(ASE MO. 3094

APPlication,
Transcripts,
SMAIL Exhibits
FTC.

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 11, 1965

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

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CASE 3283: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the adoption of a new "Manual of Back-Pressure Testing of Gas Wells" in the State of New Mexico, said manual being an adaptation of the test manual recently adopted by the Interstate Oil Compact Commission. Modification of several existing gas well test forms and adoption of several new forms will also be considered.

A copy of the proposed testing manual, complete with tables, charts, and specimens of the various forms, is available for inspection in the Santa Fe, Hobbs, Aztec, and Artesia offices of the Commission.

- CASE 3284: Application of Foster Morrell for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Willow Draw Unit Area comprising 3840 acres, more or less, of State and Federal lands in Township 20 South, Range 26 East, Eddy County, New Mexico.
- CASE 3285: Application of Richfield Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Avalon Unit Area comprising 11,154 acres, more or less, of Federal, State and Fee lands in Township 21 South, Ranges 25 and 26 East, Eddy County, New Mexico.
- CASE 3286: Application of Skelly Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks and thority to institute a waterflood project in its Skelly Penrose "3" Unit, Langlie-Mattix Pool, Lea County, New Mexico, by the injection of water into the Queen formation through 33 injection wells in Sections 31 and 32, Township 22 South, Range 37 East, and Sections 4, 5, 6, 7, 8 and 9, Township 23 South, Range 37 East.
- CASE 3287: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Langlie-Mattix Pool by the injection of water into the Queen formation through two wells in Section 21, Township 24 South, Range 37 East, Lea County, New Mexico.
- CASE 3288: Application of Tenneco Oil Company for directional drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to recomplete by means of directional drilling the following wells:

TOWNSHIP 29 NORTH, RANGE 9 WEST Florance No. 22, Unit H, Section 12

TOWNSHIP 30 NORTH, RANGE 9 WEST Florance No. 2, Unit A, Section 20 Florance No. 3, Unit M, Section 22 Florance No. 4, Unit L, Section 10

TOWNSHIP 30 NORTH, RANGE 9 WEST - Cont'd Florance No. 6, Unit M, Section 23 Florance No. 13, Unit B, Section 18 Florance No. 20, Unit B, Section 24 Prichard No. 1, Unit M, Section 1 Riddle No. 1, Unit B, Section 21 Riddle No. 2, Unit N, Section 17 State No. 1, Unit M, Section 32 State No. 2, Unit M, Section 16 Florance No. 8, Unit N, Section 14 Florance No. 16-X, Unit A, Section 6

TOWNSHIP 30 NORTH, RANGE 8 WEST Florance No. 39, Unit B, Section 35 Florance No. 45, Unit G, Section 22 Florance No. 29, Unit X, Section 25 Florance No. 37, Unit H, Section 6 Florance No. 40, Unit G, Section 21 Moore No. 1, Unit N, Section 8

All of the above wells are presently completed in the Blanco-Mesa-verde Pool. Applicant proposes to set a whipstock above the Mesa-verde producing interval and to directionally drill recompleting said wells in the Mesaverde formation, and in some instances, to further drill to the Dakota producing interval thereby permitting dual completion of the wells to produce gas from the Blanco-Mesa-verde and Basin-Dakota Gas Pools. Applicant further proposes to conduct appropriate deviation tests to ensure that none of the wells is completed nearer than 200 feet to the cuter boundaries of its provation unit.

- CASE 3289: Application of Kewanee Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Atoka-Grayburg Unit Area comprising 560 acres, more or less, of fee land in Sections 13 and 14, Township 18 South, Range 26 East, Eddy County, New Mexico.
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CASE 3092 and CASE 3093 (Reopened):

In the matter of Case No. 3092 and Case 3093 being reopened pursuant to the provisions of Orders Nos. R-2756 and R-2757, which orders established 80-acre spacing units for the Osudo-Upper Bone Spring

- 3 - August 11, 1965 Examiner Hearing

Pool and the Osudo-Lower Bone Spring Pool, Lea County, New Mexico, for a period of one year. The subject pools have apparently been depleted and these cases will be dismissed in the absence of evidence requiring other action.

CASE 3073: (Reopened and continued from the July 28, 1965 Examiner Hearing)

In the matter of Case No. 3073 being reopened pursuant to the provisions of Order No. R-2758, which order, as amended by Orders Nos. R-2758-A and R-2758-B, established 160-acre oil well spacing and 320-acre gas well spacing for the Tocito Dome Pennsylvanian "D" Oil Pool, San Juan County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre oil well spacing and 160-acre gas well spacing, or such other spacing as may seem proper.

Application of Texaco Inc. for the creation of a new pool or in the alternative for a non-standard location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for the production of oil from the Bough "B" formation in Section 14, Township 12 South, Range 34 East, Ranger Lake Field, Lea County, New Mexico. Applicant, in the alternative, seeks authority to drill its State DA Well No. 1 at an unorthodox location within 150 feet of the center of Unit K, Section 14, Township 12 South, Range 34 East, Ranger Lake Pennsylvanian Pool, Lea County, New Mexico.

(Note: The above case, at the request of the applicant, will be dismissed.)

CASE 3281 (continued from the July 28, 1965 Examiner Hearing):

Application of Samuel G. Dunn for a two-well proration unit and an unorthodox location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill and produce the second well on the 160-acre oil proration unit comprising the SW/4 of Section 26, Township 26 North, Range 1 East, Puerto Chiquito-Gallup Oil Pool, Rio Arriba County, New Mexico, the 160-acre allowable to be produced from either well in any proportion. Said second well would be drilled at an unorthodox location 1720 feet from the South line and 460 feet from the West line of said Section 26. (The SW/4 of Section 26 is currently dedicated to a well in Unit M of said section.) In the alternative, applicant seeks the creation of two non-standard 80-acre proration units comprising the N/2 SW/4 and S/2 SW/4 of said Section 26 to be dedicated to the proposed well and the existing well, respectively.

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. 3093 Order No. R-2757 NOMENCLATURE

APPLICATION OF THE BRITISH-AMERICAN OIL PRODUCING COMPANY FOR THE CREATION OF A NEW OIL POOL AND SPECIAL POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 22, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 300 day of August, 1964, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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 the cause and the subject matter thereof.
- (2) That the applicant, The British-American Oil Producing Company, seeks the contaction of a new oil pool for Lower Bone Spring production and the promulgation of temporary special rules and regulations governing said pool, including a provision for 80-acre spacing.
- (3) That the North Wilson Deep Unit Well No. 1, located in Unit O of Section 31, Township 20 South, Range 36 East, NMPM, Lea County, New Mexico, has discovered a separate common source of supply which should be designated the Osudo-Lower Bone Spring Pool; that the vertical limits of said pool should be the zone encountered in said well between 10,000 and 10,200 feet; and that

-2-CASE No. 3093 Order No. R-2757

the horizontal limits of said pool should be the SE/4 of Section 31, Township 20 South, Range 36 East and Lots 2, 3, 6, and 7 of Section 5, Township 21 South, Range 35 East, NMPM, Lea County, New Mexico.

- (4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 80-acre spacing units should be promulgated for the Osudo-Lower Bone Spring Pool.
- (5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.
- (6) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.
- (7) That this case should be reopened at an examiner hearing in August, 1965, at which time the operators in the subject pool should be prepared to appear and show cause why the Osudo-Lower Bone Spring Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

- (1) That a new pool in Lea County, New Mexico, classified as an oil pool for Lower Bone Spring production is hereby created and designated the Osudo-Lower Bone Spring Pool, with vertical limits comprising the zone encountered between 10,000 and 10,200 feet in the North Wilson Deep Unit Well No. 1, located in Unit O of Section 31, Township 20 South, Range 36 East, NMPM, Lea County, New Mexico, and horizontal limits comprising the SE/4 of Section 31, Township 20 South, Range 36 East and Lots 2, 3, 6, and 7 of Section 5, Township 21 South, Range 35 East, NMPM, Lea County, New Mexico.
- (2) That temporary Special Rules and Regulations for the Osudo-Lower Bone Spring Pool are hereby promulgated as follows:

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SPECIAL RULES AND REGULATIONS FOR THE OSUDO-LOWER BONE SPRING POOL

- RULE 1. Each well completed or recompleted in the Osudo-Lower Bone Spring Pool or in the Lower Bone Spring formation within one mile thereof, and not nearer to or within the limits of another designated Lower Bone Spring pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.
- RULE 2. Each well shall be located on a standard 80-acre unit comprising the N/2, S/2, B/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.
- RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a governmental quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.
- RULE 4. The first well drilled on every standard or non-standard unit shall be located in the NE/4 or SW/4 of a governmental quarter section. All wells shall be located within 200 feet of the center of a governmental quarter-quarter section.
- RULE 5. The Secretary-Director may grant an exception to the footage requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon, provided the well will be located no nearer than 330 feet to the outer boundary of the unit. All operators offsetting the proposed unorthodox location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the

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application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

RULE 6. A standard proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 5.67 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

- (1) That any well presently drilling to or completed in the Lower Bone Spring formation within the Osudo-Lower Bone Spring Pool or within one mile thereof that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before August 15, 1964.
- (2) That any operator desiring to dedicate 80 acres to a well presently drilling to or completed in the Osudo-Lower Bone Spring Pool shall file a new Form C-128 with the Commission on or before August 15, 1964.
- (3) That this case shall be reopened at an examiner hearing in August, 1965, at which time the operators in the subject pool may appear and show cause why the Osudo-Lower Bone Spring Pool should not be developed on 40-acre spacing units.
- (4) 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

X 1 (N () - 1 ()

MACK M. CAMPBELL, Chairman

E) S. WALKER, Member

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

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DEARNLEY-MEIER REPORTING SERVICE, Inc.

BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

July 22, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of The British-American Oil)
Producing Company for a dual completion and)
pool commingling, Lea County, New Mexico.)

Case No. 3091

Application of The British-American Oil Producing Company for the creation of a new oil pool and special pool rules, Lea County, New Mexico.

Case No. 3092

Application of The British-American Oil Producing Company for the creation of a new oil pool and special pool rules, Lea County, New Mexico.

Case No. 3093

BEFORE: DANIEL S. NUTTER, Examiner.

TRANSCRIPT OF HEARING

LEUGUEROUE, N. M.



three of your cases.

MR. NUTTER: We will call Case 3091.

MR. DURRETT: Application of the British-American Oil Producing Company for a dual completion and pool commingling, Lea County, New Mexico.

MR. NUTTER: The hearing will come to order, please.

Mr. Christy, I understand that you would like to consolidate all

MR. NUTTER: Case 3092.

MR. DURRETT: Application of The British-American Oil Producing Company for the creation of a new oil pool and special pool rules, Lea County, New Mexico.

MR. NUTTER: Case 3093.

MR. DURRETT: Application of The British-American Oil Producing Company for the creation of a new oil pool and special pool rules, Lea County, New Mexico.

MR. NUTTER: Is there objection to the consolidation of these three cases for testimony purposes? The cases will be consolidated.

MR. CHRISTY: Sim Christy of Hinkle, Bondurant and



SUGUEROUR, N. M. HONE 243-6691 Christy, Roowell, New Hexteo, attornoys for the Applicant, British-American Producing Company. We have one witness.

(Witness scom.)

JERRY BENTON

called as a witness, having been first duly sworm on oath, was exemined and testified as follows:

DIRECT EXAMINATION

BY MR. CHRISTY:

- Q Would you please state your name, address, occupation and by whom you are employed and in what capacity?
- A My name is Jerry Benton. I live in Midland, Texas and I'm employed by The British-American Gil Producing Company as District Staff Engineer.
- Q Mr. Benton, would you please briefly tell us a little history on your education, any degrees you seek and where in petroleum engineering and your experience, if any, in the petroleum engineering field?
- A I graduated from the University of Oklahoma in 1956 with a Bachalor of Science Degree in patroleum engineering. I worked for Plymouth Oil Company for six years as a field and a reservoir engineer. I worked for Harathon Oil Company about fourteen months as a field engineer, and I have worked for British-American approximately one year as a staff engineer.



BUGUERGUE, N. M. HONE 243.6691

Are you familiar with the area involved in Cases 3091, 3092 and 3093 as well as the well in question and the general area petroleum engineering-wise involved in these applications?

And you are familiar with what is sought by the appli-A Q cations?

MR. CHRISTY: Does the Examiner have any question con-A cerning his qualifications?

MR. NUTTER: No, sir. Go ahead.

Would you briefly tell the Examiner what is sought by these applications?

We seek permission to dually complete the North Wilson Deep Unit No. 1 in the Upper and Lower Bone Springs zones. We seek permission to commingle this production, and we also seek temporary 80-acre spacing for both zones and pool rules for both zones.

Special pool rules? Q

Special pool rules, that is correct.

I believe British-American is the unit operator of the A North Wilson Deep Unit in which this well is located?

That is true.

(Whereupon, Applicant's Exhibit No. 1 was marked for identification.)



- Q I refer you to Exhibit 1 and ask you if the hashed marks depicted there are the unit boundaries, is that correct?
 - A That's correct.
- Q Now, the well in question, the North Wilson Well No. 1 is located in the Southwest, Southeast of 31 in 20 South, 36 East?
 - A That's right.
 - Q And spotted in red on the map, Exhibit 1?
 - A That's right.
 - Q When was that well completed?
 - A The upper zone was completed June 4th, 1964.
 - Q The lower zone?
 - A It was potentialed on May the 29th.
 - Q You are still testing on that zone?
 - A That's right.

(Whereupon, Applicant's Exhibit No. 2 was marked for identification.)

- Q With respect to the dual completion, I'll ask you first if you'll refer to Exhibit 2, that is your mechanic's proposed dualing, is it not?
 - A That is correct.
- Q Would you briefly tell the Examiner how you propose to dually complete and produce from the two zones in question, referring to that Exhibit 2?



A This well was drilled to a total depth of 12,725 feet, 7-inch casing was set at 11,985 feet, and the well was plugged back to 11,755 feet. The Upper Bone Springs was perforated from 7888 to 7901, and the Lower Bone Springs was perforated from 10,094 to 10,122 feet.

A Brown HS 16 one-seat packer was set above the lower zone perforations and a string of 2-3/8ths-inch tubing was run to that packer. A Brown HS 17 two-seat dual packer was set above the Upper Bone Springs and the short string of 2-3/8ths-inch tubing was set in this packer. The well will be produced through these two separate strings of tubing.

- Q We'll come into it a little more later. Is this sweet or sour crude?
 - A It's sweet crude.
 - Q These are retrievable-type packers?
 - A That's correct.
- Q I notice your total depth is 12,175 feet. Have you set cement from the T.D. back up through to the casing point?
- A That's right, we plugged back to 11,755 feet in the 7-inch.

MR. NUTTER: With cement?

A Yes, sir. There's also a bridge plug on top of this cement.



- Q (By Mr. Christy) That bridge plug is depicted on Exhibit 2, is it not, at 11,755?
 - A That's right.
- Q Is that a rather orthodox method of dual completing,
 Mr. Benton?
 - A It is.
- Q And you will not be producing anything through the casing?
 - A No, sir.

(Whereupon, Applicant's Exhibit No. 3 was marked for identification.)

- Q With respect to commingling of the fluids as they reach the surface and referring to Exhibit 3, will you please explain to the Examiner your proposed method of commingling the two zones?
- A We propose to run separate flow lines from the well to the tank battery with the Lower Bone Springs being run through the heater treater and water from this zone dumped to the pit and oil going to the stock tanks. The Upper Bone Springs will come from the well through a three-phase metering separator. It will meter oil, water and gas, and the water being dumped to the pit from this test separator and the oil going through the heater treater then to the stock tanks.
 - Q I notice a little notation down in the bottom of Exhibit



A We propose to install a sampler on the oil metering side of the test separator from this sample to more accurately determine oil production from the Upper Bone Springs.

Q I see on Exhibit 3 how you can separately test the upper zone, how can you separately test the lower zone?

A We can do that one of two ways. We can close the water dump on the heater treater and produce all fluid from the Lower Bone Springs and the oil from the Upper Bone Springs to the stock tanks and then gauge and bleed off our water and subtract production from the Upper Bone Springs.

Q That's one method, what's the other one?

A We can shut-in in the Upper Bone Springs and test the Lower Bone Springs into the tank.

Q Shut off your Upper Bone Springs, close your heater treater and run it to the tanks. You don't need to close off your heater treater?

A We go through the heater treater to stock tanks.

Q Do you propose to separately meter these two zones at periodic intervals?

A The Upper Bone Springs will be tested every day. We will test the Lower Bone Springs at least once every month.



ALBUQUERQUE, N. M. PHONE 243.6691

- A Yos, sir.
- Q Is that a rather orthodox method of commingling?
- A Yes, it is. It is commonly used.
- I believe kule 303 of the Commission Rules provides for the approval of the Commissioner of Public Lands when state lands are involved. I call your attention to the fact that state lands are involved. Has this matter been discussed with the Commissioner's Office?
 - A Yes, this morning.

MR. CHRISTY: For the record, we wrote the Unit Division of the Commissioner's Office on July 2nd. Unfortunately the letter was almost lost, it was found this morning and Mrs. Rhea, who is in charge of the Unit Department, said they had no objection to the proposed commingling of the fluids on the state properties.

(Whereupon, Applicant's Exhibit No. 4 was marked for identification.)

- Q Your application further seeks temporary 80-acre spacing for both the upper and lower zone involved in this, and I refer you now to Exhibit 4 and ask you what that is. Identify it and explain it to the Examiner.
- A Exhibit 4 shows some Bone Springs field in the immediate area of the North Wilson Deep Unit No. 1. Since we had no



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previous information, or have no previous information on the characteristics of the Bone Springs, we investigated these fields, particularly the Lea and the Scarb fields, to obtain a comparison as to what we might expect.

- I believe this exhibit reflects that the Lea Unit, which is producing from two, both the Upper and Lower Bone Springs, is approximately 8.5 miles to the west, northwest, and the Scarb field producing from the Lower Bone Springs is approximately twelve miles to the northwest?
 - A That is correct.
- Q Those are your points for comparison because there's only one well in this unit at this time?
 - A That's right.

(Whereupon, Applicant's Exhibit No. 5 was marked for identification.)

Q Referring to Exhibit 5, would you please tell the Examiner what this is and what relation it has to the proposed 80-acre spacing?

A This is merely electric logs from the Scarb field and the Lea field and the North Wilson Deep Unit. It shows the zones completed in each of these fields and the Bone Springs section formation. It shows that the Bone Springs section is similar in all three fields.



- Q These are taken from the logs on the wells as indicated.

 I notice the Scarb field is simply producing from what you denominated as the lower zone.
 - A Lower zone or Bone Springs.
 - Q Did it encounter the upper zone at all?
 - A There was no commercial production in the upper zone.
 - Q Formation was there but no commercial production?
 - A That's right.
- Q In the Lea field they encountered both the upper and the lower zones but the upper zone is producing from considerably lower than your proposed upper zone, is that correct?
 - A That's correct.
- Q Then your North Wilson Deep log is here on the extreme right of Exhibit 5?
 - A There's approximately 2200 feet between the two zones.
- Q How much distance between your proposed upper and lower zone?
 - A 2200 feet.
 - Q And they are both Bone Springs?
 - A Yes.
 - Q Do you have a log on the No. 1 well here involved?
 - A Yes.

(Whereupon, Applicant's Exhibit No. 6 was marked for identification.)



- Q That has been marked as Exhibit 6?
- A fos, sir.
- O Do you feel that the convectoristics of the Scarb, Lea and North Wilson fields are similar so that comparison may reasonably be drawn from what has occurred in the Lea and Scarb Units as to what you may expect will occur in this well in the area?

A Certain characteristics, yes. In particular the lower zone in each of these fields has approximately the same bettom bol pressure and the same porosity.

Q Could we skip over to Exhibit 3 and carry that on a little further and explain what Exhibit 3 reflects with respect to the Similarity of characteristics that you just spoke of?

(Whereupon, Applicant's Exhibit No. 3 was marked for identification.)

Upper Bone Springs zone in the North Wilson Deep Unit No. 1 and the Lea Bone Springs. As you can see, the only comparison there is some porosity with the bottom hole pressure and the oil gravity being considerably different. In the Lower Bone Springs all three fields produce from this zone and the bottom hole pressure and the porosity in this lower zone compares very favorably, or is a good comparison. The oil gravity is again different in the North



Wilson Deep Unit No. 1.

Q From what we know of the Lea Unit and from the Scarb Unit and from what we may anticipate therefrom from this unit area, do you feel that one well will effectively and efficiently drain 80 acres in the areas involved in these applications?

A We made our investigations of the Lea Unit since it's the only Bone Springs that has produced long enough to set a decline. It appears from the reserves we calculated there that they are draining 80 acres or more from those wells.

- Q You, therefore, anticipate this area will do the same thing?
 - A Yes. sir.
- Q You simply at this time seek temporary 80-acre spacing in order to have it to prove up the point?
 - A That is correct.
- Q How long do you feel that this temporary order should be in force?
 - A We would like approximately one year.
- Q About one year to develop the area and have a little more information to present to the Commission?
 - A Yes, sir.

(Whereupon, Applicant's Exhibit No. 7 was marked for identification.)



Q The matter of economics always raises its head in 80-acre spacing. I will ask you to refer to Exhibit 7 and tell us a little about the economics as to whether this should be developed on 40 or 80-acre patterns.

Lea Unit. We estimated for a dual Upper and Lower Bone Springs completion on 80-acre basis, that ultimate primary recovery would be 330,000 barrels. After net profit, before Federal Income Taxes would be \$406,000 as shown on this exhibit. Profit to investment ratio would be 1.60, which is above what our company has set forth as a minimum. We use a minimum of 1.5 from experience.

- Q In other words, you found from experience that a profit ratio of less than 1.5 is an uneconomical venture?
 - A That's right.
 - Q Go ahead.

A On 40 acres drainage, using one-half of the reserves assigned to 80-acre drainage, the profit to investment ratio is twenty cents on the dollar. Condition 2 shown on Exhibit 7 is a single Upper Bone Springs completion, which in neither case would fit British-American's minimum profitability requirement. On 80-acre spacing the Upper Bone Springs would return 94 cents on a dollar.

Q I notice that your Exhibit 7 does not show the third



A Yes, sir. The lewer zone has even deer receives than the upper zone.

- Q It's so uneconomical it's no use putting on the exhibit?
- A Yes, sir.
- Q You propose special most rules for what you've denominated as the upper and lower some of the Bone Springs, in your opinion are these separate reservoirs?
 - A Yes, sir.
 - Q Separate pools?
 - A Yea.
 - Q And they're separated by some 2200 feet of interval?
 - A Yes.
- Q What area do you feel is reasonably proved as productive from the upper zone by virtue of the North Wilson Deep No. 1 well?
- A We feel that the Southeast Quarter of Section 31, Township 20 South, Range 36 East and Lots 2, 3, 6 and 7 in Section 5, Township 21 South, Range 35 East have been reasonably proved productive by this well.
- Q I assume, then, that that would be your proposed pool area that you would propose to the Conveission for the upper zone?
 - A That's right.



LBUQUERQUE, N. M. SHONE 243.6691 IR. MUTTER: What was the area in Section 31 again? en. CHRISTY: Southoast.

Southoast Quarter.

IN. NUTTER: Southwest Justica?

MR. CHRISTY: Yos.

- (By Mr. Christy) How for the Lower some.
- The same.
- The same?
- À Yes.

IR. CHRISTY: As to features of the special pool rules, Mr. Examiner, the Applicant has suggested that each well that is completed or recompleted in the respective rools be located on a standard unit comprising 30 acres consisting of either the North Half, the South Half, the East Half or the West Half for flexibility of a single governmental quarter section, provided, however; that the first well drilled on any quarter section shall be located in either the northeast or southwest of the governmental quartor section. This will permit flexibility for topographical and other reasons. It will hold the spacing pattern in some type of uniformity.

They provose further that all wells be located within 200 feet from the center of the quarter, quarter section where the well is drilled and that each standard proration unit be assigned



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unnecessary wells?

- A Yes, sir.
- Q And that, of course, would avoid the augmentation of risk, would it not?
 - A Yes, sir.
 - Q And would prevent waste, including economic waste?
 - A Yes.
- Q Do you see how any of the correlative rights of any of the parties will be violated by 30-acre spacing?
 - A No.
- Q This is a fully participating unit, unitwise, and the area comprised here is under one state lease, covers this 80 acres proposed?
 - A Right.

MR. CHRISTY: I might add to the Examiner that Mrs.

Rhea of the Unit Division of the Commissioner's Office advised me
that the state had no objection to the 30-acre spacing. We
offer in evidence Exhibits 1 through 8 inclusive.

MR. NUTTER: Applicant's Exhibits 1 through 8 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 8 were offered and admitted in evidence.

MR. CHRISTY: We have no further questions of this



witness.

MR. NUTTER: Any questions of the witness?

MR. DURRETT: I have a question, please.

CROSS EXAMINATION

BY MR. DURRETT:

Q Mr. Benton, upon what do you base your conclusion that one well will efficiently and economically drain 80 acres? Is that based upon the --

A I don't know whether it's a pool or a unit, I assume it is possibly both. Is that a Lea pool or is that a unit?

MR. NUTTER: There's a Lea pool and a Lea unit.

- A It's called the Lea field and also the Lea unit.
- Q Well, a study of the data from that pool, is that what you base your conclusion on concerning drainage in your proposed pool?

A Yes, sir. Using logs from the Lea Unit and cumulative recoveries to date, I worked backwards to establish a recovery factor, assuming all this oil was coming from 80 acres, and with the pressure depletion type reservoir this recovery would be on the order of 33 percent, which is extremely high and, therefore, appeared to me to be draining more than 80 acres for that reason.

- Q That's on the Lea area?
- A Yes, sir.



LBUGUERGUE, N. M. PHONE 243.6691

- Q How many wells do you have in your mool, just one?
- A Just one well.
- Q Are you proposing, or can you state now whether or not your company proposes to drill additional wells in the near future or how near in the future?
- A Presently we anticipate drilling well to the south this fall starting sometime in October.
 - Q Some place in Section 5?
- A Yes, sir. In the center of Lot 5, Section 5. It's the center of Lot 6.
 - Q Lot 63
 - A Yes, sir.

MR. NUTTER: That wouldn't conform with your proposed locations?

- A You are right, it's Lot 5, my error.
- Q (By Mr. Durrett) Could we safely say Lot 5 or Lot 6, according to the one which conforms to the rules?
 - A Yes.

MR. CHRISTY: According to the rules it would be Lot 5.

MR. NUTTER: You definitely want the proposed rules to

provide for locations in the Northeast Quarter or the Southwest

Quarter, don't you?

MR. CHRISTY: That's right.



MR. CHRISTY: As to the first well drilled in any quarter section?

MR. NUTTER: Yes.

MR. CHRISTY: That is correct.

MR. LAMB: I am with Wilson Oil Company and my memory on this proposal, of course, I don't want to interfere with British-American's testimony, but there is a Morrow gas zone that I believe their ultimate aim on the second well will be aimed to the Morrow gas and will be in Lot 6. There's Morrow gas in this well, but it was elected not to complete and that the next well the aim of it will be for the Morrow gas and will be in Lot 6. This is my understanding of our plans.

MR. NUTTER: According to your revised Rule 104 for Fennsylvanian or deeper gas wells, the well, the gas well would have to be in Lots 2, 3, 6 or 7 or be an exception to the rules. I suggest since this little apparent discrepancy has come up that this thing be checked out definitely and that we be advised.

There's no sense writing the pool rules restricting the locations to an area that's going to be out of face with the next well.

MR. CHRISTY: Not at all'.

A That's certainly true, you are right.



UGUEROUE, N. M.

MR. LAMB: The next well, the objective of the next well is primarily for Penn gas.

MR. NUTTER: And you know the Rule 104 for Pennsylvanian or deeper gas wells, the new revised eliminates the two end 40's of each half section for the location. So the center four 40's would be in compliance with that rule for deeper gas wells.

MR. LAMB: You look at the Bone Springs in it, but as I understood, the next well would be in Lot 6 and the main objective would be the Morrow gas data obtained from it could be used for the Bone Springs.

MR. NUTTER: In which case the existing well is an exception to the pattern for the next well.

MR. CHRISTY: I'll check that out, Mr. Examiner, and advise you within one week the problem on this Southwest, Northeast. However, I believe if the Morrow gas well drilled in Lot 6 is completed in the Morrow it wouldn't have anything to do with this.

MR. NUTTER: Or if it was a dual completion in the Bone Springs or possibly a triple completion.

MR. CHRISTY: You would be right back. I will check it and advise the Commission in one week. I wasn't aware of this.

Q (By Mr. Durrett) When was your Well No. 1 completed, Mr. Benton?



- A June the 4th.
- Q Of recent completion?
- A Yes.
- Q Once again now, what is your proposed horizontal limits for both pools?

A The Southeast Quarter of Section 31, Township 20 South, Range 36 East and Lots 2, 3, 6 and 7, Township 21 South, Section 5, Township 21 South, Range 35 East.

- Q Lots 2, 6 and 7?
- A 2, 3, 6 and 7.

MR. CHRISTY: It is in effect a long 320. That well must be in Lot 6 then.

MR. DURRETT: I think that's all I have.

BY MR. NUTTER:

Q Mr. Benton, in arriving at your reserves of 189,000 for the upper and 114,000 for the lower, are these volumetric calculations?

- A ...o, 'sir, they're calculations from the decline curves.
- Q Decline curves in the Lea Bone Springs?
- A In the Lea Bone Springs.
- Q So you haven't actually considered the calculated porosity or any connate water or formation volume factor or recovery factors in anything in arriving at a reserve for this pool itself?



A We did do that, and using an average recovery factor of 12 percent for solution gas reservoir we came up with approximately 120,000 barrels reserves for both zones.

- Q 120,000 barrels at 12 percent recovery?
- A Yes, that's using volumetrics.
- Q Do you recall what connate water you used in making that?
 - A We used 15 percent, which may be low.
 - Q Do you remember what your volume factor was?
- A I believe I used the 1.3 since this is gravity crude. Gravity was so low.
 - Q And you had your 7.4 percent porosity?
 - A Yes.
- And 5.4 percent porosity for the two zones. In our notice for this first case here I believe we stated that the commingling would occur after separately metering the Lower Bone Springs production. However, you are actually proposing to meter the Upper Bone Springs continuously?
 - A Yes.
- Q And determine the lower by means of the subtraction method?
 - A Yes.
 - Q That's no serious discrepancy there from the notice. It



doesn't really make much difference. On your dual completion, Mr. Benton, what's the GOR of your upper zone?

- A 318.
- Q And what's the GOR on your lower?
- A 256.
- Q And I think we can get the gravities of the two, being 26 and 33 from Exhibit 8?
 - A Yes, sir.
 - Q And the bottom hole pressures, please?
 - A The upper zone is 3600, the lower zone 4200.
- Q The top of the cement on the 7-inch pipe is well above the Upper Bone Spring perforation, is it not?
 - A 5830.
- Q Could you describe the mechanism of the Brown HS16 1-seat packer which separates the two zones?
- A It is similar to a permanent type packer in this respect, that it has slips looking both up and down.
 - Q What is it set by, weight or rotation or what?
 - A Rotation. It is also released by rotation.
- Q As to vertical limits of these pools, what do you propose that the vertical limits of the two pools be?
- A That would be approximately 7850 to 7950 for the upper zone and 10,050 to 10,150 for the lower zone.



Q Are there any little stringers or possible pays other than the two perforated intervals that were apparent on the logs?

A Yes, sir. There was an interval just above this, what we call the lower zone. It was from 10,040 to 10,060. We perforated that zone and swabbed salt water. On a drill stem test of the zone we recovered oil and water, but we never obtained any oil on swab test.

Q Mr. Benton, I wonder if in the event in drilling other wells that you'd find little other stringers that you might want to include in the vertical limits here that we might not make the vertical limits and get broader. What would be the actual top of the Bone Spring limestone on this well?

A It's 7750. The character of this Bone Springs, so I'm told, is that you can find porosity and pay any place in it. It will disappear from one well to the next. Setting up vertical field limits is pretty much of a guess any way you go.

- Q What's this stuff down here at approximately 8800?
- A It looks like that gets awfully dense and tight in there
- Q I'm just looking at the little cross section down there at 8800 where it Mae Wests in.

A Oh, yes. That was a shaley sand, I believe, that's correct. We drill stem tested that and recovered nothing.

Q That was a shaley sand in there?



A Yes.

Q We can make these vertical limits as you've suggested there just a hundred feet.

MR. CHRISTY: In line with the suggestion of the Examiner, we amend that on the upper zone to start at the top.

- Q To start at the top of the Bone Springs and go wherever you want to down in there?
 - A Why don't we go to 8,000 feet.
 - Q Down to 8,000?
 - A Yes, sir.
- Q So it would be from the top of the Bone Springs at 7750 to 8,000?
 - A Yes, sir.
 - Q For the upper?
- A And the lower on this log I would say from 10,000 feet to 10,200.
 - Q Ten to ten two?
 - A Yes.

MR. NUTTER: Are there any other questions of Mr. Benton? He may be excused.

(Witness excused.)

MR. CHRISTY: That's all for the Applicant.

MR. NUTTER: Do you have anything further, Mr. Christy?



MR. CHRISTY: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Cases 3091, 3092 and 3093?

MR. SNYDER: I have a statement. A. E. Snyder, Amerada Petroleum Corporation. Amerada has a small interest in this unit and although we don't have a great deal of information on it at this time we would like to go on record as supporting the temporary 80-acre spacing application of British-American.

MR. NUTTER: Thank you, Mr. Snyder. Does anyone else have anything? We'll take the cases under advisement and the hearing is adjourned.



STATE OF NEW MEXICO) ss COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 3rd day of August, 1964.

NOTARY PUBLIC

My Commission Expires: June 19, 1967.

I do hereby portify that the foregoing is a complete standard of the foregoing in the likewide hearth of the Case in Soff-12-13 heart by is compared on the Landard by its compared on the



ALBUQUEROUE, N. M. PHONE 243 6591

Case 3092

MAIN OFFICE OCC

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

1964 JUL 6 AM 7 35

Application of The British-American Oil Producing Company for the adoption of temporary special pool rules for the Upper Bone Springs and the Lower Bone Springs Pools in the North Wilson Deep Unit Area, Lea County, New Mexico, including provision for 80 acre spacing and proration units in connection with each pool.

New Mexico Oil Conservation Commission Santa Fe, New Mexico

Comes The British-American Oil Producing Company acting by and through the undersigned attorneys, and hereby makes application for the adoption of temporary special pool rules for the Upper Bone Springs and Lower Bone Springs Pools within the North Wilson Deep Unit Area, Lea County, New Mexico, and in support thereof respectfully shows:

1. That there is attached hereto and made a part hereof and for purposes of identification marked Exhibit "A" a plat showing the boundaries of the North Wilson Deep Unit Area and the location of the discovery well, being the North Wilson Deep Unit well No. 1. That the Unit Agreement embracing the Unit Area as shown on Exhibit "A" was entered into as of December 26, 1963 and approved by the New Mexico Oil Conservation Commission on December 17, 1963 and by the Commissioner of Public Lands on March 4, 1964, and that applicant, The British-American Oil Producing Company, is designated as Unit Operator under the term of said Unit Agreement. Applicant, as Unit Operator, caused the initial test well to be drilled and the same was completed on or about the 6th day of June 1964 as a well capable of producing oil in paying quantities from the Upper Bone Springs and the Lower Bone Springs Pools. Under a separate application filed with the Commission by applicant, applicant seeks to designate the following described lands as the present limits of said pools:

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Dote -

Township 20 South, Range 36 East, N.M.P.M. Section 31 - SE%

Township 21 South, Range 35 East, N.M.P.M. Section 5 - Lots 2, 3, 6 and 7

That the North Wilson Deep Unit No. 1 well has been dually completed and is producing from the respective pools through the following perforation intervals: Upper Bone Springs, 7,888 to 7,901 feet; Lower Bone Springs, 10,094 to 10,122 feet.

2. That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk caused by the drilling of an excessive number of wells and to otherwise prevent waste and protect correlative rights, applicant seeks the adoption of temporary special rules and regulations for the Upper Bone Springs and Lower Bone Springs Pools, respectively, including 80 acre spacing and proration units for each pool. Applicant proposes that each well completed or recompleted in the respective pools be located on a standard unit containing approximately 80 acres comprising the N_2^1 , S_2^1 , E_2^1 or W_2^1 of a single governmental quarter section and that the first well drilled on each standard or non-standard unit in the respective pools be located in the NE% or the SW% of a governmental quarter section, and that all wells be located within 200 feet of the center of the quarter quarter section in which the same is situated. Applicant also proposes that each standard proration unit shall be assigned an 80 acre allowable with appropriate proportional factor and that in the event there is more than one well on an 80 acre proration unit the allowable for the unit may be produced from the wells on the unit in any proportion.

Dated this 2nd day of July, 1964.

Respectfully submitted,

YNAMM

THE BRITISH-AMERICAN OIL PRODUCING

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Attorney

HINKLE, BONDURANT & CHRISTY Attorneys for The British-American Oil Producing Company

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EXHIBIT "A"

MAIN OFFICE OCC

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO 1964 JUL 6 NM 7 36

Application of The British-American Oil Producing Company for the adoption of temporary special pool rules for the Upper Bone Springs and the Lower Bone Springs Pools in the North Wilson Deep Unit Area, Lea County, New Mexico, including provision for 80 acre spacing and proration units in connection with each pool.

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Township 21 South, Range 35 East, N.M.P.M. Section 5 - Lots 2, 3, 6 and 7

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Dated this 2nd day of July, 1964.

Respectfully submitted,

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THE BRITISH-AMERICAN OIL PRODUCING

Attornéy

HINKLE, BONDURANT & CHRISTY Attorneys for The British-American Oil Producing Company

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EXHIBIT "A"

(HEELD)

MAIN OFFICE OCC

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

1964 JUL 6 AM 7:36

Application of The British-American Oil Producing Company for the adoption of temporary special pool rules for the Upper Bone Springs and the Lower Bone Springs Pools in the North Wilson Deep Unit Area, Lea County, New Mexico, including provision for 80 acre spacing and proration units in connection with each pool.

New Mexico Oil Conservation Commission Santa Fe, New Mexico

Comes The British-American Oil Producing Company acting by and through the undersigned attorneys, and hereby makes application for the adoption of temporary special pool rules for the Upper Bone Springs and Lower Bone Springs Pools within the North Wilson Deep Unit Area, Lea County, New Mexico, and in support thereof respectfully shows:

1. That there is attached hereto and made a part hereof and for purposes of identification marked Exhibit "A" a plat showing the boundaries of the North Wilson Deep Unit Area and the location of the discovery well, being the North Wilson Deep Unit well No. 1. That the Unit Agreement embracing the Unit Area as shown on Exhibit "A" was entered into as of December 26, 1963 and approved by the New Mexico Oil Conservation Commission on December 17, 1963 and by the Commissioner of Public Lands on March 4, 1964, and that applicant, The British-American Oil Producing Company, is designated as Unit Operator under the term of said Unit Agreement. Applicant, as Unit Operator, caused the initial test well to be drilled and the same was completed on or about the 6th day of June 1964 as a well capable of producing oil in paying quantities from the Upper Bone Springs and the Lower Bone Springs Pools. Under a separate application filed with the Commission by applicant, applicant seeks to designate the following described lands as the present limits of said pools:

Township 20 South, Range 36 East, N.M.P.M. Section 31 - SEZ

Township 21 South, Range 35 East, N.M.P.M. Section 5 - Lots 2, 3, 6 and 7

That the North Wilson Deep Unit No. 1 well has been dually completed and is producing from the respective pools through the following perforation intervals: Upper Bone Springs, 7,888 to 7,901 feet; Lower Bone Springs, 10,094 to 10,122 feet.

That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk caused by the drilling of an excessive number of wells and to otherwise prevent waste and protect correlative rights, applicant seeks the adoption of temporary special rules and regulations for the Upper Bone Springs and Lower Bone Springs Pools, respectively, including 80 acre spacing and proration units for each pool. Applicant proposes that each well completed or recompleted in the respective pools be located on a standard unit containing approximately 80 acres comprising the Nz, Sz, Ez or Wz of a single governmental quarter section and that the first well drilled on each standard or non-standard unit in the respective pools be located in the NEz or the SWz of a governmental quarter section, and that all wells be located within 200 feet of the center of the quarter quarter section in which the same is situated. Applicant also proposes that each standard proration unit shall be assigned an 80 acre allowable with appropriate proportional factor and that in the event there is more than one well on an 80 acre proration unit the allowable for the unit may be produced from the wells on the unit in any proportion.

Dated this 2nd day of July, 1964.

Respectfully submitted,

SOMUTANY

THE BRITISH-AMERICAN OIL PRODUCING

Attorney

HINKLE, BONDURANT & CHRISTY Attorneys for The British-American Oil Producing Company

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Examiner Hearing - July 22, 1964

CASE 3087: Application of William A. and Edward R. Hudson for an unorthodox location, Eddy County, New Mexico. Applicants, in the above-styled cause, seek authority to drill their Puckett "A" Well No. 26 at an unorthodox location 1295 feet from the North and West lines of Section 24, Township 17 South, Range 31 East, Eddy County, New Mexico. Said well would be projected to the Paddock formation at approximately 5400 feet.

CASE 3088: Application of Phillips Petroleum Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Ranger Lake Unit Area comprising 2,680 acres, more or less, of State land in Township 12 South, Range 34 East, Lea County, New Mexico.

Application of Phillips Petroleum Company for a waterflood project, CASE 3089: Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Ranger Lake-Pennsylvanian Pool in its Ranger Lake Unit Area by the injection of water into the Pennsylvanian formation through nine wells in Sections 14, 23, 24, 25, 26, 27, 34 and 35, Township 12 South, Range 34 East, Lea County, New Mexico.

CASE 3090: Application of Tenneco Oil Company for salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Pictured Cliffs formation through its Callow Well No. 2 located in Unit B, Section 33, Township 29 North, Range 13 West, West Kutz-Pictured Cliffs Pool, San Juan County, New Mexico.

Application of The British-American Oil Producing Company for a dual CASE 3091: completion and pool commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its North Wilson Deep Unit Well No. 1, located in Unit 19 of Section 31, Township 20 South, Range 36 East, Lea County, New Mexico, to produce oil from the Upper Bone Spring formation and the Lower Bone Spring formation through parallel strings of tubing. Applicant further seeks authority to commingle the production from said pools after separately metering the Lower Bone Spring production.

CASE 3092: Application of The British-American Oil Producing Company for the creation of a new oil pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Upper Bone Spring production for its North Wilson Deep Unit Well No. 1, located in Unit O of Section 31, Township 20 South, Range 36 East, Lea County, New Mexico, which well is perforated from 7888 to 7901 feet. Applicant further seeks the promulgation of special rules for said pool, including a provision for 80-acre proration units.

> Application of The British-American Oil Producing Company for the creation of a new oil pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Lower Bone Spring production for its North Wilson Deep Unit Well No. 1, located in Unit O of Section 31, Township 20 South, Range 36 East, Lea County, New Mexico, which well is perforated from 10,094 to 10,122 feet. Applicant further seeks the promulgation of special rules for said pool, including a provision for 80-acre proration units.

CASE 3093:

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 22, 1964

9 . M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

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

- CASE 3081: Application of Shell Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Langlie-Mattix Pool by the injection of water through four wells at unorthodox locations in Section 21, Township 24 South, Range 37 East, Lea County, New Mexico.
- CASE 3082: Application of Union Oil Company of California for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation through perforations from 11,246 feet to 11,285 feet in its State-Gross Well No. 2 located in Unit L of Section 11, Township 12 South, Range 32 East, East Caprock Field, Lea County, New Mexico.
- CASE 3083: Application of General American Oil Company of Texas for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier Sand through twelve wells located in Sections 27, 28, 33 and 34, Township 17 South, Range 30 East, Eddy County; New Mexico: Certain of the aforesaid injection wells would be drilled at unorthodox locations.
- CASE 3084: Application of Fair Oil Company for a buffer zone extension and pool redelineation, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2033 to extend the waterflood buffer zone authorized by said order to include the SE/4 NE/4 of Section 36, Township 17 South, Range 29 East, Eddy County, New Mexico. Applicant further seeks the extension of the Loco Hills Pool to include said quarter-quarter section, and the associated deletion of said acreage from the Grayburg-Jackson Pool.
- CASE 3085: Application of Humble Oil & Refining Company for two non-standard oil proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of two non-standard 80-acre oil proration units in Section 7, Township 19 South, Range 35 East, Scharb Bone Springs Pool, Lea County, New Mexico. The first unit would comprise the NW/4 NE/4 and the NE/4 NW/4 of Section 7 and be dedicated to applicant's Alves Well No. 1 located in Unit B of said Section 7. The second unit would comprise the SW/4 NE/4 and the SE/4 NW/4 of Section 7 and be dedicated to applicant's Alves Well No. 2, which would be drilled in Unit G of said Section 7.
- CASE 3086: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Rhodes Yates Oil Pool by the injection of water into the Yates and Seven Rivers formations through two wells in Section 26, Township 26 South, Range 37 East, Lea County, New Mexico.

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CLARENCE E. HINKLE W. E. BONDURANT, JR. S. B. CHRISTY IV LEWIS C. COX, JR. PAUL W. EATON, JR. CONRAD E. COFFIELD HAROLD L. HENSLEY, JR. MICHAEL R. WALLER

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TELEPHONE 622-6510 AREA CODE 505 POST OFFICE BOX 10

July 2, 1964

Mr. Dan Nutter Oil Conservation Commission Santa Fe, New Mexico

Dear Mr. Nutter:

This will refer to our telephone conversation of today in regard to three separate application of The British-American Oil Producing Company, including the establishment of the Upper Bone Springs and Lower Bone Springs Pools in the North Wilson Deep Unit Area and also for the dual completion of the Unit No. 1 well and the commingling of the production from the Upper and Lower Bone Springs Pools and for temporary special pool rules for the respective pools, including provision for 80 acre spacing. We enclose the three separate applications which we have prepared in triplicate and would appreciate your filing the same. In the event these do not conform to the notices which you stated would be published in connection with the hearings, please advise and we will amend accordingly.

It is our understanding that these applications will all be included on the examiner's docket for July 22.

Yours very truly,

HINKLE, BONDURANT & CHRISTY

CEH:cs

Enc.

cc: M. C. Stiendorf, Dist. Engineer

The British-American Oil Producing Company

Box 474

Midland, Texas

DOCKET MAHAD

Date () ()

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NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

Application of The British-American Oil Producing Company to establish the Upper Bone Springs and Lower Bone Springs Pools as separate pools comprising the SEZ of Section 31, Township 20 South, Range 36 East and Lots 2, 3, 6 and 7, Section 5, Township 21 South, Range 35 East within the North Wilson Deep Unit Area, Lea County, New Mexico.

New Mexico Oil Conservation Commission Santa Fe, New Mexico

Comes The British-American Oil Producing Company acting by and through the undersigned attorneys and hereby makes application for the establishment of the Upper Bone Springs and Lower Bone Springs Pools as separate pools within the North Wilson Deep Unit Area, Townships 20 and 21 South, Ranges 35 and 36 East, Lea County, New Mexico and in support thereof respectfully shows:

That the Unit Agreement for the operation and development of the North Wilson Deep Unit Area was entered into as of December 26, 1963 and approved by the New Mexico 0il Conservation Commission on December 17, 1963 and by the Commissioner of Public Lands on March 4, 1964, and that applicant, The British-American Oil Producing Company, is designated as the Unit Operator under the terms of said Unit Agreement. That the Unit Operator caused the initial test well to be drilled in the SW\2SE\2 Section 31, Township 20 South, Range 36 East, N.M.P.M. and the same was completed on or about June 6, 1964 as a well capable of producing oil from two separate zones in the Bone Springs formation, and that the said well has been dually completed for the production of oil from the Upper Bone Springs and the Lower Bone Springs producing horizons, the perforation intervals in the respective formations being as follows: Upper Bone Springs, 7,888 to 7,901; Lower Bone Springs, 10,094 to 10,122 feet.

formation above referred to are believed to be separate poels or reservoirs and that they should be established as such and it is believed that the initial test well reasonably proves the following described lands as being productive from said pools:

Township 20 South, Range 36 East, N.M.P.M. Section 31 - SE

Township 21 South, Range 35 East, N.M.P.M. Section 5 - Lots 2, 3, 6 and 7.

Dated this 2nd day of July, 1964.

Respectfully submitted,

THE BRITISH-AMERICAN OIL PRODUCING

Attorney

J.C.

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HINKLE, BONDURANT & CHRISTY Attorneys for The British-American Oil Producing Company

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NEW MEXICO OIL CONSERVATION COMMISSION

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SANTA FE, NEW MEXICO

Application of The British-American
Oil Producing Company to establish
the Upper Bone Springs and Lower Bone
Springs Pools as separate pools comprising the SE% of Section 31, Township
20 South, Range 36 East and Lots 2, 3,
6 and 7, Section 5, Township 21 South,
Range 35 East within the North Vilson
Deep Unit Area, Lea County, New Mexico.

New Mexico Oil Conservation Commission Santa Fe, New Mexico

Comes The British-American Oil Producing Company acting by and through the undersigned attorneys and hereby makes application for the establishment of the Upper Bone Springs and Lower Bone Springs Pools as separate pools within the North Wilson Deep Unit Area, Townships 20 and 21 South, Ranges, 35 and 36 East, Lea County, New Mexico and in support thereof respectfully shows:

1. That the Unit Agreement for the operation and development of the North Wilson Deep Unit Area was entered into as of December 26, 1963 and approved by the New Mexico Oil Conservation Commission on December 17, 1963 and by the Commissioner of Public Lands on March 4, 1964, and that applicant, The British-American Oll Producing Company, is designated as the Unit Operator under the terms of said Unit Agreement. That the Unit Operator caused the initial test well to be drilled in the SWASEA Section 31, Township 20 South, Range 36 East, N.M.P.M. and the same was completed on or about June 6, 1964 as a well capable of producing oil from two separate zones in the Bone Springs formation, and that the said well has been dually completed for the production of oil from the Upper Bone Springs and the Lower Bone Springs producing horizons, the perforation intervals in the respective formations being as follows: Upper Bone Springs, 7,888 to 7,901; Lower Bone Springs, 10,094 to 10,122 feet.

2. That the two producing horizons in the Bone Springs formation above referred to are believed to be separate pools or reservoirs and that they should be established as such and it is believed that the initial test well reasonably proves the following described lands as being productive from said pools:

Township 20 South, Range 36 East, N.M.P.M. Section 31 - SEX

Township 21 South, Range 35 East, N.M.P.M. Section 5 - Lots 2, 3, 6 and 7.

Dated this 2nd day of July, 1964.

Respectfully submitted,

THE BRITISH-AMERICAN OIL PRODUCING

Attorney

HINKLE, BONDURANT & CHRISTY Attorneys for The British-American Oil Producing Company

MAIN OFFICE OCC

NEW MEXICO OIL CONSERVATION COMMISSION 1964 JUL 6 AM 7:36/

SANTA FE, NEW MEXICO

Application of The British-American Oil Producing Company to establish the Upper Bone Springs and Lower Bone Springs Pools as separate pools comprising the SEX of Section 31, Township 20 South, Range 36 East and Lots 2, 3, 6 and 7, Section 5, Township 21 South, Range 35 East within the North Wilson Deep Unit Area, Lea County, New Mexico.

New Mexico Oil Conservation Commission Santa Fe, New Mexico

Comes The British-American Oil Producing Company acting by and through the undersigned attorneys and hereby makes application for the establishment of the Upper Bone Springs and Lower Bone Springs Pools as separate pools within the North Wilson Deep Unit Area, Townships 20 and 21 South, Ranges 35 and 36 East, Lea County, New Mexico and in support thereof respectfully shows:

1. That the Unit Agreement for the operation and development of the North Wilson Deep Unit Area was entered into as of December 26, 1963 and approved by the New Mexico Oil Conservation Commission on December 17, 1963 and by the Commissioner of Public Lands on March 4, 1964, and that applicant, The British-American Oil Producing Company, is designated as the Unit Operator under the terms of said Unit Agreement. That the Unit Operator caused the initial test well to be drilled in the SWISEL Section 31, Township 20 South, Range 36 East, M.M.P.M. and the same was completed on or about June 6, 1964 as a well capable of producing oil from two separate zones in the Bone Springs formation, and that the said well has been dually completed for the production of oil from the Upper Bone Springs and the Lower Bone Springs producing horizons, the perforation intervals in the respective formations being as follows: Upper Bone Springs, 7,888 to 7,901; Lower Bone Springs, 10,094 to 10,122 feet.

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2. That the two producing horizons in the Bone Springs formation above referred to are believed to be separate pools or reservoirs and that they should be established as such and it is believed that the initial test well reasonably proves the following described lands as being productive from said pools:

Township 20 South, Range 36 East, N.M.P.M. Section 31 - SE4

Township 21 South, Range 35 East, N.M.P.M. Section 5 - Lots 2, 3, 6 and 7.

Dated this 2nd day of July, 1964.

Respectfully submitted,

SOMEJIMY

THE BRITISH-AMERICAN OIL PRODUCING

Actorney

HINKLE, BONDURANT & CHRISTY Attorneys for The British-American Oil Producing Company

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. 3093

Order No. R-2157

APPLICATION OF THE BRITISH-AMERICAN OIL PRODUCING COMPANY FOR THE CREATION OF A NEW OIL POOL AND SPECIAL POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

NOMENCLATURE

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 22 , 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this ____day of __July___, 196_4, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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, The British-American Oil Producing Company, seeks the creation of a new oil pool for Lower Bone Spring production and the promulgation of temporary special rules and regulations governing said pool, including a provision for 80-acre proration-units.

-2-CASE No. 3093

Spring Pool; that the vertical limits of said pool should be the 10,000 10,200 zone encountered in said well between 10,094 and 10,122 feet; and that the horizontal limits of said pool should be the 564

of Section 31, Township 20 South, Range

36 East, NMPM, Lea County, New Menicer

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 80-acre spacing units should be promulgated for the Opulo -Lower Bone Spring Pool.

- (5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.
- (6) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically

-- 3--**CASE** No. 3093

(2) That temporary Special Rules and Regulations for the distribe __Lower Bone Spring Pool are hereby promulgated

> SPECIAL RULES AND REGULATIONS FOR THE LOWER BONE SPRING POOL

RULE 1. Each well completed or recompleted in the district -Lower Bone Spring Pool or in the Bone Spring formation within one mile of the resone Spring Pool and not nearer to or within the limits of another designated Bone Spring pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the

80 all unit containing approximately 80 acres comprising the 11/2, 5/2 E/2, or W/2 of a simple E/2; or W/2-of-a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the guarter-quarter sections in the unit.

> RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

CASE No. 3093

RULE 4. The first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located in the first well drilled on every standard or non-standard unit in-the bower-Bone Spring Pool shall be located within 200 feet of the center of a governmental guarter-guarter section.

RULE 5. The Secretary-Director may grant an exception to the footage requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon, provided the well will be located no nearer than 330 feet to the outer boundary of the unit. All operators offsetting the proposed unorthodox location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no orfset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

RULE 6. A standard proration unit (79 through 81 acres) inthe ______bower Bone String-Pool shall be assigned an 80acre proportional factor of 6.67 for allowable purposes, and
in the event there is more than one well on an 80-acre proration
unit, the operator may produce the allowable assigned to the unit
from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable in the bower Bone Spring Pool as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

- (1) That any well presently drilling to or completed in the Lower Bone Spring formation within the Obudo -Lower Bone Spring Pool or within one mile of the Spring Pool that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before August 1964.
- (2) That any operator desiring to dedicate 80 acres to a well presently drilling to or completed in the Osudo
 Lower Bone Spring Pool shall file a new Form C-128 with the Commission on or before (higher), 1964.
- ing in August, 1965, at which time the operators in the subject pool may appear and show cause why the Opula Lower Bone Spring Pool should not be developed on 40-acre spacing units.
- (4) 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.

GOVERNOR JACK M. CAMPBELL DHAIRMAN

State of New Mexico

Gil Conserbation Commission

LAND DUMMISSIDHER E. S. JOHNNY WALKER MEMBER



R D. BOX 871 BANTA FE STATE BEGLOGIST A. L. PORTER, JR. SECRETARY - DIRECTOR

August 3, 1964

Mr. Sim Christy Hinkle, Bondurant & Christy Attorneys at Law Post Office Box 10 Roswell, New Mexico

Re:

3092 3093 Case No. R-2755 Order No. R-2756 Applicant: R-2757

3091

BRITISH-AMERICAN OIL PRODUCING CO.

Dear Sire

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

ir/
Carbon copy of order also sent to:
Hobbs OCC _____
Artesia OCC____
Astec OCC ____

dearnley-meier reporting service, inc.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMÍSSION
Santa Fe, New Mexico
August 11, 1965

EXAMINER HEARING

IN THE MATTER OF:

In the matter of Case No. 3092 and Case)
3093 being reopened pursuant to the
provisions of Orders Nos. R-2756 and
R-2757, which orders established 80-acre
spacing units for the Osudo-Upper Bone
Spring Pool and the Osudo-Lower Bone
Spring Pool, Lea County, New Mexico,
for a period of one year.

Case No. 3092, 309

015

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING



2 • PHONE 243-6691

1120 SIMMS BLDG. . P.O. BOX 1092 1213 FIRST NATIONAL BANK EAST .

MR. DURRETT: In the matter of Case No. 3092 and Case 3093 being reopened pursuant to the provisions of Orders Nos. R-2756 and R-2757, which orders established 80-acre spacing units for the Osudo-Upper Bone Spring Pool and the Osudo-Lower Bone Spring Pool, Lea County, New Mexico, for a period of one year.

If the Examiner please, I would like to state for the record at this time that the Commission has been advised and we have checked our official records and have determined that to the best of our knowledge and information these pools have been depleted and would therefore move that these cases be dismissed.

MR. UTZ: Are there any appearances or any statements to be made in regard to these two cases? This was advertised for the specific purpose of accepting any statements in regard to depletion of this pool. If there are none, we will assume that the Commission records are correct in regard to the depleted condition of these two pools and the cases will be dismissed.

MR. DURRETT: I would like to move in connection with the two cases, I believe there have been special rules written and I would like to move that those rules be abolished. That would be part of dismissing the case.

MR. UTZ: Yes.



STATE OF NEW MEXICO ទទ COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability. Witness my Hand and Seal this 25th day of August, 1965.

My Commission Expires: June 19, 1967.



I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No 3.092, 09 herra by we on. -Exuminer

New Mexico Oil Conservation Commission

CASE 3094: SOUTHEASTERN NEW MEXICO NOMENCLATURE

(ASE MO. 3094

APPlication,
Transcripts,
SMAIL Exhibits
ETC.

BEFORE THE CIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

Case ng. 3094 Order ng. R-2760

THE APPLICATION OF THE CIL CONSERVATION COMMISSION UPON ITS OWN MOTION FOR AN ORDER CREATING, ABOLISHING, AND EXTENDING CERTAIN POOLS IN CHAVES, EDDY, AND LEA COUNTIES, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 13, 1964, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 14th day of August, 1964, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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 subject matter thereof.
- (2) That there is need for the creation of a new pool in Eddy County, New Mexico, for the production of gas from the Pennsylvanian formation, said pool to bear the designation of Dark Canyon-Pennsylvanian Gas Pool. Said Dark Canyon-Pennsylvanian Gas Pool was discovered by Union Oil Company of California, Dark Canyon State No. 1, located in Unit J of Section 30, Township 23 South, Range 25 East, NMP.. It was completed in Pennsylvanian on May 13, 1964. The top of perforations is 9255 feet.
- (3) That there is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Bone Springs formation, said pool to bear the designation of South Lea-Bone Springs Fool. Said South Lea-Bone Springs Fool was discovered by Shell Oil Company, Federal "L" No. 1, located in Unit F of Section 25, Township 20 South, Range 34 East, NMFM. It was completed in Bone Springs on May 28, 1964. The top of perforations is 10,064 feet.
- (4) That there is need for the creation of a new pool in Chaves County, New Mexico, for the production of oil from the San Andres formation, said pool to bear the designation of Race Track-San Andres Pool. Said Race Track-San Andres Pool was discovered by Daniel W. Varel, Avalanche Journal No. 1, located in Unit N of Section 18, Township 10 South, Range 28 East, NAPM. It was completed in San Andres on March 20, 1964. The top of perforations is 2186 feet.
- (5) That there is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Wolfcamp formation, said pool to bear the designation of Rest Vacuum-Wolfcamp Pool. Said Rast Vacuum-

- 2 -Case no. 3094 Order no. R-2760

Holfcamp Pool was discovered by Texas Pacific Oil Company, State "AF" No. 3, located in Unit L of Section 8, Township 18 South, Range 35 East, NAPM. It was completed in Wolfcamp on May 6, 1964. The top of perforations is 9883 feet.

- (6) That there is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Bone Springs formation, said pool to bear the designation of Wilson-Bone Springs Pool. Said Wilson-Bone Springs Pool was discovered by The British American Oil Producing Company, North Wilson Deep Unit No. 1, located in Unit O of Section 31, Township 20 South, Range 36 East, NMPM. It was completed in Bone Springs on June 6, 1964.
- (7) That there is need for the consolidation of the South Hare-Simpson Pool and the Hare-Simpson Pool, Lea County, New Mexico, inasmuch as the pools produce from the same formation. Said consolidation to be accomplished by the abolishment of the South Hare-Simpson Pool and extension of the Hare-Simpson Pool.
- (8) That there is need for certain extensions to the Linda-San Andres Pool in Chaves County, New Mexico, the Artesia Pool, and the Tamano-San Andres Pool, both in Eddy County, New Mexico, the North Bagley-Upper Pennsyl-vanian Pool, the Bough-San Andres Gas Pool, the South Double A-Abo Pool, the Flying "M"-San Andres Pool, the Lusk-Strawn Pool, the Mescalero-San Andres Pool, the Pearl-Queen Pool, and the Vacuum-Giorieta Pool, all in Lea County. New Mexico.

IT IS THEREFORE ORDERED:

(a) That a new pool in Eddy County, New Mexico, classified as a gas pool for Pennsylvanian production, is hereby created and designated as the Dark Canyon-Pennsylvanian Gas Pool, consisting of the following described area:

TOWNSHIP 23 SOUTH, RANGE 25 BAST, NMPM SECTION 30: All

(b) That a new pool in Lea County, New Mexico, classified as an oil pool for Bone Springs production, is hereby created and designated as the South Lea-Bone Springs Pool, consisting of the following described area:

TOWNSHIP 20 SOUTH RANGE 34 SAST, NMEM SECTION 25: NW/4

(c) That a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production, is hereby created and designated as the Race Track-San Andres Pool, consisting of the following described area:

TOWNSHIP 10 SOUTH, RANGE 28 EAST. NAMED SECTION 18: SE/4 SH/4

(d) That a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production, is hereby created and designated as the East Vacuum-Wolfcamp Fool, consisting of the following described area:

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM SECTION 8: SW/4

CASE NO. 3094 ORDER NO. R-2760

(e) That a new pool in Lea County, New Maxico, classified as an oil pool for Bone Springs production, is hereby created and designated as the Wilson-Bone Springs Pool, consisting of the following described area:

> TOWNSHIP 20 SOUTH, RANGE 36 EAST, NHEM SECTION 31: SE/4

(f) That the South Hare-Simpson Pool in Lea County, New Mexico, consisting of the following described area:

TOWNSHIP 22 SOUTH, RANGE 37 LAST, RMPM

SB/4 SECTION 9:

SECTION 15: S/2 and NW/4

SECTION 16: NE/4

SECTION 22: N/2

is hereby abolished.

(g) That the Hare-Simpson Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NAPM SECTION 9: SE/4

SECTION 15: S/2 and NW/4

SECTION 16: NE/4

SECTION 22: N/2

(h) That the Artesia Pool in Eddy County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein;

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NHPM SECTION 36: NE/4 NE/4

(i) That the North Bagley-Upper Pennsylvanian Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

> TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM SECTION 10: NW/4

(j) That the Bough-San Andres Gas Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include

TOWNSHIP 9 SOUTH, RANGE 35 EAST, NAPM

SECTION 12: SW/4

SECTION 13: N/2

(k) That the South Double A-Abo Rool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NAPH

SECTION 20: SW/4 SW/4

SECTION 29: W/2 NW/4

¢ass %. 3094 ¢rder w.r-2760

(1) That the Flying "W'-San Andres Fool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOURSHIP 9 SOUTH, RANGE 33 SAST, NORM SECTION 20: 6/2
SECTION 21: 8/2

(m) That the Linda-San andres Pool in Chaves County, New Mexico, as beretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 6 SOUTH, RANGE 26 EAST, NHPM SECTION 33: W/2 NE/4 and SE/4 SECTION 34: W/2 SH/4

TOWNSHIF 7 SOUTH, RANGE 26 EAST, NEEM SECTION 4: W/2 NE/4 and W/2 SECTION 5: E/2 SE/4

(n) That the Lusk-Strawn Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NAMEM SECTION 6: SE/4
SECTION 7: B/2
SECTION 21: NW/4
SECTION 31: NE/4
SECTION 33: NW/4

(o) That the Mescalero-San Andres rool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include thereint

TOWNSHIP 10 SOUTH, RANGE 32 BAST, IMPM SECTION 11: SE/4

(p) That the Pearl-Queen Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM SECTION 25: S/2 NW/4

TOUNSHIP 20 SOUTH, RANGE 35 BAST, NMRM SECTION 10: NE/4 NW/4

(q) That the Tamano-San Andres Fool in Eddy County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMEM SECTION 36: SW/4 SW/4

- 5 -CASE NO. 3094 ORDER NO. R-2760

(r) That the Vacuum-Glorieta Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 17 SOUTH PRANCE 35 EAST, NORM SECTION 30: NW/4
SECTION 34: S/2 NW/4

TOWNSHIP 18 SOUTH, RANGE 35 BAST, NWPM SECTION 5: NW/4 SECTION 6: NW/4

IT IS FURTHER ORDERED!

That the effective date of this order and all creations, abolishments, and extensions included herein shall be September 1, 1964.

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

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

ACK M. CAMPBELL, Chairman

E. S. WALKER. Mamber

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

NOMENCLATURE ADVERTISEMENT FOR AUGUST, 1964 CASE 994

In the matter of the application of the Oil Conservation Commission of New Mexico upon its own motion for an order for the creation of new pools in Chaves, Eddy, and Lea Counties, New Mexico, the abolishment of a certain existing pool in Lea County, New Mexico, and extensions of certain existing pools in Chaves, Eddy, and Lea Counties, New Mexico, and giving notice to all persons and parties interested in the subject matter thereof to appear and show cause why such creations, abolishments, and extensions should not be made.

a) CREATE A new pool in Eddy County, New Mexico, classified as a gas pool for Pennsylvanian production, designated as the Dark Canyon-Pennsylvanian Gas Pool, and described as:

TOWNSHIP 23 SOUTH, RANGE 25 EAST, NMPM SECTION 30: All

b) CREATE A new pool in Lea County, New Mexico, classified as an oil pool for Bone Springs production, designated as the South Lea-Bone Springs Pool, and described as:

TOWNSHIP 20 SOUTH, RANGE 34 EAST, NMPM SECTION 25: NW/4

c) CREATE A new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production, designated as the Race Track-San Andres Pool, and described as:

TOWNSHIP 10 SOUTH, RANGE 28 EAST, NMPM SECTION 18: SE/4 SW/4

ed) CREATE A new pool in Lea County, New Mexico, classified as an oil pool for Bone Springs production, designated as the Wilson-Bone Springs Pool, and described as:

SECTION 31: SE/4

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM

SECTION 9: SE/4

- SECTION 15: S/2 and NW/4

SECTION 16: NE/4

SECTION 22. W/2

(K) EXTEND the Hare-Simpson Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM

SECTION 9: SE/4

SECTION 15: S/2 and NW/4

SECTION 16: NE/4 SECTION 22: N/2

d) Create a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production, designated as the East Vacuum - Wolfcamp Pool, an described as:

Township 18 South, Range 35 East, NMPM Section 8: SW/4

- -2- August, 1964 Nomenclature
- (*) EXTEND the Artesia Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM SECTION 36: NE/4 NE/4

- (A) EXTEND the North Bagley-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:
 - TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM SECTION 10: NW/4
- (1) EXTEND the Bough-San Andres Gas Pool in Lea County, New Mexico, to include therein:
 - TOWNSHIP 9 SOUTH, RANGE 35 EAST, NMPM SECTION 13: N/2
- () EXTEND the South Double A-Abo Pool in Lea County, New Mexico, to include therein:
 - TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM SECTION 20: SW/4 SW/4 SECTION 29: W/2 NW/4
 - (k) EXTEND the Flying "M"-San Andres Pool in Lea County, New Mexico, to include therein:
 - TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM SECTION 20: E/2
 SECTION 21: S/2
- h L) EXTEND the Linda-San Andres Pool in Chaves County, New Mexico, to include therein:
 - TOWNSHIP 6 SOUTH, RANGE 26 EAST, NMPM SECTION 33: W/2 NE/4 and SE/4 SECTION 34: W/2 SW/4
 - TOWNSHIP 7 SOUTH, RANGE 26 EAST, NMPM SECTION 4: W/2 NE/4 and W/2 SECTION 5: E/2 SE/4
- (MAR) EXTEND the Lusk-Strawn Pool in Lea County, New Mexico, to include therein:
 - TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
 SECTION 21: NW/4
 SECTION 31: NE/4
 SECTION 33: NW/4
- (%n) EXTEND the Mescalero-San Andres Pool in Lea County, New Mexico, to include therein:
 - TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM SECTION 11: SE/4

- -3- August, 1964 Nomenclature
- \mathscr{B} a) EXTEND the Pearl-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM SECTION 25: S/2 NW/4

- (g)p) EXTEND the Tamano-San Andres Pool in Eddy County, New Mexico, to include therein:
 - TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM SECTION 36: SW/4 SW/4
- EXTEND the Vacuum-Glorieta Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM SECTION 30: NW/4

DEARNLEY-MEIER REPORTING SERVICE, Inc.

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico August 13, 1964

> HEARING REGULAR

IN THE MATTER OF:

Southeastern New Mexico nomenclature case calling for the creations, extensions, and abolishments of certain pools in Chaves, Eddy and Lea Counties, New Mexico

Case No. 3094

BEFORE:

Honorable Jack M. Campbell, Governor E. S. "Johnny" Walker, Land Commissioner A. L. "Pete" Porter, Secretary-Director

TRANSCRIPT OF HEARING



h

MR. PORTER: We will take up case 3094.

MR. PAYNE: Raise your right hand.

JOE D. RAMEY

having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. PAYNE:

- Q Please state your name and position.
- A Joe D. Ramey, I'm the District Supervisor for the New Mexico Oil Conservation Commission.
- Q Are you prepared to make recommendations in the Southeast New Mexico case for certain pools in Chaves, Eddy and Lea Counties, New Mexico.
 - A Yes.
- Q Are those recommendations prepared in the form of exhibits?
- A Yes, they are in Exhibit One, Southeast New Mexico nomenclature.
- Q Will you please refer to the exhibit and docket prepared and distributed in this hearing and point out any substantial differences between the two?
- A We have additions to paragraphs J, N and Q to what is advertised on the docket. I'll cover these additions in paragraph J: Township 9 South, Range 35 East, Section 12.



The Southwest quarter in paragraph N in Township 19 South, Range 32 East, Section 6, the Southwest quarter in section 7, the east half.

In paragraph P: In Township 19 South, Range 34 East, in Township 20 South, Range 35 East, section 10 Northeast quarter and Northwest quarter in paragraph Q in Township 17 South, Range 35 East, section 34, south half of Northwest quarter and in Township 18 South, Pange 35 East, section 5, the Northwest quarter.

- 0 No further changes?
- A No.
- O Do you have anything further to present, Mr. Ramey?
- A No, that's all.

MR. PAYNE: I move that Exhibit One in case 3094 be admitted.

MR. PORTER: Without objections the exhibit will be admitted. Anyone have a question of Mr. Ramey? The witness may be excused.

The Commission will take the case under advisement.

I don't believe we have a case for the Northwest this time do
we, Mr. Arnold?

MR. ARNOLD: No.

MR. PORTER: The hearing is adjourned.

(Whereupon, the hearing was concluded.)



SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATE MENTS. EXPERT TESTIMONY, DAILY COPY, CONVENTIONS 1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

STATE OF NEW MEXICO ទទ COUNTY OF BERNALILLO

I, SIDNEY VICK, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Sante 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 21st day of August, 1964.

My Commission Expires:

June 4, 1968.



PAGE

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dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATE MENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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WITNESS

JOE D. RAMEY

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INDEX

Direct examination by Mr. Payne

	OFFERED	ACCEPTED
NUMBER	3	3
Exhibit "1"		

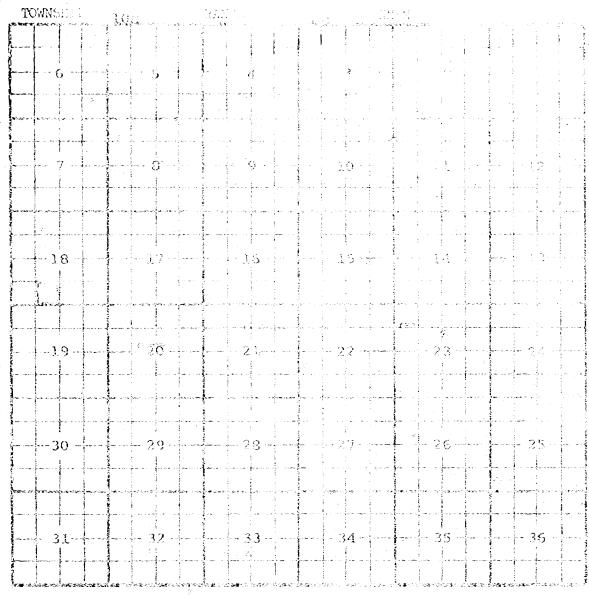


CASE 3094: (a) CREATION OF A NEW GAS POOL

COUNTY		POOL	Dark	Canyon_	<u>Pennsy</u>	lvainian G
TOWNSHIP	238	RANGE	25E	NMPM		
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Purposed:	One comp	pleted gas	well cap	able of	produ	ing.
	<u>.</u>					
Discovery						
in unit J						Lvanian Ma
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Proposed po	ool bound	dary colore	d in gree	en. Se	ction :	30: All
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CASE 8094: (b) CREATION OF A NEW OIL POOL

COUNTY LEA SOUTH LEA-BONE SPRINGS POOL TOWNSHIP 20 South RANGE 34 East NMPM 10 -18 14 -13--19 20 -21-24--30 29 28 26 34-32 - 33 -35 36 PURPOSE: One completed oil well capable of producing. SHELL OIL COMPANY - Federal "L" #1 in Unit P of Section 25-20-34. Completed in Bone Springs on May 28, 1964. Top of Perforations 10,064'. Proposed pool boundary colored in red. SECTION 25: NW/4



Purpose: One completed oil well capable of producing

Discovery Well: Daniel W. Varel, Avalanche Journal well #1 in unit N of sec. 18-108-28g. Completed in San Andres in March 20, 1964, through perforations 2186 to 2289.

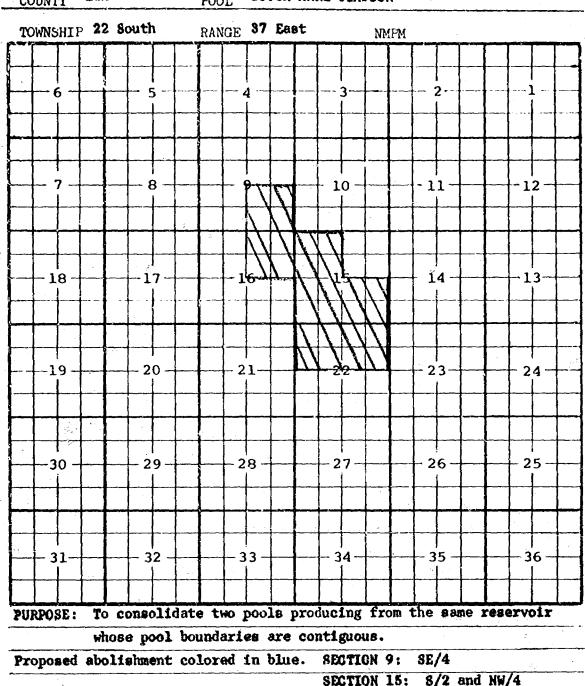
Proposed pool boundar	y <u>colored</u>	i in green.	590, 18:	34/4_34/4:
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CASE 3094: (d) CREATION OF A NEW OIL POOL

COUNTY	LEA						LECAMP			
TOWNSHIP	18 Sout	h	RANG	E 3	5 East		NMPM			,
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	one comp									
EXAS PACI										LO-8
ompleted:			_ _						9883'.	
roposed p	ool boun	dary (color	ed in	red.	SECTI	ON 8:	8W/4		

COUNTY	LEA		POOL	WILSON	-BONE	SPRINGS			
TOWNSHIP	20	South	RANGE	36	East	NMPM		. /	
		··· and a management of the same							
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PURPOSE:	One	complete	ed oil we	11 capal	ole of	produci	ng.		_]
THE BRITI								Unit #1 in	
				mpleted	in Bo	ne Sprin	gs on j	une 6, 1964	! .
Top of Pe				in red.	SECT	ION 31:	SE/4	<u> </u>	
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CASE 3094: (f) ABOLISHMENT OF AN EXISTING OIL POOL COUNTY LEA POOL SOUTH HARE-SIMPSON



Proposed	abolishment	colored	in	blue.	SECTION	9:	SE/4	3	
					SECTION	15:	8/2 and	NW/4	
					SECTION	16:	NE/4		- :
					SECTION	22:	N/2	-	-
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				.*			N. F		

CASE 8094: (g) EXTENSION OF AN EXISTING OIL POOL

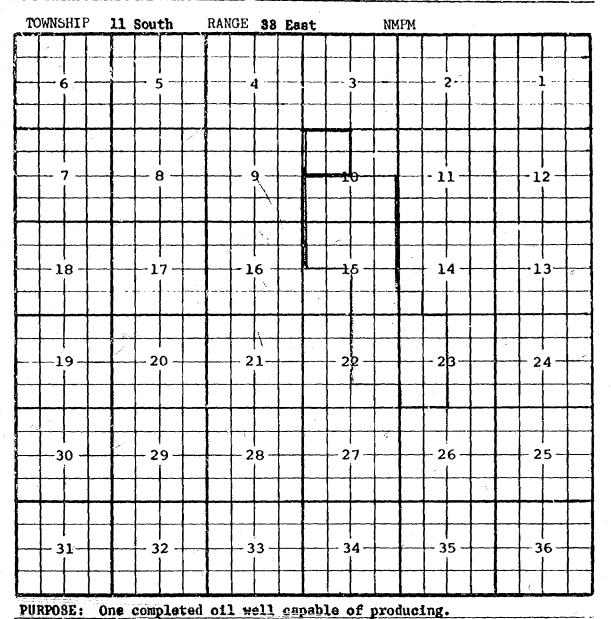
COUNTY	LEA	POOL HARE-	SIMPSON		
TOWNSHIP	22 South	RANGE 37 E	ast NM	IPM	
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19-	20	21-	22	23	24
			27	26	75
30	29	28	27	26	25
		<u> </u>			
31	32	33	34-	35	36
PURPOSE:	To take in a	creage of abo	lished South	Hare-Simpson	Pool.
,	dary colored		-		
Proposed 1	pool extension	ns colored in		ION 9: SE/4	
			1	· · · · · · · · · · · · · · · · · · ·	and NW/4
4	1.			ION 16: NE/4	
			SECT	ION 22: N/2	
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YTYU	Eddy.		PO	OL	Artes	ia		•					
WNSHIP	178		RA	NGE .	28E		NMPM			,			
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<u> </u>													
	ndary												
posed	exten	sion	8 CO	lored	in g	reen.	Sec	. 36:	NE	:/4	NE,	4	
								<u></u>	· · · · · ·				<u></u>
													_
													

COUNTY LEA

POOL NORTH BAGLEY-UPPER PENNSYLVANIAN



TEXAS FACIFIC OIL COMPANY - J. P. Collier #1 in Unit F of Section 10-11-33.

Completed in Upper Pennsylvanian on May 21, 1964. Top of Perforations
9466'.

Pool boundary colored in red.

Proposed pool extension colored in green. SECTION 10: NW/4

CASE 3094: (j) EXTENSION OF AN EXISTING GAS POOL

BOUCH-SAN ANDRES GAS COUNTY POOL 9 South 35 East TOWNSHIP RANGE NMPM 8 10 -11 16 -14 18 15 20 --19 21-22-23 24 30 29 28 27 26 25 31 32 33. 34-35 36 PURPOSE: One completed gas well capable of producing. PAN AMERICAN PETROLEUM CORPORATION - Federal A #2 in Unit G of Section 13-9-35. Completed in San Andres on March 24, 1964. Top of Perforations 48101. ADDITION--H. C. HOOD - T. Betenbough #1 in Unit M of Section 12-9-35. Completed in San Andres on May 14, 1964. Top of Perforations 47481. Pool boundary colored in red. Proposed pool extensions colored in green. SECTION 18: N/2 ADDITION----SECTION 12: SW/4

TOWNSHIP	17 South	RANGE 36 Eas	t NMPM		
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31	+ 32 +	33	34	35	36
	+++				
IIPPAGE. A	ne complete	ad odl woll co-	able of and	l de la constant	
		ed oil well cap			

PURPOSE: One completed oil well capable of producing.

LONE STAR PROD. COMPANY - Gulf State #1 in Unit M of Section 20-17-36.

Completed in Abo on June 1, 1964. Top of Perforations 9171'.

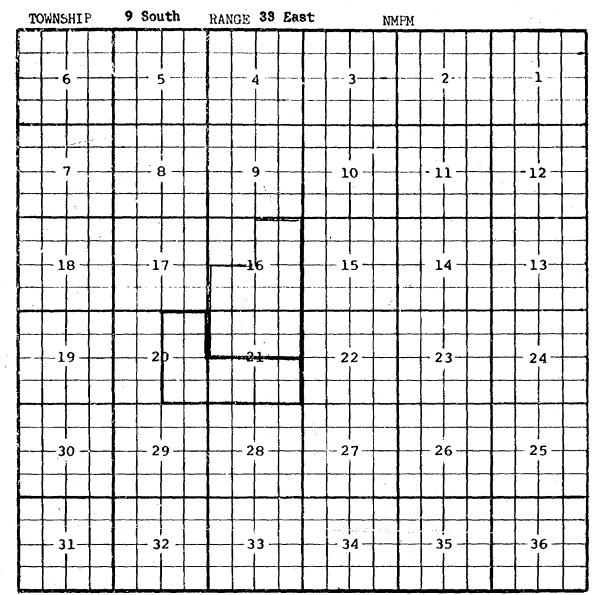
Pool boundary colored in red.

Proposed pool extension colored in green. SECTION 20: SW/4 8W/4

SECTION 29: W/2 NW/4

POOL

FLYING "M"-SAN ANDRES



PURPOSE: Five completed oil wells capable of producing.

COASTAL STATES GAS PROD. CO. - Sinclair State #1 in Unit P of Section 20-9-33. Completed in San Andres on June 17, 1964. Top of Perforations 4449'. COASTAL STATES GAS PROD. CO. - Skelly State #8 in Unit H of Section 20-9-33. Completed in San Andres on June 15, 1964. Top of Perforations 4459'. COASTAL STATES GAS PROD. CO. - Flying N State #2-21 in Unit N of Section 21-9-53. Completed in San Andres on June 80, 1964. Top of Perforations 4497'.

COASTAL STATES GAS PROD. CO. - Southern Minerals State #1-21 in Unit J of Section 21-9-33. Completed in San Andres on May 30, 1964. Top of Perforations 4508'.

COASTAL STATES GAS PROD. CO. - Southern Minerals State #2-21 in Unit L of Section 21-9-33. Completed in San Andres on June 2, 1964. Top of Perforations 4475'.

Pool boundary colored in red.

Proposed pool extensions colored in green. SECTION 20: E/2 SECTION 21: 8/2

sec. 34: W/2 SW/4

CASE 3094: (m) EXTENSION OF AN EXISTING OIL POOL (Continued)

POOL

Chaves

COUNTY

TOWNSHIP RANGE NMPM 78 26B 9 8 10 - 11 --12-15 18 17 --16 14 20 --19 - 21 22 23-24 30 -29 28-27 26 25 32 33 34 35 31-36

Purpose: As Stated on page one of this exhibit: Dr. Sam G. Dunn Continued.

4. England, Well #1 in unit B of Sec. 4-7-26, completed in San Andres May 1, 1964, through perforations 1064' to 1088'. 5. Pendergrass, Well #1 in unit D of Sec. 4-7-26, completed in San Andres, May 1, 1964, through perforations 998' to 1030'. 6. Beadle, Well #1 in unit I, of Sec. 5-7-26, completed in San Andres May 8, 1964, through perforations 1000' to 1035'. 7. Beadle, Well #2 in unit M of Sec. 4-7-26, completed in San Andres, May 10, 1964, through perforations 1017' to 1053'.

Pool boundary colored in red.

Proposed extensions colored in green. Sec. 4: W/2 NE/4, W/2

Sec. 5: E/2 SE/4

Linda-San Andres

POOL LUSK-STRAWN COUNTY LEA TOWNSHIP 19 South RANGE NMPM 32 East 10 - 11 -12 16 15 14 13-22 23 24 --30 27 26 25 32 - 35 34 -·36 PURPOSE: Three completed oil wells capable of producing. PAN AMERICAN PETROLEUM CORPORATION - Plains Unit #6 in Unit E of Section 21-19-32. Completed in Strawn on June 18, 1964. Top of Perforations 11,516'. SHELL OIL COMPANY - Middleton A Federal #3 in Unit A of Section 31-19-32. Completed in Strawn on June 7, 1964. Top of Perforations 11,1991. PAN AMERICAN PETROLEUM CORPORATION - Plains Unit #7 in Unit D of Section 88-19-32. Completed in Strawn on June 23, 1964. Top of Perforations 11,440'.

ADDITION -- TENNECO GIL COMPANY - USA Continental Unit #1 in Unit O of Section 6-19-32. Completed in Strawn on July 9, 1964. Top of Perforations 11,286'. Pool boundary colored in red. Proposed pool extensions colored in green. SECTION 21:: NW/4 SECTION 81: NE/4

SECTION 33: NW/4 ADDITIONS -- SECTION 6: SE/4 and SECTION 7: E/2

COUNTY LEA

POOL MESCALERO-SAN ANDRES

TOWNSHIP	10	South	RANGE 32	East	NMPM		
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	1						
31-	+	32	33 -	· 		35	36
	+	+				╁┼┼	
URPOSE:)ne	completed	oil well	capab	le of producin	g.	

SUNRAY DX OIL COMPANY - New Mexico State K #1 in Unit O of Section 11-10-32.

Completed in San Andres on May 31, 1964. Top of Perforations 4042'.

Pool boundary colored in red. Proposed pool extension colored in green. SECTION 11: SE/4

TOWNSHIP 19 South RANGE NMPM 34 East 10 --16 15 20 --19 22 23 24 29 -28 32 33 34-31 PURPOSE: One completed oil well capable of producing. D. W. ST. CLAIR - Superior Federal #1 in Unit F of Section 25-19-34. Completed in Queen on June 3, 1964. Top of Perforations 5042'. Pool boundary colored in red. Proposed pool extension colored in green. SECTION 25: 8/2 NW/4

CASE 8094: (p) EXTENSION OF AN EXISTING OIL POOL (Continued)

COUNTY LEA POOL PEARL-QUEEN

COUNTI	FOOL FRANKE-QUIER	
TOWNSHIP 20 South	RANGE 85 East NMPM	<u> </u>
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18 17	16 + 15 + 15	14
		
19	21 22	+ 23 + + 24 + -
30 + 29 +	28 + 27 + -	26 - 25 -
31 + 32 +	33 + 34 + 34	35 - 36 -
PURPOSE: As stated on	receding page, paragraph (a). Schibit 7
	PROD. COMPANY - Saunders	[P
	20-85. Completed in Queer	
Top of Perfor		
Pool boundary colored in		
	colored in green. SECTION	1 10: NE/4 NW/4
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CASE 3094: (Q) EXTENSION OF AN EXISTING OIL POOL

COUNTY	Eddy	POOL		Taman	o-San Ar	ndres
TOWNSHIP	178 RANGE 318 NMPM					
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19-	20 -	21-	2	2	23-	24
			<u></u> 2		26	25
30	29	28 -	2	/	26	25
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						36-17-31.
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329' to	<u> 1345'.</u>	· · · · · · · · · · · · · · · · · · ·				<u> </u>
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ol bound	dary colo	ored in re	<u>a.</u>		30	14 0-14
coposea e	1018101XE	colored	in green	. Sec	, 16: SW	1/4 SW/4
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CASE 3094: (r) EXTENSION OF AH EXISTING OIL POOL (Continued on next page)

COUNTY LEA POOL VACUUM-GLORIETA

TOWNSHIP	17 South	RANGE	85 East	NMPM	
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7 +	8 +	9	10		12
18	17	16	15	14-	13
19	20	21	22	23-	24
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30	29	28	27	26-	25
31-	32	33	34	35	36

PURPOSE: One completed oil well capable of producing.

TEXACO.	INC.	- State	of New	Hexico I	N #7 1x	Unit	E of	Section	30-17-3	5.
		Glorieta								

ADDITION--SOCONY MOBIL OIL COMPANY, INC. - State M #15 in Unit E of Section 34-17-85. Completed in Glorieta on July 1, 1964. Top of Perf-

Pool boundary	colored in				
Proposed pool		 in green.	SECTION	30:	NW/4
40, 31		ADDITION~	-SECTION	34:	8/2 NH/4
	7.0				
					
					

COUNTY LEA

POOL VACUUM-GIORIETA

