

ILLEGIBLE

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 1702
Order No. R-1431

APPLICATION OF HUMBLE OIL &
REFINING COMPANY FOR AN ORDER
AUTHORIZING AN OIL-GAS DUAL
COMPLETION IN THE FOUR LAKES-
PENNSYLVANIAN POOL EXTENSION
AND IN THE FOUR LAKES-DEVONIAN
GAS POOL, LEA COUNTY, NEW
MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 8 o'clock a.m. on June 24, 1959, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 2nd day of July, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Humble Oil & Refining Company, is the operator of the South Four Lakes Unit Well No. 6, located 1980 feet from the South line and 660 feet from the East line of Section 2, Township 12 South, Range 34 East, NMPM, Lea County, New Mexico.
- (3) That the applicant proposes to dually complete said South Four Lakes Unit Well No. 6 in such a manner as to permit the production of oil from the Four Lakes-Pennsylvanian Pool Extension and the production of gas from the Four Lakes-Devonian Gas Pool through parallel strings of tubing.
- (4) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

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Case No. 1702

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(5) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

That the applicant, Humble Oil & Refining Company, be and the same is hereby authorized to dually complete its South Four Lakes Unit Well No. 6, located 1980 feet from the South line and 660 feet from the East line of Section 2, Township 12 South, Range 34 East, NMPM, Lea County, New Mexico, in such a manner as to permit the production of oil from the Four Lakes-Pennsylvanian Pool Extension and the production of gas from the Four Lakes-Devonian Gas Pool through parallel strings of tubing.

PROVIDED HOWEVER, That applicant shall complete, operate, and produce said well in accordance with the provisions of Section V, Rule 112-A.

PROVIDED FURTHER, That applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Four Lakes-Pennsylvanian Pool.

IT IS FURTHER ORDERED: That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order, after proper notice and hearing the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John Burroughs
JOHN BURROUGHS, Chairman

Murray E. Morgan
MURRAY E. MORGAN, Member

A. L. Porter, Jr.
A. L. PORTER, Jr., Member & Secretary



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1702

TRANSCRIPT OF HEARING

June 24, 1959

DEARNLEY - MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone CHapel 3-6691

I N D E X

<u>WITNESS</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>
WILLIAM S. DAVIS	4	11	

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
June 24, 1959

IN THE MATTER OF:

Application of Humble Oil & Refining
Company for an oil-gas dual completion.
Applicant, in the above-styled cause,
seeks an order authorizing the dual
completion of its South Four Lakes
Unit Well No. 6, located in the SW/4
SE/4, Section 2, Township 12 South,
Range 34 East, Lea County, New
Mexico, in such a manner as to produce
oil from a Four Lakes-Pennsylvanian
Pool extension and gas from a Four
Lakes-Devonian Gas Pool extension
through parallel strings of tubing.

CASE NO.
1702

BEFORE:

ELVIS A. UTZ, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: Case 1702.

MR. PAYNE: Case 1702. Application of Humble Oil &
Refining Company for an oil-gas dual completion.

MR. BRATTON: Howard Bratton, appearing on the behalf
of the applicant. We have one witness and ask that he be sworn.

(Witness sworn.)

WILLIAM S. DAVIS

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name and by whom you are employed and in what capacity?

A William S. Davis, Senior Engineer with the Western Division office for the Humble Oil & Refining Company, Midland.

Q Would you state briefly your educational and professional background?

A I was graduated from the University of Texas in January of 1949 with a Bachelor of Science in Petroleum Engineering. I joined the Humble Company immediately thereafter and have been with them ever since in the Gulf Coast and Basin areas. For the last four years I have been in the Western Division which includes West Texas, New Mexico and Arizona, in both staff and field operations.

Q Are you familiar with the South Four Lakes area in New Mexico?

A Yes.

Q Is that a part of your operation?

A Yes, that is part of our operation.

Q Are you familiar with the application filed by Humble in this case?

A I am.

Q Are the witness' qualifications acceptable?

MR. UTZ: They are.

Q (By Mr. Bratton) Mr. Davis, do you have a plat of the area in question and the well in question marked Humble Exhibit No. 1?

A Yes.

Q Will you explain what is shown on that plat?

A This plat shows the location of Humble's South Four Lakes Unit 1 Well 6 in Section 2, which is the well in question. This well is 660 feet from the east line of Section 2 and 1980 from the south line.

Q This is in the South Four Lakes unit?

A Yes, this is in the South Four Lakes unit which is operated by Humble. The well is completed in the Four Lakes Pennsylvanian and Four Lakes Devonian Pools.

Q And shown on the plat are all of the offset operators to the unit area?

A Yes, those are shown as well as all the wells that are in the unit.

Q Referring to the particular well in question, No. 6. Do you have a log of that well, Mr. Davis?

A Yes, here are three copies of the radioactivity log of Four Lakes 6 with the completion intervals in the Pennsylvanian and Devonian both indicated.

Q That log is marked Exhibit No. 2?

A Yes, that is our Exhibit No. 2.

Q What does that log show with relation to the intervals in question, Mr. Davis?

A Well, it shows that there is nearly 1000 feet of separation between the two intervals in questions. I might add that both of these intervals are recognized as completions in separate oil pools. There is, however, no dual completion in this field prior to this one.

Q What are the intervals on the Pennsylvanian Oil Pool and Devonian Gas Pool?

A The Pennsylvanian perforated at 9901 to 9929 feet. And the Devonian is perforated at 12,793 to 12,831 feet.

Q Do you have a diagramtic sketch of the installation -- dual completion installation in this well, Mr. Davis?

A Yes. We offer that as Exhibit No. 3.

Q Referring to Humble's Exhibit No. 3, would you go through that completely and explain just exactly what the installation is?

A The Four Lakes 6 was drilled in the early part of this year and the drilling was completed in April of 1959. As noted on the Exhibit the surface casing of 13 3/8 inch was set at 420 feet and the cement circulated. The intermediate string 9 5/8 is set at 43; cement was also circulated on that. The oil string was set total depth 7 inch casing at 12,070 feet cemented

with 1180 sacks of cement, and the top was found by temperature survey 9460 feet. The Pennsylvanian and Devonian were perforated as we have noted before and two strings of n-80 tubing with bevel couplings were run. The Baker Model "D" packer separating these zones is set at 12,555. In the long string immediately above the packer there is a position one nipple and just above that Baker C-1 receptacle. This particular combination makes it possible to set a blanking plug just above the packer and pull a long string as well as a short string in the event you want to work on the upper zone without contamination of the lower zone. Just above that installation is an Otis sleeve and above that a Position 2 nipple which makes it possible to work on the lower zone, The Devonian, with wire line tools. There is a Baker tubing anchor at 10,001 feet and in the Pennsylvanian string of tubing there is also a pump tubing set which will make it possible to run a pump in the event Pennsylvanian declines and makes it necessary.

Q What is the size of the tubing to both strings?

A That is regular two inch, EVE-280.

Q Is the Pennsylvanian flowing or is that pumping now?

A The Pennsylvanian is flowing now at present. In fact, that side is being produced prior to the hearing on this application.

Q Is the installation equipped where it can be pumped,

where a pump can be put on?

A Yes, the setting nipple is indicated on the diagram on the Pennsylvanian side.

Q Is there anything else you wish to bring out as to the installation, Mr. Davis?

A I believe not. This is all commercially available equipment and I believe fairly routine for completions of this type.

Q Mr. Davis, application for this dual completion was made sometime ago but it was not set down until this hearing, is that correct?

A That's correct.

Q In the interim has Humble proceeded to run the test as required under Rule 112-A of Paragraph 5, the packer leakage tests?

A Yes, sir, those have been submitted through the regular Commission channels by our Hobbs District office and submitted generally in the middle of May.

Q For the record, do you have a copy of the report submitted?

A Yes, I have a copy of it here in this file.

Q Will you read into the record what is shown on that report, the results of those tests?

A The packer leakage test submitted by our Hobbs

District office on May 15, 1959, showed that on a test from May the 4th to May the 8th the Devonian was produced without any indication of draw down in the Pennsylvanian, and subsequently the Pennsylvanian was produced without any indication of draw down in the Devonian. And that was submitted on the regular Commission form for that purpose and is a part of the Commission record.

Q The two strings of tubing flow separate batteries?

A Yes, sir. There is complete separation all the way through the battery.

Q Did Humble notify all offset operators of the filing of this application?

A Yes, sir, with our letter of April 17th we notified the offset lease holders. And here is a copy of Humble's letters and the registration slips.

Q We will offer that as Exhibit No. 4. Have you received any objection or heard from any of the offset operators with regard to this installation?

A No, sir, to my knowledge there has been no objection.

Q The Pennsylvanian is now producing, but the Devonian has been shut in, is not producing?

A That's correct.

Q In your opinion, Mr. Davis, is this installation safe to prevent any possibility of commingling between the zones?

A Yes, I believe that we have effective separation

established.

Q In your opinion is the installation adequate to permit effective production of both reservoirs?

A Yes, it is.

Q In your opinion will the granting of this application prevent waste and protect correlative rights?

A Yes, sir.

Q Do you have anything further that you care to state with regard to this application?

A No, I have nothing further to add.

Q Were Exhibits 1 through 4 prepared by you or under your supervision?

A Yes.

MR. BRATTON: We would offer those Exhibits in evidence.

MR. UTZ: Without objection Exhibits 1 through 4 will be entered in evidence.

MR. BRATTON: I have no further questions of the witness.

MR. UTZ: Mr. Davis, can the Devonian be pumped satisfactorily in the event you have to?

A It would be possible to pump because this is a pull open string of 2 inch tubing. However, our plans for the Devonian, which is a gas condensate of a highly unusual nature makes us to believe that it will not be necessary to pump in the

forseeable future. The pressure has been quite well maintained in that reservoir I believe so far.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Davis, is this well within the horizonatal limits of the Four Lakes Devonian Gas Pool?

A It is now, Mr. Payne. When the application was originally filed I believe it was not, and for that reason the original letter mentioned undesignated. There have been two revisions. One, the horizontal limits, and one the reclassification of the Devonian, and I believe subsequent letters correct that situation.

MR. UTZ: Are there any other questions? If there are no questions of the witness, the witness may be excused.

(Witness excused.)

MR. UTZ: Are there any other statements to be made in this case? If there are none, the case will be taken under advisement. The hearing is adjourned.

(Whereupon the hearing was concluded.)

STATE OF NEW MEXICO)
 : ss
 COUNTY OF BERNALILLO)

I, Ned A. Greenig, 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 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 day of July, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

 Notary Public

My Commission Expires:
 May 5, 1963

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1702, heard by me on June 24, 1959.
 _____ Examiner
 New Mexico Oil Conservation Commission