CASE 2549: Application of CITIES SERVICE for a dual completion of its HODGES 7

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liction, Transcript,

11 Exhibits, Etc.

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE No. 2549 Order No. R-2245

APPLICATION OF CITIES SERVICE PETROLEUM COMPANY FOR A DUAL COMPLETION, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on May 10, 1962, at Santa Fe, New Mexico, before Danie! S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 28th day of May, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Mutter, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Cities Service Petroleum Company, seeks permission to complete its Hodges "B" Well No. 4, located in Unit M, Section 1, Township 25 South, Range 37 East, MMPM, Lea County, New Mexico, as a dual completion (conventional) in the Morth Justis Tubb-Drinkard Pool and in the Morth Justis-Devonian Pool with the production of oil from each zone to be through parallel strings of 2 3/8-inch tubing.
- (3) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.
- (4) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Cities Service Petroleum Company, is hereby authorized to complete its Hodges "B" Well No. 4, located

-2-CASE No. 2549 Order No. R-2245

in Unit M, Section 1, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) in the North Justis Tubb-Drinkard Pool and in the North Justis-Devonian Pool with the production of oil from each zone to be through parallel strings of 2 3/8-inch tubing.

PROVIDED HOWEVER. That the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations.

PROVIDED FURTHER, That the applicant shall take packerleakage tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Devonian formation.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

A. L. PORTER, Jr., Member & Secretary

GOVERNOR EDWIN L. MECHEM CHAIRMAN

State of New Mexico il Conservation Commission

LAND COMMISSIONER E. S. JOHNNY WALKER MEMBER



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 871 SANTA FE

May 28, 1962

Mr. Jason Kellahin Kellahin & Fox Attorneys at Law Box 1713 Santa Fe, New Mexico

Re: Case No. 2549
Order No. R-2245

Applicant:

Cities Service Petroleum Company

Dear Sir:

ir/

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

Carbon copy of order also sent to:

Hobbs OCC ______

Artesia OCC_____
Aztec OCC___

OTHER

C. 620 I.S 49

CITIES SERVICE PETROLEUM COMPANY

BOX 97, 500 BROADMOOR BLDG. HOBBS, NEW MEXICO April 17, 1962

27

New Mexico (il Conservation Commission Box 871 Santa Fe. New Mexico

Attention: Mr. A. L. Porter, Jr.

Gent lemen:

Cities Service Petroleum Company respectively requests that the Bil Conservation Commission schedule a hearing at the earliest possible date to consider this application to complete the Hodges 8 #4, location 990 FSL, 660 FWL, Unit M, Section 1-T25S-R37E, Lea County, New Mexico, as a dual completion in the Drinkard and Bevonian Pools. Production of oil from these pools will be through two strings of 2-3/811 tubing.

A plat is attached showing the location of Hodges 8 #4 together with location of all offset wells. Also, attached is a diagramatic sketch of the proposed dual completion - New Mexico Oil Conservation Commission "Application for Dual Completion" Form.

Very truly yours,

Cities Zervice Petroleum Company

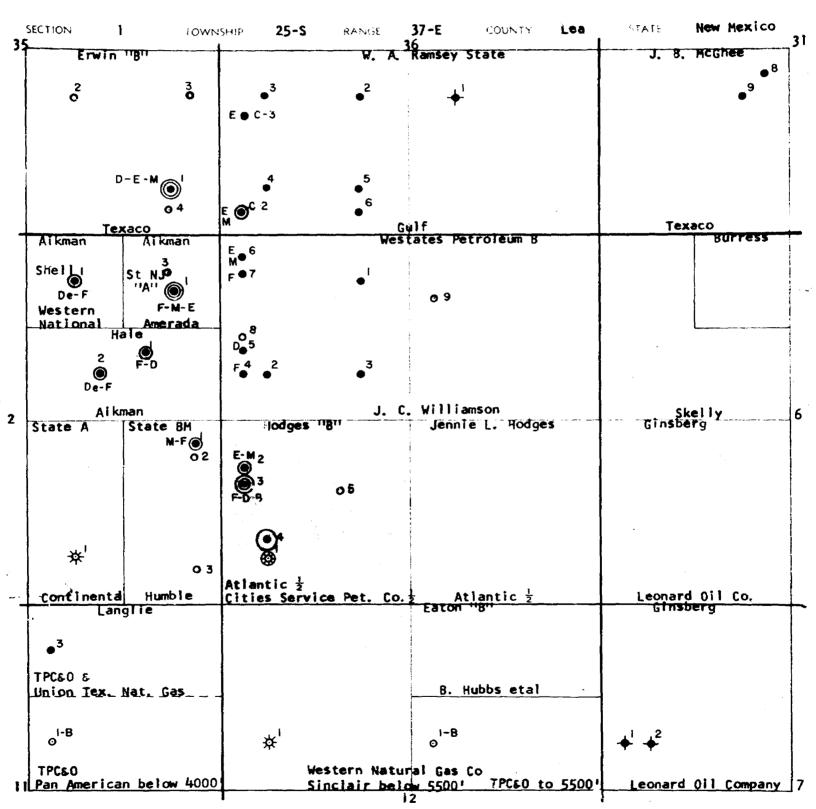
E. F. Motter Asst. Bivision Engineer

EFM/js

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NEUTRO 915 TOLSA TOLLAHOMA SECTION PLAT
Scale: 1 inch 660 feet
Pointed in 195 A

CITIES SERVICE PETROLEUM COMPANY



D - Drinkard

E - Ellenburger

F - Fusselman

M - McKee De- Devonian

B - Blinebry

Plat Showing the Proposed

Completion, Hodges B #4 and off-

set operators

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

APPLICATION FOR DUAL COMPLETION

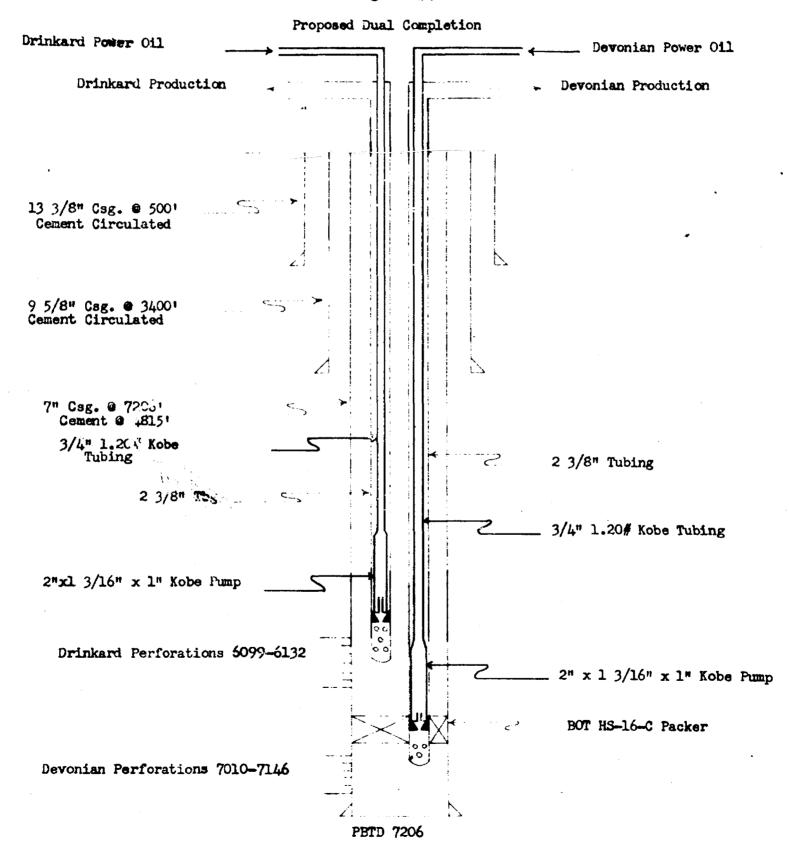
Upper Zone o. Name of reservoir b. Top and Bottom of	
Citles Service Petroleum Co. Hodges 131 ocation Unit Section Township of Well R	Range 37-5 Range 37-5 mpletion of a well in these same pools of in the same tor, Lease, and Well No.: Lower Zone Devonian 7010-7042 7104-7103 7134-7146 7124-7123
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zones within one mile of the subject well? YES NO A	Lower Zone Devonian 7010-7042 7134-7146 7124-7123
. If answer is yes, identify one such instance: Order No; Opera; Opera	Lower Zone Devonian 7010-7042 7104-7108 7134-7146 7124-7123
The following facts are submitted: Upper Zone o. Name of reservoit Drinkard b. Top and Bottom of Pay Section (Perforations) c. Type of production (Oil or Gas) d. Method of Production (Flowing or Artificial Lift) The following are attached. (Please mark YES ot NO)	Lower Zone Devonian 7010-7042 7104-7108 7134-7146 7124-7123
Upper Zone o. Name of reservoir b. Top and Bottom of G106-6103 Pay Section G059-6101 (Perforations) 6123-6132 c. Type of production (Oil or Gas) d. Method of Production (Flowing or Artificial Lift) Fump The following are attached. (Please mark YES of NO)	7010-7042 7104-7108 7134-7146 7124-7123
Upper Zone o. Name of reservoir b. Top and Bottom of G106-6108 Pay Section G059-6101 (Perforations) 6123-6132 c. Type of production (Oil or Gas) d. Method of Production (Flowing or Artificial Lift) Fump i. The following are attached. (Please mark YES of NO)	7010-7042 7104-7108 7134-7146 7124-7123
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c. Type of production (Oil or Gas) d. Method of Production (Flowing or Artificial Lift) 4. The following are attached. (Please mark YES or NO)	
d. Method of Production (Flowing or Artificial Lift) 4. The following are attached. (Please mark YES or NO)	
4. The following are attached. (Please mark YES of NO)	
4. The following are attached. (Please mark YES of NO)	Pump
c. Waivers consenting to such dual completion from each offset operator, or been furnished copies of the application. d. Electrical log of the well or other acceptable log with tops and bottoms of the reon. (If such log is not available at the time application is filed, it should be the copy of the lease on which this well is located together with the	of producing zones and intervals of perforation indicated nall be submitted as provided by Refer 112-45
5. S. Williamson, Goo YEJ Tower \$1	
es as \$1:11685GB; UUU 764 [5885]	nciair Oll & Gas Company, 520 E. Broad
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Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

CITIES SERVICE PETROLEUM COMPANY

Hodges B #4



OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

Date 5/22/62 Hearing Date gam 5/10/62

DSN & SF My recommendations for an order in the above numbered cases are as Enter an order approving litelle Service's proposed dual completion (conventional) of its they Hodges "B" Weel ho. 4 located in Unit M Dec 1, T 265, R 31E, NMPM to produce ail from the h. Justis
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Completion of annually thereafter
Completion of annually thereafter
during the GOR test period
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DOCKET: EXAMINER HEARING - THURSDAY - MAY 10, 1962

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, as alternate examiner:

CASE 2547:

Application of Pan American Petroleum Corporation for a triple completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the triple completion (conventional) of its Greenwood Unit Well No. 7, located in Unit H, Section 12, Township 19 South, Range 31 East, Eddy County, New Mexico, in such a manner as to permit the production of oil from undesignated Strawn, Wolfcamp, and Bone Spring pools through parallel strings of tubing.

CASE 2548:

Application of Pan American Petroleum Corporation for an exception to Order No. R-660, Caprock-Queen Pool, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the Special Rules and Regulations of the Caprock-Queen Pool, Order No. R-660, for the assignment of a gas allowable equivalent to the total reservoir voidage of a top allowable oil well producing at the limiting GOR of 2000: 1 for its State "AK" Well No. 1 located in Unit N, Section 19, Township 15 South, Range 31 East, Chaves County, New Mexico.

CASE 2549:

Application of Cities Service Petroleum Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its Hodges B Well No. 4, located in Unit M of Section 1, Township 25 South, Range 37 East, Lea County, New Mexico, as a dual completion (conventional) in the North Justis Tubb-Drinkard Pool and Devonian formation adjacent to the North Justis-Devonian Pool with the production of oil from each zone to be through parallel strings of 2 3/8-inch tubing.

CASE 2550:

Application of Texaco Inc., for a quadruple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its G. L. Erwin "B" NCT-2 Well No. 4, located in Unit O of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico, as a quadruple completion (tubingless) in the North Justis-Fusselman, North Justis-Devonian, North Justis Tubb-Drinkard and North Justis-

Docket No. 14-62

Blinebry Pools, with the production of oil from all zones to be through parallel strings of small diameter casing cemented in a common well bore.

CASE 2551:

Application of Texaco Inc., for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its G. L. Erwin "A" Well No. 1, located in Unit N of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico, as a triple completion (tubingless) in the North Justis-Devonian, North Justis-Tubb Drinkard and North Justis-Blinebry Pools with the production of oil from all zones to be through parallel strings of small diameter casing cemented in a common well bore.

CASE 2552:

Application of Texaco Inc., for a quadruple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order R-2109 to permit the quadruple completion (tubingless) of its G. L. Erwin "B" NCT-2 Well No. 2, located in Unit J of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico, in the North Justis-Blinebry Pool, North Justis Tubb-Drinkard Pool, an undesignated Paddock pool and an undesignated Devonian pool with the production of oil from all four zones to be through parallel strings of 2 3/8-inch casing cemented in a common

CASE 2553:

Application of Texaco Inc. for a triple completion, Lea well bore. County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order R-2181 to permit the triple completion (conventional) of its C. H. Weir "B" Well No. 5, located in Unit G of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, in the Skaggs-Giorieta and Skaggs-Drinkard Oil Pools and in an undesignated Blinebry Oil pool with the production of oil from the Glorieta and Drinkard zones to he through parallel strings of 2 1/16-inch tubing and the production of oil from the Blinebry zone to be through a dual zone flow tube and a string of 1-inch tubing.

CASE 2554:

Application of T. F. Hodge for an order creating a new pool and establishing temporary rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new pool for Pennsylvanian production; the discovery well for said pool is the Humble-State Well No. 1, located in

-3-

Docket No. 14-62

Unit N of Section 26, Township 10 South, Range 33 East, Lea County, New Mexico, completed in the Bough "C" zone of the Pennsylvanian formation with perforations from 9667 feet to 9671 feet. Applicant further seeks establishment of special rules and regulations governing said pool, including 80-acre proration units.

CASE 2555:

Application of Gulf Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its J. F. Janda (NCT-F) well No. 6, located in Unit D of Section 4, Township 22 South, Range 36 East, Lea County, New Mexico, as a dual completion (conventional) in the Jalmat Gas Pool and South Eunice Pool with the production of oil from the Jalmat Gas Pool to be through a string of 1 1/4-inch tubing and the production of oil from the South Eunice Pool to be through a parallel string of 2 3/8-inch tubing.

CASE 2556:

Application of Gulf Oil Corporation for an unorthodox oil well location and a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its Lillie Well No. 3, located 2310 feet from the North line and 330 feet from the West line of Section 23, Township 24 South, Range 37 East, Lea County, New Mexico, as a dual completion (conventional) in the Fowler-Fusselman and Fowler-Ellenburger Pools with the production oil from both zones to be through a parallel strings of tubing. Said well is at an unorthodox location under the Fowler-Ellenburger Pool Rules.

CASE 2557:

Application of Gulf Oil Corporation for a unit agreement and a secondary recovery project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Dollarhide Devonian Unit Agreement embracing 765.25 acres, more or less, of Federal and State lands in Townships 24 and 25 South, Range 38 East, Lea County, New Mexico. Applicant further seeks permission to institute a secondary recovery project in the proposed West Dollarhide Devonian Unit Area by injection of water into the Devonian formation into certain wells located in said unit.

1

BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico May 10, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Cities Service Petroleum Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its Hodges B Well No. 4, located in Unit M of Section 1, Township 25 South, Range 37 East, Lea County, New Mexico, as a dual completion (conventional) in the North Justis Tubb-Drinkard Pool and Devonian formation adjacent to the North Justis-Devonian Pool with the production of oil from each zone to be through parallel strings of 2 3/8-inch tubing.

Case 2549

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: We will call next Case 2549.

MR. MORRIS: Application of Cities Service Petroleum

Company for a dual completion, Lea County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, representing the applicant. We'll have one witness.

(Witness sworn.)



FARMINGTON, N. M. PHONE 325.1182

(Whereupon, Applicant's Exhibits 1 through 3 were marked for identification.)

E. F. MOTTER

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

- Will you state your name, please? Q
- E. F. Motter.
- By whom are you employed and in what position?
- Cities Service Petroleum Company, petroleum engineer.
- Have you previously testified before the Oil Conserva-Q tion Commission and had your qualifications made a matter of record?
 - Yes. I have. A

MR. KELLAHIN: Are the qualifications satisfactory to the Examiner?

MR. NUTTER: Yes, sir.

- (By Mr. Kellahin) Are you familiar with the application of Cities Service in Case 2549?
 - Yes. A
- Will you state what Cities Service proposes in this application?



A We propose to dual the Hodges "B" No. 4 in the North Justis Pool to the Devonian and Drinkard formations.

Q Now, referring to what has been marked as Exhibit No. 1, would you discuss the information shown on that exhibit?

A Yes, this is a plat of the Hodges "B" lease shaded yellow with the subject well circled in red. We have several other wells on this lease, No. 1 is a gas well in the old Justis Pool. No. 2 is an Ellenburger Montoya dual. No. 3 is a Fusselman Drinkard Blinebry dual. No. 4, we are asking for a Drinkard dual, and No. 5 will be a Devonian single completion.

Q Now, referring to what has been marked as Exhibit No. 2, would you discuss the proposed completion?

A Yes, this Hodges "B" 4 will have to be artificially lifted. We propose to run two strings of 2 3/8-inch tubing with a Brown packer set immediately above the Devonian perforations at approximately 6950 feet. Inside of this two inch tubing will be a string of three-quarter inch tubing inside of each string of 2 3/8ths these two zones will be pumped with a Kobe pump. In this manner we expect to be able to produce a maximum of 200 barrels a day from each zone total fluid with this type of installation.

Q Both zones will have to be artificially lifted, is that correct?

Yes, that's correct. During our initial testing we



ALBUQUEROUE, N. M. PHONE 243.6691

had to swab to get tests on both zones.

You say this is a Brown packer, is that a permanent type packer?

No, it's not a permanent type packer, but it takes a A special tool to retrieve it. This particular packer has been used rumerous times and I think we ourselves have presented testimony concerning this packer before this Commission before.

- It has been approved by the Commission?
- Yes.
- Is this a type of completion that has been approved Q by the Commission before?
- Yes, I believe that Amerada has a case of similar installation.
- Have the two zones involved here been approved by the Q Commission for multiple completion elsewhere?
- Yes, they have, in this particular field these two zones have been approved for quadrups and triples before, but I believe never as a dual. This is the first dual.
- In your opinion does this type of completion adequately protect the producing formation?
 - Yes, I do. Α
 - Can you make packer leakage tests? Q
 - Yes, we can. We haven't done it as yet, but we will Α



Y-MEIER REPORTING SERVICE, Inc.

propose to do so if and when this order is entered. I might give you a little information on the two zones. The gravity of the Devonian on test was about $34\frac{1}{2}$, the Drinkard is $37\frac{1}{2}$, the Devonian on a swab test produced 161 barrels of oil in twenty-four hours. That well has not been tested since that swabbing test. We have tested the Drinkard just the early part of this week by the use of this Kobe equipment and it potentialed or it produced 110 barrels of oil and $2\frac{1}{2}$ barrels of water in twenty-four hours.

- Q Is there any difference in the GOR's of the two zones?
- A I don't think I have a GOR on the swabbing test. I don't have a GOR on this last test either, but I know that both of them have never been known to be in excess of 2,000. Those, of course, will be filed with the potential.
- Q Now, referring to what has been marked as Exhibit No. 3, will you discuss the installation shown on that exhibit?
- A Well, as stated previously, we have several wells producing from several zones and we have permission to commingle all this fluid, and we have a picture of the lease with an overlay of the commingling facilities. If you look at the lease, first No. 4 down here indicates two lines going, or actually four lines to the No. 4 well, two of those are power oil lines and two of them are return production lines, Drinkard and Devonian.



ALBUQUERQUE, N. M. PHONE 243.6391 Looking at the overlay on the commingling system, this Devonian and Drinkard production will come into their own separators where samplers and meters are provided to meter this production prior to commingling. We'll also have a test separator that we can test those wells any time that we so desire.

The fluid, the power oil fluid from the Kobe power unit will be metered in each zone also. These meter readings will be deducted from the overall production from the Drinkard and Devonian zones in order to get the net production from those wells at the end of each month.

- Do you have anything further to add to your testimony? Q
- Well, I believe that's about it. We do have administrative approval for the commingling. I might add originally that the commingling authorization included the Blinebry, but after production all we had at the time of seeking the commingling order was the test data, and we found the Blinebry to be sour and it's had to be tanked in separate batteries, the commingling has been so amended that the Blinebry is tanked in separate batteries.
- Were Exhibits 1, 2 and 3 prepared by you or under your Q supervision?
 - Yes, they were. A

MR. KELLAHIN: At this time we would like to offer



in evidence Exhibits 1, 2 and 3.

MR. NUTTER: Applicant's Exhibits 1, through 3 will be entered in evidence.

MR. KELLAHIN: That's all the questions I have.

MR. NUTTER: Any questions of Mr. Motter?

MR. MORRIS: Just one.

MR. NUTTER: Mr. Morris.

CROSS EXAMINATION

BY MR. MORRIS:

Q The purpose of your Exhibit No. 3, as I understand it, is just to explain to the Commission what has happened is happening with respect to the commingling and ACT on this lease and is not really in support of any application here today?

A No, that is correct. The thing we wanted to point out is that we would meter the power oil so we will know how much oil is being produced from the Drinkard and other formations since it's been commingled.

Q That wasn't contemplated at the time that you asked for your original commingling authority?

A No, that's correct, because we didn't think we would have to artificially lift at that time.

MR. MORRIS: Thank you.

BY MR. NUTTER:



- Mr. Motter, is the cement circulated on the 13 3/8? Q
- Yes. I believe it is. I can check that right quick. Yes, it's circulated.
 - What is the top of the cement on the 9 5/8? Q
 - 9 5/8ths, cement circulated.
 - How about the top on the 7 inch?
 - Top of the cement is at 5550.
 - How many sacks were used there, please?
 - We used 500 sacks.
- So that top of the cement is above the uppermost perforation in the well?
 - That's correct.
 - What are the setting depths of the tubing?
- Well, the Devonian perforations are at 7,010 to 7146. A The packer will probably sit about 6950, I think I do have the depth of the packer here if you'll bear with me a minute. The top of the packer is at 6971. The short string is at 6108. Of course, the long string is set into the packer.
- You don't have any pressure information on either of these zones, is that correct?
 - No, that's correct. Well, I have drill stem pressures.
 - Yes, if you have the drill stem pressures. Q
 - I will have to go back and look those up here. We



only ran a drill stem test on the Devonian. The final shut in pressure was 1915 pounds, thirty minute shut in.

Q And the gravity on the Drinkard is $37\frac{1}{2}$ and on the Devonian 34, is that correct?

34½, correct, three degrees difference.

Q Now, with respect to this commingling installation, Mr. Motter, on this common test line in back of the separators --

Α Yes.

Q -- there are some three-way valves shown there. they automatically controlled valves?

They are pneumatic valves that can be tied into an automation system. We operate them manually as such, but this particular drawing is not complete in itself. I have the drawings with me that we submitted on the commingling order. There are other valves involved which, when this three-way valve is switched and another valve is shut in to prevent any oil going through that meter except the well on test.

This doesn't reflect the entire installation?

No. if we take the Drinkard, if a three-way valve is open for a three-way test, it goes down to the test separator down-It has a valve which is manipulated at the same time, which puts that production back into the regular Drinkard production.

So these are manually controlled, but they're tied to Q



another automatically controlled valve?

A Yes, they're pneumatic and simply a small valve opens and closes two valves at one time.

Q I see.

A I have a small one that we filed with the commingling order.

Q We probably have that in our files.

A You do have.

MR. NUTTER: Does anyone have any questions of Mr.

Motter? Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: No.

MR. NUTTER: Does anyone have anything further in Case 2549? We will take the case under advisement.

ALBUQUERQUE PHONE 243



STATE OF NEW MEXICO SS COUNTY OF BERNALILLO)

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 28th day of May, 1962.

Notary Public-Court Reporter

My commission expires:

June 19, 1963.

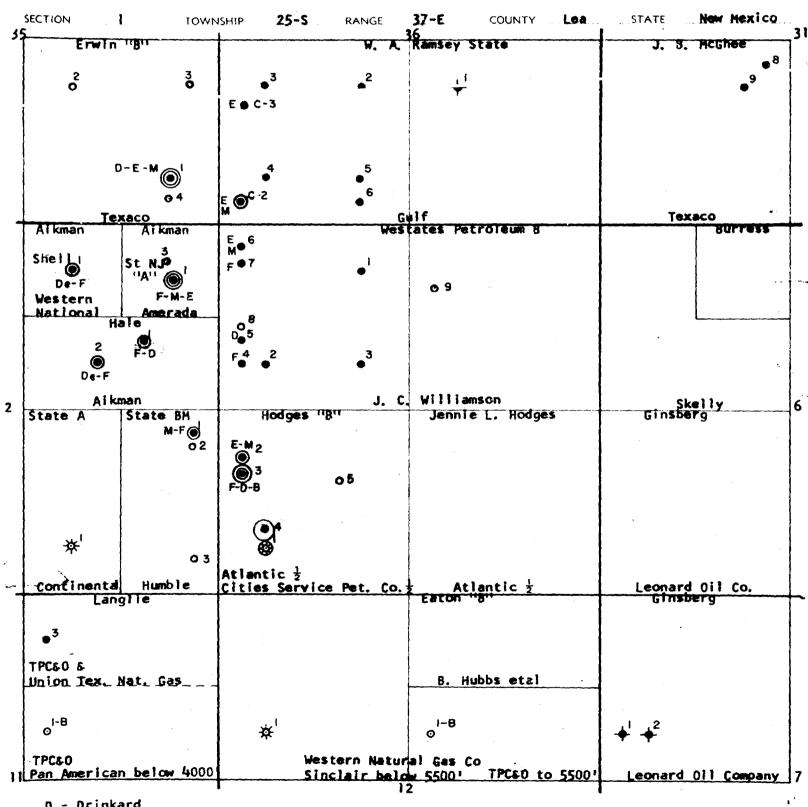
I do hereby certify that the foregoing is a complete record of the proceedings in the Examinar hearing of Case No 2546

Oil Conservation Coumission



" ROSS WARTIN CO PLAT inch = 660 feet in U.S.A.

CITIES SERVICE PETROLEUM COMPANY



D - Drinkard

E - Ellenburger

F - Fusselman

M - McKee

De- Devonian

B - Blinebry

set operators

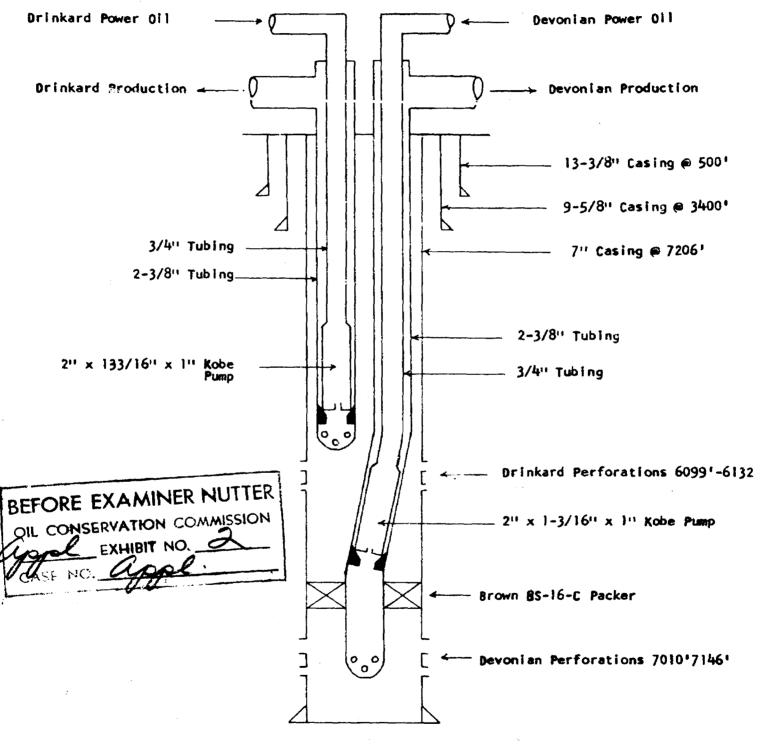
Plat Showing the Proposed Completion, Hodges B #4 MEEORE EXAMINER NUTTER OIL CONSERVATION COMMISSION

EXHIBIT NO. 2549

CITIES SERVICE PETROLEUM COMPANY

HODGES "B" NO. 4

DUAL COMPLETION



PBTD 7206*