

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural  
Resources Department  
  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: <b>Enterprise Field Services, LLC</b>	OGRID: <b>241602</b>
Contact Name: <b>Thomas Long</b>	Contact Telephone: <b>505-599-2286</b>
Contact email: <b>tjlong@eprod.com</b>	Incident # (assigned by OCD) <b>nAPP2303837689</b>
Contact mailing address: <b>614 Reilly Ave, Farmington, NM 87401</b>	

### Location of Release Source

Latitude **36.474426** Longitude **-107.907606** (NAD 83 in decimal degrees to 5 decimal places)

Site Name <b>Huerfano Pumping Station</b>	Site Type <b>Natural Gas Liquids Pumping Station</b>
Date Release Discovered: <b>02/03/2023</b>	Serial Number (if applicable): <b>N/A</b>

Unit Letter	Section	Township	Range	County
<b>L</b>	<b>21</b>	<b>26N</b>	<b>10W</b>	<b>San Juan</b>

Surface Owner:  State  Federal  Tribal  Private (Name: **BLM**)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls): <b>Estimated 1 BBLs of NGLs</b>	Volume Recovered (bbls): <b>None</b>
<input type="checkbox"/> Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
<input checked="" type="checkbox"/> Other (describe) <b>Fire</b>	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units):

**Cause of Release:** On February 3, 2023, Enterprise pipeline technicians were clearing the Unit #3 at Huerfano Natural Gas Liquids Pumping Station, through the station knock out drum and flare stack. Heavy product accumulated at the flare base and was ejected out of the flare in a partially ignited state. The small liquid fire landed on the ground within facility and the fire immediately went out on its own. No injuries occurred. No equipment was damaged. No emergency services responded. On February 6, 2023 Enterprise collected a composite sample from the ground surrounding the flare. Laboratory results indicated no contaminants of concern exceed NMOCD remediation standard base on the depth of groundwater greater than 100 feet below ground surface. Supporting documentation including siting criteria, laboratory analysis, site map and photographs are included with this "Final C-141."

State of New Mexico  
Oil Conservation Division

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Incident ID	
District RP	
Facility ID	
Application ID	

### Closure

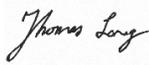
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Thomas Long Title: Senior Environmental Scientist

Signature:  Date: 04-04-2023

email: tjlong@eprod.com Telephone: (505) 599-2286

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 04/28/2023

Printed Name: Nelson Velez Title: Environmental Specialist - Adv



LEGEND:

FIGURE 1: SITE MAP  
 ENTERPRISE FIELD SERVICES, LLC  
 HUERFANO PUMPING STATION  
 UL L SECTION 21 T26N R10W  
 36.474426, -107.907606



DRAWN BY: TJLONG	DATE: 04-04-23
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CHECKED BY: BSTONE	DATE: 04-04-23
--------------------	----------------

APPROVED BY: BSTONE	DATE: 04-04-23
---------------------	----------------

PROJ. ID: HUERFANOPS	SCALE: 1"=80'	DRAWING NUMBER: 1
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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

February 14, 2023

Thomas Long  
Enterprise Products Farmington  
614 Reilly Ave.  
Farmington, NM 87401  
TEL:  
FAX:

RE: Huerfano Pumping Station

OrderNo.: 2302270

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/7/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 2302270

Date Reported: 2/14/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Enterprise Products Farmington

**Client Sample ID:** Flare Stack (Ground)

**Project:** Huerfano Pumping Station

**Collection Date:** 2/6/2023 12:45:00 PM

**Lab ID:** 2302270-001

**Matrix:** SOIL

**Received Date:** 2/7/2023 6:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	2/11/2023 4:31:22 AM	73129
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	550	47		mg/Kg	10	2/9/2023 2:22:15 PM	73058
Surr: BFB	111	70-130		%Rec	10	2/9/2023 2:22:15 PM	73058
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/10/2023 2:56:53 PM	73072
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/10/2023 2:56:53 PM	73072
Surr: DNOP	94.7	69-147		%Rec	1	2/10/2023 2:56:53 PM	73072
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>RAA</b>
Benzene	1.4	0.023		mg/Kg	1	2/8/2023 10:18:05 PM	73058
Toluene	14	0.47		mg/Kg	10	2/9/2023 2:22:15 PM	73058
Ethylbenzene	0.96	0.047		mg/Kg	1	2/8/2023 10:18:05 PM	73058
Xylenes, Total	15	0.93		mg/Kg	10	2/9/2023 2:22:15 PM	73058
Surr: 1,2-Dichloroethane-d4	123	70-130		%Rec	1	2/8/2023 10:18:05 PM	73058
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	2/8/2023 10:18:05 PM	73058
Surr: Dibromofluoromethane	99.3	70-130		%Rec	1	2/8/2023 10:18:05 PM	73058
Surr: Toluene-d8	125	70-130		%Rec	1	2/8/2023 10:18:05 PM	73058

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2302270

14-Feb-23

**Client:** Enterprise Products Farmington

**Project:** Huerfano Pumping Station

Sample ID: <b>MB-73129</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>73129</b>	RunNo: <b>94561</b>								
Prep Date: <b>2/10/2023</b>	Analysis Date: <b>2/10/2023</b>	SeqNo: <b>3418099</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-73129</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>73129</b>	RunNo: <b>94561</b>								
Prep Date: <b>2/10/2023</b>	Analysis Date: <b>2/10/2023</b>	SeqNo: <b>3418100</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2302270

14-Feb-23

**Client:** Enterprise Products Farmington

**Project:** Huerfano Pumping Station

Sample ID: <b>MB-73014</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>73014</b>	RunNo: <b>94502</b>								
Prep Date: <b>2/6/2023</b>	Analysis Date: <b>2/9/2023</b>	SeqNo: <b>3415108</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		121	69	147			

Sample ID: <b>LCS-73072</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>73072</b>	RunNo: <b>94521</b>								
Prep Date: <b>2/8/2023</b>	Analysis Date: <b>2/10/2023</b>	SeqNo: <b>3416239</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	61.9	130			
Surr: DNOP	5.4		5.000		109	69	147			

Sample ID: <b>MB-73072</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>73072</b>	RunNo: <b>94521</b>								
Prep Date: <b>2/8/2023</b>	Analysis Date: <b>2/10/2023</b>	SeqNo: <b>3416240</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.4	69	147			

Sample ID: <b>MB-73042</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>73042</b>	RunNo: <b>94502</b>								
Prep Date: <b>2/7/2023</b>	Analysis Date: <b>2/9/2023</b>	SeqNo: <b>3416464</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		121	69	147			

Sample ID: <b>LCS-73042</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>73042</b>	RunNo: <b>94502</b>								
Prep Date: <b>2/7/2023</b>	Analysis Date: <b>2/9/2023</b>	SeqNo: <b>3416465</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.9		5.000		138	69	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2302270

14-Feb-23

**Client:** Enterprise Products Farmington

**Project:** Huerfano Pumping Station

Sample ID: <b>LCS-73058</b>	SampType: <b>LCS4</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>73058</b>		RunNo: <b>94486</b>							
Prep Date: <b>2/7/2023</b>	Analysis Date: <b>2/8/2023</b>		SeqNo: <b>3414319</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.9	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.9	80	120			
Xylenes, Total	3.0	0.10	3.000	0	102	80	120			
Surr: 1,2-Dichloroethane-d4	0.61		0.5000		123	70	130			
Surr: 4-Bromofluorobenzene	0.56		0.5000		112	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		111	70	130			
Surr: Toluene-d8	0.53		0.5000		106	70	130			

Sample ID: <b>mb-73058</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>PBS</b>	Batch ID: <b>73058</b>		RunNo: <b>94486</b>							
Prep Date: <b>2/7/2023</b>	Analysis Date: <b>2/8/2023</b>		SeqNo: <b>3414320</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.60		0.5000		121	70	130			
Surr: 4-Bromofluorobenzene	0.60		0.5000		120	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.54		0.5000		109	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2302270

14-Feb-23

**Client:** Enterprise Products Farmington

**Project:** Huerfano Pumping Station

Sample ID: <b>LCS-73058</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>73058</b>		RunNo: <b>94486</b>							
Prep Date: <b>2/7/2023</b>	Analysis Date: <b>2/8/2023</b>		SeqNo: <b>3414303</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	70	130			
Surr: BFB	580		500.0		116	70	130			

Sample ID: <b>mb-73058</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>73058</b>		RunNo: <b>94486</b>							
Prep Date: <b>2/7/2023</b>	Analysis Date: <b>2/8/2023</b>		SeqNo: <b>3414304</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	570		500.0		114	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: Enterprise Products Farmington      Work Order Number: 2302270      RcptNo: 1

Received By: Juan Rojas      2/7/2023 6:50:00 AM *[Signature]*  
Completed By: Tracy Casarrubias      2/7/2023 8:56:00 AM  
Reviewed By: *[Signature]* 2-7-23

### Chain of Custody

- 1. Is Chain of Custody complete?      Yes       No       Not Present
- 2. How was the sample delivered?      Courier

### Log In

- 3. Was an attempt made to cool the samples?      Yes       No       NA
- 4. Were all samples received at a temperature of >0° C to 6.0°C      Yes       No       NA
- 5. Sample(s) in proper container(s)?      Yes       No
- 6. Sufficient sample volume for indicated test(s)?      Yes       No
- 7. Are samples (except VOA and ONG) properly preserved?      Yes       No
- 8. Was preservative added to bottles?      Yes       No       NA
- 9. Received at least 1 vial with headspace <1/4" for AQ VOA?      Yes       No       NA
- 10. Were any sample containers received broken?      Yes       No
- 11. Does paperwork match bottle labels?      Yes       No   
(Note discrepancies on chain of custody)
- 12. Are matrices correctly identified on Chain of Custody?      Yes       No
- 13. Is it clear what analyses were requested?      Yes       No
- 14. Were all holding times able to be met?      Yes       No   
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: *JR 2/7/23*

### Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order?      Yes       No       NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good	Yes	MORTY		



**Site Photography  
Enterprise Field Services, LLC  
Huerfano Pumping Station  
UL L Section 21 T26N R10 ; 36.474426, -107.907606  
San Juan County, New Mexico**



**Photo 1: View of the composite sample aliquots.**



**Photo 1: View of the composite sample aliquots.**

## Huerfano Pump Station Release (February 2023)

## CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. Ensolum, LLC (Ensolum) referenced New Mexico Administrative Code (NMAC) 19.15.29 *Releases*, which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action, during the evaluation and remediation of the Site. The appropriate closure criteria for sites are determined using the siting requirements outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Ensolum utilized the general site characteristics and information available from NM state agency databases and federal agency geospatial databases to determine the appropriate closure criteria for the Site. Supporting figures and documentation associated with the following Siting bullets are Attached.

- The NM Office of the State Engineer (OSE) tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). No PODs were identified in the same nor adjacent Public Land Survey System (PLSS) sections (**See attached documentation**).
- Twenty-four cathodic protection wells (CPWs) were identified in the NM EMNRD OCD imaging database in the same PLSS section as the Site and in adjacent sections. The six closest CPWs are depicted on the **attached map**. Documentation for the cathodic protection well located near the Huerfanito Unit #195 well location indicates a depth to water of approximately 172 feet bgs. This cathodic protection well is located approximately 0.53 miles northeast of the Site and is approximately 4 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Huerfanito Unit #207 well location indicates a depth to water of approximately 130 feet bgs. This cathodic protection well is located approximately 0.39 miles west of the Site and is approximately 22 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Huerfanito Unit #196 well location indicates a depth to water of approximately 85 feet bgs. This cathodic protection well is located approximately 0.64 miles southeast of the Site and is approximately 52 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Huerfanito Unit #218E well location indicates a depth to water of approximately 160 feet bgs. This cathodic protection well is located approximately 0.66 miles southwest of the Site and is approximately 2 feet lower in elevation than the Site. Documentation for the cathodic protection well located near the Huerfanito Unit #202 well location indicates a depth to water of approximately 160 feet bgs. This cathodic protection well is located approximately 0.66 miles south of the Site and is approximately 42 feet higher in elevation than the Site. Documentation for the cathodic protection well located near the Huerfanito Unit #197E well location indicates a depth to water of approximately 160 feet bgs. This cathodic protection well is located approximately 0.91 miles southeast of the Site and is approximately 83 feet higher in elevation than the Site.
- The Site is not located within 300 feet of a NM EMNRD OCD-defined continuously flowing watercourse or significant watercourse.
- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.
- The Site is not located within 300 feet of a permanent residence, school, hospital, institution, or church.

Huerfano Pump Station Release (February 2023)

- No springs, or private domestic freshwater wells used by less than five households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No freshwater wells or springs were identified within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to New Mexico Statutes Annotated (NMSA) 1978, Section 3-27-3.
- Based on information identified in the U.S. Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is not within 300 feet of a wetland (**See attached Wetlands map**).
- Based on information identified in the NM Mining and Minerals Division's Geographic Information System (GIS) Maps and Mine Data database, the Site is not within an area overlying a subsurface mine (**See attached Mines map**).
- The Site is not located within an unstable area per Paragraph (6) of Subsection U of 19.15.2.7 NMAC.
- Based on information provided by the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not within a 100-year floodplain.

Based on this information, this appears to be a Tier 2 or Tier 3 site.



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

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No records found.

**PLSS Search:**

**Section(s):** 21, 15, 16, 17,  
20, 22, 27, 28,  
29      **Township:** 26N      **Range:** 10W

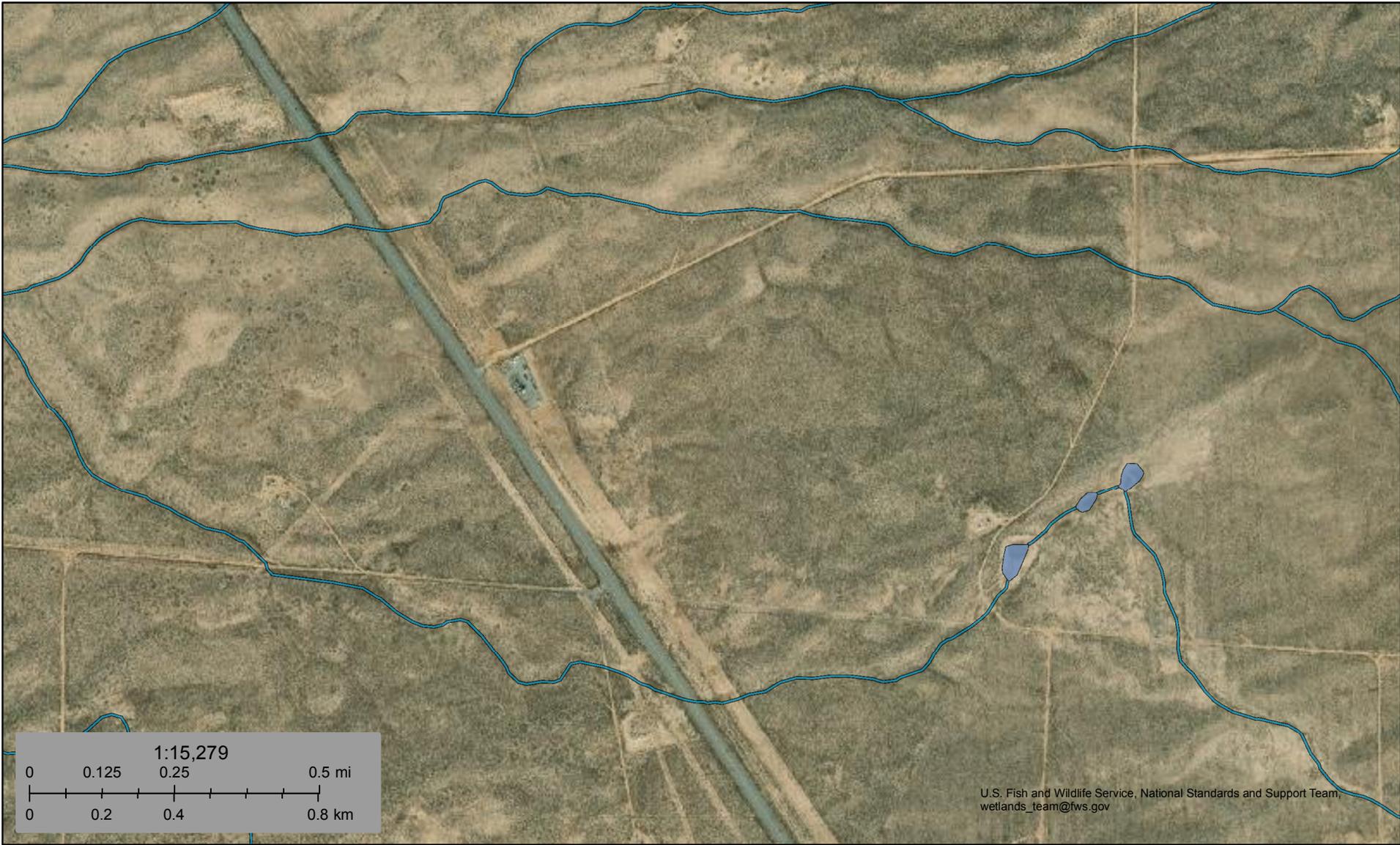
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The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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# Wetlands



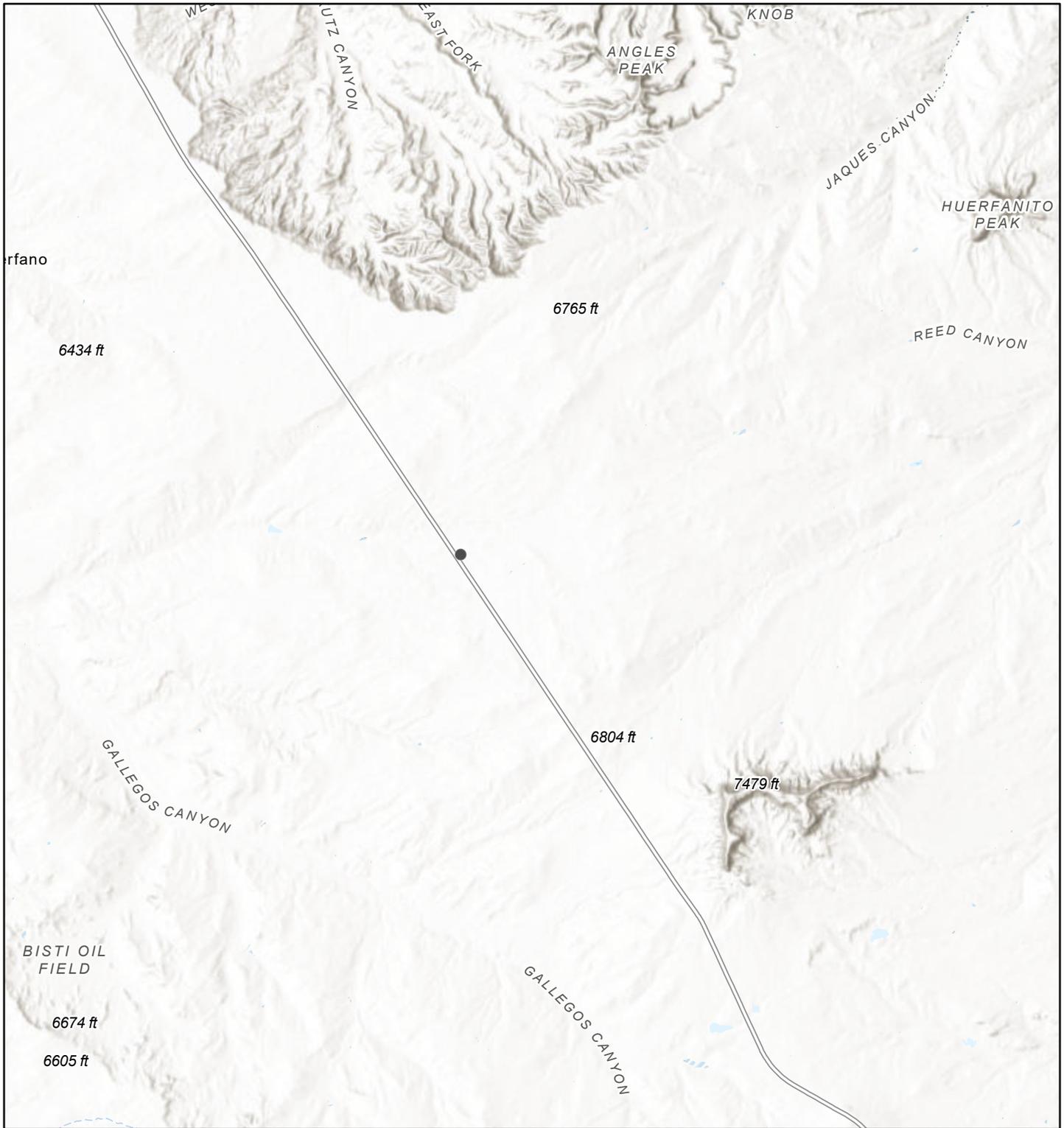
February 15, 2023

### Wetlands

- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

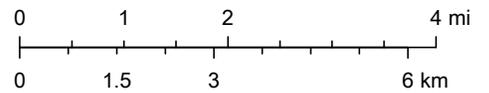
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# Mines



2/15/2023, 11:54:39 AM

1:144,448



Esri, NASA, NGA, USGS, New Mexico State University, San Juan County, NM, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

EMNRD MMD GIS Coordinator

30-045-20265

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. 15 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #176

cps 969w

Elevation 6631 Completion Date 9/5/75 Total Depth 325' 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. 150'

RECEIVED

MAY 31 1991

Depths gas encountered: N/A

OIL CON. DIV.  
DIST. 3

Type & amount of coke breeze used: 3000 lbs.

Depths anodes placed: 285', 275', 250', 240', 230', 220', 190', 180', 170', 16

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: gb #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.

30-045-20401

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

Operator MERIDIAN OIL Location: Unit NW Sec. 15 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #119  
cps 968w

Elevation 6681' Completion Date 8/25/75 Total Depth 600' 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. 460'

RECEIVED

MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: 5500 lbs.

CON. DIV

Depths anodes placed: 540', 530', 520', 510', 485', 475', 465', 440', 430', 420'

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: gb #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.

3929

30-045-26279

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

Operator MERIDIAN OIL INC. Location: Unit H Sec. 15 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #176E

cps 1847w

Elevation 6655' Completion Date 9/14/87 Total Depth 420' 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'

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 380', 370', 360', 350', 340', 330', 320', 310', 295', 285'

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: gb #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.

FM07-200 (rev. 10-82)

WELL CASING  
CATHODIC PROTECTION CONSTRUCTION REPORT  
DAILY LOG

COMP 9-15-87 ✓

Drilling Log (Attach Hereto)

95-37101

Completion Date 9-14-87

CPS #	Well Name, Line or Plant	Work Order #	Status	Inn. Union Check						
1847W	HUSTLING 176 F		OK	<input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad						
Location	Anode Size	Anode Type	Size Bit							
ME 15-26-10	3" x 60"	Carbon	3/4"							
Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat. Used						
420	409	6 hrs		FLEC. 66.55						
Anode Depth	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
	380	370	360	350	340	330	320	310	295	285
Anode Output (Amps)	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
	5.1	5.7	6.1	6.5	6.2	5.7	5.7	6.0	5.5	5.2
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	Volts		Amps		Ohms		No. 8 C.P. Cable Used		No. 2 C.P. Cable Used	
	11.7		21.8		.53					

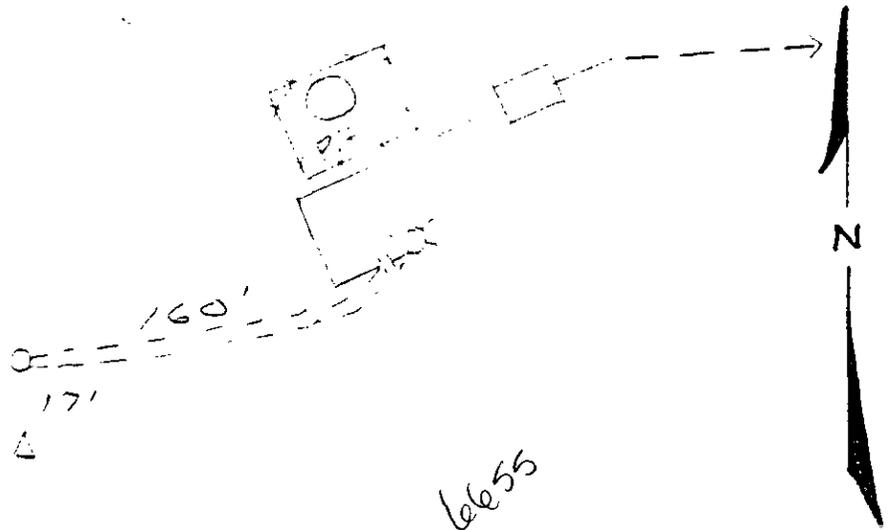
Remarks: D. Her sand water was at 240'. water sample was taken vent pipe is perforated up to 220'

Rectifier Size: 0 V     A 4300 ✓  
 Add'l Depth     364 ✓  
 Depth Credit: 91 ✓ 3936  
 Extra Cable: 30 ✓ 7.50 ✓  
 Ditch & 1 Cable: 17 ✓ 6.63 ✓  
 Ditch & 2 Cable: 150 ✓ 23.20 ✓  
 25' Meter Pole:     15000 ✓  
 20' Meter Pole:     4000 ✓  
 10' Stub Pole: 150 ✓  
 Junction Box: 2000

4553.33  
 TR 211.17  
 4434.50 ✓

All Construction Completed

*Randy Smith*  
 (Signature)







30-045-05829

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. 16 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #117  
cps 971w

Elevation 6582 Completion Date 9/5/75 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. 170'

**RECEIVED**  
MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: 3400 lbs.

**OIL CON. DIST.**

Depths anodes placed: 310', 300', 290', 280', 270', 240', 230', 220', 210', 200'

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: gb #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.

30-045-20407

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

Operator MERIDIAN OIL Location: Unit NW Sec. 16 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #194  
cps 970w

Elevation 6629' Completion Date 9/3/75 Total Depth 350' Land Type\* N/A

Casing, Sizes, Types & Depths 24' OF STEEL CASING

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. 155'

RECEIVED

MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: 3200 lbs.

OIL CON. DIV  
DIST. 3

Depths anodes placed: 305', 295', 265', 255', 245', 235', 225', 215', 205', 195'

Depths vent pipes placed: N/A

Vent pipe perforations: 250'

Remarks: gb #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.

#194E 30-045- 26232

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

Operator MERIDIAN OIL INC. Location: Unit N Sec. 16 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #194E  
cps 1854w

Elevation 6564' Completion Date 9/16/87 Total Depth 420' Land Type\* N/A

Casing, Sizes, Types & Depths 20' OF CASING

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. 120' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 375', 365', 355', 345', 335', 325', 315', 305', 295', 280'

Depths vent pipes placed: N/A

Vent pipe perforations: 320'

Remarks: (gb-#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.

FM-07-0238 (Rev. 10-82)

WELL CASING  
CATHODIC PROTECTION CONSTRUCTION REPORT  
DAILY LOG

Drilling Log (Attach Hereto)

315-29401 Completion Date 9-16-87

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check					
1854 W	Huerfano 194E		.83 IV	<input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad					
Location:	Anode Size:	Anode Type:	Size Bit:						
5016-2670	2" x 60"	Duriron	6 3/4"						
Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used				
470	412	6 hrs			Flew 6564				
Anode Depth	Anode Output (Amps)		Anode Depth		Anode Output (Amps)				
# 1 375	# 2 365	# 3 355	# 4 345	# 5 335	# 6 325	# 7 315	# 8 305	# 9 295	# 10 280
# 1 5.6	# 2 6.4	# 3 6.6	# 4 5.5	# 5 6.3	# 6 6.3	# 7 5.7	# 8 6.5	# 9 6.2	# 10 5.7
# 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 11.6			Amps 21.2			Ohms .55			

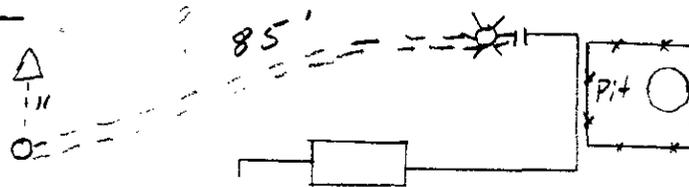
Remarks: Driller said water was at 120'. Vent pipe is perforated up to 100'. Set 20' of casing due to blow sand. A total of 15 minutes casing time

Rectifier Size: 40 V 16 A 4300  
 Addn'l Depth: \_\_\_\_\_ -352'  
 Depth Credit: 88 ✓ 3948  
 Extra Cable: 30' ✓ 7.50'  
 Ditch & 1 Cable: 11' ✓ 4.29'  
 Ditch & 2 Cable: 85' 44.20'  
 25' Meter Pole: \_\_\_\_\_  
 20' Meter Pole: \_\_\_\_\_  
 10' Stub Pole: 150.00  
 Junction Box: 40.00

All Construction Completed

*Randy Smith*  
(Signature)

20' eq pvc 440.00  
 @ \$22.00 4633.19  
 231.70  
 4865.69



6304





API WATER ANALYSIS REPORT FORM

QOS 185460

Company <b>MERIDIAN OIL Co.</b>		Sample No. <b>1</b>	Date Sampled <b>9/16/57</b>
Field <b>Ballard</b>	Legal Description	County or Parish <b>Santa Terre</b>	State <b>WVA</b>
Lease or Unit <b>Huerfano</b>	Well <b>194E</b>	Depth <b>120</b>	Formation <b>Ground Bd</b>
Type of Water (Produced, Supply, etc.) <b>Produced</b>	Sampling Point <b>Ground Bed</b>	Water, B/D	Sampled By <b>R.S</b>

DISSOLVED SOLIDS

<b>CATIONS</b>	mg/l	me/l
Sodium, Na (calc.)	374	16.3
Calcium, Ca	104	0.5
Magnesium, Mg	0.5	0.0
Barium, Ba		

OTHER PROPERTIES

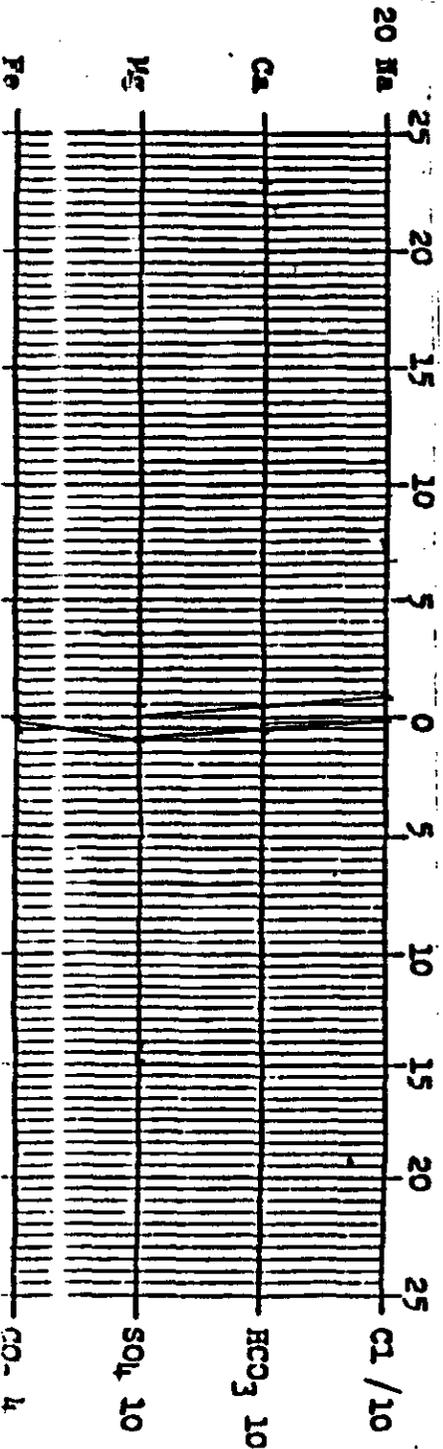
<b>PH</b>	<b>9.11</b>
Specific Gravity, 60/60 F.	1.0036
Resistivity (ohm-meters)	730
Conductivity	1400
<b>Total Dissolved Solids (calc.)</b>	<b>1250</b>

ANIONS

Chloride, Cl	25.5	0.7
Sulfate, SO <sub>4</sub>	461	9.6
Carbonate, CO <sub>3</sub>	19.2	0.6
Bicarbonate, HCO <sub>3</sub>	357	2.9

Iron, Fe (total)  
Sulfide, as H<sub>2</sub>S

REMARKS & RECOMMENDATIONS:



# BURGE CORROSION SYSTEMS, INC.

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

CPS 1854W

COMPANY Meridian DAILY DRILLING REPORT 9-16 1987

WELL NAME: <u>Huerfano</u> <del>100 ft</del>	WELL NUMBER: <u>194 E</u>	SECTION: <u>16</u>	TOWNSHIP: <u>26 N</u>	RANGE: <u>10 W</u>
WATER AT: <u>100 ft</u>		FEET:	HOLE MADE: <u>6 3/4 420 ft</u>	

DESCRIPTION OF FORMATION			
FROM	TO	FORMATION IS	COLOR
0	15	Sand	tan
15	60	Sand Stone	tan grey
60	80	Shale	grey
80	115	Water Sand	grey
115	160	Sandy shale & Shale	grey, purple
160	180	Sandstone	grey
180	210	Shale	grey
210	260	Sandstone	grey
260	400	Shale	Purple
400	420	Sand Stone	Grey
T.P. 420 ft			
SET 20 FT. PVC CASING			

REMARKS: Water sample at 120 ft set 20 ft. of casing.

Grant Summ Driller Tool Dresser

30-045-05830

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. 17 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #104

cps 972w

Elevation 6534' Completion Date 8/22/75 Total Depth 400' 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 140'

**RECEIVED**

MAY 31 1991

Depths gas encountered: N/A

**OIL CON  
DIST**

Type & amount of coke breeze used: 4300 lbs.

Depths anodes placed: 315', 305', 295', 285', 275', 265', 255', 245', 235', 22

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: gb #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.

30-045-20599

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. 20 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #207

cps 977w

Elevation 6516' Completion Date 8/28/75 Total Depth 280' 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. 130'

RECEIVED  
MAY 31 1991  
OIL CON. DIV  
DIS

Depths gas encountered: N/A

Type & amount of coke breeze used: 4300 lbs.

Depths anodes placed: 245', 235', 225', 215', 195', 815', 175', 165', 155'

Depths vent pipes placed: 245'

Vent pipe perforations: 245'

Remarks: (gb #1) ALL ANODES TIGHT. BELIEVE HOLE CAVED. COKE AROUND #10 ANODE ONLY.

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

*Handwritten signature*

Drilling Log (Attach Hereto)

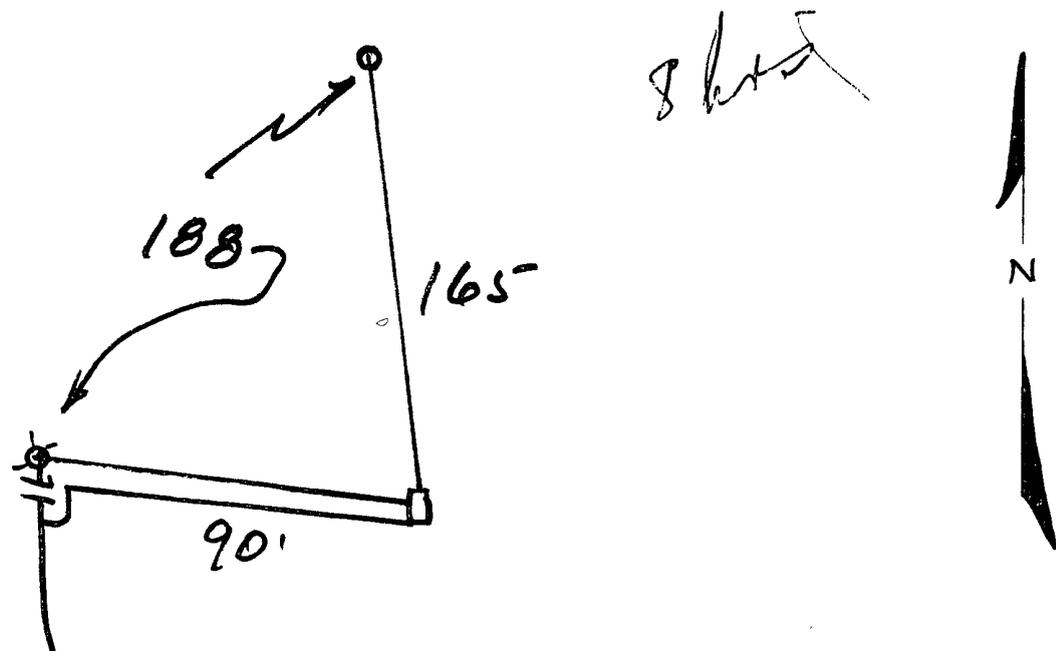
Completion Date 8-28-75

Well Name <b>Huerfano # 207</b>		Location <b>SE 20-26-10</b>				CPS No. <b>977W</b>													
Type & Size Bit Used <b>6 3/4</b>						Work Order No. <b>54746</b>													
Anode Hole Depth <b>280</b>		Total Drilling Rig Time		Total lbs. Coke Used <b>4300</b>		Lost Circulation Mat'l Used		No. Sacks Mud Used											
Anode Depth																			
# 1	<b>245</b>	# 2	<b>235</b>	# 3	<b>225</b>	# 4	<b>215</b>	# 5	<b>205</b>	# 6	<b>195</b>	# 7	<b>185</b>	# 8	<b>175</b>	# 9	<b>165</b>	# 10	<b>155</b>
Anode Output (Amps)																			
# 1	<b>2.0</b>	# 2	<b>2.4</b>	# 3	<b>2.3</b>	# 4	<b>2.5</b>	# 5	<b>2.2</b>	# 6	<b>2.2</b>	# 7	<b>2.3</b>	# 8	<b>2.1</b>	# 9	<b>2.4</b>	# 10	<b>6.6</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>11.8</b>		Amps <b>16.0</b>		Ohms <b>0.73</b>		<b>2300</b>													

Remarks: Wet at 130, Start water injection at 140  
Drilled 240' - Water Next A.M. at 130'  
Vent Perforated 245' - (ALL)  
NOTE: - No. 10 Anode. After Approx 4 sacks of Coke  
was Down Hole. ALL Anodes Got Tight at once  
was able to Get No 10 Anode loose -  
Believe Hole Caved -  
Coke Around #10 Anode only

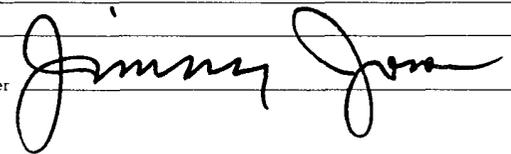
All Construction Completed  
*Dave*  
 (Signature)

GROUND BED LAYOUT SKETCH



DAILY DRILLING REPORT

LEASE					WELL NO. <b>977-W</b> CONTRACTOR					RIG NO.			REPORT NO.			DATE			19
MORNING					DAYLIGHT					EVENING									
Driller					Driller					Driller									
Total Men In Crew					Total Men In Crew					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.					
0.0	55'	Sand			140'	146'	Shale			172'	176'	Shale							
55'	105'	Sandstone			146'	152'	Sandstone			176'	198'	Sandstone							
105'	114'	Shale			152'	170'	Shale			178'	190'	Shale							
114'	140'	Sandstone			170'	172'	Sandstone			190'	195'	Sandstone							
NO. DC _____ SIZE _____ LENG. _____					NO. DC _____ SIZE _____ LENG. _____					NO. DC _____ SIZE _____ LENG. _____									
BIT NO. _____					BIT NO. _____					BIT NO. _____									
SERIAL NO. _____					SERIAL NO. _____					SERIAL NO. _____									
STANDS _____					STANDS _____					STANDS _____									
SINGLES _____					SINGLES _____					SINGLES _____									
DOWN ON KELLY _____					DOWN ON KELLY _____					DOWN ON KELLY _____									
TOTAL DEPTH _____					TOTAL DEPTH _____					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							
195'	205'	Shale																	
205'	207'	Sandstone																	
207'	213'	Shale																	
213'	221'	Sandstone																	
221'	227'	Shale																	
227'	240'	Sandstone																	
REMARKS - 280' T-D.					REMARKS -					REMARKS -									
Dump at 122-140																			
WATER @ 140 - 8-28-75																			
Trivict at 140 to 280'																			

SIGNED: Toolpusher  Company Supervisor

977W - 8-28-75

Wet at 130  
Start inj at 140  
Water Next AM at 130

MW		gal/mol
16	C <sub>1</sub>	6.4
30	C <sub>2</sub>	10.12
44	C <sub>3</sub>	10.42
58	IC <sub>4</sub>	12.28
72	NC <sub>4</sub>	11.91
72	IC <sub>5</sub>	13.85
86	NC <sub>5</sub>	13.71
86	IC <sub>6</sub>	15.58
100	C <sub>6</sub>	15.57
100	IC <sub>7</sub>	17.2
114	C <sub>7</sub>	17.46
114	IC <sub>8</sub>	19.39
128	C <sub>8</sub>	19.64
142	C <sub>9</sub>	19.67

MW	MISC	gal/mol
44	CO <sub>2</sub>	0.38
34	H <sub>2</sub> S	5.17
28	N <sub>2</sub>	4.18
2	H <sub>2</sub>	3.38

120	1.8			
	1.8			
30	.6			
	1.0			
46	1.2			
	1.1			
50	1.2			
	1.2			
60	1.2			
	1.4			
70	1.4			
	1.6			
80	1.6			
	1.7			
90	1.8			
	1.7			
200	1.7			
	1.6			
10	1.5	1	245	2.0
	1.6	2	235	2.4
20	1.7	3	225	2.3
	1.6	4	215	2.4
30	1.6	5	205	2.0
	1.6	6	195	2.2
40	1.6	7	185	2.3
	1.5	8	175	1.8
50	1.4	9	165	1.8
	1.6	10	155	2.2
60	1.3			
266				
70				
80				

T.D

10 Amides =  $11.8 \text{ V} - 16.0 \text{ A} = 0.73 \text{ A}$

1 Thru 9 =  $12.20 \text{ V} \quad 13.0 \text{ A} = 0.94 \text{ A}$

30-045-20731

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

Operator MERIDIAN OIL Location: Unit NW Sec. 20 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT NP #212  
cps 975w

Elevation 6487 Completion Date 9/18/75 Total Depth 375' Land Type\* N/A

Casing, Sizes, Types & Depths 18' SURFACE CASING

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. 135'

Depths gas encountered: N/A

Type & amount of coke breeze used: 4100 lbs.

Depths anodes placed: 280', 270', 260', 250', 200', 190', 180', 170', 155', 140'

Depths vent pipes placed: N/A

Vent pipe perforations: 250'

Remarks: gb: #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.

El Paso Natural Gas Company  
Form 7-238 (Rev. 1-69)

WELL CASING  
CATHODIC PROTECTION CONSTRUCTION REPORT  
DAILY LOG

*Handwritten signature*  
Completion Date **9-18-75**

Drilling Log (Attach Hereto)

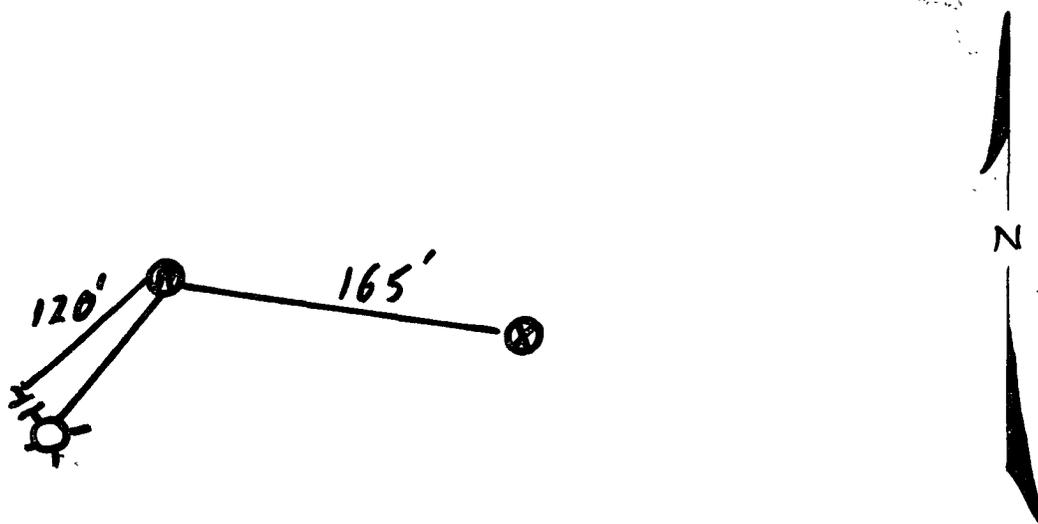
Well Name <b>Huerfano #212</b>			Location <b>NW 10-16N-10W</b>			CPS No. <b>975W</b>					
Type & Size Bit Used <b>6 3/4"</b>						Work Order No. <b>54863.19-50-2</b>					
Anode Hole Depth <b>375</b>		Total Drilling Rig Time		Total Lbs. Coke Used <b>4,100</b>		Lost Circulation Mat'l Used		No. Sacks Mud Used			
Anode Depth	# 1 <b>280</b>	# 2 <b>270</b>	# 3 <b>260</b>	# 4 <b>250</b>	# 5 <b>200</b>	# 6 <b>190</b>	# 7 <b>180</b>	# 8 <b>170</b>	# 9 <b>155</b>	# 10 <b>145</b>	
Anode Output (Amps)	# 1 <b>4.0</b>	# 2 <b>4.8</b>	# 3 <b>4.8</b>	# 4 <b>3.6</b>	# 5 <b>4.2</b>	# 6 <b>4.5</b>	# 7 <b>4.2</b>	# 8 <b>4.2</b>	# 9 <b>4.8</b>	# 10 <b>4.6</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 Volts <b>11.3</b>			Amps <b>15.5</b>			Ohms <b>0.73</b>			No. 8 C.P. Cable Used <b>2400'</b>		No. 2 C.P. Cable Used

Remarks: **Drill with Air. Driller said water at 135' Drill to 300' Logged Hole to 240' Not Enough Hole Drill to 375 Logging Anode stopped at 250' set 18' surface casing. Logging Anode stopped at 301' Vent hose perforator perforator 250'**

All Construction Completed

*Handwritten signature: Edward R. Paath*  
(Signature)

GROUND BED LAYOUT SKETCH





995W

1.8

140	1.8	20	Driller said water at 135'		
50	1.8	30			
60	1.6	40			
70	2.0	50			
80	1.8	60			
90	2.0	70			
200	1.8				
10	1.0				
20	.6				
30	.8				
40	1.4				
50	1.8		1	280	2.0 4.0
	1.8		2	270	2.2 4.8
60	2.0		3	260	2.0 4.8
	2.0		4	250	1.8 3.6
70	2.0		5	200	2.0 4.2
	2.0		6	190	2.2 4.5
80	1.8		7	180	2.0 4.2
	1.8		8	170	2.2 4.2
90	1.9		9	155	2.0 4.8
	1.9		10	145	2.0 4.6
300	301 TD			2100	
10				<del>300</del> 400	
				15.5 A	
		11.3 V			0.73 r

MW	gas/mol
16	C <sub>1</sub> 6.3
30	C <sub>2</sub> 10.7
44	C <sub>3</sub> 19.4
58	IC <sub>4</sub> 12.38
72	IC <sub>5</sub> 13.85
86	IC <sub>6</sub> 15.50
100	IC <sub>7</sub> 17.2
114	C <sub>8</sub> 20.7
128	C <sub>9</sub> 24.4
142	C <sub>10</sub> 29.1

MW	MISC	gas/mol
44	CO <sub>2</sub>	6.25
34	H <sub>2</sub> S	3.12
28	N <sub>2</sub>	4.16
2	H <sub>2</sub>	3.38

30-045-21399

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

(Submit 3 copies to OCD Aztec Office)

Operator MERIDIAN OIL Location: Unit SW Sec. 20 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #261  
cps 976w

Elevation 6494' Completion Date 9/18/75 Total Depth 403' 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. 170'

Depths gas encountered: N/A

Type & amount of coke breeze used: 4500 lbs.

Depths anodes placed: 380', 370', 360', 350', 340', 300', 290', 225', 215', 20'

Depths vent pipes placed: N/A

Vent pipe perforations: 220'

Remarks: gb #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.

30-045-20408

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

Operator MERIDIAN OIL Location: Unit NW Sec 21 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #195  
cps 978w

Elevation 6534' Completion Date 9/2/75 Total Depth 360' Land Type\* N/A

Casing, Sizes, Types & Depths 39' OF 8" PLASTIC CASING

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. 172'-200'

**RECEIVED**  
MAY 31 1991  
OIL CON. DIV  
DIST. 3

Depths gas encountered: N/A

Type & amount of coke breeze used: 3500 lbs.

Depths anodes placed: 320', 310', 300', 260', 250', 240', 230', 220', 210', 200'

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: gb #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.

30-045-20416

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. 21 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #196

cps 979w

Elevation 6590' Completion Date 8/29/75 Total Depth 450' 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 85'-110', 215'-242' & 340'-360'

Depths gas encountered: N/A

Type & amount of coke breeze used: 4600 lbs.

Depths anodes placed: 355', 345', 335', 325', 315', 305', 295', 285', 275', 265'

Depths vent pipes placed: N/A

Vent pipe perforations: 250'

Remarks: gb. #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

*[Handwritten Signature]*

Completion Date **8-29-75**

Drilling Log (Attach Hereto)

Hucrfono #196				Location SE21-26-10				CPS No. 979W			
Pipe & Size Bit Used 6 3/4								Work Order No. 5457+5465			
Anode Hole Depth 450		Total Drilling Rig Time		Total lbs. Coke Used 4600		Lost Circulation Mat'l Used		No. Sacks Mud Used			
Anode Depth	# 1 355	# 2 345	# 3 335	# 4 325	# 5 315	# 6 305	# 7 295	# 8 285	# 9 275	# 10 265	
Anode Output (Amps)	# 1 4.0	# 2 4.4	# 3 5.2	# 4 5.2	# 5 6.5	# 6 5.1	# 7 5.6	# 8 4.9	# 9 5.0	# 10 4.7	
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 Volts 11.0		Amps 19.5		Ohms 0.56		No. 8 C.P. Cable Used 3500		No. 2 C.P. Cable Used			

Remarks: Wet at 85 to 110, 215 to 242 & 340 to 360  
 Start water injection at 360' - Drilled to 450' - Broke  
 cable on rig - Filled water to 100' & logged to 435'  
 Next A.M. water at 100' & T.D. at 406'  
 Vent Perforated 250'

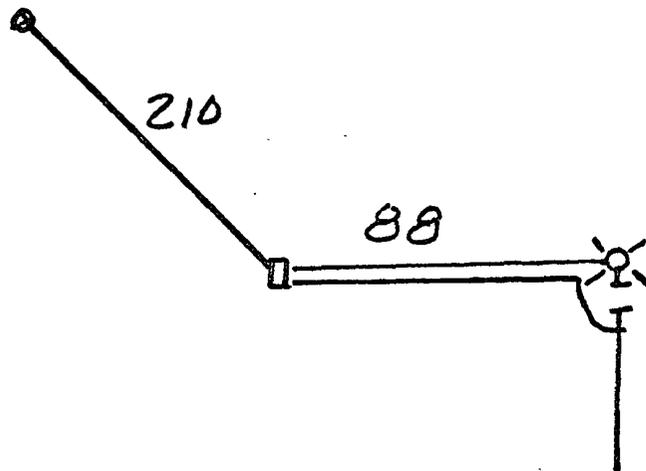
*[Handwritten Signature]*

All Construction Completed

*[Handwritten Signature]*

(Signature)

GROUND BED LAYOUT SKETCH



6590'



8-28-28-21-75

DAILY DRILLING REPORT

LEASE					WELL NO. <b>979-W</b> CONTRACTOR					RIG NO. <b>3991</b> 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.	FROM	TO	FORMATION	WT-BIT	R.P.M.	FROM	TO	FORMATION	WT-BIT	R.P.M.	FROM	TO	FORMATION	WT-BIT	R.P.M.																														
0.0	22'	Sand			80'	85'	Shale gray			142'	150'	Shale			22'	58'	Sandstone			85'	110'	Sandstone			150'	157'	Sandstone			58'	75'	Shale gray			110'	127'	Shale gray			157'	160'	Shale			75'	80'	Sandstone			127'	142'	Sandstone			160'	200'	Sandstone		
BIT NO.					NO. DC					BIT NO.					NO. DC					BIT NO.					NO. DC																																		
SERIAL NO.					STANDS					SERIAL NO.					STANDS					SERIAL NO.					STANDS																																		
SIZE <b>3/4 New</b>					SINGLES					SIZE					SINGLES					SIZE					SINGLES																																		
TYPE					DOWN ON KELLY					TYPE					DOWN ON KELLY					TYPE					DOWN ON KELLY																																		
MAKE					TOTAL DEPTH					MAKE					TOTAL DEPTH					MAKE					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																	
200'	210'	Shale	210'	242'	Sandstone	242'	250'	Shale	250'	256'	Sandstone	256'	275'	Shale	275'	293'	Sandstone	293'	298'	Shale	298'	305'	Sandstone	305'	311'	Shale	311'	317'	Sandstone	317'	320'	Shale	320'	330'	Sandstone	330'	345'	Shale	345'	355'	Sandstone	355'	360'	Shale	360'	365'	Sandstone	365'	375'	Shale	375'	435'	Sandstone						
REMARKS -																																																											
REMARKS -																																																											
REMARKS - 455' T.D.																																																											

SIGNED: Toolpusher Jimmy Jaws Company Supervisor

979W

MW	gas/mol
16	6.4
28	10.15
44	10.42
58	12.38
72	11.93
86	13.85
100	13.71
114	15.50
128	15.57
142	17.2
156	17.46
170	19.39
184	19.64
198	19.64

MW	MISC	gas/mol
34	CO <sub>2</sub>	6.38
28	H <sub>2</sub> S	4.17
2	N <sub>2</sub>	4.16
2	H <sub>2</sub>	1.38

Depth	Pressure	Flow	Notes
200	1.5	280	Water at 85-100
	2.2		215 to 242
10	2.6	90	340 to 360
	2.5		Start wiring at
20	2.4	300	360' - Drill to 450
	2.5		Broke cable
30	2.6	10	Fill water to 100
	2.6		& Log -
40	2.5	20	Water Next A.M. at
	2.5		100' -
50	2.5	30	Bottom at 406
	2.6		
60	2.6	40	
	2.6		
70	2.5	50	
	2.6		
80	2.6	60	
	2.6		
90	2.5	70	
	2.5		
200	2.6	80	
	2.4		
10	2.2	90	
	1.7		
20	1.4	400	
	1.6		
30	1.6	10	
	2.2		
40	2.5	20	
	2.5		
50	2.4	30	
	2.5		
60	2.5	435	
	2.4	40	
70	2.4	50	
	2.4		

TID

11.0V 19.5A = 0.5672

30-045-20282

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

(Submit 3 copies to OCD Aztec Office)

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

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #178

cps 980w

Elevation 6627' Completion Date 9/15/87 Total Depth 360' 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. 140'

RECEIVED

MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

OIL CON. DIV  
DIST. 9

Depths anodes placed: 320', 305', 295', 285', 275', 265', 255', 245', 235', 225'

Depths vent pipes placed: N/A

Vent pipe perforations: UP TO 130'

Remarks: gb #2

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.

30-045-20282

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

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

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #178

cps 980w

Elevation 6606' Completion Date 9/3/75 Total Depth 300' 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. 160'

RECEIVED  
MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: 2900 lbs.

OIL CON. DIV  
DIST

Depths anodes placed: 250', 240', 230', 220', 210', 200', 180', 170', 160', 150'

Depths vent pipes placed: N/A

Vent pipe perforations: N/A

Remarks: gb #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.

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'

**RECEIVED**

MAY 31 1991

Depths gas encountered: N/A

**OIL CON. DIV**  
**DIST. 3**

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: gb #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.

3015

30-045-26675

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

Operator MERIDIAN OIL INC. Location: Unit K Sec. 36 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #177E  
cps 1967w

Elevation 6620' Completion Date 6/22/88 Total Depth 250' Land Type\* N/A

Casing, Sizes, Types & Depths 20' CASING

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. 105' NO SAMPLE

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 230', 220', 210', 200', 180', 170', 160', 150', 140', 130'

Depths vent pipes placed: 250'

Vent pipe perforations: 250'

Remarks: gb #1

**RECEIVED**

MAY 21 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

FM-07-238 (Rev. 10-82)

Drilling Log (Attach Hereto)

Comp 6-23-88

Completion Date 6-22-88

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins Union Check					
1967W	Sherrillano 177 E	54531A 2054531A	6005 = 854	<input type="checkbox"/> Good <input type="checkbox"/> Bad					
Location:	Anode Size:	Anode Type:	Size Bit:						
K 36-26-10	2" x 60"	Duriron	634						
Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Goke Used	Lost Circulation Mat'l Used					
250	230								
Anode Depth									
# 1 230	# 2 990	# 3 210	# 4 200	# 5 190	# 6 170	# 7 160	# 8 150	# 9 140	# 10 130
Anode Output (Amps)									
# 1 8.4	# 2 7.6	# 3 6.8	# 4 5.8	# 5 4.7	# 6 3.2	# 7 5.2	# 8 5.6	# 9 5.0	# 10 5.4
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 12.0	Amps 28.0	Ohms .428							

Remarks: \* no static test due to compressor connections at well head. Drilled to 250' logged to 230'. Driller said water to be 105' no water sample. Installed 250' of 1" PVC perforated vent pipe. Set 30' surface casing, 1 hr. rig time.

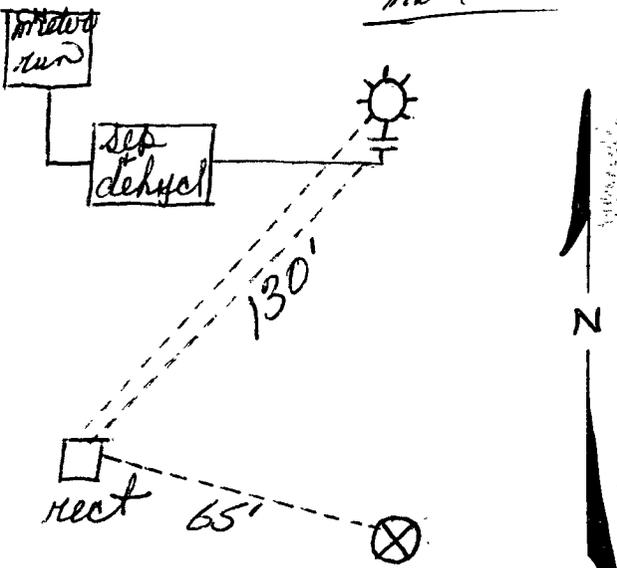
Rectifier Size:	40 V	16 A	669.00
Adn'l Depth			
Depth Credit:	250 @ .350		875.00
Extra Cable:	160 @ .24		38.40
Ditch & 1 Cable:	195 @ .70		136.50
25' Meter Pole:	1		307.00
20' Meter Pole:			
10' Stub Pole:			

1 Junction Box 225.00  
20' surface casing 110.00  
1 hr. rig time 138.00  
4822.90  
tax 241.15  
5064.05 OK

All Construction Completed

Calvin Rodman  
(Signature)

GROUND BED LAYOUT SKETCH



6600

DATA SHEET NO. \_\_\_\_\_

COMPANY \_\_\_\_\_ JOB NO. \_\_\_\_\_ DATE: 6-22-88  
 WELL: Huerfano 171 F PIPELINE: \_\_\_\_\_  
 LOCATION: SEC. 36 TWP. 26 RGE. 10 CO. \_\_\_\_\_ STATE \_\_\_\_\_  
 ELEV. \_\_\_\_\_ FT: ROTARY 250 FT: CABLE TOOL 0 FT: CASING 20  
 GROUNDED: DEPTH: 250 FT. DIA. 6 3/4 IN. GAS 4200 LBS. ANODES 11-2" x 60" type D

DEPTH, FT.	DRILLER'S LOG	EXPLORING ANODE TO STRUCTURE			NO COKE	WITH COKE	ANODE NO.	DEPTH, TOP OF ANODES
		E	I	R	I	I		
50								
55								
60								
65								
70								
75								
80								
85								
90								
95								
100				1.6				
5				1.7				
10				1.7				
15				1.5				
20				1.9				
25				2.2				
30				2.4	2.9	5.4	(10)	130
35				2.4				
40				2.3	2.9	5.0	(9)	140
45				2.4				
50				2.5	2.8	5.6	(8)	150
55				2.4				
60				2.2	2.7	5.2	(7)	160
65				2.1				
70				2.2	2.5	3.2	(6)	170
75				2.1				
80				2.1	2.4	4.0	(5)	180
85				1.9				
90				2.0				
95				2.4				
200				2.0	2.5	5.8	(4)	200
5				2.3				
10				2.3	2.8	6.8	(3)	210
15				2.4				
20				2.5	2.0	7.6	(2)	220
25				2.3				
30				2.5	3.2	8.4	(1)	230
35				2.3				
40				2.0				
45								
50	<u>F. D. 250</u>							
55								

GROUNDED RESISTANCE: (1) VOLTS 12.0 - AMPS 28.0 - 428 OHMS

(2) VIBROGROUND \_\_\_\_\_ OHMS

GENERAL CATHODIC PROTECTION SERVICES CO.

D. CRASS DRILLING CO.

1967

Drill No. 3

DRILLER'S WELL LOG

S. P. No. Huerfano 177-E-DK Date 6-22-88  
Client Meridian Oil Co. Prospect \_\_\_\_\_  
County SAN JUAN State New Mex.

If hole is a re-drill or if moved from original staked position show distance and direction moved: \_\_\_\_\_

FROM	TO	FORMATION — COLOR — HARDNESS
0	20	SAND
20	50	SANDY SHALE
50	90	SANDSTONE
90	105	SAND ✓
105	260	SHALE

Mud \_\_\_\_\_ Bron \_\_\_\_\_ Lime \_\_\_\_\_

Rock Bit Number \_\_\_\_\_ Make \_\_\_\_\_

Remarks: Water @ 105'  
Set 20' casing 1 Hr.

Driller Ronnie Brown

30-045-05697

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

Operator MERIDIAN OIL Location: Unit NW Sec. 27 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #121

cps 878w

Elevation 6655' Completion Date 8/12/83 Total Depth 580' 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. 180' & 410' - 420'

Depths gas encountered: N/A

Type & amount of coke breeze used: 6200 lbs.

Depths anodes placed: 520', 510', 465', 445', 435', 425', 380', 370', 360', 350'

Depths vent pipes placed: 545' OF 1" VENT PIPE

Vent pipe perforations: 400'

Remarks: gb #2

**RECEIVED**

**MAY 31 1984**

**OIL CON. DIST.**

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.

30-045-05697

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

Operator MERIDIAN OIL Location: Unit NW Sec. 27 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #121

cps 878w

Elevation 6655' Completion Date 6/16/71 Total Depth 520' 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. 300'

RECEIVED  
MAY 31 1994

Depths gas encountered: N/A

OIL CON. DIV.  
DIST. 3

Type & amount of coke breeze used: 9750 lbs.

Depths anodes placed: 410', 395', 385', 375', 365', 355', 345', 335', 325', 315'

Depths vent pipes placed: N/A

Vent pipe perforations: 300'

Remarks: gb #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.

30-045-20467

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. 27 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #198

cps 988w

Elevation cc (\*"Completion Date 9/29/75 Total Depth 400' 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. 140'

RECEIVED

MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: 3500 lbs. OIL CON. DIV

Depths anodes placed: 320', 310', 300', 290', 280', 270', 260', 250', 240', 230' DIST

Depths vent pipes placed: N/A

Vent pipe perforations: 210'

Remarks: qb #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.

30-045-20467

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. 27 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #198

cps 988w

Elevation 6698' Completion Date 12/20/82 Total Depth 440' 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. DRILLED OUT OF WATER ZONE AT 200'

Depths gas encountered: N/A

Type & amount of coke breeze used: 3000 lbs.

Depths anodes placed: 365', 355', 340', 330', 315', 305', 290', 280', 240', 220'

Depths vent pipes placed: 400'

Vent pipe perforations: 220'

Remarks: gb #2 FIRST HOLE CAVED AT 440' RECOVERED ANODES.

**RECEIVED**

MAY 31 1991

OIL CON. D

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.

30-045-20467

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. 27 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #198

cps 988w

Elevation cc (\*"Completion Date 9/29/75 Total Depth 400' 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. 140'

RECEIVED

MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: 3500 lbs. OIL CON. DIV

Depths anodes placed: 320', 310', 300', 290', 280', 270', 260', 250', 240', 230' DIST

Depths vent pipes placed: N/A

Vent pipe perforations: 210'

Remarks: qb #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.

36-045-20607

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

Operator MERIDIAN OIL Location: Unit NW Sec. 28 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #202

cps 989w

Elevation 6580' Completion Date 9/25/75 Total Depth 375' 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. 140'

**RECEIVED**

MAY 31 1991

Depths gas encountered: N/A

**OIL CON. D<sup>1</sup>  
DIST. ?**

Type & amount of coke breeze used: 3300 lbs.

Depths anodes placed: 310', 300', 290', 280', 240', 185', 175', 165', 155', 145'

Depths vent pipes placed: N/A

Vent pipe perforations: 228'

Remarks: gb #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.

#202E

30-045-262803937

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

Operator MERIDIAN OIL INC. Location: Unit L Sec. 28 Twp 26 Rng 20

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #202E  
cps 1855w

Elevation 6632w Completion Date 8/14/87 Total Depth 440' 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. 160' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 405', 395', 385', 375', 365', 320', 310', 300', 290', 283', 275'

Depths vent pipes placed: 430'

Vent pipe perforations: 300'

\*  
Remarks: (gb #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.

FM-07-0238 (Rev 10-82)

WELL CASING  
CATHODIC PROTECTION CONSTRUCTION REPORT  
DAILY LOG

Comp 8-14-87

Drilling Log (Attach Hereto)

Completion Date 8/14/87

95-418-01

Flev. 6632'

CPS #	Well Name, Line or Plant:	Work Order #	State:	Ins. Union Check
1855W	HURTANO UNIT "202E"		.75V N	<input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad

Location: L SW 28-26-10	Anode Size: 2" x 60"	Anode Type: Durion	Size Bit: 6 3/4"
-------------------------	----------------------	--------------------	------------------

Depth Drilled: 440	Depth Logged: 430	Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used
--------------------	-------------------	-------------------	----------------------	-----------------------------	--------------------

Anode Depth #1 405	#2 395	#3 385	#4 375	#5 365	#6 320	#7 310	#8 300	#9 290	#10 283
--------------------	--------	--------	--------	--------	--------	--------	--------	--------	---------

Anode Output (Amps) #1 5.7	#2 6.5	#3 4.3	#4 4.7	#5 5.7	#6 2.7	#7 5.4	#8 4.5	#9 4.3	#10 5.8
----------------------------	--------	--------	--------	--------	--------	--------	--------	--------	---------

Anode Depth #11 275	#12	#13	#14	#15	#16	#17	#18	#19	#20
---------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----

Anode Output (Amps) #11 4.1	#12	#13	#14	#15	#16	#17	#18	#19	#20
-----------------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----

Total Circuit Resistance Volts 11.5	Amps 19.7	Ohms .58	No. 8 C.P. Cable Used	No. 2 C.P. Cable Used
-------------------------------------	-----------	----------	-----------------------	-----------------------

Remarks: WATER AT 160'. (Took water sample) More WATER AT 250'.  
 INSTALLED 430' of 1" P.V.C. VENT pipe Perforated 300'.

"6 anode sanded in, We installed "11 to make 10. anodes covered with coke breeze

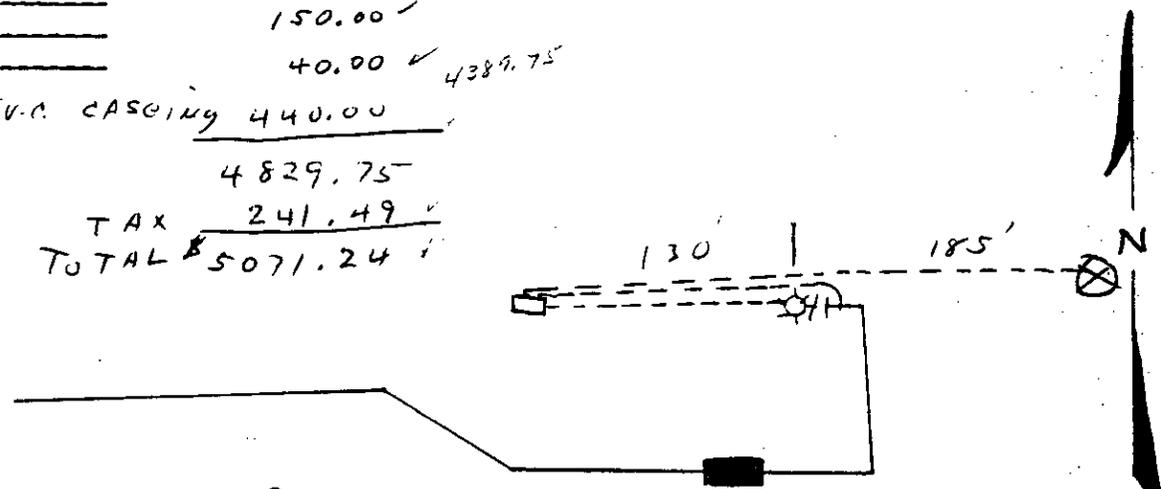
G.B. \$4300.00 -

Rectifier Size: 40 V 16 A P.P.	
Add'l Depth	
Depth Credit: -70	-280.00 ✓ 41020.00
Extra Cable: 160' ✓	40.00 ✓
Ditch & 1 Cable: 185' ✓	72.15 ✓
Ditch & 2 Cable: 130'	67.60 ✓
25' Meter Pole: -	
20' Meter Pole: -	
10' Stub Pole: 1	150.00 ✓
Junction Box: 1	40.00 ✓ 4389.75

All Construction Completed

*JR Stoltz*  
(Signature)

set 20 of 8" P.V.C. casing 440.00  
 4829.75  
 TAX 241.49 ✓  
 TOTAL \$5071.24 ✓



# MERIDIAN OIL

P. O. BOX 4289-Phone 327-0251  
FARMINGTON, NM

Date 8/14/87

## DEEP WELL GROUND BED LOG

CPS 1855 W

Company Meridian Oil

Well No. Huerfano 202 E Location SW 28-26-10

Volts Applied 11.5

Amperes 19.7

5		230	.5		455		680
10		235	.7		460		685
15		240	.5		465		690
20		245	.4		470		695
25		250	.5	WATER	475		700
30		255	.6		480		705
35		260	1.0		485		710
40		265	.4		490		715
45		270	.9		495		720
50		275	2.0	①	500		725 1-405-2.7-5.7
55		280	2.5	②	505		730 2-395-3.0-6.5
60		285	2.7		510		735 3-385-2.9-4.3
65		290	2.8	③	515		740 4-375-2.8-4.7
70		295	2.7		520		745 5-365-3.0-5.7
75		300	2.7	④	525		750 6-320-2.5-2.7
80		305	2.6		530		755 7-310-2.9-5.4
85		310	3.1	⑤	535		760 8-300-2.8-4.5
90		315	2.6		540		765 9-290-2.9-4.3
95		320	2.5	⑥	545		770 10-280-3.0-5.8
100		325	2.2		550		775 11-275-3.0-4.1
105		330	2.1		555		780
110		335	2.1		560		785
115		340	2.1		565		790
120		345	1.9		570		795
125		350	1.8		575		800
130		355	1.3		580		805
135		360	2.1		585		810
140		365	2.9	⑦	590		815
145		370	2.8		595		820
150		375	2.8	⑧	600		825
155		380	2.3		605		830
160	WATER	385	2.9	⑨	610		835
165		390	2.7		615		840
170		395	2.8	⑩	620		845
175		400	2.8		625		850
180		405	2.5	⑪	630		855
185		410	2.6		635		860
190		415	2.4		640		865
195		420	2.2		645		870
200	.5	425	1.8		650		875
205	1.1	430		TD	655		880
210	.5	435			660		885
215	.4	440		Drilled To	665		890
220	.2	445			670		895
		450			675		900



185502

API WATER ANALYSIS REPORT FORM

Company MERIDIAN OIL COMPANY		Sample No. 2		Date Sampled 8-14-87	
Field Bassard	Legal Description	County or Parish Iberia Parish	Supp. M.		
Lease or Unit	Well Huerfano # 202E	Depth 160'	Formation	Water, B/D	
Type of Water (Produced, Supply, etc.)	Sampling Point 160'	Sampled By J.E.			

DISSOLVED SOLIDS

CATIONS

Sodium, Na (calc.)	mg/l	me/l
Calcium, Ca	708	30.8
Magnesium, Mg	3.4	0.1
Barium, Ba	0	0

OTHER PROPERTIES

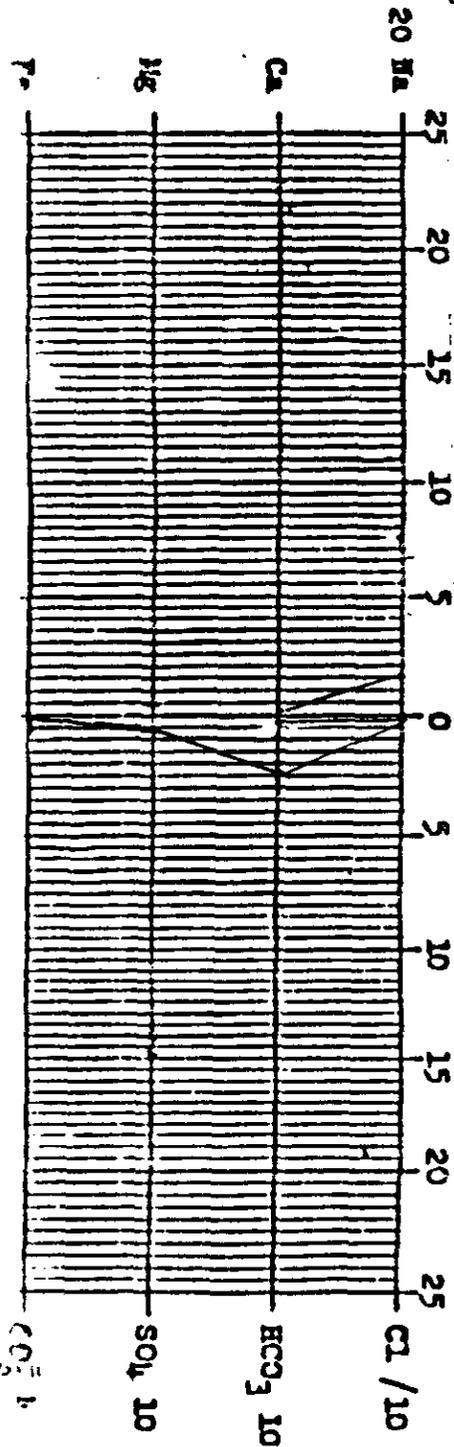
PH	9.35
Specific Gravity, 60/60 F.	1.02
Resistivity (ohm-meters), 73° F.	1000 micromhos
Conductivity	
Total Dissolved Solids (calc.)	2500

ANIONS

Chloride, Cl	21.3	0.6
Sulfate, SO <sub>4</sub>	158	5.4
Carbonate, CO <sub>3</sub>	26.0	0.9
Bicarbonate, HCO <sub>3</sub>	148.0	2.4
Hydroxide, OH	0	0

Iron, Fe (total) \_\_\_\_\_  
Sulfide, as H<sub>2</sub>S \_\_\_\_\_

REMARKS & RECOMMENDATIONS:



# BURGE CORROSION SYSTEMS, INC.

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

1855W

*San Juan*  
*Meridian*

COMPANY \_\_\_\_\_ DAILY DRILLING REPORT \_\_\_\_\_, 19\_\_

WELL NAME: <i>Huerfano</i>	WELL NUMBER: <i>202E</i>	SECTION: <i>28</i>	TOWNSHIP: <i>26N</i>	RANGE: <i>10W</i>
-------------------------------	-----------------------------	-----------------------	-------------------------	----------------------

WATER AT: <i>160</i>	FEET: <i>160</i>	HOLE MADE: <i>1/2</i>
-------------------------	---------------------	--------------------------

DESCRIPTION OF FORMATION			
FROM	TO	FORMATION IS	COLOR
<i>0</i>	<i>80</i>	<i>sand</i>	
<i>80</i>	<i>140</i>	<i>sandy shale</i>	
<i>140</i>	<i>200</i>	<i>sand</i>	
<i>200</i>	<i>260</i>	<i>shale</i>	
<i>260</i>	<i>300</i>	<i>sandy shale</i>	
<i>300</i>	<i>440</i>	<i>shale</i>	
		<i>TD-430</i>	

REMARKS: \_\_\_\_\_

Driller *Steve Houg* Tool Dresser \_\_\_\_\_

30-045-20739

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

Operator MERIDIAN OIL Location: Unit NW Sec. 29 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #218

cps 991w

Elevation 6798' Completion Date 9/19/75 Total Depth 460' Land Type\* N/A

Casing, Sizes, Types & Depths 24' OF STEEL CASING

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. 190'

RECEIVED

Depths gas encountered: N/A

MAY 31 1991

Type & amount of coke breeze used: 4400 lbs.

OIL CON. D'

Depths anodes placed: 410', 400', 380', 370', 360', 350', 340', 320', 310', 250'

DIST. 3

Depths vent pipes placed: N/A

Vent pipe perforations: 200'

Remarks: gb #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.

30-045-20814

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. 29 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUIREANO UNIT #219

cps 992w

Elevation 6571' Completion Date 9/19/75 Total Depth 400' 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. 125'

**RECEIVED**  
MAY 31 1991

Depths gas encountered: N/A

Type & amount of coke breeze used: 4800 lbs.

**OIL CON. D'**  
**DIST. 2**

Depths anodes placed: 340', 330', 320', 310', 300', 290', 279', 250', 240', 150'

Depths vent pipes placed: N/A

Vent pipe perforations: 225'

Remarks: gb #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.

2471

30-045-26281

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

Operator MERIDIAN OIL INC. Location: Unit NE Sec. 29 Twp 26 Rng 10

Name of Well/Wells or Pipeline Serviced HUERFANO UNIT #218E

cps 1860w

Elevation 6540' Completion Date 8/13/87 Total Depth 400' 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. 160' SAMPLE TAKEN

Depths gas encountered: N/A

Type & amount of coke breeze used: N/A

Depths anodes placed: 350', 340', 330', 320', 310', 280', 245', 230', 220', 210'

Depths vent pipes placed: 395'

Vent pipe perforations: 340'

Remarks: gb #1

**RECEIVED**  
MAY 31 1991  
MAY 31 1991  
OIL CON. 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.

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 204086

**CONDITIONS**

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 204086
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
nvez	None	4/28/2023