

November 3, 1961

R. C. TUCKER, PRES.

Oil Conservation Commission, Box 871, Santa Fe, New Mexico was water Nor VI

PHONE MU 2-5241
ADDRESS REPLY TO:
BOX 1659
MIDLAND, TEXAS

Re: Application for Administrative Approval for Conversion of Wells 24-10, 24-16 and 25-2 to water injection, Rock Queen Unit, Lea and Chaves Counties, New Mexico.

## Gentlemen:

As provided in the Oil Conservation Commission Order R-1541, Great Western Drilling Company, as operator of the Rock Queen Unit, requests administrative approval for conversion of Unit Wells 24-10, 24-16 and 25-2 to water injection.

Well 24-10 is in the NW/4 of SE/4 of Sec. 24, T-13-S, R-31-E, Well 24-16 is in the SE/4 of SE/4 of Sec. 24, T-13-S, R-31-E, Well 25-2 is in the NW/4 of NE/4 of Sec. 25, T-13-S, R-31-E, all in Chaves County, New Mexico.

Well 24-15 is a direct offset to each of the above wells. During September, 1961, Well 24-15 averaged five (5) barrels of oil per day on four tests. As of October 28, 1961, Well 24-15 has increased in production to twelve (12) barrels per day without a noticeable increase in gas. This is due to the stimulation from the waterflood to the West of this well.

We respectfully submit that the ultimate recoverable oil from the Rock Queen Unit Reservoir will be decreased and that waste will occur due to an unbalanced condition in the pattern flooding system, unless Wells 24-10, 24-16 and 25-2 are converted to water injection at this time. Proposed injection will be down 2" tubing, under a packer set at about 3000'.

Attached to this application are: The C-116 of Well 24-15, before and after stimulation; a plat of the area showing producing, water injection and proposed injection wells; and offset operators.

Waivers from offset operators are being requested at this time.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

By Gilleur

OHC:tr



| N-52-E                | X.             | State        | Ohio         | 1-0his      | 1                 | State<br>Chambers 1 Ohio | ]<br>-+ ]  | 58           |                | State         |            | z                      |                   | 1-13-5                                  | ction Well-14-S      |
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| <b>3</b> 6            | 3.             | 16           | Thewarer (6) | Superio     | Phillips Dt Store | The same of              | š• ä       | 3.0          | 2              | ž. <u>I</u> . | + 5        |                        | - <del></del> -   |   | - 0                  |
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|                       | UNIT           | <b>∄</b> ⑨   | Salsich +    | State State | Ĭ.                | <b>10</b>                | QUEEN UNIT | 10           | <u>1,</u> ●    | ;•            | I.         | 1.                     | <b>1</b> •        | i.                                      | CHAVES               |
| -                     | CAPROCK QUEEN  |              | (Q           | spars (a)   | \$ •              | *•                       | 700K       | i.           | <b>30</b>      | 947<br>947    | #•<br>//// | 77777<br>3( <u>0</u> ) | *•<br>/////<br>*• | i•<br>////<br>i⊛                        | 10 G                 |
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| 15                    |                |              | ã <u>⊕</u> ) | 1           | #(©)              | : •<br>:: •              | 2€)        | <b>i</b> •   | (eg            | £ 40          | 3€)        | 3.<br>1                | \$ (#)<br>\$ (#)  | ; • · · · · · · · · · · · · · · · · · · | <b>19</b> )          |
|                       | Whaley         | US           | Gulf         | (Landa)     | #•<br>#©)         | Gulf . 224               | - 8        | ₿ <u>(</u> ) | Cifies Service | 2.7           |            | 1.                     | 10                | 10                                      | 19                   |
|                       | Gale   Spurck  | State        | Maice        |             | Livermore         | 877                      | Par.       |              | Cities Service | 77            |            | # <u>@</u>             | 10                | n:0:1:0                                 | T-16.5°:             |

## NEW MEXICO OIL CONSERVATION COMMISSION

# GAS-OIL RATIO REPORT

| ADDRESSB                  | ox 1659     | , Midl        | and, Texa | S             | MON           | TH OF              | Septem         | er,          | ••••••••   | , 1961              |
|---------------------------|-------------|---------------|-----------|---------------|---------------|--------------------|----------------|--------------|------------|---------------------|
| SCHEDULED TES             | Т           |               |           | CTION TEST    |               |                    | SPECIAL        | TEST         |            | (Check One)         |
|                           |             |               |           |               |               | Daily              | Produ          | ction Dur    | ing Test   | GOR                 |
| Lease                     | Well<br>No. |               |           | Choke<br>Size | Test<br>Hours | Allowable<br>Bbls. | Water<br>Bbls. | Oil<br>Bbls. | Gas<br>MCF | Cu. Ft.<br>Per Bbl. |
| Rock Queen Un<br>Tract 27 | it<br>24-15 | 9 <b>-2</b> 1 | Pump      |               | 24            | 18                 | 0              | 4            | TSTM       |                     |
|                           | 24-15       | 9-22          | Pump      |               | 24            | 18                 | 0              | 5            | TSTM       |                     |
|                           |             |               |           |               |               |                    |                |              |            |                     |
|                           |             |               |           |               |               |                    |                |              |            |                     |
|                           |             |               |           |               |               | terflood           |                |              |            |                     |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of
15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

Mail original and one copy of this report to the district office of the New

Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules.

(I certify that the information given is true and complete to the best of my knowledge.)

| Date November 2, 1961 | Great Western Drilling Company |  |
|-----------------------|--------------------------------|--|
|                       | By Office O.H.Crews            |  |
|                       | Administrative Coordinator     |  |

#### OIL CONSERVATION COMMISSION

P. O. BOX 871 SANTA FE, NEW MEXICO

## November 10, 1961

Great Western Drilling Company Box 1659 Midland, Texas

Gentlemen:

Enclosed herewith please find Administrative Order WFX No. 95 authorizing conversion of three wells to water injection wells in the Rock Queen Unit Water Flood Project in the Caprock-Queen Pool, Lea and Chaves Counties, New Mexico.

Very truly yours,

A. L. PORTER, Jr., Secretary-Director

# ALP/JEK/og

cc: Oil Conservation Commission - Hobbs, N. M.

Oil Conservation Commission - Artesia, N. M.

New Mexico Engineer Office - Santa Fe, N. M.

# NEW MEXICO OIL CONSERVATION COMMISSION

# GAS-OIL RATIO REPORT

| ADDRESSBox                 | 1659,       | Midla           | nd, Texas           | <b>.</b>      | MON           | TH OF                       | Octobe                  | c                          | •                  | , 19 <b>61</b>             |
|----------------------------|-------------|-----------------|---------------------|---------------|---------------|-----------------------------|-------------------------|----------------------------|--------------------|----------------------------|
| SCHEDULED TEST             | •••••       |                 |                     | TION TEST     |               |                             | SPECIAL                 | TEST                       | Х                  | (Check One                 |
| Lease                      | Well<br>No. | Date of<br>Test | Producing<br>Method | Choke<br>Size | Test<br>Hours | Daily<br>Allowable<br>Bbls. | Produ<br>Water<br>Bbls. | oction Dur<br>Oil<br>Bbls. | ing Test  Gas  MCF | GOR<br>Cu. Ft.<br>Per Bbl. |
| Rock Queen Uni<br>Fract 27 |             | 10-28           | Pump                |               | 24            | 18                          | 0                       | 12                         | тѕтм               |                            |
|                            |             | T               | est after           | stimula       | tion b        | y waterfl                   | ood                     |                            |                    |                            |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60. Mail original and one copy of this report to the district office of the New

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules.

| Date November 2, 1961 | Great Western Drilling | Company   |
|-----------------------|------------------------|-----------|
|                       | Company                |           |
|                       | By CHERRY              | O.H.Crews |

(I certify that the information given is true and complete to the best of my knowledge.)

Administrative Coordinator

Title



R. C. TUCKER, PRES.

November 7, 1961

PHONE MU 2-5241
ADDRESS REPLY TO:
BOX 1659
MIDLAND, TEXAS

New Mexico Oil Conservation Commission, Box 871, Santa Fe, New Mexico

Attn: Mr. J. E. Kapteina

Gentlemen:

Enclosed please find required waivers for the expansion of the Rock Queen Unit as requested by Great Western Drilling Company, November 3, 1961.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

By Efficers

OHC:tr





November 3, 1961

R. C. TUCKER. PRES.

PHONE MU 2-5241
ADDRESS REPLY TO:
BOX 1659
MIDLAND, TEXAS

Cities Service Petroleum Company, Box 97, Hobbs, New Mexico

#### Gentlemen:

We have requested expansion of the Rock Queen Unit through Administrative Approval as set forth in Commission Order No. R-1541. A copy of our letter requesting this expansion is enclosed.

If you have no objection to the application, please signify by signing and returning one copy of this letter to this office.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

By Ellew

OHC:tr

We have no objection to the expansion of the Rock Queen Unit operations by reason of the conversion of the following wells to water injection wells:

| Unit Well No. | Location                             |
|---------------|--------------------------------------|
| 24-10         | NW/4 of SE/4 Sec. 24, T-13-S, R-31-E |
| 24-16         | SE/4 of SE/4 Sec. 24, T-13-S, R-31-E |
| 25-2          | NW/4 of NE/4 Sec. 25, T-13-S, R-31-E |

as requested in your application of November 3, 1961.

| CITIES SERVICE PETROCEUM COMPANY |
|----------------------------------|
|                                  |
| By Color                         |
|                                  |
| Date //-6.6/                     |
|                                  |



# GREAT WESTERN DRILLING CO. MIDLAND, TEXAS

## November 3, 1961

John Trigg, Box 5629, Roswell, New Mexico

## Gentlemen:

We have requested expansion of the Rock Queen Unit through Administrative Approval as set forth in Commission Order No. R-1541. A copy of our letter requesting this expansion is enclosed.

If you have no objection to the application, please signify by signing and returning one copy of this letter to this office.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

By Officers

OHC:tr

We have no objection to the expansion of the Rock Queen Unit operations by reason of the conversion of the following wells to water injection wells:

| Unit Well No. | Location                              |  |  |  |  |  |  |  |
|---------------|---------------------------------------|--|--|--|--|--|--|--|
| 24-10         | NW/4 of SE/4 Sec. 24, T-13-S, R-31-E, |  |  |  |  |  |  |  |
| 24-16         | SE/4 of SE/4 Sec. 24, T-13-S, &-31-E, |  |  |  |  |  |  |  |
| 25-2          | NW/4 of NE/4 Sec. 25. T-13-S. 1-31-E  |  |  |  |  |  |  |  |

as requested in your application of November 3, 1961.

JOHN TRIGG

By John Ingg

Date 11-6-61



November 3, 1961

R. C. TUCKER, PRES.

PHONE MU 2-5241
ADDRESS REPLY TO:
BOX 1659
MIDLAND, TEXAS

Great Western Drilling Company, Box 1659, Midland, Texas

#### Gentlemen:

We have requested expansion of the Rock Queen Unit through Administrative Approval as set forth in Commission Order No. R-1541. A copy of our letter requesting this expansion is enclosed.

If you have no objection to the application, please signify by signing and returning one copy of this letter to this office.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

By Officeros

OHC:tr

We have no objection to the expansion of the Rock Queen Unit operations by reason of the conversion of the following wells to water injection wells:

| Unit Well No.          | Loca    | Location                            |     |         |        |  |
|------------------------|---------|-------------------------------------|-----|---------|--------|--|
| 24-10<br>24-16<br>25-2 | SE/4 of | SE/4 Sec.<br>SE/4 Sec.<br>NE/4 Sec. | 24, | T-13-S, | R-31-E |  |

as requested in your application of November 3, 1961.

GREAT WESTERN DRILLING COMPANY

Date nort, 1961





## STATE OF NEW MEXICO

## STATE ENGINEER OFFICE SANTA FE

S. E. REYNOLDS STATE ENGINEER

November 7, 1961

ADDRESS CORRESPONDENCE TO: STATE CAPITOL SANTA FE, N. M.

Mr. A. L. Porter, Jr. Secretary-Director Oil Conservation Commission Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Great Western Drilling Company dated November 3, 1961 which seeks administrative approval for the conversion of wells 24-10, 24-16 and 25-2 of the Rock Queen Unit, Lea and Chaves Counties, New Mexico, to water injection.

In view of the fact that injection will be through 2" tubing under a packer set at about 3000 feet, which in each case is well below the top of the cement behind the oil string, it is concluded that a threat of contamination to any fresh waters which may exist in the area is not likely to occur. Therefore, this office offers no objection to the granting of this application.

Yours truly,

S. E. Reynolds State Engineer

By:

Frank E. Irby

Chief

Water Rights Division

ma

cc-Great Western Drilling Co.

F. H. Hennighausen