

30-045-20290

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

Operator MERIDIAN OIL Location: Unit SE Sec. 22 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #177

cps 981w

Elevation 6627' Completion Date 9/4/75 Total Depth 540' 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. WET AT 330'

Depths gas encountered: N/A

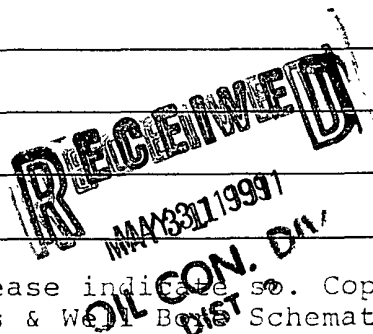
Type & amount of coke breeze used: 5500 lbs.

Depths anodes placed: 495', 470', 445', 435', 425', 415', 405', 395', 385', 375'

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: qgb #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

*Lepp*  
Completion Date 9-4-75

Drilling Log (Attach Hereto) ☐

|                                      |                         |                                     |                             |                                |                |
|--------------------------------------|-------------------------|-------------------------------------|-----------------------------|--------------------------------|----------------|
| Well Name<br><b>Huerfano #177</b>    |                         | Location<br><b>SE 22-26-10</b>      |                             | CPS No.<br><b>981W</b>         |                |
| Type & Size Bit Used<br><b>6 3/4</b> |                         |                                     |                             | Work Order No.<br><b>54570</b> |                |
| Anode Hole Depth<br><b>540</b>       | Total Drilling Rig Time | Total Lbs. Ccke Used<br><b>5500</b> | Lost Circulation Mat'l Used | No. Sacks Mud Used             |                |
| Anode Depth                          |                         |                                     |                             |                                |                |
| # 1 <b>495</b>                       | # 2 <b>470</b>          | # 3 <b>445</b>                      | # 4 <b>435</b>              | # 5 <b>425</b>                 | # 6 <b>415</b> |
| # 7 <b>405</b>                       | # 8 <b>395</b>          | # 9 <b>385</b>                      | # 10 <b>375</b>             |                                |                |
| Anode Output (Amps)                  |                         |                                     |                             |                                |                |
| # 1 <b>3.2</b>                       | # 2 <b>2.5</b>          | # 3 <b>3.8</b>                      | # 4 <b>5.0</b>              | # 5 <b>4.2</b>                 | # 6 <b>3.7</b> |
| # 7 <b>4.5</b>                       | # 8 <b>4.2</b>          | # 9 <b>4.8</b>                      | # 10 <b>3.6</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               |                             | No. 2 C.P. Cable Used          |                |
| Volts <b>11.3</b>                    | Amps <b>17.0</b>        | Ohms <b>0.66</b>                    | <b>4650</b>                 |                                |                |

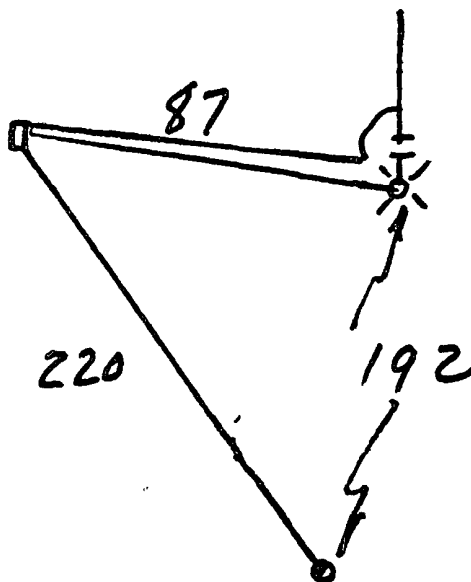
Remarks: Drilled 300' - No Water Next A.M. Wet at 330  
Start Water injection at 380'  
Vent Perforated 200'

*12 hrs*

All Construction Completed

*Amek*  
(Signature)

GROUND BED LAYOUT SKETCH



*W627*

| LEASE       |             |                  |                  |        | WELL NO. <u>981-W</u>            |             |                  |                  |        | CONTRACTOR             |             |                    |                  |        | RIG NO. <u>3791</u>              |  |  |  |  | REPORT NO. |  |  |  |  | DATE              |  |  |  |  | 19 |  |  |  |  |
|-------------|-------------|------------------|------------------|--------|----------------------------------|-------------|------------------|------------------|--------|------------------------|-------------|--------------------|------------------|--------|----------------------------------|--|--|--|--|------------|--|--|--|--|-------------------|--|--|--|--|----|--|--|--|--|
| MORNING     |             |                  |                  |        |                                  |             |                  |                  |        | DAYLIGHT               |             |                    |                  |        |                                  |  |  |  |  | EVENING    |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| Driller     |             |                  |                  |        | 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. |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>0.0</u>  | <u>3'</u>   | <u>SAND</u>      |                  |        | <u>118'</u>                      | <u>125'</u> | <u>SHALE</u>     |                  |        | <u>148'</u>            | <u>158'</u> | <u>SHALE BROWN</u> |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>3'</u>   | <u>89'</u>  | <u>SANDSTONE</u> |                  |        | <u>125'</u>                      | <u>128'</u> | <u>SANDSTONE</u> |                  |        | <u>158'</u>            | <u>162'</u> | <u>SANDSTONE</u>   |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>89'</u>  | <u>100'</u> | <u>SHALE</u>     |                  |        | <u>128'</u>                      | <u>132'</u> | <u>SHALE</u>     |                  |        | <u>162'</u>            | <u>165'</u> | <u>SHALE</u>       |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>100'</u> | <u>118'</u> | <u>SANDSTONE</u> |                  |        | <u>132'</u>                      | <u>148'</u> | <u>SANDSTONE</u> |                  |        | <u>165'</u>            | <u>186'</u> | <u>SANDSTONE</u>   |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| BIT NO.     |             |                  |                  |        | NO. DC                           |             |                  |                  |        | SIZE                   |             |                    |                  |        | LENG.                            |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| SERIAL NO.  |             |                  |                  |        | STANDS                           |             |                  |                  |        | SINGLES                |             |                    |                  |        | DOWN ON KELLY                    |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| TYPE        |             |                  |                  |        | MAKE                             |             |                  |                  |        | TOTAL DEPTH            |             |                    |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| MUD RECORD  |             |                  |                  |        | MUD, ADDITIVES USED AND RECEIVED |             |                  |                  |        | MUD RECORD             |             |                    |                  |        | MUD, ADDITIVES USED AND RECEIVED |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| Time        | Wt.         | Vis.             |                  |        | Time                             | Wt.         | Vis.             |                  |        | Time                   | Wt.         | Vis.               |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>196'</u> | <u>200'</u> |                  | <u>SHALE</u>     |        | <u>258'</u>                      | <u>265'</u> |                  | <u>SHALE</u>     |        | <u>272'</u>            | <u>275'</u> |                    | <u>SHALE</u>     |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>200'</u> | <u>206'</u> |                  | <u>SANDSTONE</u> |        | <u>265'</u>                      | <u>268'</u> |                  | <u>SANDSTONE</u> |        | <u>275'</u>            | <u>278'</u> |                    | <u>SANDSTONE</u> |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>206'</u> | <u>216'</u> |                  | <u>SHALE</u>     |        | <u>268'</u>                      | <u>270'</u> |                  | <u>SHALE</u>     |        | <u>278'</u>            | <u>282'</u> |                    | <u>SHALE</u>     |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>216'</u> | <u>258'</u> |                  | <u>SANDSTONE</u> |        | <u>270'</u>                      | <u>272'</u> |                  | <u>SANDSTONE</u> |        | <u>282'</u>            | <u>306'</u> |                    | <u>SANDSTONE</u> |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| FROM        | TO          | TIME BREAKDOWN   |                  |        | FROM                             | TO          | TIME BREAKDOWN   |                  |        | FROM                   | TO          | TIME BREAKDOWN     |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>306'</u> | <u>316'</u> | <u>SHALE</u>     |                  |        | <u>400'</u>                      | <u>405'</u> | <u>SHALE</u>     |                  |        | <u>423'</u>            | <u>426'</u> | <u>SHALE</u>       |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>316'</u> | <u>340'</u> | <u>SANDSTONE</u> |                  |        | <u>405'</u>                      | <u>407'</u> | <u>SANDSTONE</u> |                  |        | <u>426'</u>            | <u>427'</u> | <u>SANDSTONE</u>   |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>340'</u> | <u>349'</u> | <u>SHALE</u>     |                  |        | <u>407'</u>                      | <u>415'</u> | <u>SHALE</u>     |                  |        | <u>427'</u>            | <u>430'</u> | <u>SHALE</u>       |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>349'</u> | <u>350'</u> | <u>SANDSTONE</u> |                  |        | <u>415'</u>                      | <u>418'</u> | <u>SANDSTONE</u> |                  |        | <u>430'</u>            | <u>457'</u> | <u>SANDSTONE</u>   |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>350'</u> | <u>353'</u> | <u>SHALE</u>     |                  |        | <u>418'</u>                      | <u>420'</u> | <u>SHALE</u>     |                  |        | <u>457'</u>            | <u>465'</u> | <u>SHALE</u>       |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| <u>353'</u> | <u>400'</u> | <u>SANDSTONE</u> |                  |        | <u>420'</u>                      | <u>423'</u> | <u>SANDSTONE</u> |                  |        | <u>465'</u>            | <u>540'</u> | <u>SANDSTONE</u>   |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
| REMARKS -   |             |                  |                  |        | REMARKS -                        |             |                  |                  |        | REMARKS -              |             |                    |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
|             |             |                  |                  |        | <u>DAMP @ 55-67</u>              |             |                  |                  |        | <u>540' - T.D.</u>     |             |                    |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
|             |             |                  |                  |        | <u>WETA @ 67-73</u>              |             |                  |                  |        | <u>DAMP @ 700-730</u>  |             |                    |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
|             |             |                  |                  |        | <u>DAMP @ 73-87</u>              |             |                  |                  |        | <u>WETA @ 730-740</u>  |             |                    |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
|             |             |                  |                  |        | <u>WETA @ 105-115</u>            |             |                  |                  |        | <u>DAMP @ 773-780</u>  |             |                    |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |
|             |             |                  |                  |        | <u>DAMP @ 117-253</u>            |             |                  |                  |        | <u>Inject 780-540'</u> |             |                    |                  |        |                                  |  |  |  |  |            |  |  |  |  |                   |  |  |  |  |    |  |  |  |  |

SIGNED: Toolpusher

Jimmy Jones

Company Supervisor

981W - 9-4-75

| MW  | gas/mol               |
|-----|-----------------------|
| 16  | C <sub>1</sub> 6.1    |
| 30  | C <sub>2</sub> 10.12  |
| 44  | C <sub>3</sub> 10.42  |
| 58  | IC <sub>4</sub> 12.38 |
| 72  | NC <sub>4</sub> 11.03 |
| 86  | IC <sub>5</sub> 13.85 |
| 100 | NC <sub>5</sub> 13.71 |
| 114 | IC <sub>6</sub> 15.50 |
| 128 | NC <sub>6</sub> 15.57 |
| 142 | IC <sub>7</sub> 17.2  |
| 156 | NC <sub>7</sub> 17.46 |
| 170 | IC <sub>8</sub> 19.31 |
| 184 | NC <sub>8</sub> 19.64 |
| 198 | IC <sub>9</sub> 21.67 |

|     |     |     |     |                                                                       |     |     |     |
|-----|-----|-----|-----|-----------------------------------------------------------------------|-----|-----|-----|
| 330 | 2.0 | 510 | 1.7 | Drilled 300'<br>No wtr Next A.M.<br>Start testing at 380'<br>Wet 330' |     |     |     |
|     | 1.9 | 514 | TO  |                                                                       |     |     |     |
| 40  | 1.9 | 20  |     |                                                                       |     |     |     |
|     | 1.8 |     |     |                                                                       |     |     |     |
| 50  | 1.7 | 30  |     |                                                                       |     |     |     |
|     | 1.3 |     |     |                                                                       |     |     |     |
| 60  | .5  | 540 |     |                                                                       |     |     |     |
|     | .4  |     |     |                                                                       |     |     |     |
| 70  | .6  |     |     |                                                                       |     |     |     |
| 10  | 1.4 |     |     |                                                                       |     |     |     |
| 80  | 1.8 |     |     |                                                                       |     |     |     |
| 9   | 1.9 |     |     |                                                                       |     |     |     |
| 90  | 2.0 |     |     |                                                                       |     |     |     |
| 8   | 1.9 |     |     |                                                                       |     |     |     |
| 400 | 1.8 |     |     |                                                                       |     |     |     |
| 7   | 2.0 |     |     |                                                                       |     |     |     |
| 10  | 2.0 |     |     |                                                                       |     |     |     |
| 6   | 1.6 |     |     |                                                                       |     |     |     |
| 20  | 1.5 |     |     |                                                                       |     |     |     |
| 5   | 1.7 |     |     | 1                                                                     | 495 | 2.0 | 3.2 |
| 30  | 2.0 |     |     | 2                                                                     | 470 | 1.6 | 2.5 |
| 1   | 2.2 |     |     | 3                                                                     | 445 | 2.2 | 3.8 |
| 40  | 2.2 |     |     | 4                                                                     | 435 | 2.8 | 5.0 |
| 5   | 2.0 |     |     | 5                                                                     | 425 | 2.2 | 4.2 |
| 50  | 1.4 |     |     | 6                                                                     | 415 | 1.9 | 3.7 |
|     | 1.0 |     |     | 7                                                                     | 405 | 2.4 | 4.5 |
| 60  | .7  |     |     | 8                                                                     | 395 | 2.2 | 4.2 |
|     | .7  |     |     | 9                                                                     | 385 | 2.4 | 4.8 |
| 70  | 1.4 |     |     | 10                                                                    | 375 | 2.0 | 3.6 |
|     | 1.3 |     |     |                                                                       |     |     |     |
| 80  | 1.0 |     |     |                                                                       |     |     |     |
|     | .6  |     |     |                                                                       |     |     |     |
| 90  | 1.4 |     |     |                                                                       |     |     |     |
| 1   | 1.8 |     |     |                                                                       |     |     |     |
| 500 | 1.4 |     |     |                                                                       |     |     |     |
|     | 1.2 |     |     |                                                                       |     |     |     |

$$11.3 \text{ V } 17.0 \text{ A} = .66 \text{ W}$$

$$11.3 \text{ V } 17.0 \text{ A} = .66 \text{ W}$$

170  
169.80  
3.170

| MW | MISC             | gas/mol |
|----|------------------|---------|
| 44 | CO <sub>2</sub>  | 6.38    |
| 34 | H <sub>2</sub> S | 5.17    |
| 28 | N <sub>2</sub>   | 4.16    |
| 2  | H <sub>2</sub>   | 1.38    |