

#9/30-045-09598

#437/30-045-77169 P-4

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS

NORTHWESTERN NEW MEXICO

(Submit 3 Copies to OCD Aztec Office)

Operator: BLACKWOOD & NICHOLS CO. Location: Unit N, Sec. 12, Twp 30N, Rng 8W.

Name of Well/Wells or Pipeline Served NEBU 437, 9

Elevation 6100' Completion Date 7-2-93 Total Depth 378' Land Type\* Surface: F Mineral: SF-078581A

Casing, Sizes, Types & Depths 8-5/8" SCH 40 P.V.C. - 100', 7 7/8" OPEN HOLE

If Casing is cemented, show amounts & types used 20 sks Portland Zia I-II

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. Fresh water at 170'

Depths gas encountered: N/A

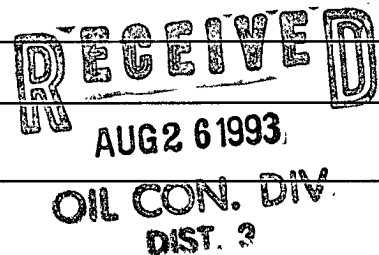
Type & amount of coke breeze used: Asbury recarburized - 107 sx

Depths anodes placed: 185' to 355'

Depths vent pipes placed: 378' to 4' above ground level

Vent pipe perforations: 378' to 98'

Remarks: Groundbed located 221' N 50° W of NEBU 437.



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.

Signed by: James K. Allen

Title: Operations Engineer

Date: 8/11/93



1115 Farmington Avenue - Farmington, NM 87401  
(505) 325-1085

Lab Sample No.: W93-246

Standard A.P.I. Water Analysis Report

Collected By: J. Evans

Company: Blackwood and Nichols Co.

Collection Date: 24-Jul-93

Well Name: P-4

Collection Time: Unknown

Formation: Surface

County: San Juan State: NM

Location: (N) Sec.12-T30-R08

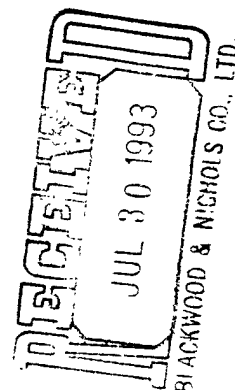
Analyst: K. Lambdin

*Karen Lambdin*

Remarks: From groundbed at 170 feet.

Analysis Date: 7/28/93

| PARAMETER        | as ION     | Comment    | PARAMETER                     | as ION      | Comment |
|------------------|------------|------------|-------------------------------|-------------|---------|
| Sodium, Na       | 300 mg/l   | calculated | Chloride, Cl                  | 12 mg/l     |         |
| Potassium, K     | 10 mg/l    |            | Sulfate, SO <sub>4</sub>      | 2030 mg/l   |         |
| Calcium, Ca      | 590 mg/l   |            | Hydroxide, OH                 | 0 mg/l      |         |
| Magnesium, Mg    | 28 mg/l    |            | Carbonate, CO <sub>3</sub>    | 0 mg/l      |         |
| Iron, Fe (Total) | 0.0 mg/l   | NR         | Bicarbonate, HCO <sub>3</sub> | 147 mg/l    |         |
| Hydrogen Sulfide | 0 mg/l     | <5         | Resistivity                   | 3.559 ohm-m |         |
| pH               | 7.22 Units |            | (@25 Degrees C)               |             |         |
| TDS              | 1,883 mg/l |            | Conductivity                  | 2,810 uS    |         |
|                  |            |            | Specific Gravity              | 1.000 Units |         |
|                  |            |            | (@ 60 Degrees F)              |             |         |

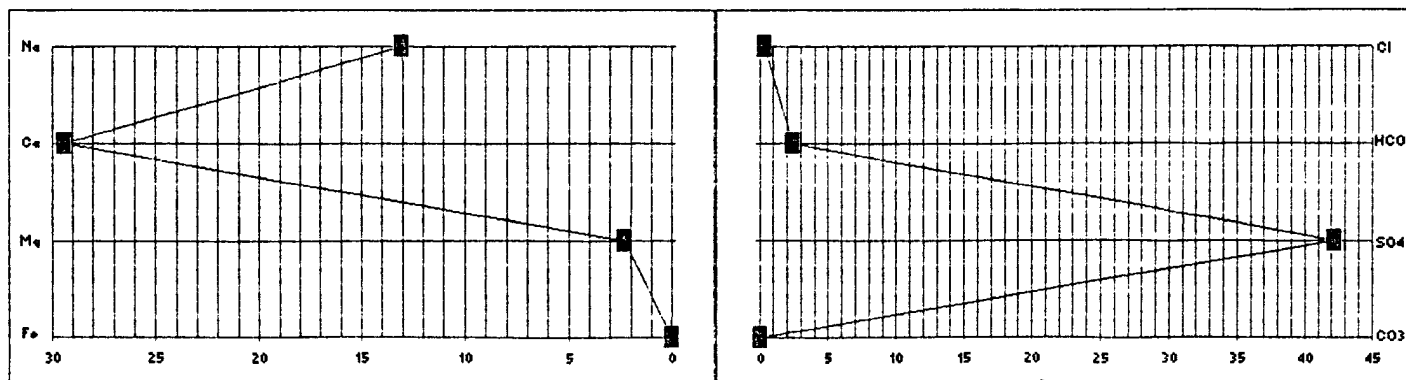


Remarks: None.

NR = Test Not Run

Anion/Cation: 99.8%

Stiff Diagram



# BLACKWOOD & NICHOLS CATHODIC GROUND BED DRILLERS REPORT

CP# P4 WELL# NER 43749

S 12 T 3.1 R216

[illegible]

DRILLER James Martin

INSPECTOR Joe Mitzel

# BLACKWOOD & NICHOLS CATHODIC GROUND BED DRILLERS REPORT

WELL # P-4 NEBU # 437 + #9

S 12 T 30N R 86

[illegible]

MILLER

INSPECTOR