

4927  
30-045-10601

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

Operator MERIDIAN OIL Location: Unit NE Sec. 22 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced ATLANTIC #5

CDS 422W

Elevation 6299' Completion Date 5/19/72 Total Depth 500' 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. 240' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: 8400 lbs.

Depths anodes placed: 470', 460', 430', 420', 410', 340', 325', 315', 305', 290'

Depths vent pipes placed: N/A

Vent pipe perforations: 300'

Remarks: qb #2 VENT HOSE MAKING WATER. HOLE MAKING GAS.

**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

*Logg*

Drilling Log (Attach Hereto). ☐

Completion Date 5-19-72

|                                       |                         |                                     |                             |                                          |                |
|---------------------------------------|-------------------------|-------------------------------------|-----------------------------|------------------------------------------|----------------|
| Well Name<br><b>Atlantia #5</b>       |                         | Location<br><b>NE 22-31-10</b>      |                             | CPS No.<br><b>422W</b>                   |                |
| Type & Size Bit Used<br><b>6 3/4"</b> |                         |                                     |                             | Work Order No.<br><b>184-52314-50-20</b> |                |
| Anode Hole Depth<br><b>500</b>        | Total Drilling Rig Time | Total Lbs. Coke Used<br><b>8400</b> | Lost Circulation Mat'l Used | No. Sacks Mud Used                       |                |
| Anode Depth                           |                         |                                     |                             |                                          |                |
| # 1 <b>470</b>                        | # 2 <b>460</b>          | # 3 <b>430</b>                      | # 4 <b>420</b>              | # 5 <b>410</b>                           | # 6 <b>340</b> |
| # 7 <b>325</b>                        | # 8 <b>315</b>          | # 9 <b>305</b>                      | # 10 <b>290</b>             |                                          |                |
| Anode Output (Amps)                   |                         |                                     |                             |                                          |                |
| # 1 <b>4.0</b>                        | # 2 <b>4.1</b>          | # 3 <b>4.2</b>                      | # 4 <b>4.0</b>              | # 5 <b>3.8</b>                           | # 6 <b>3.9</b> |
| # 7 <b>4.5</b>                        | # 8 <b>4.2</b>          | # 9 <b>4.5</b>                      | # 10 <b>4.0</b>             |                                          |                |
| 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       |                                          |                |
| Volts <b>11.2</b>                     | Amps <b>16.0</b>        | Ohms <b>0.69</b>                    | No. 2 C.P. Cable Used       |                                          |                |

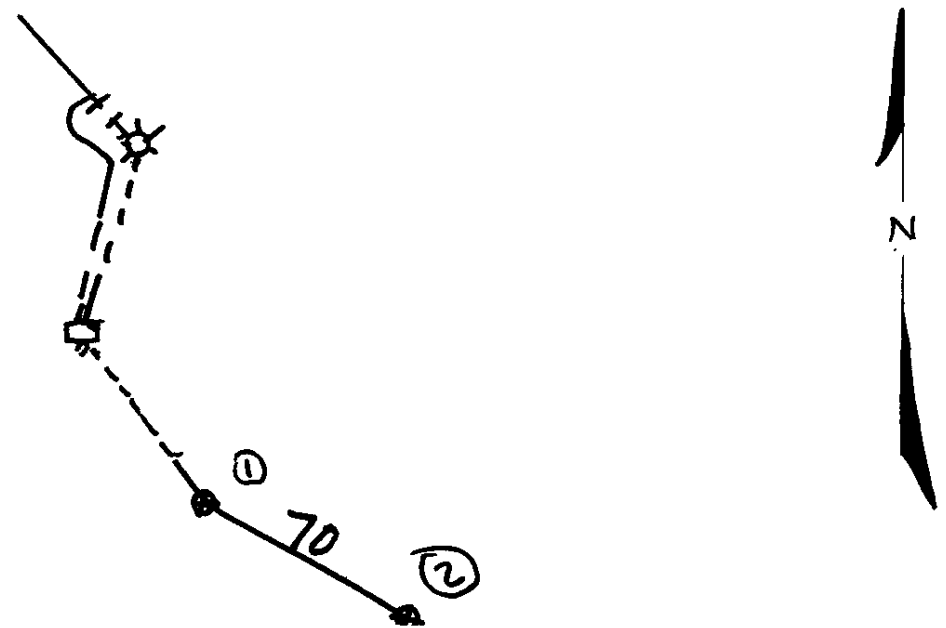
Remarks: Hole Making Gas. Driller said water at 240  
Water level at 930 A.M. Above 185' — Perforated 300 Vent.  
Pump 376 Shovels = Est 63 Bogs Slurry 125 Shovels  
Est 21 Bogs Est. Total 8400 lbs

NOTE - Vent Hose Making water -

All Construction Completed

*Paulch - Dorel*  
(Signature)

GROUND BED LAYOUT SKETCH



DRILLING DEPARTMENT

C.P.S.# 422 w

CONTRACTOR Moffett

| MORNING               |     |                   |        |        |                                  |     |                   |        |        | DAYLIGHT                         |     |                   |        |        |                                  |     |                   |        |        | EVENING                          |  |  |  |  |                                  |  |  |  |  |                                  |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
|-----------------------|-----|-------------------|--------|--------|----------------------------------|-----|-------------------|--------|--------|----------------------------------|-----|-------------------|--------|--------|----------------------------------|-----|-------------------|--------|--------|----------------------------------|--|--|--|--|----------------------------------|--|--|--|--|----------------------------------|--|--|--|--|-----|--|--|--|--|----------------|--|--|--|--|
| Driller <i>Morris</i> |     |                   |        |        | Total Men In Crew                |     |                   |        |        | Driller                          |     |                   |        |        | Total Men In Crew                |     |                   |        |        | Driller                          |  |  |  |  | Total Men In Crew                |  |  |  |  |                                  |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| FROM                  | TO  | FORMATION         | WT-BIT | R.P.M. | FROM                             | TO  | FORMATION         | WT-BIT | R.P.M. | FROM                             | TO  | FORMATION         | WT-BIT | R.P.M. | FROM                             | TO  | FORMATION         | WT-BIT | R.P.M. |                                  |  |  |  |  |                                  |  |  |  |  |                                  |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| 0                     | 6   | <i>brown clay</i> |        |        | 240                              | 300 | <i>sand shale</i> |        |        | 140                              | 400 | <i>sand shale</i> |        |        | 140                              | 400 | <i>sand shale</i> |        |        |                                  |  |  |  |  |                                  |  |  |  |  |                                  |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| 6                     | 140 | <i>Argill</i>     |        |        | 300                              | 360 | <i>shale</i>      |        |        | 140                              | 500 | <i>shale</i>      |        |        |                                  |     |                   |        |        |                                  |  |  |  |  |                                  |  |  |  |  |                                  |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| 140                   | 180 | <i>shale</i>      |        |        | 360                              | 420 | <i>sand</i>       |        |        |                                  |     |                   |        |        |                                  |     |                   |        |        |                                  |  |  |  |  |                                  |  |  |  |  |                                  |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| 180                   | 240 | <i>dry sand</i>   |        |        | 420                              | 440 | <i>shale</i>      |        |        |                                  |     |                   |        |        |                                  |     |                   |        |        |                                  |  |  |  |  |                                  |  |  |  |  |                                  |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| BIT NO.               |     |                   |        |        | NO. DC                           |     |                   |        |        | SIZE                             |     |                   |        |        | LENG.                            |     |                   |        |        | NO. DC                           |  |  |  |  | SIZE                             |  |  |  |  | LENG.                            |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| SERIAL NO.            |     |                   |        |        | NO. DC                           |     |                   |        |        | SIZE                             |     |                   |        |        | LENG.                            |     |                   |        |        | NO. DC                           |  |  |  |  | SIZE                             |  |  |  |  | LENG.                            |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| SIZE                  |     |                   |        |        | STANDS                           |     |                   |        |        | SINGLES                          |     |                   |        |        | STANDS                           |     |                   |        |        | SINGLES                          |  |  |  |  | STANDS                           |  |  |  |  | SINGLES                          |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| TYPE                  |     |                   |        |        | DOWN ON KELLY                    |     |                   |        |        | DOWN ON KELLY                    |     |                   |        |        | DOWN ON KELLY                    |     |                   |        |        | DOWN ON KELLY                    |  |  |  |  | DOWN ON KELLY                    |  |  |  |  | DOWN ON KELLY                    |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| MAKE                  |     |                   |        |        | TOTAL DEPTH                      |     |                   |        |        | TOTAL DEPTH                      |     |                   |        |        | TOTAL DEPTH                      |     |                   |        |        | TOTAL DEPTH                      |  |  |  |  | TOTAL DEPTH                      |  |  |  |  | TOTAL DEPTH                      |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| MUD RECORD            |     |                   |        |        | MUD, ADDITIVES USED AND RECEIVED |     |                   |        |        | MUD, ADDITIVES USED AND RECEIVED |     |                   |        |        | MUD, ADDITIVES USED AND RECEIVED |     |                   |        |        | MUD, ADDITIVES USED AND RECEIVED |  |  |  |  | MUD, ADDITIVES USED AND RECEIVED |  |  |  |  | MUD, ADDITIVES USED AND RECEIVED |  |  |  |  |     |  |  |  |  |                |  |  |  |  |
| Time                  |     |                   |        |        | Wt.                              |     |                   |        |        | Vis.                             |     |                   |        |        | Time                             |     |                   |        |        | Wt.                              |  |  |  |  | Vis.                             |  |  |  |  | Time                             |  |  |  |  | Wt. |  |  |  |  | Vis.           |  |  |  |  |
| FROM                  |     |                   |        |        | TO                               |     |                   |        |        | TIME BREAKDOWN                   |     |                   |        |        | FROM                             |     |                   |        |        | TO                               |  |  |  |  | TIME BREAKDOWN                   |  |  |  |  | FROM                             |  |  |  |  | TO  |  |  |  |  | TIME BREAKDOWN |  |  |  |  |
| REMARKS -             |     |                   |        |        |                                  |     |                   |        |        |                                  |     |                   |        |        | REMARKS -                        |     |                   |        |        |                                  |  |  |  |  |                                  |  |  |  |  | REMARKS -                        |  |  |  |  |     |  |  |  |  |                |  |  |  |  |

SIGNED: Joe Wilczek  
Tool Pusher

422W Atlantic #5 NE 22-31-10 W.O. 52314

|      |      |     |        |                                                                                               |      |           |
|------|------|-----|--------|-----------------------------------------------------------------------------------------------|------|-----------|
| 1 40 |      | 60  | 2.45   | Stop Drill 12:00 Midnite<br>Water level above 185'<br>at 9:30 AM - 5-19-72<br>Perf. 300' Hose |      |           |
|      | 2.4  |     | 2.3    |                                                                                               |      |           |
| 90   | 2.6  | 70  | 2.3    |                                                                                               |      |           |
|      | 2.7  |     | 2.3    |                                                                                               |      |           |
| 200  | 3.25 | 80  | 2.25   | Log                                                                                           | Wtr. | Coke      |
|      | 3.4  |     | 2.65   |                                                                                               |      |           |
| 10   | 3.3  | 90  | 2.60   | 1 4 70                                                                                        | 4.1  | 2.0 4.0 ✓ |
|      | 3.2  |     | 2.9    | 2 4 60                                                                                        | 3.9  | 2.9 4.1 ✓ |
| 80   | 2.1  | 400 | 3.15   | 3 4 30                                                                                        | 4.0  | 3.1 4.2 ✓ |
|      | 1.5  |     | 3.5    | 4 4 20                                                                                        | 3.9  | 2.9 4.0 ✓ |
| 30   | 1.4  | 10  | 3.8    | 5 4 10                                                                                        | 3.8  | 2.8 3.8 ✓ |
|      | 1.4  |     | 3.65   | 6 3 40                                                                                        | 3.5  | 2.9 3.9 ✓ |
| 40   | 1.4  | 20  | 3.9    | 7 3 25                                                                                        | 4.3  | 3.4 4.5 ✓ |
|      | 1.4  |     | 4.0    | 8 3 15                                                                                        | 4.0  | 3.1 4.2 ✓ |
| 50   | 1.3  | 30  | 4.0    | 9 3 05                                                                                        | 4.3  | 3.4 4.5   |
|      | 1.1  |     | 3.4    | 10 2 90                                                                                       | 3.8  | 3.0 4.0   |
| 60   | 1.2  | 40  | 2.7    | 11.2 V 16.0 A 0.69 Ω                                                                          |      |           |
|      | .9   |     | 3.2    |                                                                                               |      |           |
| 70   | .85  | 50  | 3.1    | Pump 376 shovels = est 375<br>shirry                                                          |      |           |
|      | 1.3  |     | 3.5    |                                                                                               |      |           |
| 80   | 1.3  | 60  | 3.9    |                                                                                               |      |           |
|      | 2.65 |     | 3.75   |                                                                                               |      |           |
| 90   | 3.8  | 70  | 4.1    |                                                                                               |      |           |
|      | 4.0  |     | 4.3    |                                                                                               |      |           |
| 300  | 3.9  | 80  | 3      |                                                                                               |      |           |
|      | 4.3  | 82  | Bottom |                                                                                               |      |           |
| 10   | 4.0  | 90  |        |                                                                                               |      |           |
|      | 4.0  |     |        |                                                                                               |      |           |
| 70   | 4.2  | 500 |        |                                                                                               |      |           |
|      | 4.3  |     |        |                                                                                               |      |           |
| 30   | 3.8  |     |        |                                                                                               |      |           |
|      | 3.7  |     |        |                                                                                               |      |           |
| 10   | 3.5  |     |        |                                                                                               |      |           |
|      | 3.2  |     |        |                                                                                               |      |           |
| 10   | 2.5  |     |        |                                                                                               |      |           |
|      | 2.75 |     |        |                                                                                               |      |           |

EL PASO NATURAL GAS COMPANY  
DEEP GROUNDWATER DATA  
FARMINGTON, NEW MEXICO AREA  
LOG FOR ATLANTIC #5

CPS-422-W

| DEPTH<br>FEET | LOGGING<br>CURRENT<br>(AMPS) | BEFORE<br>COKE | AFTER<br>COKE | ANODE<br>NUMBER | DEPTH<br>FEET | LOGGING<br>CURRENT<br>(AMPS) | BEFORE<br>COKE | AFTER<br>COKE | ANODE<br>NUMBER |
|---------------|------------------------------|----------------|---------------|-----------------|---------------|------------------------------|----------------|---------------|-----------------|
| 185'          | 2.4                          |                |               |                 | 365'          | 2.3                          |                |               |                 |
| 190'          | 2.6                          |                |               |                 | 370'          | 2.3                          |                |               |                 |
| 195'          | 2.7                          |                |               |                 | 375'          | 2.3                          |                |               |                 |
| 200'          | 3.25                         |                |               |                 | 380'          | 2.25                         |                |               |                 |
| 205'          | 3.4                          |                |               |                 | 385'          | 2.65                         |                |               |                 |
| 210'          | 3.3                          |                |               |                 | 390'          | 2.60                         |                |               |                 |
| 215'          | 3.2                          |                |               |                 | 395'          | 2.9                          |                |               |                 |
| 220'          | 2.1                          |                |               |                 | 400'          | 3.15                         |                |               |                 |
| 225'          | 1.5                          |                |               |                 | 405'          | 3.5                          |                |               |                 |
| 230'          | 1.4                          |                |               |                 | 410'          | 3.8                          | 2.8            | 3.8           | #5              |
| 235'          | 1.1                          |                |               |                 | 415'          | 3.65                         |                |               |                 |
| 240'          | 1.4                          |                |               |                 | 420'          | 3.9                          | 2.9            | 4.0           | #4              |
| 245'          | 1.4                          |                |               |                 | 425'          | 4.0                          |                |               |                 |
| 250'          | 1.3                          |                |               |                 | 430'          | 4.0                          | 3.1            | 4.2           | #3              |
| 255'          | 1.1                          |                |               |                 | 435'          | 3.2                          |                |               |                 |
| 260'          | 1.2                          |                |               |                 | 440'          | 2.7                          |                |               |                 |
| 265'          | 0.9                          |                |               |                 | 445'          | 3.2                          |                |               |                 |
| 270'          | 0.85                         |                |               |                 | 450'          | 3.1                          |                |               |                 |
| 275'          | 1.3                          |                |               |                 | 455'          | 3.5                          |                |               |                 |
| 280'          | 1.3                          |                |               |                 | 460'          | 3.9                          | 2.9            | 4.1           | #2              |
| 285'          | 2.55                         |                |               |                 | 465'          | 3.75                         |                |               |                 |
| 290'          | 3.8                          | 3.0            | 4.0           | #10             | 470'          | 4.1                          | 2.8            | 4.0           | #1              |
| 295'          | 4.0                          |                |               |                 | 475'          | 4.3                          |                |               |                 |
| 300'          | 3.9                          |                |               |                 | 480'          | 3.9                          |                |               |                 |
| 305'          | 4.3                          | 3.4            | 4.5           | #9              |               |                              |                |               |                 |
| 310'          | 4.0                          |                |               |                 |               |                              |                |               |                 |
| 315'          | 4.0                          | 3.1            | 4.2           | #8              |               |                              |                |               |                 |
| 320'          | 4.2                          |                |               |                 |               |                              |                |               |                 |
| 325'          | 4.3                          | 3.4            | 4.5           | #7              |               |                              |                |               |                 |
| 330'          | 3.8                          |                |               |                 |               |                              |                |               |                 |
| 335'          | 3.7                          | 2.9            | 3.9           | #6              |               |                              |                |               |                 |
| 340'          | 3.5                          | 2.9            |               |                 |               |                              |                |               |                 |
| 345'          | 3.2                          |                |               |                 |               |                              |                |               |                 |
| 350'          | 2.5                          |                |               |                 |               |                              |                |               |                 |
| 355'          | 2.25                         |                |               |                 |               |                              |                |               |                 |
| 360'          | 2.45                         |                |               |                 |               |                              |                |               |                 |

WELL: Atlantic #5 - CPS Sta. #422W  
W.O. #184-52314.19-50-20  
LOCATION: N.E. Sec. 22-31N-10W  
WATER LEVEL: 240'  
DATE INSTALLED: 5-19-72  
GROUNDED: Volts 11.2 - Amps 15  
Total Resistance 0.69 Ohms

EL PASO NATURAL GAS COMPANY  
SAN JUAN DIVISION  
FARMINGTON, NEW MEXICO  
PRODUCTION DEPARTMENT WATER ANALYSES

ANALYSIS NO.: 1-11964  
OPERATOR: MERIDIAN OIL  
LOCATION: 22-31-10  
FIELD: AZTEC  
SAMPLED FROM:  
DATE SAMPLED: 5/21/86  
TUBING PRESSURE:  
SURFACE CASING PRESSURE:

DATE: MAY 23, 1986  
WELL NAME: ATLANTIC #5 CPS 422W  
COUNTY SAN JUAN STATE: NEW MEXICO  
FORMATION: MESA VERDE

SECURED BY: MIKE WILLIAMS  
CASING PRESSURE:

|                        | SAMPLE SIZE | ml. TIT | AS CaCO <sub>3</sub>  | AS ION | epm   |
|------------------------|-------------|---------|-----------------------|--------|-------|
| TOTAL ALKALINITY       | 50          | 1.7     | 34                    |        |       |
| P ALKALINITY           | 50          | 0       | 0                     |        |       |
| BICARBONATE            | 50          | 1.7     | 34                    | 41     | 0.68  |
| CARBONATE              | 50          | 0       | 0                     | 0      | 0.00  |
| CHLORIDE               | 50          | 1.3     |                       | 26     | 0.73  |
| SULFATE                |             |         |                       | 3707   | 77.11 |
| TOTAL HARDNESS         | 10          | 10.05   | 1005                  |        |       |
| CALCIUM                | 10          | 9.55    | 955                   | 362    | 19.10 |
| MAGNESIUM              | 10          | .5      | 50                    | 12     | 1.01  |
| IRON                   |             |         |                       |        |       |
| SODIUM (CALCULATED)    |             |         |                       | 1343   | 58.41 |
| H <sub>2</sub> S       |             |         |                       |        |       |
| HYDROCARBONS           |             |         |                       |        |       |
| TOTAL DISSOLVED SOLIDS |             |         |                       | 5800   |       |
| pH                     |             |         |                       | 6.9    |       |
| SPECIFIC GRAVITY       |             |         | 1.005 AT 75F          |        |       |
| RESISTIVITY            |             |         | 139 OHM-CM AT 25C     |        |       |
| CONDUCTIVITY           |             |         | 7200 MICROMHOS @ 25C. |        |       |

ALL RESULTS EXPRESSED IN PARTS PER MILLION-TRACE IS LESS THAN 0.1 ppm

cc: R. A. ULLRICH  
J. D. EVANS  
J. L. GREEN  
W. F. LORETT  
FILE

DENNIS BIRD

CHEMIST *GCK*

