

*Case 2269*

J. M. HERVEY 1874-1953  
HIRAM M. DOW  
CLARENCE E. HINKLE  
W. E. BONDURANT, JR.  
GEORGE H. HUNKER, JR.  
HOWARD C. BRATTON  
S. B. CHRISTY IV  
LEWIS C. COX, JR.  
PAUL W. EATON, JR.  
CONRAD E. COFFIELD

LAW OFFICES  
HERVEY, DOW & HINKLE  
HINKLE BUILDING  
ROSWELL, NEW MEXICO  
April 13, 1961

TELEPHONE MAIN 2-6510  
POST OFFICE BOX 10

AIR MAIL - SPECIAL DELIVERY

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

Re: Great Western Drilling Company  
Federal MM #1 Well

Gentlemen:

Great Western Drilling Company hereby requests dismissal of its application to duly complete its Federal MM #1 Well in the NW $\frac{1}{4}$ NE $\frac{1}{4}$  Section 8, Township 9 South, Range 37 East, N.M.P.M., Lea County, New Mexico (undesignated field), for the production of oil from the Bough C Formation and for the injection of salt water from such well into the non-producing San Andres Formation of such well, which application was made pursuant to a letter from this office to you of April 7, 1961.

Respectfully,  
HERVEY, DOW & HINKLE

By *S. B. Christy IV*

SBC:mke

cc: Great Western Drilling Company

*never  
advertized.  
RSM*

J. M. HERVEY 1874-1953

HIRAM M. DOW  
CLARENCE E. HINKLE  
W. E. BONDURANT, JR.  
GEORGE H. HUNKER, JR.  
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LAW OFFICES  
HERVEY, DOW & HINKLE  
HINKLE BUILDING  
ROSWELL, NEW MEXICO

April 13, 1961

*Case 2269*

TELEPHONE MAIN 2-6510  
POST OFFICE BOX 10

AIR MAIL - SPECIAL DELIVERY

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

Re: Great Western Drilling Company  
Federal MM No. 2 Well

Gentlemen:

Great Western Drilling Company hereby makes application to duly complete its Federal MM #2 Well in the SE $\frac{1}{4}$ NW $\frac{1}{4}$  Section 8, Township 9 South, Range 37 East, N.M.P.M., Lea County, New Mexico (undesignated field), for the production of oil from the Bough C Formation and for the injection of salt water from such well into the non-producing San Andres Formation of such well.

A supplement to this application will be filed within the next two or three days, but we request that the above be advertised for the examiner hearing on May 4, 1961.

Respectfully,

HERVEY, DOW & HINKLE

By *S. B. Christy IV*

SBC:mke

cc: Great Western Drilling Co.

*Case 2269*

LAW OFFICES  
HERVEY, DOW & HINKLE

J. M. HERVEY 1874-1953  
HIRAM M. DOW  
CLARENCE E. HINKLE  
W. E. BONDURANT, JR.  
GEORGE H. HUNKER, JR.  
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LEWIS C. COX, JR.  
PAUL W. EATON, JR.  
CONRAD E. COFFIELD

HINKLE BUILDING  
ROSWELL, NEW MEXICO  
April 17, 1961

TELEPHONE MAIN 2-6510  
P.O. BOX 10

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

Re: Great Western Drilling Company  
Federal MM No. 2 Well

Gentlemen:

Supplementing Great Western's application to duly complete its Federal MM No. 2 Well in the SE $\frac{1}{4}$ NW $\frac{1}{4}$  Section 8, Township 9 South, Range 37 East, N.M.P.M., Lea County, New Mexico, which application was made by a letter to you of April 13, 1961, we hand you herewith three counterparts of the formal application with attached exhibits.

We understand that the above case has been set for an Examiner hearing at Santa Fe, New Mexico, on May 4, 1961; if we are incorrect in this please advise.

Respectfully,

HERVEY, DOW & HINKLE

By *S. B. Christy IV*

SBC:mke  
Encls.

cc: Great Western Drilling Company

*Handled  
Mailed  
4-21-61*

Is the water to be disposed of mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

Is any water occurring naturally within the proposed disposal formation mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

List all offset operators to the lease on which this well is located and their mailing address

<b>Santa Fe Pacific Rwy. Co.</b>	<b>900 Polk Street</b>	<b>Amarillo, Texas</b>
<b>Union Oil of California</b>	<b>Union Oil Bldg.,</b>	<b>Midland, Texas</b>
<b>John Kelly</b>	<b>Box 5671</b>	<b>Roswell, New Mexico</b>
<b>Texaco, Inc.</b>	<b>Box 3109</b>	<b>Midland, Texas</b>
<b>King, Warren &amp; Dye</b>	<b>Box 1505</b>	<b>Midland, Texas</b>
<b>L. E. Hodges</b>	<b>Box 671</b>	<b>Roswell, New Mexico</b>

Name and address of surface owner Fred Baldrige - Portales, New Mexico

Have copies of this application been sent by registered mail or given to all offset operators, surface owners, and to the New Mexico State Engineer? Yes

Is a complete electrical log of this well attached? No

Operator: Great Western Drilling Company

By: *John T. Hampton*  
**John T. Hampton**

Title: Chief Production Engineer

STATE OF Texas )  
 ) ss.  
County of Midland )

BEFORE ME, The undersigned authority, on this day personally appeared John T. Hampton known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein and that said report is true and correct.

SUBSCRIBED AND SWORN TO before me this the 14th day of April, 19 61.

*Thalia Raley*  
Notary Public in and for the County of Midland

June 1, 1961  
My Commission Expires

NOTE: Should waivers from all offset operators, the surface owner, and the State Engineer not accompany an application, the New Mexico Oil Conservation Commission will hold the application for a period of fifteen (15) days from date of receipt by the Commission's Santa Fe office. If at the end of said fifteen-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

ir/

**ILLEGIBLE**

File 2269

Revised 9 16 58

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

APPLICATION  
TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION  
NOT PRODUCTIVE OF OIL OR GAS

Operator Great Western Drilling Company Address Box 1659, Midland, Texas

Lease Federal "M" Well No. 2 County Lea

Unit 8 Section 8 Township 9-S Range 37-E

This is an application to dispose of salt water produced from the following pool(s):

Undesignated

Name of Injection Formation(s): San Andres

Top of injection zone: 4860 Bottom of injection zone: 5060

Give operator, lease, well no., and location of any other well in this area using this same

zone for disposal purposes: Unknown

CASING PROGRAM

	Diameter	Setting Depth	Sacks Cement	Top of Cement
Surface	10-3/4"	200' - plus or minus	225	Circulate
Intermediate	7-5/8"	4300 - "	1700	Circulate
Long String	4-1/2"	9800 - "	350	5100

Will injection be through tubing, casing, or annulus? Annulus

Size tubing: 2-3/8" Setting depth: 7000'- plus or minus Packer set at: 7000', plus or minus

Name and Model No. of packer: N. A.

Will injection be through perforations or open hole? Open Hole

Proposed interval(s) of injection: 4860 - 5060

Well was originally drilled for what purpose? Oil Production

Has well ever been perforated in any zone other than the proposed injection zone? Yes

List all such perforated intervals and sacks of cement used to seal off or squeeze each:

The producing zone will be perforated from approximately 9670' - 9680'.

Give depth of bottom of next higher zone which produces oil or gas: None

Give depth of top of next lower zone which produces oil or gas: 9670'

Give depth of bottom of deepest fresh water zone in area: Approximately 200'

Expected volume of salt water to be injected daily (barrels): 400 - 500 MWD

Will injection be by gravity or pump pressure? Unknown Estimated pressure: Maximum 1000 psi

Is system open or close type? Closed Is filtration or chemical treatment necessary? No

ILLEGIBLE

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

Case 2269

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name <b>Undesignated</b>		County <b>Lea</b>	Date <b>April 13, 1961</b>
Operator <b>Great Western Drilling Company</b>		Lease <b>Federal "M"</b>	Well No. <b>2</b>
Location or Well	Unit <b>7</b>	Section <b>8</b>	Township <b>9-S</b>
		Range <b>37-E</b>	

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_; Operator, Lease, and Well No.:

3. The following facts are submitted:

	Upper Zone	Lower Zone
a. Name of reservoir	<b>San Andres</b>	<b>rough "C"</b>
b. Top and Bottom of Pay Section (Perforations)	<b>4860 - 5060</b>	<b>9670 - 9680</b>
c. Type of production (Oil or Gas)	<b>Salt Water Disposal</b>	<b>Oil</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Injection</b>	<b>Artificial Lift</b>

4. The following are attached. (Please mark YES or NO)
- a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
  - b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
  - c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*
  - d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

<b>Santa Fe Pacific Dry. Co.</b>	<b>900 Polk Street</b>	<b>Amarillo, Texas</b>
<b>Union Oil of California</b>	<b>Union Oil Bldg.,</b>	<b>Midland, Texas</b>
<b>John Kelly</b>	<b>Box 5671</b>	<b>Roswell, New Mexico</b>
<b>Teneco, Inc.</b>	<b>Box 3109</b>	<b>Midland, Texas</b>
<b>King, Warren &amp; Dye</b>	<b>Box 1505</b>	<b>Midland, Texas</b>
<b>L. B. Hodges</b>	<b>Box 671</b>	<b>Roswell, New Mexico</b>

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES  NO \_\_\_\_\_. If answer is yes, give date of such notification **April 14, 1961**.

CERTIFICATE: I, the undersigned, state that I am the **Chief Production Engineer** of the **Great Western Drilling Company** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

**ILLEGIBLE**

*John J. Hampton*  
Signature

\* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.



Case # 2269

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

April 19, 1961

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 Great Western Drilling Company received in this office on April 19, 1961, which seeks to complete its Federal "MM" #2 well located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$  Section 8, Township 9 South, Range 37 East, for the production of oil and for the injection of salt water produced from such well into the non-producing formations of such well between the depths of 4860 feet and 5060 feet.

I have received assurance from Mr. John Hampton, Chief Production Engineer for the company that the surface casing which is anticipated to be 200 feet will be set into the red beds, at least one joint and the cement circulated thereon, even though the depth may require more than 200 feet. In view of this statement and the other construction specifications set forth in the application, I have concluded that the approval of this application would not constitute a threat of contamination to the fresh waters which may occur in the area. 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

FEI/ma  
cc-F. H. Hennighausen  
Great Western Drilling Co.

Treat-Rite Water Laboratories, Inc.  
WATER CONSULTANTS SINCE 1938  
BACTERIAL AND CHEMICAL ANALYSES  
P. O. BOX 1468      PHONE WI 3-4781  
MONAHANS, TEXAS

April 21, 1961

Mr. John Hampton  
Great Western Drilling Co.  
P. O. Box 1659  
Midland, Texas

Subject: Recommendations relative to analysis #M46127 (4-14-61), Federal  
MM #1.

Dear Mr. Hampton:

The attached analysis represents the water proposed for disposal through the casing annulus of the planned disposal well. This analysis is considered adequate evidence to use as a basis to establish the feasibility of an annular disposal well.

Of course, in any disposal through the annulus the primary concern is that of the corrosiveness of the water. It is the opinion of this laboratory that this water would be moderate in its corrosiveness. The type of corrosion is that of solvent action due to carbon dioxide with mild aggravation from electrolysis. The nature of this corrosiveness would be that of a comparatively even solvent action on the metal surface with minor or no localized deterioration.

It should be understood that the above designation of "moderate" corrosion is based on the chemical characteristics of the water itself and excludes the fact that there is suspended oil present. The presence of some suspended oil will be of significant benefit in that it will give substantial assistance in protecting the annular space in the disposal well by virtue of its tendency to film on and in initial corrosion products. The presence of suspended oil is anticipated to reduce the actual corrosion to a category of "moderate to mild". The further addition of a corrosion inhibitor designed to protect against mild carbonic acidity would be recommended to reduce the corrosiveness to the category of mild.

In summary, it is the conclusion of this laboratory that the comparatively moderate corrosiveness of this water, plus the presence of suspended oil and the artificial inclusion of a corrosion inhibitor, should render this water safe for disposal through the casing annulus.

Treat-Rite Water Laboratories, Inc.  
WATER CONSULTANTS SINCE 1938  
BACTERIAL AND CHEMICAL ANALYSES  
P. O. BOX 1468      PHONE WI 3-4781  
MONAHANS, TEXAS

Great Western Drilling Co. - Federal #1 (4-21-61) - Page 2

Please feel free to contact me for any supplementary reports,  
further details, or discussions concerning this situation.

Yours very truly,

Waylan C. Martin  
Texas-New Mexico Div. Mgr.

WCM/sb



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
Drawer 1857  
Roswell, New Mexico

APR 28 1961  
April 28, 1961Case 2269

Great Western Drilling Company  
Box 1659  
Midland, Texas

Attention: Mr. John L. Hampton

Gentlemen:

Your letter of April 16 transmits copies of two New Mexico Oil Conservation Commission forms, one entitled "Application for Dual Completion"; and the other "Application to Dispose of Salt Water by Injection Into a Porous Formation Not Productive of Oil or Gas." Accompanying the two forms is a schematic diagram outlining your proposal to use the annular space between 7 5/8" and 4 1/2" casing in the yet undrilled Federal "MM" well No. 2, SW 1/4 sec. 8, T. 9 S., R. 37 E., N.M.P.M., Lea County, New Mexico, lease New Mexico 01744, to conduct salt water produced on said lease into the San Andres formation for disposal. You request our approval of this proposal.

The manner you have proposed for dually completing well No. 2 Federal "MM" is not satisfactory to this office. Accordingly, your request is denied.

Very truly yours,

EDWIN M. THOMASSON  
Acting Regional Oil and Gas Supervisor

Copy to: NMOCC, Santa Fe

**ILLEGIBLE**



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
Drawer 1857  
Roswell, New Mexico

RECEIVED  
REPLY REFER TO:  
MAY 22 1961  
O. C. C.  
ARTESIA, OFFICE

May 18, 1961

*Case # 2269*

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

Attention: Mr. John T. Hampton

Gentlemen:

Your letter of May 5 transmits additional information regarding the degree of corrosiveness of salt water produced from your Federal "MM" lease (lease New Mexico 01744), and asks that we reconsider your application to use the annular space between 7 5/8 inch and 4 1/2 inch casing in the Federal "MM" well No. 2, SW 1/4 sec. 8, T. 9 S., R. 37 E., N.M.P.M., to conduct said salt water into the San Andres formation for disposal.

The manner you have proposed for dually completing Federal "MM" well No. 2 to use the annular space between 7 5/8 inch and 4 1/2 inch casing for disposal of salt water is satisfactory to this office.

Very truly yours,

EDWIN M. THOMASSON  
Acting Regional Oil and Gas Supervisor

Copy to: Hobbs

NMOCC, Santa Fe

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

May 23, 1961

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

Attention: Mr. John Hampton

Re: Case 2269

Gentlemen:

At the hearing of Case 2269 on May 4, 1961, it was stated that the U.S.G.S. had approved the dual completion as proposed by Great Western. Since the only correspondence from the U.S.G.S. which the Commission had received at that time was unfavorable to Great Western's proposal, it was requested that Great Western, or its Attorney, have the U.S.G.S. furnish the Commission with a letter indicating its approval of the proposed installation.

As of this date we have received no correspondence from the U.S.G.S. indicating their approval of this installation, and until a letter is received to that effect, we can take no further action on this case. The Commission would appreciate the cooperation of all concerned in obtaining this letter in order that this case may be disposed of before June 1, 1961.

Very truly yours,

RICHARD S. MORRIS  
Attorney

RSM/esr

cc: Mr. S. B. Christy IV  
Hervey, Dow and Hinkle  
P. O. Box 10  
Roswell, New Mexico





May 25, 1961

R. C. TUCKER, PRES.

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

Re: Water Disposal  
Federal "MM" No. 2 Well

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

Gentlemen:

In compliance with your request to Mr. John Hampton for information on the subject well, we enclose herewith a copy of the letter from the United States Department of the Interior, Geological Survey, Roswell, New Mexico, indicating the approval of that office of the manner of water injection proposed for the Federal "MM" No. 2 well.

Should you desire further information, please so advise.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

M. B. Wilson  
Vice President, Production

MBW:fw  
Encl.

