

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

0 2834

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

*clsf*

**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

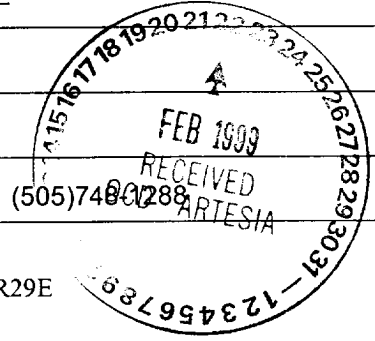
**SUBMIT IN TRIPLICATE**

1 Type of Well  
 Oil Well     Gas Well     Other

2 Name of Operator  
 Mack Energy Corporation

3 Address and Telephone No.  
 P.O. Box 960, Artesia, NM 88211-0960

4 Location of Well (Footage, Sec., T., R., M. or Survey Description)  
 NE NE, NW NE Sec 30 T17S R29E



5. Lease Designation and Serial No.  
 NM-29267

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.  
 Gold Star Federal #1

9. API Well No.  
 30-015-30358

10. Field and Pool, or Exploratory Area  
 Empire Yeso

11. County or Parish, State  
 Eddy, 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 checked="" type="checkbox"/> Other <b>Onshore Order 7</b> |
|  | <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 type="checkbox"/> Dispose Water                           |

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 )\*

Name (s) of formation (s) producing water on the lease **Empire Yeso**

Amount of water produced from each formation in barrels per day **900 Barrels per day**

A water analysis of produced water from each zone showing at lease the total dissolved solids, ph, and concentration of chlorides and sulfates. **See Attached**

How water is stored on lease **Fiberglass Tank**

How water is moved to disposal facility **Pipeline**

Operator's name, well name and location, by 1/4 1/4, section township, and range, of the disposal facility. If the disposal facility is an approved disposal system, the operator's name and the name of the disposal system should suffice. **Mack Energy Corporation  
Big George State #3  
SWD 611 Sec 12 T17S R28E**

Alternate Disposal **Mack Energy Corporation  
Muskegon 16 State Com #1  
SWD 624 Sec 16 T17S R29E**

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

Signed *Alexis C. Swoboda* Title Production Clerk Date 2/2/99

(This space for Federal or State office use)

Approved by **(ORIG. SGD.) ALEXIS C. SWOBODA** Title **PETROLEUM ENGINEER** Date **FEB 15 1999**

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.

RECEIVED

FEB 03 '99

BLM.  
ROSWELL, NM

# Enviro-Chem

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : MACK ENERGY  
 Lease : GOLD STAR  
 Well No. :  
 Salesman: JOEL CARTER

Sample Loc. : BATTERY  
 Formation :  
 Date Analyzed: 10-February-1999  
 Lab ID. No. :

### ANALYSIS

1. pH 8.000
2. Specific Gravity 60/60 F. 1.138
3. CaCO<sub>3</sub> Saturation Index @ 80 F. +2.284  
 @ 140 F. +3.394

#### Dissolved Gasses

|                     | MG/L           | EQ. WT.    | *MEQ/L |
|---------------------|----------------|------------|--------|
| 4. Hydrogen Sulfide | 5.5            | Determined |        |
| 5. Carbon Dioxide   | Not Determined |            |        |
| 6. Dissolved Oxygen | Not Determined |            |        |

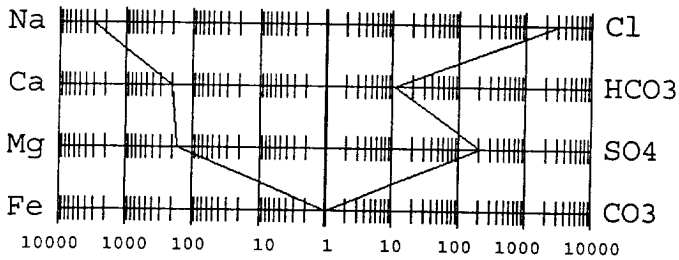
#### Cations

|                                  |                     |          |          |
|----------------------------------|---------------------|----------|----------|
| 7. Calcium (Ca <sup>++</sup> )   | 3,840               | / 20.1 = | 191.04   |
| 8. Magnesium (Mg <sup>++</sup> ) | 1,968               | / 12.2 = | 161.31   |
| 9. Sodium (Na <sup>+</sup> )     | (Calculated) 70,120 | / 23.0 = | 3,048.70 |
| 10. Barium (Ba <sup>++</sup> )   | Not Determined      |          |          |

#### Anions

|  |            |          |          |
|--|------------|----------|----------|
| 11. Hydroxyl (OH <sup>-</sup> )                  | 0          | / 17.0 = | 0.00     |
| 12. Carbonate (CO <sub>3</sub> <sup>=</sup> )    | 0          | / 30.0 = | 0.00     |
| 13. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> ) | 630        | / 61.1 = | 10.31    |
| 14. Sulfate (SO <sub>4</sub> <sup>=</sup> )      | 9,890      | / 48.8 = | 202.66   |
| 15. Chloride (Cl <sup>-</sup> )                  | 113,000    | / 35.5 = | 3,183.10 |
| 16. Total Dissolved Solids                       | 199,448    |          |          |
| 17. Total Iron (Fe)                              | 0          | / 18.2 = | 0.00     |
| 18. Total Hardness As CaCO <sub>3</sub>          | 17,700     |          |          |
| 19. Resistivity @ 75 F. (Calculated)             | 0.002 /cm. |          |          |

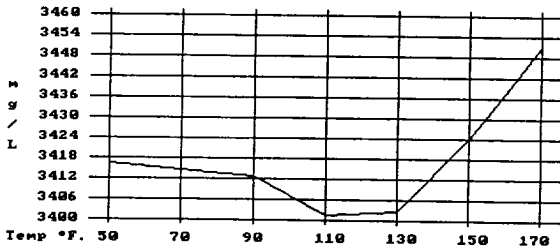
#### LOGARITHMIC WATER PATTERN \*meq/L.



#### PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X \*meq/L = mg/L.

|                                    |       |          |         |
|------------------------------------|-------|----------|---------|
| Ca(HCO <sub>3</sub> ) <sub>2</sub> | 81.04 | 10.31    | 836     |
| CaSO <sub>4</sub>                  | 68.07 | 180.73   | 12,303  |
| CaCl <sub>2</sub>                  | 55.50 | 0.00     | 0       |
| Mg(HCO <sub>3</sub> ) <sub>2</sub> | 73.17 | 0.00     | 0       |
| MgSO <sub>4</sub>                  | 60.19 | 21.93    | 1,320   |
| MgCl <sub>2</sub>                  | 47.62 | 139.38   | 6,637   |
| NaHCO <sub>3</sub>                 | 84.00 | 0.00     | 0       |
| NaSO <sub>4</sub>                  | 71.03 | 0.00     | 0       |
| NaCl                               | 58.46 | 3,043.72 | 177,936 |

#### Calcium Sulfate Solubility Profile



This water is mildly corrosive due to the pH observed on analysis. The corrosivity is increased by the content of mineral salts, and the presence of H<sub>2</sub>S in solution.

Analyst \_\_\_\_\_