

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well  
Oil ☐ Well Gas ☒ Well ☐ Other  
2. Name of Operator  
**SAMSON RESOURCES COMPANY**  
3. Address and Telephone No.  
**TWO WEST SECOND STREET, STE. 2350B, TULSA, OK 74103 (918) 591-1791**  
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**660' FSL 990' FEL, Sec. 12-T20S-R34E, Lea County, NM**

5. Lease Designation and Serial No.  
**BLM #NMNM01747**  
6. If Indian, Allottee or Tribe Name  
7. If Unit or CA, Agreement Designation  
8. Well Name and No.  
**Lea Federal Unit #19**  
9. API Well No.  
**30-025-36905**  
10. Field and Pool, or Exploratory Area  
**Lea**  
11. County or Parish, State  
**Lea County, NM**

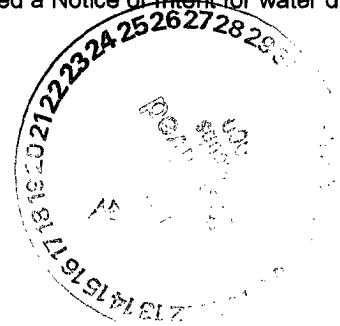
**12 CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13 Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Per your **Notice of Incidents of Noncompliance** Number AJM-143-06, please find attached a Notice of Intent for water disposal approval for the Lea Federal Unit #19, in Lea County, NM.



14. I hereby certify that the foregoing is true and correct

Signed Debra Bedington

Title **Environmental & Safety Tech**

Date **5/9/2006**

(This space for Federal or State office use)

Approved by **XXXX SGDJ DAVID E. GELFAND** Title **STROM ENGINEER**

**MAY 15 2006**

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*See Instruction on Reverse Side

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

GWW

SAMSON

05/04/2006 11:38

3257282120

The following information is needed before your disposal of produced water can be approved, per Onshore Oil & Gas Order #7.

You may attach this information to your Sundry Notice (3160-S). Submit all required information as per this attachment, submit a Sundry Notice(3160-S), one original and five copies to this office within the required time.

1. Name(s) of all formation(s) producing water on the lease. MORTOW
2. Amount of water produced from all formations in barrels per day. 6
3. A CURRENT water analysis of produced water from all zones showing at least the total dissolved solids, pH, and the concentrations of chlorides and sulfates. See Attached
4. How water is stored on the lease. Stored in 300 barrel steel welded tank.
5. How water is moved to the disposal facility. Trucked by Key Energy.
6. Identify the Disposal Facility by:
  - A. Operators' Name Millard Deck Oil Company
  - B. Well Name Atha Well No. 1
  - C. Well type and well number salt water disposal #1
  - D. Location by quarter/quarter, section, township, and range Section 31, Township 21, Range 36 East
7. A copy of the Underground Injection Control Permit - issued for the injection well by the Environmental Protection Agency or New Mexico Oil Conservation Division where the State has achieved primacy. See attached.



## Water Analysis Report

1/9/2006

Address:

Customer: SAMSON LONE STAR

Lease: Lea Fed

Attention:

Formation:

Salesman: Tracy Headstream

CC:

Target Name: Lea Fed 19

Sample Point: Lea Fed 19

Sample Date: 12/23/2006

Test Date: 01/03/2006

## Water Analysis(mg/L)

Calcium	3529
Magnesium	437
Barium	
Strontium	
Sodium(calc.)	21781
Bicarbonate Alkalinity	244
Sulfate	1302
Chloride	40000
Resistivity	0.0951

## Appended Data(mg/L)

CO2	450
H2S	0
Iron	215
Oxygen	

## Additional Data

Specific Gravity	1.05
Total Dissolved Solids(Mg/L)	67293
Total Hardness(CaCO3 Eq Mg/	10613

## Physical Properties

Ionic Strength(calc.)	1.28
pH(calc.)	6.50
Temperature(°F)	84
Pressure(psi)	50
Density	8.72

Dew Point	
Lead	
Zinc	

## Calcite Calculation Information

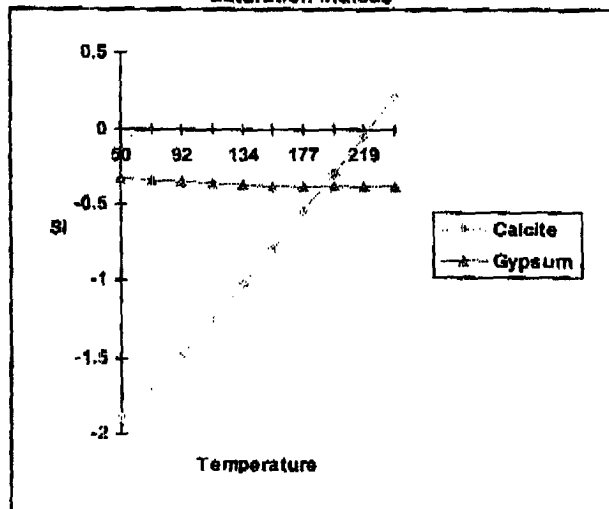
Calculation Method	Value
CO2 In Brine(mg/L)	450

Remarks:

## SI &amp; PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	-1.56	
Gypsum (Calcium Sulfate)	-0.35	
Hemihydrate (Calcium Sulfate)	-0.34	
Anhydrite (Calcium Sulfate)	-0.55	
Barite (Barium Sulfate)		
Celestite (Strontium Sulfate)		

## Saturation Indices



## Saturation Index Data Points

	50	71	92	113	134	156	177	198	219	240
Calcite	-1.89	-1.68	-1.47	-1.25	-1.02	-0.79	-0.54	-0.29	-0.04	0.23
Gypsum	-0.33	-0.34	-0.35	-0.36	-0.37	-0.38	-0.38	-0.38	-0.38	-0.38