NEW MEXICO OIL CONSERVATION DIVISION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date AUGUST 21, 1997 Time 8:15 A.M.

NAME	REPRESENTING	LOCATION
W. Kellahin	Kellahin & Kellahin	Santa Fe
Dominic E. Brown	Mewbourne Oil	Roswell
Paul Owen	Campbell, Carr, Berge & Sheridan	Santa Fe
Bill Demis	MARATHON OIL	MIDLAND, TX
Tim Robertson	" "	"
Michael Shaw	West OIL	SANTA FE
James Bruce		Santa Fe
Gardenhire	Kaiser-Francis	Midland TX
MIKE WALLACE	BURLINGTON RESOURCES	MIDLAND, TX
Doug Seams	Burlington Resources	midland, TX
Nick Gallegos	" "	Midland, TX
Keith Winfree	" "	
ROBERT HEFNER	CHESAPEAKE OPERATING	OKC, OK
MIKE HAZLIP	"	"
DAVIS PAYNE	POGO PRODUCING CORP	MIDLAND, TX
Bill Olson	NMOCD	Santa Fe

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:	)	CASE NO. 11,675
IN THE MATTER OF CASE NO. 11,675 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-10,735, WHICH ORDER PROMULGATED TEMPORARY SPECIAL RULES AND REGULATIONS FOR THE NORTH LOVINGTON-WOLFCAMP POOL IN LEA COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

August 21st, 1997

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, August 21st, 1997, 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

August 21st, 1997
Examiner Hearing
CASE NO. 11,675

* * *

E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	6	13
Exhibit 2	8	13
Exhibit 3	9	13
Exhibit 4	11	13
Exhibit 5	12	13

* * *

A P P E A R A N C E S

FOR THE DIVISION:

RAND L. CARROLL
Attorney at Law
Legal Counsel to the Division
2040 South Pacheco
Santa Fe, New Mexico 87505

FOR THE APPLICANT:

CAMPBELL, CARR, BERGE and SHERIDAN P.A.
Suite 1 - 110 N. Guadalupe
P.O. Box 2208
Santa Fe, New Mexico 87504-2208
By: PAUL R. OWEN

* * *

WHEREUPON, the following proceedings were had at 8:20 a.m.:

EXAMINER STOGNER: This hearing will come to order for Docket Number 26-97. Please note today's date, Thursday, August 21st, 1997.

I'm Michael Stogner, appointed Hearing Examiner for today's cases.

At this time I will call Case Number 11,675.

MR. CARROLL: In the matter of Case Number 11,675 being reopened pursuant to the provisions of Division Order Number R-10,735, which order promulgated temporary special rules and regulations for the North Lovington-Wolfcamp Pool in Lea County, New Mexico.

EXAMINER STOGNER: Call for appearances.

MR. OWEN: Paul Owen of the Santa Fe law firm of Campbell, Carr, Berge and Sheridan, for Manzano Oil Corporation.

I have one witness in this matter.

EXAMINER STOGNER: Any other appearances?

Will the witness please stand to be sworn at this time?

(Thereupon, the witness was sworn.)

EXAMINER STOGNER: Mr. Owen?

MR. OWEN: I call Mr. Donnie Brown.

DONNIE E. BROWN,

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

DIRECT EXAMINATION

BY MR. OWEN:

Q. Why don't you tell us your name and where you live?

A. My name is Donnie Brown and I reside in Roswell, New Mexico.

Q. And by whom are you employed?

A. I'm employed by Manzano Oil Corporation.

Q. What do you do for Manzano?

A. I am a petroleum engineer in charge of operation engineering.

Q. Have you previously testified before this Division and had your credentials as a petroleum engineer accepted and made a matter of record?

A. Yes, I have.

Q. Are you familiar with the Application filed in this case for Manzano Oil Corporation in November, 1996?

A. Yes, I am.

Q. Are you the engineer responsible for Manzano's wells in the North Lovington-Wolfcamp Pool?

A. That's correct.

Q. Have you developed data from that pool since the

previous hearing in this matter?

A. Yes, I have.

Q. Are you prepared to share that data that you've acquired with the Examiner?

A. Yes.

MR. OWEN: Mr. Examiner, are the witness's qualifications acceptable?

EXAMINER STOGNER: They are.

Q. (By Mr. Owen) Mr. Brown, would you please briefly tell us what Manzano Oil Corporation seeks with its original Application for this hearing?

A. Manzano seeks the adoption of the temporary pool rules for the North Lovington-Wolfcamp Pool, which provides for 80-acre spacing on a permanent basis.

Q. Have you prepared certain exhibits for intrcduction in this case?

A. Yes, I have.

Q. Why don't we take a look at your first exhibit, a landmap? Would you please briefly summarize that exhibit for us?

A. Yes, this is a landmap of the development of the North Lovington-Wolfcamp field.

Since the initial hearing in which we had drilled the Chipshot Number 1 in the north half of the southwest of Section 11 and the Double Eagle Number 1 in the south half

of the northeast of Section 11, we have continued to develop the field by drilling the Chipshot Number 2 in the south half of the southwest quarter of Section 11, the Big Bertha in the south half of the northwest of the Section 11, and we have drilled a dryhole in the south half of the southeast of the -- I believe that's Section -- What section is that? I don't have that here. I don't have that number.

Q. You're referring to Section 2?

A. Yes, Section 2, Killer Bee.

Q. Now, even though it's not noted, are the sections that are outlined with the yellow highlighter, those quarter sections, are those within Section 11, Township 16 South, Range 36 East?

A. That's correct.

Q. What spacing units have been dedicated to the wells in this pool?

A. They've been dedicated on a temporary basis of 80-acre spacing, and that includes the north half of Section 11 and the southwest quarter of Section 11 of Township 16 South, Range 36 East.

Q. Has the ownership in this section changed since the hearing in December, 1996?

A. As far as I know, they have not.

Q. All right, let's take a look at Manzano's Exhibit

Number 2, which is the order entered after the previous hearing in this matter.

Would you tell us why we've included this as an exhibit in this matter?

A. This was an order issued on January the 13th, 1997, granting temporary pool rules for the north half of Section 11 and the southwest quarter of Section 11 of 16 South, 36 East, and it also specified that the data should be obtained to reopen this in July of 1997.

Q. Now, I notice on this order that Manzano merely asked for the creation of a new pool in the south half of the northeast quarter and the north half of the southwest quarter of Section 11. Was more acreage than Manzano requested included in the pooling?

A. Yes, it was.

Q. In fact, was the entire north half --

A. The entire north half of Section 11 and the entire southwest quarter of Section 11.

Q. Are all of the producing wells which Manzano has drilled since that hearing within the area that was created, the pool that was created?

A. Yes.

Q. Do you have production data from those wells?

A. Yes, I do.

Q. Why don't we move on to Manzano Exhibit Number 3,

and why don't you tell us what you've put together for us there?

A. Exhibit Number 3 is a history of the field development, starting with the Chipshot Number 1 and continuing from left to right with the Double Eagle, the Chipshot Number 2, and the Big Bertha. It also includes the original pressure of the pool, production with time, and our results of our bottomhole pressure surveys.

The first well drilled to this pool was the Chipshot Number 1, and it had an original bottomhole pressure of 3656 on July the 5th, 1996, and that was based on the first DST pressure, at which time no production had been produced.

On November the 20th, 1996, we completed our Double Eagle Number 1. Its original pressure was 3646, some ten-pound pressure drop from the original pressure, after the Chipshot Number 1 had produced some 16,000 barrels of oil.

On December the 6th, 1996, we took a pressure buildup survey in the Chipshot Number 1, some two weeks after the completion of the Double Eagle. It indicated a bottomhole pressure of 3646, the same as the Double Eagle Number 1. And it also, from our transient analysis of the buildup curve, it indicated no boundary effect. And I'll elaborate on this no boundary effect later on in my

testimony.

On March the 3rd we ran another 72-hour buildup pressure test on the Chipshot Number 1 and the Double Eagle. At that time we had produced 38,884 barrels from the Chipshot Number 1 and 11,087 barrels of oil on the Double Eagle, for a total of almost 50,000 barrels. And it showed that our bottomhole pressure had declined from original down to 3621 in the Chipshot 1 and 3627 in the Double Eagle, some six pounds difference, and some 32 pounds of decline.

And at that time our buildup analysis and model verification indicated a boundary effect on the Chipshot 1, and it was concluded that it was due to the production from the Double Eagle, as opposed to a sealing fault.

In April the 28th, 1997, we did another pressure survey on all three wells shut in at the same time, after some 74,000 barrels of oil had been produced. The bottomhole pressure in the Chipshot 1 was 3552 and the Double Eagle 3559, and then the Chipshot 2, which had just come on stream and produced 2000 barrels, 3547. All three wells have very similar pressures, and all three wells showed a decline from original pressure.

In June the 2nd of 1997, we completed our Big Bertha, and it had a bottomhole pressure from DST of 3509, after some 95,465 barrels had been produced, again showing

a decline from the original bottomhole pressure. And as of August the 1st, these four wells have produced a total of some 123,000 barrels of oil.

So from the original pressure of 3656 until the last well, the fourth well, had been drilled, we produced some 643 barrels of oil per p.s.i. pressure drop.

If you can assume that abandonment pressure of the reservoir is 200 pounds, possible production from this field is some 2.3 million barrels.

Using the same parameters that we did in our initial hearing of net pay 50 feet, porosity 8 percent, water saturation 20 percent and primary recovery of 17 percent, this areal drainage is some 896 acres, which is way in addition to the 80 acres that we're requesting.

Q. Have you prepared this same data in a graphical format for the Examiner?

A. Yes, I put this same type of data on a graph that you can see more visually.

Q. Would this be Manzano's Exhibit Number 4?

A. Exhibit Number 4, yes, which shows the pressure surveys with the cumulative production.

From original bottomhole pressure of 3656 you can see that all the wells declined and was within a few pounds of each other, and all wells showed a decline from original pressure, indicating that they were producing from the same

reservoir and in communication with each other.

Q. And finally, have you had a transient analysis on the production form?

A. Yes, in Exhibit 5 this was our model verification interpretation from our buildup conducted on the Chipshot 1 when it was producing by itself in the field, and I've highlighted in yellow the conclusion of this model verification.

It reads, "...no indication of boundaries within the test radius of investigation..." and "...modeled as being in an infinite, homogeneous system."

Now, this same model verification was performed again after the Double Eagle or the second well had produced some 11,000 barrels of oil and the Chipshot some 39,000 barrels of oil.

And then it concluded that the "...modeled as being in a homogeneous system with skin, variable wellbore storage and wedge shaped boundaries within the...radius of investigation. The boundaries are believed to be due to offset production, not sealing faults," again establishing that these wells all -- they're in communication and produce from the same reservoir and effectively draining the reservoir on 80-acre spacing.

Q. Will adoption of the permanent pool rules for the North Lovington-Wolfcamp Pool, including 80-acre spacing,

as established in the order which is included as Exhibit Number 2, be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes, it would.

Q. Were Manzano Oil Corporation's Exhibits Number 1 through 5 prepared by you or compiled under your direction?

A. Yes, they were.

MR. OWEN: Mr. Examiner, I'd tender Exhibits 1 through 5.

EXAMINER STOGNER: Exhibits 1 through 5 will be admitted into evidence.

MR. OWEN: And that's all I have for this witness.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Brown, in referring to Exhibit Number 1 -- That was your map.

A. Yes.

Q. Okay. You had mentioned the dry hole up in Section 2, the SV Killer Bee Well Number 1?

A. Yes.

Q. When was that well completed or tested in the sequence of your Chipshot 1, Double Eagle 1 and so forth?

A. It was our last well drilled, just a month ago,

and it wasn't tested because there was no reservoir there.

Q. Oh, there was just no reservoir parameters, nothing there?

A. That's right.

Q. Okay. So -- And that's what I was going to refer to next, was approximate reservoir limits, and you outlined it in blue. Is that a -- Does the formation just pinch out, or is there a porosity --

A. It's just gone, pinches out.

Q. It just pinches out.

A. The reef is gone.

Q. Okay.

A. Now, I think we've established the northern boundaries with our Brownfield Trust dry hole that we drilled three or four years ago and this recent Killer Bee Number 1.

Q. Okay, that Brownfield Trust well, that's the one that's up in the northwest of the northwest of 11?

A. That's correct.

Q. Was that drilled primarily to test the Wolfcamp, or was it a secondary?

A. It was drilled primarily to test the Wolfcamp several years ago, before we had any 3-D, and it -- again, it just -- no reef there.

Q. Was that drilled based on, since you didn't have

3-D, surface seismic?

A. To tell you the truth, I don't know what it was based on. It could have been just subsurface geology.

Q. Well, they were close.

A. Yeah.

Q. Looking down there in the northwest of the southeast quarter, that's the -- It looks like the Hodge?

A. Yes, that --

Q. Do you have a log on that well, or --

A. Yes. I don't have one. I have a log; I've seen the log.

Q. Uh-huh.

A. And it's tight with -- it was drilled by -- I forget who drilled it, but they never did test the zone, and we're contemplating about going in and trying to recomplete in our Wolfcamp. It looks like they have pay in the upper part of it.

Q. Are these wells flowing, or do you have them on pump?

A. They're flowing.

Q. They are flowing?

A. Yes, anywhere from 200 pounds to 850 pounds.

Q. How long are you flowing them on a daily basis? All day long?

A. Oh, yeah.

Q. Any water?

A. The Double Eagle makes about eight barrels a day, and the Big Bertha make about -- oh, 20 barrels a day. But they're flowing 200 barrels of water.

We have cored these wells, and it shows quite a bit of fractures. And we've tested the Basin Reef, and there's water.

So we kind of flow them -- They'll flow 400 or 500 barrels a day, but we hold them down to about 200 barrels a day to prevent coning of water through these fractures.

Q. Are these wells being stimulated after they're drilled or --

A. No, every one of them -- We usually perforate and acid- -- maybe three barrels of acid; it's broke on the spot. And turn on the valve and get out of the way.

Q. Now, Dave Catanach heard the original case. That first well, your Chipshot Well Number 1, that was drilled based on a 3-D seismic?

A. Yes.

EXAMINER STOGNER: I have no other questions of Mr. Brown.

MR. OWEN: That concludes my presentation in this case.

EXAMINER STOGNER: Thank you, Mr. Brown.

THE WITNESS: Thank you.

EXAMINER STOGNER: You may be excused.

Does anybody else have anything further in reopened Case 11,675?

It's my intent to recommend to Mr. LeMay a continuation of special pool rules, and I'll take this under advisement at this time.

(Thereupon, these proceedings were concluded at 8:37 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11675, heard by me on 21 August 1997.

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 August 22nd, 1997.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998