

#2 = 30-045-07424

#3 = 30-045-20919

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS  
NORTHWESTERN NEW MEXICO

Operator MERIDIAN OIL CO. Location: Unit K Sec. 14 Twp 28 Rng 8

Name of Well/Wells or Pipeline Serviced Hardie D # 2 & D # 3

cps 506w

Elevation 6347 Completion Date 8/23/90 Total Depth 520 Land Type N/A

Casing Strings, Sizes, Types & Depths 20 ft. 8" PVC

If Casing Strings are 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: Fresh, Clear,  
Salty, Sulphur, Etc. Wet at 250 no water.

RECEIVED

MAY 31 1991

Depths gas encountered: N/A OIL CON. DIV.

Ground bed depth with type & amount of coke breeze used: DIST. 3

500 ft. with 4500 lbs of Asbury Petroleum Coke.

Depths anodes placed: 490, 480, 470, 460, 450, 425, 335, 325, 315, 305

Depths vent pipes placed: 500 ft. 1" PVC

Vent pipe perforations:

Remarks: qb #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

Drilling Log (Attach Hereto) ☐Completion Date 8-23-90

|                          |                           |                   |                       |                                                                       |
|--------------------------|---------------------------|-------------------|-----------------------|-----------------------------------------------------------------------|
| CPS #                    | Well Name, Line or Plant: | Work Order #      | Static:               | Ins. Union Check                                                      |
| 506-W                    | HARDIE D#2<br>HARDIE D#3  |                   |                       | <input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad |
| Location:                | Anode Size:               | Anode Type:       | Size Bit:             |                                                                       |
| K-14-28-8                | 2"X6"                     | ANOTEC            | 6 3/4                 |                                                                       |
| Depth Drilled            | Depth Logged              | Drilling Rig Time | Total Lbs. Coke Used  | Lost Circulation Mat'l Used                                           |
| 520'                     | 500'                      |                   | 4500 #                |                                                                       |
| Anode Depth              |                           |                   |                       |                                                                       |
| #1 490                   | #2 480                    | #3 470            | #4 460                | #5 450                                                                |
| #6 425                   | #7 335                    | #8 325            | #9 315                | #10 305                                                               |
| Anode Output (Amps)      |                           |                   |                       |                                                                       |
| #1 2.2                   | #2 2.5                    | #3 2.6            | #4 2.6                | #5 2.1                                                                |
| #6 2.1                   | #7 3.6                    | #8 4.5            | #9 4.1                | #10 4.3                                                               |
| Anode Depth              |                           |                   |                       |                                                                       |
| #11                      | #12                       | #13               | #14                   | #15                                                                   |
| #16                      | #17                       | #18               | #19                   | #20                                                                   |
| Anode Output (Amps)      |                           |                   |                       |                                                                       |
| #11                      | #12                       | #13               | #14                   | #15                                                                   |
| #16                      | #17                       | #18               | #19                   | #20                                                                   |
| Total Circuit Resistance |                           |                   | No. 8 C.P. Cable Used | No. 2 C.P. Cable Used                                                 |
| Volts 12.3               | Amps 11.4                 | Ohms 1.1          |                       |                                                                       |

Remarks: SET 20' of 8" PVC CASING. DRILLER SAID WET AT 250', WAITED 30 MINUTES, DID NOT BLOW WATER. STARTED INFECTING AT 250'. DID NOT GET WATER SAMPLE. RAN 500' of 1" PVC VENT PIPE. LEFT COKE BREEZE AT APPROXIMATELY 260'.

Rectifier Size: \_\_\_\_\_ V \_\_\_\_\_ A  
 Addn'l Depth: \_\_\_\_\_  
 Depth Credit: \_\_\_\_\_  
 Extra Cable: \_\_\_\_\_ 10'  
 Ditch & 1 Cable: \_\_\_\_\_ 42'  
 25' Meter Pole: \_\_\_\_\_  
 20' Meter Pole: \_\_\_\_\_  
 10' Stub Pole: \_\_\_\_\_  
 Junction Box: \_\_\_\_\_ 1

All Construction Completed

*Willis Knight Jr.*  
 (Signature)

GROUND BED LAYOUT SKETCH

✗ HARDIE #2 D

✗ HARDIE D#3

GB, #3  
 42' □ RECTIFIER

N

## CONSTRUCTION LOGGING READINGS

MERIDIAN O.I.

CPS #: 506-W WELL NAME: Harbrie #2-2+D3 LOCATION: K-4288 DATE: 8-23-98

TOTAL VOLTS: 12.3 TOTAL AMPS: 11.4 OHMS RESISTANCE: 1.07

|      |           |           |      |           |           |      |           |           |      |           |           | ANODE READINGS |       |         |           |
|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|----------------|-------|---------|-----------|
| DEEP | LOG ANODE | ANODE NO. | DEEP | LOG ANODE | ANODE NO. | DEEP | LOG ANODE | ANODE NO. | DEEP | LOG ANODE | ANODE NO. | NO.            | DEPTH | NO COKE | WITH COKE |
| 5    |           |           | 185  | .30       |           | 365  | .40       |           | 545  |           |           | 1              | 490   | 1.1     | 2.2       |
| 10   |           |           | 190  | .30       |           | 370  | .40       |           | 550  |           |           | 2              | 480   | 1.1     | 2.5       |
| 15   |           |           | 195  | .20       |           | 375  | .40       |           | 555  |           |           | 3              | 470   | 1.1     | 2.6       |
| 20   |           |           | 200  | .10       |           | 380  | .50       |           | 560  |           |           | 4              | 460   | 1.1     | 2.6       |
| 25   |           |           | 205  | .40       |           | 385  | .50       |           | 565  |           |           | 5              | 450   | 1.1     | 2.1       |
| 30   |           |           | 210  | .10       |           | 390  | .50       |           | 570  |           |           | 6              | 425   | 1.1     | 2.1       |
| 35   |           |           | 215  | .10       |           | 395  | .50       |           | 575  |           |           | 7              | 335   | 1.5     | 3.6       |
| 40   |           |           | 220  | .10       |           | 400  | .50       |           | 580  |           |           | 8              | 325   | 2.1     | 4.5       |
| 45   |           |           | 225  | .20       |           | 405  | .50       |           | 585  |           |           | 9              | 315   | 1.9     | 4.1       |
| 50   |           |           | 230  | .40       |           | 410  | .40       |           | 590  |           |           | 10             | 305   | 1.9     | 4.3       |
| 55   |           |           | 235  | 1.7       |           | 415  | .30       |           | 595  |           |           |                |       |         |           |
| 60   |           |           | 240  | .70       |           | 420  | .40       |           | 600  |           |           |                |       |         |           |
| 65   |           |           | 245  | .30       |           | 425  | 1.0       | 6         | 605  |           |           |                |       |         |           |
| 70   |           |           | 250  | .40       |           | 430  | .90       |           | 610  |           |           |                |       |         |           |
| 75   |           |           | 255  | .50       |           | 435  | .80       |           | 615  |           |           |                |       |         |           |
| 80   |           |           | 260  | .30       |           | 440  | .90       |           | 620  |           |           |                |       |         |           |
| 85   |           |           | 265  | .40       |           | 445  | .90       |           | 625  |           |           |                |       |         |           |
| 90   |           |           | 270  | .40       |           | 450  | 1.0       | 5         | 630  |           |           |                |       |         |           |
| 95   |           |           | 275  | .80       |           | 455  | 1.0       |           | 635  |           |           |                |       |         |           |
| 100  |           |           | 280  | 1.0       |           | 460  | 1.0       | 4         | 640  |           |           |                |       |         |           |
| 105  |           |           | 285  | .50       |           | 465  | .90       |           | 645  |           |           |                |       |         |           |
| 110  |           |           | 290  | .50       |           | 470  | 1.0       | 3         | 650  |           |           |                |       |         |           |
| 115  |           |           | 295  | .60       |           | 475  | 1.1       |           | 655  |           |           |                |       |         |           |
| 120  |           |           | 300  | 1.0       |           | 480  | .90       | 2         | 660  |           |           |                |       |         |           |
| 125  |           |           | 305  | 1.5       | 10        | 485  | .90       |           | 665  |           |           |                |       |         |           |
| 130  |           |           | 310  | 1.5       |           | 490  | 1.0       | 1         | 670  |           |           |                |       |         |           |
| 135  |           |           | 315  | 1.7       | 9         | 495  | .90       |           | 675  |           |           |                |       |         |           |
| 140  |           |           | 320  | 1.7       |           | 500  | .90       | 10        | 680  |           |           |                |       |         |           |
| 145  |           |           | 325  | 1.9       | 8         | 505  |           |           | 685  |           |           |                |       |         |           |
| 150  |           |           | 330  | 1.8       |           | 510  |           |           | 690  |           |           |                |       |         |           |
| 155  |           |           | 335  | 1.4       | 7         | 515  |           |           | 695  |           |           |                |       |         |           |
| 160  |           |           | 340  | .90       |           | 520  |           |           | 700  |           |           |                |       |         |           |
| 165  |           |           | 345  | .60       |           | 525  |           |           | 705  |           |           |                |       |         |           |
| 170  | .70       |           | 350  | .50       |           | 530  |           |           | 710  |           |           |                |       |         |           |
| 175  | .40       |           | 355  | .40       |           | 535  |           |           | 715  |           |           |                |       |         |           |
| 180  | .30       |           | 360  | .40       |           | 540  |           |           | 720  |           |           |                |       |         |           |

REMARKS: Set 20' of 8" PVC casing. Driller said wet at 250'. waited 30 minutes, did not blow water. Started injecting at 250' Ran 500' of 1" PVC Vent Pipe.

# BURGE CORROSION SYSTEMS, INC.

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

COMPANY MERIDIAN OIL DAILY DRILLING REPORT 8-22 1990

|                               |                          |                         |                        |                     |
|-------------------------------|--------------------------|-------------------------|------------------------|---------------------|
| WELL NAME:<br><u>HARDIE D</u> | WELL NUMBER:<br><u>2</u> | SECTION:<br><u>K 14</u> | TOWNSHIP:<br><u>28</u> | RANGE:<br><u>08</u> |
|-------------------------------|--------------------------|-------------------------|------------------------|---------------------|

WATER AT:

FEET:

HOLE MADE:

## DESCRIPTION OF FORMATION

| FROM | TO   | FORMATION IS                   | COLOR |
|------|------|--------------------------------|-------|
| 0    | 18'  | 8" PVC CASING (CLAY-SANDSTONE) |       |
| 18'  | 40'  | shale                          |       |
| 40'  | 60'  | sandstone                      |       |
| 60'  | 80'  | shale - SANDSTONE              |       |
| 80'  | 150' | sand - SANDSTONE               |       |
| 150' | 170' | shale                          |       |
| 170' | 230' | sandstone - sand (BLUE)        |       |
| 230' | 240' | went to injection - shale      |       |
| 240' | 250' | sand                           |       |
| 250' | 310' | shale - sand mix               |       |
| 310' | 340' | shale                          |       |
| 340' | 370' | shale - sand mix               |       |
| 370' | 410' | shale sand mix                 |       |
| 410' | 520' | shale - Bentonite - sand mix   |       |
|      |      |                                |       |
|      |      |                                |       |
|      |      |                                |       |
|      |      |                                |       |
|      |      |                                |       |
|      |      |                                |       |
|      |      |                                |       |

REMARKS: Set and cemented 20' 8" PVC casing. Went to  
injection at 230'. Drilled to 520'

Driller

Brian E. Burge

Tool Dresser