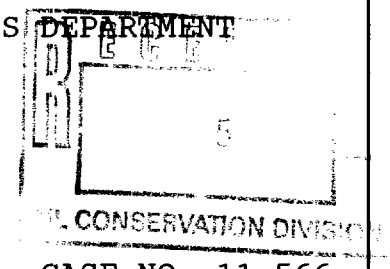
STATE OF NEW MEXICO

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 APPLICATION OF MATADOR PETROLEUM CORPORATION FOR AN UNORTHODOX GAS WELL LOCATION, EDDY COUNTY, NEW MEXICO

CASE NO. 11,566

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

July 11th, 1996

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, July 11th, 1996, 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

July 11th, 1996
Examiner Hearing
CASE NO. 11,566

* * *

E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	6	13
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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 9:58 a.m.:

EXAMINER STOGNER: Hearing will come to order.

Call next case, Number 11,566, which is the Application of Matador Petroleum Corporation for an unorthodox gas well location in Eddy County, New Mexico.

At this time I'll call for appearances.

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 one witness to be sworn.

EXAMINER STOGNER: Are there any other appearances in the Matador case?

Will the witness please stand to be sworn?

(Thereupon, the witness was sworn.)

EXAMINER STOGNER: Mr. Kellahin?

MR. KELLAHIN: Mr. Examiner, we're seeking approval to re-enter a plugged and abandoned well.

I have distributed to you a copy of the prior order. It's Order Number R-8496. It was issued on August 26th of 1987. It approved a compulsory pooling, including an unorthodox well location for Terra Resources.

This well was drilled; it came to be known as the Chevron 7 Federal Well Number 1.

Subsequently, Matador has acquired the wellbore

and the acreage. We propose to dedicate the north half of Section 7 to the well and to re-enter this well.

This is an interesting well in that Terra Resources drilled it, ran a drill stem test in the Morrow formation, and thought the results were poor and abandoned the well.

Matador has targeted this well as a re-entry candidate where, despite the adverse drill stem tests, Mr. Carnes and others believe that it has true potential. They've had other success with these types of re-entries, and we seek your permission, then, to again utilize this well for an attempt to produce hydrocarbons, principally out of the Morrow, but if that should fail we would at least want the opportunity to look at any of the 320 gas formations from the top of the Wolfcamp to the base of the Morrow. So that's the order in front of you.

The next set of exhibits are Mr. Carnes' exhibits.

And finally, Exhibit 7 is a certification by a surveyor of where the well actually got drilled in relation of where it was staked. You'll see that there is a small footage difference between the original order, which approved a 660 location, versus what has been surveyed in June of this year to be 663 from the north and 665 from the east. It's a matter of just a few feet.

With that introduction, then, we'll call Mr. Les Carnes.

LES M. CARNES,

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. Carnes, for the record, sir, would you please state your name and occupation?

A. Les Carnes, consulting petroleum engineer.

Q. Mr. Carnes, on prior occasions have you testified before the Division as a petroleum engineer?

A. Yes, I have.

Q. And as a consultant for Matador Petroleum Corporation, have you made a study of not only the engineering aspects but the geologic aspects concerning the opportunity afforded Matador to re-enter the Chevron 7 Federal Well Number 1?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Carnes as an expert petroleum engineer.

EXAMINER STOGNER: Mr. Carnes is so qualified.

Q. (By Mr. Kellahin) Mr. Carnes, if you'll turn to what is marked as Matador Exhibit 1, let's take a moment to identify the well location and describe for the Examiner

the various informations shown on this exhibit.

A. Exhibit 1 is a land plat on a scale of one inch equal to 4000 feet, showing Matador Petroleum working interest position in that part of the Diamond Mound Morrow Reservoir and also showing the well that Matador desires to re-enter in the northeast quarter of Section 7 of 16 South, 28 East, in Eddy County.

Q. What does the Applicant propose to be the spacing unit to be dedicated to the well?

A. It will be the north half of Section 7.

Q. Okay, let's turn now to Exhibit Number 2.

A. Exhibit 2 is a structure map contoured on top of the Morrow zone, sand zone, and it displays the structural behavior of the channel sands in that part of the reservoir.

Also of particular interest is an anomaly, a little out-of-the-ordinary shape there of the structure in the north half of Section 7.

Q. This is a recent structure map --

A. Uh-huh.

Q. -- this is a May-of-1996 vintage, and it was produced by you in conjunction with a Matador geologist?

A. That's correct.

Q. How was this information useful to you in determining whether the Chevron 7 well is a candidate for

re-entry?

A. On comparisons with other wells that had similar type of Morrow sand development, we referenced the well due west in Section 12 of 16-27. It's about a mile and a half due west. It's the Williamson Fed Com Number 1. Matador has an interest in the well; it is not operated by Matador. But the development there is similar in that there are four- and five-foot sand stringers developed over a vertical interval of 100 feet or so.

Q. All right, let's turn to Exhibit 3, then, and show the distribution of the main pay of those sand stringers, if you will.

A. Okay, Exhibit 3, then, is an isopach map of the gross sand thickness of the Morrow pay zone, and it indicates that the subject well to be re-entered has about 18 feet of sand in it. And then if we can go due west over to the well in the northeast quarter of the northwest of 12, that Williamson Fed well, we show that it has 14 feet. And that well has made over 4 billion cubic feet of gas.

Q. So when you're looking for an opportunity for Morrow gas production in the north half of Section 7, as shown by the geologic information, a well location up in the northeast-northeast of 7 represents the optimum opportunity?

A. Yes, it does, to take advantage of that channel

development that you see there that thickens to 40 feet.

Q. If you were to move back to a standard location in the pool, then it would put you at a substantially lesser thickness of gross main pay Morrow sand?

A. Yes, it would thin to the west, that's correct.

Q. So it's an obvious candidate for re-entry. You now have the log of the well that Terra drilled. Let's look at that and show us what they did when they had control of the wellbore.

A. A section of that log is shown as Exhibit 4, for the Chevron 7 Federal Number 1 well, and this, on the left side, is the gamma-ray/neutron density log, and then on the right panel is the dual induction SFL log, and it shows the interval from the top of the Atoka to the base of the Morrow or the top of the Mississippian.

Q. So you've taken a portion of the log for this well and have identified the interval in the Morrow and perhaps in the Atoka that represent a re-entry possibility?

A. Yes, that's correct.

Q. Let's focus on that portion of the display, and identify for us the color code that shows us the interval that was drill stem tested by Terra Resources.

A. In late 1987, when Terra drilled the well, they took two drill stem tests. And one of them, you can see, was about an 85-foot interval, just above the 9000-foot

level. And they did not test the porosity development that you see colored in red.

But the next DST after they made TD of 9300 did include that interval, and that's the DST that is encouraging to us in that there was gas to the surface too small to measure, very low flowing pressures on the DST, but a complete gas column of about 8500 feet of gas that was in the test string, and they had excellent shut-in pressures, near original pressure, had over 3000 pounds shut-in bottomhole pressure.

Q. When you examine the data available to you from Terra Resources' efforts, including the scout ticket and the information available on the two drill stem tests, can you come to any conclusion about why they elected to abandon the well, as opposed to attempt to run pipe and perforate either the Atoka or the Morrow?

A. Yes, it's my opinion that the -- this was a farmout from Chevron to Terra, and they were looking for somewhat thicker sand development, and they were looking for a flowing DST with gas to the surface at measurable rates.

It's my opinion, based on the pressure buildup data from the DST, that the well was damaged and fairly tight reservoir rock. I've calculated --

Q. How did that damage occur?

A. Through mud invasion, filtrate invasion from the mud.

Q. They drilled in such a way that they used too heavy a mud concentration and may have infiltrated and damaged the formation?

A. Either that or too -- not controlling the water loss properly, too high a water loss.

Q. What's encouraging to you about the re-entry for this well?

A. Well, we have about 10 or 12 feet of pay indicated in red there in the Morrow that I believe will make a commercial well, based on the comparable well to the west a mile and a half, that Williamson Fed Com 1 in Section 12.

And then we also have about four feet of indicated porosity and separation on the neutron density log in the Atoka, and with proper stimulation I think we can make a commercial well.

Q. Even with a re-entry, Mr. Carnes, this is still a significant risk for Matador, is it not?

A. Definite risk involved.

Q. Is the risk so high that Matador would be precluded from drilling a new wellbore at a standard location to test for this Morrow channel?

A. It would be difficult to justify the cost of a

new well, which is nearly $500,000, versus what we'll see in the next exhibit, under $300,000 to re-enter.

Q. All right, let's look at that next exhibit. It's Exhibit Number 5?

A. Yes, it is. That's an estimated cost to re-enter this well, or an AFE, and it shows the dryhole cost to be about $99,000, and that would simply be to determine by some open-hole test whether or not the well will be productive.

The completion cost is about $200,000, so the total cost here is $299,000 to re-enter.

I believe myself -- I didn't prepare this AFE; it was done by the operations manager. He and I have discussed it, and he's agreed that it's on the high side to protect on his estimate. It ought to be done cheaper than that.

Q. All right, let's turn to your economic spreadsheet, Exhibit Number 6, and have you summarize for us your reserve and economics when you plug in these costs.

A. Exhibit 6 is a projection of the production rates and reserves for this well, both condensate and gas.

Q. You made your reserve estimate based upon some volumetric calculation, I assume?

A. Yes, and it's based on about 160 acres contributing. I think there may be more. It could be up

to 200 or even to 320, and that would give us more reserves, but this is a little over 1.25 billion cubic feet of gas that we anticipate the well to produce.

You'll note on there that the first few months in 1996 are monthly rates. And after that, they are annual rates of production and revenue.

Q. What's your conclusion, then, about the economics?

A. The economics look good, with the payout of that $299,000 in about a year, with a return on investment of 4.6 to 1, and the rate of return is in excess of 100 percent.

I should mention that the net gas production and revenues here are to the Matador interest at the time that this was done. They have since increased their interest from 43 percent to 51 percent.

Q. In your opinion, Mr. Carnes, would approval of this Application afford an opportunity to Matador and its other working interest owners to recover gas out of the Morrow that might not otherwise be produced?

A. Yes, it is.

Q. And by doing so, can we protect correlative rights and prevent waste?

A. I believe we can.

MR. KELLAHIN: Exhibit Number 7, Mr. Examiner,

was provided to me by Matador. It's simply a re-survey of the actual well location, and I utilized that location in applying for approval to re-enter this well.

And then finally I want to distribute to you our notification to the offsetting interest owners concerning this re-entry.

For your information, the Exhibit 1 can be compared to the notifications. We've provided notification to the Bureau of Land Management in the northwest quarter of Section 8. Exhibit 1 shows that to be an Exxon lease. That lease has expired, and it has reverted to the BLM, and it should be put up for lease again sometime in the future. Notification was sent to UMC Petroleum Corporation, who is the operator in the southwest quarter of Section 5, the diagonal offset. And then finally, Section 6 is operated by Matador, and that will complete the notification.

With your permission, Mr. Examiner, we would move the introduction of Exhibits 1 through 7. Exhibit 8 should be the certificate of mailing. Exhibits 1 through 8, if you please.

EXAMINER STOGNER: Exhibits 1 through 8 will be admitted into evidence.

EXAMINATION

BY EXAMINER STOGNER:

Q. Just some preliminary stuff. What is the present

total depth of this well?

A. 9300 feet.

Q. And do you propose to deepen it any more?

A. No, sir, we do not. We drilled -- Terra drilled it into the Mississippi.

Q. That production casing was not ran at that time; is that --

A. That's correct. I'm glad you brought that up, because it is a clean well to re-enter. Production pipe was never set or any pulled. And you do have the surface and intermediate set and circulated, both of them. The cement was circulated to surface on them.

Q. How was that well plugged? Do you know?

A. I've got a plugging report, and there are five plugs in it, including the one at the surface. But a plug was set to protect below the intermediate pipe. Let me get my --

MR. KELLAHIN: I've got it here, Lester.

THE WITNESS: Have you got that? Okay.

MR. KELLAHIN: Mr. Examiner, if it will help you here's a copy of --

EXAMINER STOGNER: What I'll do is just take administrative notice of the well file on file. We won't need to make an --

THE WITNESS: Oh, okay.

EXAMINER STOGNER: -- exhibit or anything, but just some preliminary stuff I wanted to get out of the way.

THE WITNESS: Right. There were, I guess -- It looks like 100-foot plugs set in four downhole locations, starting at the bottom, 8750 to 8850 --

MR. KELLAHIN: It should be on the last page of that handout, Mr. Examiner.

THE WITNESS: -- and then 6775 to 6875, 3400 to 3500, and then the base of that 8 5/8 intermediate pipe, 1675 to 1775, and then there was a plug at the surface, 50-foot plug. And nine-pound brine mud was left in the hole.

EXAMINER STOGNER: Okay. I really don't see that it was necessary to bring this to hearing, but -- It could have been done administratively.

MR. KELLAHIN: We recognize that, Mr. Examiner.

EXAMINER STOGNER: Okay, I just -- All right.

Well, with that, then, I don't have anything further

MR. KELLAHIN: We anticipated we might have had some opposition. That's why we chose to schedule for hearing.

EXAMINER STOGNER: Okay.

MR. KELLAHIN: And the opposition did not materialize.

EXAMINER STOGNER: Well, with that, I don't have

anything further in this matter.

And if there's nothing further, then I'll take this case under advisement.

(Thereupon, these proceedings were concluded at 10:25 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11566, heard by me on 16 July 1996.

, Examiner
Oil Conservation Division

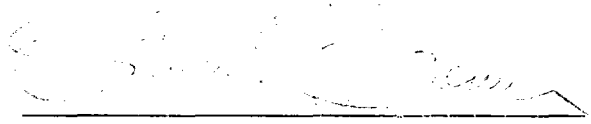
CERTIFICATE OF REPORTER

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 July 14th, 1996.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998