



# SERVICE FRACTURING COMPANY

P. O. BOX 1741 • PH. 806 665-7221 • PAMPA, TEXAS 79066-1741  
FAX 806 665-2366

EXHIBIT 1



00632105

## FLUID SAMPLE ANALYSIS

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OPERATOR: Midwestern  
LEASE NAME: Mayberry 3-10  
FORMATION: Red Cave  
FIELD:

Well at 1,376 Feet  
COUNTY: Baca  
STATE: CO  
LEGAL DESCRIPTION:

DATE SAMPLED:

DATE RECEIVED AT LAB: 25-Jan-92  
DATE ANALYZED: 27-Jan-92

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All ions are reported in milligrams per liter (mg/l).

SODIUM & POTASSIUM:	83,807	CHLORIDE:	137,360
CALCIUM:	8,560	BICARBONATE:	128
MAGNESIUM:	2,041	SULFATE:	1,275
CALCIUM/MAGNESIUM RATIO:	2.544	TOTAL IRON:	0.3
SPECIFIC GRAVITY:	1.154	pH:	7.0
TOTAL DISSOLVED SOLIDS:	233,171 (calc)	TOTAL HARDNESS:	29,800

RESISTIVITY: 0.040 at 68 deg Fahrenheit

CARBONATE SCALING: Possible

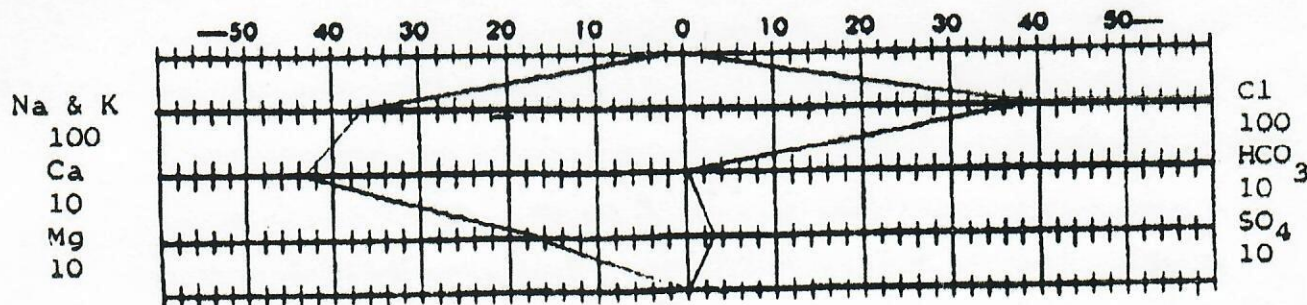
SULFATE SCALING: Possible

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COMMENTS: Scaling tendencies not serious, may take extended time before scaling is a problem. Slightly turbid, yellow colored water filtered rapidly to water-white, no foaming. Have no other records from Baca for Red Cave, but the Stiff Plot doesn't look anything like the Red Caves in TX/OK I've analyzed. Two samples are very similar to each other.

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for Stiff type plot (in meq./l.)



Analyzed by Bill Weeks

Bill Weeks



R 41 W

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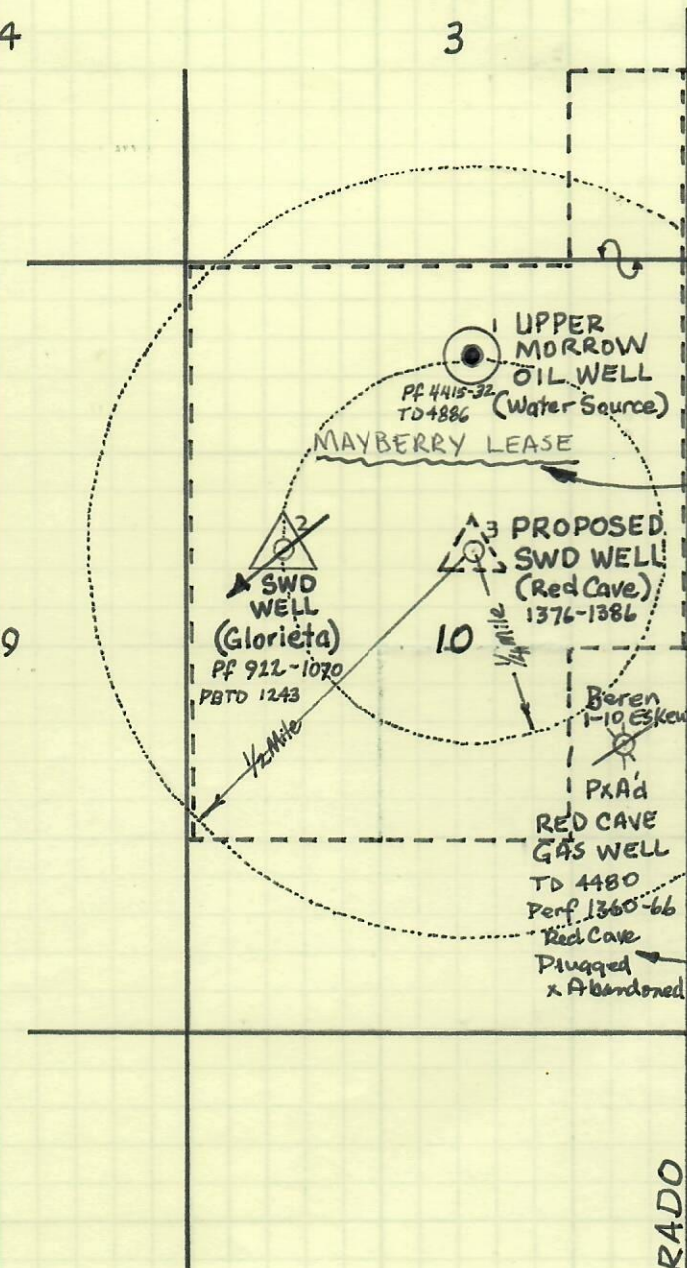
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BACA COUNTY, COLORADO  
MORTON COUNTY, KANSAS



SURFACE OWNERS

- ① Jocelyn Schram - 1/2  
6005 Diamond head DRIVE  
AUSTIN TX 78746
- ② MARILYN HILGERS - 1/2  
10500 W. 73rd PLACE  
ARVADA, Co. 80005

MINERAL OWNERS

SAME AS ABOVE @ 0.3888889  
PLUS Each  
MARION B. MAYBERRY  
12463 LAS INDIOS TRAIL, APT. 205  
AUSTIN, TX. 78729  
© .2222222

SURFACE & mineral Owners

Earl Ray & LORENE V. White - 1/3  
Gerald W. & Debra Ann White - 1/3  
Timothy O. & Connie L. White - 1/3  
PO Box 48  
MANTER, KS 67862-0048

Pf - Perforations

TD - Total Depth

PBTD - Plug Back Total Depth

⊗ CLOSEST  
IRRIGATION WELL  
OF PUBLIC RECORD

SCALE: 1" = 1/4 MILE



E X H I B I T 3

I. SURFACE OWNERS WITHIN 1/4 MILE OF PROPOSED DISPOSAL WELL:

- A. NORTHWEST QUARTER (NW/4);  
NORTHWEST QUARTER OF SOUTHWEST QUARTER (NW/4 SW/4);  
WEST HALF OF NORTHWEST QUARTER (W/2 NE/4); AND  
NORTHEAST QUARTER OF SOUTHWEST QUARTER (NE/4 SW/4)  
SECTION 10-T34S-R41W

JOCELYN SCHRAM 1/2 OWNERSHIP  
6005 DIAMONDHEAD DRIVE  
AUSTIN, TEXAS 78746

MARILYN HILGERS 1/2 OWNERSHIP  
10500 WEST 73RD PLACE  
ARVADA, COLORADO 80005

- B. WEST HALF OF SOUTHEAST QUARTER (W/2 SE/4); AND  
SOUTH HALF OF SOUTHWEST QUARTER (S/2 SW/4)  
SECTION 10-T34S-R41W

EARL RAY AND LORENE V. WHITE 1/3 OWNERSHIP  
P. O. BOX 48  
MANTER, KANSAS 67862-0048

GERALD W. AND DEBRA ANN WHITE 1/3 OWNERSHIP  
C/O EARL RAY WHITE  
P. O. BOX 48  
MANTER, KANSAS 67862-0048

TIMOTHY D. AND CONNIE L. WHITE 1/3 OWNERSHIP  
C/O EARL RAY WHITE  
P. O. BOX 48  
MANTER, KANSAS 67862-0048

II. MINERAL OWNERS WITHIN 1/4 MILE OF PROPOSED DISPOSAL WELL:

SAME AS SURFACE IN I.A. ABOVE, EXCEPT MARION B. MAYBERRY; 12463  
LAS INDIOS TRAIL, APT. 205; AUSTIN, TX 78729 HAS 2/3 OF 1/3 OF  
THE MINERALS, BUT NO SURFACE OWNERSHIP.



E X H I B I T 4

LIST OF ALL DOMESTIC AND IRRIGATION  
OF PUBLIC RECORD WITHIN 1/4 MILE OF  
PROPOSED DISPOSAL WELL

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There are no such wells of public record within 1/4 mile of the proposed disposal well.

The closest domestic or irrigation well of public record with the Colorado Division of Water Resources is in the SE SW Section 15 of T34S-R41W and is 646' FSL and 1518' FWL of Section 15. The depth on this well is 331'.

There are two windmills that produce stock water located in Section 10; <sup>one</sup> in the NW SW Section 10 and one in the NW SE of Section 10, but both are located further than 1/4 mile from the proposed disposal well.



E X H I B I T 5

PLANS AND SPECIFICATIONS FOR  
MAYBERRY LEASE DISPOSAL SYSTEM

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1. The produced water will have the oil skimmed off by an internal syphon in the 300 barrel welded steel water tanks as is currently being done. Further settling times is accomplished in the two 210 barrel holding tanks.
2. The water from the above tanks will be transported by gravity flow through the existing buried pipeline that goes to the Mayberry No. 2 SWD. A pipeline Tee fitting will be inserted into existing buried pipeline with connections, etc., to hookup said line with a valve mounted on top of the tubing of the Mayberry No. 3 as described in No. 3 below.
3. Water will enter the tubing of the Mayberry No. 3 through a valve mounted on top of the tubing.
4. The water entering the Mayberry No. 3 will gravity through the tubing into the selected Red Cave perforated zone with the tubing isolated from the uphole casing, as shown on Exhibit No. 7.
5. Water entering the Mayberry No. 3 will be metered with records maintained as to volumes disposed into each SWD well. Volumes disposed into the Mayberry No. 3 well will be the arithmetic difference between total water metered at the entry of the water retention tank group shown on Exhibit No. 8 and that entering the Mayberry No. 3.



MAYBERRY #3  
PROPOSED DOWNHOLE  
CONFIGURATION FOR  
DISPOSAL OF WATER

RECEIVED

MAY 06 1992

COLO. OIL & GAS CONS. COMM

2 7/8 Tubing WITH SEATING  
NIPPLE SET IN PACKER  
AT APPROX. 1325'

CASING-TUBING  
ANNULUS FILLED  
WITH CORROSION  
INHIBITING FLUID

9 5/8" x 2 7/8" PACKER SET AT  
APPROX. 1325'

RED CAVE PERFORATIONS  
1376' - 1386'

9 5/8" Casing Set @ 1390'  
With 550 Sacks

CEMENT PLUG  
DRILLED OUT  
TO 1392'  
(HARD DRUG  
1379-92')

TOTAL DEPTH 4900'



CURRENT  
GLORIETA  
DISPOSAL  
WELL

2

# EXHIBIT 8

DIAGRAM OF SURFACE FACILITY  
FOR THE DISPOSAL SYSTEM

N

PROPOSED  
REDCAVE  
DISPOSAL  
WELL WITH WATER  
VOLUME METER

3

MAYBERRY No 1  
PRODUCING  
WELL

210  
Bbl  
210  
Bbl  
300  
Bbl  
300  
Bbl  
WATER RETENTION  
TANK GROUP

WATER  
VOLUME METER

6'x15' Free Water  
KNOCKOUT

6'x20' TREATER

No Scale

EXHIBIT 8



### LABORATORY WATER ANALYSIS

To: Midwestern Exploration  
P. O. Box 1884  
Liberal, KS 67905-1884

Well No. Mayberry #1  
Legal Desc. \_\_\_\_\_  
County Baca, State Colo.

Date Sampled 5-20-92  
Sample Location Wellhead ✓  
Sampled by Harold Reid

Formation \_\_\_\_\_  
Depth \_\_\_\_\_  
Water B/D \_\_\_\_\_

pH 5.8  
Carbon Dioxide (CO<sub>2</sub>) \_\_\_\_\_  
Dissolved Oxygen (O<sub>2</sub>) \_\_\_\_\_  
Sulfide as H<sub>2</sub>S \_\_\_\_\_

Specific Gravity 60/60 1.115  
Resistivity (ohm meters) \_\_\_\_\_  
Saturation Index 70°F \_\_\_\_\_  
150°F \_\_\_\_\_

### DISSOLVED SOLIDS

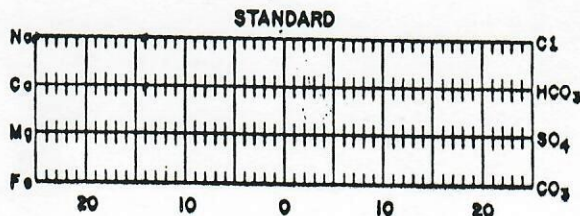
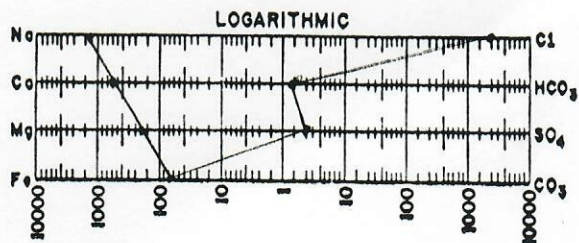
Cations	mg/l	me/l
Calcium, Ca	<u>14,000</u>	<u>700</u>
Magnesium, Mg	<u>3,124</u>	<u>257</u>
Sodium, Na	<u>42,067</u>	<u>1,805</u>
Hardness, total	<u>17,124</u>	
Barium, Ba	<u>Trace</u>	

Anions	mg/l	me/l
Carbonate, CO <sub>3</sub>		
Bicarbonate, HCO <sub>3</sub>	<u>101</u>	<u>2.0</u>
Sulfate, SO <sub>4</sub>	<u>140</u>	<u>3.0</u>
Chloride, Cl	<u>106,500</u>	<u>3,000</u>

Total Dissolved Solids, Calc. 165,932  
Total Suspended Solids \_\_\_\_\_

Iron, Total 80.  
Iron, Sol. \_\_\_\_\_

### WATER PATTERNS me/l



Remarks \_\_\_\_\_  
\_\_\_\_\_

Chemist \_\_\_\_\_

PAT BREWER  
316-624-3034  
SCAT Unit 90

Phone SCAT (316) 624-6258  
Office Phone (316) 624-8785

GARY ROGERS  
316-624-4427  
SCAT Unit 93



July 2, 1992

RE: Notice of Application For  
Underground Disposal of  
Water into the Midwestern  
Exploration Co. Mayberry No. 3  
(API No. 05-009-6379-1)  
SE NW/4 Section 10-T34S-R41W  
Baca County, Colorado

Dear

In accordance with Paragraph e., Colorado Oil and Gas Commission Rule 326 regarding "Underground Disposal of Water", this is to notify you that Midwestern Exploration Co., P. O. Box 1884, Liberal, KS 67905-1884 is applying under said rule for Colorado Oil and Gas Commission approval to dispose of produced lease water from the Mayberry No. 1 (NE NW/4 Section 10) Upper Morrow oil well into the Mayberry No. 3 (SE NW/4 Section 10) Red Cave formation. The proposed disposal of produced water into the Mayberry No. 3 will be into the Red Cave interval from 1376' to 1386' and is intended to supplement the disposal capacity of the current disposal well, the Mayberry No. 2 (SW NW/4 Section 10). The attached plat shows the wells and lands involved. You are being notified because you are a surface and/or mineral owner with holdings within one-quarter (1/4) mile of the proposed produced water disposal well.

Under Rule 326, any person who would be adversely affected or aggrieved by the authorization of the underground disposal operation as proposed, may file, within fifteen (15) days of notification, a written request for a public hearing before the Commission. Additional information on the operation, for which authorization has been applied, may be obtained at the Commission office, located at Suite 380, 1580 Logan Street, Denver, CO 80203, Telephone number (303)894-2100.

Yours very truly,

Dale J. Lollar  
Vice-President

DJL:cs  
attachment

cc



E X H I B I T 11

CERTIFICATION OF NOTIFICATION

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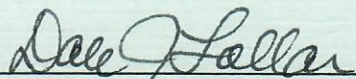
The undersigned does hereby certify that Notification of the Application of Midwestern Exploration Co. for Underground Disposal of Water under Rule 326 of the Colorado Oil and Gas Commission's Rules and Regulations was made to the following individuals and parties in accordance with Paragraph e of said Rule 326.

Parties notified were:

- |  |  |
|--|--|
| 1. Marion B. Mayberry<br>12463 Las Indios Trail, Apt. 205<br>Austin, Texas 78729 | 4. Earl Ray & Lorene V. White<br>P. O. Box 48<br>Manter, Kansas 67862-0048                         |
| 2. Jocelyn Schram<br>6005 Diamondhead Drive<br>Austin, Texas 78746               | 5. Gerald W. & Debra Ann White<br>c/o Earl Ray White<br>P. O. Box 48<br>Manter, Kansas 67862-0048  |
| 3. Marilyn Hilgers<br>10500 West 73rd Place<br>Arvada, Colorado 80005            | 6. Timothy D. & Connie L. White<br>c/o Earl Ray White<br>P. O. Box 48<br>Manter, Kansas 67862-0048 |

Notification was by Certified Mail dated July 2, 1992.

CERTIFIED BY:

  
Dale J. Lollar, Vice-President  
Midwestern Exploration Co.  
P. O. Box 1884  
Liberal, Kansas 67905-1884  
(316) 624-3534