

1221
4-R 30-045-10935
9 30-045-22728

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

Operator MERIDIAN OIL Location: Unit NE Sec. 10 Twp 31 Rng 10

Name of Well/Wells or Pipeline Serviced LUCERNE A #4R, #9

cps 1472w

Elevation 6119' Completion Date 8/21/80 Total Depth 240' 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. 50' SAMPLE TAKEN

Depths gas encountered: N/A

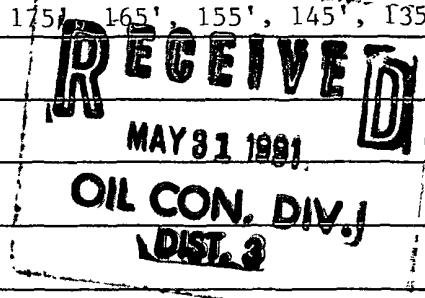
Type & amount of coke breeze used: 24 SACKS

Depths anodes placed: 215', 205', 195', 185', 175', 165', 155', 145', 135', 115'

Depths vent pipes placed: 235'

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.

WELL CASING
CATHODIC PROTECTION CONSTRUCTION REPORT
DAILY LOG

6 hrs

Drilling Log (Attach Hereto). ☐

Completion Date 8-21-80

Well Name <u>LUCERNE A #4R</u> <u>LUCERNE A #9</u>		Location <u>2 X 60 ANODES</u> <u>NE 10-31-10</u>		CPS No. <u>1472-W</u>	
Type & Size Bit Used <u>6 3/4</u>				Work Order No. <u>54332-19</u> <u>57275-21</u>	
Anode Hole Depth <u>240</u> <u>1099ed 235</u>	Total Drilling Rig Time	Total Lbs. Coke Used <u>24 SACKS</u>	Lost Circulation Mat'l Used	No. Sacks Mud Used	
Anode Depth					
# 1 <u>215</u>	# 2 <u>205</u>	# 3 <u>195</u>	# 4 <u>185</u>	# 5 <u>175</u>	# 6 <u>165</u>
# 7 <u>155</u>	# 8 <u>145</u>	# 9 <u>135</u>	# 10 <u>115</u>		
Anode Output (Amps)					
# 1 <u>3.4</u>	# 2 <u>3.7</u>	# 3 <u>4.4</u>	# 4 <u>3.6</u>	# 5 <u>3.8</u>	# 6 <u>4.1</u>
# 7 <u>4.3</u>	# 8 <u>4.8</u>	# 9 <u>4.9</u>	# 10 <u>4.4</u>		
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	
Volts <u>12.2</u>	Amps <u>18.0</u>	Ohms <u>.67</u>			No. 2 C.P. Cable Used

Remarks: UNION - OK

DRILLER SAID HIT WATER AT 50'. Next A.M. Blew water, G.
WATER Sample, making APPROX. 5 GPM. Installed
235' of 1" VENT PIPE, PERFORATED 200' of VENT PIPE

1 60V 30A Rect ✓

Ditch + 1 Cable - 262' ✓

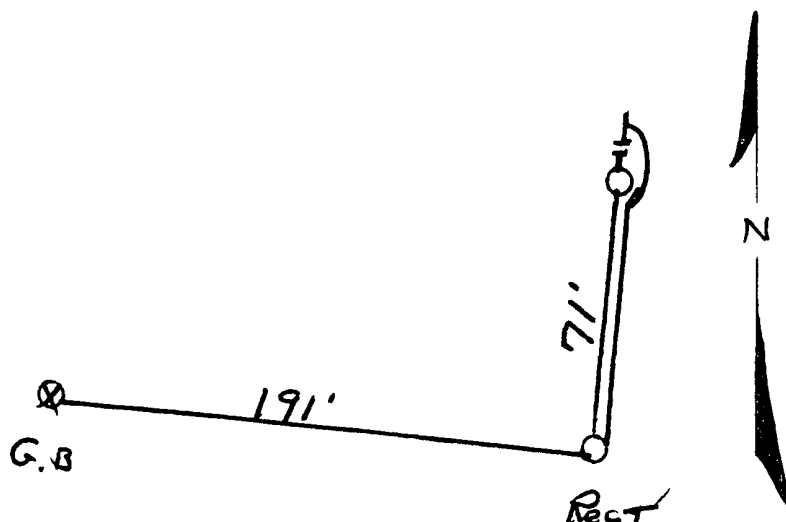
EXTRA cable - 101' ✓

Hole Depth - 265' ✓

GROUND BED LAYOUT SKETCH

All Construction Completed

Walter Lough Jr.
(Signature)



DISTRIBUTION:

WHITE - Division Corrosion Office
YELLOW - Area Corrosion Office
PINK - Originator File

649

El Paso Natural Gas Company
ENGINEERING CALCULATION

Sheet: 8-21-80
Date: 8-21-80
By: WK
File: _____

LUCERNE A #4R W/D 54332-19
LUCERNE A #9 W/D 57275-21
NE 10-31-10 UNION - OK
CPS 1472-W

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

1 60V 30A Rect
Ditch + 1 cable
EXTRA cable
Hole Depth

DRILLER Said hit water at
50'; Next A.M. Blew water
Got water sample. Install
240' of 1" VENT PIPE, PERFOR
200' of VENT PIPE. SURRYED
SACKS of COKE BREEZ
APPROX 5 GPM WATER

50	1.4	200	3.0
55	3.0	05	2.6 ②
60	4.0	10	2.8
65	3.9	15	2.5 ①
70	3.3	20	2.4
75	3.3	25	2.1
80	3.2	30	1.8
85	3.8	35	1.8
90	3.9	40	
95	3.6		
100	3.2		
05	2.9		
10	3.2		
15	3.2 ⑩		
20	2.8		
25	2.3		
30	2.9		
35	3.4 ⑨		
40	3.2		
45	3.3 ⑧		
50	3.2		
55	3.3 ⑦		
60	3.3		
65	3.1 ⑥		
70	3.0		
75	2.9 ⑤		
80	2.9		
85	2.6 ④		
90	2.7		
95	3.3 ③		

① 215	2.5	3.4
② 205	2.6	3.7
③ 195	3.3	4.4
④ 185	2.6	3.6
⑤ 175	2.9	3.8
⑥ 165	3.1	4.1
⑦ 155	3.3	4.3
⑧ 145	3.3	4.8
⑨ 135	3.4	4.9
⑩ 115	3.2	4.4

12.2V 18.0A .67 Ω

CPS# 1472 W Lucerne #s A4R & A9 W.O.#s 54332-19 & 57275-21 DATE August 21st 1980

LEASE WELL NO. CONTRACTOR 3-C Drilling RIG NO. #1 REPORT NO. DATE

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.
SER. NO.		NO. DC	SIZE	LENG.	SER. NO.		NO. DC	SIZE	LENG.	SER. NO.		NO. DC	SIZE	LENG.
SIZE		STANDS			SIZE		STANDS			SIZE		STANDS		
TYPE		SINGLES			TYPE		SINGLES			TYPE		SINGLES		
MAKE		DOWN ON KELLY			MAKE		DOWN ON KELLY			MAKE		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.	Time	Wt.	Vis.	Time	Wt.	Vis.	Time	Wt.	Vis.

FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN	FROM	TO	TIME BREAKDOWN
0	20	sand & bentonite	190	200	bentonite			
20	40	shale-sand-water Sgpm	200	220	shale			
40	60	bentonite	220	240	bentonite			
	120	shale						
120	140	bentonite & shale						
140	190	shale						

REMARKS -	REMARKS - drilled to 40' on the 20 th but water sand at 30'. water standing at 30' next morning. Hole making about 5 gall./min. Got a good water sample.	REMARKS -
	Total hole depth 240'	
	Total log depth 235'	

SIGNED: Toolpusher

Brian Bunge

Company Supervisor

EL PASO NATURAL GAS COMPANY
SAN JUAN DIVISION
FARMINGTON, NEW MEXICO
PRODUCTION DEPARTMENT WATER ANALYSIS

Analysis No. 1-10048 Date 11-12-80

Operator El Paso Natural Gas Well Name Lucerne A #4R

Location NE 10-31-10 County San Juan State New Mexico

Field Kutz Formation _____

Sampled From CPS 1472 @50 ft.

Date Sampled 8-21-80 By Willis Knight

Tbg. Press. _____ Csg. _____ Surface Csg. Press. _____

Sodium <u>627</u> ppm	<u>27.3</u> epm	Chloride <u>52</u> ppm	<u>1.5</u> epm
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Calcium <u>484</u>	<u>24.2</u>	Bicarbonate <u>222</u>	<u>3.6</u>
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Magnesium <u>56</u>	<u>4.6</u>	Sulfate <u>2450</u>	<u>51.0</u>
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Iron _____	_____	Carbonate <u>0</u>	<u>0</u>
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H ₂ S _____	_____	Hydroxide <u>0</u>	<u>0</u>
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cc: C.B. O'Nan
R.A. Ullrich
E.R. Paulek
J.W. McCarthy
A.M. Smith
W.B. Shropshire
D.C. Adams
File

Total Solids Dissolved 4272

pH 6.9

Sp. Gr. 923 At _____ 60°F

Resistivity 200 ohm-cm at 77 °F

Joe Barnett
Chemist

