

BEFORE THE  
OIL CONSERVATION COMMISSION  
Hobbs, New Mexico  
January 4, 1956

IN THE MATTER OF:

Case No. 989

TRANSCRIPT OF PROCEEDINGS

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IN THE MATTER OF:

Application of Humble Oil and Refining  
Company for an order granting permission  
to dually complete a well under Rule 112-A  
(a) and to produce same from the Blinebry  
Gas Pool and the Tubb Gas Pool, and further  
to establish a 320-acre non-standard gas  
proration unit in exception to Rule 5 (a) of  
the Special Rules and Regulations of the  
Blinebry Gas Pool as set forth in Order R-610  
and Rule 5 (a) of the Special Rules and Regula-  
tions for the Tubb Gas Pool as set forth in  
Order R-586.

Applicant, in the above-styled cause, seeks an  
order granting permission to dually complete  
and produce their Blinebry-Tubb Unit No. 1,  
Well No. 1 from the Blinebry and Tubb Gas  
Pools; said well located 1980 feet from the East  
line and 990 feet from the South line of Section  
10, Township 21 South, Range 37 East. Applicant  
further seeks an order establishing a 320-acre  
Blinebry Gas Unit and 320-acre Tubb Gas Unit;  
said units consisting of the S/2 of Section 10,  
Township 21 South, Range 37 East, Lea County,  
New Mexico; said acreage to be dedicated to  
applicant's Blinebry-Tubb Gas Unit No. 1, Well  
No. 1.

Case No. 989

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BEFORE:

Warren W. Mankin, Examiner

TRANSCRIPT OF HEARING

HEARING EXAMINER MANKIN: The hearing will come to order.

The next case that we have is Case No. 989, the application of Humble for

a non-standard proration unit in the Blinebry and Tubb Gas Pools.

MR. HINKLE: Clarence Hinkle, Hervey, Dow and Hinkle, Roswell, New Mexico, appearing on behalf of the Humble. This is the application of the Humble Oil and Refining Company for an order granting permission to dually complete its Unit No. 1, Well No. 1 Well, located on the SE/4 of Section 10, Township 21 South, Range 37 East, Lea County. And also for approval of a gas unit consisting of 320 acres in both the Tubb and Blinebry reservoirs. The unit consisting of the S/2 of Section 10, Township 21 South, Range 37 East, Lea County. We have one witness, Mr. Bob Dewey, I would like to have him sworn.

BOB DEWEY

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

DIRECT EXAMINATION

By MR. HINKLE:

Q. Repeat your name.

A. Robert S. Dewey.

Q. Do you now work with Humble Oil and Refining Company?

A. Yes Sir.

Q. In what capacity?

A. Division Petroleum Engineer.

Q. How long have you been employed by Humble Oil and Refining?

A. Twenty-nine years.

Q. Your area or jurisdiction includes Lea County?

A. It does.

Q. Have you previously testified before the Oil Conservation Commission?

A. I have.

Q. As an expert?

A. That is right.

Q. Are the witness' qualifications acceptable?

MR. MANKIN: Yes, the qualifications are acceptable.

Q. Mr. Dewey, are you familiar with the communitization agreement which has been entered into between the Humble and the Tide Water Associated Oil Company, covering the S/2 of Section 10, Township 21 South, Range 37 East?

A. To a certain extent, I haven't reviewed it recently, but I have knowledge of it.

Q. Do you know when that agreement was entered into?

A. The agreement was entered into on August 4, 1955.

Q. In substance, what does that unit cover and what does it provide---- the communitization agreement, that is.

A. The agreement provides that Humble and Tide Water would communitize their interests in the S/2 of Section 10, Township 21 South, Range 37 East. They---Tide Water Associated Oil Company contributed the SE/4 of the SE/4 of this section and the Humble Oil and Refining Company contributed the balance of the S/2 of this section.

Q. Do you know whether or not that communitization agreement has been approved by the Commissioner of Public Lands?

A. The communitization agreement was submitted to the Commissioner of Public Lands and on April 29, 1955, approval was obtained.

Q. Do you have a copy or an executed copy of the communitization agreement with you?

A. Unfortunately, I do not.

Q. Mr. Examiner, we would like to have permission to introduce at a later date, by sending to you by mail, as Exhibit No. 1, a photostatic copy of the communitization agreement. Unfortunately, we fail to have it with us at the moment.

MR. GURLEY: Is there any way that you can lay the foundation for that by testifying as to what it amounts to?

MR. HINKLE: Well, he has already testified that the date it was entered into has been approved by the Commissioner of Public Lands and is between the Humble and the Tide Water Associated Oil Company.

MR. GURLEY: Is that a standard communitization agreement---- that are usually approved in such cases?

MR. HINKLE: Substantially so. It is all State Lands.

MR. MANKIN: That will be acceptable. Would it be possible that we receive that within two weeks?

MR. HINKLE: Within the next few days.

MR. MANKIN: Alright, that will be acceptable.

MR. HINKLE: At this time, before the record I would like to offer that exhibit in evidence.

MR. MANKIN: Without objection it will be accepted.

Q. Now the communitization agreement which you have referred to covers the entire S/2 of Section 10, Township 21 South, Range 37 East?

A. Thats right.

Q. Now I hand you Humble's Exhibit No. 2, which is the first exhibit shown on the wall, and ask you to explain to the Commission what that shows.

A. Exhibit No. 2 is an ownership plat of the area surrounding the S/2 of Section 10, Township 21 South, Range 37 East. Being an ownership plat, it shows the lease ownership of operators owning leases adjacent contiguous to the S/2 Section 10, 21 South, Range 37 East. It also shows the location of the Blinebry-Tubb Gas Unit No. 1, Well No. 1. This well is located 990 feet from the South line and 1980 feet from the East line of said section. The location of this well at this point was made in order that---- so that it could support a 320 acre unit with a radius of influence of 3,735 feet. That is that all parts of the S/2 of Section 10, 21 South, Range 37 East, would be within the radius of influence of 3,735 feet. This plat also shows the location of wells which have been drilled by other operators in either the Blinebry Gas Pool or in the Tubb Gas Pool or in some instances dual completions, which have been made to both pools.

Q. In that connection, can you indicate to the Commission the wells which have been completed to the Blinebry and those that have been completed in the Tubb and those that have been dually completed?

A. Yes, on this plat the wells that have been completed to the Blinebry are identified by the letter B, and the wells that have been completed to the Tubb are identified by the letter T, and wells that are dually completed in both the Tubb and the Blinebry are identified by the letters B-T. Starting in the

northwest corner of the plat, the Stanolind Southland Royalty "A" Well No. 6 is a single completion to the Blinebry. Coming south, Continental et al, W. C. Hawks B-9 Well No. 7, completed to the Tubb, a single completion. Continuing south you have Gulf's E. H. Leonard Well No. 4 in Section 16, completed to both the Tubb and the Blinebry, a dual completion. Following around to the south, the direct offset in Section 15, Tide Water State "S" lease Well No. 2, completed to-----as a dual completion in both the Blinebry and the Tubb. Further south, you find the Cities Service Well No. 1, completed to the Blinebry and Well No. 2 completed to the Tubb, single completions. Offsetting those two wells to the east is the Shell lease, which---Well No. 1 is completed to the Tubb as a single completion, and Well No. 2 is completed to the Blinebry as a single completion. Offsetting the Tide Water "S" lease to the east in Section 14, Moran, Inc. on their D. C. Ham lease Well No. 2 completed to the Tubb. Continuing to the north we show no additional wells on this plat, and then we do have a well on the north part of the plat in Section 10, which is Aztec Oil Company's Well No. 2 completed to the Blinebry. As far as I know the wells are properly located and the----as far as the location on the plat and relative to a completion interval, and if there is any discrepancy or any additional wells I would like the record to stand corrected.

Q. Was this Exhibit No. 2 prepared by you or under your direction?

A. It was prepared under my direction.

Q. We would like to offer this as evidence.

MR. MANKIN: Is there any objection to the entering of Exhibit No. 2 in evidence? If not, it will be so entered.

Q. Now, Mr. Dewey, you have already testified as to the location of the Unit Well. I believe you testified that it was located 990 feet north of the south line and 1980 feet east---from the east line. That would be in the SE/4 of Section 10, would it not?

A. Thats right.

Q. How is that well designated on the Conservation records?

A. You mean the name of the well.

MR. HINKLE: Yes.

A. It is designated as the Blinebry-Tubb Gas Unit No. 1, Well No. 1.

Q. Has that well already been drilled?

A. It has.

Q. When were drilling operations commenced?

A. Drilling operations commenced on this well May 20, 1955.

Q. And when was it completed?

A. It was completed June 23, 1955.

Q. At what depth?

A. Slightly below 6,298 feet.

Q. Has the well been completed in the vertical limits of both the Blinebry and the Tubb Gas Pools?

A. In our opinion, it has.

Q. Explain to the Commission, how the well has been dually completed.

A. The well was completed with 5 1/2" casing set on bottom and the interval to the Blinebry horizon was perforated with three sets of perforations



and interval to the Tubb gas horizon with three sets of perforations.

Q. Now, Mr. Dewey, if you will refer to Humble Exhibit No. 3, which is the second exhibit on the board and explain to the Commission what that shows.

A. This is purely a diagrammatic sketch of a well completion. Beginning at the top, it is identified as perforated intervals, Humble Oil and Refining Company Blinebry-Tubb Gas Unit No. 1. Beginning at the top of the sketch, the well was perforated from 5576 to 5672, with four shots per foot. Then the blank interval was left, and another interval 5692 to 5744 was perforated with four shots per foot. Then a blank interval was left and the third interval was perforated from 5764 to 5804. These three perforated intervals are all in the Blinebry---the horizontal limits of the Blinebry Gas Pool.

MR. MANKIN: Mr. Dewey, didn't you say 5692, didn't you mean 5698 as the top of the second batch of perforations?

A. Yes.

MR. MANKIN: 5698 it should be.

A. 5698 to 5744 is the middle perforations. In the Tubb zone the well was perforated from 6105 to 6142 with four shots per foot and a blank interval was left and the middle interval was perforated from 6228 to 6250 with four shots per foot and the lower interval was perforated from 6280 to 6298. These three intervals in the Tubb are in the horizontal limits of the Tubb Gas Pool---horizontal limits and vertical limits both were all perforated with four shots per foot. On final completion a separation packer was set at

6,073. This packer was placed in the well to segregate the production of gas from the Tubb and Blinebry formations. There is a formation packer set in the Tubb zone at 6270, which excludes the upper two center perforations in the Tubb zone and permits the well to produce from the lower set of perforations from 6280 to 6298. The Tubb zone is completed so that the production from the lower zone may be produced through the tubing.

MR. GURLEY: Did I understand you to say that that top packer that separated the Tubb from the Blinebry was at 60---

A. 6,073, that is the blank area between the Blinebry and Tubb zones.

MR. MANKIN: Mr. Dewey, you indicated that you had a formation packer in the Tubb.

A. Yes.

MR. MANKIN: You actually have three sets of perforations.

A. Well two of them are not open to production.

MR. MANKIN: What do you mean by formation packer? I thought there were perforations through the casing.

A. Well, this packer is set on tubing, actually.

MR. MANKIN: I see.

A. And the lower packer is set on the tubing. To exclude the upper two perforated intervals in the Tubb zone.

MR. MANKIN: So it is actually producing from only one of the three perforated zones.

A. From only the lower.

MR. MANKIN: Only the lower zone, from the Tubb.

A. Thats right.

Q. Mr. Dewey, does this method of completion, in your opinion, effectively prevent any communication between the Blinebry and the Tubb horizons ?

A. I think it does, yes sir.

Q. I would like to offer in evidence Humble's Exhibit No. 3.

MR. MANKIN: Is there objection to the entering of Exhibit No. 3 in evidence? If not, it will be so entered.

Q. I would like for you to, Mr. Dewey, refer to Humble's Exhibit No. 4 and ask you to explain to the Commission what that is and what it shows.

A. Humble's Exhibit No. 4 is a cross-section through the Blinebry Tubb Gas Fields. It was prepared by Humble's geological department.

Q. At your request, under your direction?

A. Yes Sir-----the cross-section has of course, extending from the southwest and going toward the north northeast and north to certain wells in the Blinebry and Tubb Gas Pool, and is identified of course by the AA on on the plat.

Q. The cross-section area covers, as shown by the insert on the plat itself?

A. Thats right, it is indicated by the plat itself. It starts with the Mid-Continent No. 3 Well in Section 16 and extends through the Amerada "DA" No. 4 Well in the same section. It extends through the Tide Water---it extends through the Cities Service "S" No. 1 in Section 15, and it comes to the

Humble's Blinebry-Tubb Gas Unit No. 1 in Section 10 and to Humble's State "B" No. 8 in the same section, and northward to the Aztec Dauron No. 2 in Section 10. These wells are all in Township 21 South, Range 37 East. This exhibit was prepared from the electrical logs that were available to us and was prepared to depict the vertical limits of the Blinebry Gas Pool and the vertical limits of the Tubb Gas Pool. The vertical limits of the Blinebry Gas Pool have been indicated by the interval between the two red lines that extend across the plat and the vertical limits of the Tubb Gas Pool are delineated by the blue lines that extend across the plat. The vertical limits are---- have been determined from the reference points depicted on the plat, top of the Blinebry and top of the Tubb. It is rather a misnomer, I think, calling it a top. In both cases I think it should mean the Blinebry marker and the Tubb marker. The cross-section just indicates that in this particular area the structure is relatively flat and that the producing intervals in the Blinebry-Tubb Gas Unit No. 1 lie within the vertical limits of both the Blinebry and Tubb Gas Pools as defined by the Commission.

Q. We would like to offer Exhibit 4 in evidence.

MR. MANKIN: Is there objection to the entering of Exhibit 4 in evidence? If not, it will be so entered.

Q. Mr. Dewey, have any tests been made of the Unit No. 1 Well, since its completion?

A. I don't think the well has been tested recently---not since----

Q. Do you have any evidence to show the potential producing capacity of the well in both the Blinebry and Tubb zones?

A. Yes, I do.

Q. What is that?

A. The well was originally drilled and completed and was given a 3,000 gallon acid treatment at intervals 5576 to 5672 in the Blinebry. A subsequent test from this interval in the Blinebry indicated that it had an initial daily production of 2,052,000.

Q. Is that in the Blinebry?

A. That is in the Blinebry. And then on the initial completion in the three intervals in the Tubb zone, that is from 6105 to 6142, 6224 to 6250, 6280 to 6298 in the Tubb horizon, each were treated with 3,000 gallons of acid and a subsequent test out of the Tubb zone we have an indicated daily production of 1,082,000 cubic feet of gas per day, 30 barrels of oil and 19 barrels of salt water. That initial completion was rather peculiar to us that we did not anticipate that we were going to get an oil well in the Tubb zone, and the situation wasn't adequately covered in the communitization agreement, and it was decided that we work the well over and on March---or September 22, 1955 the work-over unit was moved in. The intention was at that time to test the three perforated intervals of the Tubb zone to determine if there was communication between them and we were about to sandfrac each interval with 6,000 gallons of oil and 6,000 pounds of sand. The well was killed and tests were made for communication between the various intervals in the Tubb section. It was found that there was communication between the lower section and the middle section.

The communication was cemented off and a second test made for communication and no communication was determined on the second test. So the lower zone, that is from 6280 to 6298, was given fracture treatment of 6,000 gallons of oil and 6,000 pounds of sand. On a subsequent test to test this lower section over a 24-hour period, through a half inch choke, the well produced with a tubing pressure of 1250 pounds and made 92.55 barrels of fluid, which had a shake-out of 1 percent and produced 6,152,000 cubic feet of gas. The gravity of the oil was 62<sup>0</sup> API. This-----plans changed somewhat at that time and we did not go ahead and sandfrac the upper two perforated intervals but we came back to make a well in the Blinebry with the idea of trying to make a dual completion. At that time this segregation packer was set at 6270 which was previously testified to. Now, that left the Tubb zone completed in just the lower perforations. We came back to try and clean up the Blinebry section that had previously been killed with salt water. We first washed all the perforations with a 1,000 gallons of acid, and we took a test on the whole Blinebry section over a 24-hour period and it indicated a gas production of only 1,305,000 cubic feet per day, with tubing pressure of 170 pounds. Oil production of 93.52 barrels, six tenths of which was BS&W and the corrected gravity of the oil was 38.7. Apparently in working the well over we had lost some of our gas-----in working the Tubb over, so we decided to test between the perforated intervals in the Blinebry part of the well to determine communication. Communication was found between the middle and lower sets of perforations, that is the middle perforations are 5698 to 5744 and the lower perforations are 5764 to 5804. As

to the indication between those, we ran a test---a swab test to determine the production from those two sets of perforations. That indicated that we had 62 barrels of 40.6 corrected gravity oil with a shake-out of 2 percent, with 445,000 cubic feet of gas per day. We thought that our best opportunity to obtain a gas well, probably, was from the upper set of perforations. So we tried an experimental water-frac from 5576 to 5672. This water-frac was unsuccessful. It built up a very high pressure with a water-frac without obtaining commensurate results. So we went back again and gave it a sand and oil fracture treatment using 10,000 gallons of refined oil, 7,500 pounds of sand. On the subsequent test over 24 hours through only the upper perforations, that is from 5576 to 5672, the well produced with a tubing pressure of 1420 pounds, 165 barrels of oil through a 7/16 inch choke, with 5,880,000 cubic feet of gas per day. We then went back and threw all three zones together in the Blinebry and made the test, it was a short test, it was only five hours, through 1/2 inch choke. The well produced 23 barrels 45.7 corrected gravity oil, with 4,980,000 cubic feet of gas. So apparently, the Blinebry has a capacity of producing somewhere near five million cubic feet of gas per day. The Tubb has capacity of producing somewhere near six million cubic feet of gas per day.

Q. Now, Mr. Dewey, taking into consideration the oil that is being produced or capable of being produced, does that bring this well within the definition of the Conservation Commission Special Rules that are adopted for both the Tubb and the Blinebry Gas Pool, as being a gas well?

A. The definition, I believe, of a gas well in the Blinebry Pool is that it is producing a gas-oil ratio in excess of 32,000. All of our tests, except one, has indicated that the gas production in the Blinebry would be in excess of 32,000-1. Now, based on these tests that we have, we think that it will perform as a gas well in the Blinebry zone.

MR. MANKIN: What again was the gravity of that Blinebry----that final gravity?

A. The gravity was 45.7, corrected gravity.

MR. MANKIN: Which is less than 51 gravity as indicated for the Blinebry gas wells?

A. Thats right, it is a less gravity.

Q. Now, Mr. Dewey, in your opinion, is the entire 320 acres included in this proposed unit reasonably productive of gas in both the Blinebry and Tubb horizons or reservoirs?

A. I think so. As indicated on the whole exhibit the whole S/2 of Section 10, Township 21 South, Range 37 East, is surrounded by wells that are producing from the Blinebry and Tubb Gas Pools.

Q. Mr. Dewey, state whether or not in your opinion, this well is capable of effectively and efficiently and economically draining the entire 320 acres.

A. In my opinion, I think that it will, based on the bulk of the capacity of these tests, being in the range of five to six million each are adequate capacity in itself to drain the area.



Q. Have you made a study of the allowables for the past year in both the Blinebry and Tubb Pools, with a view to ascertaining whether or not this well is capable of making the gas allowable which has prevailed during the last year in both of these areas?

A. I made a tabulation of-----

Q. Will you refer to Humble's Exhibit No. 5, is that the tabulation which you speak of?

A. Yes Sir---the tabulation beginning January, 1955 and extending through December, 1955, being the twelve months of last year, of the current allowable assigned on a monthly basis to wells producing from a 160-acre unit, and that tabulation indicates that, if the mathematics are correct, that the monthly nominations and the monthly current allowable average 20,862,000 for the Blinebry and 20,735,000 for the Tubb, for each 160-acre unit. Reducing that to a daily average by dividing by 30.4 it indicates that a well with a productive capacity in excess of 700,000 cubic feet per day, if it were allowed to produce daily would have sufficient capacity to support a 160-acre unit. Now, I know that production is not taken daily but erratically--but we had to figure that----to see how much it would take for a 320-acre unit on a daily production basis, and multiply that by two and arrive at an average of 1,400,000 per day which is well within the limits of 5 to 6 million cubic feet per day that we have indicated that is possible productive capacity from the Humble Blinebry-Tubb Gas Unit Well No. 1.

Q. Now from what source were these figures taken?

A. These were taken from the proration schedules---gas proration schedules issued by the Conservation Commission of New Mexico.

Q. We offer in evidence, Humble's Exhibit No. 5.

MR. MANKIN: Is there objection to the entering of Humble's Exhibit No. 5?

MR. DEWEY: If there are any errors in this we will stand corrected.

MR. MANKIN: It will be entered in evidence.

Q. Mr. Dewey, what are the reasons of the Humble for desiring the establishment of a 320-acre gas unit in this particular case?

A. To start with the negotiations were entered into with the Tide Water Associated Oil Company to form a communitization agreement and at the time the negotiations started it was vizualized that it was sufficiently large capacity well to obtain---that it would be possible to obtain 320-acre gas proration units in both the Blinebry and Tubb horizons. As a consequence that agreement contemplated that, depending of course on the capacity of a well which hadn't been drilled, that if it had sufficient capacity, an application would be made for 320 acre gas proration units. The cost of the well was in excess of \$100,000 and as long as the well has been completed and it has sufficient capacity to effectively and efficiently drain 320 acres, I made the necessary request for this hearing to determine the size of the unit. The communitization agreement also affects the distribution of property between the Tide Water and the Humble. In fact there is 160 acre proration unit that the terms of the communitization agreement are one thing and if they are 320 acres, they are another thing and in order to settle that point we need to know

the size of the gas proration unit. We think that the drilling of a well in the SW/4 of Section 10 to both the Tubb and Blinebry formations would be an unnecessary expense and it would not add greatly to the total gas from the S/2 of Section 10.

Q. Would the drilling of that additional well in the SW/4 of Section 10 effect-----be an economic waste, in your opinion?

A. It would be an economic burden, at least. Possibly it would be an economic waste.

Q. Mr. Dewey, state whether or not, in your opinion, the dual completion of this well and the assignment of 320-acre allowable in both the Blinebry and Tubb Pools or formations would be in the interest of conservation and prevention of waste.

A. I think it would.

MR. MANKIN: Mr. Dewey, I want to get back again, if I might, to the Tubb recompletion. You indicated that you had communication-----was between all three perforated zones when the-----

A. There was no communication between the top of the middle perforated zones and the lower part of the upper perforated zone, but there was communication between the middle perforated interval and the lower perforated interval, and that communication was repaired by squeeze cementing of the---- and reperforating and opening up of the perforations in the lower zone.

MR. MANKIN: In other words, it was only squeezed through the lower perforations?

A. That is right.

MR. MANKIN: The two upper zones were not squeezed?

A. No Sir.

MR. MANKIN: And therefore, they are still open back of the tubing between the casing and the tubing, and they are still there?

A. Yes Sir.

MR. MANKIN: But only producing from the lower perforation, the bottom most perforation in the Tubb zone?

A. That is right.

MR. MANKIN: To get back to the Blinebry zone, you indicated there was communication, I believe, between the middle and lower zone.

A. There was.

MR. MANKIN: And it was squeezed-----in the lower-----

A. No.

MR. MANKIN: There was no squeeze?

A. There was no squeeze at all.

MR. MANKIN: There was no squeeze so there was strictly fracture jobs on the thing?

A. Strictly fracture job on the upper perforations, no fracture on the lower perforation because there was not any communication.

MR. MANKIN: And all three zones are now open?

A. That is right. Of course, we don't know whether that---fracture that upper zone whether it might of fraced down and communicated with the middle zone. We don't know that.

MR. MANKIN: Your application, dated November 25, 1955, indicated a test in the Blinebry of 118 barrels of oil and 58.3 gravity and 4,155,000 of gas, with a gas-oil ratio of 32,460. Was that work that you spoke of awhile ago performed after this application? In other words, you indicated the gravity was, I believe 47 or 45, and instead of being about 4 million was about 4 million nine hundred, and considerably less ----- . Was that work performed after your application?

A. Our application, dated November 25, -----

MR. MANKIN: The latest work on the Blinebry, was that performed after November 25th. The reason I am asking this is there is apparently considerably lower gravity as a result of later work.

A. Lets see, did I give you the test of-----I think I did----of the perforations from 5576 to 5672 and produced 165 barrels of oil through a 7/16 inch choke, tubing pressure of 1420 pounds, gas rate of 5,880,000-----Now that test was made on the 25th ---on October-----No-----that test was made on October 25th so it was filed on November 25th.

MR. MANKIN: Well, the latest test that you gave us was a much lower gravity, it was different from the one in your application. I wondered which took precedence, because there is considerable difference in gravity.

A. This is on just that one zone.

MR. MANKIN: I meant your completion as you finally made it, in which you are basing your tests upon the Blinebry at the present time. I was also wondering if all of this work that was done is covered by Form C-102 and C-103.

The latest information that I could find did not cover all of these. I wonder if it is now up to date.

A. I don't know if it is up to date or not.

MR. HINKLE: You will see that it is brought up to date.

A. Yes, I will.

MR. MANKIN: I would appreciate it if you would bring it up to date and I also want to see what your final tests were on this zone, as to gravity.

A. The last test-----

MR. MANKIN: Do you have the date of that test?

A. November 11th is the last date I have here, when we swabbed in the total Blinebry zone, we swabbed in---a five hour test was made.

MR. MANKIN: That was all three zones together?

A. That was all three zones together, during which it produced 23 barrels of 45.7 corrected gravity oil and gas rate of 4,980,000 MCF per day. That is the last test that I have on all three zones together.

MR. MANKIN: Which, apparently, a later test than what your application of November 25th shows?

A. There is a later test than I have in that application, I am sure of that.

MR. MANKIN: What kind of a packer---you said a formation packer what kind of packer separates this lower zone from the other two open zones. Do you have any knowledge of what that packer is?

A. Well, it was reported to me----and if I am wrong I wish you would correct me here-----the Baker Model D-5.

MR. GURLEY: Would you repeat that, please.

MR. MANKIN: That was the Baker Model D-5?

A. That was the Baker Model D-5, that is the one that is set at 6270.

MR. MANKIN: Set in the casing?

A. Yes Sir. Set on tubing in the casing.

MR. MANKIN: Are there any other questions of the witness?

Mr. Rieder.

MR. RIEDER: Mr. Dewey, do you subscribe to the Commission staffs' radius of influence?

A. Well, not whole heartedly, no sir. We use it because the Commission does, but I don't-----as a yardstick-----the Commission personnel's views and as long as they do why we use it too.

MR. RIEDER: Well, would you consider it applicable in this case?

A. Well, we did to the extent that we located our well so that we conformed with it.

MR. RIEDER: Well, that was my question, sir. You made reference to a radius of influence of 3,720 feet, I believe, that is approximately what it is.

A. Yes, the well was located purposely to conform with that.

MR. RIEDER: However, as you are no doubt familiar, the 3,720 feet is for 640-acre spacing----that is for the Eumont. And referring to-----

A. We just adapted it here because it has been used in the other gas pools that did have larger spacing.

MR. RIEDER: Referring to Order 610, Finding 11, this would apply partly to a number of questions I have. That one well in a gas pool will effectively and efficiently drain an area of 160 acres. Due to the complex nature of

the Blinebry gas and associated reservoirs, gas proration units in excess of 160 acres should not be permitted pending further reservoir information. I point that out for two purposes. The first, there is 160-acre spacing, and applying the Commission Staffs' radius of influence, I have done it hurriedly here----and I-----subject to more complete calculations--- and I get a radius of influence of 1,866 feet, which I point out that it might be more applicable than the 3,720 feet that you applied. This is not as a point of argument but just as a point of information, which would leave considerable portions of your unit out of the radius of influence for 160-acre drainage. Further, I would like to ask you, Mr. Dewey, do you have any reason, reservoir wise or any reservoir facts or information that would make this particular area different than the remaining portion of the pool, in which we feel that 160 acres is about the most efficient and economic drainage?

A. I don't think there is anything unique about this particular part of the pool--that it is different from the offsets in the surrounding area.

MR. RIEDER: Essentially it is a low permeability reservoir throughout the pool?

A. I think it is probably the better part of the two reservoirs, but I don't think it is anything outstanding-----

MR. RIEDER: But from the permeability and the porosity it would not be?

A. No.

MR. RIEDER: Now, on your numerous tests that were performed in both the Tubb and the Blinebry, it is---well particularly the Blinebry, depending



on the flow procedure of the efficiency of lifts and one thing and another, your fluid will vary considerably, would it not?

A. I think it would. Of course, there have been a lot of advances made in perfecting the-----we don't know what the producing characteristics eventually will be.

MR. RIEDER: It is quite possible, is it not, that the well may even become a true oil well under the terms of the order?

A. That possibility is open that it might be either more of a gas well or less than a gas well.

MR. RIEDER: It could be either way?

A. Either way, I don't think-----I would not want to hazard a guess as to what it is going to be.

MR. RIEDER: Correct me, if I am wrong. There is in no way-----your acreage is being affected in no way by undue drainage by a larger unit or there is no real undue drainage, lets say, taking place. In other words, your acreage is not in any extensive danger?

A. Well, it is surrounded all around by wells that are-----unless we protect ourselves by either having this 320-acre unit or by drilling additional wells to protect ourselves-----

MR. RIEDER: Well, let me put it this way. There is nothing peculiar about the SW/4 particularly, the northwest or the southwest that would make it impossible to make it a commercial well?

A. Oh, I don't think that. I think we could get a commercial well in the SW/4 the same as we can get a commercial well in the SE/4.

MR. RIEDER: And essentially the units around you are of 160 acres or less?

A. I think that is correct, yes sir.

MR. RIEDER: I would, if the Examiner please, I would like the record to take note of Finding 11 of Order R-610, in which the drainage and even a statement limiting or suggesting limitations for proration units in the Blinebry to 160 acres. I-----if it please the Examiner-----I would like that to be entered into the record. I do not feel that there is any evidence to demonstrate that this Finding is in error nor to show that the suggested limitations shouldn't be enforced.

MR. MANKIN: Anything further?

MR. RIEDER: I would like to state further that not only the size of the unit but the characteristics of the Blinebry well in particular should be--- due to the possibility that it could be an oil well or gas well should certainly be considered in view of the fact that the well if assigned an extremely large unit might even further aggravate the situation. I seriously think that the oil is present in the Tubb zone.

MR. MANKIN: Any further questions of the witness? Mr. Lyon.

MR. LYON: V. T. Lyon for Continental Oil Company. Mr. Dewey, in regard to the communitization of the S/2 of Section 10, is this communitization effective as to all formations?

A. No, it is limited to the Tubb and Blinebry.

MR. LYON: I see, now in regard to offset wells, you are familiar with the offset wells and proration units assigned to those wells are you not?

A. Well, lets say to the extent that I think that all of the offset wells have 160 acres assigned to them if that is what you meant.

MR. LYON: Yes sir, and I have a list of the wells which we have compiled from our records and the Commission's records showing that Tide Water State "S"-----

MR. GURLEY: Just a minute, Mr. Mankin, this man is not under oath, and if he is going to enter evidence-----unless you want---

MR. LYON: I want to ask him if he has any reason to doubt the accuracy of-----

MR. GURLEY: You are just going to use that----basing your question to him on it. Is that correct?

MR. LYON: Yes Sir.

MR. MANKIN: Proceed.

MR. LYON: The Tide Water State "S" 2, in Section 15, has a 160-acre unit, which is a Blinebry Tubb dual, the Moran Owen No. 2 has a 160-acre unit, in Section 14, which is a Blinebry Drinkard dual, the Continental Oil Company State 10 No. 2, has a 160-acre unit in Section 10, and is a Blinebry Drinkard dual, Aztec's Dauron No. 2, which has a 40-acre unit in Section 10, is a Blinebry Drinkard dual, Stanolind's Southland Royalty "A" 6, has a 160-acre unit in Section 9, which is a single completion to the Blinebry. Continental Hawk B-9 No. 2 has a 160-acre unit in the Blinebry and Drinkard, dual completion and Gulf Leonard "E" 4 has a 160-acre unit in Section 16, which is a Blinebry Tubb dual. Do you have any reason to doubt the accuracy of those figures for that?

A. This Continental well, I did not have a record on this Continental in Section 10---I did not show that on this plat. If I understand your question,

it is relative to the size of the gas proration units surrounding the S/2 of Section 10, Township 21 South, Range 37 East.

MR. LYON: Yes.

A. I think, as far as I know all the gas proration units so far established in the Blinebry Pool are 160 acres or less. Now I am not certain relative to all the gas proration units in the Tubb Gas Pool. I think there is one exception is there not, that 240-acre gas proration unit operated by Skelly Oil and Gas Company, and with that one lone exception, all other gas proration units in the Tubb Gas Pool are 160 acres or less.

MR. LYON: But you would say the majority of the proration units in both Blinebry and Tubb Pools are 160 acres or less, is that not true?

A. That is correct.

MR. LYON: Also, a large majority of those wells are dual completions, are they not?

A. I have not made any investigation relative to the number of dual completions.

MR. LYON: There are a large number though, are there not?

A. There are a number I would say that are dual completions, yes. I think probably the proration schedule would answer that question.

MR. LYON: You are aware of the fact, are you not, that Stanolind has drilled at least one well in this immediate vicinity which is a single completion.

A. I am not aware of that except that you have reference to this number six well. This one well up here, Southland "A" No. 6 in Section 9 is indicated to be a single completion. Why they did that, I do not know.

MR. LYON: Mr. Dewey, there are several formations deeper than both the Blinebry and Tubb in which Humble has wells completed, which are available for dual completion, are there not?

A. There are other wells on the lease and some of them are completed to the Ellenberger.

MR. LYON: As a matter of fact, isn't it true that in the SW/4 of this Section, that is the W/2 of Humble's lease, is it not true there are at least eight wells which are completed in the Drinkard or Ellenberger which can be dually completed for the production of Tubb and Blinebry gas.

A. I cannot answer that question because I have not examined the completions on those wells in the SW/4 of Section 10 recently. I am of the opinion that some are. Whether all are, I do not know.

MR. LYON: Of course, the Commission's records will indicate that fact. Our records that we have compiled to indicate there are eight wells on the W/2 of the lease which are completed in formations deeper than the Tubb. If those wells are dually completed, it isn't very probable, is it, that the cost would be \$100,000 or more.

A. No.

MR. LYON: It would be economical, would it not, to dually complete those wells for 160-acre units?

A. It could be done. There would be considerably less cost than drilling a new well, but it would still be an additional expense that is perhaps unnecessary.

MR. LYON: You are aware of the fact, of course, that the Commission has made a finding that the well will effectively and efficiently drain 160 acres

in the Tubb and Blinebry Pool.

A. Yes, I am.

MR. LYON: It would not be an undue economical burden on the part of Humble to dually complete existing wells to take care of the 160 acres constituting the SW/4 of Section 10. Tide Water does not have an interest currently in those wells in the SW/4 of Section 10, that is in the oil production.

A. I do not know just what effect it might have on our current communitization agreement if forced to do that.

MR. LYON: At the time that agreement was made, wasn't it true that the rules in effect at that time provide for 160-acre units?

A. No, I do not think that was so. The first date that the agreement became effective, on March 4, 1955, and as you probably realize, Mr. Lyon, a lot of these communitization agreements require six months of time to put together before it is finalized.

MR. LYON: Are you familiar with Order R-372-A?

A. Yes.

MR. LYON: The Commission had hearings prior to March 4, 1955, but the Commission did not issue their order in final form, as we understand it, until April 11, 1955, and that was Order R-610 covering the Blinebry Pool and Order R-558 covering the Tubb, Byers-Queen and Justis Pools. At the time those orders were issued, we understood, however, it would be in effect and reviewed as of October 1955. Before they were in final form, subject to change, the Commission did call those things back for review last October, is that correct?

A. It was reviewed. They had prior orders up to April 7, 1955, but as testimony relative to these pools prior to that time, but we do not feel that things were finalized until this order was issued on April 11, and we felt that those should be reviewed in October, 1955. The Commission did call the Blinbry for review at that time, but no additional testimony was offered.

MR. LYON: That is all the questions I have.

MR. MANKIN: Anything further? Mr. Rieder.

MR. RIEDER: For the record, R-372-A dated November, 1953, established 160-acre spacing as the standard gas proration unit in the Blinbry. My question is back to your reasons for requesting this unit. You state that drilling a well in the SW/4 would contribute to waste.

A. Well, it would be waste except to the extent that it would entail additional expense to drilling a well in the SW/4 of Section 10. I do not think it a question of underground waste.

MR. RIEDER: In other words, the only waste that it would incur would be the waste incurred by any well?

A. It would be more of that nature. It would be an economic waste.

MR. RIEDER: Is it not possible, in view of the reservoir findings to date, as were held in the hearings and meetings prior to the issuance of R-610 in which all the findings and investigations tend toward 160-acre spacing-- is it not possible that completing a well would contribute to underground waste due to the leaving of liquid and gaseous hydrocarbons in the ground?

A. No, I do not think that the failure ultimately to drill a well in there might leave some liquid in the ground. I believe that there is sufficient

permeability and porosity in the area, that practically all gas could be recovered by the surrounding wells.

MR. RIEDER: But in other words, the failure to complete a well in the SW/4 actually might contribute to underground waste.

A. If it was drilled in a reasonable time, I would think the drainage would recover everything that would reasonably be expected to be obtained.

MR. MANKIN: Anything further of the witness? Mr. Utz.

MR. UTZ: Mr. Dewey, do you have a shut-in pressure for the Blinebry zone?

A. I do not think I have Mr. Utz. The 1725 pounds seems to have been the shut-in pressure at the end of one test.

MR. UTZ: Just a minute. Do you have this available in your office files?

A. Yes, we can furnish the Commission with the shut-in pressure.

MR. UTZ: Why don't I just state what I would like for you to furnish. I would like the shut-in pressure and the time of the shut-in on the Blinebry zone. At any rate, you can furnish this information. I would also like the size choke that the well was tested through on November 11, and as to whether the well was tested through the casing or tubing. It was apparently tested through the casing, and the same information for the Tubb zone on the test. I do not know the date of the test. You stated it was 6,152,000-----

MR. MANKIN: Mr. Dewey, could you possibly furnish this information to us in a letter so that we can incorporate it in this case. I think that would suffice.

A. I believe so.



MR. UTZ: That would be satisfactory with me. If you can now, and you have an opinion as to whether the test you made on the Blinebry was stablized.

A. I would have to borrow the man who took the test personally. I do not know.

MR. UTZ: Any information you have in regard to these tests----rate of flow, as to whether stablized or not. The reason I was asking the questions, Mr. Dewey, I doubt it was a stablized test.

MR. MANKIN: Anything further.

MR. LYON: I would like to make a statement.

MR. MANKIN: Any further questions of the witness? Anyone else. This is the only witness that you have?

MR. HINKLE: That is all.

MR. MANKIN: Mr. Lyon wishes to make a statement for Continental.

MR. LYON: First I would like to state that Continental has no objection to the dual completion of this well so long as the Blinebry zone is classified by the Commission as gas producing. In regard to the size of the units, I should like to point out that the order, of course, restricts size to 160 acres, and further, that the offset operators have developed on the basis of 160 acres or less, and also that it is economically feasible to develop this lease on the basis of 160 acres, either through the drilling of an additional well or the dual completion of the present existing well. I would like to point out that the evidence indicates that the liquids produced from the well are of such type and

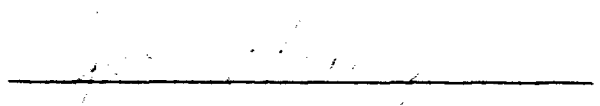
gravity that there may be some question as to the probable classification of the well, either now or in the future. In bearing these points in mind, we respectfully request that the Commission limit the gas proration units of this well to 160 acres.

MR. MANKIN: Any further statements to be made in this case? If not we will take the case under advisement. The hearing is adjourned.

STATE OF NEW MEXICO )  
                          : ss  
COUNTY OF SANTA FE  )

I, Joan Hadley, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Commission Examiner at Hobbs, New Mexico, is a true and correct record, to the best of my knowledge, skill and ability.

Dated at Santa Fe, New Mexico this 24th day of January, 1955.

A handwritten signature, likely of Joan Hadley, is written over a horizontal line.