BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 15, 1957

TRANSCRIPT OF HEARING

Case 1291

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

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
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AFTERNOON SESSION

IN THE MATTER OF:	
Application of Tidewater Oil Company for approval of an oil-oil dual completion in an undesignated Drinkard Pool and an undesignated McKee Pool underlying Section 24, Township 25 South, Range 37 East, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing an oil-oil dual completion, by means of parallel strings of tubing, in an undesignated Drinkard Pool and an undesignated McKee Pool underlying Section 24, Township 25 South, Range 37 East, Lea County, New Mexico, for its Coates "C" Well No. 8 located 660 feet from the North line and 1880 feet from the East line of said Section 24.	Case 1291

BEFORE:
Mr. A.L. Porter
Mr. Murray Morgan
Honorable Edwin L. Mechem

TRANSCRIPT OF HEARING

MR. PORTER: The meeting will come to order, please. The Commission has decided that the normal unit allowable for September will be 37 barrels. We will consider next Case 1291.

MR. COOLEY: Application of Tidewater Oil Company for approval of an oil-oil dual completion in an undesignated Drinkard Pool and an undesignated McKee Pool underlying Section 24, Township 25 South, Range 37 East, Lea County, New Mexico.

MR. HOLLOWAY: I am J. B. Holloway, Supervisor of Proration

and Unitization for the Southern Division of Tidewater. I have appeared a good many times before this Commission, and I believe I will handle the case myself.

MR. COOLEY: Will you raise your hand?

(Witness sworn.)

J. B. HOLLOWAY

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

DIRECT EXAMINATION

By MR. COOLEY:

Q State your full name for the Commission, please.

A J. B. Holloway.

Q What is your position, Mr. Holloway?

A I am a Supervisor of Proration and Unitization for the Southern Division of Tidewater Oil Company, located in Houston, Texas.

Q Have you previously testified before this Commission as an expert witness, Mr. Holloway?

A Not necessarily as an expert. I have in connection with factual data, and in handling cases where that type of testimony wasn't particularly necessary. As for being an expert, I have been in the production end of this business for thirty-seven years. I have no degree. They didn't issue petroleum engineering degrees in those days. I don't think they did. That's about the way

I've grown up in this business.

MR. PORTER: The witness's qualifications are acceptable.

MR. COOLEY: Would you proceed, please?

A Yes, We haven't thought it would be necessary in this case to bring in technical witnesses and experts in connection with material technique that the industry uses now adays in dually completed wells, using parallel strings of tubing. That sort of testimony has been presented here a number of times. I believe the Commission and its Staff are familiar with the methods and the materials that are available. Possibly we have had more experience than the Commission inasmuch as I believe there are only three cases of this type that have been granted by the Commission. They were more or less salvage cases. Tidewater, has however, quite a number of dual completions using parallel strings of tubing.

Our first job was in June 1955 in the Shoestone Field in Louisiana. The upper zone soon commenced producing water and was put on artificial lift, and a few months after it was completed and has since been operating very satisfactorily. There have been no problems that could be associated with the well having been dually completed.

We have dually completed some twenty wells in the Venice Field, which is located on the Mississippi delta. A number of them are being artificially produced, artificially lifted, and none have

given any trouble. We are a member of the CATC group that operates offshore, that is the Continental, Atlantic, Tidewater and city service. Continental is the operator, and ten of those wells offshore have been dually completed using parallel strings of tubing, some as far as twenty-three miles from land, some in waters deep as one hundred feet. I mention that, although we are not the operator there, I mention that to show you the confidence that that group of operators have in this type of dually completing wells, because certainly out there is no place to complete a well in any manner that's going to bring about a lot of expensive workover jobs. It is pretty expensive as it is when they are working properly.

We will confine our testimony more or less to the well that we want to dually complete, and why. We recently completed as a new field discovery well our Coates "C" Well #6. It was completed in the Ellenburger and is located in Section 24, Township 25 South, Range 37 East in Lea County. In drilling this well, we made drill stem tests of the Drinkard zone as we drilled through it. I want to read you those tests if I can locate it here in my notes.

The first test was for the interval from 5920 to 6000 feet, the well flowed at an estimated rate of 20 barrels of oil an hour. This flow was through a 5/8 inch bottom hole choke with surface choke of one inch. The tool was open two hours and thirty minutes. Free oil reached the surface in one hour and forty minutes

Initial shutin pressure was 2741 pounds. Initial flowing pressure was 1040 pounds. Final shutin pressure after thirty minutes was 2245 pounds. A second test from 6030 feet to 6080 feet recovered 5000 feet of sulphur water.

Three drill stem tests were made of the McKee zone, the first being for the interval from 7192 to 7290 feet. Recovery from that test was only a small amount of gas and some slightly oil-cut mud. A second test was made of the interval from 7166 to 7338. The gas reached surface in five minutes, oil reached the surface in forty-five minutes, and flowed 41.1 gravity oil at the rate of 25 to 30 barrels an hour. The chokes were 5/8 inch on bottom and 1 inch on top. Initial flowing pressure was 1323 pounds. Final flowing pressure, 1732 pounds. Shutin pressure after 30 minutes, 2680 pounds. Two days later a third test was run for the interval 7173 to 7383. Recovery was gas to surface in seven minutes. Oil to surface in fifty-six minutes, and the well flowed 52.44 barrels of 40.2 gravity oil in one hour, with gas-oil ratio of 850 to 1. We reversed out 7100 feet of oil and gas with no water. The initial flowing pressure was 1410 pounds, and the final flowing pressure was 1695 pounds, shutin pressure after 30 minutes was 3020 pounds.

We have since drill stem tested the Drinkard pay in another well, the Coates "C" No. 7, which is being drilled at one location south of the discovery well. The interval from 5880 to 5940 was

tested for two hours and twenty minutes. Gas surfaced in three minutes, oil in fifteen minutes, and flowed into tanks 39.87 barrels the first hour and 41.24 barrels the second hour, or at a daily rate of 973 barrels with no water, 750 to 1 gas-oil ratio, gravity was 36.1, corrected.

I might call your attention that we have four points difference in gravity between the McKee and the Drinkard so we can identify what we are producing. At a point 660 feet South of the North line and 1880 feet West of the East line of Section 24, 25 South, 37 East, the location has been staked for the Coates "C" Well No. 8. This location is 100 feet East of the discovery well. We propose to drill this well to the McKee zone, set seven inch casing approximately 7450 feet and cement the casing with sufficient cement to protect all productive horizons or formations, and to prevent any communication of reservoirs behind the pipe. 850 sacks of cement were set in the discovery well for the producing string, and this amount of pipe was calculated to bring the cement up into or behind the intermediate string. I would anticipate that we would set no less than that amount of cement in this "C" No. 8. We propose to perforate the casing opposite the McKee zone from 7290 to 7360 feet, and are now making a request that we also be permitted to dually complete the well by perforating the Drinkard zone from 5930 to 5950 feet, and produce both zones as an oil-oil completion. A packer will be set at a depth of approximately

7100 feet to prevent any communication of fluids within the well bore. Each zone will be produced through individual strings of two inch tubing. It is our opinion that the manner and method proposed for the dual completion of this well has been proven to be mechanically feasible and practical, and it should be in the interest of conservation and the protection of correlative rights. We will observe and comply with all the rules and regulations of this Commission and will maintain separation of production between the two zones.

Our estimated cost of drilling and completing a well in the Drinkard zone is $115,000.00. We estimate the cost of a McKee zone completion would be $145,000.00. Two wells drilled, one completed in each zone, would then add up to $260,000.00. We have estimated that a dually completed well can be drilled and completed in each zone for $155,000.00. This would be a saving of $105,000. We have 400 acres in the lease on which the discovery well was drilled, and 40 acres within this same Section 24. Of course, we do not know now how much will be productive, but hope that all of it will be, and one or two zones of dual completions over all if permitted, would permit us to save an unnecessary expenditure, in our opinion, of more than a million dollars. We really believe that it would be in the interest of conservation because we feel the ultimate recoveries would be increased in that possibly certain locations would be drilled for dual completions,

that economically we might not think could be drilled if we had to drill two of them on that particular 40 acre tract. We can think of no reason why wells completed in this manner, where each zone can be artificially produced, where each string can be individually run,and packers are available now, that effectively separate the two zones, we can't think of any reason why any less oil should be produced in this manner than would be through two wells.

We have sent copies of this application to all of our neighbors and we have received letters waiving objections to this application from Atlantic Refining Company, from Amerada Petroleum Corporation, from W. K. Byrom, from Skelly Oil Company, from The Texas Company, from the Western Natural Gas Company, and the Gulf Oil Corporation I believe has wired direct to the Commission, I have a copy of its telegram,also waiving objection, and as this is on a Federal Lease, I sent a copy to the United States Geological Survey, and I have a letter from them waiving objection to this application provided only that we file with them certain necessary forms and change of plan.

I would like to give the Commission these letters of waiver for its record, and I have brought with me a copy of the electric log of the discovery well on which we have marked the top and bottom of the Drinkard and the proposed perforations that we would like to make in the "C" No. 8, and being only 100 feet distant, it

should be identical when drilled, to this log. I believe the Commission, if it doesn't have a copy of same, would like to have a copy of the discovery well log and will offer it not necessarily as an exhibit.

Q How many letters do you have there?

A I have one from Amerada Petroleum, the Atlantic Refining Company, W. K. Byrom, Skelly Oil Company, The Texas Company, Western Natural Gas and the United States Geological Survey.

Q Five in all?

A Yes, sir, and the telegram from Gulf.

Q Would you identify the letters and the electric log as Exhibit 1, please?

A All of them as Exhibit 1?

Q Yes. A Just a minute.

(Marked Tidewater's Exhibit No. 1, for identification.)

Q And the electric log as Exhibit 2?

A Yes, sir.

(Marked Tidewater's Exhibit No. 2, for identification.)

A That completes my testimony, my direct testimony. I would be glad to answer any questions.

MR. PORTER: You had Exhibits No. 1 and 2?

A Yes, sir, I gave the reporter the Exhibits 1, all letters being marked Exhibit No. 1, and the electric log being marked No. 2.

MR. PORTER: Without objection they will be admitted in the record. Anyone have a question of Mr. Holloway? Mr. Utz.

CROSS EXAMINATION

By MR. UTZ:

Q Just to run through briefly your method of completion, I didn't quite pick it up, you are setting seven inch casing?

A Yes, sir.

Q Cement circulated into the intermediate?

A We set 850 feet in the discovery well, as I stated, and it was calculated that amount would reach the intermediate string. I would say that they would set at least that amount, or at least a thousand string. We will set enough to get up to the intermediate string, yes, sir.

Q What size tubing?

A Two inch. One will be just a normal regular two inch, the other will have streamline or high drill joints on it so there won't be any possibility of getting tangled up when you go by the collars.

Q You will use the ordinary method of tubing anchors?

A We set the long string on the packer, the other string will be suspended, the short string will be suspended.

Q Will this be a flowing well, or do you know?

A Right now indications are it will be flowing, yes. We are prepared to produce it artificially if we have to, either by

pumping or by flow valves. We have two gas wells on this lease also. We don't have any compressor, but that could be set and the wells produced by flow well.

Q If it shouldn't be a flowing well, how do you propose to test the packer?

A How do we propose to test the packer?

Q Yes.

A You can test the long string by putting pressure on it.

Q We had dual completions in both strings of pumping, and we had a little bit of trouble testing the packer. I wanted to clarify that point. I believe that is all I had. I have one further question. Do you know now what type of packer you are going to set?

A We showed on our application that we would set a Baker Model D production packer. It's entirely possible, if there's any particular reason you have, Mr. Utz, for asking that question, it's entirely possible we could set a Baker retainer packer, there are a number of packers available. This is the type of packer they seem to choose in the field setting this casing.

Q This packer you intend to set is comparable to packers that have been set for dual completions? A That's right.

MR. UTZ: That's all I have.

MR. PORTER: Anyone else have a question? No further questions, the witness may be excused.

(Witness excused.)

Anyone have a statement?

MR. COOLEY: If the Commission please, I have a telegram from Gulf Oil Corporation. It is in substance, states that Gulf has no objection to the application in this case.

MR. PORTER: Anything else? Mr. Kastler.

MR. KASTLER: Bill Kastler, representing Gulf Oil Corporation. I would like to state that while we have not yet made our first deep completion in this field, we are in the process of drilling right now. Our studies indicate that the most feasible method of completion would be dual completion, and we therefore wish to enter our concurrence in Tidewater's application.

MR. PORTER: Anyone have anything further in the case?

MR. UTZ: I have one additional question.

J. B. HOLLOWAY

recalled as a witness, having previously been sworn, testified further as follows:

CROSS EXAMINATION

By MR. UTZ:

Q How about the pressure on the formation? Would you give us the pressure on those?

A We have only the drill stem pressures which I read. They were normal, and the differential, I believe, is only indicated by the difference in depth, one being 58 and the other 71.

I think there was only 70 some pounds difference, about 400 pounds difference.

Q 400 pounds difference?

A That is the way I remember.

Q Which is the higher? A The lower is higher.

MR. UTZ: That is all.

MR. PORTER: Any more questions or statements or anything? We will take the case under advisement.

(Witness excused.)

C E R T I F I C A T E

STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this day of August, 1957.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1959.