CASE 3691: Application of ROGER C. HANKS, Ltd. for salt water disposal, Chaves County, N. M.

Casa Mo.

Application, Transcript,
5 mall Exhibits, Etc.

JOHN M. KELLY

1001 CONNECTICUT AVENUE, N. W. SUITE 625 WASHINGTON, D. C. 20036

December 13, 1967

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Car 3691

ROGER C. HANKS, LID. 1102 Oil and Gas Building Wichita Falls, Texas

Re: Case 3691 N.M. 011 & Gas Commission

Dear Mr. Hanks:

By telephone on November 30th, you indicated that you would send to me the complete geological and engineering information pertaining to the above captioned case that was heard by the N.M. Oil Conservation formation on November 20th Commission on November 29th.

As I indicated to you, my geology shows that a substantial portion of my lease is above the water table of the Bough "C" formation; and would be adversely affected by the injection of water into the Tidewater

I would appreciate receiving this information, as soon as convenient, so that I may study whether or not to formally protest the order issued by the New Mexico Oil Conservation Commission on December 4th.

Very truly yours,

John M. Kelly

MAIN OFFICE

'ST BEC 15 AH

JMK:sl

Mr. Elvis A. Utz N.M. Oll Conservation Commission

Please refer to my letter of 12/15/67
Nov 28 19 6 Mi Hacks

ROGER C. HANKS, LTD.

OIL & GAS BUILDING
WICHITA FALLS, TEXAS 76301

November 30, 1967

MAIN OFFICE 000

New Mexico Oil Conservation Commission State Land Office Building Santa Fe, New Mexico 767 DEC 4 AH 8 16

Attention: Mr. Elvis A. Utz

Re: Case 3691 (Salt Water Disposal, Chaves County, New Mexico

Dear Mr. Utz:

Enclosed for additional evidence is the copy of the Humble letter showing no objections to our injecting water in the Cabot Tidewater-State. The interval referred to in the letter of 130' below the lowest producing well in Tobac corresponds to my testimony referring to Exhibit 2 supporting that we do intend to inject into this interval.

I have received this date a letter from Mr. John M. Kelly of Washington, D. C. notifying me that he is a direct offset leaseowner to the Cabot Tidewater-State well. I would like to apologize to the Commission in that this was an oversight on my part in that I thought Mr. Kelly was a non-operating interest owner and that the Cabot Corporation was the operator of the lease. I talked with Mr. Kelly on the telephone this morning and apologized and am this date sending him copies of all the information that we have relating to the case and I would appreciate the Commission sending him a copy of the testimony at my expense.

I will attempt to get Mr. Kelly's approval to inject salt water into this zone and at such time as I receive same, I will forward this on to the Commission.

Roger C. Hanks General Partner

ery truly yours

RCH:rm Enclosure

HUMBLE OIL & REFINING COMPANY

MIDLAND, TEXAS 79701

POST OFFICE BOX 1600

PRODUCTION DEPARTMENT
SOUTHWESTERN DIVISION
C. A. LANGNER
OPERATIONS MANAGER

November 16, 1967

Salt Water Disposal

Mr. Roger C. Hanks, Ltd. Oil & Gas Building Wichita Falls, Texas 76301

Dear Mr. Hanks:

Humble Oil & Refining Company, as an operator in the Tobac Field, has no objection to your disposing of salt water into the abandoned Cabot Tidewater-State Well located in the SE NE of Section 31-88-33E, Chaves County, New Mexico.

It is understood that this injection will be at least 130 feet lower than any of the present producing wells in the Tobac Field.

Yours very truly,

C. A TANANER

HNR:lw

DEFORE 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. 3691 Order No. R-3350

APPLICATION OF ROGER C. HANKS, LTD., FOR SALT WATER DISPOSAL, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 29, 1967, at Santa Fe, New Mexico, before Examiner Elvis A. Uts.

NOW, on this 4th day of December, 1967, 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, Roger C. Hanks, Ltd., is the owner and operator of the Tidewater State Well No. 1, located in Unit N of Section 31, Township 8 South, Range 33 East, NMPM, Chaves County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Bough "C" zone of the Pennsylvanian formation adjacent to the Bar-U Pennsylvanian Pool, with injection into the perforated interval from approximately 9200 feet to 9208 feet.
- (4) That the injection should be accomplished through 2-inch internally plastic-coated tubing installed in a packer set at approximately 9180 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be

-2-CASE No. 3691 Order No. R-3350

attached to the annulus or the annulus left open at the surface in order to determine leakage in the tubing or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Roger C. Hanks, Ltd., is hereby authorized to utilize its Tidewater State Weil No. 1, located in Unit H of Section 31, Township 8 South, Range 33 East, NMFM, Chaves County, New Mexico, to dispose of produced salt water into the Bough "C" zone of the Pennsylvanian formation adjacent to the Bar-U Pennsylvanian Pool, injection to be accomplished through 2-inch tubing installed in a packer set at approximately 9180 feet, with injection into the perforated interval from approximately 9200 feet to 9208 feet;

PROVIDED HOWEVER, that the tubing shall be internally plastic-coated; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus left open at the surface in order to determine leakage in the tubing or packer.

- (2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO SIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

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

Member

7

GOVERNOR DAVID F. CARGO CHAIRMAN

State of New Mexico Gil Conservation Commission

LAND COMMISSIONER GUYTON B. HAYS MEMBER



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

December 4, 1967

Mr. Clarence Hinkle, Hinkle, Bondurant & Christy Attorneys at Law Post Office Box 10 Roswell, New Mexico 88201 Re: Case No. 3691
Order No. R-3350
Applicant:

ROGER C. HANKS, Ltd.

Dear Sir:

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	
Carbon copy	of drder also sent to:
Hobbs OCC	
Artesia OCC_	X
Aztec OCC	
Other	Mr. Frank Irby

JOHN M. KELLY

1001 Connecticut Avenue, N. W. Suite 625 Washington, D. C. 20036

November 28, 1967

ROGER C. HANKS, LTD. 1102 Oil and Gas Building Wichita Falls, Texas

MAIN OF THE S

Re: Case 3691 N.M. 011 & Gas Commission

'67 Noy 30 AH 8 52

Dear Mr. Hanks:

I received a notice that the above captioned case would be heard by the Oil Commission on November 29, 1967 at Santa Fe, New Mexico. I am the owner of State of New Mexico Oil & Gas Lease L-164, covering the NNNE, SWINE, NWIN, NESWI, SELSWI, NESEI of Section 32, Township 8 South, Range 33 East. This lease is a direct offset to the Tide-water State #1 well, located in Section 31, Township 8 South, Range 33 East. This well is the one in which you seek authority to dispose of produced salt water into the Bough C zone. I presume you will produce this water in the Bar-U Pennsylvanian pool some 2 to 3 miles to the Southwest.

The reason for writing this letter is that we have not received, to this date, any information concerning the manner in which you wish to dispose of this salt water. In other water disposal cases where we had an interest nearby, we have been furnished with complete geological and engineering information in order to evaluate the potential damage to that part of the reservoir that underlies our leasehold interest.

Would you be so kind as to mail me, at the above captioned address, a copy of your application and presentation that you intend to make to the Oil Conservation Commission. I am sending a copy of this letter to the Oil Conservation Commission so that they may know of my interest in your application.

Very truly yours,

John M. Kelly

JMK:81

Voc: Mr. Elvis A. Utz N.M. Oil Conservation Commission Santa Fe, New Mexico Case 36 91

Keard 11-29-67

Rec. 11-30-67

1. Stand, Roger Hanks St. of.

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DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 29, 1967

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 3689:

Application of Sunray DX Oil Company for a dual completion and salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Navajo Table Mesa Well No. 2, located in Unit O of Section 27, Township 28 North, Range 17 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from the Table Mesa-Pennsylvanian "C" Oil Pool and the disposal of produced salt water through the intermediate casing-production casing annulus into the Organ Rock formation through perforations in said intermediate casing from approximately 5505 feet to 5525 feet.

CASE 3690:

Application of Roger C. Hanks, Ltd., for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Bar-U Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre spacing units and the establishment of 80-acre allowables for said 160-acre units.

CASE 3691:

Application of Roger C. Hanks, Ltd., for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Bough "C" zone of the Pennyslvanian formation adjacent to the Bar-U Pennsylvanian Pool in its Tidewater State Well No. 1 located in Unit H of Section 31, Township 8 South, Range 33 East, Chaves County, New Mexico.

CASE 3692:

Application of Skelly Oil Company for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the expansion of its Lovington Paddock Unit Waterflood Project, Lovington Paddock Pool, by the conversion to water injection of seven additional wells located in Sections 25 and 35, Township 16 South, Range 36 East; Section 30, Township 16 South, Range 37 East; Sections 1 and 12, Township 17 South, Range 36 East; and Section 6, Township 17 South, Range 37 East, Lea County, New Mexico.

CASE 3693:

Application of Atlantic Richfield Company for an exception to Order No. R-3221, Lea County, New Mexico. Applicant, in the above-styled cause, on its own behalf and as operator of the Denton Salt Water Disposal System, seeks an exception to the provision of Paragraph (6) of Commission Order No. R-3221 which requires that certain unlined pits used for the disposal of produced salt water be filled, leveled, and compacted. Applicant proposes that said pits be left open in the Denton Field, Lea County, New Mexico, to permit their use for temporary emergency storage of produced water in connection with individual tank batteries connected to the Denton Salt Water Disposal System operated by Atlantic Richfield Company.

- CASE 3694: Application of Mallard Petroleum Inc., for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox gas well location of its Alves Well No. 1, located 660 feet from the South line and 990 feet from the East line of Section 6, Township 20 South, Range 36 East, Lea County, New Mexico, said well being completed as an apparent extension of the North Osudo-Morrow Gas Pool.
- CASE 3695: Application of Tenneco Oil Company for Special Pool Rules,
 McKinley County, New Mexico. Applicant, in the above-styled
 cause, seeks the promulgation of special pool rules for the South
 Hospah Upper Sand Oil Pool and the South Hospah Lower Sand Oil
 Pool, McKinley County, New Mexico, to provide that wells drilled in
 said pools could be located anywhere on the 40-acre unit except that
 no well could be located closer than 330 feet to the outer boundary
 of the lease nor closer than 200 feet to another well producing
 from the same pool. Applicant further proposes that any existing
 well not located in accordance with the above requirements be
 granted an exception to said requirements.

LAW OFFICES

HINKLE, BONDURANT & CHRISTY

600 HINKLE BUILDING

ROSWELL, NEW MEXICO 88201

MIDLAND, TEXAS OFFICE 521 MIDLAND TOWER (915) MU 3-4691

OF COUNSEL: HIRAM M. DOW

October 31, 1967

TELEPHONE (505) 622-3510 POST OFFICE BOX 10

Cace 3691

Oil Conservation Commission Box 2088 Santa Fe, New Mexico

Attention: Mr. Dan Nutter

Gentlemen:

CLARENCE E.HINKLE

S. E. CHRISTY IV

LEWIS C. COX,JR. I'AUL W. EATON,JR. CONRAD E.COFFIELD

W. E.BONDURANT, JR.

HAROLO L. HENSLEY, JR.

MICHAEL R. WALLER

STUART D. SHANOR

There is enclosed copy of an application of Roger C. Hanks, Ltd. for salt water disposal by injecting the produced water from the Bar-U Pennsylvanian Pool into a well drilled by Tidewater to test the Bough-C formation, which was a dry hole, located in the SEXNEX Section 31, Township 8 South, Range 33 located in the original of this application to Mr. Hanks East. We have sent the original of this application to Mr. Hanks at Wichita Falls to be signed and so that he can supply the plat, log and diagrammatic sketch referred to in the application.

We would like to have this matter set down for hearing at the last examiner's hearing in November, which we understand will be on the 29th, along with the other application of Mr. Hanks for the approval of special field rules for the Bar-U Pennsylvanian Pool. We are sending you this copy at this time so that you will have the necessary information for publication in case the original of the application does not reach you prior to getting up the notice of publication. The writer talked with Mr. Nutter in regard to this matter today.

Yours sincerely,

HINKLE, BONDURANT & CHRISTY

CEH:cs

Fnc

cc: Roger C. Hanks, Ltd.

DOCKET MAILED

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MARIONE

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BEFORE THE NEW MEXICO OIL, CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

APPLICATION OF ROGER C. HANKS, LTD. FOR SALT WATER DISPOSAL BY INJECTION INTO TIDEWATER STATE NO. 1 LOCATED IN THE SEXNEX SECTION 31, TOWNSHIP 8 SOUTH, RANGE 33 EAST, N.M.P.M. CHAVES COUNTY, NEW MEXICO

Nov 1 An 8 nm

Pare 3691

Oil Conservation Commission Box 2088 Santa Fe, New Mexico

Comes Roger C. Hanks, Ltd., a partnership, with offices in the Oil & Gas Building, Wichita Falls, Texas, and hereby makes application for approval of the disposal of salt water by injection into the Tidewater State No. 1 well located in the SE½NE½ Section 31, Township 8 South, Range 33 East, N.M.P.M. and in support thereof respectfully shows:

- 1. That the Tidewater State No. 1 well located in the SELNEL Section 31, Township 8 South, Range 33 East, N.M.P.M. was drilled to a depth sufficient to test the Bough-C formation and was abandoned as a dry hole. Said well, together with the oil and gas leasehold interest covering the lands upon which the same is located, has been acquired by applicant. Applicant is also the owner of 3 producing wells located in the Bar-U Pennsylvanian Pool in Sections 1 and 2, Township 9 South, Range 32 East, N.M.P.M. and is desirous of disposing of the water produced in connection with said wells by the injection of the same into the Tidewater State No. 1 well in Section 31, Township 8 South, Range 33 East above referred to. Injection tests have been run which indicate that the well will accept the estimated amount of salt water produced from the Bar-U field by injection into the Bough-C zone or formation.
- 2. There is filed herewith and made a part hereof the following:
- (a) A plat showing the location of the proposed injection well and the location of all other wells within a radius of 2

miles from said proposed injection well and the formation from which said wells are producing or have produced. The plat also indicates the owners of the oil and gas leases within said 2 mile radius.

- (b) Electrical log of the proposed injection well.
- (c) A diagrammatic sketch of the proposed injection well showing all casing strings, including diameters and setting depths; quantities used and tops of cement; perforations or open hole intervals; tubing strings, including diameters and setting depths; and the type and location of packers.
- 3. That a copy of this application complete with plat, log and diagrammatic sketch have been mailed to the State Engineer's office, Capitol Building, Santa Fe, New Mexico.
- 4. That applicant proposes to inject water into said well in such a manner that the water injected will be confined to disposal in the Bough-C zone or formation.
- 5. That applicant requests that this matter be set down for hearing at the last examiner's hearing in November, 1967.

Respectfully submitted,

ROGER C. HANKS, LTD.

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By.		··

HINKLE, BONDURANT & CHRISTY

Attorneys for Applicant

Box 10

DUX IU

Roswell, New Mexico

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

STUART D. SHANOR

LAW OFFICES

HINKLE, BONDURANT & CHRISTY

600 HINKLE BUILDING

November 2/ 1067

November 24, 1967

521 MIDLAND TOWER (915) MU 3-46917 OF COUNSEL: HIRAM M. DOW

MIDLAND, TEXAS OFFICE

TELEPHONE (505) 622-6510 Post Office Box 10

New Mexico Oil Conservation Commission State Land Office Building Santa Fe, New Mexico 87501

Care 3691

Gentlemen:

We enclose herewith in triplicate application of Roger C. Hanks, Ltd. of Wichita Falls, Texas for salt water disposal by injection into the Tidewater State No. 1 well located in the SENNER Section 31, Township 8 South, Range 33 East, N.M.P.M. You will find attached to the application Exhibit "A" and "C", and there is also enclosed copy of electrical log of the proposed injection well. This case has been set down for the examiner's hearing on November 29, 1967, as Case No. (3691)

We are sending a copy of the complete application, together with exhibits, to the State Engineer and enclose a copy of our letter of transmittal.

If you need additional copies of the electrical log, they will be supplied at the time of the hearing as we were not furnished with sufficient copies to file three copies at this time.

Yours sincerely,

HINKLE, BONDURANT & CHRISTY

CEH: pv Enclosures

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

APPLICATION OF ROGER C. HANKS, LTD. FOR SALT WATER DISPOSAL BY INJECTION INTO TIDEWATER STATE NO. 1 LOCATED IN THE SELNEL SECTION 31, TOWNSHIP 8 SOUTH, RANGE 33 EAST, N.M.P.M. CHAVES COUNTY, NEW MEXICO

Case 369/

Oil Conservation Commission Box 2088 Santa Fe, New Mexico

Comes Roger C. Hanks, Ltd., a partnership, with offices in the Oil & Gas Building, Wichita Falls, Texas, and hereby makes application for approval of the disposal of salt water by injection into the Tidewater State No. 1 well located in the SE½NE½ Section 31, Township 8 South, Range 33 East, N.M.P.M. and in support thereof respectfully shows:

- 1. That the Tidewater State No. 1 well located in the SELNEL Section 31, Township 8 South, Range 33 East, N.M.P.M. was drilled to a depth sufficient to test the Bough-C formation and was abandoned as a dry hole. Said well, together with the oil and gas leasehold interest covering the lands upon which the same is located, has been acquired by applicant. Applicant is also the owner of 3 producing wells located in the Bar-U Pennsylvanian Pool in Sections 1 and 2, Township 9 South, Range 32 East, N.M.P.M. and is desirous of disposing of the water produced in connection with said wells by the injection of the same into the Tidewater State No. 1 well in Section 31, Township 8 South, Range 33 East above referred to. Injection tests have been run which indicate that the well will accept the estimated amount of salt water produced from the Bar-U field by injection into the Bough-C zone or formation.
- 2. There is filed herewith and made a part hereof the following:
- (a) A plat showing the location of the proposed injection well and the location of all other wells within a radius of 2

miles from said proposed injection well and the formation from which said wells are producing or have produced. The plat also indicates the owners of the oil and gas leases within said 2 mile radius.

- (b) Electrical log of the proposed injection well.
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- 4. That applicant proposes to inject water into said well in such a manner that the water injected will be confined to disposal in the Bough-C zone or formation.
- 5. That applicant requests that this matter be set down for hearing at the last examiner's hearing in November, 1967.

Respectfully submitted,

ROGER C. HANKS, LTD.

General Partner

HINKLE, BONDURANT & CHRISTY

Attorneys for Applicant

Box 10

Roswell, New Mexico

DIAGRANMATIC SKETCH OF CAROT COMP. #1 TIDEWATER-STATE WELL, SE NE Section 31, T-8-5, R-33-E, Chaves County, Nevi Mexico 133/8" 48# 71-40 csg. ser of 485' with 400 sacks. Circulsted cement to surface. 85/8" 24# #32# J-55 C59, Set at 1851" nitt 2505acks 4% get snd 1005ccks 2% get concert (41/2") [1.60# J-55 & N-80 csg. Set st 9250 with 200 sacks 50 0 Poznik. Top of cornent on Borkl log = 8438 Baker Model R' cag pkr, 21/8" (- 2 Perk 9200:08:05 9180' Exhibit "C" Roger C. Hanks, Ltd. Crace 3691

November 24, 1967

Mr. S. E. Reynolds New Mexico State Engineer Capitol Building Santa Fe, New Mexico 87501

Dear Mr. Reynolds:

There is enclosed herewith application of Roger C. Hanks, Ltd. for salt water disposal. Applicant proposes to dispose of produced salt water into the Bough "C" zone of the Pennsylvanian formation adjacent to the Bar-U Pennsylvanian Pool by injection of the water into Tidewater State No. 1 well located in Unit H of Section 31, Township 8 South, Range 33 East, Chaves County, New Mexico. This matter has been set down for an examiner's hearing on November 29, 1967 and appears on the docket as Case No. 3691.

Yours very truly,

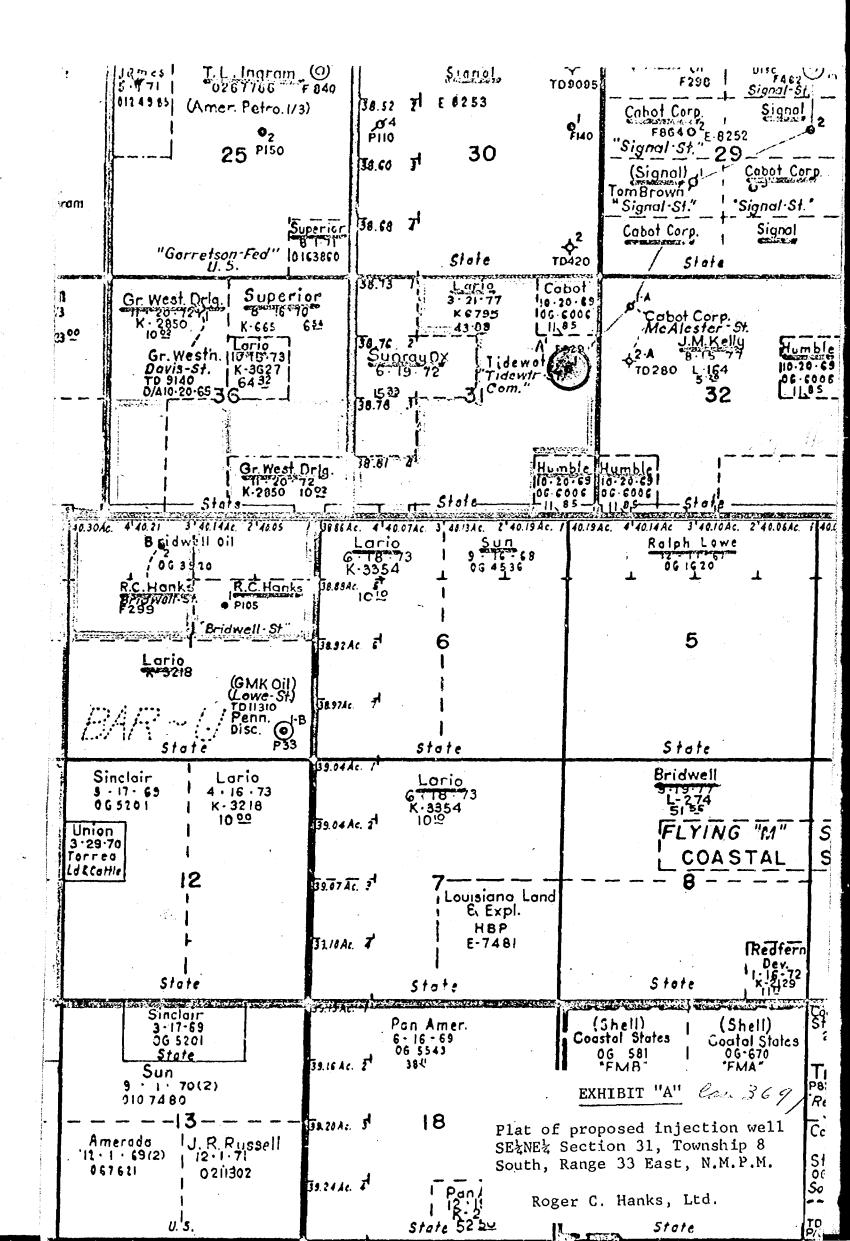
HINKLE, BONDURANT & CHRISTY

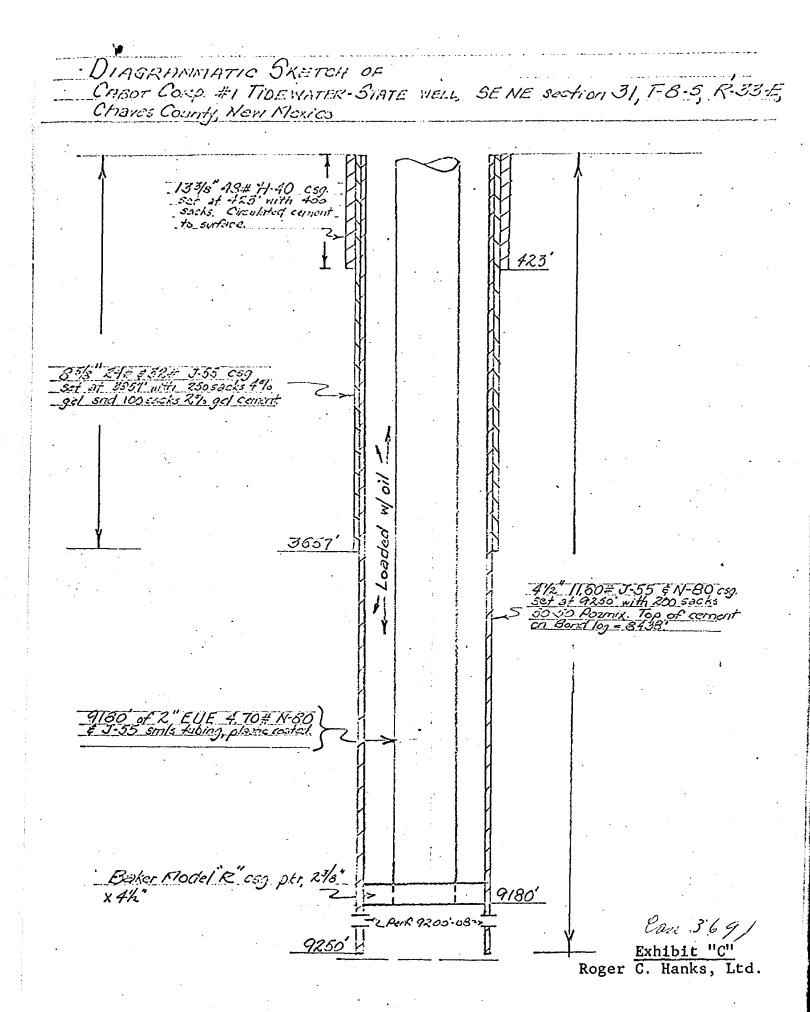
By

CEH: pv Enclosure

cc: New Mexico Oil Conservation Commission

Case 369/





1120 SIMMS BLDG. . P. O. BOX 1092 . PHONE 243-6691 . ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 29, 1967

EXAMINER HEARING

IN THE MATTER OF:

Application of Roger C. Hanks, Ltd.,) for salt water disposal, Chaves County,)
New Mexico.

Case 3691

BEFORE: Elvis A. Utz, Examiner



TRANSCRIPT OF HEARING

MR. UTZ: Case 3691.

MR. HATCH: Case 3691. Application of Roger C. Hanks, Ltd., for salt water disposal, Chaves County, New Mexico.

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

MR. HINKLE: Clarence Hinkle, Hinkle, Bondurant and Christy of Roswell, appearing on behalf of Roger C. Hanks.

We have just the one witness, Mr. Hanks and four exhibits.

MR. UTZ: Are there other appearances? You may swear the witness.

(Whereupon witness sworn)

ROGER C. HANKS

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

DIRECT EXAMINATION

BY MR. HINKLE:

- Q State your full name?
- A Roger C. Hanks.
- Q Where do you reside, Mr. Hanks?
- A Wichita Falls, Texas.
- Q How are you connected with the applicant in this case, Roger Hanks, Limited?

- A I am the general partner of the Roger C. Hanks, Limited, partnership.
 - Q Are you a graduate geologist?
 - A That's correct; from the University of Texas, 1955.
 - Q Have you ever testified before the Commission before?
 - A Not the State of New Mexico, no.
- Q Have you practiced your profession since your graduation?
 - A Yes, sir.
- Q Are you conducting operations in New Mexico at the present time?
 - A Yes, sir.
 - Q And have been for some time?
 - A Yes, sir, a year ago in October.
- Q Are you familiar with the Bough "C" Pennsylvanian Pool?
 - A Yes, sir.
 - Q And with the Tobac area?
 - A Yes, sir.
 - Q Have you made a study of those areas?
 - A Yes, sir, I have.
- Q And those wells that have been drilled in those areas?

- A In that connection, yes.
- Q Do you have any producing wells in the Bar-U Pennsylvanian Pool at the present time?
 - A Yes, sir, I own three wells there.
- Q Refer to your exhibit number 1 and explain to the Commission what this is and what it shows.
- A Exhibit 1 is a plat showing the Bar-U and the Toback area and all ownership of leases and minerals, et cetera, within a two-mile radius of the Cabot Tidewater State Well located in Unit letter H of Section 31 in Chaves County, which is approximately mid-way between the Tobac: field and the Bar-U field.
- Q Does it also show your wells in the Bar-U Pennsylvanian Pool?
- A Yes, sir, it does. It shows my two wells in the north half of Section 1, down just above the blue area that states Bar-U, and below State Well which is over in the southeast of the northeast of Section 2.
- Q Those are the only two wells that you have at the present time?
 - A The only three wells I have.
 - Q Three wells?
 - A Yes -- no, that's incorrect. We have drilled a

second well north of the Number 1 which is a San Andres Well at this time, but it wasn't drilled to this depth.

- Q Have you prepared a structural map of this area?
- A Yes, sir, that would be Exhibit 2.
- Q Refer to Exhibit Number 2 and explain what this is and what it shows.

A Under my direction, I have had prepared a structural map which is Exhibit 2. This map is drawn on the top of the Bough "C" formation encountered at various depths with the subsea datum shown by each value. It represents, in our opinion, the total graphic appearance of the Bough "C" of this prescribed depth. We are satisfied that the well that we are asking the Commission to grant us permission to inject into, is neither a part of Tobac nor a part of Bar-U, yet it appears to be at a re-entrant between. The pink indication on the map indicates abandoned wells, the orange, dry holes, and the blue, producing wells.

Due to the structural position of the Cabot Tidewater

State, it produced some 18,000 barrels of oil prior to

abandonment. The production of these wells is shown on Exhibit

4 which is the cross-section; we will get into that next, but

the well in our opinion is capable of taking the amounts of

salt water that we are producing at Bar-U and would save us

a considerable amount of money in trucking the salt water up plus the fact that we feel there would be no damage to either Tobac or Bar-U as a result of injecting into the Bough "C" formation. The Exhibit 4 ---

- Q Wait just a minute.
- A Excuse me.
- Q What is the history, as far as the drilling of the well is concerned of the Tidewater Number 1? Who was that drilled by?

water farmout. That's where it got it's name, Cabot Tidewater State. The well was drilled at a depth of 9,250 feet and it has 13 and 3/8ths set at 423 feet with 400 sacks of cement circulated to the surface. It has 3657 feet of 8 and 5/8ths inch various weighted casing set at a depth of 3659 with 250 sacks of four per cent gel and a hundred sacks of two per cent gelatin cement. It has a production string of 4 and a half inch various weighted pipe, 11.60 J55 piping in 80, set at a depth of 9250 with 200 sacks of 50-50 posnate. The cement bond log was run on this well and the top of the cement was found to be at 8438. The well was perforated from the interval of 9,002 to 8, two shots per foot. The well flowed naturally and produced 18,000 barrels of oil and code top was put on it

and it was abandoned.

I purchased the well at a sale last spring.

- Q You mean you purchased the lease, the State Lease on which the well is located?
- A Yes, sir, pardon me, I purchased the lease after Tidewater; Cabot reassigned it to Tidewater and Tidewater dropped it. We purchased the lease at a State Land sale last March.
 - Q And that lease is shown on Exhibit Number 1?
- A Yes, as Lario, it's shown on Exhibit Number 1 as
 Lario of which Lario is a partner in it with me and they own
 45 per cent and I own 55 per cent. The lease was purchased on
 March 21st of 1967.
- Q Now, before going into this well and making tests, did you obtain the complete history of the well as far as the way it was drilled and cased and so forth?
- A Yes, sir, I got a thorough run-down on the well and production and completion history of the well from Cabot through Tidewater.
- Q What did you do with respect to testing the well to determine whether or not it would accept water that you are going to produce from the Bar-U Pennsylvanian Pool?
- A I loaded the annulus of this well with the same fluid that is being produced out of Bar-U. I took that from

my disposal pit over there and loaded up two hundred and eighty barrels and loaded the hole and pressured up on it and ran injection tests. The injection tests, I was able to pump in 3.8 barrels per minute at 550 pounds. I pumped this rate for thirty minutes till it ran out of water. Immediate shut in pressure was 200 pounds in thirty seconds; a hundred fifty pounds in two minutes and at the end of that it went on a complete vacuum. That was on October 29th, 1967.

I ran these tests at 2 p.m. The next morning, on October 30th, the well was on a good vacuum.

- Q From your study of the water which you produced from your well in the Bar-U Pennsylvanian Pool, is it your opinion that this well will accept the water which you produce from your wells in the Bar-U Pennsylvanian Pool?
 - A Yes, sir, I think it will take our water.
- Q Now, refer to your Exhibit number 3, which is a cross-section and explain what that is and what it shows?
- A The Exhibit 4, the line of the Cross-section is shown on Exhibit 3 from A to A prime, which is a cross-section from the center, the discovery well of Toback down across Toback to this disposal zone that we are requesting. You will note that the cross-section is marked blue and red. The completion dates, the treatment and the cumulative production of these wells

through January '67, is shown through -- yes, January '67, is shown under each of the wells. The purpose of this crosssection is to show the relationship of the porosity development in Tobach and also it's structural position. The well that we are requesting in relation to the up-dip wells in Toback. I believe, that is the Signal State, Cabot Signal State, which was a discovery well which would be the well in the northeast of 29, as shown as A. The well we are requesting to dispose of is a prime. The porosity development, cleanliness of this up-dip relationship is not evidenced at all in the last two wells which are structurally lower and there appears to be some question in our mind, as to how much water this zone will take, due to the fact that it's not a part of Toback or Bar-U. injection tests have shown that the well will take sufficient amounts of water; now, how long, we don't know, whether we would have to pressure up against it, we don't know.

The initial injection test taken by Haliburton indicates that it will take sufficient amounts of water for our needs only.

Q Does this cross-section substantiate the structural map which is Exhibit number 2?

A Yes, sir, these logs were laid out at a minus 4100 foot datum and the structure position of them are laid from

there down.

Q What conclusion do you draw from Exhibit number 2 and Exhibit number 3 in this cross-section?

A The conclusion to me, is that the Cabot Tidewater

State Well is not a part of Tobac: due to the obvious difference
in appearance of the electrical sections.

Q These are electrical logs and imposed on the cross-section, are they not?

A Yes, sir.

MR. HINKLE: Mr. Examiner, we find one copy of the electrical log of the injection well in Section 31. We have two additional copies if you need them. At that time, I didn't have the other two copies. Would you like to have them filed?

MR. UTZ: I think we would only need one.

Q (By Mr. Hinkle) Now, refer to Exhibit number 4 which I believe you have practically explained and see if there is anything else you would like to say with regard to that Exhibit?

A Well, Exhibit 4 is a diagrammatic sketch of the well. This well presently does not have tubing in it. My injection tests were down casing. I plan to run 9180 feet of 2 and 3/8th JDU tubing to a depth of 9180 and set it with a Baker Model R plastic-coated fully clothed in plastic-coated

piping, load that annulus with oil and inject down the tubing, isolating our interval, isolating our injection interval through the zone of 9200 to 9208. We will have a total of 5 strings of pipe attachments.

- Q By injecting into this well in the manner in which you have testified to, will the water, injected water, be confined to the Bough "C" formation zone?
 - A Yes, sir, in my opinion it will.
- Q In your opinion, will it affect the production in either the Pennsylvanian Pool or the Tobac! Pool?
 - A No, sir, I don't think it will affect it at all.
- Q Did you give offset operators notice of this application or of your intention to convert this well to an injection well?
- A Yes, sir, I notified every offset operator within two miles.
 - Q Have you had any response from them?
 - A Yes, sir, I have.
 - Q Do you have copies of their responses?
 - A Sir?
 - Q Do you have copies of those responses?
 - A Yes.

MR. HINKLE: We have here responses from Shell Oil

Company, McAllister Fuel Company, Great Western Drilling
Company, Ralph Lowe Estate, Sunray DX, Sinclair, Cabot
Corporation, Tom Brown Drilling Company and Lario Oil and Gas
Company.

Q (By Mr. Hinkle) Now, have all of these companies indicated that they have no objection to using this well as a disposal well?

A That's right. The remaining operators in the fields have stated that they take no position.

MR. UTZ: Did that include Humble?

A Yes, sir and Signal. The north offset operator, I talked to them this morning in Midland, Mr. Denton, and I was concerned about the fact that I hadn't heard from them and they said they take no position either endorse nor do they object.

MR. HINKLE: We would like to have these letters all marked Exhibit 5 just together as one exhibit.

(Whereupon Applicant's Exhibit 5 marked for identification)

MR. HINKLE: We will offer in evidence Applicant's Exhibits 1 through 5 inclusive.

MR. UTZ: Without objection, Exhibits 1 through 5 will be entered into the record of this case.

(Whereupon Applicant's Exhibits 1 through 5 were offered and admitted in evidence) MR. HINKLE: I believe that's all we have.

CROSS EXAMINATION

BY MR. UTZ:

- Q Mr. Hanks, I believe you said that the pink circles or wells on Exhibit 2 indicated abandoned wells?
 - A Abandoned wells, yes, sir. The blue, producing.
 - Q In other words, that have produced?
 - A They have produced, yes, sir.

The blue, presently producing wells, the orange, dry holes, never have produced.

- Q And the blue is producing from the Bough "C"?
- A Yes, sir, from this approximate interval at which the structural map shows.
- Q Even though you are injecting up structure from Toback, I believe it's your statement that you don't believe it will interfere with any of the production in Toback?
 - A No, sir, we are down structure from Tobac.
 - Ω Down structure?
- A Yes, sir, We should be a hundred and twenty-three feet lower than any well producing at the present time, in Tobaci.
- Q It doesn't look like it was down on this crosssection. This is the well over here, isn't it a prime? No,

I'm sorry, I'm looking at it crossways.

- A A to A prime, A starts up in Tobac, A prime is the
 - Q These three are the abandoned wells?
- A Yes, sir. We are approximately a full mile from any existing producing well in the field.
- Q Mr. Hanks, in regard to your casing on the proposed injection well, you had the top of the cement at 8438?
 - A Yes, sir, that's a bond log top.
 - Q And the bottom of the 8 and 5/8th casing at 3657?
 - A Yes, sir.
- Q That's 4780 feet of open hole behind the 4 and a halx-inch casing?
- A That would be from -- yes, from 8480 to 3657. That would be the open hole, yes, sir.
- Q What is behind this interval in the way of water, oilgas formation?
- A Well, it's the San Andres and Glorietta, the Tubb, the Clear Fork, the Abo.
 - Q None of which are producing or capable of producing?
 - A No.
 - Q No fresh water in that area?
 - A No, sir.

Q Now, did you say where the top of the cement was on your 8 and 5/8ths?

A No, I didn't. There is 250 sacks of -- well, actually 350 sacks of cement giving you an estimated fill-up of a thousand feet on these drilling wells. Temperature surveys aren't run on those production strings or the intermediate strings. Sufficient casing is -- cement is run to be sure that they are tacked on good, but I would swear to the fact that there is a thousand feet of cement behind them.

- Q That would bring the cement up to approximately 2657?
 - A Yes, sir.
- Q Now, from 2657 to the bottom of your 13 and 3/8ths, what is in that area?
- A San Andres and I'm sorry, I can't name the other formation. It escapes me at this present time.
 - Q There is no fresh water zone?
- A To my knowledge, the fresh water sands are protected with the 13 and 3/8ths.
 - Q Above 423?
- A Yes, sir, that's the purpose in that the Commission requires that you circulate strings where you don't set that and I am talking out of school because I really don't know.

- Q So then you have three strings of casing in the well?
 - A Yes, sir.
- Q And you are going to inject through tubing below the packer?
 - A Yes, sir.
 - Q Annulus will be filled with oil?
 - A Annulus will be filled with oil, that's correct.
- Q And do you intend to put a pressure gauge at the surface on the annulus?
 - A Yes, sir.

MR. UTZ: Are there other questions of the witness?

MR. HINKLE: One other question.

REDIRECT EXAMINATION

BY MR. HINKLE:

- Q Do you know whether or not a copy of your application has been furnished to the State Engineer?
 - A Yes, sir, it has.
 - Q You have had no objection from the State Engineer?
- A No, sir, and I think one point we missed here is the volume of fluids which we plan to put down this hole.

MR. UTZ: That's right.

A Approximately, yesterday on November 27th, my
Bridwell lease made 1277 barrels of water and that's the capacity

of the hydraulics equipment we have. We have two 4-inch pumps and that will be the approximate volume going down this hole.

Q (By Mr. Hinkle) Is it likely that that volume will increase as time goes on?

A Not likely, this is all we can possibly produce out of our wells. The lease is producing approximately 280, 290 barrels of oil and at 1277 water on this particular daily gauge, it does fluctuate, however, I would say this was one of the high days rather than lower.

RECROSS EXAMINATION

BY MR. UTZ:

- Q These pumps are in your wells?
- A Yes, sir, 4-inch hydraulics.
- Q And you will pump the water from these wells to your injection well?
- A Yes, sir, I will set up a settling tank at the battery because the treater occasionally fouls up and dumps oil down that line and you want a pure commodity of salt water to put in. If oil goes in it, it will contaminate that reservoir real quick. It won't take the water. We will set a settling tank, I imagine, probably a thousand-barrel wood tank is what I will set for settling, and then we will pump out of that up

to the well and then we will set our injection pump at the Bridwell battery because of the availability of gas there for power, so it will be pumping a mile and three quarters that will be 2-inch cement-lined pipe with the injection tubing being plastic-coated. I haven't made arrangements for that. It was pending on the Commission's approval.

MR. UTZ: Are there other questions? Case will be taken under advisement. Witness may be excused.

(Witness excused)

MR. UTZ: Other statements?

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EXHIBITS

EXHIBIT	MARKED	OFFERED AND ADMITTED
Applicant's 1 through 4	2	12
Applicant's	12	12

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, KAY EMBREE, 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 5th day of Olympur, 1967.

Kay Embrue

My Commission Expires:

New. 13,1971

I do heroby sertify that the foregoing is a region to record as the precedings in the secure hearing of Case \$0.369/ ... hours by is on Adam 1967.

New Mexico 041 Conservation Complication

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DIAGRANIMIATYC SKETCH OF CABOT CORP. #1 TIDE WATER-STATE WELL, SE NE section 31, T-8-5, R-33-E, Chaves County, New Mexico 133/8" 48# H-40 Csg. set at 428' with 400 sacks, Cyculated cement to surface. 423' 85/8" 24# & 32# J.55 C69.

35f = 1 8657' wth 250 socks 470

gel and 100 socks 270 gel conort. 1.0 Ž Loaded 3657 4/2 11.60# J-55 & N-80 csg. Set at 9250' with 200 sacks 50 50 Aozmix. Top of coment on Horal log = \$155' 9180 of 2" EUE 4.70# N-80 & J-55 smls tubing, plastic costal. Baker Model R" cag ptr, 23/8" 9180' BEFORE EXAMINER UTZ * L Aux 9200-08 CIL CINSERVATION COMMISSION

APPLIN EXHIBIT NO 4

CASE NO. 369 CASE NO. **EXHIBIT**



SHELL OIL COMPANY

WESTERN DIVISION
P. O. BOX 1509
MIDLAND, TEXAS 79701

November 22, 1967

Subject: Salt Water Injection Well

Roger C. Hanks, Ltd. Oil and Gas Building Wichita Falls, Texas 76301

Attention Mr. Roger C. Hanks

Gentlemen:

Please find attached one executed copy of Shell Oil Company's waiver to your disposal of salt water in the Cabot Tidewater-State well located in the SE/4 of the NE/4 of Section 31, Township 8-S, Range 33-E, Chaves County, New Mexico.

Yours very truly,

J. E. R. Sheeler

Division Production Manager

Attachment

BEFORE EXAMINER UTZ

CASE NO. 3 9/

ROGER C. HANKS, LTD. OIL & GAS BUILDING WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company
Superior Oil Company
Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tidewater-State Well located in the SE NE of Section 31-85-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

Roger C. Hanks

General Partner

has

. Oil Company

OIL & GAS BUILDING
WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company
Superior Oil Company
Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tide-water-State Well located in the SE NE of Section 31-8S-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

Roger C. Hanks General Partner

truly yours.

RCH: rm

etuca futur. McAllister Fyel Co.

OIL & GAS BUILDING
WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company
Superior Oil Company
Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tide-water-State Well located in the SE NE of Section 31-8S-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

Great Western

Wrilling Company

Roger C. Hanks General Partner

OIL & GAS BUILDING WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company
Superior Oil Company
Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tide-water-State Well located in the SE NE of Section 31-8S-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

Roger C. Hanks General Partner

Great Western / Drilling Company

Box 832 Midland, Texas 79701 November 20, 1967

Mr. Roger C. Hanks Oil & Gas Building Wichita Falls, Texas 76301

Re: Salt Water Injection Well

Dear Mr. Hanks:

We are enclosing one copy of your letter of November 14, 1967, which has been executed on behalf of Ralph Lowe Estate, indicating that we have no objections to waiving this application for disposal of salt water in the Cabot Tidewater-State well.

Yours very truly,

RALPH LOWE ESTATE

Charles L. Morgan, Ir.

CLM:jl Encl.

OIL & GAS BUILDING WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company Lario Oil & Gas Company Estate of Ralph Lowe Cabot Corporation Great Western Drilling Company Superior Oil Company Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cahot Tidewater-State Well located in the SE NE of Section 31-8S-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

> Roger C. General Partner

Ralph Lowe Estate

Estate of Ralph Lowe

By The Landia

Co-Executor

has no objections to waiving this application for disposal

of salt water in the Cabot Tidewater-State Well.

Sunray DX Oil Company



Southwest Division

E. H. Ramsey Production Manager

November 16, 1967

Roger C. Hanks, Ltd. Oil and Gas Building Wichita Falls, Texas 76301

Attention: Mr. Roger C. Hanks

Re: Salt Water Injection Well

Gentlemen:

As requested in your letter of November 14, 1967, enclosed please find one executed copy of your waiver letter concerning the above captioned subject.

Very truly yours,

SUNRAY DX OIL COMPANY

E. J. Pierce Division Engineer

/dmp

Enclosure (1)

cc: J. R. Finch L. L. Peek

OIL & GAS BUILDING
WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company
Superior Oil Company
Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tide-water-State Well located in the SE NE of Section 31-85-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550%; ISIP 200%; 2 minute SIP 100%; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

Roger C. Hanks General Partner

RCH:rm

Swiray D-X Oil Company

11/17/67

OIL & GAS BUILDING WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company Lario Oil & Gas Company Estate of Ralph Lowe Cabot Corporation Great Western Drilling Company Superior Oil Company Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tidewater-State Well located in the SE NE of Section 31-8S-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

> Roger C. General Partner

has no objections to waiving this application for disposal of salt water in the Cabot

Tidewater-State Well.

OIL & GAS BUILDING
WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company

Great Western Drilling Company Superior Oil Company

Superior Oil Company Sunray D-X Oil Company Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company

Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tidewater-State Well located in the SE NE of Section 31-8S-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

logy . He

truky yours,

Roger C. Hanks General Partner

RCH:rm

Cabet Corporation

OIL & GAS BUILDING
WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company
Superior Oil Company
Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

Re: Salt Water Injection Well

Gentlemen:

Roger C. Hanks, Ltd. has requested permission from the State of New Mexico to dispose of salt water in the abandoned Cabot Tidewater-State Well located in the SE NE of Section 31-8S-33E, Chaves County, New Mexico.

Injection tests on this well indicate it will take Bough "C" water at a rate of 3.6 barrels per minute at 550#; ISIP 200#; 2 minute SIP 100#; 3 minutes - well was on a complete vacuum.

We will plead to the Commission that in our opinion this well is neither a part of Tobac to the Northeast or Bar-U to the Southwest for two reasons. The first reason is that it is structurally approximately 130' lower than any of the present producing wells in Tobac and approximately 100' lower than any wells producing at Bar-U. Secondly, the gross section in appearance electrically is not comparable to either Tobac or Bar-U. Consequently, we feel it is an isolated part of the reef that did not receive sufficient hydrocarbons to be commercial.

If your Company has no objections to waiving this application, please so signify your waiver by signing and returning one (1) copy of this letter to the above address.

I call your attention to the hearing date of November 29, 1967, so time is of the essence.

Roger C. Hanks General Partner

RCH:rm

Tom Brown Drilling Co.

has no objections to waiving this application for disposal of salt water in the Cabot

Tidewater-State Well.

oil & gas building WICHITA FALLS, TEXAS 76301

November 14, 1967

TO: Bridwell Oil Company
Lario Oil & Gas Company
Estate of Ralph Lowe
Cabot Corporation
Great Western Drilling Company
Superior Oil Company
Sunray D-X Oil Company

Sinclair Oil & Gas Company Signal Oil Company Sun Oil Company McAllister Fuel Tom Brown Drilling Company Humble Oil Company Shell Oil Company

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Roger C. Hanks General Partner

Lario Oil & Gas Company

11-27-67

has no objections to waiving this application for disposal of salt water in the Cabot Tidewater-State Well, subject to its future objection in the event it appears that the disposal of salt water is damaging any oil and/or gas bearing horizon located in the vicinity of said disposal well.