

SCHEMATIC DIAGRAM
 GREAT WESTERN DRILLING CO.
 FEDERAL "MM" NO. 1
 SEC. 8 T-9-S R-37-E
 LEA COUNTY, NEW MEXICO

BEFORE EXAMINER NUTTER
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. 2
 CASE NO. 2208

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

SIMULTANEOUS



Laterolog - Gamma Ray - Neutron

COUNTY LEA FIELD or LOCATION WELL COMPANY GREAT WESTERN DRILLING COMPANY	COMPANY	GREAT WESTERN DRILLING COMPANY
	WELL	EXHIBIT NO. 2208
	FIELD	UNDESIGNATED
	COUNTY	LEA STATE NEW MEXICO
Location: 660' FROM N/L 1930' FROM E/L Sec. 3 Twp. 9S Rge. 37E		Other Services: MLL

Permanent Datum: GL	Elev.: 4027
Log Measured From FB	Ft. Above Perm. Datum
Drilling Measured From FB	Elev.: K.B. 4033 D.F. 4027 G.L. 4027

Date	1-7-61				
Run No.	ONE				
Depth - Driller	2715				
Depth - Schlum.	2709				
Btm. Log. Interval	2704				
Top Log. Interval	0				
Casing - Driller	75 9" @ 4296	10 3/4" @ 422	@	@	@
Casing - Schlum.	4295				
Bit Size	6 3/4"				
Type Fluid in Hole	SALT GEL				
Dens.	Visc.	9.4	76		
pH	Fluid Loss	2 CC	CC	CC	CC
Source of Sample	P. 1				
Rm @ Meas. Temp.	115 @ 70 °F	@ °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	038 @ 70 °F	@ °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F	@ °F
Source: Rmf Rmc	M				
Rm @ B. H. T.	066 @ 130 °F	@ °F	@ °F	@ °F	@ °F
Time Since Circ.	5 HOURS				
Max. Rec. Temp.	130 °F	°F	°F	°F	°F
Equip.	Location	2524 HOLES			
Recorded By	QUISH				
Witnessed By	L. S. WILL				

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

HALLIBURTON DIVISION LABORATORY

HALLIBURTON COMPANY
LOVINGTON, NEW MEXICO

LABORATORY REPORT

No. **WT-13**

Date **1/7/61**

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

To **Greatwestern Drilling Co.**

Box 1659

Midland, Texas

Date Received **1/7/61**

9681 -

Well & Lease **Federal MM #1**

Depth **9690**

Formation **Bough C**

Location **East Allison Field**

Field **WQ**

Source **DST #3**

Specific gravity **1.084**
60/60 °F
Color, filtrate **colorless**
pH **6.5**
Resistivity **0.074**
72 ohm-cm
ppm (mpl)
Chlorides, Cl **69,000**
Sulfates, SO₄ **500**
Alkalinity, HCO₃ **310**
Calcium, Ca **6200**
Magnesium, Mg **910**
Iron, Fe **light(20)**
Sodium, Na* **36,400**
Sulfides, H₂S **negl.**

Starch **light trace**

Remarks:

This sample appears to be mostly formation water with a trace of mud filtrate.

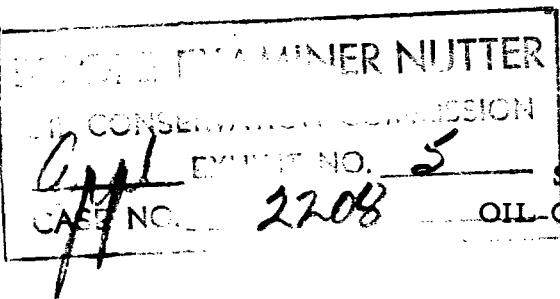
ppm equals Parts per million uncorrected or milligrams per liter
* includes Potassium as Na

Laboratory Analyst
Sutton

Respectfully submitted
HALLIBURTON COMPANY

By **Dave Sutton**





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 MM Well No. 1 County Lea
Unit B Section 8 Township 9-S Range 37-E

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

Wildcat

Name of Injection Formation(s): San Andres, Glorieta

Top of injection zone: 4300' Bottom of injection zone: 9400'

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"	422'	350 sacks regular	Circulated
Intermediate	7-5/8"	4298'	300 sacks 50-50 Pozmix 700 sacks Lite-Wate	1700'
Long String	4-1/2"	9731'	75 sacks reg. plus 1/3 cu.ft.per sk. Strata- Crete 6 plus 4% gel.	9400'

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

Size tubing: 2 1/2" Setting depth: 4500' Packer set at: None

Name and Model No. of packer: Tubing Anchor (Baker Compensating)

Will injection be through perforations or open hole? Annulus

Proposed interval(s) of injection: 4300 - 9400'

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:

9662-67) squeezed w/ 150 sacks Diesel Oil Cement
Pay zone Perforated 9673-77) 9671-73 Open

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

Give depth of top of next lower zone which produces oil or gas: N.A.

Give depth of bottom of deepest fresh water zone in area: Unknown

Expected volume of salt water to be injected daily (barrels): 350 bbls. per day

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

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

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

Santa Fe Pacific Rwy. Co.	900 Polk Street	Amarillo, Texas
Union Oil of California	Union Oil Building,	Midland, Texas
John Kelly	Box 5671	Roswell, New Mexico
Texaco, Inc.	Box 3109	Midland, Texas
King, Warren & Dye	Box 1505	Midland, Texas
L. B. Hodges	Box 671	Roswell, New Mexico

Name and address of surface owner W. R. Bilbrey 310 South 1st St., Lovington, New Mex.

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? Yes

Operator: GREAT WESTERN DRILLING COMPANY

By: John T. Hampton
John T. Hampton

Title: Chief Production Engineer

STATE OF TEXAS)
County of MIDLAND) ss.

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 1st day of March, 19 61.

Sam H. Snoddy
Notary Public in and for the County of Midland, Texas.
Sam H. Snoddy
Notary Public, Midland County, Texas
My Commission Expires 6-1-61
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.

BEFORE EXAMINER NUTTER

NEW MEXICO

OIL CONSERVATION COMMISSION

OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

EXHIBIT NO. 6CASE NO. 2208

APPLICATION FOR DUAL COMPLETION

Field Name Undesignated		County Lea	Date March 3, 1961
Operator Great Western Drilling Company		Lease Federal MM	Well No. 1
Location of Well B	Unit 8	Township 9-S	Range 37-E

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 X
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	San Andres - Glorieta	Bough "C"
b. Top and Bottom of Pay Section (Perforations)	4300 - 9400'	Perforations 9662-67', 9673-77', 9671-73'
c. Type of production (Oil or Gas)	Salt Water Disposal	Oil
d. Method of Production (Flowing or Artificial Lift)	Injection Zone	Artificial Lift

4. The following are attached. (Please mark YES or NO)

- Yes 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.
- Yes 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.
- Yes 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.*
- Yes 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.

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

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 _____.

CERTIFICATE: I, the undersigned, state that I am the **Chief Production Engineer** of the **Great Western Drilling Co.** (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.

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.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

APPLICATION OF GREAT WESTERN
DRILLING COMPANY TO DULY COM-
PLETE ITS FEDERAL NM NO. 1 WELL
LOCATED 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 PRODUCED FROM SUCH
WELL INTO THE NON-PRODUCING FORMA-
TIONS OF SUCH WELL BETWEEN THE
DEPTHS OF 4300 FEET AND 9400 FEET;
AND, FOR AN EXCEPTION TO RULE 107(d)
TO PERMIT THE SETTING OF TUBING IN
SAID WELL MORE THAN 250 FEET ABOVE
THE TOP OF THE PAY.

Case No. _____

AFFIDAVIT

STATE OF NEW MEXICO)
County of Chaves } ss.

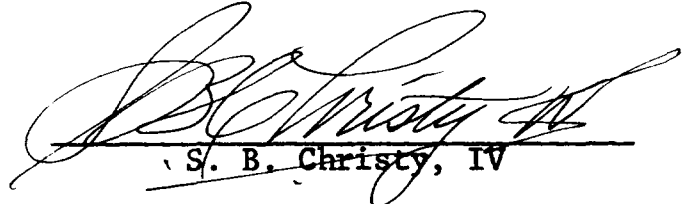
S. B. Christy, IV, a member of the law firm of Hervey,
Dow & Hinkle, Box 10, Roswell, New Mexico, which firm is the
attorney of record for Great Western Drilling Company in
Case No. 2208 before the New Mexico Oil Conservation Com-
mission, does hereby swear that he did on the 15th day of
February, 1961, mail a true and correct copy of the Application
in the above and foregoing case, postage prepaid, to each of
the following addressees at the address stated, to-wit:

<u>NAME</u>	<u>ADDRESS</u>
Santa Fe Pacific Rwy. Co.	900 Polk Street, Amarillo, Texas
Union Oil of California	Union Oil Building, Midland, Texas
John Kelly	Box 5671, Roswell, New Mexico
Texaco Inc.	Box 3109, Midland, Texas
King, Warren & Dye	Box 1505, Midland, Texas
L. B. Hodges	Box 671, Roswell, New Mexico
W. R. Bilbrey	310 South First Street, Lovington, New Mexico
U. S. Geological Survey	Box 6721, Roswell, New Mexico
State Engineer	Capitol Building, Santa Fe, New Mexico

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE NO. 2208

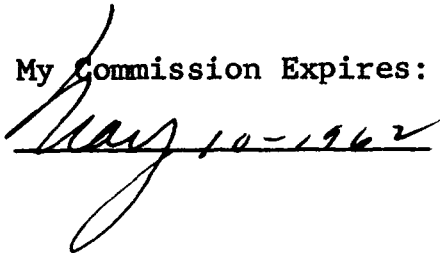
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and that he did take such action for and in behalf of Great
Western Drilling Company in connection with said Application.


S. B. Christy, IV

Subscribed and sworn to before me this 17th day of
February, 1961.

My Commission Expires:


May 10-1962


Notary Public