

#2 30-045-10676  
#3 30-045-24675  
DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO

Operator Meridian Oil Co. Location: Unit P Sec. 14 Twp 31 Rng 12

Name of Well/Wells or Pipeline Serviced \_\_\_\_\_

HARPER #2 AND #3

Elevation \_\_\_\_\_ Completion Date 3-30-93 Total Depth 395 Land Type P

Casing Strings, Sizes, Types & Depths 12/11 SET 100' OF 8" PVC CASING

NO GAS, WATER, OR BOULDERS WERE ENCOUNTERED DURING CASING.

If Casing Strings are cemented, show amounts & types used Cemented

WITH 24 SACKS.

If Cement or Bentonite Plugs have been placed, show depths & amounts used

no plugs

Depths & thickness of water zones with description of water: Fresh, Clear,  
Salty, Sulphur, Etc. 180' and clear.

Depths gas encountered: no gas

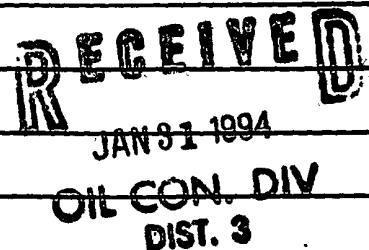
Ground bed depth with type & amount of coke breeze used: 395' with  
57 (100 lb) sacks of LORSCO S.W.

Depths anodes placed: #1 is at 370' and #15 is at 190'

Depths vent pipes placed: Bot. to Surface

Vent pipe perforations: up to 180'

Remarks: \_\_\_\_\_



If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included.

Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee.  
If Federal or Indian, add Lease Number.

# API WATER ANALYSIS REPORT FORM

Laboratory No. 25-930417-38

|                                        |  |                                       |  |                                 |  |
|----------------------------------------|--|---------------------------------------|--|---------------------------------|--|
| Company<br><b>MERIDIAN OIL</b>         |  | Sample No.                            |  | Date Sampled<br><b>3-30-93</b>  |  |
| Field<br><b>4072 W</b>                 |  | Legal Description<br><b>P14-31-12</b> |  | County or Parish<br><b>S.T.</b> |  |
| Lease or Unit                          |  | Well<br><b>HARPER #2, #3</b>          |  | Depth                           |  |
|                                        |  |                                       |  | Formation<br><b>MU &amp; DK</b> |  |
| Type of Water (Produced, Supply, etc.) |  | Sampling Point<br><b>G. Bed</b>       |  | Sampled By<br><b>R. Smith</b>   |  |

## DISSOLVED SOLIDS

| CATIONS            | mg/l | me/l |
|--------------------|------|------|
| Sodium, Na (calc.) | 1100 | 48   |
| Calcium, Ca        | 455  | 22.7 |
| Magnesium, Mg      | 16   | 1.3  |
| Barium, Ba         |      |      |
|                    |      |      |

## ANIONS

|                      |      |     |
|----------------------|------|-----|
| Chloride, Cl         | 500  | 14  |
| Sulfate, $SO_4$      | 2800 | 57  |
| Carbonate, $CO_3$    |      |     |
| Bicarbonate, $HCO_3$ | 50   | 0.3 |
|                      |      |     |

## OTHER PROPERTIES

|                                       |        |
|---------------------------------------|--------|
| pH                                    | 7.65   |
| Specific Gravity, 60/60 F.            | 1.0076 |
| Resistivity (ohm-meters) <b>74 F.</b> | 2.0    |
|                                       |        |
|                                       |        |

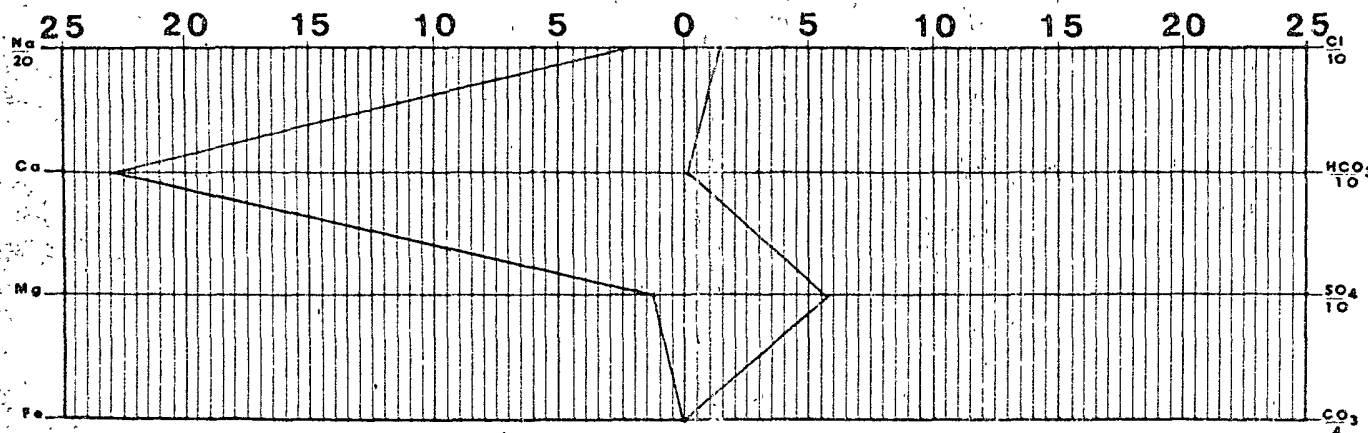
Total Dissolved Solids (calc.)

4,900

Iron, Fe (total)  
Sulfide, as  $H_2S$

## REMARKS & RECOMMENDATIONS:

ATTN: B. DONAHUE



**TECH, Inc.**  
333 East Main  
Farmington  
New Mexico  
87401  
505/327-3311

|                                          |           |                                        |                            |
|------------------------------------------|-----------|----------------------------------------|----------------------------|
| Date Received<br><b>April 17th, 1993</b> | Preserved | Date Analyzed<br><b>May 21st, 1993</b> | Analyzed By<br><b>R.H.</b> |
|------------------------------------------|-----------|----------------------------------------|----------------------------|