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

4 November 1987

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corporation for a ~~unit agreement,~~ Unorthodox Gas Well Location Eddy County, New Mexico. CASE 9249

DM S.
12/22/87

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Jeff Taylor
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I N D E X

E X H I B I T S

MR. STOGNER: Call Case Number 8249.

MR. TAYLOR: 9249?

MR. STOGNER: Yes, 9249.

MR. TAYLOR: The application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico.

MR. STOGNER: Call for appearances.

MR. DICKERSON: Mr. Examiner, I'm Chad Dickerson of Artesia, New Mexico, on behalf of the applicant and I have one witness.

MR. STOGNER: Are there any other appearances in this matter?

There being none, will the witness please stand to be sworn?

(Witness sworn.)

RAY BECK,

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

DIRECT EXAMINATION

BY MR. DICKERSON:

Q Will you state your name, your occupation and by whom you're employed and in what capacity, please?

A My name is Ray Beck. I'm a petroleum geologist with Yates Petroleum in Artesia.

Q Mr. Beck, you have previously qualified and testified before this Division as a geologist, have you not?

A Yes, I have.

Q And have you made a study of the available geological data within the spacing unit and the area of the proposed unorthodox well location?

A Yes, I have.

MR. DICKERSON: Tender Mr. Beck as an expert petroleum geologist, Mr. Examiner.

MR. STOGNER: Mr. Beck is so qualified.

Q Mr. Beck, will you state the purpose of Yates' application in Case 9249?

A In Case 9249 Yates Petroleum Corporation respectfully requests approval of the unorthodox gas well location of its proposed Eastern Shores "QW" Federal No. 2, to be drilled 2310 feet from the south line and 660 feet

from the west line of Section 8, Township 19 South, Range 27 East, Eddy County, New Mexico.

The south half of Section 8 would be dedicated to the well.

Q Will you summarize for us the necessity for this unorthodox location?

A The necessity for this nonstandard location is based on geologic conditions prevailing in both the primary objective McMillan Upper Penn carbonate reservoir and in the secondary objective Morrow Clastics interval.

Drilling plans are as follows: Option 1. If severe lost circulation problems are not encountered in the McMillan Upper Penn reservoir, the well will be drilled through the Morrow Clastics to an approximate depth of 10,150 feet; however, the well will be initially completed in the McMillan Upper Penn reservoir as the sole producer from that reservoir in the south half of Section 8.

Option 2. If severe lost circulation problems are encountered in the Upper penn, the well will be drilled only through the base of the Upper Penn at an approximate depth of 8100 feet and again would be the only producer from that reservoir in the south half of Section 8.

Q So regardless of whether or not Yates actually takes the well to the base of the Morrow it is

seeking approval of this proposed unorthodox location in all zones from the top of the Wolfcamp to the base of the Morrow.

A That's true.

Q Mr. Beck, will you identify what we've submitted as Exhibit Number One and tell the Examiner what that shows?

A Exhibit Number One is a land plat showing the proposed location as a red dot and its relationship to the surrounding situation. Yellow denotes acreage in which Yates has full or partial interest in the operating rights, and the proration unit is outlined in red.

Q Identify Exhibit Number Two and tell us what that map shows.

A Exhibit Number Two is a structure map contoured on the top of the McMillan Upper Penn dolomite reservoir. Contour interval is 100 feet. Large well spots colored in blue indicate completions in the McMillan Upper Penn reservoir. Red spots indicate Morrow completions and yellow indicates Atoka completions. Wells which are currently producing in the McMillan Upper Penn reservoir are the Yates well in the south half of Section 5; the Enfield well in the south half of Section 7; the Yates well in the north half of Section 8; and the Enfield well in Section 18.

Enfield is currently drilling an unortho-

dox north half Upper Penn gas well location in Section 7, which is shown on the map.

The proposed nonstandard location shown on the map is near the axis of a northeast to southwest trending structure mapped on the top of the Upper Penn dolomite, and this location essentially maximizes the potential pay section above the water contact for the south half proration unit.

The original gas/water contact was determined by drill stem test and production pipe recovery information of wells in and near the existng gas field.

Also shown on the map is a trace of the cross section which is the next exhibit.

MR. DICKERSON: Mr. Stogner, I might mention that that unorthodox location for the Enfield well which Mr. Beck described was recently approved administratively by your office.

Q Mr. Beck, identify Exhibit Number Three and tell us what you show on that instrument.

A I've got Exhibit Number Three on the wall here. You can see it a little better. Exhibit Number Three is a southwest to northeast structural cross section hung on the original gas/water contact of -4616 feet subsea. This cross section shows the pertinent correlations and the relationships of the Upper Penn dolomite, base of the dolomite,

to the original -- shows the Upper Penn dolomite reservoir in relationship to the original gas/water contact.

The proposed location here should encounter 216 feet of pay section above the agas/water contact, which is essentially a maximum for the south half proration unit.

Q Mr. Beck, identify Exhibit Number Four and tell us what it is.

A Exhibit Number Four is a combined structure and sand isolith map. Dotted lines, dashed lines, actually, are structural contours on top of the Lower Morrow for the majority of the map, and on the top of the Morrow Clastics for the well in Seciton 4 and the well in the northeast northeast of Section 5.

Solid lines are isolith contours showing the varying thicknesses of total, clean, Morrow sand in the area of these nine contiguous sections. Clean is defined as sand with less than 50 gamma ray API units on the neutron density log. Contour interval is 20 feet.

The proposed location, if drilled through the Morrow, should encounter the m aximum amount of sand deposited in the south half proration unit.

Q Mr. Beck, identify Exhibit Number Five and tell us what it shows.

A Exhibit Number Five on the wall is a west

to east stratigraphic cross section hung on the Lower Morrow marker. The cross section shows the pertinent correlations and the yellow colored on the left side of the neutron density shows how the clean sand was counted.

In addition, the proposed location drilled through the Morrow should penetrate the Lower Morrow to Mississippian "thick" interval, which improves the chances for encountering Lower Morrow sands.

Q Mr. Beck, please refer to what we submit as Exhibit Number Six and identify that instrument for the Examiner.

Before we do that, would you summarize the geological necessity for this unorthodox location?

A In summary, the proposed location is geologically the best allowable location in the south half of Section 8, regardless of whether drilling events permit drilling of both the main objective Upper Penn dolomite and the Morrow or only the Upper Penn dolomite.

Q So in your opinion the proposed unorthodox location is the best location anywhere within the south half of Section 8?

A Yes, sir.

Q Now would you identify and describe what Exhibit S consists of?

A Exhibit Six is an affidavit assuring that

all parties entitled to receive notice of this case were notified and include receipts of notice from these intrested parties.

MR. DICKERSON: The originals are included in your top copy, Mr. Examiner.

Q Mr. Beck, were Exhibits One through Five compiled by you or under your direction and supervision?

A Yes, they were.

MR. DICKERSON: Move admission of Yates Exhibits One through Six, Mr. Examiner, and I have no further questions.

MR. STOGNER: Exhibits One through Six will be admitted into evidence.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Beck whenever I look at your Exhibit Number One there, let me ask about the surface location in this well, seems like McMillan Reservoir is somewhere around this vicinity.

Q Yes, sir. it is. The map is misleading, the land map here. It -- the well is actually on the west side of the Pecos River channel, as it is now, and actually both wells in Section 8 currently drilled on the west side of that -- of the river. It's in the swamp flood plain

there but it's -- it's very accessible.

Q It's not even within the high water mark of the McMillan --

A No, it's not. It's --

Q -- reservoir?

A I think the ground level elevation is 3275 and the elevation that's usually high water mark is 3270.

Q Okay. Now you show your -- in several of your exhibits here, the other well in the south half of this section, that Well No. 1. Is that presently producing?

A Yes, sir, it is.

Q And could you give me a brief rundown on that well, its history, its spud date, first complete, and any other formations it might be producing from?

A Well, the well was drilled some years back. I'm not exactly sure. It was completed in the Morrow and that's where it's currently completed. It's -- I believe I can tell you a little more about it here. Over 2.2 BCF, it's down to about 650 MCF per day.

Q I'm sorry, what was that again?

A It's already produced 2.2 BCF. It's down to 650 MCF per day. It probably has a few more years left in the Morrow.

On the way down we drill stem tested the

Upper Penn dolomite reservoir and it produced gas and surging water. We suspect that the water problem would be too much to make a well out of it so we're not going to attempt completing in that zone, another reason why we want to drill another well in the south half here, to get a better pay section in that reservoir.

We don't anticipate ever producing out of it.

Q Other than letting it go its course in the Morrow.

A That's right.

Q And do you anticipate testing or have tested the Wolfcamp formation in that No. 1 Well?

A Yes, I believe we might have to test the Wolfcamp in that. I'm not positive about that.

Q Do you anticipate this well to be completed eventually in the Wolfcamp or --

A The proposed location?

Q No, the new location. I mean --

A The new location?

Q -- the Well No. 1.

A The old location?

Q Right.

A I'm not aware of any other zones right now that we would be producing out of. We would probably

just go ahead and drain the complee -- all we can get out of the Morrow and then the south half would be held by the Pennsylvanian well.

Q In the Well No. 1 again, what is the -- what kind of water production are you getting out of that now?

A One barrel of water per month.

Q Does it look -- it appears, according to your Exhibit Number Two, that that water/oil contact or that water contact line is approaching pretty close to it, is that correct?

Q Yes, sir, that's right. The water contact is -4616. Given tolerance of maybe 5 feet on either side because of pipe measurements, we've got at the top of the Penn dolomite at -4602. We did DST it on the way down, got gas to surface but it surged water, so we went on down to the Morrow and made the well there. We don't anticipate producing out of the Upper Penn dolomite in this well, at least that's what I've been told by our reservoir engineer (unclear.)

Q Okay. As far as your Well No. 1, again, what is the -- that Morrow production is dedicated to what pool?

A That is the Eddy Undesignated Morrow.

Q And this well's been producing for how

long?

A For a number of years now.

Q And it's still undesignated?

A Well, they have a listing in the -- they put some of these in the undesignated and they just leave them there and they never change them. There's -- it's in the regular production book in the back.

If you can't find it in the regular field names, that's one place you always look to find it, and there are about, I would guess, a couple of dozen wells in that designation, undesignated.

Q Well, let me look a the wells in No. 9, in Section No. 9 and Section No. 17. You show those are Morrow producers.

A They are potential Morrow producers. The No. 9 is completed in the Morrow but it is shut in waiting on a pipeline connection.

Q Okay, the -- you're referring to the well in the south -- I mean, I'm sorry, in the northwest quarter of Section 9?

A Yes, sir.

Q And how about the one in the northeast auarter of Section 17?

A Okay, that well there, too, is a Morrow well and it's also listed in the New Mexico engineering book

as Eddy Undesignated Morrow.

Q Okay. And you know of no objections to -- to your letter sent out of October 13th covered in Exhibit Number Six?

A Insofar as I've been able to determine. I haven't heard of any objection.

Q Okay. I -- in -- I'm sorry. Bob Enfield has applied for -- I'm sorry -- was -- has an unorthodox location up in Section 7. Were you in contact with them on their proposed well?

A Yes, sir. He made a proposal to us that we not protest each other's unorthodox location and we agreed to that.

Q All right.

MR. STOGNER: I have no further questions of this witness.

Are there any other questions of Mr. Beck?

MR. DICKERSON: No.

MR. STOGNER: He may be excused.

Mr. Dickerson, do you have anything further in Case Number 29 -- I'm sorry, 9249?

MR. DICKERSON: No, sir, we don't.

MR. STOGNER: 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 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. 9249, heard by me on November 1987.

Examiner
Oil Conservation Division