

1101

30-045-26361

E

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO  
(Submit 3 copies to OCD Aztec Office)

Operator MERIDIAN OIL INC. Location: Unit A Sec. 14 Twp 26 Rng 9

Name of Well/Wells or Pipeline Serviced BALLARD #13E

cps 1813w

Elevation 6286' Completion Date 8/14/87 Total Depth 400' Land Type\* N/A

Casing, Sizes, Types & Depths N/A

If Casing is cemented, show amounts & types used N/A

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

Depths & thickness of water zones with description of water when possible:

Fresh, Clear, Salty, Sulphur, Etc. 150' SAMPLE TAKEN

Depths gas encountered: N/A

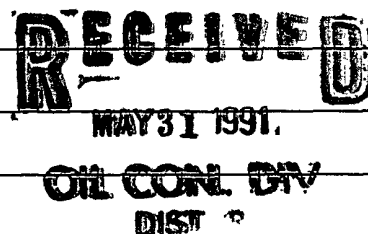
Type & amount of coke breeze used: N/A

Depths anodes placed: 375', 365', 355', 345', 335', 325', 290', 240', 230', 220'

Depths vent pipes placed: N/A

Vent pipe perforations: 310'

Remarks: gb #1



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.

WELL CASING  
CATHODIC PROTECTION CONSTRUCTION REPORT  
DAILY LOG

Comp  
8-18-87

Drilling Log (Attach Hereto) ☐Completion Date 8-14-87

9538801

|                          |     |                           |     |                   |     |                      |     |                                                                       |     |
|--------------------------|-----|---------------------------|-----|-------------------|-----|----------------------|-----|-----------------------------------------------------------------------|-----|
| CPS #                    |     | Well Name, Line or Plant: |     | Work Order #      |     | Static.              |     | Ins Union Check                                                       |     |
| 1813 W                   |     | Ballard 13E               |     |                   |     | .83 N.W.             |     | <input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad |     |
| Location                 |     | Anode Size                |     | Anode Type        |     | Size Bit             |     |                                                                       |     |
| A14-26-9                 |     | 2" x 60"                  |     | Duriron           |     | 6 3/4"               |     |                                                                       |     |
| Depth Drilled            |     | Depth Logged              |     | Drilling Rig Time |     | Total Lbs. Coke Used |     | Lost Circulation Mat'l Used                                           |     |
| 400                      |     | 392                       |     | 6 Hrs.            |     |                      |     | Eleo 6286                                                             |     |
| Anode Depth              |     | Anode Output (Amps)       |     | Anode Depth       |     | Anode Output (Amps)  |     |                                                                       |     |
| # 1                      | 375 | # 2                       | 365 | # 3               | 355 | # 4                  | 345 | # 5                                                                   | 335 |
| # 6                      | 325 | # 7                       | 290 | # 8               | 240 | # 9                  | 230 | # 10                                                                  | 220 |
| # 11                     | 170 | # 12                      | 145 | # 13              |     | # 14                 |     | # 15                                                                  |     |
| # 16                     |     | # 17                      |     | # 18              |     | # 19                 |     | # 20                                                                  |     |
| Total Circuit Resistance |     | Volts                     |     | Amps              |     | Ohms                 |     | No. 8 C.P. Cable Used                                                 |     |
| 12                       |     | 26.8                      |     | 45                |     |                      |     | No. 2 C.P. Cable Used                                                 |     |

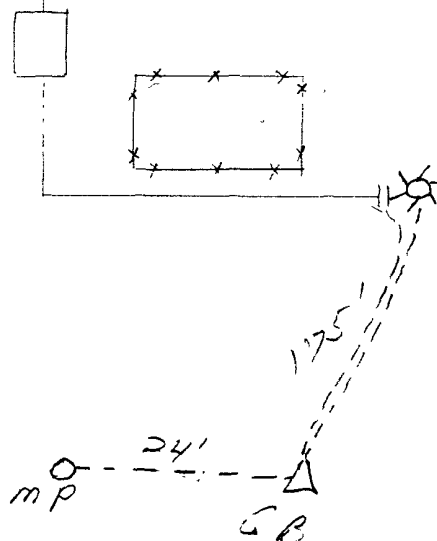
Remarks: Driller said water was at 100'. Vent pipe is perforated up to 90'. Water sample was taken. Lost 172 anodes due to sand cake in.

Rectifier Size: 40 V 16 A    4300 ✓  
 Addn'l Depth: 108 ✓    - 432.00 ✓  
 Depth Credit: 30' ✓    3868.00  
 Extra Cable: 24' ✓    7.50 ✓  
 Ditch & 1 Cable: 24' ✓    7.36 ✓  
 Ditch & 2 Cable: 175' ✓    91.20 ✓  
 25' Meter Pole: 305.00 ✓  
 20' Meter Pole: \_\_\_\_\_  
 10' Stub Pole: \_\_\_\_\_  
 Junction Box: 40.00 ✓    40.00 ✓

4320.86  
 TX 216.04  
 4536.90 ✓

All Construction Completed

*Handy Smith*  
 (Signature)



6286

Date 8-14-87

# DEEP WELL GROUND BED LOG

**Company.**

Well No. \_\_\_\_\_

### Location

Ballard 135

- Volts Applied

12

Amperes<sup>5</sup>

76.8

|     |     |   |      |     |     |      |      |  |     |      |     |     |     |  |  |  |  |
|-----|-----|---|------|-----|-----|------|------|--|-----|------|-----|-----|-----|--|--|--|--|
| 5   |     |   |      | 230 | 2.6 | ✓    | 9    |  | 455 | 3.75 | 3.2 | 680 | 3.0 |  |  |  |  |
| 10  |     |   |      | 235 | 2.5 |      |      |  | 460 | 3.65 | 3.1 | 685 | 3.5 |  |  |  |  |
| 15  |     |   |      | 240 | 2.6 | ✓    | 8    |  | 465 | 3.55 | 2.7 | 690 | 4.9 |  |  |  |  |
| 20  |     |   |      | 245 | 2.1 |      |      |  | 470 | 3.45 | 2.7 | 695 | 5.1 |  |  |  |  |
| 25  |     |   |      | 250 | 2.0 |      |      |  | 475 | 3.35 | 3.0 | 700 | 6.1 |  |  |  |  |
| 30  |     |   |      | 255 | 2.0 |      |      |  | 480 | 3.25 | 2.7 | 705 | 6.2 |  |  |  |  |
| 35  |     |   |      | 260 | 1.7 |      |      |  | 485 | 2.90 | 2.8 | 710 | 5.3 |  |  |  |  |
| 40  |     |   |      | 265 | 1.7 |      |      |  | 490 | 2.40 | 2.8 | 715 | 5.6 |  |  |  |  |
| 45  |     |   |      | 270 | 1.5 |      |      |  | 495 | 2.30 | 3.0 | 720 | 5.4 |  |  |  |  |
| 50  |     |   |      | 275 | 1.1 |      |      |  | 500 | 2.20 | 2.7 | 725 | 5.6 |  |  |  |  |
| 55  |     |   |      | 280 | 1.1 |      |      |  | 505 | 1.70 | 2.6 | 730 | 5.3 |  |  |  |  |
| 60  |     |   |      | 285 | 2.2 |      |      |  | 510 | 1.45 | 2.6 | 735 | 5.5 |  |  |  |  |
| 65  |     |   |      | 290 | 2.7 | -    | 7    |  | 515 |      |     | 740 |     |  |  |  |  |
| 70  |     |   |      | 295 | 2.2 |      |      |  | 520 |      |     | 745 |     |  |  |  |  |
| 75  |     |   |      | 300 | 1.6 |      |      |  | 525 |      |     | 750 |     |  |  |  |  |
| 80  |     |   |      | 305 | 1.5 |      |      |  | 530 |      |     | 755 |     |  |  |  |  |
| 85  |     |   |      | 310 | 1.2 |      |      |  | 535 |      |     | 760 |     |  |  |  |  |
| 90  |     |   |      | 315 | 1.8 |      |      |  | 540 |      |     | 765 |     |  |  |  |  |
| 95  |     |   |      | 320 | 2.4 |      |      |  | 545 |      |     | 770 |     |  |  |  |  |
| 100 |     |   |      | 325 | 2.3 | ✓    | 5    |  | 550 |      |     | 775 |     |  |  |  |  |
| 105 |     |   |      | 330 | 2.5 |      |      |  | 555 |      |     | 780 |     |  |  |  |  |
| 110 | ✓   | 7 |      | 335 | 2.5 | ✓    | 5    |  | 560 |      |     | 785 |     |  |  |  |  |
| 115 | 1.4 |   |      | 340 | 2.4 |      |      |  | 565 |      |     | 790 |     |  |  |  |  |
| 120 | 2.8 |   |      | 345 | 2.2 | ✓    | 4    |  | 570 |      |     | 795 |     |  |  |  |  |
| 125 | 2.4 |   |      | 350 | 2.2 |      |      |  | 575 |      |     | 800 |     |  |  |  |  |
| 130 | 1.3 |   |      | 355 | 2.4 | ✓    | 3    |  | 580 |      |     | 805 |     |  |  |  |  |
| 135 | 1.9 |   |      | 360 | 2.4 |      |      |  | 585 |      |     | 810 |     |  |  |  |  |
| 140 | 2.0 |   |      | 365 | 2.5 | ✓    | 2    |  | 590 |      |     | 815 |     |  |  |  |  |
| 145 | 2.5 | ✓ | (12) | 370 | 2.4 |      |      |  | 595 |      |     | 820 |     |  |  |  |  |
| 150 | 2.7 |   |      | 375 | 2.5 | ✓    | (10) |  | 600 |      |     | 825 |     |  |  |  |  |
| 155 | 1.7 |   |      | 380 | 2.7 |      |      |  | 605 |      |     | 830 |     |  |  |  |  |
| 160 | 1.5 |   |      | 385 | 2.5 |      |      |  | 610 |      |     | 835 |     |  |  |  |  |
| 165 | 2.0 |   |      | 390 | 7.0 | 39.2 |      |  | 615 |      |     | 840 |     |  |  |  |  |
| 170 | 2.4 | ✓ | (11) | 395 |     |      |      |  | 620 |      |     | 845 |     |  |  |  |  |
| 175 | 2.4 |   |      | 400 |     |      |      |  | 625 |      |     | 850 |     |  |  |  |  |
| 180 | 2.2 |   |      | 405 |     |      |      |  | 630 |      |     | 855 |     |  |  |  |  |
| 185 | 1.8 |   |      | 410 |     |      |      |  | 635 |      |     | 860 |     |  |  |  |  |
| 190 | .8  |   |      | 415 |     |      |      |  | 640 |      |     | 865 |     |  |  |  |  |
| 195 | .3  |   |      | 420 |     |      |      |  | 645 |      |     | 870 |     |  |  |  |  |
| 200 | .3  |   |      | 425 |     |      |      |  | 650 |      |     | 875 |     |  |  |  |  |
| 205 | .4  |   |      | 430 |     |      |      |  | 655 |      |     | 880 |     |  |  |  |  |
| 210 | .5  |   |      | 435 |     |      |      |  | 660 |      |     | 885 |     |  |  |  |  |
| 215 | 1.3 |   |      | 440 |     |      |      |  | 665 |      |     | 890 |     |  |  |  |  |
| 220 | 2.4 | ✓ | 10   | 445 |     |      |      |  | 670 |      |     | 895 |     |  |  |  |  |
| 225 | 2.5 |   |      | 450 |     |      |      |  | 675 |      |     | 900 |     |  |  |  |  |



1813 W

## API WATER ANALYSIS REPORT FORM

|                                                          |                     |                                  |                                                  |
|----------------------------------------------------------|---------------------|----------------------------------|--------------------------------------------------|
| Company <u>MERIDIAN OIL COMPANY</u>                      |                     | Sample No. <u>6</u>              | Date Sampled <u>8-14-87</u>                      |
| Field <u>Huerfano</u>                                    | Legal Description   |                                  | County or Parish <u>San Juan</u> State <u>NM</u> |
| Lease or Unit <u>Ballard</u>                             | Well <u>Ballard</u> | 13E                              | Depth <u>100</u> Formation Water, B/D            |
| Type of Water (Produced, Supply, etc.) <u>ground bed</u> |                     | Sampling Point <u>Ground bed</u> | Sampled By <u>R. L.</u>                          |

## DISSOLVED SOLIDS

## CATIONS

|                    | mg/l | me/l |
|--------------------|------|------|
| Sodium, Na (calc.) | 310  | 13.5 |
| Calcium, Ca        | 16.  | .8   |
| Magnesium, Mg      | 0    | 0    |
| Barium, Ba         |      |      |
|                    |      |      |
|                    |      |      |

## OTHER PROPERTIES

|                                        |                |
|----------------------------------------|----------------|
| pH                                     | 8.86           |
| Specific Gravity, 60/60 F.             |                |
| Resistivity (ohm-meters) <u>71°</u> F. | 6.60           |
|                                        |                |
| Conductivity                           | 1500 $\mu$ mho |

Total Dissolved Solids (calc.)

1000

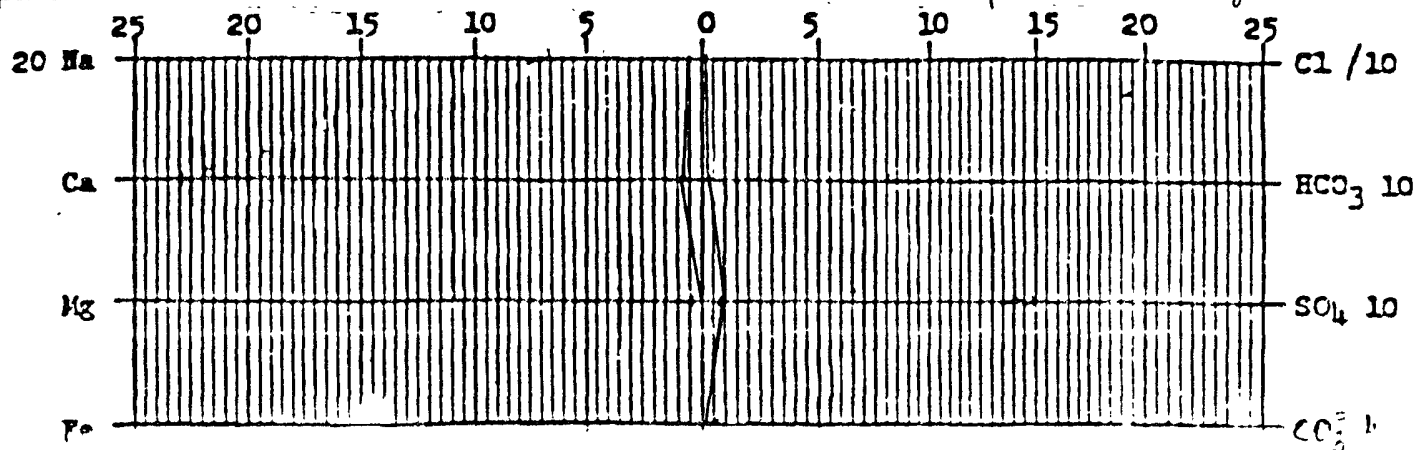
## ANIONS

|                               |      |     |
|-------------------------------|------|-----|
| Chloride, Cl                  | 128  | 3.6 |
| Sulfate, SO <sub>4</sub>      | 376  | 7.8 |
| Carbonate, CO <sub>3</sub>    | 10   | .3  |
| Bicarbonate, HCO <sub>3</sub> | 160. | 2.6 |
| Hydroxide, OH                 | 0    | 0   |

Iron, Fe (total)  
Sulfide, as H<sub>2</sub>S0  
0

## REMARKS &amp; RECOMMENDATIONS:

Sample diluted 1:1 to be filterable



1813 W

P.O. BOX 1359 - PHONE 334-6141  
AZTEC, NEW MEXICO 87410

COMPANY Meridian DAILY DRILLING REPORT 8-14 1987

|            |              |          |           |        |
|------------|--------------|----------|-----------|--------|
| WELL NAME: | WELL NUMBER: | SECTION: | TOWNSHIP: | RANGE: |
| Ballard    | 13 E         | 14       | 26 N      | 9 W    |

|                                    |                                |
|------------------------------------|--------------------------------|
| WATER AT: <i>water sample</i>      | HOLE MADE: <i>6 3/4 400 ft</i> |
| <i>100 ft, 200, 270, at 100 ft</i> |                                |
| DESCRIPTION OF FORMATION           |                                |

[illegible]

REMARKS:

REMARKS:  
water standing at about 150 ft. when pulled  
out of the hole  
J. R. A. Burn

## Driller

## Tool Dresser