

30-045-21959

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. 36 Twp 31 Rng 11

Name of Well/Wells or Pipeline Serviced BEAVERLODGE COM A #2R

cps 1317w

Elevation 6009' Completion Date 11/19/78 Total Depth 350' 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. 80' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: 40 SACKS

Depths anodes placed: 280', 265', 250', 185', 175', 165', 155', 145', 135', 110'

Depths vent pipes placed: 340'

Vent pipe perforations: 280'

Remarks: qb #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

Drilling Log (Attach Hereto) ☐

CONTRACT #2

Completion Date 11/19/78

|                                      |                         |                                  |                             |                            |          |
|--------------------------------------|-------------------------|----------------------------------|-----------------------------|----------------------------|----------|
| Well Name<br>BEAVERLODGE COM. A #2R  |                         | Location<br>NE 36-31-11          |                             | CPS No.<br>1317 W          |          |
| Type & Size Bit Used<br>6 3/4"       |                         | (2"X2"X48" GRAPHITE)             |                             | Work Order No.<br>55991-21 |          |
| Anode Hole Depth<br>350' - 350' T.D. | Total Drilling Rig Time | Total Lbs. Coke Used<br>40 SACKS | Lost Circulation Mat'l Used | No. Sacks Mud Used         |          |
| Anode Depth                          | #1 280'                 | #2 265'                          | #3 250'                     | #4 185'                    | #5 175'  |
| Anode Depth                          | #6 165'                 | #7 155'                          | #8 145'                     | #9 135'                    | #10 110' |
| Anode Output (Amps)                  | #1 6.0                  | #2 6.4                           | #3 5.2                      | #4 6.0                     | #5 5.9   |
| Anode Output (Amps)                  | #6 6.5                  | #7 6.0                           | #8 6.3                      | #9 6.2                     | #10 6.2  |
| Anode Depth                          | #11                     | #12                              | #13                         | #14                        | #15      |
| Anode Output (Amps)                  | #16                     | #17                              | #18                         | #19                        | #20      |
| Total Circuit Resistance             | Volts 10.5              |                                  | Amps 24.2                   | Ohms .43                   |          |
| No. 8 C.P. Cable Used                |                         |                                  | No. 2 C.P. Cable Used       |                            |          |

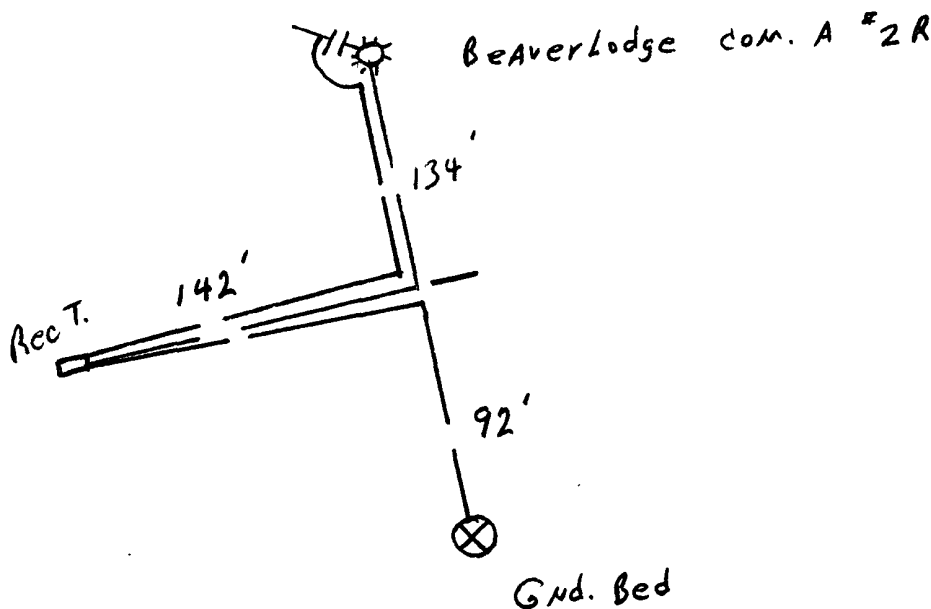
Remarks: STATIC 600' E. = .79V Drilled To 80', NEXT AM. 15' OF WATER IN hole. Took WATER SAMPLE. HOLE MAKING APPROX. 2 GAL/MIN. Drilled To 350'. Logged 350'. INSTALLED 340' OF 1" P.V.C. VENT PIPE. PERFORATED 280'.

DITCH & 1 CABLE = 368'  
EXTRA CABLE = 418'  
20' meter Loop Pole + 40V 16A RECT.  
Hole Depth -150'

All Construction Completed

*JE Stalk*  
(Signature)

GROUND BED LAYOUT SKETCH



## DAILY DRILLING REPORT

| LEASE      |     |                                  | WELL NO. <i>1317W</i> |         |  | CONTRACTOR <i>DFA Enter.</i> |      |                                  | RIG NO. <i>2</i> |            |  | REPORT NO.                                                                                               |    |                                  | DATE <i>11-19</i> |               |  | 19 <i>78</i> |  |            |  |        |  |         |  |               |  |             |  |
|------------|-----|----------------------------------|-----------------------|---------|--|------------------------------|------|----------------------------------|------------------|------------|--|----------------------------------------------------------------------------------------------------------|----|----------------------------------|-------------------|---------------|--|--------------|--|------------|--|--------|--|---------|--|---------------|--|-------------|--|
| 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.        |  |              |  |            |  |        |  |         |  |               |  |             |  |
|            |     |                                  |                       |         |  |                              |      |                                  |                  |            |  |                                                                                                          |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| BIT        |     | NO. DC                           |                       | SIZE    |  | LENG.                        |      | BIT NO.                          |                  | NO. DC     |  | SIZE                                                                                                     |    | LENG.                            |                   | BIT NO.       |  | NO. DC       |  | SIZE       |  | LENG.  |  |         |  |               |  |             |  |
| SERIAL NO. |     | STANDS                           |                       | SINGLES |  | DOWN ON KELLY                |      | TOTAL DEPTH                      |                  | SERIAL NO. |  | STANDS                                                                                                   |    | SINGLES                          |                   | DOWN ON KELLY |  | TOTAL DEPTH  |  | SERIAL NO. |  | STANDS |  | SINGLES |  | DOWN ON KELLY |  | TOTAL DEPTH |  |
| MUD RECORD |     | MUD, ADDITIVES USED AND RECEIVED |                       |         |  | MUD RECORD                   |      | MUD, ADDITIVES USED AND RECEIVED |                  |            |  | MUD RECORD                                                                                               |    | 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                   |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| 0          | 20  | SURFACE PIPE                     |                       |         |  | 260                          | 280  | Sandy Shale                      |                  |            |  |                                                                                                          |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| 20         | 80  | Shale & (water)                  |                       |         |  | 280                          | 340  | Sandy Shale                      |                  |            |  |                                                                                                          |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| 80         | 140 | Shale                            |                       |         |  | 340                          | 350  | Shale                            |                  |            |  |                                                                                                          |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| 140        | 180 | Shale                            |                       |         |  |                              |      |                                  |                  |            |  |                                                                                                          |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| 180        | 220 | Sandy Shale                      |                       |         |  |                              |      |                                  |                  |            |  |                                                                                                          |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| 220        | 260 | Shale                            |                       |         |  |                              |      |                                  |                  |            |  |                                                                                                          |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
| REMARKS -  |     |                                  |                       |         |  | REMARKS -                    |      |                                  |                  |            |  | REMARKS -                                                                                                |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |
|            |     |                                  |                       |         |  |                              |      |                                  |                  |            |  | <i>Drilled 6 3/4" Hole to 350</i><br><i>Logged 350</i><br><i>Exp water at 2 gal min.</i><br><i>at 80</i> |    |                                  |                   |               |  |              |  |            |  |        |  |         |  |               |  |             |  |

SIGNED: Toolpusher

D. K. Mc Donald

\_\_\_\_ Company Supervisor

El Paso Natural Gas Company  
ENGINEERING CALCULATION

Sheet: \_\_\_\_\_ of \_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_

File: \_\_\_\_\_

CPS = 1317 W

Beaverlodge Com. A 2R

NE 36-31-11

w.o. 55991-21

| MW     | gals/mol  |
|--------|-----------|
| 16.04  | C1 6.4    |
| 30.07  | C2 10.12  |
| 44.10  | C3 10.42  |
| 58.12  | IC4 12.38 |
| 58.12  | nC4 11.93 |
| 72.15  | IC5 13.85 |
| 72.15  | nC5 13.71 |
| 86.18  | IC6 15.50 |
| 86.18  | C6 15.57  |
| 100.21 | IC7 17.2  |
| 100.21 | C7 17.46  |
| 114.23 | C8 19.39  |
| 28.05  | C2 9.64   |
| 42.08  | C3 9.67   |

| MW    | MISC. gals/mol |
|-------|----------------|
| 32.00 | O2 3.37        |
| 28.01 | CO 4.19        |
| 44.01 | CO2 6.38       |
| 64.06 | SO2 5.50       |
| 34.08 | H2S 5.17       |
| 28.01 | N2 4.16        |
| 2.02  | H2 3.38        |

|                                                                                                                                           |                            |                                                           |  |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------|--|
| Drilled To 80' Next A.M.<br>15' of water in hole. Took<br>water sample. Hole making<br>Approx. 2 gal./min. Drilled<br>To 350' Logged 350' |                            |                                                           |  |
| 80 - 1.3                                                                                                                                  | 60 - 2.8                   |                                                           |  |
| 90 - 3.6                                                                                                                                  | 4.6 - ②                    |                                                           |  |
| 100 - 3.9                                                                                                                                 | 20 - 4.4                   |                                                           |  |
| 4.1                                                                                                                                       | 4.1                        |                                                           |  |
| 100 - 3.9                                                                                                                                 | 80 - 3.9 - ①               | Installed 340' of 1" P.V.C.<br>vent pipe. Perforated 280' |  |
| 4.1                                                                                                                                       | 3.4                        |                                                           |  |
| 10 - 4.4 - ⑩                                                                                                                              | 90 - 3.3                   |                                                           |  |
| 4.2                                                                                                                                       | 3.2                        |                                                           |  |
| 20 - 4.2                                                                                                                                  | 300 - 3.0                  |                                                           |  |
| 4.0                                                                                                                                       | 3.0                        |                                                           |  |
| 30 - 4.1                                                                                                                                  | 10 - 2.9                   | 10.5 V. 24.2 A. = 43 Ω                                    |  |
| 4.4 - ⑨                                                                                                                                   | 2.8                        | 11/19/78                                                  |  |
| 40 - 4.2                                                                                                                                  | 20 - 2.8                   | js                                                        |  |
| 4.1 - ⑧                                                                                                                                   | 2.6                        |                                                           |  |
| 50 - 3.9                                                                                                                                  | 30 - 2.5                   |                                                           |  |
| 4.2 - ⑦                                                                                                                                   | 2.5                        |                                                           |  |
| 60 - 4.2                                                                                                                                  | 40 - 2.0                   |                                                           |  |
| 4.2 - ⑥                                                                                                                                   | 2.0                        |                                                           |  |
| 70 - 4.5                                                                                                                                  | 50 - Drilled To - 350 T.D. |                                                           |  |
| 4.1 - ⑤                                                                                                                                   |                            |                                                           |  |
| 80 - 3.9                                                                                                                                  |                            |                                                           |  |
| 4.1 - ④                                                                                                                                   |                            |                                                           |  |
| 90 - 3.6                                                                                                                                  |                            |                                                           |  |
| 3.3                                                                                                                                       |                            |                                                           |  |
| 200 - 2.7                                                                                                                                 | 1 - 280 - 4.8 - 6.0        |                                                           |  |
| 1.4                                                                                                                                       | 2 - 265 - 5.2 - 6.4        |                                                           |  |
| 10 - 1.4                                                                                                                                  | 3 - 256 - 4.2 - 5.2        |                                                           |  |
| 1.9                                                                                                                                       | 4 - 185 - 4.3 - 6.0        |                                                           |  |
| 20 - 1.9                                                                                                                                  | 5 - 175 - 4.2 - 5.9        |                                                           |  |
| 2.1                                                                                                                                       | 6 - 165 - 4.5 - 6.5        |                                                           |  |
| 30 - 2.4                                                                                                                                  | 7 - 155 - 4.1 - 6.0        |                                                           |  |
| 3.0                                                                                                                                       | 8 - 145 - 4.5 - 6.3        |                                                           |  |
| 40 - 3.2                                                                                                                                  | 9 - 135 - 4.8 - 6.2        |                                                           |  |
| 3.6                                                                                                                                       | 10 - 110 - 4.7 - 6.2       |                                                           |  |
| 50 - 4.0 - ③                                                                                                                              |                            |                                                           |  |
| 3.8                                                                                                                                       |                            |                                                           |  |
|                                                                                                                                           | 40 SACKS coke              |                                                           |  |

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

Analysis No. 1-9451 Date 1-19-79

Operator \_\_\_\_\_ Well Name Beaver Lodge Com A-#2-R

Location NE 36-21-11 County \_\_\_\_\_ State \_\_\_\_\_

Field \_\_\_\_\_ Formation \_\_\_\_\_

Sampled From CPS 1317W

Date Sampled \_\_\_\_\_ By \_\_\_\_\_

|                   |                   |                          |
|-------------------|-------------------|--------------------------|
| Tbg. Press. _____ | Csg. Press. _____ | Surface Csg. Press _____ |
| ppm               | epm               | ppm epm                  |

|                              |                                 |
|------------------------------|---------------------------------|
| Sodium <u>1775</u> <u>77</u> | Chloride <u>7136</u> <u>201</u> |
|------------------------------|---------------------------------|

|                                |                                 |
|--------------------------------|---------------------------------|
| Calcium <u>2320</u> <u>116</u> | Bicarbonate <u>459</u> <u>8</u> |
|--------------------------------|---------------------------------|

|                                |                               |
|--------------------------------|-------------------------------|
| Magnesium <u>441</u> <u>36</u> | Sulfate <u>1260</u> <u>21</u> |
|--------------------------------|-------------------------------|

|                     |                             |
|---------------------|-----------------------------|
| Iron <u>Present</u> | Carbonate <u>0</u> <u>0</u> |
|---------------------|-----------------------------|

|                                |                             |
|--------------------------------|-----------------------------|
| H <sub>2</sub> S <u>Absent</u> | Hydroxide <u>0</u> <u>0</u> |
|--------------------------------|-----------------------------|

cc: D.C.Adams  
R.A.Ullrich  
E.R.Paulek  
J.W.McCarthy  
A.M.Smith  
W.B.Shropshire  
File

Total Solids Dissolved 16216

pH 6.9

Sp. Gr. 1.0112 at 60°F

Resistivity 52 ohm-cm at 72 °F

Water at 80'  
approx 2 gal/min

*Joe Barnett*  
Chemist

