



R. C. TUCKER, PRES.

May 23, 1960

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

Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application for Administrative Approval for a
Conversion of Two Unit Wells to Water Injection
Wells, North Central Caprock Queen Unit, Lea and
Chaves Counties, New Mexico

Gentlemen:

As provided in the Oil Conservation Commission Order No. R-1311, Great Western Drilling Company, as operator of the North Central Caprock Queen Unit, requests administrative approval for the conversion of the following Unit wells to water injection wells:

| <u>Unit Well No.</u> | <u>Location</u> |
|----------------------|---|
| 14-6 | SE/4 of NW/4 Section 14, T-13-S, R-31-E |
| 14-10 | NW/4 of SE/4 Section 14, T-13-S, R-31-E |

Well No. 14-7, a direct offset to both wells 14-6 and 14-10, has received response to water injection since May 10, 1960. The last test on April 30, 1960, resulted in 23 barrels per day which is the allowable of this well. This has gradually increased to 32 barrels per day on the last test, May 19, 1960.

We respectfully submit that the ultimate recoverable oil from the Caprock Queen Reservoir will be decreased and that waste will occur due to an unbalanced condition in the pattern flooding system if Unit Wells No. 14-6 and 14-10 are not converted to water injection wells at this time.

Attached to this application are: the C-116 of Great Western Drilling Company Well 14-7, before and after stimulation; a plat of the area showing all producing, water injection and the proposed water injection wells; and the offset operators.

Waivers from offset operators are being requested at this time, and these waivers will be forwarded to the Commission at such time as they are executed so as to decrease the required 15 day interim period set up by Commission order for administrative expansion.

Yours very truly,

GREAT WESTERN DRILLING COMPANY


G. H. Crews



CHC:amh

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

OPERATOR Great Western Drilling Company POOL Caprock Queen
ADDRESS P. O. Box 1654, Midland, Texas MONTH OF May, 19 60
SCHEDULED TEST _____ COMPLETION TEST _____ SPECIAL TEST X (Check One)
(See Instructions on Reverse Side)

| Lease | Well No. | Date of Test | Producing Method | Choke Size | Test Hours | Daily Allowable Bbls. | Production During Test | | | GOR Cu. Ft. Per Bbl. |
|--|----------|--------------|------------------|-------------------|------------|-----------------------|------------------------|-----------|---------|----------------------|
| | | | | | | | Water Bbls. | Oil Bbls. | Gas MCF | |
| North Central Caprock Queen Unit Tract 19 | 14-7 | <u>5-10</u> | Pump | | 24 | 23 | 0 | 32 | TSTM | |
| | | | | After Stimulation | | | | | | |

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 May 23, 1960 Great Western Drilling Company
By O. H. Crews (O. H. Crews)
General Superintendent
Title

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

OPERATOR.....Great Western Drilling Company..... POOL.....Caprock Queen.....
ADDRESS.....P. O. Box 1659, Midland, Texas..... MONTH OF.....April....., 19 60.
SCHEDULED TEST..... COMPLETION TEST..... SPECIAL TEST.....X..... (Check One)
(See Instructions on Reverse Side)

| Lease | Well No. | Date of Test | Producing Method | Choke Size | Test Hours | Daily Allowable Bbls. | Production During Test | | | GOR Cu. Ft. Per Bbl. |
|--|----------|--------------|------------------|------------|------------|-----------------------|------------------------|-----------|---------|----------------------|
| | | | | | | | Water Bbls. | Oil Bbls. | Gas MCF | |
| North Central Caprock Queen Unit Tract 19 | 14-7 | 4-30 | Pump | | 24 | 23 | 0 | 23 | TSTM | |

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.

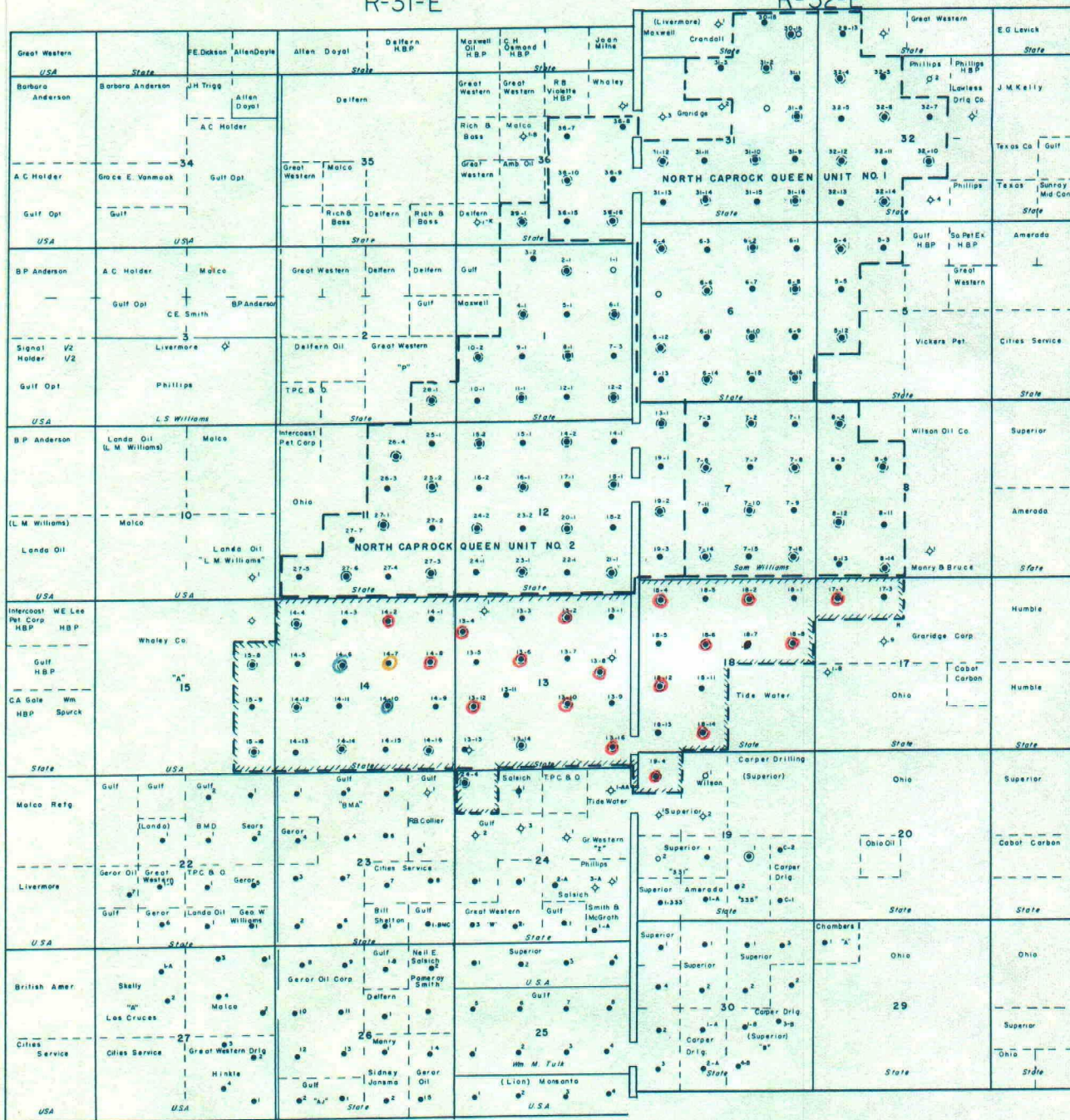
(I certify that the information given is true and complete to the best of my knowledge.)

Date.....May 23, 1960..... Great Western Drilling Company.....
By.....O. H. Crews..... (O. H. Crews)
General Superintendent
Title

R-31-E

R-32-E

T-12-S



T-13-S

NORTH CENTRAL CAPROCK QUEEN UNIT

OPERATED BY
GREAT WESTERN DRILLING COMPANY

CAPROCK QUEEN POOL

LEA AND CHAVES COUNTIES, NEW MEXICO



LEGEND

- Producer
- Injection well
- Proposed injection well
- ◇ Dry hole

- Injection Wells
- Proposed Injection Wells
- Stimulated Wells



R. C. TUCKER, PRES.

May 27, 1960

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

New Mexico Oil Conservation Commission
P. O. Box 371
Santa Fe, New Mexico

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

Gentlemen:

Please find the three (3) executed waivers obviating the necessity of the fifteen (15) day waiting period for administrative approval for expansion of the North Central Cap-rock Queen Unit, Lea and Chaves Counties, New Mexico by converting wells No. 14-6 and 14-10 to Injection.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

G. H. Crews
General Superintendent

OEC:anh
Enclosures





R. C. TUCKER, PRES.

May 23, 1960

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

Great Western Drilling Company
P. O. Box 1659
Midland, Texas

Gentlemen:

We have requested expansion of the North Central Caprock Queen Unit under the system for administrative approval as set forth in the Oil Conservation Commission Order No. R-1311. A copy of our letter requesting this expansion is attached.

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

Yours very truly,

GREAT WESTERN DRILLING COMPANY

O. H. Crews
General Superintendent

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

Unit Well No.

Location

14-6
14-10

SE/4 of NW/4 Section 14, T-13-S, R-31-E
NW/4 of SE/4 Section 14, T-13-S, R-31-E

as applied for in your letter dated May 23, 1960.

GREAT WESTERN DRILLING COMPANY

By:

Date: May 27, 1960



MAIN OFFICE 000

GREAT WESTERN

Midland

TEXAS OPERATIONS

1960 MAY 21 AM 8:15



MAY 24 1960

| | | |
|-------------------------------------|-------|-------|
| <input type="checkbox"/> | Exec: | _____ |
| <input type="checkbox"/> | Prim: | _____ |
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| <input checked="" type="checkbox"/> | Engr: | _____ |
| <input checked="" type="checkbox"/> | Adm: | 127 |
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| <input type="checkbox"/> | Per: | _____ |
| <input type="checkbox"/> | FILE: | _____ |

R. C. TUCKER, PRES.

May 23, 1960

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

Ambassador Oil Corporation
P. O. Box 9338
Fort Worth, Texas

Gentlemen:

We have requested expansion of the North Central Caprock Queen Unit under the system for administrative approval as set forth in the Oil Conservation Commission Order No. R-1311. A copy of our letter requesting this expansion is attached.

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

Yours very truly,

GREAT WESTERN DRILLING COMPANY

C. H. Crews
General Superintendent

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

| <u>Unit Well No.</u> | <u>Location</u> |
|----------------------|---|
| 14-6 | SE/4 of NW/4 Section 14, T-13-S, R-31-E |
| 14-10 | NW/4 of SE/4 Section 14, T-13-S, R-31-E |

as applied for in your letter dated May 23, 1960.

AMBASSADOR OIL CORPORATION

By:

Date: 5-24-60



OFFICE 000

MAY 24 AM 10 16

May 23, 1960

Graridge Corporation
P. O. Box 752
Breckenridge, Texas

Gentlemen:

We have requested expansion of the North Central Caprock Queen Unit under the system for administrative approval as set forth in the Oil Conservation Commission Order No. R-1311. A copy of our letter requesting this expansion is attached.

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

Yours very truly,

GREAT WESTERN DRILLING COMPANY


O. R. Crews
General Superintendent

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

Unit Well No.

Location

14-6

SE/4 of NW/4 Section 14, T-13-S, R-31-E

14-10

NW/4 of SE/4 Section 14, T-13-S, R-31-E

as applied for in your letter dated May 23, 1960.

GRARIDGE CORPORATION

By: 

Date: 5/24/60



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

June 24, 1960

ADDRESS CORRESPONDENCE TO:
P. O. BOX 1079
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 the Great Western Drilling Company which seeks to convert wells No. 14-6 and 14-10, North Central Caprock Queen Unit, to water injection wells, and subsequent correspondence between this office and that company. The application and the correspondence indicate that only the wall of the 5 1/2" oil string will be protecting the Santa Rosa Formation from the injection water which is extremely poor quality, as indicated by the analysis submitted by Great Western. After consultation with the technical staff of this office, I have reached the conclusion that this one casing wall will not provide adequate protection and therefore recommend that additional protection be provided for the Santa Rosa Formation in that the water be injected through tubing and packer set inside the 5 1/2" casing or some other method which will provide equal protection.

The General Superintendent of Great Western states that there is no water to be found in this formation in the vicinity of these two wells and I am aware of the truthfulness of this statement. I am also aware that good quality water does exist in the Santa Rosa Formation at other localities and that any contamination which may enter the formation at the location of these wells could migrate to the places at which usable water is found in that formation; therefore, I cannot give weight to the fact that no water exists at the location of these two wells as a controlling factor in my recommendation to you.

Very truly yours,

S. E. Reynolds
State Engineer

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Division

FEI:md
cc: Great Western Drilling
F. H. Hennighausen