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30-045-22505

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. 10 Twp 31 Rng 10

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

cps 1240w

Elevation 6184' Completion Date 1/11/79 Total Depth 500' Land Type* N/A

Casing, Sizes, Types & Depths 53' OF 8" STEEL CASING ,

133' of 6 5/8 CASING

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. DAMP 180' - 200' WATER AT 280' & 360'

SAMPLE TAKEN

Depths gas encountered: 280'

Type & amount of coke breeze used: 50 SACKS

Depths anodes placed: 420', 410', 400', 390', 380', 370', 360', 325', 315', 305'

Depths vent pipes placed: 310'

Vent pipe perforations: 200'

Remarks: gb #1

RECEIVED
MAY 31 1991
OIL CON. DIV.
DIST. 3

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"X60" DURIRON Anodes

Completion Date 1-11-79

Well Name Lucerne A #4 A		Location NW 10-31-10		CPS No. 1240 W	
Type & Size Bit Used 5 7/8"		Contract # 3		Work Order No. 5 7 209-21	
Anode Hole Depth 500 - 455	Total Drilling Rig Time	Total Lbs. Coke Used	Lost Circulation Mat'l Used	No. Sacks Mud Used	
Anode Depth					
# 1 420	# 2 410	# 3 400	# 4 390	# 5 380	# 6 370
# 7 360	# 8 325	# 9 315	# 10 305		
Anode Output (Amps)					
# 1 3.6	# 2 3.6	# 3 3.8	# 4 3.4	# 5 3.5	# 6 3.6
# 7 3.8	# 8 3.4	# 9 3.4	# 10 4.3		
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	No. 8 C.P. Cable Used		No. 2 C.P. Cable Used		
Volts 11.5	Amps 15.0	Ohms 0.77			

Remarks: DRILLER SAID DAMP @ 180' & 200'. STARTED MAKING WATER @ 280'. ALSO MAKING GAS @ 280'. MORE WATER @ 360'. INSTALLED 310' OF 1" PVC VENT PIPE. PERFORATED 200' OF 1" PVC VENT PIPE. SLURRIED 50 SACKS OF COKE. INSTALLED 53' OF 8" STEEL CASING. 133' OF 6 5/8" STEEL CASING. 130' OF BOULDERS.

Static 600' SE = 0.86

40V16A Rectifier

Stub Pole

Ditch & 1 cable = 278

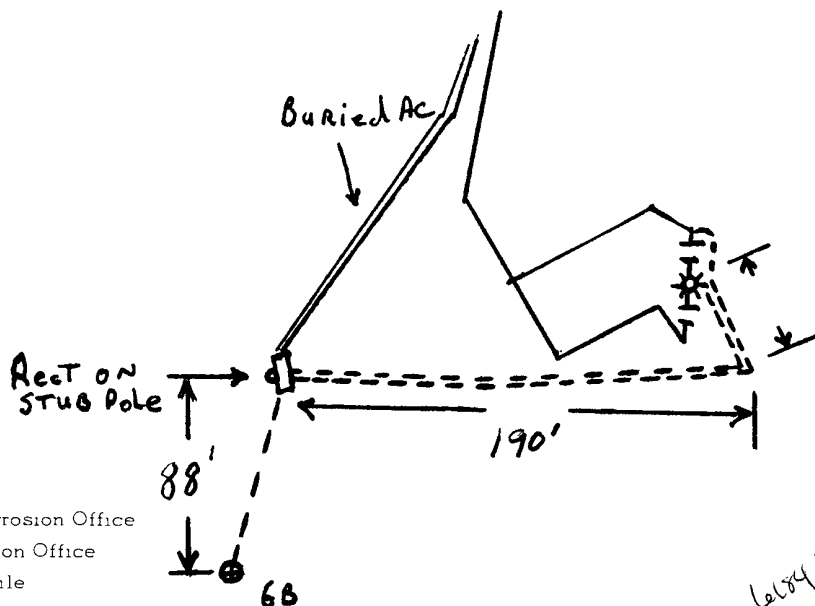
EXTRA CABLE = 190'

Hole Depth = -322

All Construction Completed

W. Z. Lutz
(Signature)

GROUND BED LAYOUT SKETCH



DISTRIBUTION:

WHITE - Division Corrosion Office

YELLOW - Area Corrosion Office

PINK - Originator File

DAILY DRILLING REPORT

Contract #3

LEASE _____ WELL NO. 1240W CONTRACTOR DAK Enter. RIG NO. 2 REPORT NO. _____ DATE 1-11 19 79

MORNING					DAYLIGHT					EVENING				
Driller		Total Men In Crew			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.		NO. DC	SIZE	LENG.	SERIAL NO.		NO. DC	SIZE	LENG.	SERIAL 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	133	SURFACE PIPE	280	360	SHALE (WATER)			
133	140	SANDY SHALE	360	400	SANDY SHALE			
140	160	SHALE	400	440	SHALE			
160	180	SANDY SHALE (DAMP)	440	500	SANDY SHALE			
180	260	SHALE						
260	280	SANDY SHALE (GAS + DAMP)						

REMARKS -	REMARKS -	REMARKS -

DRILLED 578 HOLES to 500
 LOGGED 455
 EST WATER 20 g.t.m.

SIGNED: Toolpusher

D. F. McDonald

Company Supervisor

CONTRACT #3

LUCERNE A #4-A

NW10-31-10

1240W

5709-21

5 7/8" B.T.

2" X 60" DARLON ANODES

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

Static 600	S = 0.86			DRILLER SAID MAKING WATER @ 280' MORE
1 50 2.1				WATER @ 360'. Damp @ 150 & 200'
60 1.3				
60 1.0				Grd Bud MAKING GAS @ 280'
70 1.7				
80 2.10		80 2.0	⑤	Installed 310' of 1" PVC Vent Pipe
2.10		2.0		PERFORATED 200' of 1" PVC Vent Pipe
90 2.0		90 1.9	④	SLURRYED 50 SACKS of CEMENT
1.9		1.9		
200 1.6		400 2.1	③	53' of 8" steel casing
1.4		2.2		133' of 6 5/8" steel casing
10 1.8		10 2.1	②	Drilled to 300' with 5 7/8" B.T.
2.4		2.0		130' of Boulders
20 2.5		20 2.0	①	
2.5		1.7		
30 2.8		30 1.5		
2.9		1.4		
40 2.7		40 1.9		
2.4		2.0		
50 2.3		50 1.9	Logged	
2.0			T.D.	
60 1.5		60		
1.3				
70 1.3		70		
1.0				
80 1.0		80		① 420 2.0 3.6
1.1				② 410 2.1 3.6
90 1.3		90		③ 400 2.1 3.8
1.3				④ 390 1.9 3.4
300 2.0		500		⑤ 380 2.0 3.5
2.2	⑩			⑥ 370 2.0 3.6
10 2.4				⑦ 360 2.2 3.8
2.2	⑨			⑧ 325 2.1 3.4
20 2.0				⑨ 315 2.1 3.4
2.0	⑧			⑩ 305 2.6 4.3
30 2.0				
1.2				
40 1.1				11.5 Volts
1.0				15.0 Amps
50 1.0				0.77 ohms
1.8				
60 2.2	⑦			
2.2				
70 2.1	⑥			
2.0				

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

Analysis No. 1-9450 Date January 19, 1979

Operator EPNG Well Name Lucerne A #4-A

Location NW 10-31-10 County San Juan State NM

Field _____ Formation _____

Sampled From CPS 1240 W

Date Sampled _____ By _____

Tbg. Press. _____	Csg. Press. _____	Surface Csg. Press _____	
ppm	epm	ppm	epm

Sodium <u>1874</u> <u>82</u>	Chloride <u>160</u> <u>5</u>
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Calcium <u>120</u> <u>6</u>	Bicarbonate <u>103</u> <u>2</u>
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Magnesium <u>29</u> <u>3</u>	Sulfate <u>4025</u> <u>84</u>
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Iron <u>Present</u>	Carbonate <u>0</u> <u>0</u>
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H ₂ S <u>Absent</u>	Hydroxide <u>0</u> <u>0</u>
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cc: D.C.Adams
R.A.Ullrich
E.R.Paulek
J.W.McCarthy
A.M.Smith
W.B.Shropshire
File

Total Solids Dissolved 6946

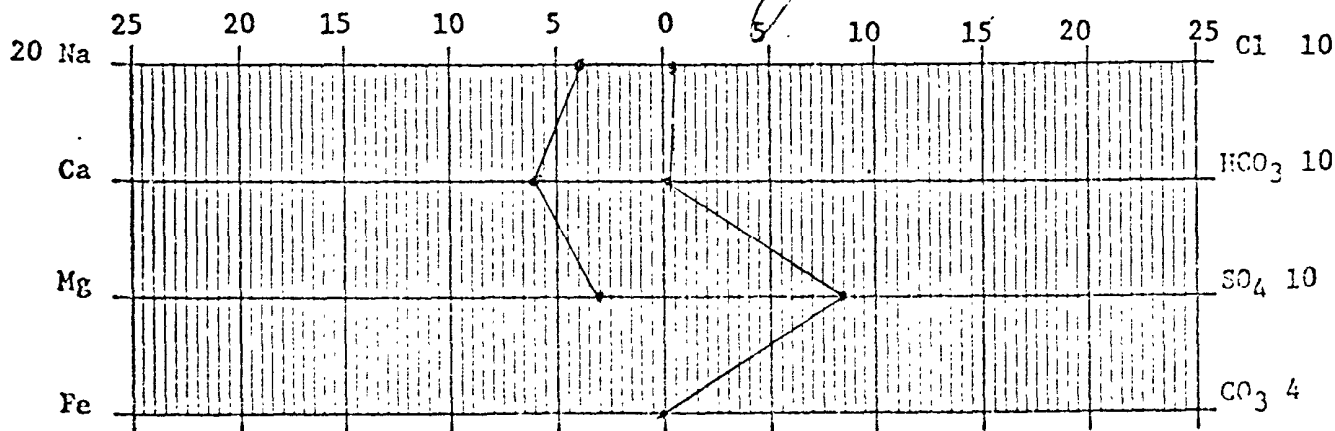
pH 7.2

Sp. Gr. 1.0070 at 60°F

Resistivity 130 ohm-cm at 72 °F

Water at 280'

Joe Barnett
Chemist



Scale: epm