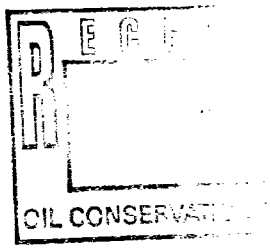
STATE OF NEW MEXICO

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:

APPLICATION OF H.L. BROWN, JR.

CASE NO. 11,382

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

ORIGINAL

BEFORE: DAVID R. CATANACH, Hearing Examiner

September 21, 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, September 21st, 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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Examiner Hearing
CASE NO. 11,382

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A P P E A R A N C E S

FOR THE APPLICANT:

KELLAHIN & KELLAHIN
117 N. Guadalupe
P.O. Box 2265
Santa Fe, New Mexico 87504-2265
By: W. THOMAS KELLAHIN

* * *

WHEREUPON, the following proceedings were had at 8:34 a.m.:

EXAMINER CATANACH: At this time I will call Case 11,382, the Application of H.L. Brown, Jr., for a unit agreement, Eddy County, New Mexico.

Are there appearances in this case?

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing on behalf of the Applicant, and I have two witnesses to be sworn.

EXAMINER CATANACH: Any additional appearances? If the two witnesses would stand to be sworn in, please.

(Thereupon, the witnesses were sworn.)

MR. KELLAHIN: Mr. Examiner, this is an exploratory voluntary unit that H.L. Brown is seeking approval for. It already has the preliminary approval of the Commissioner of Public Lands, the Bureau of Land Management.

It contains federal, fee and state acreage.

The primary target for the initial unit well is going to be a Devonian test.

My first witness is Mr. Brown's petroleum landman, Mr. Peter Courtney.

PETER COURTNEY,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Peter Courtney. I'm land manager for H.L. Brown, Jr., in Midland, Texas.

Q. On prior occasions, Mr. Courtney, have you testified before the Division as a petroleum landman?

A. Yes, I have.

Q. And as part of your duties with regards to land management matters for your company, have you been responsible for consolidating the acreage and obtaining the various regulatory approvals for the formation of what we've described on the docket as this voluntary exploratory unit?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Courtney as an expert petroleum landman.

EXAMINER CATANACH: Mr. Courtney is so qualified.

Q. (By Mr. Kellahin) Mr. Courtney, let's turn to what's marked as Exhibit 1 for the moment and identify for the Examiner what you have proposed for a unit boundary,

and then let's talk about the various leases contained within that boundary.

A. Okay, the proposed unit is in Township 24 South, Range 23 East of Eddy County and comprises all of Sections, 27, 28, 33 and 34.

Q. When you look at the caption, have you identified for the Examiner the total acreage as best you can determine within the unit and then how that acreage is divided among state, federal and fee tracts?

A. Yes, I have.

Total acreage contained within the unit is 2560 acres and that is broken down, 1520 acres of state land, 920 acres of federal and 120 acres of fee land.

Q. On Exhibit 1, within the boundary of the unit, have you identified how we might recognize the individual leases that compose the unit?

A. Yes, I have.

Q. And how do we see that?

A. I've broken it down by tract numbers, 1 through 7.

Q. Can you identify for us how we would distinguish the state, federal and fee tracts each from the other?

A. On Exhibit 3, we have included the breakdown of the various leases.

Q. All right. And also on Exhibit 1 you have

indicated if it's a fee or a state or a federal tract?

A. That's correct.

Q. All right, sir. Let's turn to Exhibit 2, then. Would you identify and describe what's shown on Exhibit 2?

A. Exhibit 2 is the state/federal/fee exploratory unit agreement.

Q. How did you come to use this particular form?

A. This was the newest revised form given to us by the BLM.

Q. In fact, it's been revised as of July of 1995?

A. That's correct, as shown on the front page.

Q. Have you determined from the Commissioner of Public Lands and the Bureau of Land Management that this form is suitable and acceptable to them for use as your unit document?

A. Yes, I have.

Q. As part of the attachments to your unit agreement, have you prepared what is known as an Exhibit B?

A. Yes, sir.

Q. And how is that identified in the exhibit package presented to the Examiner?

A. It's Exhibit 3 of this case, and it's Exhibit B to the unit agreement.

Q. Have you satisfied yourself that the information contained with regards to the lease tabulation is accurate

and correct?

A. Yes, I have.

Q. And has it been accepted and approved by both the BLM and the Commissioner of Public Lands?

A. Yes, sir.

Q. As to both form and content?

A. Yes, sir.

Q. Let's turn now to Exhibit 4. Would you identify and describe Exhibit Number 4?

A. Exhibit 4 is a letter dated August 25th, 1995, from the United States Department of the Interior, giving preliminary approval of the unit.

Q. As part of that approval, did you negotiate with the Bureau of Land Management the approximate location of the initial unit well that will qualify as the unit well?

A. Yes, sir.

Q. And have you agreed upon a plan of development with regards to the unit?

A. Yes, sir, we have.

Q. Has the Bureau of Land Management approved the configuration as to size and shape of the unit?

A. Yes, sir.

Q. Let's turn to Exhibit Number 5. Would you identify and describe Exhibit 5 for us?

A. Exhibit 5 is a letter from the State of New

Mexico, Commissioner of Public Lands, dated September 19th, giving preliminary approval of the unit.

Q. Again, does the Commissioner of Public Lands provide preliminary approval as to the unit size and shape?

A. Yes, sir.

Q. And as to an initial unit well and its approximate location?

A. Yes, sir.

Q. Are there any special limitations or unusual circumstances with regards to this particular unit?

A. No, sir.

Q. With regards to the initial unit well and its location, have you obtained an approved application for a permit to drill that well?

A. Yes, sir.

Q. Is that identified and marked as an exhibit in this case?

A. Yes, sir, it is.

Q. And what exhibit is it, sir?

A. Exhibit 6.

Q. All right. With regards to the land issues that you have dealt with, are there any use limitations within any of the leases dedicated to the unit that have made it more difficult to determine where and how to drill this particular well?

A. Yes, sir, there are.

Q. Describe for the Examiner, using Exhibit Number 1, what the unusual circumstances are that limit the typical development and access to the tracts.

A. Okay. The two federal leases located in Sections 33 and 34, which are tracts 1 and 2, are surface use limitation leases.

Q. As regards to those surface use limitations, what specifically limits their use?

A. No surface occupancy.

We'd have -- In order to drill, we would have to sidetrack underneath these tracts. We couldn't drill on these lands.

Q. What's the problem with the surface that precludes its use?

A. Carlsbad Park is to the south of this block.

Q. Are you talking about the Carlsbad National --

A. -- National Park.

Q. Carlsbad Caverns National Park?

A. Yes, sir.

Q. All right. And so there's a surface use within that area precluding you from access?

A. Yes, sir.

Q. All right. And so what's the plan then?

A. The plan would be, upon discovery of the initial

well, to further develop the lands we would need to drill and sidetrack wells to properly and efficiently drain or produce the federal leases I've talked about.

Q. So your initial well is to be located in Unit Letter K of Section 28?

A. Yes, sir.

Q. To the best of your knowledge, do you satisfy and meet all the regulatory requirements for the drilling, casing and cementing of this particular well in this fashion?

A. Yes, sir.

Q. Describe for us the voluntary nature of the unit insofar as the working interests are concerned. Who are those parties?

A. H.L. Brown, Jr., is the only leasehold owner and owner in this block.

Q. Okay. In your opinion, Mr. Courtney, would approval of this Application, from a land perspective, provide for the efficient and economic exploration of this prospect that you cannot otherwise achieve on competitive leasehold development?

A. Yes, sir.

Q. Can you give us an idea of why you hold that opinion?

A. For one -- The lack of drilling activity in the

past on these four sections. None of these four sections has been drilled.

The surface use occupancy limitation in the two southern sections limit us there.

We feel that this would -- the unit would be the best way to explore and develop in an efficient manner these four sections.

Q. In the absence of approval of the unit, it would be very difficult for you and Mr. Brown to develop in an efficient manner the potential hydrocarbons that exist within these particular tracts?

A. Yes, sir.

MR. KELLAHIN: That concludes my examination of Mr. Courtney.

We move the introduction of his Exhibits 1 through 6.

EXAMINER CATANACH: Exhibits 1 through 6 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Courtney, why would it be difficult to develop these in the absence of a unit agreement?

A. Due to the fact there's so many leases involved in these four sections, and again with the surface limitations on the southern sections.

Q. Is there any depth limitation within this unit, or is it from the surface to whatever?

A. Yes, it's all depths.

Q. Are there any -- Within this unit, are there any royalty interest owners besides the state and the feds?

A. There is a fee owner.

Q. Oh, there is a fee owner.

A. The fee tract is shown on page 3, Exhibit 3.

Q. I'm sorry, the tract number is what?

A. Tract Number 7, on page 3 of Exhibit 3.

Q. Have you been in contact with those royalty interest owners?

A. Yes, we have.

Q. They've no objection to the unit?

A. No, sir.

Q. Are there special drilling procedures for this area that you know of?

A. No, sir.

Q. The BLM has approved your drilling permit though?

A. Yes, sir.

Q. I'm sorry, this is on -- this initial well is on state land?

A. Yes, sir.

Q. Okay. So the OCD has approved your...

A. Yes, sir.

EXAMINER CATANACH: I have nothing further of the witness.

FURTHER EXAMINATION

BY MR. KELLAHIN:

Q. Let me follow up one point, Mr. Courtney, for clarification.

The bottomhole target for this initial well is under the federal tract, is it not?

A. No, it is on the state tract.

Q. So you're going to bottom this well within the state tract?

A. Yes, sir.

Q. Mr. Catanach, I think, was alluding to the BLM karst drilling requirements in this area. Do they apply to any portion of the unit?

A. No, sir.

Q. They would be farther south, then?

A. South and to the east.

Q. South and to the east. And they're -- So you're not impacted by the BLM karst drilling requirements?

A. That's correct.

MR. KELLAHIN: All right, sir. Nothing further.

EXAMINER CATANACH: The witness may be excused.

MR. KELLAHIN: Mr. Catanach, our next witness is a petroleum geologist. His name is Jim Hughes.

JAMES L. HUGHES,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A. My name is James L. Hughes. I'm an exploration geologist for H.L. Brown in Midland.

Q. There's a hum of a fan, Mr. Hughes. You'll have to keep your voice up so that we can all hear you.

As part of your employment for Mr. Brown as a geologist, have you made a geologic investigation with regards to this unit?

A. Yes, I have.

Q. And as part of that study, have you reduced your investigation and your conclusions to some geologic displays that we might review?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Hughes as an expert petroleum geologist.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) Let's turn to what we've marked as Exhibit 7, Mr. Hughes, and first of all help us get oriented as to where we are.

A. This is a structure map on the top of the Devonian in southeast Eddy County, covering several hundred square miles. It is a --

Q. When we --

A. Sorry.

Q. The Devonian is the primary target of the initial unit well?

A. Yes, it is.

Q. And why have you chosen that to be the initial target?

A. The quality of the reservoir, which we'll see in a later exhibit, is capable of hosting several million barrels of reserves, and the geologic setting here, we feel, is perfect for the entrapment of the Devonian as a primary objective.

Q. All right. Is there any Devonian production or Devonian attempts within the unit boundary?

A. No, sir, there are not.

Q. Describe for us how you have determined that the proposed unit boundary is a logical boundary size and shape by which to give you the ability to explore for potential Devonian production in this area.

A. As you can see on Exhibit 7, there are two fault systems, one basically trending northeast-southwest and the other northwest-southeast. This prospect is at the

intersection of those two, which is commonly referred to in the Permian Basin as a pop-up or trapdoor-type structure.

And in coming to this intersection, which we'll see later on Exhibit 8, the Devonian beds are sealed in such a fashion that they'd be up against each -- other nonporous beds at the fault. As they come up to this intersection, we have multiple levels of the faulting, depending on the amount of displacement of this.

And so by shaping the unit in this fashion, we get to look at the potential of each one of these fault blocks as it comes to this major intersection of these two structural features.

Q. Within each fault block there is sufficient displacement that that should provide a seal to hydrocarbon flow from one side of the fault to the other?

A. We anticipate that, yes.

Q. Within the particular unit, there are two defined fault blocks. There's an east fault block and, if you will, a west fault block?

A. Yes, sir.

Q. Within the west fault block there is a red dot. What is that to represent?

A. That is our proposed location.

Q. If that is successful and the unit continues, what commitment has H.L. Brown made to the BLM and the

State Land Office with regards to the second fault block within the unit?

A. In six months' time we will move to Section 27, at some standard location within that, based on terrain and regulatory rules, and drill a second well.

Q. Are you the geologist that made a personal presentation of the geologic information to both the Commissioner of Public Lands personnel and to the BLM personnel upon which preliminary approval was obtained?

A. Yes, sir, I am.

Q. Let's go to the next display and have you identify and describe what we've marked as Exhibit 8.

A. Exhibit 8 is a larger scale at the top of the Devonian, showing the same fault-block presentation as on the regional, smaller-scale map.

Q. We can now more specifically see your proposed unit and the configuration of the geologic interpretation as it fits that unit. You have some additional information, though, that I'd like you to describe.

First of all, let's start with the line of cross-section. What does that represent?

A. It represents really a means to get back to our type log, which is the Humble Number 4 Huapache in Section 14. It's an example of the type of reservoir -- the reservoir quality that we're anticipating in the Devonian.

Q. When we look at the log for the well in Section 30, in your opinion is that your best type log in this area by which you then have inferred the information about the Devonian?

A. Yes, sir, it is.

Q. Let's take a moment and to go that display, then. If you'll turn to Exhibit 9, let's talk about your objectives as you see them within the unit, using this type log.

A. The first is the Atoka, at around 5400, which had a small show of gas on drill stem test.

There are various other porosity zones as you come down the hole, with the primary one being the Siluro-Devonian, which tested 4185 feet of sulfur water out of the porosity section at the top of the Devonian.

The additional porosity you see on that type log, we feel, is every bit as significant as the upper part, which gives us some 125 feet of total porous section.

Q. How do you use that information to draw any conclusions about the unit to the east?

A. The standard barrel-of-oil-per-acre-foot-type presentation that we see all over the Permian Basin in southeast New Mexico and west Texas would lead us to believe that with these porosity values and the amount of anticipated closure, we could be looking at from 8 to 10

million barrels of oil in the upper block and possibly the same in the lower block on this unit.

Q. Let's go back to Exhibit Number 8 now and have you summarize for us the logic of the proposed initial unit boundary for the unit which contains these four sections.

A. As we see the prospect, the fault intersection allows us multiple blocks across here, the highest being, of course, off our acreage over here, and we're not entirely sure of its location or boundaries.

But within our unit itself -- the first we will refer to is the closing 2000-foot -- minus 2000-foot contour, encompasses a large portion of Section 34 and 33, which have surface use restrictions, and on to the downthrown or the second block, which we'll call -- or refer to as the minus-5000-foot block.

Those will take specific tests to evaluate and explore the potential. A test in 28, of course, will be a straight hole.

But a subsequent test to evaluate and fully develop the part in Section 33 and 34 will require drilling down a straight hole, setting a plug and directionally drilling under this.

To some extent, the same thing will be required in the Section 27 or the 5000-foot block.

So it will take a good deal of observation in

terms of time to get a decline profile on these things, these wells, to see in fact if they are worth the additional expense and effort it will take to develop them.

Q. There's a data point which represents position A' on the cross-section, but if we're looking at Exhibit 8 it will be shown within Section 26 where there's a Yates Petroleum --

A. Yes, sir.

Q. The Dark Canyon State Number 1 well?

A. Right.

Q. What's the significance to you of that data point?

A. It gives us conclusive boundaries on the amount of displacement that is in this fault system as you go from west to east, plus the fact that the Yates Inexco Dark Canyon well conducted a drill-stem test in the Devonian at this subsea and recovered, as I recall, nearly 2000 feet of sulfur water, which indicates that the porosity development that we see up here in our type log continues across this block and, should we be fortunate enough for it to be trapped, will also be a very high reserve potential area.

Q. As a result of that well's inability to produce hydrocarbons out of the Devonian, do you see any reason for the inclusion of any portion of Section 26 within the unit?

A. No, sir, not at this point.

Q. Describe for me what you see to be the advantages of the flexibility of a unit operation as a geologist over what you would be compelled to do if this was simply competitive leasehold development.

A. A competitive leasehold development would require certain contractual obligations to be met in a time sense that we feel would be slightly unfair since we're going to have to directionally drill and drill in one more than one fault block.

And we may find upon actually drilling this that there are more fault blocks than actually we can see at this point based on the data that we have.

So it will allow us to prudently and efficiently evaluate our next step in each case.

Q. Does this means of exploration under a unit concept allow all interest owners to achieve a fair and equitable share of production if that production is obtained?

A. In our opinion, yes, sir, it does.

MR. KELLAHIN: That concludes my examination of Mr. Hughes.

We move the introduction of his Exhibits 7, 8 and 9.

EXAMINER CATANACH: Exhibits 7, 8 and 9 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Hughes what did you use to map these faults out?

A. Two -- Basically two things.

There is a surface expression of these faults that occupy a position a little bit further to the west than they actually do in the subsurface.

And the second thing, and certainly more conclusive, was a 1970-vintage seismic line that we purchased and reprocessed, and in that we could see these three breaks or faults, if you will.

The other thing that -- In the initial stages of developing the idea, the Huapache fault system has been -- it's referred to as a monocline or a fault -- has been well known since sometime in the mid-Sixties as Exxon, or Humble in those days, and various other people have drilled various wells across in an east-west fashion looking for this.

So we took the existing data as we saw it from a regional standpoint and further defined it by walking the surface and picking these out and then tying it back to the seismic.

That seismic line is shown starting over in NM-369 in Section 23 and continues to the west, to Section

19, I believe.

Q. How were you able to map -- Based on that seismic line, how were you able to map the faults in the southwest and the northeast direction?

A. The surface expression was used to indicate where this fault boundary is. There is no seismic in that area, and you are restricted from shooting seismic based on the Carlsbad Cavern National Park.

There are several published reports that have been used here -- these were in conjunction with a master's thesis and other type of publications -- that shows what is referred to as the Walnut Creek Syncline. And we can see certain aerial expressions of this on high-altitude photos and in walking this out.

And plus the fact that as you come south within this middle -- or the minus-2000-foot fault block, you have a couple of control points that give the relative elevation of this. This is not just drawn from our imagination. There is a precedent for that.

And in the next control points to the south that you can see on Exhibit 7, are in the minus-4200 and -4500 foot subsea. So we know that between those two points there has to be some sort of displacement. It may not in fact be exactly where we have it, but it is proximal to that, to the best of our ability to place it.

Q. So your next control point to the southeast is about four or five miles away?

A. Yes, sir. On Exhibit Number 8 there is a control point in Section 30 of 24-23 that is identified here as the Humble Huapache Number 12. It reached a total depth in the Atoka, and using the type log to get an Atoka value comparative to that, and then going from there to the amount of footage that would be required to be Devonian, and then going back to the seismic line, we feel like that the relationship that we're showing between that control point and the minus-2000-foot block is realistic.

And then going south, there is no other control that is anywhere in that subsea range. It's all in the 4000-or-deeper range.

Q. The Yates Petroleum Dark Canyon State Number 1, is it your opinion that that was low on the structure in the water?

A. Yes, sir. I believe it's low on the block, the lower block or the 5000-foot block.

Q. Do you believe drilling upstructure from that well, you encounter oil?

A. We hope to, yes, sir.

Q. Is there any other -- Besides the Devonian, is there other potential producing intervals?

A. Yes, sir, there is. The -- Starting in the

Permian section, there have been various hydrocarbon shows scattered through the area, down through the Abo and Wolfcamp, slight shows, and porosity has been encountered.

As I mentioned earlier, the Atoka has had a show of gas on a drill stem test. In some areas of southeastern New Mexico -- or southwestern New Mexico [*sic*], in this part of the Basin, there have been Mississippian producers. The Devonian is our primary objective. And then the Ellenburger at approximately 8200 feet is also a major objective.

Q. Did you say that if your first well is successful, your drilling commitment involves drilling a well in Section 27; is that right?

A. Yes, sir.

Q. That would be your second well?

A. Yes, sir.

EXAMINER CATANACH: I don't have anything further of this witness, Mr. Kellahin. You may be excused.

Is there anything further?

MR. KELLAHIN: No, sir.

EXAMINER CATANACH: There being nothing further, Case 11,382 will be taken under advisement.

(Thereupon, these proceedings were concluded at 9:02 a.m.)

* * *

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 September 24th, 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. 11382, heard by me on 9/21/ 1995.

David R. Catanach, Examiner
Oil Conservation Division