Case. Number. 4450

Application, Transcripts

5m all Exhibts.

ETC.

209 SIMMS BLDG. . P.O. BOX

NEW MEXICO

BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO

> October 28, 1970 EXAMINER HEARING

IN THE MATTER OF:

Case No. 4450

Application of Anderson Oil and Gas Company for a dual completion and salt water disposal, Lea County, New Mexico.

BEFORE: Elvis A. Utz, Examiner



TRANSCRIPT OF HEARING



dearnley-meier reporting service, inc.

SPECIALIZING INI DEPOSITIONS, MEARINGS, STATE MENTS, EXPERT TESTIMONY, DAILY GOPY, CONVER-1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-669] • ALBUGUERQUE, NEW MEXICO 203 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUGUERQUE, NEW MEXICO MR. HATCH: This is the application of Anderson Oil and Gas Company for a dual completion and salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the applicant. I have one witness I'd like to have sworn.

WILLIAM G. KERN,

a witness, having been first duly sworn according to law, upon his oath, testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

- Q Will you state your name, please?
- A William G. Kern.
- Q By whom are you employed and in what position, Mr. Kern?
- A Employed as an engineer by Anderson Oil and Gas Company in Midland, Texas.
- Q Have you testified before the Oil Conservation Commission and one of its examiners and made your qualifications a matter of record?
- A Yes, sir.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. UTZ: Yes, sir. They are.



dearniey-meier reporting service, inc.

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

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 1203 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUEROUE, NEW MEXICO

Q Mr. Kern, are you familar with the application of Anderson Oil and Gas Company in Case 4450?

- A Yes, sir. I am.
- Q What is proposed by the applicant in this case?
- A What we propose to do is re-enter the State B.T. (Q)

 No. 1 well in the Bagley Field; squeeze off the existing perforations; drill to a total depth of eleven thousand seventy-five feet; run a liner and complete it as a dual production and disposal well.

(Whereupon, Applicant's Exhibits 1 through 4 were marked for identification.)

- Q Referring to what has been marked as Applicant's Exhibit
 No. 1, would you identify that exhibit?
- A Exhibit No. 1 is a well completion plat showing the completion interval of all the wells within a two mile radius of our proposed re-entry. This area has upper and lower Pennsylvanian production and Devonian production. On this map we also show three salt water disposal wells that they are disposing of water in the Devonian formation under the Bagley Field.
- Q That is in Sections 2 and 11 in the lower right hand of the exhibit?
- A Yes, sir.



dearnley-meier

SPECIALIZING IN,

- Who operates those disposal wells? Q
- Α These are operated by Amerada Hess.
- Were any of them a dual completion as proposed in this application?
- No. They aren't dual completions. They are single completion water injection wells.
- But they are disposing in the same horizon you propose to dispose in?
- Yes, sir.
- Now, referring to Exhibit No. 2, will you identify that exhibit?
 - Exhibit No. 2 is the existing wellbore condition in this State B.T (Q) No. 1. This wellbore sketch shows the surface pipe thirteen and three-eights inch cemented to the surface; eight and five-eights inch set at three thousand eight hundred ninety-five and cemented to the surface and the existing five and a half inch set at nine thousand eight hundred ninety. The top of the cement behind the five and a half inch was found, by a temperature log, at seven thousand five hundred forty feet.

This well was completed from 9805 to 9815 and produced approximately four and a half million cubic feet



dearnley-meier reporting service, inc.

0 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 3 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO

DEPOSITIONS, HEARINGS, STATE MENTS. EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

SPECIALIZING IN.

and two hundred thousand barrels of oil.

- Q What formation was that production from?
- A That is from the Pennsylvanian.
- Now, the well was actually drilled to a greater total depth, was it not?
- A TD was 11,075 feet and is currently plugged back to 9,843.
- Now, referring to what has been marked as Exhibit No. 3, would you identify that exhibit?
- A Exhibit No. 3 shows our installation of the proposed workover and the schematic wellbore diagram. What we intend to do is squeeze off the existing perforations, drill the well to 11,050 feet, run a four inch liner, cement it back to the top of the liner and then re-drill out to the TD of 11,075 feet. We will be disposing of the water in an open hole section from 11,050 to 11,075 feet and producing from perforations from 9,910 and 9,940.
- Now, how will the disposal well be completed -- will you inject down through tubing?
- A We intend to make a dual tubing string out of it using two and a sixteenth inch hydril tubing, plastic coated, for the disposal system and plain two and a sixteenth inch hydril for the production string.



pot Les

1

en.

) Land

DEPOSITIONS, HEARINGS, STATE MENTS, EXPERT TESTIMONY, DAILY COPY, SIMMS BLDG. • P.O. BOX 1092 FIRST NATIONAL BANK EAST •

- Now, will this type of completion adequately protect any Q producing formation, in your opinion?
- Yes, sir. This will protect it completely.
- And you anticipate that the well will take under pressure or under a vacuum?
- Wells in the area have been taking as high as ten thousand barrels a day on vacuum in the Devonian.
- Will you be able to operate the producing side of the well without any difficulty?
- I feel we can.
- What volume of water will you be disposing of?
- We intend to dispose of seven hundred fifty barrels of water a day.
- What is the source of that water? Q
- That will be from three wells that we intend to drill in A this immediate area.
- Would it also include the subject well here?
- Yes.
- That would be water produced with the oil?
- A Yes, sir.
- You say initially seven hundred fifty barrels a day?
- Initially seven hundred fifty. A
- What do you anticipate the maximum will be? Q



SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATE MENTS, EXPERT TESTIMONY, S BLDG. • P.O. NATIONAL BANK

I would think the maximum would be in the neighborhood Α of five thousand barrels a day.

- Do you have a water analysis on this water?
- I have a water analysis taken from the three different wells surrounding our lease. It shows here the chlorides in the neighborhood of thirty to thirty-four parts per million which indicates it isn't too corrosive water.
- And this is the type of water you will be disposing of in this well?
- Yes, sir.
- Were Exhibits 1 through 4 prepared by you or under your supervision?
- Yes, sir. They were.

MR. KELLAHIN: At this time I'd like to offer into evidence Exhibits 1 through 4.

MR. UTZ: Without objection, Exhibits 1 through 4 will be entered into the record of this case.

- Is the type of completion you propose here one that has been approved by this Commission in other cases?
- This has been approved before. This is a typical dual completion.

MR. KELLAHIN: That is all I have on direct examination, Mr. Utz.



CROSS EXAMINATION

BY MR. UTZ:

- You are going to inject through two and one sixteenth inch tubing?
- Yes, sir.
- Will that handle five thousand barrels of water a day?
- I don't know if we can get that much down it on a vacuum or not. I am sure it will take the water, but you might have to put pressure on it to get that volume down.
- Do you intend to coat the inside of this tubing? Q
- This tubing will be plastic coated.
- I notice your Exhibit 3 says you are going to squeeze off these perforations. That is five and a half inch, isn't it?
- Yes.
- Is that for your drilling-in you are going to open them up or --
- I believe that zone is depleted in this well. produced in excess of four and a half million cubic feet and two hundred thousand barrels of oil. We recently went into the well, pulled the tubing and packer out of it without killing the well or without any pressure at the surface.

 PHONE 243-6691
PHONE 256-1294 BOX 1 1120 SIMMS BLDG. • P.O. 1203 FIRST NATIONAL BANK ž



A

You are going to perforate about a hundred lower? Q Yes, just below the bottom of the five and a half inch.

MR. UTZ: Any other questions of the witness?

You may be excused.

Statements in the case?

The case will be taken under advisement.

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 1203 FIRST NATIONAL BANK EAST • PHONE 256-1294 •

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

I, PETER A. LUMIA, a Court Reporter 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.

)

SS.

Peter A. Lumia, C.S.R.



I do horeby country that her his a complete record of the a the Executor hearing of Cure : bearing by se on 10 Now Mexico Off Consorvation Commission

dearnley-meier reporting service, inc.

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

1120 SIMMS BLDG, • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 1203 FIEST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO

T N D E X	
WITNESS:	PAGE:
WILLIAM G. KERN	e e
Direct Examination by Mr. Kellahin	2
Cross Examination by Mr. Utz	7

EXHIBITS

APPLICANT'S	MARKED	OFFERED AND ADMITTED
Nos. 1 through 4	3	7





OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

GOVERNOR DAVID F. CARGO CHAIRMAN

LAND COMMISSIONER ALEX J. ARMIJO MEMBER

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

November 6, 1970

in Tagan Vallahin	Re:	Case No.	4450	
Ar. Jason Kellahin Kellahin & Fox		Order No	R-4057	
attorneys at Law		Applicant:		
Post Office Box 1769 Santa Fe, New Mexico		Anderson Oi	1 & Gas Company	
Dear Sir:				

D

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

ALP/ir
Copy of order also sent to:
Hobbs OCC x
Artesia OCC
Aztec OCC
OtherState Engineer Office

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. 4450 Order No. R-4057

APPLICATION OF ANDERSON OIL AND GAS COMPANY FOR A DUAL COMPLETION AND SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 28, 1970, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 6th day of November, 1970, 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, Anderson Oil and Gas Company, seeks authority to complete its New Mexico State B. T. "Q" Well No. 1, located 660 feet from the South line and 660 feet from the East line of Section 33, Township 11 South, Range 33 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the Bagley-Pennsylvanian Pool in the perforated interval from approximately 9910 feet to 9940 feet through 2 1/16-inch tubing and to dispose of produced salt water into the Devonian formation, Bagley Siluro-Devonian Pool, in the open-hole interval from approximately 11,050 feet to 11,075 feet through a parallel string of 2 1/16-inch plastic-lined tubing, with separation of the zones by a packer set at approximately 10,000 feet.
- (3) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Anderson Oil and Gas Company, is hereby authorized to complete its New Mexico State B. T. "Q" Well No. 1,

-2-CASE No. 4450 Order No. R-4057

located 660 feet from the South line and 660 feet from the East line of Section 33, Township 11 South, Range 33 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the Bagley-Pennsylvanian Pool in the perforated interval from approximately 9910 feet to 9940 feet through 2 1/16-inch tubing and to dispose of produced salt water into the Devonian formation, Bagley Siluro-Devonian Pool, in the open-hole interval from approximately 11,050 feet to 11,075 feet through a parallel string of 2 1/16-inch plastic-lined tubing, with separation of the zones by a packer set at approximately 10,000 feet;

PROVIDED HOWEVER, that the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO

DAVID E. CARGO, Chairman

ALEX J. ARMIJO, Member

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

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. 4086 Order No. R-3722

APPLICATION OF HANSON OIL COMPANY FOR A DUAL COMPLETION AND SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 26, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 1st day of April, 1969, 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, Hanson Oil Company, seeks authority to complete its CSA Federal Well No. 1, located in Unit L of Section 29, Township 26 South, Range 37 East, NMPM, Scarborough Yates-Seven Rivers Pool, Lea County, New Mexico, as a dual completion to produce oil from the Yates formation in the interval from 3116 feet to 3135 feet through 2 1/16-inch tubing and to dispose of produced salt water into the Seven Rivers formation in the interval from 3172 feet to 3197 feet through a parallel string of 2 1/16-inch plastic-lined tubing, with separation of the zones by a packer set at approximately 3150 feet.
- (3) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

-2-CASE No. 4086 Order No. R-3722

IT IS THEREFORE ORDERED:

(1) That the applicant, Hanson Oil Company, is hereby authorized to complete its CSA Federal Well No. 1, located in Unit L of Section 29, Township 26 South, Range 37 East, NMPM, Scarborough Yates-Seven Rivers Pool, Lea County, New Mexico, as a dual completion to produce oil from the Yates formation in the interval from 3116 feet to 3135 feet through 2 1/16-inch tubing and to dispose of produced salt water into the Seven Rivers formation in the interval from 3172 feet to 3137 feet through a parallel string of 2 1/16-inch plastic-lined tubing, with separation of the zones by a packer set at approximately 3150 feet;

PROVIDED HOWEVER, that the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

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

SEAL

esr/

Case 4450

Jeant Cenders on Oil Co. premisión

lo Vie ally complete their 137'3' St.

#1 P - 3 - 3 + 11 - 3 = ao follows.

Produce oil from Bagley - Penn oil

pool thu thing 21's tubileg & inject

evales lam 26 lubra. & emder aparka,

sel at aparox 10,000'. I into the biluro.

Devonint open hole from 11,000 - 75.

(that dijection tubility will be

ent-plailie to ale.)

- CASE 4447: Application of Morris R. Antwell for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of his Allen Well No. 1 located in Unit J of Section 31, Township 22 South, Range 27 East, Eddy County, New Mexico, in such a manner as to permit the production of gas from the South Carlsbad-Strawn and South Carlsbad-Morrow Gas Pools through parallel strings of tubing.
- CASE 4173: Reopened (Continued from the September 30, 1970 Examiner Hearing)

 In the matter of Case 4173 being reopened pursuant to the provisions of Order No. R-3811-A, which order extended 80-acre spacing units and a limiting gas-oil ratio of 4000 cubic feet of gas per barrel of oil for the Hobbs-Drinkard Pool, Lea County, New Mexico, for a period of 90 days. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing, why the limiting gas-oil ratio should not revert to 2000 to one, and/or why all casinghead gas produced by wells in the pool should not be reinjected.
- CASE 4448: Application of MWJ Producing Company for pool redelineation and the creation of a new pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the redelineation of the Mescalero Permo-Pennsylvanian Pool by the deletion of all lands in Sections 28 and 33, Township 10 South, Range 32 East, Lea County, New Mexico, from said pool. Applicant further seeks the creation of a new pool for the production of oil from the Permo-Pennsylvanian formation for its Huber State Well No. 1 located in Unit K of said Section 33, and for the promulgation of special rules therefor including a provision for 160-acre spacing units and the assignment of 80-acre allowables.
- CASE 4449: Application of Petro-Thermo Corporation for authority to operate an oil treating plant, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks authority to install and operate a water-bath and heat-treatment type oil treating plant in the SW/4 NW/4 of Section 31, Township 18

 South, Range 37 East, Lea County, New Mexico, for the reclamation of sediment oil.

CASE 4450:

Application of Anderson Oil and Gas Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete the New Mexico State B. T. (Q) Well No. 1 located 660 feet from the South and East lines of Section 33, Township 11 South, Range 33 East, Lea County, New Mexico, in such a manner as to permit the production of oil through tubing from the Bagley-Pennsylvanian Pool and the disposal of produced salt water through tubing into the Devonian formation, Bagley-Siluxo-Devonian Pool at a depth of approximately 11,075 feet.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 28, 1970

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

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

- CASE 4443: Application of Pan American Petroleum Comporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the BS Mesa-Gallup and Basin-Dakota Gas Pools in the wellbores of its Jicarilla Apache 102 Wells Nos. 7, 9, 11, and 12, located respectively in Sections 3, 4, 10, and 9, Township 26 North, Range 4 West, Rio Arriba County, New Mexico. Applicant further seeks a procedure whereby other wells on said Jicarilla Apache 102 lease now dually completed in said pools may be approved administratively for downhole commingling.
- CASE 4444: Application of Tenneco Oil Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the rules governing the Allison-Pennsylvanian Pool to permit the completion of an oil well at an unorthodox location 1830 feet from the North line and 660 feet from the West line of Section 10, Township 9 South, Range 36 East, Lea County, New Mexico.
- CASE 4445: Application of Byron McKnight for an exception to Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules as set forth in Commission Order No. R-111-A. Applicant proposes to drill two exploratory wells in the NW/4 NW/4 of Section 35 and the NE/4 NE/4 of Section 34, both in Township 19 South, Range 33 East, Lea County, New Mexico, in such a manner as to eliminate the necessity of running the salt protection string required by said Order No. R-111-A, provided the production string would be cemented to the surface.
- CASE 4446: Application of Ford Chapman for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the open-hole interval from 2899 feet to 2905 feet in his Gulf Pipkin Federal Well No. 1 located 330 feet from the South line and 605 feet from the East line of Section 34, Township 26 South, Range 29 East, Pecos-Delaware Pool, Eddy County, New Mexico.

- CASE 4451: Application of Union Oil Company of California for a non-standard oil proration unit, Roosevelt County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for an 80-acre non-standard oil proration unit comprising the SW/4 SE/4 of Section 17 and the NW/4 NE/4 of Section 20, Township 8 South, Range 38 East, Bluitt-San Andres Associated Pool, Roosevelt County, New Mexico, to be dedicated to a well to be drilled at a standard location in the SW/4 SE/4 of said Section 17.
- CASE 4423: Continued from the September 30, 1970 Examiner Hearing

Application of Union Oil Company of California for compulsory pooling, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to and including the San Andres formation underlying the N/2 NE/4 of Section 20, Township 8 South, Range 38 East, Bluitt-San Andres Associated Pool, Roosevelt County, New Mexico. Said acreage to be dedicated to a well to be drilled at an orthodox location in the NW/4 NE/4 of said Section 20. Also to be considered will be the cost of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

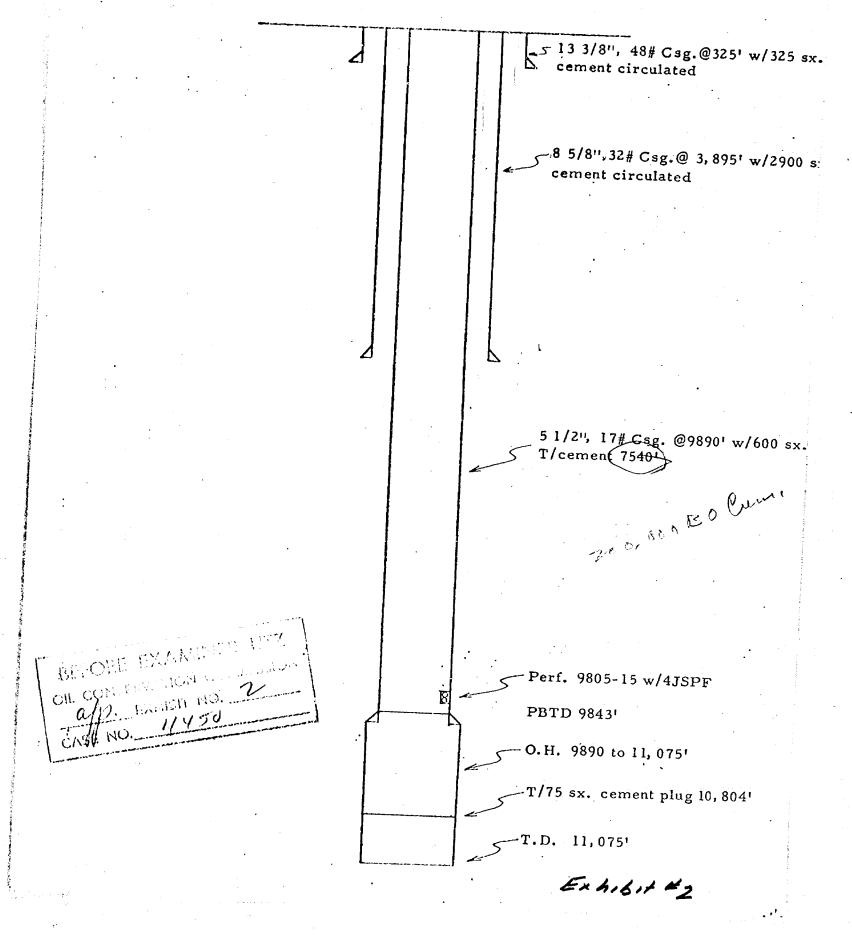
- CASE 4434: (Continued from the September 30, 1970, Examiner Hearing)

 Application of Union Oil Company of California for the creation of a new gas pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for its Pipeline Federal Well No. 1 located in Section 4, Township 19 South, Range 34 East, Lea County, New Mexico. Applicant further seeks the promulcation of special rules therefor, including a provision for 640-acre spacing and proration units and fixed well location requirements.
- CASE 4452: Application of David C. Collier for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by injection into the Queen formation through 4 wells located in Sections 1 and 12 of Township 19 South, Range 29 East, and Section 6 of Township 19 South, Range 30 East, East Turkey Track-Queen Pool, Eddy, County, New Mexico.

is,elalMi _s	(Sohio) (Sun) CB CB Read (E) K-4866 Read Action processes	Sam Borzh Kza toko 500	Paul DeClava I Gulfeto Guif	Tes. Pacific 2 & Sunset Int.	Synset Int. Cabel Corp.	"J.O.Guye etol"
Reh Inc	Sun-St.	Shea Climenko State Champlin St.	Humale St. 11 199 52	"AK"	37074 03 1320	JEBossermonia(S) O.E. Griging (9)5)
tc 76 Reoder	•3 K- 3036 •'	6.16 6.7469	NCRA F.32 X 2604	A K Trobaugh Guir Pasel (Cobot) Belmont) Hp. Meadec (CG 1318 L C 7489 (Lea St 106-1318	(Cabet Corp.) Cabet Corp. 018 K.2372 06 1318 3642 Meadco Prop. K.2372	Southland Roy I A
ra Sul F	Stole	1 50 3101 00 5840 A 5061	16 511 '06' Bagley - 51"	DAGALY NO	Meadco Prop. Atapox 73 Fix Pet 79 Cobot St. K-1184 40 &	6 Piez Farranii
	(⊚ Wagner, ary	1 Tipperary Andoven	Christer 16:05	4.K. Trobaugh	(Cabal Carp) (Cabal Carp) (Cabal Carp)	(So Roy) So Roy.
*****	Me Coller Points Hugh LR. E. B. J. Grander Hugh LR. E. B. J. Grander F. (4)	Fed. U.S.M.I. Hugh, L.R.E.B.J.Grahom Est. (S)		"Mary E. Dallas" F204 F. J. Danglade, MI O 33 D. E. Gridley (265)	Cabat-St." State	A.B.Crawlz M.L. 5251 Par K.I. Farrar, estal, MI F. S. S. Gravar, estal, MI F. S. S. Gravar, estal, MI J.E. Bossermania, S.
Gulf Powhatan Coffer TO 10,403 TWO 5240 Abo 7130 O DIAS 1753	(Andover Oil) 3.24 25 36	Morieu Stor		Guiff Gobot Corp	Cabal Corp. of 06 259 MCDst real Humble-54 Tomorack Tomorack	So Rey So Roy to 9850 (Shell) (Shell)
4 0/ks 22 83	SamBoren Stoltz Wagner ElBrown 1	'Opal' I'kay! Tipperary	J.E. Bossermonts (5)	05-1402 FE9150 (Gulf) 22 Tipperary	Cabol Corp. K-2792 - 1	φ •1 Ερρετεοπ 1
S Beal & Assoc	Andover-Fed. Srenda	Queen Sucha (Sunray)	COH Stoleto KI Pen Aver 1	Felmont St. 262"	Cabel Corp. Midwest Piso Feperson Piso Feperson Ed Holl Hear	(Shell) So. Roy So. Roy to 5900
: P. Johnson, etai arry Waggoner	W.E. Mathers WE.Mathers	J.E. Read MI. Florence 1 Ann Audreu blecke Morley, et al (S. 1848) D.E. Gride U. (4)	Bell Pet. Pet.	Skelly Tipper-	Maddo Prop Midwest I.R. Epperson Fnompson Med Mest Pout 8 Aco Midwest	Maiil, etal MI. Nancy Eppergen (g.) Rueben W., Epperson
Mayral c	CM Huber Corp Sam Boren, 1-8 Sam Boren, 91-8 et of 1 139-14, 7	Frances 5. 1903 Mobel Com.	Worren Amer) Tipper- ary Gry (W McKnight//3 Worren 1/6 Tom W R Davis 1/6) Worren 1/6 Tom	Stock Syberale Little 1513	Midwest Kesos NM SA	So. Roy. So Roy)
yery Wooggoner	1.8 F212 There # 30	Pegger	Warren Store Lovington Tr. 28 Toper America	Right Ectark Prophy	Mid-Text	Midgrest 25
8.ng RM BTA 435 12-15-74 (12) K-4600	1 man 1	Surrey J. Surface	Golf Gry Land	renAmer) (Gulf) K-4-480 Tom Brown OG 1492	7445 9.72 320 Mins. 19.72 1.25-71 06.426 State	\$10384 s
196 H. U	a E Mathers, etal Stote #354	Tipperory Julius Amereka Kelsoy State PARTEST	Lavington TipperaryRes. Warren-St " Varional Bk.Tr. Stare	Warren Sturm	Midwest Single 8 29 72 LG Greany HC Hood 2.7.7 Welden L Dallaselal	Nancy Elm W Epperson etal T.M. Epperson R.W. Epperson
ic Alester Fuel 2 + 19 + 73	Som Boren (US Smell) Texaco (U	"Rose Sunray" "Nellie"	Mathers St. Com B-10356	P.De tol 645 Amerodo 15 13 160 Amerodo 15 15 16 8-10356	Guil Amerodo HBP 77 HB1 e16 Amerodo 1 HB2	Major, Giebel & Foreter 3 - 21 - 71 K - 1261
K - 3067 (3 2)	BTA.etal F.B. Giar MI 14 5337 [7] John H. Moore 14 11 11 11 11 11 11 11 11 11 11 11 11 1	to 10326		8-10356 Ameroda Paul De: 81M Cleva eta: 81M 103-426	Amerada Amerada	Amer Petrofine
	HBP (0.0. Bomar) (2037 Pi80	Moss Wonds	Amini Oil Goodings	America America America Harris	Antrodo	Mojor, Giebel Exforster
Stote	Myrtic 603 LId	Stole So Ollsir.	Mothers Atene 1 441 W.E. Mathers State 4 566.	Ameroda o ofo Ameroda		78 /2129 Fina St.
	State BA.Moore, etal	3,0,0	Siere W.E. Matheis State.	184K 2/6/4 818. 1 mm	374.0	DA - 1:56 Style
5hell 1 21 74	87A.etal	SamBoren Jogrussi 105 M	An Texas Pocus	American Company	Melege C. Le Control	DA 1 11 56 State State State State Surroy WE
Shell	UNA TINNE SUNE TRUE . 8TA.etal	Sam Boren 100	Texas Pactric B-9949 E-6696 At "C"	Mothers A	Barrier Her Roc.	AND ALTER STATE MARK ALTERNATION AND AND AND AND AND AND AND AND AND AN
5hell 1 21 74	BRE 1188 1688 PERIL 188 PERIL 188 PERIL 188 PERIL 189 PE	Sam Boren Jogruss 8 Sam Boren Jogruss 8 I 15 73 8 374 15 73 8 374 15 73 8 374 15 73 8 374 15 73 8 374 15 73 8 374 15 73 15 7	Texas Pocific 1 8-9919 E-6696 At C. C. C. Macoco Frop. 1 Tex Poc. 1 19:55	Amerada Amerada Amerada Amerada Amerada Amerada Amerada Amerada Amerada Amerada Osessin Dodie U.S. M. Dodie U.S. M. Dodie	Barreda Barred	Carrow Mc State
5hell 1 21 74	87A, et al. 1-19-73 7-3-4-3 Wm. E. Brower, 1/2 MI Pete Louisseno \$ 8 1/2 MI 19977; 7 5 5 6 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Sam Boren 100	Texas Pocific 8-9919 E-6696 At Tex Pocific 8-9919 E-6696 At Tex Pocific 1-15	Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo OSAMI, DOGREGO Amerodo Amerodo Amerodo OSAMI, DOGREGO Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo Amerodo	Barrier Pac Pac	Canada 155 State Canada 155 State
Shell 1 21 74 K 1839 H 20 H	BRE 1188 1688 178114 8TA etal 1-19-73 TSM1-3 Wm. E. Brewer, 1/2 MI Pete Louisseno S & 1/2 MI BTA 181-74 2-18-74 K-3843 78-88-78-78-78-78-78-78-78-78-78-78-78-7	Sam Boren	Texas Pocrir C B-9919 E-6696 An C C C C C C C C C C C C C C C C C C	Amerado Amerado Amerado Amerado Amerado Amerado Aserodo Ososalinodole Oso	ex Pace Americal (State of State of Sta	State Stat
Shell 1:21:74 K:1839 H:00 # M.I. bers et ol	### 1888 #### #### #### ##### ##### ########	Som Boren John Me 15 15 15 15 15 15 15 1	Texas Pocific i E-6696 At	Amerada	ex Pac larereda (since) Arrando Arrando Pac la Pacific Bread Arrando Pac la Pacific Bread Arrando Pac la Pacific Bread Arrando Pacifi	State Stat
Shell 1: 21: 74 K: 1839 II CO # M.I. bers etal I/W MI ibers.Se MI	### 188 188	Som Boren John Me 15 73 15 73 15 73 73 74 75 75 75 75 75 75 75	Texas Pocific B-9919 E-6696 An C. **S.1.** Meodo Frop. Tex Poc. C. **S.1.** Meodo Frop. Tex Poc. C. **S.1.** **Meodo Frop. Tex Poc. C. **S.1.** **S.1.** **Meodo Frop. Tex Poc. C. **S.1.** **S.1.* **S.1.** **S.1.* **S.1.	Amerada Ame	es. Poc. Americala (1976) Affection (1976) Affection (1976) B. 19310 Feb.	State Stat
Shell 1: 21: 74 K: 1839 II CO # M.I. bers etal I/W MI ibers.Se MI	### State	Som Boren John Me 15 73 15 73 15 73 73 74 75 75 75 75 75 75 75	Texas Poctric 8-9319 6-6695 An C. 18-9319 8-6695 An C. 18-9319 18-18-18-18-18-18-18-18-18-18-18-18-18-1	Amerada Ame	ex Poc lar recda 1110 18.9350 18	State Stat
Shell 1:21:74 K:1839 11:20 4 M.I. bers etal I/B MI 1Ders.Se MI	### JE Cos 5: 21: 78 12: 74	Som Boren John May 15 73 15	Texas Pocific B-9919 E-6695 An C. St. B-9919 E-6695 An C. E-6695	Amerada Amerada Amerada Amerada Amerada Assess A	ex Poc la recda para la recda	State Stat
Shell 1:21:74 K-1882 1:20 4 M.I. bers etal iva M.I. bers. Se M.I. 100, S. doord, etai, M.I. eno, S.	### 1982 1982	Sam Boren John Me 15 15 15 15 15 15 15 1	Texas Poctric E-6696 and Company E-6696 and Company St. Maddig Frop , Tex Poc I a 137 mg Medden Mill Tex Poc L B. H 4 157 mg Medden Mill Tex Poc L B. H 4 157 mg I a 137 mg I a	Amerada Ame	ex Poc law recda 1 11 12 12 13 15 11 15 15 15 15 15 15 15 15 15 15 15	State Stat
Shell 1:21:74 K-18239 11:20 2:M.I. bers etal iva Cub.elaiddi iva Mi ibers.Se Mi etal, Mi no, S Jessie Lee loard, etai, Mi enn, S	### 188 188 189 18	Som Boren John May 15 73 15	Texas Poctric B-9919 E-6696 Art St. B-9919 Art B-9	Amerada Ame	ERCOD C. B. Redol Amerado Bridge Bridge Amerado Bridge Bridge Amerado Bridge Bridge Amerado Bridge	State Stat
Shell 1:21:74 K-18239 11:20 2:M.I. bers etal iva Cub.elaiddi iva Mi ibers.Se Mi etal, Mi no, S Jessie Lee loard, etai, Mi enn, S	### 1982 1982	Sam Boren Sell Me Sell	Texas Poctric E-6696 and Company E-6696 and Company St. Maddig Frop , Tex Poc I a 137 mg Medden Mill Tex Poc L B. H 4 157 mg Medden Mill Tex Poc L B. H 4 157 mg I a 137 mg I a	Amerada Ame	ERCOD C. B. Redol Amerado Bridge Bridge Amerado Bridge Bridge Amerado Bridge Bridge Amerado Bridge	State Stat
Shell 1:21:74 K:1839 11:20 4: M.I. bers etal I/B MI 100 100 100 100 100 100 100 10	### State B. 1950 Test Pocific Test Pocific Test Pocific B. 1950 Test Pocific Test	Som Boren Solitor Solitor	Manual M	Amerada Ame	ex Poc. larerceda is in the Poc. larerceda is	State Stat
Shell 1:21:74 K:1839 1:20 4 M.I. bers etal iners etal iners. Se MI atal, Mi no, S Jessie Lee loard, etai, Mi enn, S 1:Spear 7:5 2.75	### State	Som Boren	Meadop Maj M	Amerodo Ame	Record Canced Towns of North Bagley Thy New Mexico Legend Poccinity Amerodo Store, MT Amerodo, S MPLETION PLAT Of North Bagley Ty, New Mexico Legend OBagley Bagley Bagley	State Stat
Shell 1:21:74 K:1839 1:20 # M.I. bers etal //# C.u.p.etal but //# MI pers. Se MI Jessie Lee 'aard, etai, MI enn, S 1: Spear 7: 75 snn Rog. 121111	### Stote Stote Stote ### Stote Stote ### Stote Stote #### Stote Stote #### Stote Stote #### Stote Stote #### Stote ##### Stote ###### Stote ###### Stote ###### Stote ###################################	Som Boren John Man 15 15 15 15 15 15 15 1	Texas Pocific B-9919 E-6696 AT Tex Pocific B-9919 E-6696 AT Tex Pocific B-9919 E-6696 AT Tex Pocific	Amerada Ame	BREAD C. B. Redo C. B. Cocific Co. Store M. C. Store M	State Shelf Shelf State Shelf Sh
Shell 1:21:74 K:1839 1:20 # M.I. bers etal //# C.u.p.etal but //# MI pers. Se MI Jessie Lee 'aard, etai, MI enn, S 1: Spear 7: 75 snn Rog. 121111	### State	Som Boren Jograss Som Boren Jograss Som Boren Som Boren	Texas Pocific B-9919 E-6696 AT Tex Pocific B-9919 E-6696 AT Tex Pocific B-9919 E-6696 AT Tex Pocific	Amerada Amerada Amerada Sola Sola Sola Sola Sola Sola Sola Sol	BREOD La Redo La Legend British Amerodo Store Marines Store BREOD La Redo L	State Stat

•

WELL BORE SKETCH
Present Condition
Anderson Oil & Gas Company
BT "Q" STATE #1 33-11-33
Lea County, New Mexico



WELL BORE SKETCH

Proposed Dual Completion Anderson Oil & Gas Company BT "Q" STATE #1 33-11-33 Lea County, New Mexico

13 3/8", 48# Csg.@325' w/325 sx. cement circulated 8 5/8",32 # Csg.@ 3,895' w/2900 sx cement circulated 2 1/16" Hydril SWD P.C. Tubing .5 1/2", 17# Csg. @9890' w/600 sx. T/cement 7540' 2 1/16" Hydril Production Tubing . Dual String Tubing Anchor 9910-40 BOT. Type J-J Liner Hanger --Perf. 9805-15 w/4JSPF Sqwzd w/150 sx cement Prop Perfs. 9, 910'-9, 940' BOT. Husky Packer @ 10,0001 4" 11.34# F.J. Liner 9,850'-11,050' cemented w/400 sx. T.D. 11,075' O.H. 11,050' to 11,075 Exhib, + #3

WATER ANALYSIS North Bagley Lower Penn Field Lea County, New Mexico

Location of Sample Well

Property	Sec. 34, T-11-S, R-33-E	Sec. 3, T-12-S, R-33-E	Sec. 4, T-12-S R-33-E
Restivity	.168 @ 70° F	.104@ 78° F	.118 @ 78° F
Specific Gravity	1.035	1.054	1.046
pH	6.1	6.8	6.8
Calcium (Ca)	2,400	3,600	2,600 *MPL
Magnesium (Mg)	510	990	660
Chlorides (Cl)	30,350	34,500	30,000
Sulfates (SO ₄)	674	100	100
Bicarbonates (HCO ₃)	585	244	305
Soluble Iron (Fe)	85	5	5

BEFORE EXAMINED TO THE CASE NO. 1450

*Milligrams per liter

Exhibit =4

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW FEXICO

THE MATTER OF THE APPLICATION OF ANDERSON OIL AND GAS COMPANY FOR APPROVAL OF A DUAL COMPLETION AND SALT WATER DISPOSAL, LEA COUNTY, NEW MEXTCO

Che 4450

APPLICATION

Comes now Anderson Oil and Gas Company, and applies to the Oil Conservation Commission of New Mexico for an order approving a dual completion for the New Mexico State B.T.(Q) Well No. 1, located 660 feet from the South line and 660 feet from the East line of Section 33, Township 11 South, Range 33 East, N.M.P.M., Lea County, New Mexico, for the production of oil from the Bagley-Pennsylvanian Pool, and for the disposal of produced water from the Pennsylvanian formation, in the Devonian formation, Bagley Siluro-Devonian Pool, and in support thereof would show the Commission:

Applicant proposes to renter the above well, run a liner, and complete said well with two strings of tubing, with a packer separating the Pennsylvanian and Devonian formations, in such manner as to permit production of the Pennsylvanian formation through 2 1/16th inch tubing from a depth of approximately 9,950 feet, and for the disposal of produced water in the Devonian formation at a depth of approximately 11,075 feet, through 2 1/16th inch tubing.

Water from the subject well and from other wells in the vicinity, which are producing from the Pennsylvanian formation, will be disposed of in the Devonian formation. It is anticipated that approximately 5,000 barrels of water per

DOCKET MAILED

Date 10-18-70

day will be disposed of in the subject well, which is expected to take water on a vacuum.

Approval of this application is in the interests of conservation and the prevention of waste, and will not result in damage to any producing formation.

WHEREFORE applicant prays that this application be set for hearing before the Commission or the Commission's duly appointed examiner, and that after notice and hearing as required by law, the Commission enter its order approving the dual completion as prayed for.

Respectfully submitted,
ANDERSON OIL & GAS COMPANY

KELLAHIN & FOX

P. O. Box 1769

Santa Fe, New Mexico 87500

ATTORNEYS FOR APPLICANT

DRAFT
GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN T CALI

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

Ju

CASE No. 4450

Order No. R-4057

APPLICATION OF ANDERSON OIL AND GAS COMPANY FOR A DUAL COMPLETION AND SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 28, 1970, at Santa Fe, New Mexico, before Examiner Elvis A. Utz

NOW, on this <u>day of <u>November</u>, 1970, 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,</u>

FINDS:

set at approximately 10,000 feet.

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- authority to complete its New Mexico State B. T. Well No. 1, located 660 feet from the South line and 660 feet from the East line of Section 33, Township Il South, Range 33 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the Bagley-Pennsylvanian Pool in the interval from approximately 970 feet to 9700 feet through 2/16 -inch tubing and to dispose of produced salt water into the Devonian formation, Bagley Siluro-Devonian Pool, in the interval from approximately 1/050 feet to 1/075 feet through a parallel string of the line of the south separation of the zones by a packer

(3) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Anderson Oil and Gas Company, is hereby authorized to complete its New Mexico State B. T. (0) Well No. 1, located 660 feet from the South line and 660 feet from the East line of Section 33, Township 11 South, Range 33 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the Bagley-Pennsylvanian Pool in the interval from approximately feet to feet through —inch tubing and to dispose of produced salt water into the Devonian formation, Bagley Siluro-Devonian Pool, in the interval from approximately feet to feet to feet through a parallel string of —inch tubing, with separation of the zones by a packer set at approximately feet;

PROVIDED HOWEVER, that the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

CASE 4451: Application of UNION OIL COMPANY OF CALIF. FOR A NON-STANDARD GAS PRORATION UNIT.