

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

Operator MERIDIAN OIL CO. Location: Unit NE Sec. 9 Twp 30 Rng 6

Name of Well/Wells or Pipeline Serviced SAN JUAN 30-6 # 403

Elevation \_\_\_\_\_ Completion Date 11/13/90 Total Depth 420 Land Type \_\_\_\_\_

Casing Strings, Sizes, Types & Depths 20 ft. 8" PVC Casing

If Casing Strings are cemented, show amounts & types used \_\_\_\_\_

If Cement or Bentonite Plugs have been placed, show depths & amounts used

Bentonite Plugs set 375 to 420 ft.

Depths & thickness of water zones with description of water: Fresh, Clear,

Salty, Sulphur, Etc. Wet at 140 ft., Water at 240 ft. got a sample

Depths gas encountered: 400 to 420 ft.

Ground bed depth with type & amount of coke breeze used: \_\_\_\_\_

10,000 lbs of Ashbury Petroleum Coke used 375 ft.

Depths anodes placed: 355, 220, 170, 164, 157, 150, 120, 112, 105, 95

Depths vent pipes placed: 400 ft. 1" PVC

Vent pipe perforations: 280 ft. perforated

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. 25-401203-1C

Company <b>MERIDIAN OIL INC.</b>		Sample No. <b>1</b>	Date Sampled <b>11-12-90</b>	
Field <b>GOBERNADOR</b>	Legal Description <b>NE-9-30-6</b>	County or Parish <b>RIO ARRIBA</b>	State <b>N.M.</b>	
Lease or Unit	Well <b>SJ 30-6 #403</b>	Depth <b>240'</b>	Formation	Water, B/D
Type of Water (Produced, Supply, etc.)		Sampling Point	Sampled By <b>W. KNIGHT JR.</b>	



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

**DISSOLVED SOLIDS**

CATIONS	mg/l	me/l
Sodium, Na (calc.)	<u>331</u>	<u>14.4</u>
Calcium, Ca	<u>180</u>	<u>9</u>
Magnesium, Mg	<u>26.7</u>	<u>2.2</u>
Barium, Ba	<u>-</u>	<u>-</u>

**OTHER PROPERTIES**

pH	<u>7.66</u>
Specific Gravity, 60/60 F.	<u>1.0017</u>
Resistivity (ohm-meters) <u>61</u> F.	<u>3.7</u>

Total Dissolved Solids (calc.) 1768

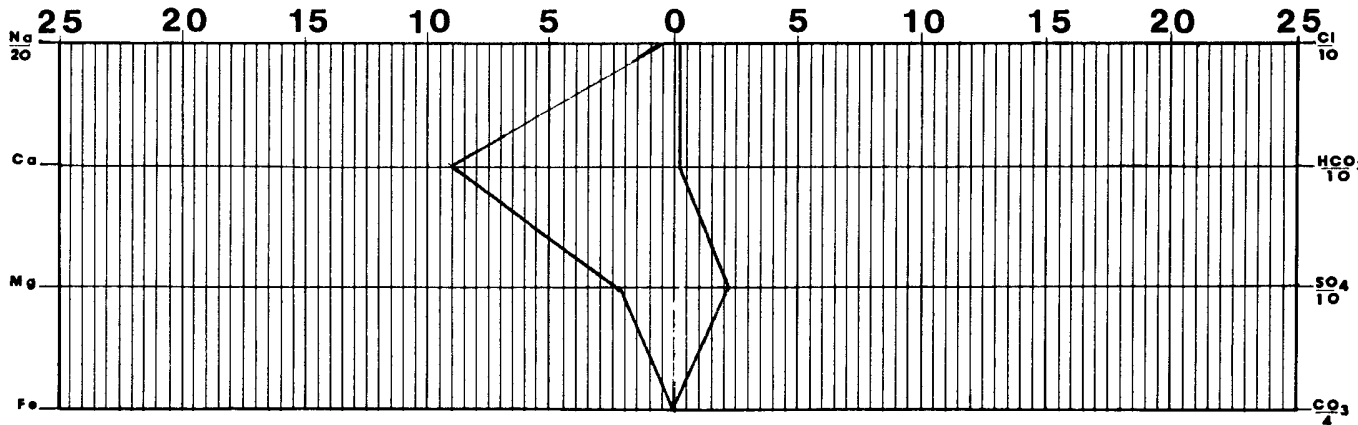
**ANIONS**

Chloride, Cl	<u>72.7</u>	<u>2.05</u>
Sulfate, So <sub>4</sub>	<u>1027</u>	<u>21.4</u>
Carbonate, CO <sub>3</sub>	<u>-</u>	<u>-</u>
Bicarbonate, HCO <sub>3</sub>	<u>131</u>	<u>2.15</u>

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

**REMARKS & RECOMMENDATIONS:**

ATTN. WARD ARNOLD



Date Received <u>3RD Dec, 1990.</u>	Preserved	Date Analyzed <u>4TH Dec, 1990.</u>	Analyzed By <u>R.H.</u>
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WELL CASING  
CATHODIC PROTECTION CONSTRUCTION REPORT  
DAILY LOG

Drilling Log (Attach Hereto)

Completion Date 11-13-90

CPS #	Well Name, Line or Plant:	Work Order #	DP No:	Static:	Ins. Union Check					
-	JT 30-6 # 403	4692A			<input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad					
2167W										
Location: SW NE 1/4 G	Anode Size:	Anode Type:	Size Bit:							
NE 9-30-6	2" x 60"	ANOTEC	6 3/4							
Depth Drilled	Depth Logged	Drilling Rig Time	Total Lbs. Code Used	Low Circulation Mat'l Used	No. Sacks Mud Used					
420'	375'		10,000 #							
Anode Depth	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
	355'	220'	170'	164'	157'	150'	120'	112'	105'	95'
Anode Output (Amps)	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10
	2.1	2.5	3.3	4.4	4.6	4.2	3.5	4.2	4.1	3.3
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	
	11.8		12.8		.92					

Remarks: Set 20' of 8" PVC casing Driller said wet at 140'. Next A.M. could NOT blow water. Driller said wet at 240', waited 20 minutes, blew approx. 190#/c. of mud, got water sample - hit some gas at 400' to 420'; Next A.M. gas had disapated, set BENTONITE plug from 420 to 375'. Ran 400' of 1" vent pipe, perforated 250' of vent pipe. Left coke breeze approx 50  
5 sacks of BENTONITE

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

*Willis Knight Jr*  
(Signature)

GROUND BED LAYOUT SKETCH

**RECEIVED**  
 JAN 07 1991  
 OIL CON. DIV.  
 DIST. 3

Rectifier

G.B. #1

30-6 # 403



## BURGE CORROSION SYSTEMS, INC.

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

COMPANY MERIDIAN OIL DAILY DRILLING REPORT 11-13 1990

WELL NAME: <u>SAN JUAN 30-6</u>	WELL NUMBER: <u>403</u>	SECTION: <u>NE - 9</u>	TOWNSHIP: <u>30</u>	RANGE: <u>6</u>
WATER AT: <u>200'</u>		FEET: <u>420'</u>		

## DESCRIPTION OF FORMATION

FROM	TO	FORMATION IS	COLOR
0	18'	8" PVC CASING - SANDSTONE	
18'	85'	SANDSTONE	
85'	120'	SHALE - SAND MIX	
120'	145'	BENTONITE - SANDSTONE	
145'	170'	SHALE - Bentonite	
170'	215'	SAND - SANDSTONE	
215'	225'	SHALE	
225'	350'	SANDSTONE - SAND - WATER 240'	
350'	355'	SHALE - SAND MIX	
355'	420'	SANDSTONE - SAND GAS	

## REMARKS:

Set 20' 8" PVC casing - cemented - Drilled to 140'  
waited to next A.M. no water. Drilled to 240' Got water - mud sample  
Hit gas at 400-420' Plugged hole back to 375'

Brian E. Burge

Driller

Tool Dresser

Meridian 011

CPS #: WELL NAME: S.J 30-6-403 LOCATION: NE 9.30.6 DATE: 11-13-90

TOTAL VOLTS: 11.8 TOTAL AMPS: 12.8 OIMS RESISTANCE: - - - 92

DEEP	LOG ANODE	ANODE NO.	DEEP	LOG ANODE	ANODE NO.	DEEP	LOG ANODE	ANODE No.	DEEP	LOG ANODE	ANODE No.	ANODE HEADINGS			
												NO.	DEPTH	WITH COKE	
5			185	30		365	.50		545			1	355	1.0	2.1
10			190	30		370	.50		550			2	220	1.1	2.5
15			195	20		375	.50	T.D	555			3	170	1.1	3.3
20			200	30		380			560			4	164	1.8	4.4
25			205	30		385			565			5	157	2.0	4.6
30	30		210	.50		390			570			6	150	1.3	4.2
35	20		215	160		395			575			7	120	1.5	3.5
40	20		220	1.2	2	400			580			8	112	1.6	4.2
45	10		225	1.1		405			585			9	105	1.2	4.1
50	20		230	60		410			590			10	95	1.2	3.3
55	30		235	.50		415			595						
60	160		240	.50		420			600						
65	30		245	140		425			605						
70	130		250	140		430			610						
75	30		255	140		435			615						
80	50		260	160		440			620						
85	50		265	160		445			625						
90	190		270	170		450			630						
95	1.0	10	275	160		455			635						
100	80		280	160		460			640						
105	190	9	285	.50		465			645						
110	1.5	8	290	.50		470			650						
115	1.3		295	.50		475			655						
120	1.3	7	300	160		480			660						
125	180		305	.50		485			665						
130	180		310	140		490			670						
135	160		315	.50		495			675						
140	180		320	160		500			680						
145	160		325	160		505			685						
150	1.2	6	330	160		510			690						
155	1.9		335	170		515			695						
160	2.1	5	340	160		520			700						
165	1.7	4	345	160		525			705						
170	190	3	350	.80		530			710						
175	.50		355	1.0	1	535			715						
180	140		360	160		540			720						

REMARKS: SET 20' OF 8" PVC CASING. DRILLER SAID WPT AT 140' NEXT A.M. DID NOT BLOW WATER. SAID WPT AT 240' WAITED 20 MINUTES. BLOW APPROXIMATELY 1 GAL. OF MUDDY WATER. GOT WATER SAMPLE. DRILLER SAID HIT SOME SAND AND WATER WITH A TRACE OF GAS 420'. NEXT AM GAS HAD DISAPATED. PUT APPROXIMATELY 45' BENTONITE PLUG FROM 420' TO 375' TO SEAL OFF BOTTOM ZONE