6-17-71

I N D E X

WITNESS	DIRECT & REDIRECT	CROSS & RECROSS	EXAM. BY BD/STAFF
1. Charles F. Wisdom	8-11 14-15,18	--	11-14 16-17
2. Emmett Balch	19-22 25-26,29	--	22-25 26-29
3. John F. Rankin	30-31	--	31-35
4. Orville LeRoy Everley	36-38	--	38-40
5. John Couvillion	43-44	--	45-46
6. Gene W. Snell	49-55 68-71	--	56-67 71-75
7. Arden Anderson	76-79	--	79-82
8. E. T. Nichols	82-84	--	84-85

E X H I B I T S

TITLE	DESCRIPTION	OFFR'D	REC'D
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Exhibit No. 2 (C. F. Wisdom)	Portion of electric log	15	35
Exhibit No. 3 (C. F. Wisdom)	Land plat	18	35

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Exhibit No. 4 (Emmett Balch)	Economic analysis	21	35
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STATE OIL & GAS BOARD OF ALABAMA

Tuscaloosa, Alabama

December 18, 1970

Testimony and proceedings before the State Oil & Gas Board of Alabama, in Regular Session, in the Board Room of the State Oil & Gas Board Building, University Campus, Tuscaloosa, Alabama, pursuant to adjournment, on this the 18th day of December, 1970.

BEFORE:

BOARD MEMBERS

Mr. Drexel Cook.....Chairman

Mr. E. O. Eddins.....Associate Member

Mr. Julian Maddox.....Associate Member

BOARD STAFF

Mr. Philip E. LaMoreaux.....Secretary & Supervisor

Mr. Thomas Joiner.....Assistant Supervisor

Mr. Gene White (absent).....Chief Petroleum Engineer

Mr. William Tucker.....Petroleum Engineer

(Reported by Lou M. Chambers)

A P P E A R A N C E S

NAME	REPRESENTING
1. Robert E. Thompson Fort Worth, Texas	Champlin Petroleum Co.
2. Pete Hoffman Fort Worth, Texas	Champlin Petroleum Co.
3. James T. Laws Fort Worth, Texas	Champlin Petroleum Co.
4. Charles F. Wisdom New Orleans, Louisiana	Champlin Petroleum Co.
5. John F. Rankin New Orleans, Louisiana	Champlin Petroleum Co.
6. Emmett Balch Fort Worth, Texas	Champlin Petroleum Co.
7. Gene W. Snell Jackson, Mississippi	Oglesby-Solatex-Ainsworth
8. John Couvillion	Falcon Seaboard Drilling Company
9. Richard Kreshner	Shell Oil Company
10. W. C. Cather, III Birmingham, Alabama	Alabama Gas Corporation
11. Orville LeRoy Everley Detroit, Alabama	Operator
12. Paul S. Crump Sulligent, Alabama	Land Owner
13. S. H. Gilmer Sulligent, Alabama	Well Owner (Gilmer No. 1)

A P P E A R A N C E S
(Continued)

NAME	REPRESENTING
14. Grady E. Jacobs Columbus, Mississippi	Self
15. Arden A. Anderson Pensacola, Florida	Self
16. E. T. Nichols	Self
17. Bill O'Rear Montgomery, Alabama	State of Alabama
18. Boyd Bailey Citronelle, Alabama	State Oil & Gas Board

P R O C E E D I N G S

(At 10:30 A.M., December 18, 1970, the hearing was convened in Regular Session.)

CHMN. COOK: Gentlemen, shall we call ourselves to order? Mr. LaMoreaux, would you lead us in a word of prayer? May we stand.

(A prayer was then offered by Mr. LaMoreaux)

CHMN. COOK: Mr. Supervisor, has the proper notice been given for this meeting?

MR. LaMOREAUX: Mr. Chairman, the meeting has been properly advertised in accordance with law, and we can proceed with the items on the agenda. I will transmit a copy of the notice of the meeting to the recording secretary to be included in the minutes of the meeting.

NOTICE OF MEETING

"The State Oil and Gas Board will hold its regular monthly meeting on Friday, December 18, 1970, at 10 a.m. in the Board Room of the State Oil and Gas Board Building, University Campus, Tuscaloosa, Alabama, to consider the following petition:

"Petition by Champlin Petroleum Company requesting that the State Oil and Gas Board enter an order prescribing Special Field Rules for the development and operation of the Carter Mississippian Pool in the unnamed field in Lamar County, Alabama, discovered at the W. A. DeLaney No. 1, SW/4 SE/4, S16, T12S, R15W, said field rules to include a rule prescribing 40-acre governmental quarter quarter section spacing for said pool.

"The petition and proposed Special Field Rules are on file with the State Oil and Gas Board, University Campus, Tuscaloosa, Alabama, and may there be examined.

"Petitions before the State Oil and Gas Board of Alabama must be represented in person by the petitioner or by his duly authorized agent. In the absence of such representation, the petition before the

said Board will be subject to dismissal.

"The Board was established by an act of the Legislature of Alabama in the regular session of 1945, an act that became effective May 22, 1945.

"The public is invited to attend this meeting.

"Philip E. LaMoreaux
Secretary to the Board
State Oil and Gas Supervisor"

CHMN. COOK: Would you be good enough to read the No. 1 Item on our agenda, regular agenda?

MR. LaMOREAUX: Item No. 1 is:

"Petition by Champlin Petroleum Company requesting that the State Oil and Gas Board enter an order prescribing Special Field Rules for the development and operation of the Carter Mississippian Pool in the unnamed field in Lamar County, Alabama, discovered at the W. A. DeLaney No. 1, SW/4 SE/4, S16, T12S, R15W, said

field rules to include a rule prescribing 40-acre governmental quarter quarter section spacing for said pool."

CHMN. COOK: Anyone in behalf of the petitioner, come forward.

MR. THOMPSON: My name is Robert E. Thompson and I represent Champlin Petroleum Company.

CHMN. COOK: Are there others here in behalf of the petitioner?

MR. THOMPSON: Yes, there are.

MR. LaMOREAUX: You might get them to come forward.

CHMN. COOK: You might get them all to come forward if you would, sir.

MR. THOMPSON: This is our first appearance before the Board, Mr. Chairman, and we brought several people with us and our purpose is not to outnumber the Board but merely to get acquainted. I would like to introduce them at this time, if I may.

CHMN. COOK: You certainly may. May I suggest this. It's customary that they come forward and identify themselves and the Supervisor will swear them in.

MR. LaMOREAUX: Those who will present testimony, we will swear them in at one time.

CHMN. COOK: Let the Chairman assure you that the Board is delighted to have you, irrespective of the number.

MR. THOMPSON: Well, Mr. Emmett H. Balch, Jr., who is our superintendent of proration of our unit operations, will appear as our witness.

MR. LaMOREAUX: Come forward. Go ahead with the rest of your...

MR. THOMPSON: Mr. James T. Laws, our director of engineering, is with us but will not appear as a witness.

MR. LAWS: I'll spare you that.

MR. THOMPSON: Charles P. Hoffman, he is our administrative manager for the environmental control, and we are proud of that position. He will not appear as a witness. Charles F. Wisdom is our district exploration geologist and he will appear as a witness, and Mr. John Rankin, our district operations manager, will also appear as a witness.

MR. LaMOREAUX: Raise your right hand. State your name.

(Messrs. Balch, Wisdom and Rankin each stated their name and were duly sworn as witnesses by Mr. LaMoreaux.)

MR. LaMOREAUX: Would you give the recorder your name

as you present your testimony?

MR. THOMPSON: Would you be seated?

CHMN. COOK: Mr. Thompson, we can get another chair.

MR. THOMPSON: Could we have them all at the table? It would be more convenient.

MR. LaMOREAUX: All right.

CHMN. COOK: Mr. Thompson, you may proceed in whatever order you choose to.

MR. THOMPSON: Thank you, Mr. Chairman. As indicated in the notice, the purpose of this hearing is to establish and adopt Special Field Rules for the Carter Mississippian Sandstone. Now, this was incorrectly designated "Lime" in the petition, in the unnamed field in Lamar County, Alabama. I would call as my first witness, Mr. Wisdom.

CHARLES F. WISDOM

appearing as a witness on behalf of Petitioner, Champlin Petroleum Company, being first duly sworn, testified as follows:

DIRECT EXAMINATION

CHMN. COOK: Mr. Wisdom, if you will, state your name and qualifications so she might get it for the record, please.

MR. WISDOM: All right. Charles Wisdom. I received

a BS degree in geology from LSU in 1958, and since that time, I've been employed as a petroleum geologist for McAllister Fuel Company and Sun Oil Company and the last two years with Champlin in charge of working this area, Mississippi, Alabama and Florida, and employed in New Orleans, Louisiana.

MR. THOMPSON: Do you have any further questions regarding his qualifications?

Questions by Mr. LaMoreaux:

Q Mr. Wisdom, who is the head of the -- were you in the geology department at LSU?

A Right.

Q Who was the head of the geology department at the time you were there?

A Dr. Sanders.

Q Who were some of the other professors?

A Grover Murray, Donald Kupler.

MR. LaMOREAUX: That's enough.

CHMN. COOK: Any further questions of the witness?

(No response)

Questions by Mr. Thompson:

Q As a geologist employed by Champlin, have you had occasion to study the geology in the area of that well

identified as the L. R. Tatum No. 1 W. A. DeLaney located in Section 16, Township 12 South, Range 15 West, Lamar County, Alabama?

A Yes, I have.

Q Is this well productive of hydrocarbons?

A Yes, it produces from the Carter Sand.

Q Have you prepared a geological structure map of the area under consideration?

A Yes, I have it here.

MR. THOMPSON: Now, at this time, Mr. Chairman, I will offer this exhibit, Champlin Exhibit No. 1, and with your permission, Champlin has several exhibits to offer and if we would be permitted at the end of our testimony to move that these be admitted in evidence, we will proceed in that way, or we could, of course, do so at the conclusion of the testimony of each exhibit, whichever is customary.

CHMN. COOK: Whichever is most expeditious -- Mr. Supervisor?

MR. LaMOREAUX: No, his preference.

MR. THOMPSON: This is Exhibit No. 1.

(Mr. Thompson distributed copies of the exhibit to Members of the Board and Staff)

(Whereupon, document described as structure map was marked for identification as Exhibit No. 1 to the testimony of C. F. Wisdom)

(Questions by Mr. Thompson cont'd:)

Q Mr. Wisdom, will you please discuss and explain the purpose of this map?

A This map was prepared by me, it's a sub-surface structure map on top of the Carter Mississippian Sand. The datum is mean sea level, but you see, we have just the two wells that have penetrated the Carter Sand in this area. The structure itself was taken from photo-gravity and photo-geology work which we contracted to do with a consulting firm and which it showed a faulted anticline in this area. With the drilling of the Everly Well from the points, you have a fault down to the north. The Tatum Well has been productive and the Everly Well. I believe they're setting pipe now. We feel like the area out-dashed, including the nine sections, should be productive and the Carter Sand should underlie this area.

EXAMINATION BY BOARD OR STAFF

Questions by Mr. LaMoreaux:

Q Mr. Wisdom, what's the effect of that fault on the

Carter Sand?

A As far as production goes, I don't know. We haven't seen any tests that Mr. Everly has run yet. We hope they will be productive on both sides. Indications are that they probably will be.

Q What's the range of displacement of the Carter Sand on the fault?

A It seems to be around 250 feet.

Q And this exhibit was prepared by you?

A Yes sir.

Questions by Mr. Joiner:

Q Did you say the structure contours ~~was~~ were based on gravity and photo-geology?

A Yes sir, just the four on the structure here was.

Q Did you give the total depth of the four wells on the map, which two penetrated the Carter Sand?

A The two sub-surface points.

Q The others did not get...

A One is the Champlin DeLaney east of the Southwest of 16 there, which we are drilling now, and the Hodge Well in the Northwest/Northwest 22 is the location. The total depth of the DeLaney Well was 1808 on the log run of the DeLaney Well.

Questions by Mr. LaMoreaux:

Q Are you going to present a sub-surface log?

A Yes sir.

MR. LaMOREAUX: All right.

Questions by Mr. Tucker:

Q Is this log depth on the Everly Johnson Well or is this from the gravity?

A This is from...

Q From the log?

A Right.

Questions by Mr. Joiner:

Q Has this ~~log~~ fault actually been confirmed by drilling the sub-surface geology?

A Well, I don't have a copy of this Everly log myself. I saw it at one time. From correlating between the Everly Well and the Tatum Well, it appears there is faulting. I think there is a fault present. The exact location between that interval in there, I don't know. The fault when we get more information on it may have quite a different alignment. It may be placed 100 or 200 feet either way of where it's drawn right now, but from our photo-gravity, it appears that this is the alignment of the fault, and this well did cut a fault

so that's why it's placed where it is.

CHMN. COOK: Gentlemen, any further questions of Mr. Wisdom as far as Exhibit No. 1?

MR. TUCKER: Mr. Chairman, in the order that we have, it spells out the "Carter Mississippian Lime;" on the map it's the "Carter Sand," and in the advertisement it's the "Carter Pool." Would you care to clarify this?

MR. THOMPSON: The correct designation is the "Carter Mississippian Sandstone." I understand that's correct.

MR. TUCKER: Well, I have here the original order.

MR. THOMPSON: Yes sir.

REDIRECT EXAMINATION

(Questions by Mr. Thompson:)

Q Is it your opinion then, Mr. Wisdom, that Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, Township 12 South, Range 15 West, are underlain by the Carter Mississippian Sand?

A Yes.

Q Is it your further opinion that notwithstanding the fault line in this area, the area described in the preceding question, should be regarded and treated as a common pool, separate and distinct from any other pool?

A Yes sir, that's my opinion.

MR. THOMPSON: Are there any further questions of Mr. Wisdom regarding this Exhibit No. 1?

MR. LaMOREAUX: We may have other questions later on when further testimony is given.

MR. THOMPSON: At this time, we would like to offer Champlin's Exhibit No. 2.

(Mr. Thompson distributed copies of the exhibit to Members of the Board and Staff)

(Whereupon, document described as portion of electric log was marked for identification as Exhibit No. 2 to the testimony of C. F. Wisdom)

(Questions by Mr. Thompson cont'd:)

Q Mr. Wisdom, would you discuss and explain Champlin's Exhibit No. 2?

A This is a reproduction of a portion of the electric log run on the Bob Tatum No. 1 DeLaney, which is the discovery well for this area, and is presented to identify the Carter Sand which is drilled at 1780 sub-sea minus 1214 on this log.

MR. THOMPSON: Mr. Chairman, do you have any questions in regard to...

CHMN. COOK: Any questions on behalf of the Board or the Staff on this exhibit?

REEXAMINATION BY BOARD OR STAFF

Questions by Mr. LaMoreaux:

Q What is the exact thickness, Mr. Wisdom, of the producing formation -- it goes from 1780, is that correct, to 1800?

A Well, the sand itself is thicker than this. This is the total depth of the log and they drilled on down, down to 1829. There is a gamma ray that's been run which indicates that there's probably 30 feet of porous sand.

Q And of this sand, how much of it is producing sand?

A I really don't know. I know that they haven't produced any water in the interval. I assume that it's all oil productive. The porous portions of the sand should all be oil productive.

Q Have you studied the gamma log that was made? Did you see it and study it?

A Yes sir, I did.

Q Could you give us a description of that sand, a physical description for recording in your testimony?

A I haven't written one down, but it's more or less a medium grain sand, light and shaley, very tight, estimated around 10 to 12% porosity, probably, and of

course, through the interval it grades from medium grain to a slightly smaller grain.

Q It's predominantly fine to medium grain? Is it very homogeneous? What's its characteristic with regard to grain size, homogeneous sand?

A Yes. Well, there are interval streaks within it that has silted, but overall, I would say it's a medium grain sand, fairly tight.

Questions by Mr. Joiner:

Q Was it calcareous?

A I didn't have the samples to work all the way myself. I didn't look.

Q Was this sand fracked?

A We have some engineers. You'll have to ask one of them.

MR. JOINER: All right.

MR. LaMOREAUX: I have no further questions.

CHMN. COOK: Any further questions, gentlemen?

(No response)

CHMN. COOK: Proceed, if you will, sir.

MR. THOMPSON: At this time, we would offer Champlin's Exhibit No. 3.

(Mr. Thompson distributed copies of the exhibit to Members of the Board and Staff)

(Whereupon, document described as land plat was marked for identification as Exhibit No. 3 to the testimony of C. F. Wisdom)

REDIRECT EXAMINATION

Questions by Mr. Thompson:

Q Mr. Wisdom, would you discuss and explain the purpose of this map?

A This is a land plat of Township 12 South, Range 15 West, and it's really designated by the strip of the area's acreage, which Champlin has an acreage, has the lease on, and it would strongly show that we do have a substantial leasehold in there, particularly in the nine sections from which we are asking the ruling from the Board on, and we own about 32%, approximately 32% of the acreage in that area.

MR. THOMPSON: Mr. Chairman, do you have any questions in regard to this exhibit?

MR. LaMOREAUX: Yes. I would ask Mr. Wisdom to designate that the stippled pattern, somewhere here in your block, diagram an explanation of the fact that the stippled area is the area that you hold leases on.

MR. THOMPSON: Can we supply that information at a later date?

MR. LaMOREAUX: Yes.

CHMN. COOK: Any questions or comments, gentlemen?

(No response)

MR. THOMPSON: If there are no questions, Mr. Chairman, that will conclude Mr. Wisdom's testimony.

CHMN. COOK: All right. Do you want to submit these exhibits now or do you have other exhibits?

MR. THOMPSON: We have other exhibits.

CHMN. COOK: All right, sir. Your next witness.

(Mr. Wisdom was excused)

MR. THOMPSON: At this time, I'd like to call Mr. Balch.

EMMETT BALCH

appearing as a witness on behalf of Petitioner, Champlin Petroleum Company, being first duly sworn, testified as follows:

DIRECT EXAMINATION

Questions by Mr. Thompson:

Q Mr. Balch, will you state your full name?

A Emmett H. Balch, Jr.

Q And by whom are you employed?

A Champlin Petroleum Company.

Q And what is your position with Champlin?

A Petroleum engineer and I hold the position currently of superintendent of proration of unit operations.

Q Would you outline briefly your educational background and professional experience?

A I graduated in 1955 from the University of Tulsa, a Bachelor in Petroleum Engineering. In 1956, I went to work for Champlin. I've worked for Champlin as district engineer and division engineer, senior area engineer and currently proration superintendent.

Questions by Mr. LaMoreaux:

Q Mr. Balch, where have you had experience as a petroleum engineer before Champlin?

A Oklahoma, Southwest Canada, Oklahoma, Texas, Kansas, Rocky Mountains. I'm a registered professional engineer in Oklahoma and Texas and the province of Alberta.

MR. THOMPSON: Mr. Chairman, are there any further questions regarding qualifications of this witnesss?

CHMN. COOK: I hear none.

MR. THOMPSON: At this time, I'd like to offer Champlin's Exhibit No. 4.

(Mr. Thompson distributed copies of the exhibit to Members of the Board and Staff)

(Whereupon, document described as economic analysis was marked for identification as Exhibit No. 4 to the testimony of Emmett Balch)

(Questions by Mr. Thompson cont'd:)

Q In your capacity of superintendent of proration of unit operations of Champlin, have you made an analysis of reservoir characteristics and economic analysis of the Carter Mississippian Sandstone underlying the area under consideration?

A Yes sir.

Q You have before you Champlin's Exhibit No. 4. Would you discuss and outline this exhibit?

A This exhibit is broken into two sections. The first is entitled "Recoverable Reserves" and the second is "Economics." The two columns "20 Acre Spacing" and "40 Acre Spacing" are a comparison of the showing. The reservoir -- first, we have "E" in parenthesis behind some numbers. Now, that means that those are estimated. I had no exact way of calculation or direct measurement. One of the more significant factors here is the viscosity, which you will note is in the 15 to 30 centipoise range. The recoverable reserve in barrels per acre foot is 46.5 barrels, and reservoir

thickness, I used 30 feet, which you previously heard covers a section of the sand which is not contained in the exhibit log, Exhibit 2, but it is shown on this gamma ray referred to and is probably -- I personally consider at least 10 feet of that is highly questionable. This is the DeLaney Well. The last two numbers in that first section are the recoverable reserves on 20 and 40-acre spacing. Going on down to the bottom of the page to the "Economics," the obvious comparison here is the net loss of $32,000 on 20-acre spacing versus a $6,000 approximate gain on 40-acre spacing. The investment cost of $70,000 is not recovered by the value of the reserves. The first numbers, on 20-acre spacing, $59,700, and the well cost is $70,100.

MR. THOMPSON: Are there any questions from the Board regarding this Exhibit No. 4?

MR. TUCKER: Mr. Chairman --

CHMN. COOK: Yes sir.

EXAMINATION BY BOARD OR STAFF

Questions by Mr. Tucker:

Q Mr. Balch --

A Yes sir.

Q Mr. Balch, in your opinion, would the development of

this reservoir on 40-acre spacing prevent waste?

A Yes sir.

Q Will it prevent the abuse of correlative rights and opportunities of each owner of oil and gas in the common reservoir due to non-uniform disportionment or unratable withdrawals causing undue drainage between tracts of land?

A Yes sir.

Q Will it prevent underground waste as that is defined?

A Yes sir.

MR. TUCKER: That's all.

CHMN. COOK: Mr. Supervisor, any questions?

MR. LaMOREAUX: I would like to ask a couple of questions with regard to the use of these estimated quantities here.

Questions by Mr. LaMoreaux:

Q Mr. Balch, how did you arrive at these estimates? I would like a qualification of each of them, if you would, sir, so we can understand how you approached your estimate of porosity and viscosity and so forth, so that we can compare in our own...

A All right. Ten percent porosity, you previously heard, is based on examination by Mr. Wisdom, and the

water saturation is, I consider, reasonable for tight sand. The reservoir oil viscosity is estimated because I don't have the measured viscosity available at reservoir temperature. However, I would like to channel the table (phon.) to convert 80% surface viscosity; 10% recovery factor, I used muscats (phon.). Considering comparisons of recovery for different viscosity in different reservoir conditions, I found 10% to be reasonable, average, for my purposes.

Q I notice in the testimony of your qualifications, you've had over 15 years experience as a petroleum engineer, and on the basis of that rather extensive experience in this type of thing, do you feel that your estimates are reasonable and accurate, sufficiently accurate to use that statement?

A Yes sir, I do.

CHMN. COOK: I have a question, Mr. Balch.

Questions by Chmn. Cook:

Q Using your estimates as a basis, if you were 15% incorrect, would that appreciably affect the economics of the 40 or 20-acre spacing?

A Of course, it depends on which way I'm wrong. The profit on 40-acre spacing is only $6,000 out of

$120,000. That's 2%, so I don't think we're -- not 2%, 5%. It wouldn't change the 20-acre spacing at all, 15% wouldn't bother it, but 15% over-estimation on 40 acres, it would have a loss condition there on 40 acres. It would not be economical.

CHMN. COOK: Any questions by the Board?

(No response)

REDIRECT EXAMINATION

Questions by Mr. Thompson:

Q You do feel, however, Mr. Balch, that 40-acre spacing would encourage development?

A Yes sir, as the minimum spacing.

MR. THOMPSON: Any further questions regarding this exhibit?

CHMN. COOK: No further questions on this exhibit.

MR. THOMPSON: At this time, we offer Champlin's Exhibit No. 5.

(Mr. Thompson distributed copies of the exhibit to Members of the Board and Staff)

(Whereupon, document described as Special Field Rules was marked for identification as Exhibit No. 5 to the testimony of Emmett Balch)

(Questions by Mr. Thompson cont'd:)

Q Mr. Balch, will you discuss and explain the rules set

forth in Champlin's Exhibit No. 5?

A Yes sir. Rule No. 1 has two parts, as to continue the present 40-acre spacing, and the second sentence, adjust the tolerance of 250 feet as opposed to the present 150 feet. Rule 2 would require a minimum of 200 feet of surface casing for a well of 3000-foot depth and sets out the testing procedure. Rule 3 is the right to issue additional orders.

MR. THOMPSON: Mr. Chairman, would the Board have some questions regarding this exhibit?

MR. LaMOREAUX: Mr. Tucker wishes to examine the witness in regard to injection of fresh water sands in the structure under these Field Rules.

REEXAMINATION BY BOARD OR STAFF

Questions by Mr. Tucker:

Q Under Rule 1, Spacing of Wells, do you feel, Mr. Balch, the location of a well 150 feet of a drilling unit would unduly drain the off-set drilling unit?

A I don't believe that -- of a well within 250 feet?

Q Yes sir.

A This is the tolerance from the center. This is the radius from the center of the 40. Assume it's 660 less 250 -- 410 away.

Q Do you feel that a well 410 feet from a property line will unduly drain an off-set tract?

A No sir.

Q Would you explain your Section A -- you're requiring the minimum of 200 feet for surface ~~injection~~ casing as opposed to our Order No. 1? This within itself is more than what we already require.

A Well, the 200 feet is intended to protect the shallow gravels, fresh water gravels.

Q This is noted by your ~~gravels~~ logs?

A Yes sir. That's why we propose additional surface...

Questions by Mr. LaMoreaux:

Q Would this depth in every case extend that surface ~~location~~ casing below the gravel?

A Well, there are areas in Lamar County, I don't know, gravel does, I believe, go to 300 feet.

Q How about within the field? Would this be sufficient to extend the surface casing below the bottom of the ~~surface~~ gravel?

Q (Tucker) Through the gravel of the main well?

A I believe so.

MR. TUCKER: Mr. Wisdom, do you know?

MR. WISDOM: I think it's about 180 or 90.

MR. TUCKER: This is in excess of what we normally require for a well.

MR. LaMOREAUX: I realize that's so, Bill, but in this case, with the unusual circumstances ~~that were~~ developed ~~in~~ the hydrocarbon reservoir at shallow depth, and too, we're dealing with a thick sequence of unconsolidated sand and gravel on top of consolidated bedrock, and that sand and gravel is a water-bearing formation with fresh water.

MR. TUCKER: Would Champlin be amenable to change that Field Rule to read "to the bedrock"?

MR. THOMPSON: It's cited in the rule as the minimum depth, and it's my understanding that the Rule 1, you had this obligation of protecting the sands outside the Special Rules, and this being a minimum depth here...

MR. LaMOREAUX: I think if it's stated a minimum and we understand that those sands and gravels must be protected, I think the wording in this proposed Field Rule will be all right.

MR. THOMPSON: Well, that was our understanding.

MR. BALCH: As an example is our first well.

(Questions by Mr. Tucker cont'd:)

Q Section B on the eight hours, do y'all intend to

use any additives to accelerate?

A The surface casing? Yes sir, we do, normally 3% or...

MR. TUCKER: That's all I have.

MR. THOMPSON: Any further questions regarding Exhibit No. 5, gentlemen?

CHMN. COOK: We have no further questions.

REDIRECT EXAMINATION

Questions by Mr. Thompson:

Q By way of summation then, Mr. Balch, then in your opinion, will Champlin's proposal including these Special Field Rules prevent waste and protect correlative rights and afford the proper basis for the development of the Carter Mississippian Sandstone underlying this area under consideration?

A Yes sir.

MR. THOMPSON: Gentlemen, if there are no further questions of Mr. Balch, this concludes his testimony.

CHMN. COOK: Anything further, gentlemen?

MR. LaMOREAUX: Before you release these gentlemen, there are people from the area and I would like for them to identify themselves, if they would, and if they have a statement, to make it, and if there is opposition, I think we should...

CHMN. COOK: I think we should finish the petition.

MR. THOMPSON: We just have one more witness.

MR. JOINER: Mr. Balch, are you familiar with the completion operations?

MR. BALCH: No sir, the next witness.

MR. THOMPSON: At this time, we'd like to call Mr. John Rankin.

JOHN F. RANKIN

appearing as a witness on behalf of Petitioner, Champlin Petroleum Company, being first duly sworn, testified as follows:

DIRECT EXAMINATION

Questions by Mr. Thompson:

Q Mr. Rankin, by whom are you employed?

A Champlin Petroleum Company.

Q And what is your position with Champlin?

A District Operations Manager, Louisiana District, which includes this area also.

Q Would you give us a brief outline of your educational background and professional experience?

A BS degree in mining engineering with petroleum option, 1948, ~~Georgia~~ Colorado School of Mines and Metallurgy. I've worked in the oil fields for Lathorn Oil Company,

(phon.), Standard Oil of New Jersey, Champlin Petroleum Company, for the past 22 years.

CHMN. COOK: Any questions on it, gentlemen, regarding his qualifications?

(No response)

CHMN. COOK: There don't seem to be any.

(Questions by Mr. Thompson cont'd:)

Q Mr. Rankin, from your personal observation, are you familiar with the topography surrounding the L. R. Tatum No. 1 W. A. DeLaney Well?

A Yes sir, I am.

Q And based upon your familiarity with this topography, is it your opinion that the 250 feet from center tolerance requested in Rule 1 is a reasonable tolerance for the well location?

A Yes, I do, because of the ruggedness or differences in elevation.

EXAMINATION BY BOARD OR STAFF

Questions by Mr. LaMoreaux:

Q How much relief is in the area ~~at the mouth~~ of the field proposed?

A There is at least 100 feet difference between the highest point in this area and the lowest point,

according to the map.

Q Is the area relatively dry, is it swampy or...

A No, it's not swampy. There are several more or less dry streams there and numerous small valleys, but even before the rain started the last two to three weeks, they were still moist, but you know, it's just a...

Q You see no problem as related to the topography with regard to easy access to sites within the tolerances described by the Field Rules?

A There could still be problems, but the 250 feet would definitely help.

Questions by Mr. Joiner:

Q Mr. Rankin, is topography the only thing being considered in requesting this tolerance of 250 feet?

A To the best of my knowledge, yes. I believe Mr. Balch would have to answer definitely.

CHMN. COOK: Mr. Supervisor, I have a question of you in this same connection, and Mr. Eddins. To be correct for my own information, does 250 feet establish anything unusual?

MR. LaMOREAUX: Well, this is why we're getting this testimony from Mr. Rankin. I expect the Board will have to discuss this after you've heard the testimony of this

group and make a decision on this matter.

MR. TUCKER: Mr. Chairman, could I ask a question?

CHMN. COOK: Yes sir.

Questions by Mr. Tucker:

Q Mr. Rankin, would you briefly describe your drilling program, surface casing, production casing, how y'all helped to develop this field?

A Currently on our first well, we drilled an 11-inch surface hole to 386 feet. Based on drilling time, it appeared that we topped the Pennsylvania at 125 feet. We set 8-5/8 ~~one~~-pound casing at 372 feet and cemented it with 170 sacks of cement. The cement was circulated to the surface and was held under pressure for over 24 hours. Below our surface pipe, we would drill a 7-7/8-inch hole and set 4½, 9.5-pound KOJ 55 casing through the pay zone and raise the cement over 500 feet above the top of the uppermost pay...(testimony was unintelligible due to the fact the reporter was sitting behind the witness)...cores would be perforated and we do plan if at all possible to take the cores on this well and the data derived therefrom will help us in deciding the exact completion technique.

Q Will rotary rigs be used throughout your drilling program?

A Yes sir. On the completion, we will move in a completion rig rather than use the rotary on the completion, but for the actual drilling, it will be rotary rigs.

CHMN. COOK: Tom, you had a question?

Questions by Mr. Joiner:

Q Mr. Rankin, as far as fracking the sand prior to production, would you describe that for us?

A The sand?

Q Fracking the sand.

A Oh. We have not drilled our well total depth and set packer. We're just in the process of drilling at this time.

Q In the DeLaney Well, I'm thinking now of the discovery well, could you relate that for us, please?

A I was not actually involved with the work on that particular well. I could relate in a hearsay type manner.

CHMN. COOK: Any further questions of Mr. Rankin?

MR. JOINER: One other question.

Q As far as the topographic consideration for the 250-foot tolerance, did you examine the number of the potential locations to determine if this would be a definite benefit?

A I have looked at the topographic maps and also our

present location, and it would appear that it would be a great help. As far as actually looking at other locations, I have not.

Q So it's just generally felt because of the relief of the region...

A Right. Driving and walking through the area, steep valleys and short hills.

Q But as far as specifically knowing that the 250 feet would be needed at additional sites, you have not made examinations?

A No sir. We would prefer to drill in the center where you can get to it if...

CHMN. COOK: That's all the questions.

MR. THOMPSON: Mr. Chairman, at this time, I would move that Champlin's Exhibits 1 through 5 be admitted in evidence as a part of this record.

CHMN. COOK: Gentlemen, it is requested that Champlin's Exhibits 1 through 5 be accepted in evidence by the Board, and the Board will accept them as such.

(Whereupon, documents previously described and marked for identification were received in evidence as Exhibits 1, 2 and 3 to the testimony of C. F. Wisdom, and Exhibits 4 and 5 to the testimony of Emmett Balch)

MR. THOMPSON: Mr. Chairman, Champlin Petroleum Company, based upon the testimony developed in this hearing, respectfully requests the State Oil and Gas Board to enter its order finding the Carter Mississippian Sandstone underlying Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, in Township 12 South, Range 15 West, and all productive extensions thereof be developed and treated as a separate and distinct oil producing pool, and that the Special Field Rules introduced at this hearing be adopted.

Mr. Chairman, that concludes our case.

CHMN. COOK: Thank you, Mr. Thompson. Now, before we go any further, is there -- you've heard the proponents of the petition in the No. 1 item on our agenda. Is there anyone here who appears in opposition to this petition?

MR. EVERLEY: (Raised hand)

CHMN. COOK: Yes sir.

ORVILLE LeROY EVERLEY

appearing as a witness on behalf of Everley & Associates, testified as follows:

DIRECT TESTIMONY

Statement by Mr. Everley:

MR. EVERLEY: I think the minimum -- my name is Everley and I'm with Everley & Associates, Inter-American

Drilling. I suggest that that rule on the, especially on the casing of the surface pipe, as I've drilled two wells up there, be on the minimum of 250 feet, because you're going to have gravel and sand there, you'll have quick sand on top of the ground and gravel. I suggest that we go 250 instead of the 200 they ask for, because if you don't, you're not going to get enough surface pipe in the hole and it's going to fall in on you on the way. I have no objections to Champlin on their 40-acre spacing, and I think their requestment on the 250-~~acre~~ tolerance should be acceptable to the Board because to the southeast of there you're going to have some swamps and stuff and we've done encountered one over on the Spruell lease already. We had to make another location, bedrock in the middle of that creek bed in the middle of a 40. So I suggest you go ahead with that on just the casing, go to 250 instead of 200 on this particular petition they're asking for.

MR. LaMOREAUX: Mr. Everley?

MR. EVERLEY: Yes sir.

MR. LaMOREAUX: Would you give the recorder your full name and company associate and address, please?

MR. EVERLEY: My name is Orville L. Everley, Box 38, Detroit, Alabama. I'm associated with Inter-American

Drilling firm of Corpus Christi, Texas, and represent them and myself here at this meeting.

CHMN. COOK: Thank you, Mr. Everley. Does anybody have any questions?

MR. EVERLEY: I have one other suggestion for the new name of the field. I suggest at this time while Champlin is here that we call the field the Detroit East Field.

CHMN. COOK: Mr. Everley, we appreciate your appearing. Does anybody have any comments or questions they want to ask of Mr. Everley?

MR. LaMOREAUX: Mr. Tucker...

CHMN. COOK: Would you submit to questioning, Mr. Everley?

MR. EVERLEY: I suggest we have a field...

CHMN. COOK: No -- I said, would you submit yourself to questioning by a member of the Staff?

MR. EVERLEY: Yes sir.

EXAMINATION BY BOARD OR STAFF

Questions by Mr. Tucker:

Q Do you know exactly where you found the bedrock on the two wells that you've drilled?

A Yes sir. We found -- we topped the quick sand and we

went from shale and we hit quick sand at about 50 feet on the DeLaney, we drilled on through at 110 feet or 200 feet, we had gravel all the way, and then we hit the top of the Pennsylvania at 225 there and then, the reason I am saying this, I drilled a well, the Johnson Well, we come back there, they had quick sand right on top of the ground and we had mud almost up to the motor there so you could go ahead and drill it, to hold the walls up on the side of the casing so you could go ahead and run your pipe. I'm sure that John will tell you that there is some problems up there and that's why we're requiring additional surface pipe here, and if you don't touch the second break it's going to fall in on you all the way down and you'll have lost circulation and get your lost circulation into your formation on down on the bottom which will carry, if you don't get enough surface pipe in, it'll just fall in on you. That's the reason why -- that's the reason I suggested 250 feet instead of the 200 required.

Q What was the top of the Pennsylvania in the Johnson Well?

A At 292 and then we made eight feet in. We set 300 foot of 8-5/8 on the Johnson.

Questions by Mr. LaMoreaux:

Q Mr. Everley, we appreciate your suggestions and comments. I would like to have from you or someone representing interests up there a letter with the recommendation with regard to the naming of the field, the Board then would take the recommendations for names into consideration and take an action on it, but we would like for your suggestion to be followed up with a letter from you or from any interested group in the area.

A The reason why is because I think you're going to have more than one field up there. I think in the particular area that you will see it at a later date.

CHMN. COOK: Thank you, Mr. Everley. Is there anyone else here that appears in opposition to the petition?

(No response)

CHMN. COOK: Gentlemen, does that conclude your case?

MR. THOMPSON: Yes sir.

CHMN. COOK: The Board at this time will take this matter under advisement. We will weigh what's been said and you will get a decision. We thank you very much for coming.

MR. LaMOREAUX: I'd like to commend all of you for your first appearance before the Board. We appreciate the homework that you've done. Your presentation is easily understood. We wish you the most success up there in your Alabama endeavor.

MR. THOMPSON: I would say this, I'll hope we'll be down here many times.

CHMN. COOK: We share that hope, Mr. Thompson.

MR. THOMPSON: Thank you, indeed.

CHMN. COOK: We will recess for five minutes.

(At 11:30 A.M., December 18, 1970, the hearing was recessed)

(At 11:40 A.M., December 18, 1970, the hearing was reconvened)

CHMN. COOK: Gentlemen, we'll come to order. The Supervisor will call the next item on our agenda, Item 2.

MR. LaMOREAUX: All right.

"Continued hearing to consider plans for operators in the Gilbertown and South Carlton Fields to dispose of salt water into an approved subsurface aquifer and to discontinue the use of surface pits for the disposal of salt water.

"The State Oil and Gas Board will now consider plans by operators in the following order:

SOUTH CARLTON FIELD

"a) Falcon Seaboard Drilling Company

GILBERTOWN FIELD

"a) Marshall Oglesby

b) T. W. Sylte for F. H. Kelton Estate

c) Arden A. Anderson

d) Otis Ainsworth

e) E. T. Nichols

f) Solatex Petroleum Company, Inc."

All right, Falcon Seaboard Drilling Company.

MR. COUVILLION: Good morning. My name is John Couvillion and I've appeared before the Board before. I represent Falcon Seaboard Drilling Company in the South Carlton Field.

(Mr. Couvillion distributed document to Members of the Board and Staff)

MR. LaMOREAUX: (To Chmn. Cook) Each of these companies has sent representatives in to our office or our men have met with representatives.

CHMN. COOK: We'll go back on record now. Mr.

Couvillion, if you will, give us a summary of your proposal.

JOHN COUVILLION

appearing as a witness on behalf of Falcon Seaboard Drilling Company, testified as follows:

DIRECT TESTIMONY

Statement by Mr. Couvillion:

MR. COUVILLION: Falcon Seaboard Company has three producing wells in the South Carlton Field, all of them being on the Clarke County side of the Alabama River. We don't anticipate drilling any further wells and the three wells are capable of producing 100 barrels of oil a day and will average 100 barrels of salt water per day.

Now, the off-set operator in the field is Patrick Petroleum Company and they on November 20, 1970 presented a proposal to the Board at Chatom and it was accepted, and so we are currently negotiating with Patrick to join them in their system which has been approved. Now, we have not, we are still in the process of negotiating, but have not reached final terms, and I have attached some exhibits which will point out certain factors involved.

Exhibit No. 1 is estimated cost of Falcon to join Patrick in their accepted proposal, and I don't see any

use in breaking this down. The total cost to Falcon is approximately $7,800.

Exhibit No. 2 is a copy of Patrick Petroleum's Exhibit No. 5 which was submitted November 20 with additions to it showing Falcon's leases, Falcon's wells, our producing facilities and proposed disposal line to tie in to their facilities.

Exhibit No. 3 is Patrick's Exhibit No. 4 presented on November 20 and it shows Falcon will tie in upstream of their 400-barrel skimmer tank and minimize any chance of getting oil into the well and will naturally afford the same escape features that were proposed by Patrick on November 20.

The other exhibits that were presented by Patrick will not be reproduced here, after talking with Mr. White, Gene White. He stated that those were available for review, so there was no sense in presenting those again.

Now, we will construct and install our facilities to coincide with the completion of Patrick's equipment and facility system. We'll be able to dispose of the water the same time they do.

MR. LaMOREAUX: In essence then what you're saying is that negotiations are nearly consummated with Patrick

for the receival of your salt water, that your construction will be coordinated so that you can discharge to the Patrick system on the completion of the Patrick system?

MR. COUVILLION: Right.

MR. LaMOREAUX: Therefore, the Board has before it a proposal from Falcon Seaboard that in essence will arrange for the movement of the brine into another system which you will hear testimony on. So unless the Staff has questions, I see no further reason for holding Mr. Couvillion.

MR. EDDINS: Did you say that we would hear...

MR. LaMOREAUX: You will hear a statement.

MR. EDDINS: We have already...

MR. LaMOREAUX: I mean you have already heard the statement in regard to Patrick. Let me correct that statement.

MR. BAILEY: There's only one question I would like to ask. About what time or when do you or will you know whether or not this deal will be consummated? Will it be within the next few weeks?

MR. COUVILLION: No. At the November hearing, of course, I'm quoting Patrick...

MR. BAILEY: Right.

MR. COUVILLION: They're in the process of consolidating tank batteries, and to the best of my knowledge, they stated it would be sometime in 1971 before they would have all of their tank batteries consolidated and get the water well drilled and tied in. Other than that, they would have to have disposal facilities from each of their tank batteries, and the purpose of consolidating, of course, is to do away with two tank batteries which is pretty distant from the disposal well. So they're consolidating the tank batteries at the present time, I understand, and on completion of that, they will drill the disposal well and it's my understanding it will be in 1971.

MR. BAILEY: I mean, though, will you know in the next week or 10 days or two weeks whether or not you will be able to participate in Patrick's program?

MR. COUVILLION: We should know, you know, as far as that goes. They want us to come in, we're trying to get in as cheap as we can and they're trying to make it as expensive for us as they can, but it shouldn't take -- I would say within 30 days at the most.

MR. BAILEY: Yes sir.

MR. COUVILLION: We're talking to them now about it.

MR. LaMOREAUX: I think the intent of their proposal sets the deadline. Falcon has proposed here that they are going to work out an agreement with Patrick and then further they're saying in the last paragraph that as soon as Patrick's system can take the salt water, their salt water will be discharged to that system. So that again, his proposal is tied directly to Patrick, so he must work out an agreement with Patrick.

MR. COUVILLION: I don't foresee any problem in talking to them, they'll be glad for anybody to go in and share the cost. I'm sure of that.

MR. LaMOREAUX: Share the cost. Does the Staff have any further questions?

(No response)

MR. LaMOREAUX: I would suggest that the Board receive this proposal and then after your deliberations are over, that you advise Mr. Couvillion of your decision in the matter.

CHMN. COOK: The Board then will receive the proposal along with the exhibits and take them under advisement.

(Whereupon, documents previously described were marked for identification and received in evidence as Exhibits 1, 2 and 3 to the testimony of John Couvillion)

MR. LaMOREAUX: Thank you, Mr. Couvillion.

MR. COUVILLION: Thank you.

CHMN. COOK: Thank you, sir.

(Witness was excused)

CHMN. COOK: Call the next one.

MR. LaMOREAUX: The next item will be the presentation by Mr. Marshall Oglesby, and I think he's represented here by Mr. Gene Snell.

MR. SNELL: I'm representing him. Excuse me. I am Gene Snell and I'm representing Mr. Marshall Oglesby; Mr. Tom Sylte for the Kelton Estate; and I've a statement to make for Mr. Otis Ainsworth and also Solatex on the Gilbertown salt water disposal.

CHMN. COOK: Gene, you represent four on this list then?

MR. SNELL: Right, sir.

CHMN. COOK: That just about destroys our agenda.

MR. LaMOREAUX: As I understand it then, you will be representing Sylte, T. W. Sylte?

MR. SNELL: Yes.

MR. LaMOREAUX: For the F. H. Kelton Estate and Mr. Ainsworth and Solatex?

MR. SNELL: Correct.

MR. LaMOREAUX: Come forward. All set?

MR. SNELL: Yes.

GENE W. SNELL

appearing as a witness on behalf of Marshall Oglesby, T. W. Sylte for F. H. Kelton Estate, Otis Ainsworth, and Solatex Petroleum Company, Inc., testified as follows:

DIRECT TESTIMONY

Statement by Mr. Snell:

MR. SNELL: I am Gene W. Snell, and as previously stated, I represent these various groups to present their plans for salt water disposal in the Gilbertown Field.

I have previously appeared before the Board on numerous occasions. These plans have been derived from the previous hearings on this field. I appeared, I believe it was the last hearing, I made the statement to the effect that at this hearing we would present a plan. At that time, I solely represented Mr. Marshall Oglesby, which I referred to as the Frank Kelton Estate, and since that time, I've been requested to present statements in appearing for Mr. Ainsworth and Solatex.

The information that I have to present, first of all, is Mr. Oglesby's and it has been divided into three phases, mainly because we also have Mr. Kelton here and

Mr. Kelton and Mr. Oglesby are going to share in the system, and I'd like to pass out, first, we will call this Phase 1 of the salt water disposal system to be installed jointly by Mr. Oglesby and Mr. Kelton.

(At this point in the proceedings, there was a brief discussion off the record)

MR. SNELL: If it's all right, I'd just like to start through the letter and refer to the various exhibits attached in these exhibits, so that I think we can file it pretty quick.

CHMN. COOK: Has the Staff reviewed all of your plans and proposals?

MR. LaMOREAUX: The general proposal, yes, but the final report, they have not been able to.

MR. SNELL: That is correct. In Phase 1, stating in my letter to the Board:

> "Gentlemen:
>
> "Pursuant to your request, the following plan for sub-surface injection for produced salt waters and elimination of disposal surface pits is submitted for your review and approval."

Phase 1 is the proposed program for disposing of produced salt water from the Frank Kelton-Josephine Morgan Heirs

No. 3, Eula Jones No. 1, and the Marshall Oglesby- J. S. Morgan No. 1 into the salt water injection well Josephine Morgan Heirs No. 4. The design for water disposal in this well is 2,000 barrels per day.

I have attached to this the first map, which is a plat map showing the location of the subject wells, Jones 1, Morgan 3 and Morgan 1 and the injection well, and just rapidly outlining where the tank batteries were located for these wells, as well as the injection well and the lines that will inter-connect these wells.

In brief, and further, the attached schematic plat shows the location of the producing wells, the tank battery site for oil production, salt water disposal and injection well. Oil production from all three producing wells in this system will be separately measured into individual isolated tank batteries. The produced waters will be collected into a salt water tank by inter-connecting all of the heater treaters from the three producing wells to a common water supply line. The production and salt water disposal facility will be located at the existing Morgan No. 3-Jones No. 1 tank battery location, and further, the second schematic diagram attached is the on-site oil production and salt water assembly that will be

directed for disposal of waters. A schematic diagram showing the oil production and salt water disposal system is attached. Each of the three wells will produce independently in the isolated tank batteries with the produced water being transferred directly to the water supply tanks. The produced waters from the J. S. Morgan 1 will be inter-connected by laying a new line from its existing tank battery location. The method for disposal will be to collect all produced salt waters into the salt water collection and clarifying tanks. These tanks will be equipped with an internal automatic siphon designed to prevent spillage should electrical and/or other failure occur within any components of this system. This siphon is so designed to deliver water directly to the existing emergency disposal pit now on location.

I would like to explain that. The pit that is being used is the now surface pit being utilized by the Morgan 3 and the Eula Jones 1. So actually we will have an elimination of a surface disposal pit here as well as in the Oglesby-Morgan 1. The ~~well~~ water is clarified and treated, if necessary, then transferred to the clear water tank in the disposal system which is directly connected to the water injection pump designed and capable of handling

2,000 barrels of water per day at 1,500 psi injected pressure. The quantities of salt water now being produced in this system is approximately 1,500 plus barrels. We have about a 25% contingency factor involved.

The water disposal system will be fully automatic in that it will be equipped with hi-lo level automatic switches and sensing devices to actuate the injection pump and shut down the system in the event of mechanical failures and so forth. All automatic devices, control panels and other electrical equipment will be fully explosion-proof to eliminate all potential fire hazard.

The salt water disposal well, which is the Josephine Morgan 4, and there is a strip log attached which should be in the back of the report, is currently temporarily abandoned, cased and has perforations from the 3,276 feet to 3,300 feet. Production casing is $5\frac{1}{2}$ NA and is set at 3,343 feet with the estimated top of cement at 2,850 feet. The well was originally perforated at 3,290 to 92 feet squeeze with 50 sacks of cement. The well was also perforated with 3,267 to 3,269 and squeezed with 50 sacks prior to perforating the production zone 3,276 to 3,300. It is expected that the entire Eutaw Zone is cemented as well as the zones in the Basal Chalk section.

The procedure for recompletion of the Josephine Morgan 4 to a salt water disposal well would be to rig up a drill pulling unit, clean out to its plugged back depth of approximately 3,330 feet. This will clean existing perforated intervals from 3,276 to 3,300 and allow an initial pump test utilizing high pressure equipment to determine if the existing perforated interval will accept the designed 2,000 barrels per day at nominal pressures. Should this be achieved on the initial run, then completion of the well will be made immediately. If the desired rate pressure design is not attained, then the entire previously perforated interval plus the interval of approximately 3,258 to 3,316 will be perforated utilizing bullet casing (phon.) perforations. The zone will then be acid treated, swabbed to recover all acid water and the natural swab flow test calculated. The treatment will be followed by clear water injection tests utilizing the same high pressure equipment to check the rate pressure characteristics on the completed intervals.

The estimated total cost for the installation of subject salt water system, including the well recompletion program as outlined, is $32,100. These costs could run appreciably higher if the desired injection design speci-

fications are not achieved within the limits outlined.

The operators anticipate that work on the outlined program can begin after approval by the State Oil and Gas Board and will require approximately six months to complete to be in full operation.

MR. LaMOREAUX: Gene, that's a nice report and it's well presented and well documented, and I wanted you to give this personally in detail like this so that the Board could see that you have been working diligently with the Staff in coming up with a detailed proposal on salt water injection in the Gilbertown.

I call the attention of the Board again to the fact that this is a field that you might class as being in old age and the economics are marginal for a project of this magnitude, but they have come in with a proposal and it looks like a sound one. I would suggest you give the Staff an opportunity to question Mr. Snell about this proposal briefly and that it be submitted to the Staff for study and recommendation to the Board for action.

Now, he has two other proposals here that are the same detail and after he's had an opportunity to stand a short cross examination on this, I would like for him to, by using any method he wishes, but highlight those addi-

tional proposals and then use the graphics showing you the wells that are involved, which is what the Board is concerned with to a great extent, so that they can get an understanding of just how your proposals in Gilbertown will correct the salt water disposal problem at Gilbertown.

So first I'd like to ask the Staff if they have any questions that they would like to ask of Mr. Snell. I think one thing that we should do is clarify where the salt water will be injected and any effect this might have on the economics, existence of hydrocarbons in the area, pollution problem, potential pollution problem, and so forth.

MR. TUCKER: Mr. Chairman, I'd like to ask the witness a question.

CHMN. COOK: Proceed.

EXAMINATION BY BOARD OR STAFF

Questions by Mr. Tucker:

Q Mr. Snell, your proposed injection zone is the former producing interval, is that correct?

A Yes. It's in the what I would term probably the Basal part of the Eutaw, but the Eutaw is one of the producing intervals in the field.

Q Do you know off-hand how much oil this particular well produced prior to its abandonment?

A I would have to refer to -- just a second -- if it is listed here, which hopefully it is. No, I don't have a record of that, Mr. Tucker. I thought it was listed here.

Q Is it your opinion now that this well is a non-commercial former oil producer?

A Yes, according to the -- and I go on just what the operators have conveyed to me, that the well is uneconomical to operate and has been temporarily abandoned for some time.

Q Is it your opinion that injection of salt water into this zone, will it affect the production on off-set leases or affect the reservoir pressure in the surrounding area?

A The answer to the first part of your question, will it affect oil production on off-set leases, I can only answer by saying I don't know. The second answer, yes, it will definitely increase pressure, but as far as I can show...

Q Could the injection of salt water into this well sweep recoverable hydrocarbons from underneath this lease

under someone else's lease?

A If the same contiguous correlative intervals perforated in this well and perforated in adjacent wells, with this well being an injection well, there's a very good possibility this could happen.

Q Are there any provisions to compensate off-set lease-holders or the leaseholders of the Morgan Heirs No. 4 for any hydrocarbon sweep underneath this lease?

A No, not to my knowledge.

Q Are the leasehold owners or the mineral owners of Morgan No. 4 the same as Morgan No. 1 and 3? Is that the same ownership?

A Excuse me just a minute -- the Morgan 1?

Q It's listed as Morgan 1 and 3 and the No. 4 is the Morgan Heirs No. 4.

A I don't know. I have no idea of what the leasehold interest is in that at all.

Q Do you think that injection of water in this zone will affect materially the ultimate recovery of hydrocarbons in this area on this tract?

A Here again, this is a very difficult question to answer, the reason being is that we have not run any water flood calculations, which is what we're getting

into here, a water flood. We have not run any continuity tests throughout this particular small plat area within the Eutaw to determine this factor. It would be very difficult for me to say and answer that question truthfully as to whether it would or would not.

Q Have y'all investigated any other zones that are known not to be productive for possible disposal zones?

A In this particular Phase 1, no. We've investigated two other wells which are not shown on the plat of Phase 1 but are located east of this particular well. They are wells owned by Mr. Marshall Oglesby which he intends to plug and abandon because of fact number one, they are very low capacity oil producers and number two, the economics of getting them into the system are not justified. So these two wells are available. As far as other zones other than the Eutaw and the Chalk section, yes, we investigated one. The Board won't let us go into it, so that's it.

MR. TUCKER: Could I ask him one question off the record?

MR. LaMOREAUX: Sure.

(At this point in the hearing, the proceedings were off the record)

(Back on record - Mr. Snell:)

A Our primary problem in Phase 1, Phase 2 and Phase 3 of this program is to get the volume of water in the ground at some, I would call it nominal, pressure at an economical price. These are secondary zones of interest that we're looking at. Right now we have little information to go on in various areas of the field as to the capability of the zones to accept the water. We're kind of floundering in the dark in this fashion. So it will be -- the acceptance of these phases by the Board will be actually what we can do mechanically in the field.

Questions by Mr. Maddox:

Q Do some of the people in the field think that with an injection system, do some of them think there might be more oil?

A I've never heard this comment in any of the work that I've done at all, Mr. Maddox.

Questions by Mr. Tucker:

Q One approach maybe to this thing, if the Board approves this order, would be to keep very careful records and tests on these off-set wells after the injection. We have background production information. Should there appear to be any production stimulation occurring,

it's possible to have to unitize these wells and prorate that production.

A Also in line with that, Bill, I have done extensive evaluation work in this field for Mr. Oglesby and other operators to determine future net reserves and I don't know specifically but I know that the majority interest in the plans that are proposed for the Kelton Estate and Mr. Oglesby, most all of the working and other interests are owned by Mr. Oglesby or a majority interest. There are several areas and scatters of other interests that I don't have at this time. I think the comment off the record of unitization would be extremely difficult from various aspects.

MR. LaMOREAUX: Are there any other questions?

MR. TUCKER: I'd like to -- we need to number his exhibits for his presentation.

Questions by Mr. Joiner:

Q The alternate zones proposed by you in the Selma Chalk are above the Eutaw Formation?

A Right, just above.

Q The Selma Chalk zones produced in the Gilbertown Field, are there any wells in the vicinity of this proposed injection system produced in the Selma Chalk?

A Not to my knowledge.

Q What you're saying your problem is is that you've got so much in over... question marks about the zone and so forth?

A A bunch of water to get rid of. This system as outlined, that is, for 2,000 barrels, would take into consideration some overages. In a day, that's quite a bit of water, and generally, that system on that is going to double it. So it's quite a problematical thing. We may get a pleasant surprise and we may not get a surprise as to how we...

MR. LaMOREAUX: Anymore questions?

(No response)

MR. LaMOREAUX: Well, let's proceed then to the identification.

MR. SNELL: One thing you might clarify, just in looking at the relationship of where these plans are, the plan that we just looked at here is setting right here. I'm looking upside down, so I can't see -- right here with these three wells is this Phase 1. This is actually Phase 3 right here in the middle. This encompasses the presently installed Humble disposal system which we'll go into. It is in operation and was previously approved by

the Board about 1965. This is the Phase 2 operation out here which all of the red wells in here are majority interest owned and operated by Mr. Oglesby, so this is the kind of relationship as to where these things are in the field.

MR. TUCKER: Excuse me, Gene. To keep the record straight, will you identify what you are pointing at? Will you introduce this as an exhibit?

MR. SNELL: No, this is just for informative purposes. I didn't mean to -- but Phase 2 encompasses the Oglesby operations in the Gilbertown West Field producing from the Eutaw Formation.

CHMN. COOK: I think you have by reference shown the correlation between the three phases.

MR. SNELL: And Phase 3 is the installed Humble Oil -- previously owned Humble Oil & Refining salt water injection system in the mid part or main part of the Gilbertown where Phase 1 is in the East Gilbertown Field, Eutaw production.

MR. LaMOREAUX: Actually, Bill, I think it will be perfectly all right orally like that in testimony. In actuality, the Board really needs only the presentation of the items; the details really don't even need to be

recorded.

(At this point in the proceedings, in an off-the-record presentation, Mr. Snell submitted the various exhibits to the Board along with a detailed explanation of each)

MR. TUCKER: Mr. Chairman, I'd like to ask Mr. Snell a question.

CHMN. COOK: Go ahead.

Questions by Mr. Tucker:

Q Gene, do y'all have a commingle agreement on order from the Board to commingle these wells?

A On this facility?

Q Yes.

A No, to my knowledge, no.

Q Do you plan to secure a commingling order if the system is approved?

A Yes.

Q Have y'all talked to these landowners?

A To my knowledge, Mr. Oglesby has. Again, to my knowledge, there are no problems involved right now.

MR. TUCKER: That's all.

CHMN. COOK: Now, were there any further questions?

MR. JOINER: I wanted to ask a question here just for the record.

Questions by Mr. Joiner:

Q This system that you were just discussing is in the West Gilbertown Field, is that correct?

A In the West Gilbertown Field, right. That's what I get for looking upside down.

Q How often during the month would you test a well, test the production from a well, under this commingling arrangement?

A Well, of course, the minimal being one 24-hour plant test, my suggestion would be that depending upon the well itself, we have good well characteristics and these wells are not troublesome, hard runs and things like this. In other words, if they produce 29 days out of the month, two tests per month, I think, is adequate. If there are troublesome wells which the operator knows about, they should be tested more frequently because here again you are doing mechanical changes that alter what that well's capability can do. I would say no less than two times on sufficient operating wells.

Q The proposed injections on here, this is the Selma Chalk, right?

A Right.

Q Are any of the wells shown on this map in this system here producing from the Selma Chalk at the present time?

A To my knowledge, they are not, and I'm limited on my knowledge because all of the data, down-hole data, I did not get to check and go through in detail between the time that we met and what I'm testifying to right now. I can pass that information to you. There are -- I know of one well located back to the east that has been perforated throughout the Selma and the Eutaw. This was, I believe, the Johnson-Utsey Well, which was surveyed as an injection well since it's setting in the middle of a bunch of catfish ponds. We decided it wasn't...

MR. LaMOREAUX: Does the Staff have any other questions on this?

MR. TUCKER: No.

(At this point in the proceedings, Mr. Snell's presentation was again off the record)

Questions by Mr. LaMoreaux:

Q You stated that this system right now handles about 8,000 -- no, about 10,000 barrels a day, is that right?

A This is my calculated -- if you'll take approximately 25% off of that, that is what your well test that we tried to conduct in the field would actually do, but we're going to have increased production, so there is about a 25% contingency put on it.

MR. LaMOREAUX: Does the Staff have any questions?

MR. TUCKER: No.

CHMN. COOK: There are no questions by the Board. Let's go off the record just a minute.

(At this point in the proceedings, there was a brief off-the-record discussion between Board Members and Staff)

CHMN. COOK: All right. We'll go back on the record then. Are there any further questions regarding Mr. Snell's testimony?

MR. LaMOREAUX: No further questions from the Staff.

CHMN. COOK: Well, in the absence of any objections, then, for the purposes of receiving this material, we will label Phases 1, 2 and 3 as Exhibits 1, 2 and 3. The Board will receive them and take them under advisement and ask for a Staff review. Is there anyone in attendance who has any objections or any comments to make about what's just been stated and heard here?

(No response)

CHMN. COOK: Thank you, Mr. Snell, very much.

MR. SNELL: Do you want to hear from the rest of my clients now or do you want me to come back?

CHMN. COOK: We're trying to get through with Phases 1, 2 and 3. Doesn't that get all your clients?

MR. SNELL: Uh-uh! That's Mr. Oglesby and Mr. Kelton.

CHMN. COOK: That gets rid of Phases 1, 2 and 3. So there's nothing wrong with intermittently thanking you for it.

REDIRECT TESTIMONY

Statement by Mr. Snell:

MR. SNELL: Well, now we go to Mr. Otis Ainsworth. Mr. Ainsworth has two wells in the mid portion of the field that he plans to dispose in and two wells in the western part of the field, which is adjacent near and to the testimony I just got through giving.

First, this is a -- here, I'll just hand these out here.

(Mr. Snell distributed document to Members of the Board and Staff)

This is a plat, which we can label Exhibit No. 1, of the two producing wells which are the...

CHMN. COOK: Allow an interruption, if you will, Mr.

Snell. Let's see if we -- Phases 1 and 2 concern Mr. Oglesby?

MR. SNELL: And Mr. Kelton.

CHMN. COOK: And Mr. Sylte and Mr. Kelton, are those the only two people affected by Phases 1, 2 and 3?

MR. SNELL: Correct.

CHMN. COOK: In other words, now we're with Mr. Ainsworth?

MR. SNELL: Yes.

CHMN. COOK: All right. Proceed.

MR. SNELL: This plan shows the two producing wells, the Chestnut No. 1 and the Chestnut No. 2 and the water injection well, the Morgan 2, located in Section 2, 10 North, 3 West, that are operated and owned by Mr. Ainsworth. These wells, if I can abbreviate this, will be connected very similar, if not the same way, that wells in the previous testimony were. These two wells will produce independently into a system which combines the salt water, which is shown on Exhibit No. 2, whereas you have the two wells producing into a common salt water storage system and disposal system as shown on Exhibit 2. This system will be located at the site of the Chestnut No. 1 Well. Water from both heater-treaters is collected

into this storage system. The system will be installed with automatic cycles, automatic on-off controls and other devices and an injection pump leading to the C. B. Morgan No. 2 which is the proposed injection well.

At this time and because of the shortness in the preparation of this data, I do not know what the volume to be disposed of in the cycle to be, but I can convey that to the Staff very shortly and we shall amend whatever we need with design specifications. This came up very late.

The injection well, the C. B. Morgan No. 2, which I have shot a short section of the Eutaw, will be used as the injection well. At this time and also because of the brevity of time, the exact interval for injection to this well has not been determined, but because of its close association with the system or the Phase 1 system which is located directly to the south, we have zones from 3,000 feet to 3,060, 3,110 to 3,180, which are in the Basal part of the Chalk area, and we also have sand accumulations in the Eutaw for 3,300 to 3,360 approximately and below that point, too, it's plugged back TD. As I say, these are the zones of interest. This particular well is now perforated from 3,342 to 3,345, which encompasses the large resisting kick on the right hand column. Obviously,

this will not be enough to inject volume, I wouldn't feel like, of water at this time. So this program does not have a price set but I have been requested to present this data and it will be augmented almost immediately.

REEXAMINATION BY BOARD OR STAFF

Questions by Mr. LaMoreaux:

Q When did you receive the request to represent Mr. Ainsworth on this proposal?

A At 2:00 o'clock yesterday.

Q It doesn't give you a great deal of time to prepare yourself, does it?

A No, quite short indeed.

Questions by Mr. Joiner:

Q Mr. Snell, who owns the C. B. Morgan No. 2 Well?

A I do not know. Mr. Ainsworth indicated to me that there would be one of three wells selected, most probably the C-1 and 2. The wells are the designated 191, 1236 or 996 and he indicated to me at that time that this would be the well most probably used for injection. We had three wells clustered right close together, so I investigated the 996.

Questions by Mr. Eddins:

Q Has he only two wells?

A He has these two wells. Then we have two wells which are located out in the, shall we say, west field, which is very close to the Phase 2 operation of Mr. Oglesby's and that is what I was getting into next, that these are nearly adjacent to the previously referred to Phase 2 operation, which actually would be in reference to these wells right here. We're talking about that area and that area, four wells and two injectors, and if I may go to that real quick like. This is the plat of the area which you can call Exhibit 1 to Mr. Ainsworth's Utsey No. 2 disposal system located in Section 33, 11 North, 4 West, Choctaw County. We have a two-well complex similar to the other being serviced by one injection well. Exhibit No. 2 is a brief outline of the facility similar to that as has previously been explained where each well will produce in the isolated tank batteries and the common collection of salt water going to and being injected into the Utsey No. 2. The proposed or let's refer to it as the perforated section on the typical well log for this well, electric log, is from 3,648 to 3,655 feet in the Eutaw section. This was the section recommended for production, for injection by Mr. Ainsworth and we have not been able

to ascertain whether it would be adequate or not. It's involved in the same category but with much less water injection volume to be concerned with than our other programs. There is an estimated 250 to 300 barrels of salt water being produced from these two wells at the present time and it does not appear with the sections that we see on Exhibit 3, which is the down hole log, that there would be many problems in getting into several zones in the Eutaw section for the disposal of this nominal amount of water. Again, further, there has been no cost estimates or design specs for this. Mr. Ainsworth expressed to me that his intent for installing this system in good faith will be almost immediate and he was to be here but he had other meetings to attend. That's all for Mr. Ainsworth.

CHMN. COOK: The Board will, if there are no objections, the Board will accept the material presented by Mr. Snell and the exhibits as the named exhibits and take them under advisement. Let's go off the record just a minute.

(At this point in the hearing, the proceedings were off the record)

CHMN. COOK: We'll go back on the record now.

MR. SNELL: The Solatex Petroleum Company who owns two producing wells in the Gilbertown Field...

MR. LaMOREAUX: Do you have a proposal for them?

MR. SNELL: No, I just have a statement.

MR. LaMOREAUX: Is it written?

MR. SNELL: No, it's just vocal. He just requested of me, Mr. Bryan Hudson, he's the president. These wells are located south of the main injection area referred to in the past. At the present time, they are contemplating possibly laying a line for these two wells. They are, I would say, pretty fair wells. That's about as far as I can go. He requested that I...

MR. LaMOREAUX: Have you been retained by them to submit something to the Board, a proposal?

MR. SNELL: Not a proposal, as such, because I can't. I was going to say I was retained to make a statement to the fact that they're possibly planning to lay a line. That was it, but they're also planning possible other activities in the area, so I don't know, because it used to be very difficult to work all these things out. So that's all I can say, they're planning some type of activity.

MR. LaMOREAUX: Mr. Snell, do you feel like the two

Ainsworth proposals have had sufficient time placed in their preparation to make them complete and accurate enough for the Board to consider?

MR. SNELL: I feel that as far as going into the Ainsworth testimony, I would know just about what type of facilities that we'd need. A rough estimate of cost, I think, is something there that we know. The exact design volumes, I don't think, are excessive as it is in these others. I think probably the main thing is to determine what type of zones, what is in the well, things of this magnitude, should the Staff require to see and so forth. It does lack a little on that end, yes.

MR. LaMOREAUX: We have no further questions, Mr. Chairman.

CHMN. COOK: Thank you, Mr. Snell, for appearing before the Board. The Board will take it under advisement what you've presented here. The Staff will review it, and we'll try to give you an early decision.

I'm going to ask the Supervisor to call the next item.

MR. LaMOREAUX: Mr. Arden Anderson is your next witness.

ARDEN ANDERSON

appearing as a witness in his own behalf, being first duly sworn, testified as follows:

DIRECT TESTIMONY

Statement by Mr. Anderson:

MR. ANDERSON: My name is Arden Anderson, Route 4, Box 96, Pensacola. You've got some new people on the Board since I've last been here.

MR. LaMOREAUX: This is Mr. Julian Maddox from Luverne, and Mr. Drexel Cook from Elba.

CHMN. COOK: And you're new to us, too.

MR. ANDERSON: I know Senator Eddins real well. I operate four wells in the easternmost part of the Gilbertown Field. I have a little plat here which will show the location of them relative to one another with a little more information on it.

(Mr. Anderson distributed document to Members of the Board and Staff)

MR. ANDERSON: Two basic leases are the Clark No. 4 Well with a separate tank battery. Scott Paper Company owns an interest in it. The Clark Wells Nos. 1, 2 and 3 are commingled, and at present, I have a salt water collection tank for all four of the Clark Wells and the

brine is going down into the creek in the area. If you'll note on the plat the disposal well just to the west of the Clark Well there, that's the well I drilled a dry hole. It's called the Unit 115-A1. I perforated the zone that appeared to be the producing zone of another well. This particular well, and it produced nothing but salt water in large quantities and was not characteristic of the wells in the area because as a rule, they produce more oil than water, a higher oil cut than the water cut, so I saved the well and did not plug it because I anticipated someday that it would be necessary to dispose of water and I felt that since I had a zone that would produce water like this one did, it certainly would also take water in converse fashion.

I have a little sketch here, a little schematic sketch. I only have one with me. It's very simple, though.

CHMN. COOK: Is it all right with you if we label this schematic here as Exhibit No. 1, Mr. Anderson?

MR. ANDERSON: Yes sir. This is a 250-barrel tank I'm collecting water in. What I propose to do is to have a salt water pump up here operated by a mercury pressure switch and when the level in this tank reaches a certain

height, it'll kick in the pump and it'll pump the salt water to a clean salt-water tank, 210-barrel tank I have available, and from there there will be another pressure switch, a Keddenback switch (phon.), liquid level control, to handle that, and when the salt water level reaches about 10 feet in a 15-foot tank, this pump will kick in, a positive placement, 4 x 4 gas duplex pump (phon.) that I have now in use in the Pollard Field with a 15-horsepower motor, and it will merely pump the brine in that well, 2-inch tubing. It's pretty simple because I'm not an engineer, but it's working in the Pollard Field and I feel like it'll work as well in Gilbertown. I'm going to abandon the well over there and just move this equipment from the Pollard Field to the Gilbertown.

Going back to this original plat, you will note on there two Stewart Wells. At the present, I'm only producing one of them, the Stewart 1. Sometimes we run the Stewart 2, but neither of these wells make enough water hardly to see it coming out of the treaters. It's just a stream smaller than a pencil and as a temporary measure, at present, I plan to just have a tank there that we can haul the water away periodically and bring it over to this 210-barrel tank and put it in that tank for disposal.

Now, Marshall Oglesby has a couple of wells just northwest of that Stewart No. 1 Well, and I've been talking to him about joining my system over here, and if we run a pipeline, after he runs a pipeline from his well to the disposal well, well then I'll probably hook into the pipeline with the Stewart Well and kill about 10 birds with one stone, but that's basically what I have in mind.

CHMN. COOK: Gentlemen, do you have any comments or questions?

EXAMINATION BY BOARD OR STAFF

Questions by Mr. Joiner:

Q Are your perforations in the disposal well, proposed disposal well, in the Eutaw?

A Yes sir.

Q The production from the wells around there is from the Eutaw?

A Right. That has to be a different sand, though. It produced no oil at all, and well, of course, y'all have a report on this, oil production was zero. So it's undoubtedly a different sand. It apparently has a pretty good capacity. I'd like to try it and see if it wouldn't take the water, and perforate into a deeper or shallower sand, the D Sand or the A Sand.

MR. JOINER: That's all.

Questions by Mr. LaMoreaux:

Q I might have missed your statement. How much total salt water do you have involved here in this system?

A Well, counting the Oglesby water, I don't know if you were here when I mentioned...

Q No, I missed that.

A Oglesby has two wells in this area which we discussed taking the water and put his water and my water, that would be 600 barrels a day.

Q The amount from your system is what?

A From my wells?

Q Yes, your wells.

A It's between -- the well we tested about three years ago makes about 100 barrels. I suspect it makes somewhere between 100 and 200 now. Actually, the Clark No. 2 was making 90% of the brine. It's got a bad cement job in it, getting vertical migration of water, and the wells have low water production.

Q How about the Stewart Wells?

A If you took a teacup by that treater, you'd have to wait a while -- very little water.

Q You developed a procedure with these wells...

A This is just a characteristic of this sand.

Q Now, how about the Oglesby Wells -- how much brine?

A Well, Mr. Snell told me that his Mattie Clark Well was making -- where has he gone?

Q He's in the other room.

A Somewhere above 300 barrels a day, and then the Eula Jones, Eula Absen (phon.) Well that used to be operated by Joe Hutchinson, I think, made maybe 30 barrels of water.

Q You're actually talking about accepting the salt water from the two Oglesby and from all of your wells?

A Well, I told or warned Marshall that if my well had difficulty, that he'd have to...

Q Now, how long would you say it would take to implement this system?

A Well, I wrote a letter to the Board indicating that I thought it would be completed by May 1st.

MR. LaMOREAUX: I have no further questions, Mr. Anderson. We've got the material. The Board will be advised.

CHMN. COOK: Thank you, Mr. Anderson.

MR. TUCKER: Arden, did you intend to introduce that as an exhibit?

MR. ANDERSON: Yes, I'll be glad to give you this. You already have the other one.

CHMN. COOK: We labeled the other one Exhibit 1. If we may, we'll label this as Exhibit 2.

MR. ANDERSON: All right.

CHMN. COOK: Is Mr. Nichols next?

E. T. NICHOLS

appearing as a witness in his own behalf, being first duly sworn, testified as follows:

DIRECT TESTIMONY

Statement by Mr. Nichols:

MR. NICHOLS: Gentlemen, I am E. T. Nichols, here representing myself, and Mr. Cooper Wigham (phon.) who is a landowner of the wells involved, and these wells are in approximately the center of the field, just south of the well that Mr. Oglesby has.

My proposal basically is to accumulate the salt water into a tank and to then dispose of it into one of the producing wells into the Selma Chalk which has been perforated and acidized.

(Mr. Nichols distributed document to Members of the Board and Staff)

My proposal, I think, could be said to be in the form

of an exhibit with a number of parts. The first is a brief description of the proposed disposal of the salt water into the Selma Chalk. The second part is a diagram showing the actual well, the log of the well. This is followed by a diagram showing the sub-surface construction and then a diagram showing the location of the surface equipment, and finally, an estimate of the cost, which comes to the total of $2,940. The reason for disposing of this water into the Selma Chalk is that there are no salt water sands above the Selma Chalk. Also, there are no other wells in the immediate vicinity of these wells, so that I'm pretty well limited as to, from a practical point of view, as to where the water can be put.

Now, I believe it will go into the Selma Chalk. The reason I say that is this, the wells produce a very small amount of water and during the summer, I had difficulty, one of the wells was sanded up there, a well I intended to put water into. The well was sanded up. I spent a month trying to accumulate a tank of water so that I could wash that well out from the water produced by the other well and I didn't actually accumulate a tank of water. I finally gave up, bought a pump and set it on the creek and there got enough water to wash the well out, and I

had put water in the well. It does take some water, not much. I believe the well, that that zone will take the water which flows by gravity into the well, and in the event that it won't go by gravity, I have a duplex (phon.) pump on the location and my proposal is to tie the salt water line from the accumulation tank. The tank is an old stock tank that I don't need on that particular well. I'm just converting it to a holding tank for water and if the water won't go back, of course, it will or if it doesn't, what will go into the well by gravity will go -- hopefully, all of it will go, but if it doesn't, then it accumulates in the tank by gravity, and then we will pump it into the well. I believe that system will be satisfactory. I believe it will work, and if it proves that we can't dispose of the water that way, then we'll have to dispose of it in some other fashion.

I believe that if this is approved by the Board, that it can be implemented within approximately 60 days.

EXAMINATION BY BOARD OR STAFF

Questions by Mr. Joiner:

Q Mr. Nichols, your production is from the Eutaw formation?

A That's right.

Q And you're proposing to inject into the fractured Selma Chalk?

A Selma Chalk, by virtue of setting the packer to separate the Eutaw from the Chalk, putting the salt water down the annulus and just going ahead and producing the Eutaw.

Q Is there any nearby wells producing from the Selma Chalk?

A Not to my knowledge, and this well had not produced from the Selma Chalk. It was tested in the Chalk but did not produce. Now, I believe that the Chalk is of abnormally low bottom hole pressure there because of production in other areas. That would help for the water to go in there.

CHMN. COOK: Any questions, Gentlemen?

MR. LaMOREAUX: No.

CHMN. COOK: The Board, Mr. Nichols, will receive the material you've presented and take it under advisement.

MR. NICHOLS: Thank you, gentlemen.

CHMN. COOK: Is there someone else to appear on this agenda, Mr. Supervisor?

MR. LaMOREAUX: I'd like to introduce one other man that hasn't been to a meeting before, Mr. Richard Kreshner

with Shell Oil Company. This is his first attendance. He's an observer. We just want you to know we're delighted to have you.

MR. KRESHNER: Thank you, Mr. LaMoreaux.

MR. LaMOREAUX: We're delighted to have Shell operating here in central west Alabama. I understand you have an office here in Tuscaloosa now.

MR. KRESHNER: We do, and it's quite a pleasure to be here.

MR. LaMOREAUX: We just hope the very best for Shell in its operations here.

MR. KRESHNER: Thank you very much.

MR. LaMOREAUX: Come back to our Board meeting.

MR. KRESHNER: I certainly shall.

MR. LaMOREAUX: I think now that the final...

CHMN. COOK: Has everybody appeared on salt water disposal? Is there anyone here that's got a statement to make or any comments to make to this Board?

(No response)

CHMN. COOK: Otherwise, we'll go to the next item on the agenda.

MR. LaMOREAUX: Mr. Chairman, before you go to the next item, I think you should know that your order reads

that the operators at Gilbertown and Carlton were instructed to have written proposals to the State Oil and Gas Board on or before November 1, 1970. Then this order -- some of those proposals came in and there weren't discussions with many of the operators and our Staff, and you will recall that we extended the time to December 1st, at which time there was to be submitted to the Board the written plan for disposal of salt water in these two fields.

Now you have had an opportunity to not only hear any statements from the operators involved, but at a time we have passed the deadline for the submittal of proposals with respect to salt water, and of course, your order stated that unless those proposals were presented to the Board by that deadline date, that the operators that have not submitted orders would have to stop producing oil or gas and brine until such a time when an acceptable proposal was submitted to the Board.

I think this order that you have issued should be considered at this time in relation to the submittal of proposals from the two fields or at least considered at this time. Now I would recommend you go on to the next item on the agenda.

CHMN. COOK: All right, sir.

MR. LaMOREAUX: The next item is approval of the minutes of August 21 and September 25, 1970 -- off the record.

(At this point in the proceedings, there was a brief off-the-record discussion concerning the above mentioned minutes)

MR. LaMOREAUX: The September 25th minutes, I'm going to have to check on.

MR. BAILEY: I haven't looked at them.

MR. LaMOREAUX: I'm not sure that these minutes have been reviewed and approved by all the members of the Staff responsible for this, so I can't make a recommendation to you for approval of the minutes.

MR. EDDINS: We will continue it to the next meeting.

CHMN. COOK: Would you like to dispense with the approval of the minutes?

MR. LaMOREAUX: We're not in a position to approve the minutes of August 21st or September 25th.

MR. EDDINS: I make a motion that we carry them over to the next meeting of January 29th.

CHMN. COOK: Do I hear a second?

MR. MADDOX: I second it.

CHMN. COOK: Those in favor, say "aye" -- opposed, "no."

(All Board Members voted "aye")

CHMN. COOK: The motion carried.

MR. LaMOREAUX: This is the last item on the agenda. They've already decided the next meeting would be in Tuscaloosa on January 29th.

CHMN. COOK: Yes.

MR. EDDINS: I move that the plan submitted by the Oleum Petroleum Corporation in the South Carlton Field be approved.

MR. MADDOX: I second the motion.

CHMN. COOK: All those in favor, say "aye" -- opposed "no."

(All Board Members voted "aye")

CHMN. COOK: The motion carried unanimously.

MR. EDDINS: I move that plans submitted for salt water disposal in the Gilbertown Field, Choctaw County, Alabama, by Marshall Oglesby, E. T. Nichols, and Arden Anderson, be approved subject to Staff review and approval.

MR. MADDOX: I second the motion.

CHMN. COOK: All those in favor, say "aye" -- opposed "no."

(All Board Members voted "aye")

CHMN. COOK: The motion carried unanimously.

MR. EDDINS: I move that all wells in the Gilbertown Field not specifically covered by plans approved here today be shut in until such plans have been submitted and approved.

MR. MADDOX: I second the motion.

CHMN. COOK: Those in favor, say "aye" -- opposed, "no."

(All Board Members voted "aye")

CHMN. COOK: The motion carried unanimously.

MR. EDDINS: I move that the Special Field Rules for the unnamed field in the Carter Sand, Lamar County, Alabama, be approved as amended.

MR. MADDOX: I second the motion.

CHMN. COOK: Those in favor, say "aye" -- opposed, "no."

(All Board Members voted "aye")

CHMN. COOK: The motion carried unanimously. Shall we go into executive session now?

MR. EDDINS: I move we adjourn.

MR. MADDOX: I second it.

CHMN. COOK: Those in favor, say "aye" -- opposed, "no."

(All Board Members voted "aye")

CHMN. COOK: The motion carried unanimously. We stand adjourned.

(Whereupon, at 1:20 P.M., December 18, 1970 the Board adjourned the Regular Session of the hearing to go into Executive Session.)

REPORTER'S CERTIFICATE

STATE OF ALABAMA)
)
COUNTY OF TUSCALOOSA)

I, Lou M. Chambers, Hearings Reporter in and for the State of Alabama, do hereby certify that on Friday, December 18, 1970, in the Board Room of the State Oil and Gas Board Building, University Campus, Tuscaloosa, Alabama, I reported the proceedings before the State Oil and Gas Board of Alabama in Regular Session; that the foregoing 91 typewritten pages contain a true and accurate verbatim transcription of said proceedings to the best of my ability, skill, knowledge and belief.

I further certify that I am neither of kin nor of counsel to the parties to said cause, nor in any manner interested in the results thereof.

Lou M. Chambers

LOU M. CHAMBERS
Hearings Reporter
State of Alabama