BEFORE THE

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

Santa Fe, New Mexico

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TRANSCRIPT OF PROCEEDINGS

CASE NO. 684

Regular Hearing

March 17, 1954

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO
Santa Fe, New Mexico
March 17, 1954

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| IN THE MATTER OF: Application of the Commission for an order: (1) outlining procedure to be followed in the stage separation of gas and distillate in the Tubb and Blinebry Gas Pools; (2) outlining the gas metering requirements in the Tubb and Blinebry Gas Pools; and (3) clarifying and revising the vertical limits of the Tubb and Blinebry Gas Pools, Lea County, New Mexico. | Case No. 684 |

TRANSCRIPT OF PROCEEDINGS

MR. YOST: I have been advised that they are not prepared to proceed in this matter. However, I believe Mr. Macey has a statement for the benefit of those present.

MR. SPURRIER: Mr. Macey, do you have a statement in Case 684?

MR. STANLEY: The Commission has recently requested information from the various operators regarding condensate in Tubb and Blinebry Pools. The information requested was in the form of a questionnaire which would enable the Commission to gather certain basic data for final disposition of the problem as outlined in paragraph one and paragraph two of Case 684. The date deadline for the submission of these questionnaires was set as March 10, 1954. However, due to the limited time, the information has not been fully analyzed. Therefore, I request that this Commission postpone at least the first two points of Case 684 to the April hearing. However, Stanolind is prepared to present their testimony in point three; we might

hear it.

MR. SPURRIER: Is Stanolind prepared?

MR. HILTZ: No. We would like the case continued. We have worked up some data.

MR. SPURRIER: All right, we will continue it to the regular April hearing.

MR. MACEY: I talked to a number of operators about the problems brought up in Case 684. A lot of the operators do not thoroughly understand what the problems are. Some of them understand one part of it; some of them understand another. The whole question involves the production of gas from the Tubb and the Blinebry zones. Some of this gas is being produced into high pressure separators. The gas is going down the transmission line and the distillate is going into the tank battery, and some of the gas is being vented through the tank vent in the form of vapors. Other operators are stage separating their production and the low pressure gas is going into a low pressure system, going to a gasoline plant. The question arises, is the gas going off the second stage separation, is it chargeable against the well's gas allowable. The rules say that all the gas produced by a gas well shall be metered. If it is to be charged against the gas allowable, then the gasoline plants will have to nominate it. Bear in mind that the volume is not very large. If an operator has the volume charged against his allowable, he, in effect, is being penalized because he is conserving that gas, where the other operator, who, in effect, vents it through the tank vents, it isn't charged against his allowable. That is just the start of that little problem. There is also the cost of installing metering equipment to meter that gas separately. The

second problem about the commingling of the distillate produced by the two zones, this Commission has approved a number of requests by operators to commingle the production of Tubb and Blinebry distillate in one tank battery in the interest of economics. There is not any rule in the green book that says you can or says you can't. The only rules say that you cannot commingle oil.

The reason that the case was brought up was so that this matter could be handled by an order, and do away with the numerous letters which have been and which will be required.

The third matter is one that requires a lot of thought, and it involves the present vertical limits of the Tubb and Blinebry Pools. The limits, as set up by Order R-264 and 264-A, which are gas pool delineation orders, they are very indefinite as to the zones involved. Recently, we have had operators dually complete Tubb wells in the lower portion of the Tubb, between the bottom of our presently designated Tubb zone and the top of the Drinkard. We don't want anybody perforating in the top of the Drinkard Gas zone, but at the same time, if we don't give them the opportunity to perforate in the lower Tubb zone, the complete section, then there won't be any distillate, or gas, or whatever is in there will stay there. We might even have somebody come in here and say that is another pool, or that it is a common reservoir.

But nevertheless, those are the problems, and we are vitally interested in having all the operators present all of the information they can so that we can arrive at some recommendation to the Commission in the matter.

MR. STANLEY: Could I make one more statement? In reviewing some of these forms that have been submitted, I have noticed that

various ratios of gas to condensate. I was looking over the sheets--477 to 1, 700 to 1, 1293 to 1, and the majority are too small to measure. However, an operator, and most of them do not meter that gas in forms that we have here no one meters that gas; that particular gas that is not metered may have a reflection upon your Drinkard gas-oil ratios. Whenever the Commission is checking plant figures versus Drinkard gas-oil ratios, any gas that is not accounted for in that respect, by going down the line as Drinkard gas, could have a reflection on your GOR's in the Drinkard Field. I thought I might bring up that point, because to anyone that is making quite a bit of gas after second stage separation, it would be to their advantage to account for the gas as it reflects to the Drinkard gas-oil ratio.

MR. MACEY: I think Gulf has some meters in operation. I thought I saw a report that said you had meters in operation.

MR. COLE: Yes, I believe that is correct. On the January C-114, we show four of the condensate type wells where the condensate type vapors were tied into our casing head gas gathering system. It just happened that we were already at the location with our gathering system, and did, in some instances, put a meter there, and in some instances, there was already a meter there. I recall one particular case where an operator used to have an oil well from which we took casing head gas that could later be classified as a gas well. We used the same physical set-up, and metered his low stage vapors. We have those figures; they have been turned in to our Eunice gasoline plant at Porter. They can be compared with the high pressure gas proration schedule.

MR. MACEY: That is all I have. I will be glad to answer any

questions.

MR. SPURRIER: Anyone else have a question in this case, or a comment? If not, we will recommend that we continue the case to April 15th. The next case on the docket is Case 685.

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STATE OF NEW MEXICO )
: ss.
COUNTY OF BERNALILLO )

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 23rd day of March, 1954.

Ada Dearnley
Notary Public, Court Reporter

My Commission Expires

June 19, 1955.

BEFORE THE

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

Santa Fe, New Mexico

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TRANSCRIPT OF PROCEEDINGS

CASE NO. 684

Regular Hearing

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 15, 1954

**IN THE MATTER OF:**

Application of the Oil Conservation Commission for an order: (1) outlining procedure to be followed in the stage separation of gas and distillate in the Tubb and Blinebry Gas Pools; (2) outlining the gas metering requirements in the Tubb and Blinebry Gas Pools; (3) clarifying and revising the vertical limits of the Tubb abd Blinebry Gas Pools, Lea County, New Mexico.

Case No. 684 Cont'd.

BEFORE:

Honorable Edwin L. Mechem, Chairman
Mr. E. S. (Johnny) Walker, Member,
Mr. R. R. Spurrier, Secretary & Director

TRANSCRIPT OF HEARING

MR. SPURRIER: The next case on the docket is Case 684.

S. J. S T A N L E Y,

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

DIRECT EXAMINATION

By MR. KITTS:

Q Will you state your name and position for the record, please?

A My name is S. J. Stanley, Engineer for the New Mexico Oil Conservation Commission.

Q You have testified before this Commission numerous times?

A Yes, sir, I have.

MR. KITTS: Will his qualifications be admitted?

MR. SPURRIER: They will.

Q Mr. Stanley, have you requested from the operators in the Tubb and Blinebry Gas Pools information concerning second stage separation of gas and condensate?

A Yes, I have.

Q What was the nature of the inquiry and what were the results that you compiled?

A I requested, in the form of a questionaire, certain questions which incorporated two stage separation in the Tubb and Blinebry Pool, and I would like to read into the record the results of these surveys, with my recommendations. The study of two stage separation and a production of condensate in the Tubb and Blinebry Pools incorporates some 53 wells. From the information furnished by the operators in the form of a questionaire, it showed the 42 wells producing condensate had low pressure separators and 11 wells were not so equipped. Further, it is my understanding that one operator is in the process of installing two stage separators on four of the wells involved in this stuay. It was this company's conclusion that two stage separation is economically feasible and furthermore, to separate the gas from the condensate in the tank and allow it to escape in this matter creates a fire hazard. The total condensate produced during February, 1954 for the Tubb and Blinebry Pools was 17,588 barrels. The total condensate passing through two stage separation was 12,855 barrels, or 73.1 percent of the total condensate produced. The average gas condensate ratio of the 73.1 percent of the condensate produced was 2,987 to 1. Applying this

average ratio to the total condensate produced, equals a gas production of 2,535 MCF following two stage separation during February of 1954.

We have received a letter from the Skelly Oil Company, Gas Purchases and Sales Department. The argument set forth in writing parallel my recommendations and thoughts on the subjects and I would like to read it into the record before I make my recommendations.

"Skelly Oil Company, Tulsa 2, Oklahoma. April 7, 1954 - Oil Conservation Commission, State of New Mexico, Santa Fe, New Mexico. RE: Case No. 584 - Measurement of Gas from Low Pressure Separators on Gas Distillate Wells. Gentlemen: It is our understanding that the case mentioned in the caption above will come up for hearing in Santa Fe on April 15, and we would like to give you our view point concerning the matter.

We are at present taking gas from five or six low pressure separators and the gas is being measured through the same meter as the casinghead gas. Our District Plant Superintendent has advised that ultimately there will be about 75 wells in this category in the area that we serve, and that they will average about 20,000 cubic feet per day of low pressure gas. The cost of installing meters to measure this low pressure gas separately will run about $700.00 per well, resulting in our case of a total investment of $52,500.00. Obviously the quantity of gas involved does not justify such an investment.

So that the producers may have some figure to take into considera-

tion in determining their gas oil ratios, we would like to recommend that the said low pressure gas be measured once each three months by meter, pitot tube, or orifice well tester, to determine its ratio to the total volume produced from the well, and the ratio so determined be used to determine the low pressure gas for the ensuing quarterly period. For example, if the well was producing at the rate of 500,000 cubic feet per day at the time of the test and the low pressure gas measured 20,000 cubic feet, then the low pressure gaswwould equal 4.0% of the total gas produced. If the said well produced 25,000,000 cubic feet for the month, then the low pressure gas would be 1,000,000 cubic feet and the high pressure gas 24,000,000 cubic feet.

Your earnest consideration of the above proposal will be greatly appreciated. Yours very truly, Signed: R. D. Turner."

These are my recommendations, based on my study, and in the interest of conservation, I feel that at least a two stage separation should be mandatory installation wherever condensate is produced and sold. The gas produced, following two stage separation, should not be charged against the dry gas allowable. Third, a tap-flange or a by-pass valve connection, or any similar device, should be installed downstream from the low pressure separator, so that the gas produced can be metered. Fourth, the metering of gas produced from condensate following two stage separation should be handled in a similar manner, as an annual gas-oil ratio survey and so reported. This is necessary so that the Commission in review-

ing Drinkard gas-oil ratios will be aware of the added gas produced due to second stage separation in the Tubb and Blinebry Pools. Fifth, exceptions to these recommendations should be granted on an operator wherever a casinghead gas line is not available for connection,,or for other economic reasons. I feel that this exception should be granted by letter, without formal notice and hearing. This concludes my testimony.

(Marked Commission's Exhibit No. 1 for identification.)

MR. KITTS: We have marked the letter from Skelly Oil as Commission's Exhibit No. 1, and offer it in evidence.

MR. SPURRIER: Without objection it will be admitted. Are there any questions of the witness?

MR. MACEY: By exception to what?

A Exception to the installing of two stage separator, or low separator, as it is so-called, I feel, in some instances, if an operator were producing perhaps a barrel of condensate a day he may not be justified economically, and in a matter of conservation for the installing of a two stage separator.

MR. SELINGER: If the Commission please, George W. Selinger, representing Skelly Oil Company. First I would like to correct the letter which referred to Case Number 584. It should have read 684, and, secondly, we made certain recommendations in that letter. We wish to modify our recommendations in line with Mr. Stanley's recommendations, particularly with respect to, we recommended the quarterly testing. We would be perfectly willing to established

bi-annual testing. Also we agree with Mr. Stanley's recommendations with respect to the exemption, where it is uneconomically justifiable to two stage separation and particularly where the well is so located that it is not close... economically to a line, so such an exemption should be permitted. On the whole we concur with Mr. Stanley's recommendations as indicated by our letter.

MR. SPURRIER: Anyone else?

MR. MALONE: Ross Malone.

MR. SPURRIER: Mr. Malone?

MR. MALONE: May it please the commission, Ross Malone for Gulf Oil Corporation. It is the practice of Gulf to install high pressure and low pressure separators on their wells in this area. However, Gulf has some doubt as to the desirability and advisability of the Commission going into that detail of operating procedure. They could not oppose the Commission so doing it. They propose to continue themselves, but it is a detail of operating practice which there is, in our opinion, some question as to the advisability of the Commission entering into it. In the event that two stage separation is required, Gulf joins in the recommendation that the gas from the low pressure should not be charged against the gas allowable. They would concur in the periodic test, and would prefer a semi-annual or annual test, but would not oppose a quarterly test as suggested by the Commission's Engineer.

MR. SPURRIER: Anyone else?

A I did not suggest a quarterly test. I recommended an annual. The quarterly test that you had reference to was read from Skelly

Oil Company's letter.

MR. MALONE: I misunderstood. I thought you concurred in that recommendation.

A No.

MR. HINKLE: Clarence Hinkle. I would like to say on behalf of Humble, that they are in accord with the recommendations of Mr. Stanley.

MR. HULL: C. A. Hull, Shell Oil Company. Shell would like to go on record concurring with Mr. Stanley's recommendations.

MR. TOWNSEND: Jim Townsend with Stanolind. We concur generally with the recommendations of Mr. Stanley, but would like to read a statement into the record.

Stanolind is in favor of an order by the Commission, embodying the further principle, wherever two stage separation is employed for either the Tubb or Blinebry Pool, individual high pressure separators shall be provided for each zone with the total well affluent from each well to be run through its erective high pressure separator. Two, all high pressure gas from the initial stage of separation as to each formation must be metered separately, and charged against the regularly assigned allowable for each respective well. Three, where production is obtained from both the Tubb and Blinebry Pool, on a lease where the ownership of the working interest and royalty interest is common to both pools, the liquids may be co-mingled after leaving the high pressure separator. Four, where a second stage or low pressure separator is provided, the low pressure gas shall be metered if diverted to a legal use, but shall not be

charged against the regularly assigned allowable of the well. It is the intention to permit comingling of the liquids from high pressure separator in the low pressure separator.

MR. SPURRIER: Does anyone else have a question of Mr. Stanley? If not the witness may be excused. Does anyone else have a comment in the case? (Witness excused.)

MR. KITTS: We have another witness.

R A N D E L F I E L D S M O N T G O M E R Y

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

DIRECT EXAMINATION

By MR. KITTS:

Q Will you state your name and position, please?

A Randel Fields Montgomery, Geologist, New Mexico Oil Conservation Commissio .

Q Mr. Montgomery, Commission Orders R-264 and 264A define the vertical limits of the Blinebry and Tubb Gas Pools. Have you made a study of these vertical limits?

A Yes, sir, I have.

Q On the basis of that study, do you have any comments or recommendations as to the geological problems involved?

A I have a couple of exhibits that I would like to show and point out the difficulty that is involved in the nomenclature particularly.

(Marked Commission's Exhibits 2 and 3 for identification.)

A This cross section here --

Q (Interrupting) That is Exhibit --

A (Interrupting) Excuse me, Exhibit Number 3. This is a north-south cross section through the Tubb-Blinebry. The vertical is one inch, equals 100, and the horizontal is one inch, 600. The logs are electric logs and radio-active log, which were made available to me, and the rectangular blue is the perforations and beside each perforation the oil or gas symbol is indicated, whichever is appropriate. I want to point out some of the difficulties that are encountered in the nomenclature here on the platform in this particular area. This if the Top of the so-called Glorieta. Many people don't know for sure whether that is the Glorieta or not, but it is more or less a commonly accepted point. Most companies pick this reflex here at the Top of the Glorieta. Some of the companies refer to this as the San Angelo. That is the part that is marked on the east of the platform. In this area we have the "Paddock Pay", until we get down to what so many call the "Top of the Clear Fork". If you will note here on the cross section I have Clear Fork in quotes, indicating possibly that it does not have formational range in this area. Also, I have indicated in parenthesis another name commonly used, Blinebry. This is the Blinebry Gas Zone, which is shown here in the upper parts. This zone is also known as the "Middle Yeso."

The next one is the "Top of the Tubb Marker". I have added the marker to that and I have also put that in quotes, indicating in my opinion I do not think it is of formational range, at least formerly at this time. It is commonly known as the Fullerton, and

also commonly known as the Drinkard Sandy.Member. Three names for this one zone. I would like to point out, at the Top of the Clear Fork, not all companies pick this particular reflex for the top. Some of them go down on the base, and some, it is also within 30 or 40 feet that it depicts on there, but there is no general agreement. That is also true with the Top of the Tubb. This Marker that is indicated, is very diagnostic throughout this entire area and is known as the Tubb Gas Pay. The lower line here is the Top of the Drinkard Marker, and in quotes again, also indicating that in my opinion I do not feel it is of formational range at this time. This is known as the Drinkard Vivian Pay. Many of the companies consider the Drinkard from this point here (indicating) to the base of the Permian. Some consider the Drinkard from this point here to the top of the Abo. Some of them consider the Abo Pay, which underlies the Drinkard Vivian Pay as the same pay.

As you can see, the nomenclature is very confusing, and any name that is based on the Pools with these names being used, causes confusion and it is difficult, there is no general agreement exactly where the top should be.

I recommend that these kicks at this tip be picked throughout all the companies for this area, and we will use this as the datum point for the vertical limits.

This is an east-west cross section --

Q (Interrupting) That is Exhibit Number --

A (Interrupting) Excuse me, Exhibit Number 2. This cross section shows essentially the same thing. I would like to point out

that as presently defined with my correlation, that this particular perforation here exceeds the vertical limits of the Blinebry Pool. I would like to point out here that these particular perforations exceeds the vertical limits of the Tubb. I believe they are one and the same reservoir. I think the companies should be allowed to go ahead and perforate in those zones.

Q Were these Exhibits 2 and 3 prepared by you, or under your direction?

A Yes, sir, they were.

MR. KITTS: We offer Exhibits 2 and 3 in evidence.

A I have a letter I would like to read. The letterhead is the Roswell Geological Society. "Mr. Randel Montgomery, New Mexico Oil and Gas Commission, Box 871, Santa Fe, New Mexico. Dear Mr. Montgomery: In reference to your inquiry as to whether or not the stratigraphic committee of the Roswell Geological Society has established a definite correlation of formations and pay zones in the Yeso, I would like to submit the following:

A number of confusing names exist in various publications and in common usage referring to various zones within the Yeso. The stratigraphic committee of the Roswell Geological Society will meet with the approval of the majority of geologists working in the area.

We have not at this time established any standard that can be utilized. The stratigraphic committee recognizes the problem of correlative formations, not only in the Yeso formation, but in the

Wolfcamp-Pennsylvanian sequence, and in the Siluro-Devonian. The Sociaty has been desirous of finding some solution to the problem and I am sure that we would be glad to accept the responsibility of establishing, with the aid of the New Mexico Oil and Gas Commission, a standard nomenclature for southeastern New Mexico.

Many of these problems have been worked on during the construction of the geological cross-sections that have been compiled by the Society. The confusion in correlation has been noted but has not been resolved.

We will be glad to furnish you the results obtained by ou stratigraphic committee as they proceed with this study. If we can help you in any other way please let us know. Yours very truly, Signed David A. Dunn, President."

Therefore, I would like to recommend at this time using the correlation that I have on these charts, the vertical limits of the Blinebry Gas Pool from a point 75 feet above the Blinebry Marker to a point 300 feet below the Blinebry Marker; the Tubb Gas Pool from a point 150 feet above the Tubb Marker to a point 225 feet below the Tubb Marker.

MR. BOSS: I would like to ask a question. Mr. Boss with Gulf. You said when you pointed out that they had exceeded the vertical limits in a number of instances there, you said you considered them a common reservoir. Did you mean by that that the Blinebry and the Tubb were a common reservoir?

A No, I did not. I think they are distinct and separate reservoirs. I mean that the perforations in the Tubb and Blinebry

exceeded the vertical limits as they are presently defined. I believe that the perforations, what they have perforated is the same reservoir in the Tubb and in the Blinebry, both.

By MR. MACEY:

Q Mr. Montgomery, I don't know whether you have any wells on the cross section in the Tubb zone, but isn't it a fact that some of the wells have been perforated deeper in the Tubb zone than 225 feet which you have recommended?

A Yes, sir, they have. Where they have perforated deeper they are getting very close to the Drinkard Oil Pay. In my opinion, at this time, with the information that has been made available to me through the request of the Commission, that that is gascap gas and is a distinct and separate reservoir from the overlying Tubb.

MR. MALONE: Ross Malone for Gulf Oil Corporation. I understand then, Mr. Montgomery, that in fixing the vertical limits, it is your intention to fix a limit that would prevent a perforation that could take gas-cap-gas from the Drinkard?

A That is definitely correct.

MR. SPURRIER: Mr. Macey?

MR. MACEY: What do you propose to do with the wells that are already perforated into that Drinkard Gas-cap?

A In my opinion they have violated the vertical limits of the pool to begin with. Wait a moment, May I ask you a question off the record?

(Discussion off the record.)

A In answer to your question, I do not know.

MR. SPURRIER: Does anyone else have a question of Mr. Montgomery?

MR. VICKERS: If the Commission please, I am J. H. Vickers with Atlantic Refining. I would like to ask Mr. Montgomery if he could identify the four markers in any one well?

A You mean pick one well as the kick marker?

Q That is right.

A Well, some in the cross section.

Q Name the well, please, and the approximate location.

A Due to the good characteristics of this log here, I would like to pick this log.

Q Which is that?

A On Exhibit No. 3, Humble States No. 20, located in the southwest of the northwest of two, 22, 37....

MR. STANLEY: I would like to ask Mr. Montgomery a question.

MR. SPURRIER: Does that answer your question, Mr. Vickers?

MR. VICKERS: No, sir, I would like to find the depth that he has encountered in that particular well.

MR. SPURRIER: Is this something that you can get later, Mr. Vickers, from Mr. Montgomery?

MR. VICKERS: I think everybody would be interested in it.

MR. STANLEY: I feel that this Commission should publish an sample log. I think that the Blinebry and Tubb marker is easily picked on every well in that vicinity. I feel it is the duty of this Commission to set forth a sample log or group of logs which

will definitely set out the patterning of any electrical log or radioactive log we have, and thereby establish the various points in writing. Do you agree with me, Mr. Montgomery?

A Yes, sir, I do. I hope you will bear in mind the thickness of the line, the probable area involved on the top line is ten feet, and probably five feet on the other, here, although the kick is an exhibit and it is on the record. This footage "the Top of the Glorieta" or "San Angelo" or "Upper Yeso" is minus 1628. The "Top of the Upper Clear Fork" or"Blinebry" IS MINUS ")'%. The "Top of the Tubb Marker" or "Fullerton" or "Drinkard-Sandy Member", or the "Top of the Lower Yeso" is minus 2549. The "Top of the Drinkard Marker", minus 2875. I would like for you to put a query behind the 2875, if you will, please, because if you notice, I dashed my correlation at this particular point, although that isn't a reference point, so it really is not involved in this particular problem. Mr. Macey suggested that I have the type log here in front of me. I guess I could have read it right off the log. The "Top of the Glorieta" would be at a point 5,000. Is this the same well -- Yes, this is the same well.

MR. WALKER: What is the elevation?

A 3,380. That would be a point 5,004 feet. The "Top of the Clear Fork" would be 5,457. The "Top of the Tubb would be 5,921. The "Top of the Drinkard" with the query would be 6,249.

MR. CAMPBELL: May I ask Mr. Montgomery a question?

By MR. CAMPBELL:

Q Do you know how many wells there are in this area that are perforated below the point, 225 feet under the top of the Tubb?

A I know of one well, Mr. Campbell. I am not sure where that well is located or what the name of the well is. I know of one well, which I could find easily enough for you.

Q Do you know whether under the present definitions in this pool, that well is improperly producing?

A In my opinion, yes, sir, it is.

Q Under the present definitions, or under your proposed?

A Under the present and under my proposed, yes, sir.

MR. SPURRIER: Does anyone else have a question?

MR. STANLEY: What would you do with a well that exceeded the vertical limits? I have to sign the form, and here is a well that has exceeded the vertical limits of the "Tubb". Just exactly what should this Commission do about a well of that nature?

MR. SPURRIER: We will assign you that problem. Does anyone else have a question of Mr. Montgomery?

By MR. MACEY:

Q Mr. Montgomery, I think you had probably better introduce in evidence the electro log that you read the figures from, and identify it completely so there is no question in anybody's mind what figures you used.

A May I submit this and withdraw it for drafting purposes? I am a little ashamed of the scratches on it.

(Marked Commission's Exhibit No. 4, for identification.)

**MR. KITTS:** I would like to offer Exhibits Number 1 through 4 in evidence.

MR. SPURRIER: Is there objection to the introduction of these exhibits? If not they will be so admitted. Mr. Smith?

By MR. SMITH:

Q Mr. Montgomery, I appear to be in a complete state of confusion as to just how you went about taking the particular kick marks that you did. Could you explain a little bit why you happened to select those particular points?

A I picked those because they are diagnostic points throughout the area. All the companies represent those particular kicks. Some companies may pick within 30 or 40 feet of the kick point I may have picked. They all recognized the particular kicks that are recognized here.

Q You made an analysis of the various company records that were reported to the Commission and they all agreed on those kick points as indicated on your Exhibits 2 and 3?

A No, sir, all the companies do not agree on all the kick points.

Q Is it a recommendation for a further study or recommendation for a change in the rules?

A I made a recommendation that the further study be made in the nomenclature. I made definite recommendations on the vertical limits, using my points as the data.

Q Those are recommendations for further study of the nomenclature and also you are recommending that the change be made. Is it a dual

recommendation?

A Yes, sir, I am making the recommendation that the nomenclature be straightened out. It is very confusing. I made a recommendation for the vertical limits of the two gas pools.

Q One other factor that I am confused on. As I understood your testimony your going down in the point, in what is considered to be the lower part of the Tubb and calling it the upper part of the Drinkard, is that correct?

A That is the difficulty of the nomenclature as it presently stands. I don't know what you are talking about.

Q That is what I am trying to find out. I don't know what you are talking about.

A That is why I used all the names that are available. I realize that I didn't use all the names that are in common use up there on my cross section. The Wichita is also used, the Clear Fork by many of the people covers the interval of the Tubb and the Drinkard, and I don't know for sure how far it does go down. A good many of the companies --

Q If your recommendation is to change the name and use the markers that have been agreed upon by most of the companies, I have no further questions. If it is your purpose to alter the location of what is considered to be the present formation, then I might like to know a little more as to whether the changes have been made or recommended. I read the letter from the Roswell Geological Society and they pointed out in that letter what a great state of

confusion that their present nomenclature is in. As I stated, many of the companies, they don't necessarily pick the same point I pick. I picked the point in my opinion that was the best point. I put the names in quotes or in brackets and called it a marker. I want to point out I did not call those formations.

Q Well, of course, the field presently is being proposed to be prorated. As I understand it the Drinkard is an oil formation, is that correct?

A That is correct.

Q It will be on the oil schedule?

A Yes.

Q The Tubb is the gas, and will be on the gas schedule?

A Yes.

Q There will be a material change, perhaps, in the amount of production permitted if there would be a material change in the present recognized boundaries?

A I understand the point you are making, Mr. Smith. I didn't check that, but I feel sure that they will not be thrown into another depth range, because those particular kicks are recognized, and it is just naming them in the proper and formal manner.

Q That is what I am trying to get at. If your recommendation embraces a change in the operations, I will put it that way, of any particular wells out there -- In other words, the reclassification of a presently existing gas well to be a gas well in an oil field producing gascap gas, have you studied your problem to the extent that you can say such a change will occur if the

Commission follows your recommendation?

A I am sorry, Mr. Smith, I didn't follow you.

Q I guess it was a confusing question. What I am trying to get at is this. Have you analyzed the effect of your recommendations with respect to the operations of individual wells out there, to the extent that you know whether or not if the Commission follows your recommendation there will be a change in classification of any of the presently existing wells out there?

A No, sir, there will be no change in the classification as it now stands. There hasn't been anything badly wrong in the area, as far as that goes. Some of the companies have exceeded the vertical limits of the Tubb and the Blinebry to go up and pick up the pay that overlays the Blinebry and overlays the Tubb, but I think that is part of the reservoir. That is only a name, the accumulation doesn't stop where the name begins.

MR. SMITH: I have no further questions.

MR. SPURRIER: We will take a short recess.

(Recess.)

(Marked Commission's Exhibit No. 5, for identification.)

MR. SPURRIER: Are there any further questions of Mr. Montgomery? If not the witness may be excused.

(Witness excused.)

MR. KITTS: I would like to offer in evidence, Commission's Exhibit No. 5, which is the well log of Humble State S No. 20.

MR. SPURRIER: Without objection it will be admitted. Does

anyone have anything further?

MR. MALONE: Ross Malone, for Gulf. Gulf, having made the original recommendation as to the vertical limits of the Tubb Pool wishes to state it has no objection to the recommendation of Mr. Montgomery.

MR. HILTZ: Mr. Hiltz for Stanolind. I would like to point out that we have completed and perforated one well in the Tubb formation in the limits lower than are now set for the Tubb formation by the Commission. The markers that we pick for the "Top of Blinebry" and the "Top of the Tubb and Drinkard", coincide with those picked by Mr. Montgomery. Based on the tops, if they are accepted by the Commission, it actually leaves 100 feet of the lower part of the Tubb essentially in No-Man's Land, not identified with either the Tubb or Drinkard Pool. On our Southland Royalty Company No. A-2 Well, when completed and the pressure measurements we obtained during those tests compare to pressure measurements in the Drinkard, indicate there is separation between the Tubb and the Drinkard in that area, and that they are not in communication. The perforated interval that we have in the bottom of the Tubb should be placed in the Tubb Pool. Inasmuch as there is some confusion about it, it would be our suggestion that in order to properly identify and locate that 100 feet in the No-Man's-Land, that this study to be made by the Roswell Geological Society also concern itself with the proper vertical delineation of these pools as well as clarifying their nomenclature. We would be happy

to furnish a copy of the log and with what pressure information we have, showing what we believe to be the separation between the bottom portion of the Tubb and the Drinkard.

MR. SPURRIER: Does anyone else have a comment?

MR. HINKLE: Clarence Hinkle, representing the Humble. The Humble concurs in the recommendation of Mr. Montgomery with regard to the finding of the vertical limits.

MR. SELINGER: Mr. Selinger, representing Skelly Oil. We concur in Mr. Montgomery's recommendations.

MR. SPURRIER: Anyone else?

MR. NESTOR: Mr. Spurrier, E. W. Nestor, Shell Oil Company. We also served as a member of the recent nomenclature committee, which dealt with the limits for the Tubb and Blinebry, but we have no quarrel with Mr. Montgomery's suggestion and recommend that they be adopted.

MR. SPURRIER: If there is nothing further in the case we will take it under advisement and move on to Case No. 529.

STATE OF NEW MEXICO )
: SS.
COUNTY OF BERNALILLO )

I, ADA DEARNLEY, do hereby certify that the foregoing and attached transcript of proceedings before the Oil Conservation Commission for the State of New Mexico, held at Santa Fe, New Mexico, on April 15, 1954, is a true and correct record to the best of my knowledge, skill and ability.

DATED this 22nd day of April, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
Notary Public & Reporter

My Commission Expires:
June 19, 1955

ADA DEARNLEY & ASSOCIATES
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