STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

17 August 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of BHP Petroleum Company, Inc. for non-standard proration units and an unorthodox gas well location, Chaves County, New Mexico. CASE 9461

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Robert G. Stovall
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For the Applicant: W. Thomas Kellahin
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I N D E X

E X H I B I T S

MR. CATANACH: Call Case 9461.

MR. STOVALL: Application of BHP Petroleum Company, Inc., for a nonstandard proration unit and an unorthodox gas well location, Chaves County, New Mexico.

MR. CATANACH: Are there appearances in this case?

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin & Aubrey, appearing on behalf of the applicant and I have one witness to be sworn.

MR. CATANACH: Any other appearances?

Will the witness please stand and be sworn in?

(Witness sworn.)

WILLIAM J. MORRIS,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Morris, for the record would you

please state your name and occupation?

A My name is William J. Morris. I'm a petroleum geologist for BHP Petroleum Company.

Q Mr. Morris, on previous occasions you've testified as a petroleum geologist before the New Mexico Oil Conservation Division?

A Yes.

Q And you've prepared and made an evaluation of the subject matter for this application?

A Yes, I have.

MR. KELLAHIN: Mr. Examiner, at this time we tender Mr. Morris as an expert petroleum geologist.

MR. CATANACH: He is so qualified.

Q Mr. Morris, let's take a moment and let me direct your attention to what is marked as Exhibit Number One. Would you identify for us, first of all, the section that is the subject matter of this application?

A Section 5, located in Township 11 South, 27 East.

Q And this is referred to as the Erwin (sic) Ranch prospect in Chaves County, New Mexico?

A That's right.

Q What is the primary formation that you

intend to test with the drilling of this well in Section 5?

A Our primary objective is the Lower Paleozoic Montoya formation.

Q The Montoya would be an oil producing formation?

A Right, it is an oil zone.

Q And is there special pool rules for the Montoya formation or is this on statewide spacing rules?

A This falls on statewide rules.

Q When we look at Exhibit Number One, Mr. Morris, within Section 5 are we dealing with a full size section?

A No, we're not. These are half sections that have resulted from the land grid survey that is employed in the State of New Mexico.

Q When we look at the south half of that section, then, we're dealing with 320 acres plus the odd size lots along the northern boundary?

A That's right.

Q And when we look at the spacing unit for the 40-acre oil spacing, in fact how many acres are we dealing with?

A 47.06 acres.

Q Okay. The well location is spotted there and what distance is it from the south and east lines

of the section?

A It is from -- 1650 feet from each line.

Q And will that be a standard oil well location under statewide rules?

A Yes.

Q Let's turn now, sir, to Exhibit Number Two. This is in fact the same display --

A Yes.

Q -- as the previous exhibit?

A Yes, it is.

Q When you look at the potential for an oil -- for a gas well spacing, is that what you've intended to portray with the red outline?

A Right. The red outline is the proration unit we're asking for to be dedicated to gas.

Q And how many acres would be included within the section, then, for that gas spacing unit?

A There would be approximately 348 acres.

Q Are there special pool rules for any of the deep gas producing formations below the top of the Wolfcamp in this immediate area?

A Yes. The statewide rules --

Q Would apply?

A -- would apply to this case.

Q So there are no special pool rules for

any --

A Oh, no. No.

Q -- of these gas pools.

A Right, this is -- would be a wildcat well.

Q Using the statewide gas spacing, then, would this well for gas spacing below the top of the Wolfcamp be at a standard gas well location?

A No. Statewide rules require it to be 1980 from the east line in this case and we are 330 feet short of that requirement.

Q And in this instance you're moving towards acreage that your company also controls?

A That's right.

Q Monsanto now is BHP Petroleum, isn't it?

A Correct.

Q Let's turn, sir, now to Exhibit Number Three and have you identify that exhibit.

A Okay, this is a structure map on top of the Lower Paleozoic Montoya formation. We have five seismic lines across this to help define the structural feature.

The yellow color is the acreage that BHP has under lease from the state and the arrow points to the proposed location.

Q Does this represent your work product?

A Yes, it does.

Q Do we have any subsurface control for this area in terms of wellbore information, logs, that type of information?

A There are a number of wells on this map. The closest one to the proposed location is in Section 31 just to the northeast.

Q In mapping the structure, this is a map of the structure for the potential oil production out of the Montoya formation?

A That is correct.

Q Have you attempted to map or interpret what we might see in the deeper gas formation?

A The gas would be a little bit shallower. It's in the Pennsylvanian section.

Q Oh, I'm sorry. All right.

A And I have not made a map on that to this date.

Q In looking at the 320-acre gas spacing units that would lie above the Montoya formation, can we infer or interpret from this structural interpretation anything about the gas formations?

A No, I don't believe so.

Q The primary objective, then, is the oil

in the Montoya?

A That's correct.

Q Explain to us what has caused you to pick this as the location within Section 5 that is the optimum location by which to penetrate and test the Montoya formation.

A Okay. Typically the Montoya formation in this area produces on structure. It's a very strong water drive type reservoir. If you use the Chisum Field as an example, which lies to the southeast it is a two well producing field and it has several wells, dry holes that are water-bearing just off of the structure. So they're small structures. We feel like we need to be on the highest point of the feature. The proposed location is our interpretation of where the highest location is at.

Q Within your structural interpretation for the Montoya formation do we have a standard oil well location that would also be standard gas well spacing location?

A It's my feeling that we'd be too close to the fault to be -- to be at a standard gas location to properly test the Montoya formation.

Q Describe for us what you find in identifying the fault that runs through Section 5. Is that a fault to such a degree that you're separating physically

potential production from the west side of the section from the east side?

A As far as the Montoya formation --

Q Yes, sir.

A -- that's what we're -- yes, that's why we're drilling at the proposed location.

Q When we look at potential gas production can we infer or interpret from this structural display that we would be physically separating out the spacing unit?

A No. Typically in this area the faulting which cuts the lower Paleozoic sections usually dies out into the Penn, Pennsylvanian section, so they don't always go through that part of the formation.

Q Identify for us those lines of seismic runs that are closest to the proposed well location.

A Okay, we have a line 4, which is an east/west line that runs through the midsections of Sections 3, 4, 5 and 6, and we have lines 2 and 5, which are north/south lines that run through Section 5 as well.

Q Do you have an opinion, Mr. Morris, as to whether or not approval of this application would afford to BHP Petroleum Company the opportunity to avoid the drilling of an unnecessary well?

A Yes, it certainly would.

Q And in your opinion would it promote

conservation, protect correlative rights and avoid or prevent the waste of hydrocarbons?

A Yes. Yes, it would.

MR. KELLAHIN: That concludes my examination of Mr. Morris, Mr. Catanach.

We would move the introduction of his Exhibits One through Three.

Exhibit Four is our Certificate of Mailings to other interest owners in the immediate area.

We would ask also at this time that Exhibit Four be admitted.

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

MR. KELLAHIN: That concludes our presentation.

MR. CATANACH: Exhibit A to Number Four is the list of the operators you sent notification to?

MR. KELLAHIN: Yes, sir, and what we did is on July 28th, as well as July 25th, we sent them not only a copy of this cover letter which is attached but they had a copy of the actual application.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Morris, you're requesting that for the 40-acre proration unit that you get the northwest-southeast and Lot 2.

A North -- right, that is right. Yes. It's shown on Exhibit One in the red outline what the proration unit would be.

Q How many acres does Lot 2 consist of?

A 7.06 acres.

Q 7.06.

A Right. That's shown in green.

Q How deep would you encounter the Montoya formation?

A It should be about 6300 feet.

Q You said there were some other Montoya wells in this area?

A There are two wells in Section 13, which is about 5 miles to the southeast that produce from the Lower Paleozoic section. They're in Units I and J, and they're oil wells. This is the Chisum Field.

Q You say that structure has a lot to do with the productive capabilities of these wells?

A Yeah, these wells only produce on structure, usually at the highest point. Typically these struc-

tures are not totally filled with oil so that there is an oil/water -- there's a lot of water on the flankish (sic) portions so that you need to be on the very highest points to have your safest location.

Q There isn't any other Pennsylvanian production in this area?

A The closest field that I'm aware of is the Foor Ranch Penn Field and it's about 10 to 15 miles to the north, maybe slightly northwest, and it is a gas zone. It's probably 10 to 20 wells, something like that.

Q Now you're basing your location on your seismic data, is that right?

A That's correct.

Q That's the only control you have.

A Exactly.

Q And your seismic shows that you'd be --

A The highest point would be approximately at shotpoint 110 on line 4 and that's the approximate location of the well. We're a little bit off of that but that would put us even at a more unorthodox location for oil.

MR. CATANACH: I don't have any more questions of the witness. He may be excused,

Is there anything further in Case 9461?

MR. KELLAHIN: No, sir.

MR. CATANACH: The case 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 that 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. 9461, heard by me on August 17, 1988.

David R. Catanach, Examiner
Oil Conservation Division