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PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
MABRY HALL
Santa Fe, New Mexico
August 24, 1960

IN THE MATTER OF:)
)
Application of Anderson-Prichard Oil Corporation)
for a triple completion and for a 181-acre non-)
standard gas proration unit. Applicant, in the)
above-styled cause, seeks an order authorizing)
the triple completion of its Western-Federal No.)
1, located 330 feet from the North and West lines)
of Section 5, Township 23 South, Range 38 East,)
Lea County, New Mexico, in such a manner as to)
permit the production of oil from the Blinebry)
Pool, the production of gas from the Tubb Gas)
Pool and the production of oil from the Drink-)
ard Pool through parallel strings of 2 3/8-inch)
tubing, 2 1/16-inch tubing, and 2 3/8-inch tub-)
ing respectively. Applicant, further seeks the)
establishment of a 181-acre non-standard gas pro-)
ration unit in the Tubb Gas Pool consisting of)
Lots 1, 2, 3 and 4 of said Section 5, to be de-)
dicated to the said Western-Federal Well No. 1.)

Case 2058

BEFORE:

Daniel Nutter

TRANSCRIPT OF HEARING

MR. NUTTER: We will take Case 2058.

MR. PAYNE: Application of Anderson-Prichard Oil Corporation
for a triple completion and for a 181-acre non-standard gas pro-
ration unit.

MR. SILVER: My name is Caswell Silver and I am interested in
case 2058. I was notified at the last minute just yesterday and
came down from Denver. I am a party in the case and I own the



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south half of the standard lease which is under production. They are causing me great inconvenience and unnecessary expense. The case was properly called before and in addition I appeared, and I feel in view of the circumstance that the case if continued should be allowed to give me adequate time in the future. Anderson-Prichard should reimburse me.

MR. NUTTER: We will call this case again at the end of the hearing today, there is a possibility that Anderson-Prichard will be here and we will go on with the case. If they are not here we will have to dismiss the case and re-advertise it for another date. But as far as any arrangements you can make as to travel expense -

MR. SILVER: It's a great inconvenience to wait around all day. I think and I move on my part that the case be dismissed and at the present time in further motion for a new date.

MR. NUTTER: Rather than dismiss the case at this time, Mr. Silver, we will proceed with the remaining cases, it won't take too long and we will give them another chance to appear.

MR. SILVER: I want to catch a plane, when will you be through with this?

MR. NUTTER: I think we will be through before noon.

MR. KELLAHIN: My name is Jason Kellahin of Kellahin and Fox and I am appearing on behalf of Anderson-Prichard Oil Corporation. We will have two witnesses.



(Whereupon witnesses were sworn.)

CHESTER SKRABACZ

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

(Whereupon Exhibits 1 through 6 were marked for identification.)

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please.

A My name is Chester Skrabacz.

Q By whom are you employed and what position?

A I am employed by Anderson-Prichard Oil Corporation as a geologist in the New Mexico area for the past 13 years, the past 11 years.

Q Have you previously testified before the Oil Conservation Commission?

A I have testified.

MR. KELLAHIN: Are the witnesses qualifications acceptable?

MR. NUTTER: Yes, sir.

BY MR. KELLAHIN:

Q Mr. Skrabacz, are you familiar with the application which has been filed in this case?

A I am.

Q Would you state briefly what Anderson-Prichard proposes in this application?

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A In this case Anderson-Prichard proposes to prove geologically that the four lots in Section 5, Township 23 South, 38 East, and forming a little over 180-acres into a Tubb gas unit. We drilled the Anderson-Prichard No. 1 Federal Western 330 from the north and west of Section 5. I would like you to take note this is located in the Tubb gas field and in the Drinkard area.

Q Do you have a plat showing the proposed unit and location of the well and off-set ownership?

A Yes, we have this Exhibit No. 1 which will tell you the proposed unit, the north half north half of Section 5, 23 South, 38 East.

Q That consists of the four lots, does it not?

A Four lots totaling over 180-acres.

Q Are those lots governmental survey?

A In a federal governmental survey.

Q And the complete lots are proposed to be included in that.

A That is right. We don't want to break them up in any respect.

Q Referring to what has been marked as Exhibit No. 2, would you discuss that exhibit, please.

A Exhibit No. 2 is a geological structure map covering the area in question and it indicates that the north half north half of the section which is our proposed unit which is outlined in



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yellow and green as you see it, the reason we made a unit of that type primarily is because of the geological aspects in the situation. Structurally our well is in along that north half north half of 5.

Q Before you get into the structure, this well has been completed in three zones, has it not?

A That is correct. This well has been completed in three zones. The Blinebry oil, Tubb gas and the Drinkard oil.

Q Now, does it happen to be located at 330 foot location?

A It's a 330 foot location. Primarily we were attempting to get on structure as much as possible to beat our off-set obligation which is the Paddock Well. You notice the Cities Service is just north of us. The Paddock and the Blinebry - well, we were trying to get on structure as much as possible and we established a 330 location having Paddock in mind.

Q Is that a standard location for Paddock production?

A It is a standard location. In other words, economics is very much in question here. We are on the edge of the field and we tried to get as high on structure as possible. We drilled the Paddock Well and since the Texaco Well northwest of us number 4 Blinebry had tested and completed, previously completed as a Blinebry oil Tubb gas and Drinkard oil. We felt we should drill our oil down to the Drinkard and to check those horizons. The Paddock zone in our well appeared negative, too low, and we tried



to salvage what we could by completing out of the upper Drinkard, the Tubb gas and Blinebry. And the reason we have all zones open is due to the fact that the economics of the situation would just about take all the zones to pay these wells off.

Q Now, what is the dedication of the acreage that is proposed by Anderson-Prichard in this case? Would you discuss that please.

A The dedication of the acreage?

Q With the Tubb production I am referring to.

A The reason we have this 160 north half north half 5 is because of its position on this structure. As you can see on the map we feel that everything north of this line, the Lion Well which was drilled many years ago, I believe about 1945 or 46, it tested some of the Tubb zone, the bottom 200 feet and recovered 170 feet of gas cut mud.

MR. NUTTER: Directly south of your well?

A The southwest. 170 gas cut, testing the bottom 200 feet of the Tubb's critical limits. By the same token we perforated our Tubb and it made natural, a little over 1 million cubic feet of gas natural. We feel the limits of the gas Tubb may be limited along the structure of our well. At least the lease we have defined on the map there the north half north half of 5, Section 5. Now, the well in the southwest of the northeast of 5 is the Weiner Well, the total depth approximately 4500. In the San



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Andrews, we do have some structural markers there to give us an estimated Tubb top in the preparation of this map. It really didn't penetrate the Tubb or the Blinbry any of producing and it did give us a structure mark.

Q How is it to the Tubb?

A It went down 4500 more than the Tubb, 6100, so it will be over 1500 feet. The nearest Tubb production or off-set units in Section 32 is the Gulf No. 3, the Andrews, the southwest quarter of 32, the southeast quarter is dedicated, that square up to 160.

MR. NUTTER: Does Gulf have the entire southeast quarter of 32 dedicated to that well in the Tubb.

A That is right and in the west half of 32 Pan American has the west half, west half of 32 dedicated to the Tubb Well. The well being the Pan American No. 32 State. It's southwest of the northwest quarter. And the east half of the west half of 32 there is another 160-acre unit, one whole unit dedicated to Tubb gas and it's called the Cities Service unit and I believe it's the Cities Service one in the southeast of the northwest quarter, that is the Tubb producer.

MR. NUTTER: What acreage is dedicated to that?

A The east half of the west half of 32.

MR. NUTTER: Pan American and Cities Service acreage both?

A Correct. They must have unitized in some respect.

MR. NUTTER: The east half of the west half is dedicated to



the Tubb Well.

A Yes, sir the Tubb is the west half. Cities Service 1 and 32 to the west there and also I would like to point out this Texaco unit is located in the south half south half along 160 in Section 31, and their well is located to the southeast southeast being on the margin of the structure. Here, these long units have been formed and as long as we feel we have gas there, we definitely believe that. So Anderson-Prichard unit there is belong - approximately 160-acres because of the off-set obligation. Now, I have several cross sections made into a exhibit.

(BY MR. KELLAHIN) Before we get into the cross section, would you say that the Lion Well to the south conceded that acreage.

A From the viewpoint of gas, we have made a natural gas after perforating our Tubb zone and the Lion had tested there and had no more gas-oil ratio other than the 170 feet gas cut mud. It would be my opinion it would be conceded.

Q It conceded the western portion of the lands which you propose to dedicate to your well?

A The east part being it's our 180-acres is on struck and off-set with the Gulf unit, Gulf Andrews unit and Pan American. Cities Service was and has been approved and is producing. We feel that we are off set to them and structurally not detrimental. We feel it's productive.

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Q Now, are the cross sections you refer to shown on Exhibit No. 2?

A The lines of the cross section on this plat, the first cross section is A-18-A1.

Q That is set out on Exhibit No. 3?

A Exhibit No. 3, it's a north-south cross section showing dip to the south and it is close to the Gulf Scarborough No. 2 in Section 31. It's cross section is 8A1 and it was made and prepared to show the continuity of the Tubb Reservoir and some structure drop from the Gulf Scarborough No. 2 which is the Tubb Gas Well and the Texas No. 1 Blinbry southeast southeast of 31, a proven gas well and the Anderson-Prichard Western-Federal and showing the vertical limits of the Blinbry Tubb and Drinkard and the perforations and completions in the Tubb.

Q Now, referring to Exhibit No. 4, will you discuss that exhibit please.

A That is another cross section prepared on the east west cross section and the first well on the cross section starting from the left is the Gulf Pike producer in Section 6, that is just west of the Anderson-Prichard Well and the Anderson-Prichard Well itself and going a good mile and a half to the Dekalb Well, that well was drilled back in '45 with no electric logs or gamma radio activity logs were made. We do have a sample log and the sample log will show that the reservoir exists. However, it



appears to be non-productive or lacking any oil shows and structurally slightly low.

MR. NUTTER: It did penetrate the Tubb.

A It had gone down to 7353 which would take in the Drinkard Pays. No test in the Tubb or the Blinebry or any other shallower horizons. It definitely was drilled back in '45.

MR. NUTTER: So the productive part of the Tubb Pool probably ends someplace between your well and this Dekalb well.

A Definitely, we feel under our present knowledge there would be a limitation there.

(BY MR. KELLAHIN:) Do you have any opinion as to what contour interval would represent the limit of the Pay.

A No, sir I don't think the contour interval would pinpoint it. It's due a great deal to the porosity permeability that you would find limiting on the size of this structure or on struck.

MR. NUTTER: Whose well is this in Section 33?

A That is a recent Texas Company Number 8 Blinebry, it's 330 from the west line and I believe 1980 from the north line of 33. It's a Blinebry Tubb gas well.

MR. KELLAHIN: That is a gas well.

A That is Tubb gas, the Tubb has not yet been approved and we believe they are going to dedicate the north half of 33 to it. That is, there was expression on it, it is another flank well, that is the reason I think they put it on the 330 location and came up

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with Tubb gas immediately to the north in Section 28. Texaco has number 11, the Blinebry that is a Tubb Well but it's a Tubb oil well, number 11 Blinebry. I think rapidly the field is being defined and if there are any other questions on Exhibit 4 we have have Exhibit No. 5.

Q Exhibit No. 5, would you discuss that please?

A This is the north south cross section C to C 1, it's also in Green going from the two Tubb Wells in Section 32, the Gulf No. 2 and Andrews No. 3. And the Andrews and the Gulf both are commercial gas producers and you will see from the cross section that the Tubb Section is well defined, they're the same all right and the continuity is there and leads right into the Anderson-Prichard producer. We are assuming and we are fairly certain that the north half of 5 at least on the 80 acres in the north half of the north east of 5 would have a similar section and be productive.

Q Now, what is the general nature of the Tubb producing formation in this area.

A It's a very tight fine gray sand stone and has a stringer of dolomite in it. It's limited in the porosity and permeability.

Q Now, on the basis of your study of the reservoir in the area involved here and on the basis of the cross section which you have presented, in your opinion is all of the acreage of Anderson-Prichard proposed to be dedicated to be productive of gas from the Tubb zone.



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A I believe that is true. I think all the acreage is productive in Tubb gas and from a geological viewpoint and another important fact is economics. I think Mr. Smith will do a little better job of defining the economics there.

MR. NUTTER: Have you potentialized this well in the Tubb?

A Yes, we have a gauge, we don't have a potential we are waiting for this hearing.

MR. NUTTER: What does it gauge?

A It gauged, it was 2.4 million cubic feet of gas.

MR. KELLAHIN: A pretty fair well then.

A As it appeared right at this moment, yes, sir, pipe line limitation in the area has kept a lot of these wells from producing their full allowable.

MR. NUTTER: Is this in the area that there has been some question as to the bottom of the Tubb and the top of the Drinkard, a matter that is going to be pending before the Commission before too long?

A These very sections were prepared on the basis of the vertical limits established by the Oil and Gas Commission, that is our present limits. Now, if there are any changes to that coming up, I am not aware of it.

MR. NUTTER: This is not around the Justice area.

A No, this is two Townships south, well, we will have something on that coming up September 7th, I believe.



(Whereupon Exhibit No. 8 was marked for identification.)

THE WITNESS: I would like to point out in Section 6 of the Gulf Pike Well drilled back in '46, they have perforated part of the Tubb zone in there and northwest of the northwest quarter. That was originally drilled down to the Drinkard and found non-commercial and was plugged back to test the Tubb part of the Tubb and after acidizing it was swabbed dry and made little oil and water, acidizing with a thousand gallons and at present it has been for the last number of years producing from the Blinebry. That is in the northwest of the northeast quarter. Gulf Pike, it's in the cross section of BBl. I would like to point out also that the Western gas south of the Lion which Lion had perforated and tested part of the lower Tubb zone back in '47 and they used 15,000 gallons and acidized it and swabbed it dry. We have a definite porosity permeability problem here. The reason I believe that our lease could still be productive is to the way it's situated.

Q Have you received any waivers from companies to this application?

A We have received one.

Q Exhibit No. 8, will you state what that is.

A Texaco had sent us a waiver August 15, 1960, a notation of the Anderson-Prichard non-standard gas prorated unit and they explained it and this is to inform you that Texaco an off-set

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operator has no objection to that assignment of this non-standard provision unit to Anderson-Prichard of Western-Federal 1.

MR. NUTTER: Geologically in the future your unorthodox location, your well is moving in the direction of Texaco property, is it not?

A That is right. They have no objection.

BY MR. KELLAHIN: Were Exhibits 1 through 5 by your direction?

A Direction.

Q And Exhibit 8 is a letter received by your company, is that right?

A A letter received to our legal department.

Q It is addressed to the Oil Conservation Commission?

A That is right.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits 1 through 5 and Exhibit No. 8.

MR. NUTTER: 6 and 7 will be coming later and Anderson-Prichard's 1 through 5 and 8 will be admitted.

MR. SILVER: I wish to state for the record that I am Caswell Silver an oil and gas operator and producer in New Mexico, that I own of record the south half of the northwest quarter of Section 5 and the west half of the southwest quarter of Section 23 in Township 23 South, Range 38 East. That the south half of the northwest quarter of Section 5 would normally be in a standard gas provision unit with the Anderson-Prichard Well. I would like

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to question Mr. Skrabacz. In his testimony he stated in direct answer to the inquiry, is the south half of the northwest quarter conceded. He said, "Some of it." Is it not a fact that the question of Tubbs gas on the south half of the northwest quarter has not been either proven or disproven as a result of the test of the Lion Company Well.

A I will say the facts we have right now the test that was made of the Lion Well, the 170 gas cut mud compared to our testing, our Tubb unit natural, it gave up over 1 million gas natural, where the Lion zone tested and gave up 170 gas cut mud.

Q The gas or oil water contact, the gas water or oil water contact in the Tubb has not been established in the Lion Well since the two lower 200 feet was tested and yielded no water.

A That is probably true, it has not been defined gas oil water contacts.

Q So there is a chance there would be gas on the south half of the northwest quarter of Section 5 which might be drained by your Anderson-Prichard Well on the northwest quarter.

A In my opinion it might not be. We can drain it as well with what we have of the north half of the north half of 5.

MR. SILVER: I would like to state to the Commission I don't want to prejudice Anderson-Prichard, in any event I am trying to establish and I feel, I don't know myself whether it would hurt me or prevent if I were to drill to that, I would have to confer,



I would like to establish there is a possibility of our asking for a permit, the Tubb gas permit on the south half of the north-west quarter of Section 5.

MR. NUTTER: You are not objecting to the formation of this proposed unit by Anderson-Prichard?

MR. SILVER: I don't know till I see the balance of the testimony. I don't want to prejudice their case. In any event I am taking no stand at the present time. I think I would like to just establish what I wanted to establish. There is some room south of that gas, it exists on the entire quarter of the north-west quarter of Section 5. I turn the witness back to the examiner.

MR. NUTTER: Does anyone have any further questions of Mr. Skrabacz?

(No response)

MR. NUTTER: He may be excused. Call your next witness, Mr. Kellahin.

ED SMITH

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please.

A C. M. Smith.

Q By whom are you employed and what is your occupation, Mr.



Smith?

A I am employed by Anderson-Prichard Corporation as Petroleum Engineer in the economics evaluation department in Oklahoma City.

Q What educational qualifications have you had in the field of petroleum engineering?

A I'm a graduate petroleum engineer at the University of Texas.

Q What year?

A I graduated in 1949.

Q Did you secure a degree?

A B. S. in petroleum engineering.

Q Since your graduation, what activity have you engaged in?

A I have been employed by Calco as a drilling engineer in the Gulf Coast area for a period of my time and up in the Rocky Mountain district and subsequent to that time I was production engineer for Indiana Oil Corporation and subject to that time I was the head engineer in Denver for the British American Producing in economics and evaluation section there and I am now employed by Anderson-Prichard.

Q How long have you been employed by Anderson-Prichard?

A Two and a half years.

Q And in connection with your duties with Anderson-Prichard Oil Corporation, do you have anything to do with the area that is

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involved in this application?

A Yes, I have to apply the economics of the drilling proposal and the study of the area to determine what the recovery of the reserves are.

Q You might explain, from this area does that activity require you to study the particular areas involved in particular?

A That is the particular area and the associated areas.

MR. KELLAHIN: Are the witnesses qualifications acceptable?

MR. NUTTER: Yes, sir.

BY MR. KELLAHIN: This is a proposal to make a triple completion of this well. Referring to what has been marked as Exhibit No. 6, would you discuss that exhibit, please.

A Exhibit No. 6 is a diagrammatic triple completion that we would like to obtain for producing the Blinebry oil Tubb gas and Drinkard oil. This well has a 7 inch casing set at 7052 feet, the Drinkard's perforations are from 6536 to 6982. There is a Baker Model D Packer set at 6500 feet. Above the Drinkard completions in which there is a string of 2 3/8 OD EUE tubing set in the Packer at 6500 feet to produce the Drinkard oil. Above this Packer are the Tubb perforations from 6106 to 6227 feet. Above these perforations is a Baker Model K Packer setting at 6059 feet in which there is a string of 2 1/16 inch OD tubing set in the Packer at 6059 feet, through which the Tubb gas will be produced. Immediately above the Baker Model K Packer is a Baker parallel



string anchor setting at 5925 feet, and in this anchor the Blin-bry oil will be produced and the perforations of which are 5731 to 5901 and this is a string of 2 3/8 inch OD EUE tubing.

Q What is the present status of this well, it is completed, is it not?

A It is completed.

Q Have you run any Packer leakage, other tests as yet?

A We have run them on our well to establish that they are not leaking and in preparation for the state test.

Q The state test has not been made?

A No, sir only one state lease, that was the Drinkard.

Q What did you find?

A There is no leakage communication between the zones.

Q Would you discuss in some detail, please, the cementing program on that well?

A There is for surface casing, there is 13 3/8 inch pipe cemented at 319 feet and the cement circulated with 350 sacks. We have a 9 5/8 inch intermediate string set at 2980 feet and was cemented with 2000 sacks of cement. And the 7 inch string is set at 7052 feet with 250 sacks of cement which is 60 units of Hali-burton equipment to prevent corrosion in the pipe.

Q Do you have information on the tops of the cement?

A Both the other - the surface pipe was circulated, the ME strings top were 400 feet from the surface and -

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MR. NUTTER: Your exhibit indicates that was 455, is that intermediate?

A True, I beg your pardon and the top of the 7 inch was 3185 feet.

Q (By Mr. Kellahin:) All of it covered by that cement program?

A Yes, sir.

Q In your opinion will this type of completion effectively separate the producing horizons?

A Yes, sir.

Q Do you have any information on the bottom hole pressure and the zones involved?

A Yes, sir, we ran bottom hole pressures on all three zones. The Drinkard zones bottom hole pressure was 3050, Sub-sea was 2548 PSI. The Tubb at 2891 feet Sub -sea 2553 PSI and the Blinbry at 2400 Sub-sea was 2209 PSI.

Q Do you have any information on the fluid characteristics of the reservoir?

A Yes, sir, we tested the Drinkard zone on July the 29th, 1960, this was a Commission test. It flowed 143.03 barrels per day on 1364 inch choke and had a 150 gas oil ratio.

MR. NUTTER: What was the fluid gravity?

A I do not have the fluid gravity of that well, sir, it was approximately 42, I couldn't say for sure. The Tubb, this was a independant test as it had not been- it flowed 2.4 MCF and 152

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barrels of condensate, 52.8 degrees gravity.

MR. NUTTER: 52.8?

A Yes, sir and the Blinebry was tested for an 11 hour period and it flowed 165 barrels of oil for 250 flowing tubing pressure.

MR. NUTTER: Do you have the gravity on that?

A No, sir.

BY MR. KELLAHIN: Do you have the gas oil ratio?

A No. Those two zones the Drinkard and the Blinebry have not been given any official test.

MR. SILVER: What was the choke on that?

A No choke size on it, 2 inch tubing that was with unofficial tests.

BY MR. KELLAHIN: How were the fluids being handled, were they commingled?

A No, separate tank batteries.

Q For each zone?

A That is right.

Q And how about the gas production from the zones if any aside from the Tubb?

A The casing head gas will be sold, that is right.

Q It will be metered?

A Yes, sir everything has its individual tank batteries and installation for testing and metering.



Q Now, Mr. Smith, have you made any study of the reservoir in the area involved in this application to determine if a well located as the Anderson-Prichard Well is located would efficiently and economically drain the acreage proposed to be dedicated to it?

A Yes, sir I have.

Q Would you give us the results of that study?

A I made a study of the entire Tubb field bottom hole pressure production history test since the inception of the field and I have concluded that these wells that are currently existing in the field that they are adequately draining all the acreage and that they are draining the acreages assigned and more than at least 160 acres.

Q Do you have any information on the porosity and permeability of the formation?

A Yes, sir which zone?

Q Tubb zone.

A The Tubb zone has an average porosity in our net pay, was 11.4 percent and the average water saturation was 43.5 percent.

Q Would you referring to what has been marked as Exhibit No. 7, would you discuss that exhibit, please?

A Exhibit No. 7 is a graph of the Tubb field bottom hole pressure data, they are numerous points on this curve since 1946, they are located by these and are the average bottom hole pressures as reported in the New Mexico Commission reports and they



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are shown by dots with little circles around them. In addition there are numerous dots that have little numbers opposite them and these are bottom hole pressures and are drills stem line test pressures taken upon initial completion of wells drilled in the field subsequent to the initial establishment of the field area and prior to any production of the individual wells. It will be noticed that the average line drawn through these curves, these points of the average would indicate that the Tubb fields original bottom hole pressure was approximately 2600 pounds and there are no wells subsequent to that time that were drilled that had pressures that magnitude. In the majority of the cases the field wells there were out in the better developed portion of the field. Their pressures were comparatively close to the average field pressures indicating that the average was being drained even though there was no production in that particular well for instance, Carl Weston drilled a well in 1957 located in number 17, excuse me in 1959 it's number 17 you will see quite a ways below the 2600 pounds it had 2630 PSI and the Western Texaco Blinbry number 41 which is the northwest diagonal off-set to the Anderson-Prichard Well had a bottom hole pressure, initial bottom hole pressure, it hadn't been presented as yet, was 2533 which is slightly below the fields original bottom hole pressures and indicating some draining has occurred even on that lease on the south end and from this it would indicate that the Tubb gas zones are



and have a relatively low permeability but it is connected throughout the entire field area and that production proper with other wells are draining under developed acreage and will do so if given a sufficient amount of time.

Q What was your experience on the bottom hole pressure on the Federal No. 1?

A On Western-Federal No. 1 had as I stated before a 2553 bottom hole pressure which is slightly above that of the Texaco Well but a little bit further removed in the field limits.

Q Does that pressure to you indicate that that acreage has likewise suffered drainage?

A True.

Q Is that acreage in access of a mile?

A Well, the closest well, productive well, is those wells in the north half of the Section 32 that would be approximately a mile, wouldn't it?

MR. NUTTER: Yes, sir.

BY MR. KELLAHIN: Is that the closest well with the exception of the Texaco?

A There has been no production from the Texaco Well. Those west in the north half have the closest production.

MR. NUTTER: The Texaco Well hasn't produced yet?

A Yes, sir.

BY MR. KELLAHIN: Then completed about a year ago.



A Yes, sir.

Q On the basis of your study, in your opinion will a well located as the Anderson-Prichard Federal No. 1 is located, drain the acreage proposed to be dedicated to the Tubb formation?

A Yes, sir.

Q Now, Mr. Smith, have you examined the Oil Commission's records to determine whether the elongated units have been dedicated to other pools in the Tubb Pool?

A Yes, there are several that have been granted by the Commission.

Q Will you discuss some of those?

A As previously stated by Mr. Skrabacz there were three of these elongated mile long quarter mile wide units adjacent to out acreage and then up in the north end of the field there are four of those granted in 21 South 38 and 37 East.

MR. NUTTER: What is this cross hatch line, is that the limit of the pool that is presently defined?

MR. SKRABACZ: This was obtained from the Hobbs office Oil and Gas Commission and it was about 2 years behind date so the field has not really been defined.

MR. KELLAHIN: This is the contour of the Tubb and Mr. Skrabacz has just extended it down to here, it will conform with the other map that he presented and these are on some several 330 locations from the adjacent leased boundry lines that were

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granted. We went through random and picked them out.

MR. NUTTER: You identified the 330 foot locations by a yellow circle.

A Yes, squares.

BY MR. KELIAHIN: Would you have that marked as Exhibit No. 9?

(Whereupon Exhibit No. 9 was marked for identification.)

Q For what reason, Mr. Smith, has Anderson-Prichard desired a completion of the triple completion in the dedication of this particular acreage, the well for Tubb production?

A As was previously stated we were being pushed by the Federal Government for either drilling an off-set to the Paddock Well because of off-set obligations or paying royalty and since we felt reasonably sure that the structure would drop rapidly or to the south of this off-set production we felt it was necessary to drill the 330 location.

Q You are referring to the Paddock structure?

A The Paddock structure so that we could have some chance of getting a Paddock producer to keep from paying compensatory royalty and this resulted in still being a dry hole in regard to the Paddock. However, it turned out that the Tubb and Blinbry and also the Drinkard were productive. It became necessary to use this well or a Tubb well. Now, the Drinkard has been produced in this immediate area by wells to the north, to the northwest

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and to the west of the Anderson-Prichard Federal Well, it has partially been completed the cumulative life of these wells I would say favor in terms of oil recoveries. The Drinkard production has had likewise history. I went through an analysis of what we would estimate the recovery would be from the Drinkard and also the Blinebry reservoir and under the most optimistic estimate the recoveries I found that we can recover approximately 195,000 barrels of oil.

MR. NUTTER: Is that from each?

A No, from the two combined Blinebry and Drinkard. And the profit ability of producing these two zones for an investment of \$240,000.00 and a 13 year life had a present worth of a future profit of only \$90,000.00. Should the recoveries be less than our optimistic recoveries, we would certainly be in a poor economic position from regard of production and so therefore it was necessary that we consider producing the Tubb gas along with these zones in order to enhance the profit ability of this oil well.

Q In your opinion will it become necessary to pump the two oil producing zones?

A Yes, sir. The Blinebry gas oil ratio and the well is just barely flowing and we are reasonably sure within the next 3 to 6 months we will put a pump on it and it will be something like the same history for the history of the Drinkard Wells, they are pumpers.

Q It will be possible to pump those two wells?



A Yes, sir.

Q Would that add to the cost of your well?

A My \$204,000.00, that included two pumping unit installations, those wells, the well now as it stands costs about \$160,000.00 for two zone completions.

Q Now, in the event Anderson-Prichard was not permitted to dedicate the full acreage asked for to the well, would that have any effect on the economics.

A As I stated before our profit was nominal under the most optimistic estimate and if something should happen we could recover similar to the rest of the field, that would be an unprofitable proposition.

Q In your opinion would it be economically feasible to drill another Tubb Well on this acreage?

A No, sir.

Q Would it be economically profitable to drill a triple completion including the Tubb zone on this acreage?

A Yes, sir. That is the basis of the reason why we finally decided to go this route but we felt with the Tubb gas and these other two zones we could economically complete this well.

Q I think you misunderstood, would you recommend to your company that they drill another well on the other side of this unit for triple completion as this.

A No.

Q Would that be economically feasible?



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A No.

Q In the event Anderson-Prichard were not allowed to dedicate the four lots to the proposed unit as proposed in this case, would it be possible to produce the gas from that zone?

A Would you re-state that?

Q In the event you were not allowed to dedicate only 160 acres to the well rather than the 181 I believe requested here, what would happen to that other acreage?

A It would just lay there and be drained by off-set operators and off-set producers.

Q Now, were Exhibits 6 and 7 and 9 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: I would like to offer in evidence Exhibits 6, 7 and 9.

MR. NUTTER: Anderson-Prichard's 6,7 and 9 will be entered in evidence.

BY MR. KELLAHIN: Do you have anything to add to your testimony, Mr. Smith?

A Unless I feel that this acreage is entirely productive and is attributed as I have studied these cross sections, presented by Mr. Skrabacz, that the continuity of the zones are similar in the wells to the west of our leases and north and the wells due north and on the east side of our leases and I have no reason to



believe that the zones do not exist on our east acreage and since it is a structural continuity across the eastwest I feel that the acreage is productive and is permeable to be productive and we can drain all that acreage.

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

MR. NUTTER: Are there any questions of Mr. Smith? Mr. Silver.

BY MR. SILVER:

Q Mr. Smith, in giving the economics you combined the Drinkard and the Blinebry economics, but I didn't see or hear any economics on the Tubb, could you specifically answer the net effect pay in the Tubb and the Anderson-Prichard Well?

A Yes, sir by electric log we have 34 feet of that pay.

Q Did you estimate the reserves per acre foot in that zone?

A Yes, sir.

Q Gas and oil?

A Yes, sir.

Q What were they?

A That is in the Tubb zone?

Q Yes.

A I estimated the recoverable gas from the Tubb zone to be 427 MCF per acre foot.

Q Per acre foot?

A That is right and that the condensate recovery throughout



the life of the field would be 21 barrels per million cubic feet of gas.

Q Did you make an estimate of the total value of recovery of hydrocarbons in the Tubb zone?

A No, sir I did not.

Q Is it not a fact that the value of the hydrocarbons to be produced from the Tubb zone would warrant considerably, enhance the economic picture?

A True. That was my original statement that we needed the Tubb gas zone to help in the production so that we could produce the Drinkard and Blinebry zones longer and extend the economic limit so we could recover all the recoverable reserves available in the Blinebry and Drinkard.

Q You gave the present, gave the Drinkard and Blinebry production?

A Yes.

Q Did you make a present worth or evaluation of the combined Drinkard and Blinebry and Tubb?

A I have no combination of those three.

Q Mr. Smith, you testified that the field pressures will drain undeveloped acreage, is that correct?

A Now, field pressure -

Q You testified that the field pressures indicated that under developed acreage would be drained for a distance exceeding



a mile.

A Yes.

MR. SILVER: Thank you.

MR. NUTTER: Mr. Smith, in your economic picture you said that the two zones flowing completion would cost \$160,000.00. You also gave a figure of \$204,000.00.

A Two pumping units and installations.

Q That is your two zones economics with pumping units.

A Yes, sir. This did not include the Tubb economics because I wanted to see what we could make with just the two zones without the Tubb and it would be necessary for us to have the Tubb to produce our well at an economic limit that would be commensurate with the recoverable reserves I have mentioned.

Q What is it anticipated that the completion will be or that the completion will cost all told for the triple completion and then installing pumping on the flowing zones.

A We have no figures. All the figures that I have it would cost us approximately \$35,000.00 more for that third completion.

Q So the total cost would be somewhere in the neighborhood of \$240,000.00?

A Yes.

I note here on your bottom hole pressure corve that you don't have any weighted average for the pool, in 1959 wasn't the



bottom hole pressure available for 1959?

A No, sir. We had well head shut-in pressures presented by El Paso Natural Gas Company on 132 wells, and I averaged those pressures out and I converted it by assuming a gas gravity of .7 and I calculated what the bottom hole pressure would be. I did not present it on there. I did not know as to the accuracy of the well head shut-in pressures, it came out to be 1700 and I believe 1750 pounds.

You make an estimate then that the average bottom hole pressures for 1959 would be 1700.

A 1750.

BY MR. SILVER: Were these wells after shut-in.

A 72. That is the well shut-in pressure that the Commission requires for gas potential tests. That was reported by El Paso Natural Gas Company on all the producing wells in the Tubb field.

MR. NUTTER: 1750 would hit pretty well on the curve.

A In fact it was so close it scared me, I thought something was maybe wrong.

MR. NUTTER: Mr. Smith, will you obtain the gravity on the Blinebry and the gas oil ratios?

A I may have it, something on that. Gravity 37 degrees on the Drinkard.

MR. NUTTER: 37 degrees?

A And the Blinebry, let's see,



MR. SILVER: Could I ask one more question?

MR. NUTTER: Yes, sir.

MR. SILVER: The Texas Well was 35 on the Blinebry on their completion, could I imagine that would be pretty close?

A I am sure.

MR. NUTTER: Mr. Smith, when you get back to your office, if you can furnish us with the gravity of the wells and the gas oil ratio on the Blinebry, we will appreciate that.

A I don't know whether we have taken the gas oil ratios yet.
BY MR. KELLAHIN: Will you be taking these tests before long?

A Yes, sir on the Blinebry gas oil ratios and also the gravity.

MR. NUTTER: He got gas oil ratios on the other zones and we got gravities for the other zones.

A Okay.

BY MR. SILVER: Mr. Smith, was any attempt made to form a standard proration unit?

A We had this 160 plus acreage and we contacted Lion Oil Company who we felt had the acreage or we were informed they had held the acreage and since that well had been tested and produced no gas and was deemed non-commercial, we did not feel we could contribute acreage that had a drill hole on it and was non-productive, we did not feel we wanted to re-complete the Tubb in that zone, that well and so we approached Lion and asked them if they



would object to our application and they said no and subsequent to that time we found out and this was last Thursday that you had obtained the leases in March of this year and that we and still since we felt that that acreage would be contributing or attributing acreage to a non-productive area. We do not feel it was necessary to try to communitize it and we sent you a waiver last Thursday or thereabouts.

Q You then did not know your company was not aware of the fact that the adjoining acreage which would normally form part of the standard gas proration unit had been owned by me since July of 1959 and had it been of record and the lease had been issued of February 1, 1960.

A I so stated.

Q So that the Lion Oil Company then was not in the position, was not the party to a standard gas proration unit, isn't that a fact?

A We did not approach Lion for forming a standard gas unit because we felt their well and they did that, it was not productive and we could not attribute non-productive acreage and make a standard unit even though it had a dry hole.

Q Since you did not approach Lion, would it be correct to state that you made no attempt to stand to form a standard gas proration unit?

A Why should we when we think that we have a dry hole and



we would not want to attribute acreage that had contained a dry hole in it. We do feel that our Western-Federal has proven that the acreage in the vicinity and on the north half of 5 is still productive. The test and the other tests south of Lion which definitely prove that the permeability or productiveness of the Tubb zone has not been developed and therefore, this acreage would not entirely be all productive, so I feel that part of it may be the half way between the two wells, it may or may not, who can say exactly whether or not the permeability developments and whether it does not, I feel that we are within the reasonable limits of the productive area of the Tubb in the area we have so indicated here today.

What I would like to have for you is a yes or no to the question. Did Anderson-Prichard exhaust all possibilities open to them for forming a standard unit before applying to the Commission for a non-standard unit?

MR. KELLAHIN: The question has been answered, they did not attempt to form for the reasons the witness has stated.

MR. NUTTER: Very good. Any further questions of Mr. Smith?

(No response)

MR. NUTTER: You may be excused. Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That is all I have.

MR. NUTTER: Does anyone have anything they wish to offer?



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MR. SILVER: If the Commission, please, I would insert for the record my position in the matter. I was notified of this hearing just yesterday and did not have time to prepare an analysis of my position. I don't wish to prejudice Anderson-Prichard's case in any way, but I would beg the Commission's indulgence to have the privilege for a very brief period of time, a week or ten days would be sufficient, to examine the evidence reviewed this morning and either enter an objection or waive an objection in the case.

MR. NUTTER: I don't think that will be exactly a correct procedure, Mr. Silver. However, our rules do provide that any person who feels he is affected adversely or otherwise by any Commission order that follows an examiner hearing, he has the right to apply to the Commission for a hearing de novo of the subject.

MR. SILVER: How long do I have for that?

MR. NUTTER: 30 days in which to file after the order is entered.

MR. SILVER: Can I do that before the order is entered if I so desire?

MR. NUTTER: Well, sir, if you send in a statement or waiver I am sure no one would have objection of the statement, the statement would have no cross examination if you send in a statement.

MR. SILVER: I would like to enter then the statement into



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the record that the case, the evidence offered indicates that there is reasonable evidence that my position may be prejudiced by a non-standard gas proration unit as to development of the south half of the northwest quarter of Section 5 which would ordinarily fall into a standard unit. Thank you.

MR. NUTTER: I would like this records to show that we have received waivers from Western Natural Gas Company and also from Cities Service Oil Company to the application here. Does anyone have anything further for case 2058?

(No response.)

MR. NUTTER: We will take the case under advisement and the hearing is adjourned.



I N D E X

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, LEWELLYN NELSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 19th day of September, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico

Llewellyn F. Nelson

NOTARY PUBLIC

My Commission Expires:

June 14, 1964

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1058, heard by me on 8/24, 1960.

[Signature], Examiner
New Mexico Oil Conservation Commission

