BEFORE THE OIL COMSERVATION COMMISSION SAMTA FE, MEW MEXICO MAY 4, 1961

EXAMINER HEARING

I'I THE MATTER OF:

CASE 2265 Application of Mash, Windfohr and Brown for an unorthorox well location. Applicant, in the above-styled cause, seeks approval of an unorthodox location in an undesignated Abo pool for its Jackson Federal Hell No. 23-B, located 1420 feet from the South line and 1980 feet from the East line of Section 24, Township 17 South, Range 30 East, Eddy County, New Mexico.

BEF ORE:

Daniel S. Hutter, Examiner.

TRANSCRIPT PROCEEDIMES

IR. WUTTER: We will take Case 2265.

MR. MORRIS: Case 2265. Application of Mash, Mindfohr and Brown for an unorthodox well location.

MR. WATSOM: I am Mr. Watson, Watson & Matson, Artesia. New Mexico, attorney for the applicant. He have a witness. Mr. V. P. Sheldon, to be sworn.

(Witness sworn)

(Whereupon, Applicant's Exhibits Mos. 1 and 2 were marked for identification)



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VILAS SHELDON,

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WATSON:

- State your name, please.
- A Vilas Sheldon.
- Q What is your profession, Mr. Sheldon?
- A Geologist.
- G Have you testified previously before the Oil Conservation Commission of New Mexico and given your qualifications?
 - A Yes, sir, I have.
- MR. WATSON: Does the Commission recognize Mr. Sheldon's qualifications?
 - MR. MUTTER: Yes, sir. Please proceed.
- (By Mr. Watson) Mr. Sheldon, are you at the present time and have been for some time recently employed by Mash, Windfohr and Brown as a consulting geologist with reference to operations on their Jackson B lease?
 - A Yes, sir, I am so employed.
- Q I'll hand you what has been marked Applicant's Exhibit No. 1, and ask you to state what that is, please?
- A It is a blueprint of the map of the general area, showing ownership of the acreage for several miles around the Mash, Windfohr and Brown block of acreage.



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- Are the Mash, Windfohr and Brown leases in that area leasehold interests on that area outlined in any particular manner?
- A Yes. The Mash, Windfohr and Brown leases are colored by the use of yellow.
- On Applicant's Exhibit 1, you have indicated a location of the Jackson 22-B Well, is that right?
 - A Yes.
- And you have also indicated the location of the well for which we seek approval here, the 23-B?
 - A Yes, sir.
 - Q And they're so designated on this map?
 - A They are.
 - From what formation is the Jackson 22-B Well producing?
 - A Jackson 22-B is the discovery well in the Abo formation.
- Q Is any part of the Mash, Windfohr and Brown lease in a designated Abo field at this time?
- A I don't think so. Yet, I'm not for sure. The last I knew, it hadn't been placed in any field.
 - Q Well, there's only the one producing well?
 - A There's just the one producing well.
 - and the 23-B Well has been commenced, is that correct?
- A Yes, it has. Mr.Windfohr wanted to start drilling it, so he started drilling it.
- And approval was obtained from the U.S.G.S. subject to obtaining approval of this unorthodox location?



A Oh, yes, the U.S.G.S. gave approval for it. It's up to the O.C.C. to grant approval and assign an allowable. Insofar as the U.S.G.S., they were happy.

- There has been in this immediate area only this one Abowell drilled previously, the Jackson 22?
- A Yes, in the immediate area. It's about two miles each direction.
- The proposed unorthodox location, who owns the offset 40-acre leasehold interest?
 - A Mash, Mindfohr and Brown.
 - Q All of them?
 - A All of them.
- Will you state, Mr. Sheldon, the reasons for the request to drill the well at the proposed location?
 - A Yes.
 - all right.
- A Hr. Windfohr wanted to drill the well approximately a half a normal location south of the 22 discovery well, based on just pure geology. The Abo reef trend through this portion of Eddy County, we think, is going to be very narrow, probably one location certainly not over half a mile. We are being very cautious to keep from straddling the entire reef. Do they have the Exhibit?

MR. MATSOM: Mo, here.

A Well, here's several copies. The Jackson 22-B Well, of course, when we located it on the ground, we put it in the center



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of a 40-acre unit. We had hoped to hit the reef on the very crest, but the hope wasn't quite fulfilled. We drilled a slightly back reef well. We were some 300 feet into the Abo before we found porosity. There was considerable green shale; in fact, there was a tiny bit of red shale, which is quite, insofar as I'm concerned, it was definite proof that we were on the back side of the reef, to some, not a terribly lot, but the Cedar Lake Abo Field two miles east is a very narrow situation, and the Wooly Well and the Texas-Pacific Well about two miles west, is on a very narrow situation. Mr. Windfohr and I, too, for that matter, were quite concerned that if we move a full location we might jump clear over and get on the front side of the reef. This we did not want to do.

- Referring to Applicant's Exhibit 2, did you prepare this Exhibit?
 - A Yes, I prepared the Exhibit.
- Mhat does the Exhibit show with respect to where you anticipate the Abo formation will be found in this particular area.
- A Well, the Exhibit, of course, consists of a small sketch map showing the Mash, Windfohr and Brown acreage with the surface locations, and then a cross section projected; our interpretation of what we think the Abo reef is going to look like, showing the oil-water contact.
- Mow, this is based on information obtained in connection with the drilling of the 22-B Well?



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A It's based on what we knew originally, and what we learned in drilling B-22.

- Go ahead, Mr. Sheldon.
- A There is another factor, I think, that should be entered. It is generally thought that most wells drilled in the Abo are drifting to the north and in the case of the Jackson B-22 Mr. Windfohr had an Eastman directional survey taken, and, of course, the well --
 - Q Have you examined that survey?

A Yes. I have a copy of it and have examined it. The well wound up 305 feet north and 46 feet west of the surface location.

- Mhat is the reason for that, Mr. Sheldon --
- A Oh, wells--
- C -- can you give any reason?
- A Rotary wells tend to drift up structure. I don't know why. In the Jackson B-22 at a depth of 4,060 feet, a directional survey was taken to find out where we were going, and at that point it was 140 feet north and 29 feet east of the surface location, which at that point placed it 238 feet north of the unit line. If it continues to drift the next 2,000 feet, it should be 30 foot from the unit line, anyway.

MR. NUTTER: That's the Mo. 23?

A That's the Mo. 23.

MR. MUTTER: What was the location?



- A 4,057 feet. It was a 137.67 feet and .28.55 feet east.
 - MR. NUTTER: Off the surface location?
- A Off the surface location. The location was deliberately made exactly where it is, trying to bottom the hole, that's about 400 foot north of the unit line.
- Q (By Mr. Watson) Mr. Sheldon, it is correct, is it not, that the working interest and the royalty interest under the Jackson B lease are identical?
 - A Yes, they are identical.
- I believe we have already brought out that Nash, Windfohr and Brown all own the 40-acre offsets --
 - A Yes, they do.
 - -- to this proposed location?
 - A In every direction.
- Do you have anything else you want to add, Mr. Sheldon, about your reasons for recommending this location?
- A No, I believe not. I'll be glad to answer any questions. We simply, Mr. Windfohr and myself didn't want to straddle the reef on this exploratory well, trying to hit it on the top.
- As you pointed out, Mr. Sheldon, it is true, isn't it, that the Abo reef formation is very narrow in places --
 - A In places, yes.
 - S -- in Eddy County?
 - A Yes, it is.
 - Some places not as much as an entire location wide, is



that correct, an entire 40-acre tract?

A That is probably correct, yes.

MR. WATSON: I have no further questions at this time.

MR. MUTTER: Any questions of Mr. Sheldon?

MR. MORRIS: Yes, sir.

MR. NUTTER: Mr. Morris.

CROSS-EXAMINATION

BY MR. MORRIS:

Mr. Sheldon, your proposed location is unorthodox here in that it is only 100 feet north of the quarter-quarter section line, rather than 330, as required?

A Yes.

Assuming that your application is granted, and that you obtain a productive well in No. 23, would any further wells be drilled in the southwest quarter of the southeast quarter, the 40 directly south of the 40 we're in?

A Mr. Morris, if this well is not too far structural on the reef south, for instance, if we hit near the crest of the reef, I'm sure the operator will wish to drill a well in the south 40, the one you just described.

Now, you are aware, are you not, of our rule, the Commission's rule requiring that wells be 650 feet apart? That might necessitate your coming back for another hearing to be 660 feet from the well for which you are seeking approval here today. In other words, to have a standard location in the southwest quarter,



you would have to be 560 feet from the north boundary of the quarter-quarter section line?

A Yes, sir, and I do not anticipate that we'll have to come back, because if the wells are going to drift off 400 feet, we're going to be quite -- we would be very reluctant to spud the well any less than 400 feet from the unit line, so I don't think 560 is going to be a factor. I'm positive Mr. Windfohr will want to go 560 feet to keep under the geographic limit. He has already run two Eastman surveys; someone might ask him to run another one.

In other words, you are of the opinion that if the unorthodox location that you are seeking today is granted, it will
not necessitate another unorthodox location application at a later
date?

A Not on the 40 acres that you discussed. We might want to the same thing, say, in the southwest of the southwest of 24, but answering your question as I think you meant it, this unorthodox location will not directly cause another request.

Yes, that was my question. Mr. Sheldon, if there's some question about where the bottom hole location of this well might be, would Mash, Windfohr and Brown be willing to run a bottom hole survey on this well?

A Well, it has been run at 4,060 feet already. Yes, answering your question, yes.

MR. MORRIS: I have no further questions. Thank you.

BY MR. NUTTER:



- Q Mr. Sheldon, may I see the directional survey that was run on the No. 23, please?
 - A Yes.
- When this survey was run, you had approximately 2,000 more feet to drill, is that right?
 - A 3,000.
- 3,000 more feet. At the time the survey was run, the drift was in the neighborhood of 4, 5 or 6 degrees?
- A Four and three-quarters, something in that order, and the hole is off at 5600, the hole was still off 5 degrees.
- Q Was there any noticeable change in the drift on the last 2,000 feet on the No. 2 Well?
- A No, it straightened up some. Here, it happens to be here at 4200. At 46, it was 4 degrees, at 51 it was 4 degrees and fifteen minutes, at 56, 4 degrees, at 6,000, 445, at $654\frac{1}{6}$, at 7,000, $3\frac{1}{6}$.
- So the drift was relatively constant, it straightened up to a constant rate of drift?
 - A Yes.
- Q At the present time your No. 23 Well has moved 137 feet north of the survey's location?
 - A Yes.
- Does Nash, Windfohr and Brown own the 40 acres directly to the south of the 40 acres on which this well is spudded?
 - A Yes, sir.



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- Q Is their royalty ownership under that the same?
- A Yes.
 - MR. MUTTER: Any further questions? He may be excused.

(Witness excused)

- MR. NUTTER: Do you have anything further, Mr. Watson?
- MR. WATSON: No, sir, that's all we have.
- MR. MUTTER: These Exhibits haven't been offered.
- MR. WATSON: Yes, I would like to offer Applicant's Ex-

hibits 1 and 2.

MR. MUTTER: Applicant's Exhibits 1 and 2 will be entered in evidence.

(Whereupon, Applicant's Exhibits Mos. 1 and 2 were received in evidence)

MR. NUTTER: Does anyone have anything they wish to offer in Case 226? We'll take the case under advisement, and take a recess.



STATE OF NEW MEXICO)

COUNTY OF BERNALILLO)

I, ADA DEARNIEY, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in machine shorthand and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this, the 7th day of Manual the City of Albuquerque, County of Bernalillo, State

My Commission expires:
June 19, 1963

I do hereby certify that the foregoing is a complete record of the proceedings in the Exeminer hearing of Case No. 2263, heard by the on 1966.

Hew Mexico Oil Conservation Commission

