

30-045-2711

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

Operator Meridian Oil Inc. Location: Unit B Sec. 34 Twp 31 Rng 8

Name of Well/Wells or Pipeline Serviced Hole # 353 well

Elevation _____ Completion Date 11-29-90 Total Depth 495 Land Type P

Casing Strings, Sizes, Types & Depths 8" PVC - 20' deep

If Casing Strings are cemented, show amounts & types used 5 each 90 LB bags of Gackrete

If Cement or Bentonite Plugs have been placed, show depths & amounts used
NA - None

Depths & thickness of water zones with description of water: Fresh, Clear, Salty, Sulphur, Etc. Just wet 350' to 360' = 10' thick
= Muddy water.

Depths gas encountered: None - NA.

Ground bed depth with type & amount of coke breeze used: 495' Deep
with 2,700 LBS. of 99.9% SWB Carbon Coke

Depths anodes placed: 404', 413', 422', 431', 440', 449', 458', 467', 476', 485'

Depths vent pipes placed: 0 - 495' Deep

Vent pipe perforations: From 195' to 495'

Remarks: _____

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.

API WATER ANALYSIS REPORT FORM

EXHIBIT E

Laboratory No. 25-90203-10

Company MERIDIAN OIL INC.		Sample No. 1		Date Sampled 11-29-90	
Field CEDAR HILL		Legal Description B34-31-8		County or Parish SAN JUAN	
Lease or Unit		Well HALE # 353		Depth 350'	
Type of Water (Produced, Supply, etc.)		Sampling Point		Water, B/D	
				Sampled By W. KNIGHT JR.	



TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

DISSOLVED SOLIDS

CATIONS

	mg/l	me/l
Sodium, Na (calc.)	203	8.81
Calcium, Ca	208	10.4
Magnesium, Mg	26.7	2.2
Barium, Ba	-	-

OTHER PROPERTIES

pH	7.80
Specific Gravity, 60/60 F.	1.0014
Resistivity (ohm-meters) 61 F.	4.4

Total Dissolved Solids (calc.) 1446

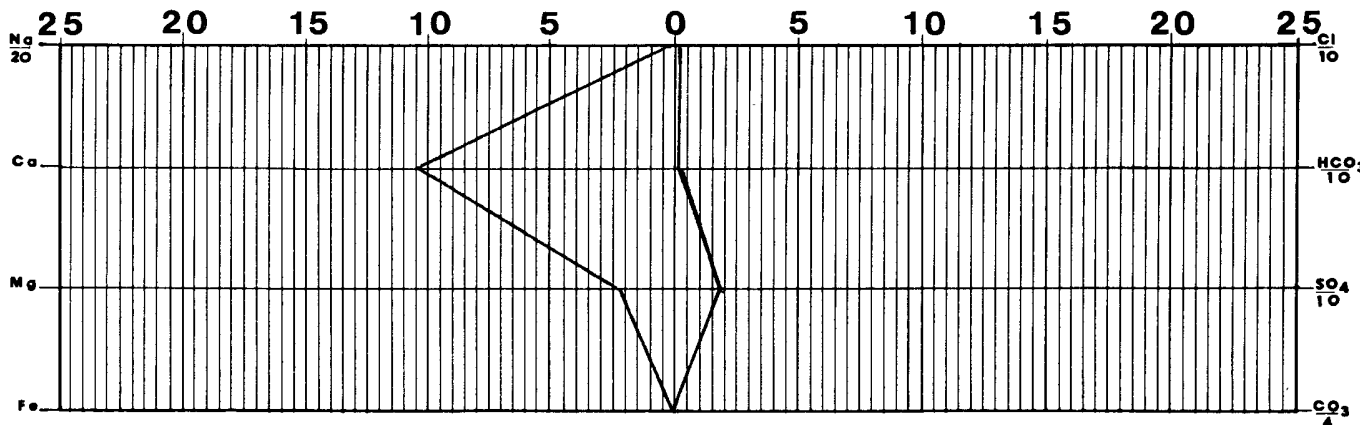
ANIONS

Chloride, Cl	66.7	1.88
Sulfate, So ₄	921	19.2
Carbonate, CO ₃	-	-
Bicarbonate, HCO ₃	26.3	0.33

Iron, Fe (total) -
Sulfide, as H₂S -

REMARKS & RECOMMENDATIONS:

ATTN: WARD ARNOLD



Date Received 3rd Dec, 1990.	Preserved	Date Analyzed 4th Dec, 1990.	Analyzed By R.H.
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**WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG**

EXHIBIT A

Drilling Log (Attach Hereto) ☐Completion Date 11-29-90

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check
4296W	Hale #353			☒ Good ☐ Bad
Location:	Anode Size:	Anode Type:	Size Bit:	
B34-31-8	2" x 60"	ANOTEC	6 3/4	
Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Cable Used	Last Circulation Man'l Used
500'	495'		2700 lb	
Anode Depth				
# 1 485	# 2 476	# 3 467	# 4 458	# 5 449
# 6 440	# 7 431	# 8 422	# 9 413	# 10 404
Anode Output (Amps)				
# 1 3.6	# 2 3.8	# 3 4.0	# 4 3.6	# 5 3.3
# 6 3.8	# 7 3.6	# 8 3.5	# 9 3.6	# 10 3.2
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	No. 8 C.P. Cable Used		No. 2 C.P. Cable Used	
Volts 12.2	Amps 13.8	Ohms .88		

Remarks: Set 20' of 8" PVC casing. Driller said wet 350' to 360', wait 30 minutes. Blew mud. Got water sample. Ran 500' of 1" PVC VENT PIPE. Perforated 300' of VENT PIPE. Left coke breeze approximately 375'.

Rectifier Size: _____ V _____ A
 Addn'l Depth: _____
 Depth Credit: _____
 Extra Cable: _____
 Ditch & 1 Cable: _____
 25' Meter Pole: _____
 20' Meter Pole: _____
 10' Stub Pole: _____
 Junction Box: _____

All Construction Completed

William Doughty Jr.
 (Signature)

GROUND BED LAYOUT SKETCH

Hale #353

RECEIVED

JAN 07 1991

OIL CON. DIV.

DIST. 3

G.B. #1



MOORE DRILLING, INC.

DAY Monday

DRILLER <u>Bob E.</u>		LEFT TOWN	ARRIVED FIELD
HELPER <u>Donna</u>		LEFT FIELD	ARRIVED TOWN
HELPER <u>Bill</u>		TOTAL FOOTAGE TODAY	

RIG NO. 206 DATE 11-29 CLIENT Menden

BEGIN WORK ON HOLE NO. 16-353 AT _____ FEET

BEGIN WORK ON HOLE NO. _____ AT _____ FEET

TIME		ACTIVITY
FROM	TO	
0	10	Hard clay
10	95	Brown sandstone
95	110	Red shale
110	135	Sandstone
135	160	gray shale
160	225	gray sandstone
225	320	gray shale
320	400	gray shaly sandstone
400	500	gray hard shale

BIT RECORD		
SIZE & MAKE	SERIAL NO.	FOOTAGE
<u>1 1/2" Rock Bit</u>		

CIRCULATION MATERIAL		
QUAN	UNIT	MATERIAL

NO. OF LOADS OF WATER 1 SOURCE Bottom of Pump

Meridian 011

CPS #:

WELL NAME: Hole #353

LOCATION: B34-31-8 DATE: 11-29-90

TOTAL VOLTS: 12.2 TOTAL AMPS: 13.8 OHMS RESISTANCE: .88

												ANODE READINGS			
DEEP	LOG ANODE	ANODE NO.	DEEP	LOG ANODE	ANODE NO.	DEEP	LOG ANODE	ANODE NO.	DEEP	LOG ANODE	ANODE NO.	NO.	DEPTH	NO COKE	WITH COKE
5			185			365	.60		545			1	485	1.9	3.6
10			190			370	.60		550			2	476	1.6	3.8
15			195			375	.60		555			3	467	2.1	4.0
20			200	.30		380	.60		560			4	458	2.0	3.6
25			205	.30		385	.60		565			5	449	1.8	3.3
30			210	.50		390	.60		570			6	440	2.1	3.8
35			215	.50		395	.50		575			7	431	1.6	3.6
40			220	.40		400	.60		580			8	422	1.6	3.5
45			225	.50		405	1.9	10	585			9	413	1.6	3.4
50			230	1.1		410	1.8		590			10	404	1.7	3.2
55			235	1.4		415	1.5	9	595						
60			240	1.5		420	1.5		600						
65			245	1.5		425	1.4	8	605						
70			250	1.6		430	1.4		610						
75			255	1.5		435	1.5	7	615						
80			260	1.4		440	1.7	6	620						
85			265	1.2		445	1.8		625						
90			270	.70		450	1.6	5	630						
95			275	.70		455	1.7		635						
100			280	.70		460	1.9	4	640						
105			285	.40		465	2.1		645						
110			290	.70		470	1.5	3	650						
115			295	1.3		475	1.5		655						
120			300	1.0		480	1.6	2	660						
125			305	.40		485	1.6	1	665						
130			310	.40		490	2.1		670						
135			315	.30		495	1.7	T.D	675						
140			320	.20		500			680						
145			325	.10		505			685						
150			330	.10		510			690						
155			335	.30		515			695						
160			340	.50		520			700						
165			345	.50		525			705						
170			350	.60		530			710						
175			355	.50		535			715						
180			360	.50		540			720						

REMARKS: SET 20' of 8" PVC casing. DRILLER said
 WET 350' TO 360'. WAITED 30 MINUTES. BLOW
 mud. GOT WATER SAMPLE

27 Bags coke