STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico

8 May 1985

EXAMINER HEARING

IN THE MATTER OF:

The application of Gulf Oil Corporation for a nonstandard gas proration unit and an unorthodox gas well location, Lea County, New Mexico.

CASE 8597

BEFORE: Gilbert P. Quintana, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Jeff Taylor
Attorney at Law
Legal Counsel for the Division
Oil Conservation Division
Santa Fe, New Mexico 87501

For the Applicant: W. Thomas Kellahin
Attorney at Law
KELLAHIN & KELLAHIN
P. O. Box 2265
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. QUINTANA: We'll call next Case 8597.

MR. TAYLOR: The application of Gulf Oil Corporation for a nonstandard gas proration unit and an unorthodox gas well location, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin, Santa Fe, New Mexico, appearing on behalf of the applicant and I have one witness to be sworn.

MR. QUINTANA: Are there other appearances in this case?

If not, sir, would you please stand up to be sworn in at this time?

(Witness sworn.)

LES MUNSON,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Munson, for the record would you please state your name and occupation?

A My name is Les Munson. I'm a petroleum

engineer with Gulf Oil Corporation, Midland, Texas.

Q Mr. Munson, have you previously testified before the Oil Conservation Division and had your qualifications as a petroleum engineer accepted andmade a matter of record?

A I have.

Q Pursuant to your employment with Gulf Oil Corporation, have you made a study of the engineering facts surrounding this application?

A Yes.

Q And have you prepared certain exhibits for introduction today?

A Yes, I have.

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

MR. QUINTANA: He's considered qualified.

Q Mr. Munson, would you summarize for us what Gulf Oil Corporation is seeking to accomplish with this application?

A We seek to -- we seek approval of an unorthodox location and nonstandard proration unit for our R. R. Bell NCTC Well No. 5 in Lea County, New Mexico.

Q Let me direct your attention, Mr. Munson, to what is marked as Gulf's Exhibit Number One and have you

identify that letter for us.

A Exhibit One is a copy of the original application sent to Mr. Catanach on April 2nd, 1985.

In it is Form C-102 that described the acreage to be dedicated in this proration unit. If you'll look back, you'll see that it consists of the west half of Section 15, Township 21 South, Range 36 East, Lea County.

Q When we're dealing with gas wells in the Eumont Gas Pool, Mr. Munson, what would be a standard proration unit to dedicate in that pool?

A It's my understanding it's -- the rules call for 640 acres and they define spacing for 320's and 160's in the rules, also.

Q All right, sir, so you're seeking the dedication of the west half of the section and that would constitute a nonstandard proration unit of 320 acres.

A That's correct.

Q In addition, sir, would you identify for us what it is that's unorthodox about the location for the No. 5 Well?

A The spacing rules for a 320-acre proration unit in the Eumont call for a well to be located at least 1980 feet from the end of a proration unit.

This well will be located 1470 feet from the end of the proration unit, and that is the -- against

the rule in question.

Q Why was this not processed administratively through the Division, Mr. Munson?

A I believe it was because the application or the location was not based on topographic or geologic factors.

Q All right, sir. Let's go, then, through the rest of the application.

We have described the C-102. Would you describe the information next contained?

A Okay. On the next page is Form C-101. That's our application to drill and submittal of casing program.

The next page after that gives a schematic.

After that, list of offset operators, and these are operators who were notified of our application by copy of this letter, and a plat from a commercial map is on the back of that.

Q All right, sir, now let's turn to Exhibit Number Two and have you identify that.

A Exhibit Number Two is a copy of return receipts and returned from the operators listed on the operators list in the application. They were all returned.

Q Let's turn now to Exhibit Number Three,

Mr. Munson, and talk about Gulf's reasons for its proposed No. 5 Well.

A Okay. The reason for that location comes as a result of the Eunice-Monument South unitization.

Q Let's describe and refresh for the Examiner's memory what the situation is with the Eunice-Monument South Unit, and what are the obligations of the working interest owners in terms of contributing wellbores to that unit.

A Okay. The consenting -- the operators who join the operating agreement are bound by the agreement to donate either a wellbore or pay 250 -- $200,000 penalty for each wellbore that can't produce for the 40-acre proration that's in that unit.

Q And this is a unit that is for secondary recovery of oil.

A That's correct.

Q Would you be contributing a wellbore to the unit within this northwest quarter of Section 15?

A We will -- we will have four wellbores to contribute but the R. R. Bell "C" No. 4 Well is dually completed in both the Eunice-Monument Grayburg-San Andres and the Eumont Gas.

Q The No. 4 Well is depicted on Exhibit Number Three?

A That's right.

Q All right, let's look at the same time at Exhibit Number Four and have you describe what type of wells are identified on that exhibit.

A Okay. Exhibit Four shows completions in the Eunice-Monument Grayburg-San Andres Field.

This is a nine-section area that surrounds and includes Section 15, subject of today, and you can see on that in the northwest quarter of Section 15 the four wells in the unit and also the Bell "C" No. 4 that is dually completed in both fields.

Q All right. Again, when we look at the Gulf No. 4 Well, what is -- what is Gulf going to do with that wellbore?

A The operating agreement stipulates that none of the wellbores dedicated to the Eunice-Monument South Unit may be dually completed.

It is Gulf's intention to abandon the Eumont gas in this well and redrill the No. 5 Well to recover reserves from this -- from this northwest quarter.

Q Is the No. 4 Well located in such a position in Section 15 that it is suitable for purposes of the unit?

A It is located in an ideal position for the waterflood pattern we wish to institute in that unit.

Q Is the No. 5 Well, the proposed well that you're to drill pursuant to this order, is that located at a point in the reservoir that will allow Gulf to recover gas from the Eumont Gas Pool that would not otherwise have been recovered from the No. 4 Well?

A Yes, it is.

Q All right, sir, let's turn to the reasons you can reach that conclusion, Mr. Munson, and have you identify for us Exhibit Number Five, first of all.

A Number Five is a copy of Dwight's curve. The data included on that curve include bottom hole pressure over Z plotted as a function of --

Q This is for which well?

A It's for the R. R. Bell NCTC Well No. 4.

Q All right.

A And it applies to the Eumont gas completion in that well.

Plotted on this exhibit, some of the data plotted on this exhibit includes bottom hole pressure over Z versus cumulative production.

A standard analysis of this data indicates that ultimate recovery from the Eumont gas at this location could be as high as 11 BCF.

In practicality the abandonment pressure will probably be around 175 psi.

Q How long has this -- how long has the No. 4 Well been producing from the Eumont Gas Pool?

A It's been producing since 1937. Excuse me, since 1955.

Q And can you approximate for us the cumulative production from the Eumont Gas Pool?

A Yes, cumulative as of March, 1985, was approximately 8.16 BCF and that represents 91 percent of the calculated recoverable reserves from this well, and we believe it has nearly reached its productive life.

Q You've reached that conclusion based upon information including Exhibit Number Five, which is the P/z curve?

A That's correct.

Q All right, sir. Would you now turn to Exhibit Number Six and identify that for us?

A Exhibit Number Six depicts the Well No. 4 and also the proposed Well No. 5.

A drainage radius for the No. 4 Well has been calculated at 1648 feet. This represents an area of 196 acres.

A similar circle was drawn around -- around the proposed well to indicate what we expect to recover from that well.

The cross hatched area indicates addi-

tional reservoir, or additional reserves that will be recovered from the No. 5 Well that would not have been recovered otherwise from the No. 4 Well.

The calculated recovery for this area in the Eumont is 51.5 MMCF per acre.

The area represented cross hatched is approximately 52 acres and we calculate an additional recovery of approximately 2.7 BCF from that area.

Q That is what you calculate to be the additional recovery of gas from Eumont Gas Pool that would not have been recovered from the No. 4 Well?

A That is correct.

Q In your opinion is the No. 5 Well needed at this location in order to effectively and efficiently drain Eumont Gas Pool?

A I believe so, and the reason being that there are reserves to be -- there are reserves to be recovered up there yet, and that's what we intend to do.

Q In your opinion would the No. 4 Well, should it have been produced all the way through abandonment, produce the reserves that you would now produce from the No. 5 Well?

A I don't -- no, I don't believe so.

Q All right, sir. Let's go now to Exhibit Number Seven and have you identify that for us.

A Exhibit Seven is a production history from the -- from both zones completed in the R. R. Bell NCTC Well No. 4.

As you can see, production began in 1937 from the Eunice-Monument Grayburg-San Andres Pool.

Production from the Eumont prorated gas pool began in 1955.

Cumulative production from each of those, for the Eunice-Monument Grayburg-San Andres, 470,007 barrels of oil and the Eumont prorated -- the Eumont Gas has produced 8,158,000,000 cubic feet.

Q All right, sir, let's go to Exhibit Number Eight and have you identify that.

A Exhibit Eight is a copy of Form C-103 that was filed indicating our intention to plug the Eumont Gas in the "C" No. 4 Well. It was filed February 28th, 1985, signed by our area engineer in Hobbs.

Exhibit Number Nine is a copy of Form C-103 filed subsequent to the plugging of the Eumont zone, and it's dated May 6th, 1985. It's also signed by our area engineer in Hobbs.

Q All right, sir, in summary, then, Mr. Munson, what conclusions do you reach from your engineering study of the No. 4 Well and the proposed No. 5 Well in terms of recovering additional reserves underlying this proration

unit?

A The abandonment of the Eumont No. 4 Well was stipulated by the operating agreement. There are reserves to be -- there are reserves yet to be recovered from this portion of the proration unit and we feel the No. 5 Well is in a good position to recover those reserves, and the additional recovery of 2.7 BCF from the No. 5 Well we feel to be not an insignificant amount of gas to be recovered from this well.

MR. KELLAHIN: That concludes our examination of Mr. Munson.

We move the introduction of Exhibits One through Nine.

MR. QUINTANA: Exhibits One through Nine will be entered into evidence.

I have no questions of the witness.

Are there further questions of the witness?

If not, he may be excused.

Is there anything further in Case 8597?

MR. KELLAHIN: No, sir.

MR. QUINTANA: If not, it will be taken under advisement.

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 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.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 8597 heard by me on May 8 1985.

Gilbert P. Quintana Examiner
Oil Conservation Division