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. 1553
Order No. R-1293

APPLICATION OF THE TEXAS COMPANY
FOR AN OIL-GAS DUAL COMPLETION
AND FOR PERMISSION TO COMMINGLE
THE LIQUID HYDROCARBON PRODUCTION
FROM TWO SEPARATE POOLS, CHAVES
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 19, 1958, 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 26th day of November, 1958, 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, The Texas Company, is the owner and operator of the Peery-Federal lease comprising all of Section 29, Township 15 South, Range 30 East, NMPM, Chaves County, New Mexico, on which lease is located applicant's Peery-Federal (NCT-1) Well No. 1, situated 1980 feet from the North line and 1980 feet from the East line of said Section 29.

(3) That the applicant proposes to dually complete the above-described Peery-Federal (NCT-1) Well No. 1 in such a manner as to permit the production of oil from an undesignated Devonian oil pool and the production of gas from an undesignated Ellenburger gas pool through parallel strings of 2-1/16 inch Hydril tubing.

(4) That the applicant further proposes to commingle the liquid hydrocarbon production from the Devonian and Ellenburger

formations from all existing and future wells on the above-described Peery-Federal lease after the production from each of said zones has been separately measured.

(5) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(6) That approval of the subject application will not cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, The Texas Company, be and the same is hereby authorized to dually complete its Peery-Federal (NCT-1) Well No. 1, located 1980 feet from the North line and 1980 feet from the East line of Section 29, Township 15 South, Range 30 East, NMPM, Chaves County, New Mexico, in such a manner as to permit the production of oil from an undesignated Devonian oil pool and the production of gas from an undesignated Ellenburger gas pool through parallel strings of 2-1/16 inch Hydril 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 Devonian Oil 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.

(2) That the applicant, The Texas Company, be and the same is hereby authorized to commingle the production from the Devonian and Ellenburger formations from all existing and future wells on its Peery-Federal lease, consisting of all of Section 29, Township 15 South, Range 30 East, NMPM, Chaves County, New Mexico, provided that the production from each of said zones is separately measured prior to commingling.

PROVIDED FURTHER, That the applicant shall check said meters for accuracy at intervals and in a manner satisfactory to

the Commission.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

MURRAY E. MORGAN, Member

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

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BEFORE THE
OIL CONSERVATION COMMISSION
NOVEMBER 19, 1958

IN THE MATTER OF:

APPLICATION OF THE TEXAS COMPANY, CASE 1553

TRANSCRIPT OF HEARING

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

BEFORE THE
OIL CONSERVATION COMMISSION
NOVEMBER 19, 1958

IN THE MATTER OF:
Application of The Texas Company for a dual completion and for permission to commingle the liquids produced from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Peery-Federal (NCT-1) Well No. 1 located 1980 feet from the North and East lines of Section 29, Township 15 South, Range 30 East, Chaves County, New Mexico, in such a manner as to permit the production of oil from an undesignated Devonian oil pool and gas from an undesignated Ellenburger Gas Pool through parallel strings of tubing. Applicant further requests permission to commingle the liquids and low pressure gas produced from the Devonian and Ellenburger formations from all existing and future wells on its Perry-Federal Lease which comprises all of said Section 29.

Case 1553

BEFORE:
Elvis Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: The hearing will come to order, please. At this time, I will give the order in which we will takeup the rest of the cases. We have a hardship case with The Texas Company. We will take 1553, 1554, and we have a continued case with Pure Oil Company which was continued from last month and does not appear on the Docket, 1537. The rest of the cases will be in order after 1548. Case 1553.

MR. PAYNE: Case 1553, application of The Texas Company for a dual completion and for permission to commingle the liquids

produced from two separate pools.

MR. WHITE: Charles White, of Gilbert, White and Gilbert, appearing on behalf of The Texas Company. We have one witness who will now stand to be sworn.

(Witness sworn.)

JOHN B. ROSS

the witness, having first been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q State your name, please?

A John B. Ross.

Q By whom are you employed and in what capacity?

A The Texas Company as District Engineer.

Q Where are your offices situated?

A In Midland.

Q Have you previously testified before the Commission?

A No.

Q Will you briefly state your educational background and your professional experience?

A I'm a graduate of the Colorado School of Mines with a degree in Petroleum Engineering; and I've worked as a Petroleum Engineer for approximately 12 years. I've worked as District Engineer for The Texas Company approximately four years.

Q Mr. Ross, are you familiar with the pending application on behalf of The Texas Company?

A Yes, sir, I am.

Q Where is the location of this well?

A It is located in Chaves County, Section 29, Township 15 South, Range 30 East.

Q Has the Oil Conservation Commission heard before and approved any dual completions in this area or within the same zones within one mile of the subject well?

A No.

Q What reservoirs are involved in this application?

A Devonian and Ellenburger.

Q Do you have an exhibit showing the reservoir characteristics?

A Exhibit Number One shows the reservoir characteristics.

Q Will you disburse those exhibits to the Commission?

A (Witness complies.)

Q Why don't you give them a copy of each exhibit at this time?

A All right. This is Exhibit Two, Exhibit Three, Exhibit Four and Exhibit Five.

Q Now, will you continue and explain Exhibit One?

A Exhibit One shows that the top of the Devonian is 10,992 feet, Ellenburger is 11,968 feet. Original bottom hole pressure of the Devonian was 4487 pounds at a minus 7111 feet. Original bottom hole pressure of the Ellenburger was 4864 at a minus of 8106 feet. Original gas-liquid ratio and cubic feet for barrel

for the Devonian was 1142 and for the Ellenburger was 26,600.

Liquid gravity for the Devonian is 55 and for the Ellenburger 57. The gas gravity for the Devonian is 0.950, and gas gravity for the Ellenburger is 0.660.

G P M for the Devonian is 1.76; for the Ellenburger 0.364.

Q You've a diagrammatic sketch of the proposed hole completion?

A That is Exhibit Two.

Q Explain that, please.

A Exhibit Two shows the location of the perforations in the Ellenburger 12,068 feet to 12,106 feet. Perforation in the Devonian, 11,050 to 11,134 feet. A Baker Model "D" Production Packer has been set at 11,950 feet between the Ellenburger and the Devonian, and a string of 2 1/16 Hydril tubing has been seated in this packer.

Another string of tubing has been run for the Devonian oil and is seated in a parallel latching sub at 11,050 feet. The purpose of the latching sub is to hold down the bottom of the second string of tubing and provides no connection between the two tubing strings as far as fluid flow goes.

I might say this is more or less a standard dual completion hook up here, many of which have been approved in this State.

Q And does that sketch also show where the cement has been set?

A It shows that 9 5/8 inch casing has been set at 12,298 feet,

and the top of the cement is 7305 feet. That, I believe, fairly well explains the dual installation.

Q What type of production do you expect to obtain from each of these reservoirs?

A The Devonian is an oil reservoir as demonstrated by its original gas-liquid ratio of 1142. The Ellenburger is a gas distil reservoir as demonstrated by its original ratio of 26,660.

Q What is the proposed method of production, by flow or artificial lift?

A Both of these zones will flow at the present time.

Q I direct your attention to what has been marked as Exhibit Three. State what that is and explain what it is intended to show?

A It is a plat showing the location of the subject well on the lease and listing the surrounding leases with their operators and addresses. It also shows there are no wells in the vicinity of this well.

Q Do you have an electric log of this particular well?

A That is Exhibit Four, and we have marked the tops of the Ellenburger and the Devonian on this log and also the perforated intervals in each zone. It shows the top of the Devonian to be 10,992, with perforations in the Devonion from 11,050 to 11,134 feet, and the top of the Ellenburger at 11,968 feet, the perforations at 12,068 feet to 12,106 feet.

Q Mr. Ross, was this proposed installation one of the similar type that has been approved by this Commission, or do you

know?

A To the best of my knowledge, there have been a number of similar type installations approved by the Commission.

Q Has this type been successful as far as The Texas Company is concerned?

A Yes, it has.

Q Under this type of equipment and on the proposed method of installation, in your opinion, will there be any communication between the zones?

A No, there will be no communication.

Q Is that conclusion strengthened or supported by any test that you might have taken?

A Yes, we have prepared and submitted on October 29th a Packer Leakage Test which indicated there was no communication between these two zones.

MR. WHITE: Insofar as the Packer Leakage Test is concerned, since it has been filed with the Commission, we will ask the Commission to take administrative notice of it.

MR. UTZ: We will take administrative notice of it.

Q (By Mr. White) Directing your attention to that part of the application in regard to the commingling and surface storage, will you refer to Exhibit Five and state what that is?

A Exhibit Five is a schematic diagram of the proposed hook up of the surface facilities for commingling the Ellenburger and the Devonian productions.

Q Would you mind briefly explaining the whole set up to the Examiner, please?

A The Devonian flow from the well to the tank battery is shown in red, and the Ellenburger is shown in green. First, taking the Devonian, the Devonian crude leaves, crude and gas, leaves the well and goes to a high pressure separator, which is shown as number one in red. The gas from this high pressure separator will be sold and the gas will be metered before entering the sales line.

Q What type meters do you contemplate using?

A We plan to use a standard Orifice Meter. The liquid from the high pressure separator marked one travels to the low pressure separator marked number three. This is the metering -- we propose to put a metering separator in this location which will meter the amount of Devonian oil sent to the tank battery.

The gas from this separator will be measured separately by an Orifice Meter, if it is sold to a low pressure gas line. If the low pressure gas is flared, we do not propose to meter the low pressure gas.

Now, the flow from the Ellenburger horizon as shown in green travels to the high pressure separator marked one. The gas in this separator is measured by the separator orifice meter before it goes to the sales line. The liquid from this separator is dumped into the low pressure separator marked three and travels from that separator to the tanks where it is commingled

with the Devonian production.

The gas from the low pressure separator on the Ellenburger side will be separately metered by an orifice meter.

Q Will there be facilities provided to check periodically and calibrate the meters?

A The orifice will be checked with a manometer, and this reading from the meter, and the metering will be performed by gauging into separate tanks, and this gauging of the tank and the meter reading on the separator gives the actual measurement in this tank.

Q The tank battery will be manually operated?

A At this time, the battery will be manually operated. We will be checking the crude for this lead, and I do not herein provide for automatic transfer of the crude.

Q The Texas Company is the only working interest involved?

A That is right.

Q What precautions, if any, have you taken against back flow?

A We propose to place a check valve in each line before they join together going into the stock tanks.

Q Do you intend to drill additional wells on this lease?

A Yes.

Q And commingle that production with this common storage?

A Yes.

Q Mr. Ross, have you obtained formal consent from the operators, the offset operators.

A Yes. The only offset operator is Shell, and we have

received a waiver from them. We just have one copy of this. We will be happy to provide additional copies. This should be Exhibit Six.

Q Were Exhibits One through Five prepared either by you or under your direction?

A Yes, they were.

MR. WHITE: At this time we offer Exhibits One through Five.

MR. UTZ: Without objection, they will be received.

(Whereupon the documents marked Applicant's Exhibits One through Five were received in evidence.)

MR. WHITE: That's all the direct testimony we have.

MR. UTZ: Any questions from the Commission? Mr. Fischer.

CROSS-EXAMINATION

BY MR. FISCHER:

Q Did you ever give the bottom hole pressure of those holes?

A Yes, sir, the original bottom hole pressure of 4487 pounds for the Devonian as shown on that sheet. The Ellenburger is 4864 at a minus 8106.

Q Do you have any idea at what pressure that Devonian will hit that high pressure separator?

A Our flowing pressure--we ran some tests here if I can find them. Shut in tubing pressure is approximately 1800 pounds.

Q On which one?

A On the Devonian. And flowing pressure, and the allowable rate is approximately 1650 to 60 pounds, the flowing tube pressure. The shut in tubing pressure on the Ellenburger is approximately 3490 pounds. However, it draws down quite far. In our initial test, we tested it at the rate of approximately a million cubic foot per day, and the tubing pressure was approximately 150 pounds.

MR. UTZ: Any other questions of the witness?

Q (By Mr. Utz) Mr. Ross, what will be the line pressure or down stream pressure from the high pressure separator into the high pressure sales line?

A We don't know that, sir. We haven't obtained a market for this gas, and we do not know at this time whether we'll have a market for low pressure gas or high pressure gas or what the sales pressure will be. We are operating these high pressure separators at approximately 500 pounds, or the one that we have in operation; and we could conceivably raise it up more than that actually if the sales line required it.

Q Does the Ellenburger pressure operate at the 500 pounds?

A I doubt it very seriously if we will be able to produce a satisfactory amount of gas at 500 pounds. Now, we do propose to use the Ellenburger for rig fuel for wells drilling in that area, which will take the gas at relatively low pressures.

Q What do you plan to opperate the low pressure separators at?

A Approximately 25 to 30 pounds.

Q Can you tell me how far this well is from the nearest high pressure line, gas line?

A It's -- according to our gas-gasoline department, it's approximately ten miles from the nearest line of any sort. I can't say whether that is high pressure or low pressure.

Q Do you know whose line that is?

A I believe it is Phillips; I'm not absolutely certain of that. I'm not absolutely certain of the location.

Q Can you tell me how much gas you will produce at a top allowable rate on these wells? Are both zones top allowable?

A We have no allowable on the Ellenburger since we have no market for the gas; and it will undoubtedly be limited by its capacity. The allowable for the Devonian is 193 barrels a day and produces based on the initial gas-oil ratio of 1142 times 193, approximately 200,000 cubic feet per day.

Q You are not sure how much gas will be flared on the Ellenburger?

A We don't propose to flare the Ellenburger gas at this time, except in the situation where we maybe sell at say 100 pounds or 150 pounds and subsequently dump the liquid into a lower pressure separator. There may be a small amount of gas flared from that low pressure separator.

Q Did I understand you to say you didn't intend to flare any Ellenburger gas?

A None except a small amount of low pressure gas, possibly.

We propose to use it either for rig fuel or to sell it when a market becomes available.

Q Will you flare the Devonian gas?

A We are flaring the Devonian gas at this time.

Q At the rate of about 200,000 a day?

A Yes, sir.

Q Has your company made any attempt to find a market for this gas?

A Yes. Our gas-gasoline department has tried to find a market for it; but I kind of doubt we'll be able to secure one until we have additional wells and a little more information to offer them to justify the cost of the connection.

Q This is the only completed well in this immediate area?

A Yes.

MR. UTZ: Any other questions of the witness?

EXAMINATION BY MR. FISCHER:

Q Did you say you would put your check valves in the line in each line down stream from the east low pressure separator?

A Before they tie together.

Q There would be no other check valves in there?

A We possibly may put one at the well head; but the one mainly intended for the purpose of preventing one zone from flowing back to the other will be installed at the tank battery.

MR. FISCHER: Thank you.

MR. UTZ: Any other questions of the witness? Any other

statements to be made in this case? The witness may be excused.

(Witness excused.

MR. UTZ: Is that all you have.

MR. WHITE: Yes, sir.

MR. UTZ: The case will be taken under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, JOHN CALVIN BEVELL, Notary Public in and for the county of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of hearing before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me; that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 25th day of November, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

John Calvin Bevell
NOTARY PUBLIC

My Commission Expires:

January 24, 1962

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1553, heard by me on Nov. 19, 1958.

Examiner
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

November 28, 1958

COPY

Mr. L. C. White
Gilbert, White & Gilbert
P.O. Box 787
Santa Fe, New Mexico

Dear Mr. White:

On behalf of your client, The Texas Company, we enclose two copies of Orders R-1293 and R-1294 issued November 26, 1958, by the Oil Conservation Commission in Cases 1553 and 1554, respectively.

Please note that these orders require that each meter installed in the subject systems shall be tested for accuracy at intervals and in a manner satisfactory to the Commission. It will be necessary for The Texas Company to run a series of tests of sufficient duration to determine that the meters are functioning properly immediately following installation. Thereafter, tests should be made at intervals not to exceed one month and a report of said calibration filed with the Commission. The meters shall be calibrated against a master meter or against a test tank of measured volume.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

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Encls.