. That is the thick trend of that isopach.

Q. Mr. McKamey, are these the typical pods that you see in the Strawn formation in this area?

A. They're very small.

Q. So the one that you're targeting in the Jones Number 1 well, do you know what the extent of that structure is?

A. We have represented that extent in the Strawn-Atoka isochron in Exhibit Number 4, which you see barely crosses the half-section line but probably is not connected to the Lusk Number 2. The 140-foot isochron thickness on Exhibit Number 3, Mr. Catanach, is a representation of the yellow color on the Strawn-Atoka isochron.

Q. So that -- you believe that is a separate structure?

A. That's right, separate pod buildup, actually.

Q. And the majority of that pod looks to be within the south half of that quarter section?

A. Yes, that's correct, but separate from the well that we've tested in the Jones Number 2. We do not feel like we've tested that particular buildup in that horizontal well. So we don't think that any -- If we do establish production in that well, we don't think any drainage will affect the Jones Number 1 location. So therefore, reserves will be left in the ground if it's undrilled.

Q. I'm just curious why that well wouldn't -- wouldn't you want to -- You're drilling on the northern boundary of that structure. Wouldn't you want to drill more in the center of that structure?

A. If we did, we'd have two wells in that same 40, because the Jones Number 2 is already in that 40, and it's also in the 40 to the east of it, so then we'd have to share allowable. And we feel like we could adequately drain that structure with the location as is, however if it's moved any other direction we perhaps may not even find it.

Q. Well, let me ask you this. The way that you've

got that structure configured or mapped out, are you going to be draining any reserves from the north half of that quarter section?

A. Where we have the well located, we expect to drain the north half of the southwest, yes.

Q. That structure appears to be mainly situated on that south half?

A. That's where the thickest part of it is situated, that's correct.

Q. You're saying that part of that structure extends onto that north half?

A. Exactly, that's right.

Q. But you don't have it mapped out that way?

A. Not in the 140-foot thick. It is represented to be 130 foot thick or better, that's the next line of isopach thickness.

Q. So you're saying that's what you believe the productive limits of the reservoir would be, down to the 130-foot?

A. I do believe the 130-foot interval adds to reservoir volume. However, lots of times we don't find the porosity until we get in 140 foot or better. As a matter of fact, that's been the case every time.

Q. That's been the general rule in this whole area, that you have to have 140 feet?

A. Yes, sir.

Q. Can you show me instances where that's not been true in this area?

A. I don't know of any instances that that has not been true. It's been true in every well so far. The Lusk 2 has 140 foot, the Runnels 2 has 140 foot, and the Mayfly 2 has over 140 feet. And no other wells have established production with less to this date.

Q. No other wells have established production?

A. Not to my knowledge.

Q. What's the Lusk Number 1?

A. It is an Atoka-Morrow well.

Q. That's not a Strawn well?

A. No, sir.

Q. Has that tested in the Strawn?

A. Yes, it was, and it was dry.

Q. Is this typically the 3-D seismic that you use in this area to determine well locations?

A. It is. We use the 3-D seismic to give us a feel of the geometry of the reservoir, like you see on the isochron map. The 3-D geology is also used to depict porosity, and it's also indicative of isochron thickness as well.

Q. Mr. McKamey, do you know if these wells -- Have you had experience with drilling these wells in this area?

Do you know if they exhibit any tendency to drift at all?

A. Most of the wells in this area do drift a little, but never beyond 1 1/2 to 2 degrees in a vertical wellbore.

Q. Is it possible that your bottomhole location may, in fact, not even be on the proposed proration unit?

A. We intend to take a security measure and take downhole surveys and correct to make sure that we can obtain the bottomhole location we intend to.

Q. What about any potential for uphole completions?

A. The Cisco-Townsend-Upper Permo-Upper Penn zone is prospective uphole. It's about 11,000 feet. It's about a 10- to 15-foot-thick zone that is currently producing in the Lusk Number 2 well. That is a 40-acre proration unit.

Q. That is a 40-acre -- That's an oil pool?

A. Yes, sir, standard statewide rules, I believe, apply there.

Q. Anything above there?

A. No, sir. There are some Wolfcamp zones in the Townsend field that are potentially prospective, but we feel like they may be drained already. We may evaluate those zones through drill stem tests as we drill through, to see if they have been drained.

Q. Mr. McKamey, if this location is not approved, what is the proposal? What would you do? You would just not drill a well in that north half?

A. We feel like the Atoka-Morrow may be too risky to drill on its own, so I feel like that it probably will not be drilled, without a Strawn to reduce the risk. And the Strawn is our primary objective.

EXAMINER CATANACH: I believe that's all the questions I have.

MR. CARR: That concludes our presentation of Mr. McKamey, and that concludes our presentation in this case.

EXAMINER CATANACH: Okay. There being nothing further in this case, Case 12,340 will be taken under advisement.

(Thereupon, these proceedings were concluded at 9:35 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 12340, heard by me on February 3, 2000.

David K. Catanach, Examiner
Oil Conservation Division

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 February 6th, 2000.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002