

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

MAIN OFFICE OCC

1958 JUL 9 AM 8:35

IN THE MATTER OF:

CASE NO. 1465

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES  
INCORPORATED  
GENERAL LAW REPORTERS  
ALBUQUERQUE, NEW MEXICO  
3-6691 5-9546

June 11, 1958

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
JUNE 11, 1958

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IN THE MATTER OF: :

CASE NO. 1465 Application of Magnolia Petroleum Com- :  
pany for an oil-oil dual completion. :  
Applicant, in the above-styled cause, :  
seeks an order authorizing the dual com- :  
pletion of its New Mexico "S" No. 1 Well, :  
located 990 feet from the North line and :  
1650 feet from the East line of Section :  
2, Township 16 South, Range 32 East, Lea :  
County, New Mexico, in such a manner as :  
to permit the production of oil from the :  
Wolfcamp formation adjacent to the And- :  
erson Ranch-Wolfcamp Pool and oil from :  
the Anderson Ranch-Devonian Pool through :  
parallel strings of tubing. :

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BEFORE:

Daniel S. Nutter, Examiner.

T R A N S C R I P T    O F    P R O C E E D I N G S

MR. NUTTER: Next case on the docket is Case 1465.

MR. PAYNE: Application of Magnolia Petroleum Company for  
an oil-oil dual completion.

(Witness sworn)

MR. SPERLING: J. E. Sperling, Modrall, Seymour, Sperling,  
Roehl & Harris, Albuquerque, appearing for the applicant.

W. H. LEACH, JR.,

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

DIRECT EXAMINATION

BY MR. SPERLING:

Q Will you state your name, please?

A William Leach, Jr.

Q By whom are you employed and in what capacity?

A By the Magnolia Petroleum Company as aerial petroleum engineer, Tatum, New Mexico.

Q How long have you been so employed?

A Been employed by Magnolia since June of 1953.

Q Have you testified previously as an expert before the Commission?

A Not under oath.

Q Would you give us a short resume of your educational and experience background?

A I was graduated from the University of Pittsburg in June, 1953 with a Bachelor of Science degree in petroleum engineering. I've worked for Magnolia since then as a junior petroleum engineer in Leakey, Texas, and as an aerial petroleum engineer in Tatum, New Mexico.

MR. SPERLING: Are the witness' qualifications acceptable?

MR. NUTTER: They are. Please proceed.

Q Are you familiar with the application that has been filed in this matter?

A Yes, sir.

Q Would you please state what is proposed by the application?

A By the application, Magnolia proposes to dually complete its New Mexico "S" No. 1 Anderson Ranch-Devonian Field as a dual completion to produce from both Devonian and Wolfcamp zones in that Field. Production is proposed through two strings of two and three-eighths inch OD tubing with production segregated by Baker permanent packer.

Q I call your attention to Exhibit identified as No. 1, and ask you if that is the plat which identifies the area of the proposed dual completion, showing the other dual completions in the area and the lease ownership in the area?

A That is correct.

Q Would you state what the location of the well is as shown by the plat?

A The location of New Mexico "S" No. 1 is 990 feet from the North line, 1650 feet from the East line, Section 2, Township 16, South, Range 32 East, Lea County, New Mexico.

Q And from what zone is that well presently producing?

A Presently the well is producing from the Devonian formation at approximately 13,400 feet.

Q And what are the other particulars with reference to the production and gas-oil ratios and so forth?

A New Mexico "S" No. 1 was completed in the Anderson Ranch-Devonian Field on January 1st, 1958, producing 319 barrels of oil per day, no water, 20/64 inch choke, tubing pressure 200 pounds, gas-oil ratio 697 to 1. Presently, it is still flowing top allowable.

The gas-oil ratio is not changing appreciably on initial bottom hole pressure test. The initial bottom hole pressure of the well was determined to be 4,586 at field datum.

Q Would you give us the benefit, now, of your estimates with reference to production from the Wolfcamp formation?

A We have estimated that based on reservoir characteristics taken from log and core data that the Wolfcamp formation to be drained by this well, if the application is approved, will produce approximately 62,400 barrels of oil.

Q I'll call your attention to what has been marked as Exhibit 2, and ask if that represents the casing and cementing program which you expect to follow with reference to the dual completion in the Wolfcamp if the application is granted?

A That is right. That is a diagrammatic sketch of the well showing the proposed dual completion installation, if acceptable.

Q Now, I believe you mentioned a Baker packer as the method to be used for the purpose of segregating the two formations?

A That is correct. We propose to set a Baker production packer at approximately 10,000 feet to segregate the Wolfcamp from Devonian production.

Q Now, referring to what has been marked as Exhibit No. 3, I will ask you if that is a log representing the producing interval of the two formations or indicating the producing interval?

A That is correct; that is a gamma ray neutron log of New Mexico "S" No. 1 on which has been marked in the top and bottom of

the Wolfcamp porosity, the location of the two zones to be perforated at approximately 9,850 feet; the top of the Devonian formation and the present Devonian perforation at approximately 13,400 feet.

Q Now, have you made a calculation designed to reflect the oil reserves and the economics insofar as these producing areas are concerned, with particular reference to the Wolfcamp?

A Yes, sir, we have. We have estimated that to drill, complete, and fully equip a wolfcamp well in this field, it would cost approximately \$202,900. To perform the same operation through dual completion of the present well, it would cost approximately \$52,900. Comparing both of these figures against the gross revenue from the 62,400 barrels of gross oil mentioned previously, we find that by drilling a new well, Magnolia would stand to lose \$10,700 as opposed to a gain of approximately \$139,000 gross revenue, should the present well be dually completed.

Q Now, referring again to Exhibit No. 1, which is the plat of the area, the Exhibit indicates the present dual completion of two offset wells operated by Gulf Oil Corporation. Do you know whether or not those were the subject of application and approving order by this Commission?

A That's correct. The south offset is Gulf's Lea State CL "A" State No.1, a dual completion. Permission for that well was given by the Commission in Order R-1164 dated April 22nd, 1958. The east offset is Gulf's Lea State "B" No. 1, and permission for

dual completion of that well was given by the Commission in Order R-1166, dated April 22nd, 1958.

Q Is the method which you expect to use in connection with the proposed dual completion of your company's well similar to or identical with the method used in connection with the dual completion of these other two wells?

A Yes, it is.

Q In your opinion, Mr. Leach, will the favorable action of the Commission on this application result in the prevention of waste and the protection of correlative rights?

A Yes, sir, it will.

MR. SPERLING: That's all I have.

MR. NUTTER: Anyone else have any questions of Mr. Leach?

CROSS EXAMINATION

BY MR. NUTTER:

Q Now, Mr. Leach, I don't believe you gave an estimate of what the gravity and bottom hole pressure and GOR would be in the Wolfcamp. Do you have any idea?

A Yes, sir. On the Wolfcamp, it's 42 degrees API, a sour crude as opposed to Devonian, which is 52 degrees API and sweet crude. The gas-oil ratio from March, 1958, Engineering Committee report figures, the Wolfcamp Field average ratio was 2,311 to 1; Devonian Field ratio was 593 to 1; and bottom hole pressure, I've stated that our Devonian was 4,586 from drill stem test through the Wolfcamp. When we drilled this well, we found the shut-in

pressure there in the Wolfcamp, 3,530 PSI.

Q What was that again?

A 3,530.

Q The bottom hole pressure in the Devonian of 4586 is the current bottom hole pressure, or the initial --

Q That's the initial. We believe it to be very nearly current.

Q And your initial GOR was 697, and it is now 593?

A That is correct.

Q Mr. Leach, can you tell me where the top of the cement comes in these various casing strings on your sketch of the well?

A Yes, sir. Starting with the surface casing -- that cement has been circulated to the seven and five-eighths casing, and the cement top there is 7,565, and on the five and a half inch liner, top of cement there is 11,485, as so marked to the left of the picture.

Q And the seven inch is set at what depth?

A Seven and five-eighths is set at 10,428.

Q So there is an interval there from 10,478 to 11,485 where there is no cement?

A No, sir, the top of this five and a half inch liner at 10,238 has been squeezed off with 200 sacks of cement.

Q Does that fill that interval from --

A I do not believe it does.

Q --10,238 down to the top of the cement on the liner?

A I do not believe it will fully fill that interval, no, sir. However, we know that there is a bend there; we did not run a survey through that.

MR. NUTTER: Are there any further questions of Mr. Leach? If not, he may be excused.

(Witness excused)

MR. SPERLING: We would like to ask the reception of Exhibits 1 through 3 at this time.

MR. NUTTER: Is there objection to the introduction of Magnolia's Exhibits 1 through 3? If not, they will be received. Does anyone have anything further they wish to offer in Case 1465? We will take the case under advisement.

**C E R T I F I C A T E**

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

I, J. A. Trujillo, Notary Public 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 stenotype and reduced to typewritten transcript by me and/or 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 8<sup>th</sup> day of July, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

*Joseph A. Trujillo*  
Notary Public

My Commission Expires:  
October 5, 1960

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1465 heard by me on 6-4, 1958.  
*James H. ...* Examiner  
New Mexico Oil Conservation Commission