

30-045-27649

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS
NORTHWESTERN NEW MEXICOOperator Meridian Oil Inc. Location: Unit P Sec. 34 Twp 31 Rng 8Name of Well/Wells or Pipeline Serviced Hole # 351 WellElevation _____ Completion Date 11-30-90 Total Depth 490' Land Type PCasing Strings, Sizes, Types & Depths 8" PVC - 20' Deep.If Casing Strings are cemented, show amounts & types used 5 each 90 LB.
bags of Sackrete.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. Wet at 70' $\pm$ 5' Thick Brown
Grey SandstoneDepths gas encountered: None - NAGround bed depth with type & amount of coke breeze used: 490' Deep
with 99.9% Carbon Coke Breeze (SWB) = 3,900 #Depths anodes placed: 330', 340', 385', 395', 405', 415', 425', 435', 445', 455'Depths vent pipes placed: 0' to 490' Deep.Vent pipe perforations: From 60' to 490' Deep.

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. 25-901203-1A

Company MERIDIAN OIL INC.		Sample No. 1		Date Sampled 11-30-90	
Field CEDAR HILL		Legal Description K34-31-8		County or Parish SAN JUAN	
Lease or Unit		Well HALE #351		Depth 70'	
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.)	32.7	1.42
Calcium, Ca	462	23.05
Magnesium, Mg	5.47	0.45
Barium, Ba	-	-

OTHER PROPERTIES

pH	12.05
Specific Gravity, 60/60 F.	1.0015
Resistivity (ohm-meters) 61 F.	3.8

Total Dissolved Solids (calc.)

1637

ANIONS

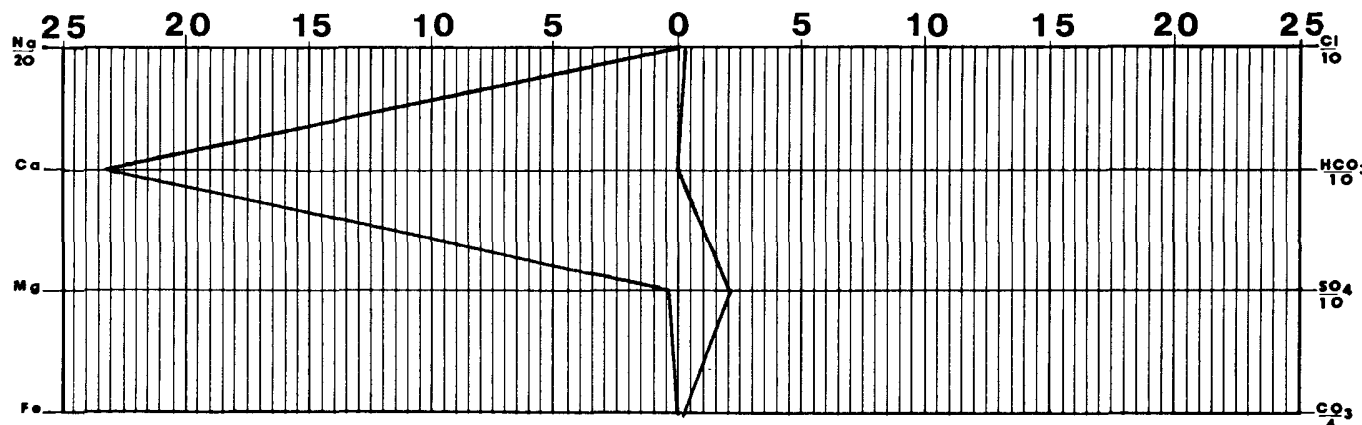
Chloride, Cl	121	3.42
Sulfate, SO_4	986	20.5
Carbonate, CO_3	30	1
Bicarbonate, HCO_3	-	-

Iron, Fe (total)
Sulfide, as H_2S

-
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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) ☐

30-045-27649

Completion Date 11-30-90

CPS #	Well Name, Line or Plant:	Work Order #	Static:	Ins. Union Check:
4595W	Hiale #351			☒ Good ☐ Bad
Location:	Anode Size:	Anode Type:	Size Bt:	
K34-31-8	2" X 60"	ANOTEC	6 3/4	
Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Cables Used	Less Circulation Mat'l Used
500'	490'		3900	
Anode Depth				
# 1 455	# 2 445	# 3 435	# 4 425	# 5 415
# 6 405	# 7 395	# 8 385	# 9 340	# 10 330
Anode Output (Amps)				
# 1 4.4	# 2 4.4	# 3 4.5	# 4 4.6	# 5 4.8
# 6 5.2	# 7 4.6	# 8 4.6	# 9 3.5	# 10 3.6
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 13.8	Amps 16.0	Ohms .86		

Remarks: SET 20' of 8" PVC CASING. DRILLER SAID WET AT 70', DRILLED TO 80' NEXT AM WATER STANDING APPROXIMATELY 60'; GOT WATER SAMPLE. RAN 500' of 1" PVC VENT PIPE. PERFORATED 430' of VENT PIPE. LEFT COKE BREEZE APPROXIMATELY 300'.

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

All Construction Completed

Willis Knight Jr
 (Signature)

GROUND BED LAYOUT SKETCH

RECEIVED

JAN 07 1991

OIL CON. DIV.
 DIST. 3

G.B. #1
 0



Hiale #351



MO-TE DRILLING, INC.

DAY

Friday

DRILLER

LEFT TOWN

ARRIVED FIELD

HELPER

LEFT FIELD

ARRIVED TOWN

HELPER

TOTAL FOOTAGE TODAY

RIG NO.

DATE

7-30-70

CLIENT

Mpression

BEGIN WORK ON HOLE NO.

440-354

AT

FEET

BEGIN WORK ON HOLE NO.

AT

FEET

TIME	FROM	TO	ACTIVITY
	0	10	Land & lay
	10	50	Sand line
	50	70	Shale
	70	110	Brown grey sandstone (water @ 70')
	110	190	Grey shale
	190	225	Brown sandstone
	225	250	Grey shale
	250	300	Grey sandstone
	300	325	Grey shale
	325	345	Grey sandstone
	345	380	Red & grey hard shale
	380	455	Hard grey sandstone
	455	500	

RECORD			
SIZE & MAKE	SERIAL NO.	FOOTAGE	
CIRCULATION MATERIAL			
QUAN.	UNIT	MATERIAL	

NO. OF LOADS OF WATER

1

SOURCE

Bottom Pump

San Juan repr farm, nm Form 219-6

Meridian Oil

CPS #:

WELL NAME: Hale #351

LOCATION: K34-31-8 DATE: 11-30-90

TOTAL VOLTS: 13.8

TOTAL AMPS: 16.0

OHMS RESISTANCE: 86

												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	1.3		365	1.60		545			1	455	1.4	4.4
10			190	1.50		370	1.80		550			2	445	2.1	4.4
15			195	1.30		375	1.80		555			3	435	2.3	4.5
20			200	1.20		380	1.90		560			4	425	2.2	4.6
25			205	1.30		385	1.8	8	565			5	415	1.9	4.8
30			210	1.30		390	1.8		570			6	405	2.5	5.2
35			215	1.30		395	2.1	7	575			7	395	2.2	4.6
40			220	1.40		400	2.0		580			8	385	1.8	4.6
45			225	1.4		405	2.1	6	585			9	340	1.4	3.5
50			230	1.9		410	2.3		590			10	330	1.7	3.6
55			235	2.0		415	2.0	5	595						
60			240	1.8		420	1.8		600						
65			245	1.7		425	2.1	4	605						
70	1.0		250	1.7		430	2.2		610						
75	1.0		255	1.5		435	2.0	3	615						
80	1.20		260	1.7		440	2.4		620						
85	1.40		265	1.5		445	2.6	2	625						
90	1.60		270	1.6		450	2.0		630						
95	1.40		275	1.1		455	1.3	1	635						
100	1.20		280	1.6		460	1.6		640						
105	1.20		285	1.50		465	1.7		645						
110	1.20		290	1.40		470	1.90		650						
115	1.40		295	1.40		475	1.90		655						
120	1.20		300	1.30		480	1.90		660						
125	1.20		305	1.40		485	1.1		665						
130	1.20		310	1.40		490	1.90	TD	670						
135	1.80		315	1.50		495			675						
140	1.0		320	1.50		500			680						
145	1.60		325	1.40		505			685						
150	1.80		330	1.6	80	510			690						
155	1.80		335	1.6		515			695						
160	1.7		340	1.8	9	520			700						
165	1.2		345	1.0		525			705						
170	1.9		350	1.50		530			710						
175	1.6		355	1.70		535			715						
180	1.9		360	1.60		540			720						

REMARKS: Set 20' of 8" PRC casing. Driller said not
70'. Drilled to 80' Next A.M. water stand approx.
60'. Got water sample

39 sacks coke