

3930

30-045-26239

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 N Sec. 18 Twp 26 Rng 9Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #180E  
cps 1848wElevation 6543' Completion Date 8/28/87 Total Depth 480' Land Type\* N/ACasing, Sizes, Types & Depths N/AIf Casing is cemented, show amounts & types used N/AIf Cement or Bentonite Plugs have been placed, show depths & amounts used  
N/A

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

Fresh, Clear, Salty, Sulphur, Etc. 160' SAMPLE TAKENDepths gas encountered: N/AType & amount of coke breeze used: N/ADepths anodes placed: 400', 355', 345', 295', 285', 260', 250', 240', 220', 220'Depths vent pipes placed: 460'Vent pipe perforations: 300'Remarks: (gb #1**RECEIVED**  
MAY 31 1991  
OIL CON. DIV.  
DIST. 3

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  
9-1-87

Drilling Log (Attach Hereto) ☐

9537201

Completion Date 8/28/87

|                                         |  |                          |  |                       |  |                       |  |                                                                       |  |
|-----------------------------------------|--|--------------------------|--|-----------------------|--|-----------------------|--|-----------------------------------------------------------------------|--|
| CPS #                                   |  | Well Name Line or Plant: |  | Work Order #          |  | State:                |  | Ins. Union Check                                                      |  |
| 1848 W                                  |  | HyerfA40 UNIT #180 E     |  |                       |  | .86V N                |  | <input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad |  |
| Location<br>SW 18-26-9                  |  | Anode Size:<br>2' X 60"  |  | Anode Type:<br>DURION |  | Size Bit:<br>6 3/4    |  |                                                                       |  |
| Depth Drilled<br>480                    |  | Depth Logged<br>460      |  | Drilling Rig Time     |  | Total Lbs. Coke Used  |  | Lost Circulation Mat'l Used                                           |  |
| Anode Depth<br>#1 400                   |  | #2 355                   |  | #3 345                |  | #4 295                |  | #5 285                                                                |  |
| #6 260                                  |  | #7 250                   |  | #8 240                |  | #9 230                |  | #10 220                                                               |  |
| Anode Output (Amps)<br>#1 4.2           |  | #2 5.0                   |  | #3 5.2                |  | #4 4.5                |  | #5 4.9                                                                |  |
| #6 4.4                                  |  | #7 4.5                   |  | #8 4.8                |  | #9 4.7                |  | #10 4.8                                                               |  |
| Anode Depth<br>#11                      |  | #12                      |  | #13                   |  | #14                   |  | #15                                                                   |  |
| #16                                     |  | #17                      |  | #18                   |  | #19                   |  | #20                                                                   |  |
| Anode Output (Amps)<br>#11              |  | #12                      |  | #13                   |  | #14                   |  | #15                                                                   |  |
| #16                                     |  | #17                      |  | #18                   |  | #19                   |  | #20                                                                   |  |
| Total Circuit Resistance<br>Volts 11.89 |  | Amps 19.3                |  | Ohms .62              |  | No. 8 C.P. Cable Used |  | No. 2 C.P. Cable Used                                                 |  |

Remarks: INSTALLED 460' of 1" P.V.C. VENT PIPE, PERFORATED  
300' WATER AT 160'

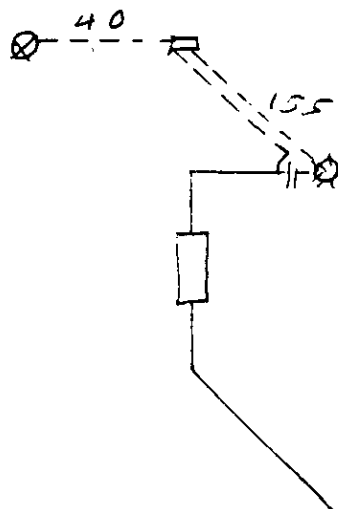
(TOOK WATER SAMPLE)

GMB. Bed 4300.00

|                  |       |           |
|------------------|-------|-----------|
| Rectifier Size:  | 40 V  | 16 A P.P. |
| Add'l Depth      |       |           |
| Depth Credit:    | - 40' | 160.00    |
| Extra Cable:     | 30    | 7.50      |
| Ditch & 1 Cable: | 40    | 15.60     |
| Ditch & 2 Cable: | 155   | 80.60     |
| 25' Meter Pole:  |       |           |
| 20' Meter Pole:  |       |           |
| 10' Stub Pole:   | 1     | 150.00    |
| Junction Box:    | 1     | 40.00     |
|                  |       | 4433.70   |
| TAX              |       | 221.69    |
| TOTAL            |       | 4655.39   |

All Construction Completed

*JE Stalls*  
(Signature)



6543

# MERIDIAN OIL

P. O. BOX 4289-Phone 327-0251

FARMINGTON, NM

Date 8/28/87

## DEEP WELL GROUND BED LOG

Company Meridian Oil

Well No. HURP 240 #180 E Location SW 18-26-9

Volts Applied 11.99 Amperes 19.3

|     |         |     |         |     |            |     |                |
|-----|---------|-----|---------|-----|------------|-----|----------------|
| 5   |         | 230 | 2.1 - ⑥ | 455 |            | 680 |                |
| 10  |         | 235 | 1.9     | 460 | T.D.       | 685 |                |
| 15  |         | 240 | 1.9 - ⑧ | 465 |            | 690 |                |
| 20  |         | 245 | 2.2     | 470 |            | 695 |                |
| 25  |         | 250 | 2.1 - ⑥ | 475 |            | 700 |                |
| 30  |         | 255 | 2.0     | 480 | Drilled 70 | 705 |                |
| 35  |         | 260 | 1.9 - ⑥ | 485 |            | 710 |                |
| 40  |         | 265 | 1.5     | 490 |            | 715 |                |
| 45  |         | 270 | .8      | 495 |            | 720 |                |
| 50  |         | 275 | .9      | 500 |            | 725 | 1-400-2.4 4.2  |
| 55  |         | 280 | .9      | 505 |            | 730 | 2-355-2.8 5.0  |
| 60  |         | 285 | 1.9 - ⑤ | 510 |            | 735 | 3-345-2.9 5.2  |
| 65  |         | 290 | 2.1     | 515 |            | 740 | 4-295-2.7 4.5  |
| 70  |         | 295 | 2.1 - ④ | 520 |            | 745 | 5-285-2.9 4.9  |
| 75  |         | 300 | 1.4     | 525 |            | 750 | 6-260-2.6 4.4  |
| 80  |         | 305 | .9      | 530 |            | 755 | 7-250-2.9 4.5  |
| 85  |         | 310 | 1.0     | 535 |            | 760 | 8-240-2.6 4.8  |
| 90  |         | 315 | .9      | 540 |            | 765 | 9-230-2.8 4.7  |
| 95  |         | 320 | .9      | 545 |            | 770 | 10-220-3.0 4.2 |
| 100 |         | 325 | 1.0     | 550 |            | 775 |                |
| 105 |         | 330 | 1.0     | 555 |            | 780 |                |
| 110 |         | 335 | 1.2     | 560 |            | 785 |                |
| 115 |         | 340 | 1.8     | 565 |            | 790 |                |
| 120 |         | 345 | 2.1 - ③ | 570 |            | 795 |                |
| 125 |         | 350 | 2.0     | 575 |            | 800 |                |
| 130 |         | 355 | 2.0 - ② | 580 |            | 805 |                |
| 135 |         | 360 | 1.4     | 585 |            | 810 |                |
| 140 |         | 365 | .9      | 590 |            | 815 |                |
| 145 |         | 370 | 1.0     | 595 |            | 820 |                |
| 150 |         | 375 | 1.0     | 600 |            | 825 |                |
| 155 |         | 380 | .8      | 605 |            | 830 |                |
| 160 | WATER   | 385 | .7      | 610 |            | 835 |                |
| 165 | 2.0     | 390 | .8      | 615 |            | 840 |                |
| 170 | 1.7     | 395 | 1.7     | 620 |            | 845 |                |
| 175 | 1.4     | 400 | 1.9 - ① | 625 |            | 850 |                |
| 180 | 1.5     | 405 | 1.5     | 630 |            | 855 |                |
| 185 | 1.6     | 410 | 1.0     | 635 |            | 860 |                |
| 190 | 1.4     | 415 | .9      | 640 |            | 865 |                |
| 195 | 1.4     | 420 | .8      | 645 |            | 870 |                |
| 200 | 1.2     | 425 | .8      | 650 |            | 875 |                |
| 205 | 1.6     | 430 | 1.2     | 655 |            | 880 |                |
| 210 | 1.6     | 435 | .9      | 660 |            | 885 |                |
| 215 | 2.0     | 440 | .7      | 665 |            | 890 |                |
| 220 | 2.1 - ⑩ | 445 | .6      | 670 |            | 895 |                |
| 225 | 2.0     | 450 | .6      | 675 |            | 900 |                |



QPS 1848cc

# API WATER ANALYSIS REPORT FORM

|                                        |                  |                   |            |                  |              |            |    |
|----------------------------------------|------------------|-------------------|------------|------------------|--------------|------------|----|
| Company                                | Meridian Oil Co. |                   | Sample No. | 3                | Date Sampled | 8-28-87    |    |
| Field                                  | Ballard          | Legal Description | # 180 E    | County or Parish | San Juan     | State      | NM |
| Lease or Unit                          | Well             | Depth             | 180'       | Formation        | 180'         | Water, B/D |    |
| Type of Water (Produced, Supply, etc.) | Sampling Point   | 180'              | Sampled By | JF               |              |            |    |

## DISSOLVED SOLIDS

| CATIONS            | mg/l | me/l |
|--------------------|------|------|
| Sodium, Na (calc.) | 336  | 14.1 |
| Calcium, Ca        | 7    | .4   |
| Magnesium, Mg      | 1    | .1   |
| Barium, Ba         |      |      |

## OTHER PROPERTIES

|                            |                |
|----------------------------|----------------|
| pH                         | 9.08           |
| Specific Gravity, 60/60 F. | 1.0244         |
| Resistivity (ohm-meters)   | 725 F.         |
| Conductivity               | 1200 $\mu$ mho |

Total Dissolved Solids (calc.) 1120

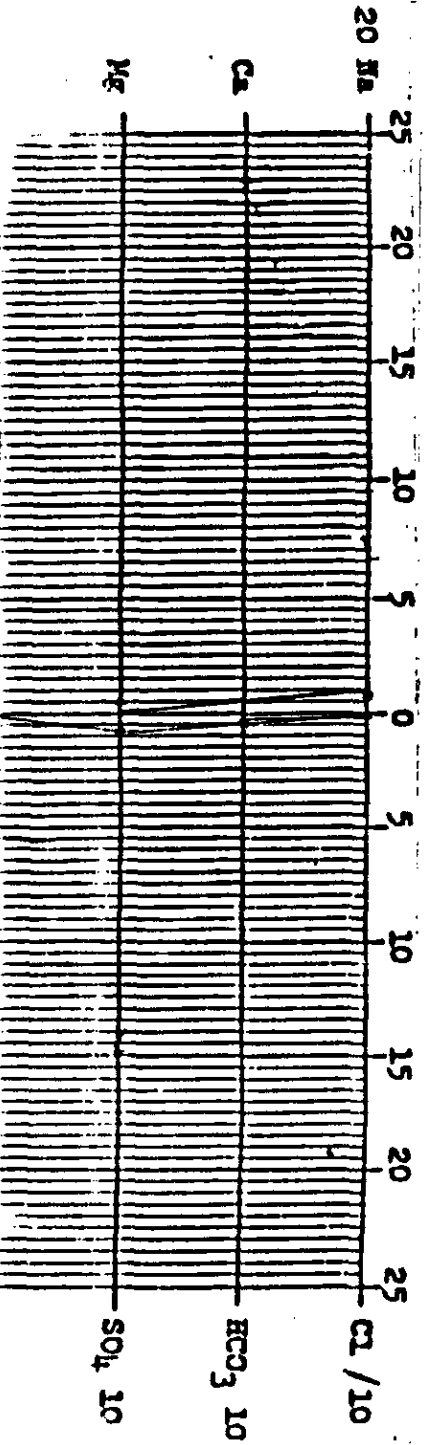
Iron, Fe (total) 0

Sulfide, as H<sub>2</sub>S 0

## ANIONS

|                               |      |     |
|-------------------------------|------|-----|
| Chloride, Cl                  | 14.2 | .4  |
| Sulfate, SO <sub>4</sub>      | 413  | 8.4 |
| Carbonate, CO <sub>3</sub>    | 23.3 | .8  |
| Bicarbonate, HCO <sub>3</sub> | 321  | 5.3 |

## REMARKS & RECOMMENDATIONS:



# BURGE CORROSION SYSTEMS, INC.

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

CPS 1848W

COMPANY Meridian DAILY DRILLING REPORT 8-28 1987

|                               |                              |                          |                                          |                      |
|-------------------------------|------------------------------|--------------------------|------------------------------------------|----------------------|
| WELL NAME:<br><u>Huerfano</u> | WELL NUMBER:<br><u>180 E</u> | SECTION:<br><u>1N 18</u> | TOWNSHIP:<br><u>26 N</u>                 | RANGE:<br><u>9 W</u> |
| WATER AT:<br><u>160 ft</u>    |                              | FEET:                    | HOLE MADE:<br><u>6 3/4</u> <u>480 ft</u> |                      |

| DESCRIPTION OF FORMATION |     |                      |        |
|--------------------------|-----|----------------------|--------|
| FROM                     | TO  | FORMATION IS         | COLOR  |
| 0                        | 10  | Sand & clay          | tan    |
| 10                       | 40  | Sand - sandstone     | tan    |
| 40                       | 80  | Sandy shale & clay   | Grey   |
| 80                       | 90  | Sandstone            | Grey   |
| 90                       | 150 | Shale                | Purple |
| 150                      | 160 | Water sand           | Grey   |
| 160                      | 180 | Shale                | Grey   |
| 180                      | 220 | Sandstone water sand | Grey   |
| 220                      | 270 | Shale                | Purple |
| 270                      | 300 | Sandstone            | Grey   |
| 300                      | 330 | Shale                | Grey   |
| 330                      | 360 | Sandstone            | Grey   |
| 360                      | 380 | Shale                | Grey   |
| 380                      | 400 | Water sand           | Grey   |
| 400                      | 440 | Shale                | Grey   |
| 440                      | 480 | Water sand           | Grey   |
|                          |     |                      |        |
|                          |     |                      |        |
|                          |     |                      |        |

REMARKS: water sample at 160 ft.  
Tried to drill deeper to get more shale but too much  
bottom sand falling in hole.  
Sent Sam

Driller

Tool Dresser