

1203 #2A 30-045-23164
#5 30-045-20852

E

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. 9 Twp 30 Rng 10

Name of Well/Wells or Pipeline Serviced SUNRAY E #2A, #5

cps 147lw

Elevation 6346 Completion Date 9/9/80 Total Depth 340' 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. 90'

Depths gas encountered: N/A

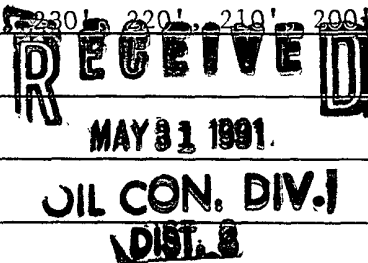
Type & amount of coke breeze used: N/A

Depths anodes placed: 300', 260', 250', 240', 230', 220', 210', 200', 190'

Depths vent pipes placed: 340'

Vent pipe perforations: 260'

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.

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

Drilling Log (Attach Hereto). ☐

(2" X 60" Durion)

Completion Date 9/9/

Well Name <u>SUNRAY E *2A</u>		Location <u>NW 9-30-10</u>		CPS No. <u>1471 W</u>	
Type & Size Bit Used <u>6 3/4"</u>				Work Order No. <u>57472</u> <u>54943</u>	
Anode Hole Depth <u>340 T.P. 340</u>	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used	
Anode Depth					
# 1 <u>300</u>	# 2 <u>260</u>	# 3 <u>250</u>	# 4 <u>240</u>	# 5 <u>230</u>	# 6 <u>220</u>
# 7 <u>210</u>	# 8 <u>200</u>	# 9 <u>190</u>			
Anode Output (Amps)					
# 1 <u>5.4</u>	# 2 <u>5.2</u>	# 3 <u>6.0</u>	# 4 <u>5.8</u>	# 5 <u>5.7</u>	# 6 <u>5.2</u>
# 7 <u>5.9</u>	# 8 <u>5.4</u>	# 9 <u>5.0</u>			
Anode Depth					
# 11	# 12	# 13	# 14	# 15	# 16
# 17	# 18	# 19			
Anode Output (Amps)					
# 11	# 12	# 13	# 14	# 15	# 16
# 17	# 18	# 19			
Total Circuit Resistance			No. 8 C.P. Cable Used		
Volts <u>11.9</u>			No. 2 C.P. Cable		
Amps <u>23.6</u>			Ohms <u>.5</u>		

Remarks: STATIC ON SUNRAY E *2A 600' E = .82 V INSULATED UNION C
SUNRAY E *5 HAS A BOND BOX #38-B ON IT. UNION CHECKED
DRILLER SAID WATER AT 90'. APPROX. 1 GAL/MIN. TOOK WAT.
SAMPLE. DRILLED TO 340'. LOGGED 340'. INSTALLED 340' OF
P.V.C. VENT PIPE, PERFORATED 260'. WATER SAMPLE DID
SETTLE OUT. USED 3 JOINTS 8" CASING. (NO RIG T.

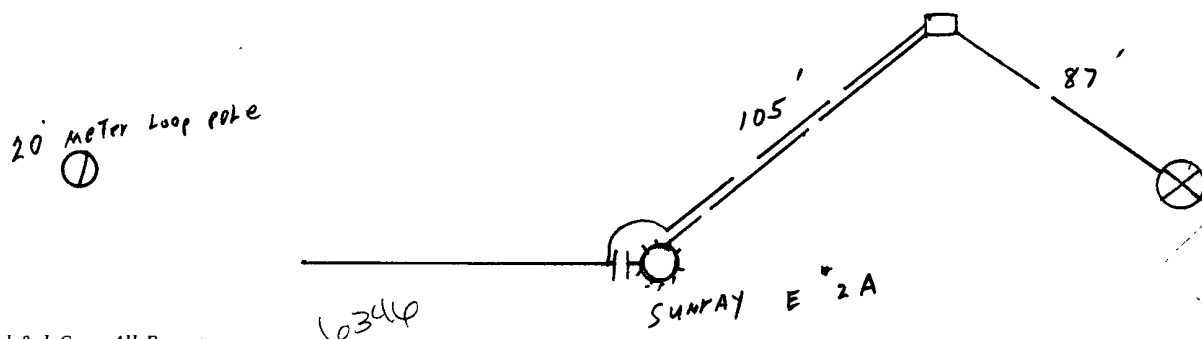
DITCH + 1 CABLE = 192' ✓
EXTRA CABLE = 135' ✓
20' meter Loop pole ✓
10' stub pole ✓
60V 30A RECT. ✓
Hole Depth - 160' ✓

All Construction Completed

JE Stoltz
(Signature)

GROUND BED LAYOUT SKETCH

E-2A 4 X 1/2 Ry. 1 Str.
E *5 4 X 1/2 Ry. 1 Str. C



CPS# 1471W

Sunray #E2A & E#5

NO.#'s 57472-21 & 54943-19

LEASE

WELL NO.

CONTRACTOR 3C Drilling

RIG NO. # 1

REPORT NO.

DATE SEPT. 9 1980

MORNING					DAYLIGHT					EVENING				
Driller <i>Brian</i>		Total Men In Crew <i>3</i>			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.

BIT NO.		NO. DC	SIZE	LENG.	BIT NO.		NO. DC	SIZE	LENG.	BIT NO.		NO. DC	SIZE	LENG.
SERIAL NO.		STANDS			SERIAL NO.		STANDS			SERIAL NO.		STANDS		
SIZE <i>6 3/4</i>		SINGLES <i>17</i>			SIZE		SINGLES			SIZE		SINGLES		
TYPE		DOWN ON KELLY			TYPE		DOWN ON KELLY			TYPE		DOWN ON KELLY		
MAKE		TOTAL DEPTH <i>340' TD. 340'</i>			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
0	60	sand	200	280	shale			
60	80	shale	280	300	shale & sand			
80	100	watersand - 1 gal per min.	300	320	shale			
100	130	Bentonite	320	340	sand & Bentonite			
130	180	shale						
180	200	shaly Bentonite						

REMARKS -	REMARKS - <i>drilled to 40' on the 8th had trouble with sand had to wait on water. hit water sand at 90' approx hole producing approx 1 gallon per minute. Got a muddy water sample. total depths 340'</i>	REMARKS -

SIGNED: Toolpusher

Brian Bunge

Company Supervisor

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet _____ of _____
Date: _____
By: _____
File: _____

SUNRAY E 2A
SUNRAY E 5

C.P.S. # 1471 W
NW 9-30-10

W.O. 57472-21
W.O. 54943-19

MW	gals/mol
16.04	C ₁ 6.4
30.07	C ₂ 10.12
44.10	C ₃ 10.42
58.12	iC ₄ 12.38
58.12	nC ₄ 11.93
72.15	iC ₅ 13.85
72.15	nC ₅ 13.71
86.18	iC ₆ 15.50
86.18	C ₆ 15.57
100.21	iC ₇ 17.2
100.21	C ₇ 17.46
114.23	C ₈ 19.39
28.05	C ₂ 9.64
42.08	C ₃ 9.67

MW	MISC	gals/mol
32.00	O ₂	3.37
28.01	CO	4.19
44.01	CO ₂	6.38
64.06	SO ₂	5.50
34.08	H ₂ S	5.17
28.01	N ₂	4.16
2.02	H ₂	3.38

90 - 1.4

1.3

100 - 1.1

1.3

10 - 1.6

1.4

20 - 1.4

1.8

30 - 2.3

2.3

40 - 2.6 - ⑩

2.5

50 - 2.3

2.2

60 - 2.4

2.3

70 - 2.1

1.0

80 - 1.7

1.2

90 - 2.7 - ⑨

3.1

200 - 3.1 - ⑧

3.3

10 - 3.2 - ⑦

2.8

20 - 3.0 - ⑥

3.1

30 - 3.1 - ⑤

3.1

40 - 3.1 - ④

3.1

50 - 3.2 - ③

2.9

60 - 2.7 - ②

2.5

70 - 2.0

1.6

80 - 2.0

2.1

290 - 2.0

2.5

300 - 2.6 - ①

2.4

10 - 2.3

2.1

20 - 2.2

2.3

30 - 2.1

2.0

40 -

Drilled To T.P.

Driller said water at 90'.
Approx 1 gal/min. Took water
sample. Drilled to 340'.
Logged 340'. Installed
340' of 1" P.V.C. vent
Pipe perforated 260'.
Water sample would not
settle out.

11.9V 23.6A = .5Ω
9/9/80
JL

1 - 300 - 4.1 - 5.4

2 - 260 - 4.3 - 5.2

3 - 250 - 5.0 - 6.0

4 - 240 - 4.8 - 5.8

5 - 230 - 4.8 - 5.7

6 - 220 - 4.3 - 5.2

7 - 210 - 5.3 - 5.9

8 - 200 - 4.8 - 5.4

9 - 190 - 4.2 - 5.0

10 - 140 - 3.6 - 4.4