



Project: Lea County, NM (NAD-83)
 Site: Gaucho Unit
 Well: 99H
 Wellbore: OH
 Design: APD Plan #1



Azimuths to Grid North
 True North: -0.44°
 Magnetic North: 6.71°
 Magnetic Field
 Strength: 48256.5nT
 Dip Angle: 60.30°
 Date: 2/5/2016
 Model: BGGM2015



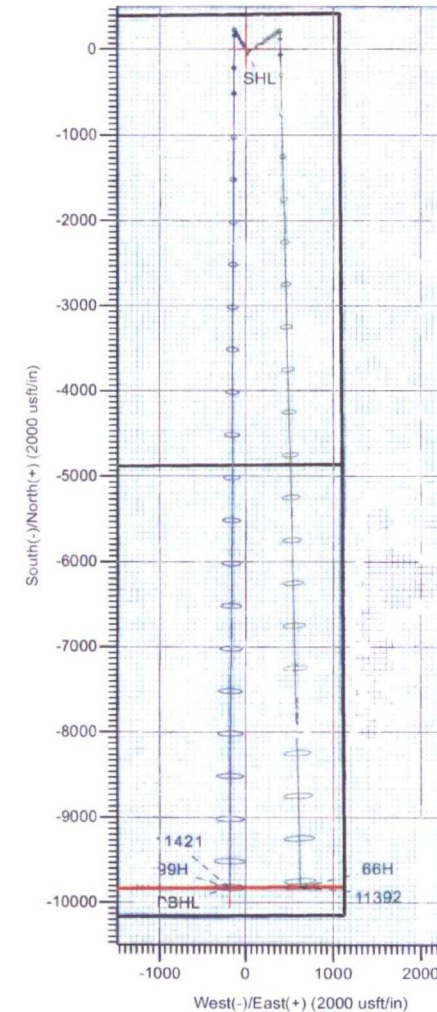
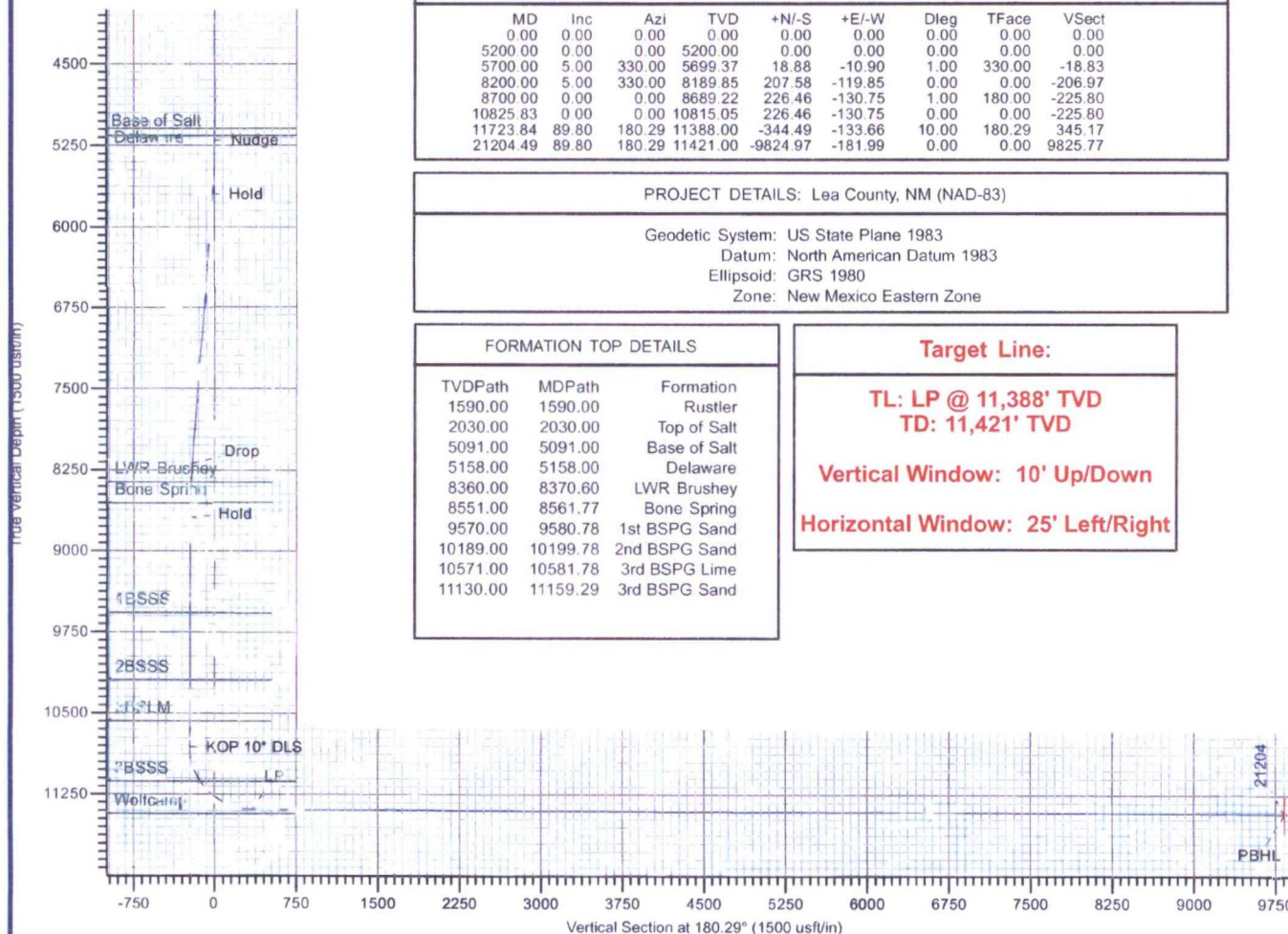
DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
SHL (GU 99H)	0.00	0.00	0.00	504177.89	797322.62
PBHL (GU 99H)	11421.00	-9824.97	-181.99	494352.92	797140.63

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	0.00	
5700.00	5.00	330.00	5699.37	18.88	-10.90	1.00	330.00	-18.83	
8200.00	5.00	330.00	8189.85	207.58	-119.85	0.00	0.00	-206.97	
8700.00	0.00	0.00	8689.22	226.46	-130.75	1.00	180.00	-225.80	
10825.83	0.00	0.00	10815.05	226.46	-130.75	0.00	0.00	-225.80	
11723.84	89.80	180.29	11388.00	-344.49	-133.66	10.00	180.29	345.17	
21204.49	89.80	180.29	11421.00	-9824.97	-181.99	0.00	0.00	9825.77	

PROJECT DETAILS: Lea County, NM (NAD-83)	
Geodetic System: US State Plane 1983	
Datum: North American Datum 1983	
Ellipsoid: GRS 1980	
Zone: New Mexico Eastern Zone	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1590.00	1590.00	Rustler
2030.00	2030.00	Top of Salt
5091.00	5091.00	Base of Salt
5158.00	5158.00	Delaware
8360.00	8370.60	LWR Brushey
8551.00	8561.77	Bone Spring
9570.00	9580.78	1st BSPG Sand
10189.00	10199.78	2nd BSPG Sand
10571.00	10581.78	3rd BSPG Lime
11130.00	11159.29	3rd BSPG Sand

Target Line:
 TL: LP @ 11,388' TVD
 TD: 11,421' TVD
 Vertical Window: 10' Up/Down
 Horizontal Window: 25' Left/Right



DEVON ENERGY

Lea County, NM (NAD-83)

Gaucha Unit

99H

OH

Plan: APD Plan #1

Standard Planning Report

05 February, 2016

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Gaucho Unit
 Well: 99H
 Wellbore: OH
 Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
 TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
 MD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Gaucho Unit		
Site Position:	Map	Northing:	504,450.40 usft
From:		Easting:	799,049.77 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 23' 2.539 N
		Longitude:	103° 29' 54.548 W
		Grid Convergence:	0.45 °

Well	99H		
Well Position	+N/-S	-272.51 usft	Northing:
	+E/-W	-1,727.15 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,491.50 usft
		Latitude:	32° 22' 59.976 N
		Longitude:	103° 30' 14.713 W
		Ground Level:	3,468.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	2/5/2016	7.16	60.30	48,256

Design	APD Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.29

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	5.00	330.00	5,699.37	18.88	-10.90	1.00	1.00	0.00	330.00	
8,200.00	5.00	330.00	8,189.85	207.58	-119.85	0.00	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,689.22	226.46	-130.75	1.00	-1.00	0.00	180.00	
10,825.83	0.00	0.00	10,815.05	226.46	-130.75	0.00	0.00	0.00	0.00	
11,723.84	89.80	180.29	11,388.00	-344.49	-133.66	10.00	10.00	-20.01	180.29	
21,204.49	89.80	180.29	11,421.00	-9,824.97	-181.99	0.00	0.00	0.00	0.00	PBHL (GU 99H)

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 99H
Company:	DEVON ENERGY	TVD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Site:	Gaucha Unit	North Reference:	Grid
Well:	99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	APD Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (GU 99H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,590.00	0.00	0.00	1,590.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,030.00	0.00	0.00	2,030.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00

LEAM Drilling Systems LLC

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 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,091.00	0.00	0.00	5,091.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,158.00	0.00	0.00	5,158.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	1.00	330.00	5,300.00	0.76	-0.44	-0.75	1.00	1.00	0.00
5,400.00	2.00	330.00	5,399.96	3.02	-1.75	-3.01	1.00	1.00	0.00
5,500.00	3.00	330.00	5,499.86	6.80	-3.93	-6.78	1.00	1.00	0.00
5,600.00	4.00	330.00	5,599.68	12.09	-6.98	-12.05	1.00	1.00	0.00
5,700.00	5.00	330.00	5,699.37	18.88	-10.90	-18.83	1.00	1.00	0.00
5,800.00	5.00	330.00	5,798.99	26.43	-15.26	-26.35	0.00	0.00	0.00
5,900.00	5.00	330.00	5,898.60	33.98	-19.62	-33.88	0.00	0.00	0.00
6,000.00	5.00	330.00	5,998.22	41.53	-23.97	-41.40	0.00	0.00	0.00
6,100.00	5.00	330.00	6,097.84	49.07	-28.33	-48.93	0.00	0.00	0.00
6,200.00	5.00	330.00	6,197.46	56.62	-32.69	-56.46	0.00	0.00	0.00
6,300.00	5.00	330.00	6,297.08	64.17	-37.05	-63.98	0.00	0.00	0.00
6,400.00	5.00	330.00	6,396.70	71.72	-41.41	-71.51	0.00	0.00	0.00
6,500.00	5.00	330.00	6,496.32	79.27	-45.76	-79.03	0.00	0.00	0.00
6,600.00	5.00	330.00	6,595.94	86.81	-50.12	-86.56	0.00	0.00	0.00
6,700.00	5.00	330.00	6,695.56	94.36	-54.48	-94.08	0.00	0.00	0.00
6,800.00	5.00	330.00	6,795.18	101.91	-58.84	-101.61	0.00	0.00	0.00
6,900.00	5.00	330.00	6,894.80	109.46	-63.19	-109.14	0.00	0.00	0.00
7,000.00	5.00	330.00	6,994.42	117.00	-67.55	-116.66	0.00	0.00	0.00
7,100.00	5.00	330.00	7,094.04	124.55	-71.91	-124.19	0.00	0.00	0.00
7,200.00	5.00	330.00	7,193.66	132.10	-76.27	-131.71	0.00	0.00	0.00
7,300.00	5.00	330.00	7,293.28	139.65	-80.63	-139.24	0.00	0.00	0.00
7,400.00	5.00	330.00	7,392.90	147.20	-84.98	-146.76	0.00	0.00	0.00
7,500.00	5.00	330.00	7,492.52	154.74	-89.34	-154.29	0.00	0.00	0.00
7,600.00	5.00	330.00	7,592.14	162.29	-93.70	-161.82	0.00	0.00	0.00
7,700.00	5.00	330.00	7,691.76	169.84	-98.06	-169.34	0.00	0.00	0.00
7,800.00	5.00	330.00	7,791.37	177.39	-102.41	-176.87	0.00	0.00	0.00
7,900.00	5.00	330.00	7,890.99	184.94	-106.77	-184.39	0.00	0.00	0.00
8,000.00	5.00	330.00	7,990.61	192.48	-111.13	-191.92	0.00	0.00	0.00
8,100.00	5.00	330.00	8,090.23	200.03	-115.49	-199.44	0.00	0.00	0.00
8,200.00	5.00	330.00	8,189.85	207.58	-119.85	-206.97	0.00	0.00	0.00
8,300.00	4.00	330.00	8,289.54	214.37	-123.77	-213.74	1.00	-1.00	0.00
8,370.60	3.29	330.00	8,360.00	218.26	-126.01	-217.62	1.00	-1.00	0.00
LWR Brushey									
8,400.00	3.00	330.00	8,389.36	219.66	-126.82	-219.02	1.00	-1.00	0.00
8,500.00	2.00	330.00	8,489.26	223.44	-129.00	-222.78	1.00	-1.00	0.00
8,561.77	1.38	330.00	8,551.00	225.02	-129.91	-224.36	1.00	-1.00	0.00
Bone Spring									
8,600.00	1.00	330.00	8,589.22	225.71	-130.31	-225.04	1.00	-1.00	0.00
8,700.00	0.00	0.00	8,689.22	226.46	-130.75	-225.80	1.00	-1.00	0.00
8,800.00	0.00	0.00	8,789.22	226.46	-130.75	-225.80	0.00	0.00	0.00
8,900.00	0.00	0.00	8,889.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,000.00	0.00	0.00	8,989.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,100.00	0.00	0.00	9,089.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,200.00	0.00	0.00	9,189.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,300.00	0.00	0.00	9,289.22	226.46	-130.75	-225.80	0.00	0.00	0.00

LEAM Drilling Systems LLC

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,400.00	0.00	0.00	9,389.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,500.00	0.00	0.00	9,489.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,580.78	0.00	0.00	9,570.00	226.46	-130.75	-225.80	0.00	0.00	0.00
1st BSPG Sand									
9,600.00	0.00	0.00	9,589.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,700.00	0.00	0.00	9,689.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,800.00	0.00	0.00	9,789.22	226.46	-130.75	-225.80	0.00	0.00	0.00
9,900.00	0.00	0.00	9,889.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,000.00	0.00	0.00	9,989.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,100.00	0.00	0.00	10,089.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,199.78	0.00	0.00	10,189.00	226.46	-130.75	-225.80	0.00	0.00	0.00
2nd BSPG Sand									
10,200.00	0.00	0.00	10,189.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,300.00	0.00	0.00	10,289.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,400.00	0.00	0.00	10,389.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,500.00	0.00	0.00	10,489.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,581.78	0.00	0.00	10,571.00	226.46	-130.75	-225.80	0.00	0.00	0.00
3rd BSPG Lime									
10,600.00	0.00	0.00	10,589.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,700.00	0.00	0.00	10,689.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,800.00	0.00	0.00	10,789.22	226.46	-130.75	-225.80	0.00	0.00	0.00
10,825.83	0.00	0.00	10,815.05	226.46	-130.75	-225.80	0.00	0.00	0.00
10,850.00	2.42	180.29	10,839.21	225.95	-130.75	-225.29	10.00	10.00	0.00
10,900.00	7.42	180.29	10,889.01	221.67	-130.77	-221.00	10.00	10.00	0.00
10,950.00	12.42	180.29	10,938.25	213.06	-130.82	-212.39	10.00	10.00	0.00
11,000.00	17.42	180.29	10,986.55	200.19	-130.88	-199.53	10.00	10.00	0.00
11,050.00	22.42	180.29	11,033.54	183.17	-130.97	-182.50	10.00	10.00	0.00
11,100.00	27.42	180.29	11,078.87	162.11	-131.08	-161.44	10.00	10.00	0.00
11,150.00	32.42	180.29	11,122.20	137.18	-131.20	-136.51	10.00	10.00	0.00
11,159.29	33.35	180.29	11,130.00	132.13	-131.23	-131.47	10.00	10.00	0.00
3rd BSPG Sand									
11,200.00	37.42	180.29	11,163.18	108.57	-131.35	-107.90	10.00	10.00	0.00
11,250.00	42.42	180.29	11,201.52	76.49	-131.51	-75.83	10.00	10.00	0.00
11,300.00	47.42	180.29	11,236.92	41.20	-131.69	-40.53	10.00	10.00	0.00
11,350.00	52.42	180.29	11,269.10	2.96	-131.89	-2.29	10.00	10.00	0.00
11,400.00	57.42	180.29	11,297.83	-37.94	-132.10	38.61	10.00	10.00	0.00
11,450.00	62.42	180.29	11,322.88	-81.19	-132.32	81.86	10.00	10.00	0.00
11,500.00	67.42	180.29	11,344.07	-126.46	-132.55	127.13	10.00	10.00	0.00
11,550.00	72.42	180.29	11,361.24	-173.41	-132.79	174.08	10.00	10.00	0.00
11,600.00	77.42	180.29	11,374.24	-221.67	-133.03	222.34	10.00	10.00	0.00
11,650.00	82.42	180.29	11,383.00	-270.88	-133.28	271.55	10.00	10.00	0.00
11,700.00	87.42	180.29	11,387.42	-320.67	-133.54	321.34	10.00	10.00	0.00
11,723.84	89.80	180.29	11,388.00	-344.49	-133.66	345.17	10.00	10.00	0.00
11,800.00	89.80	180.29	11,388.27	-420.66	-134.05	421.33	0.00	0.00	0.00
11,900.00	89.80	180.29	11,388.62	-520.66	-134.56	521.33	0.00	0.00	0.00
12,000.00	89.80	180.29	11,388.96	-620.65	-135.07	621.33	0.00	0.00	0.00
12,100.00	89.80	180.29	11,389.31	-720.65	-135.58	721.33	0.00	0.00	0.00
12,200.00	89.80	180.29	11,389.66	-820.65	-136.09	821.33	0.00	0.00	0.00
12,300.00	89.80	180.29	11,390.01	-920.65	-136.60	921.33	0.00	0.00	0.00
12,400.00	89.80	180.29	11,390.36	-1,020.65	-137.11	1,021.33	0.00	0.00	0.00
12,500.00	89.80	180.29	11,390.70	-1,120.64	-137.62	1,121.33	0.00	0.00	0.00
12,600.00	89.80	180.29	11,391.05	-1,220.64	-138.12	1,221.33	0.00	0.00	0.00
12,700.00	89.80	180.29	11,391.40	-1,320.64	-138.63	1,321.33	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Site: Gaucho Unit
Well: 99H
Wellbore: OH
Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
MD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,800.00	89.80	180.29	11,391.75	-1,420.64	-139.14	1,421.32	0.00	0.00	0.00
12,900.00	89.80	180.29	11,392.10	-1,520.64	-139.65	1,521.32	0.00	0.00	0.00
13,000.00	89.80	180.29	11,392.44	-1,620.63	-140.16	1,621.32	0.00	0.00	0.00
13,100.00	89.80	180.29	11,392.79	-1,720.63	-140.67	1,721.32	0.00	0.00	0.00
13,200.00	89.80	180.29	11,393.14	-1,820.63	-141.18	1,821.32	0.00	0.00	0.00
13,300.00	89.80	180.29	11,393.49	-1,920.63	-141.69	1,921.32	0.00	0.00	0.00
13,400.00	89.80	180.29	11,393.84	-2,020.63	-142.20	2,021.32	0.00	0.00	0.00
13,500.00	89.80	180.29	11,394.18	-2,120.63	-142.71	2,121.32	0.00	0.00	0.00
13,600.00	89.80	180.29	11,394.53	-2,220.62	-143.22	2,221.32	0.00	0.00	0.00
13,700.00	89.80	180.29	11,394.88	-2,320.62	-143.73	2,321.32	0.00	0.00	0.00
13,800.00	89.80	180.29	11,395.23	-2,420.62	-144.24	2,421.32	0.00	0.00	0.00
13,900.00	89.80	180.29	11,395.58	-2,520.62	-144.75	2,521.32	0.00	0.00	0.00
14,000.00	89.80	180.29	11,395.92	-2,620.62	-145.26	2,621.32	0.00	0.00	0.00
14,100.00	89.80	180.29	11,396.27	-2,720.61	-145.77	2,721.32	0.00	0.00	0.00
14,200.00	89.80	180.29	11,396.62	-2,820.61	-146.28	2,821.32	0.00	0.00	0.00
14,300.00	89.80	180.29	11,396.97	-2,920.61	-146.79	2,921.32	0.00	0.00	0.00
14,400.00	89.80	180.29	11,397.32	-3,020.61	-147.30	3,021.32	0.00	0.00	0.00
14,500.00	89.80	180.29	11,397.67	-3,120.61	-147.81	3,121.31	0.00	0.00	0.00
14,600.00	89.80	180.29	11,398.01	-3,220.60	-148.32	3,221.31	0.00	0.00	0.00
14,700.00	89.80	180.29	11,398.36	-3,320.60	-148.83	3,321.31	0.00	0.00	0.00
14,800.00	89.80	180.29	11,398.71	-3,420.60	-149.34	3,421.31	0.00	0.00	0.00
14,900.00	89.80	180.29	11,399.06	-3,520.60	-149.85	3,521.31	0.00	0.00	0.00
15,000.00	89.80	180.29	11,399.41	-3,620.60	-150.36	3,621.31	0.00	0.00	0.00
15,100.00	89.80	180.29	11,399.75	-3,720.59	-150.87	3,721.31	0.00	0.00	0.00
15,200.00	89.80	180.29	11,400.10	-3,820.59	-151.38	3,821.31	0.00	0.00	0.00
15,300.00	89.80	180.29	11,400.45	-3,920.59	-151.89	3,921.31	0.00	0.00	0.00
15,400.00	89.80	180.29	11,400.80	-4,020.59	-152.40	4,021.31	0.00	0.00	0.00
15,500.00	89.80	180.29	11,401.15	-4,120.59	-152.91	4,121.31	0.00	0.00	0.00
15,600.00	89.80	180.29	11,401.49	-4,220.59	-153.42	4,221.31	0.00	0.00	0.00
15,700.00	89.80	180.29	11,401.84	-4,320.58	-153.93	4,321.31	0.00	0.00	0.00
15,800.00	89.80	180.29	11,402.19	-4,420.58	-154.44	4,421.31	0.00	0.00	0.00
15,900.00	89.80	180.29	11,402.54	-4,520.58	-154.95	4,521.31	0.00	0.00	0.00
16,000.00	89.80	180.29	11,402.89	-4,620.58	-155.46	4,621.31	0.00	0.00	0.00
16,100.00	89.80	180.29	11,403.23	-4,720.58	-155.97	4,721.30	0.00	0.00	0.00
16,200.00	89.80	180.29	11,403.58	-4,820.57	-156.48	4,821.30	0.00	0.00	0.00
16,300.00	89.80	180.29	11,403.93	-4,920.57	-156.99	4,921.30	0.00	0.00	0.00
16,400.00	89.80	180.29	11,404.28	-5,020.57	-157.50	5,021.30	0.00	0.00	0.00
16,500.00	89.80	180.29	11,404.63	-5,120.57	-158.01	5,121.30	0.00	0.00	0.00
16,600.00	89.80	180.29	11,404.97	-5,220.57	-158.52	5,221.30	0.00	0.00	0.00
16,700.00	89.80	180.29	11,405.32	-5,320.56	-159.03	5,321.30	0.00	0.00	0.00
16,800.00	89.80	180.29	11,405.67	-5,420.56	-159.54	5,421.30	0.00	0.00	0.00
16,900.00	89.80	180.29	11,406.02	-5,520.56	-160.05	5,521.30	0.00	0.00	0.00
17,000.00	89.80	180.29	11,406.37	-5,620.56	-160.56	5,621.30	0.00	0.00	0.00
17,100.00	89.80	180.29	11,406.71	-5,720.56	-161.07	5,721.30	0.00	0.00	0.00
17,200.00	89.80	180.29	11,407.06	-5,820.55	-161.58	5,821.30	0.00	0.00	0.00
17,300.00	89.80	180.29	11,407.41	-5,920.55	-162.09	5,921.30	0.00	0.00	0.00
17,400.00	89.80	180.29	11,407.76	-6,020.55	-162.59	6,021.30	0.00	0.00	0.00
17,500.00	89.80	180.29	11,408.11	-6,120.55	-163.10	6,121.30	0.00	0.00	0.00
17,600.00	89.80	180.29	11,408.45	-6,220.55	-163.61	6,221.30	0.00	0.00	0.00
17,700.00	89.80	180.29	11,408.80	-6,320.55	-164.12	6,321.30	0.00	0.00	0.00
17,800.00	89.80	180.29	11,409.15	-6,420.54	-164.63	6,421.29	0.00	0.00	0.00
17,900.00	89.80	180.29	11,409.50	-6,520.54	-165.14	6,521.29	0.00	0.00	0.00
18,000.00	89.80	180.29	11,409.85	-6,620.54	-165.65	6,621.29	0.00	0.00	0.00
18,100.00	89.80	180.29	11,410.19	-6,720.54	-166.16	6,721.29	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Gaucho Unit
 Well: 99H
 Wellbore: OH
 Design: APD Plan #1

Local Co-ordinate Reference: Well 99H
 TVD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
 MD Reference: 3468' GE + 23.5' RKB @ 3491.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,200.00	89.80	180.29	11,410.54	-6,820.54	-166.67	6,821.29	0.00	0.00	0.00
18,300.00	89.80	180.29	11,410.89	-6,920.53	-167.18	6,921.29	0.00	0.00	0.00
18,400.00	89.80	180.29	11,411.24	-7,020.53	-167.69	7,021.29	0.00	0.00	0.00
18,500.00	89.80	180.29	11,411.59	-7,120.53	-168.20	7,121.29	0.00	0.00	0.00
18,600.00	89.80	180.29	11,411.94	-7,220.53	-168.71	7,221.29	0.00	0.00	0.00
18,700.00	89.80	180.29	11,412.28	-7,320.53	-169.22	7,321.29	0.00	0.00	0.00
18,800.00	89.80	180.29	11,412.63	-7,420.52	-169.73	7,421.29	0.00	0.00	0.00
18,900.00	89.80	180.29	11,412.98	-7,520.52	-170.24	7,521.29	0.00	0.00	0.00
19,000.00	89.80	180.29	11,413.33	-7,620.52	-170.75	7,621.29	0.00	0.00	0.00
19,100.00	89.80	180.29	11,413.68	-7,720.52	-171.26	7,721.29	0.00	0.00	0.00
19,200.00	89.80	180.29	11,414.02	-7,820.52	-171.77	7,821.29	0.00	0.00	0.00
19,300.00	89.80	180.29	11,414.37	-7,920.51	-172.28	7,921.29	0.00	0.00	0.00
19,400.00	89.80	180.29	11,414.72	-8,020.51	-172.79	8,021.28	0.00	0.00	0.00
19,500.00	89.80	180.29	11,415.07	-8,120.51	-173.30	8,121.28	0.00	0.00	0.00
19,600.00	89.80	180.29	11,415.42	-8,220.51	-173.81	8,221.28	0.00	0.00	0.00
19,700.00	89.80	180.29	11,415.76	-8,320.51	-174.32	8,321.28	0.00	0.00	0.00
19,800.00	89.80	180.29	11,416.11	-8,420.51	-174.83	8,421.28	0.00	0.00	0.00
19,900.00	89.80	180.29	11,416.46	-8,520.50	-175.34	8,521.28	0.00	0.00	0.00
20,000.00	89.80	180.29	11,416.81	-8,620.50	-175.85	8,621.28	0.00	0.00	0.00
20,100.00	89.80	180.29	11,417.16	-8,720.50	-176.36	8,721.28	0.00	0.00	0.00
20,200.00	89.80	180.29	11,417.50	-8,820.50	-176.87	8,821.28	0.00	0.00	0.00
20,300.00	89.80	180.29	11,417.85	-8,920.50	-177.38	8,921.28	0.00	0.00	0.00
20,400.00	89.80	180.29	11,418.20	-9,020.49	-177.89	9,021.28	0.00	0.00	0.00
20,500.00	89.80	180.29	11,418.55	-9,120.49	-178.40	9,121.28	0.00	0.00	0.00
20,600.00	89.80	180.29	11,418.90	-9,220.49	-178.91	9,221.28	0.00	0.00	0.00
20,700.00	89.80	180.29	11,419.24	-9,320.49	-179.42	9,321.28	0.00	0.00	0.00
20,800.00	89.80	180.29	11,419.59	-9,420.49	-179.93	9,421.28	0.00	0.00	0.00
20,900.00	89.80	180.29	11,419.94	-9,520.48	-180.44	9,521.28	0.00	0.00	0.00
21,000.00	89.80	180.29	11,420.29	-9,620.48	-180.95	9,621.28	0.00	0.00	0.00
21,100.00	89.80	180.29	11,420.64	-9,720.48	-181.46	9,721.27	0.00	0.00	0.00
21,204.49	89.80	180.29	11,421.00	-9,824.97	-181.99	9,825.77	0.00	0.00	0.00

PBHL (GU 99H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL (GU 99H)	0.00	0.00	0.00	0.00	0.00	504,177.89	797,322.62	32° 22' 59.976 N	103° 30' 14.713 W
- plan hits target center									
- Point									
PBHL (GU 99H)	0.00	0.00	11,421.00	-9,824.97	-181.99	494,352.92	797,140.63	32° 21' 22.773 N	103° 30' 17.722 W
- plan hits target center									
- Point									

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 99H
Company:	DEVON ENERGY	TVD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3468' GE + 23.5' RKB @ 3491.50usft
Site:	Gaucha Unit	North Reference:	Grid
Well:	99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	APD Plan #1		

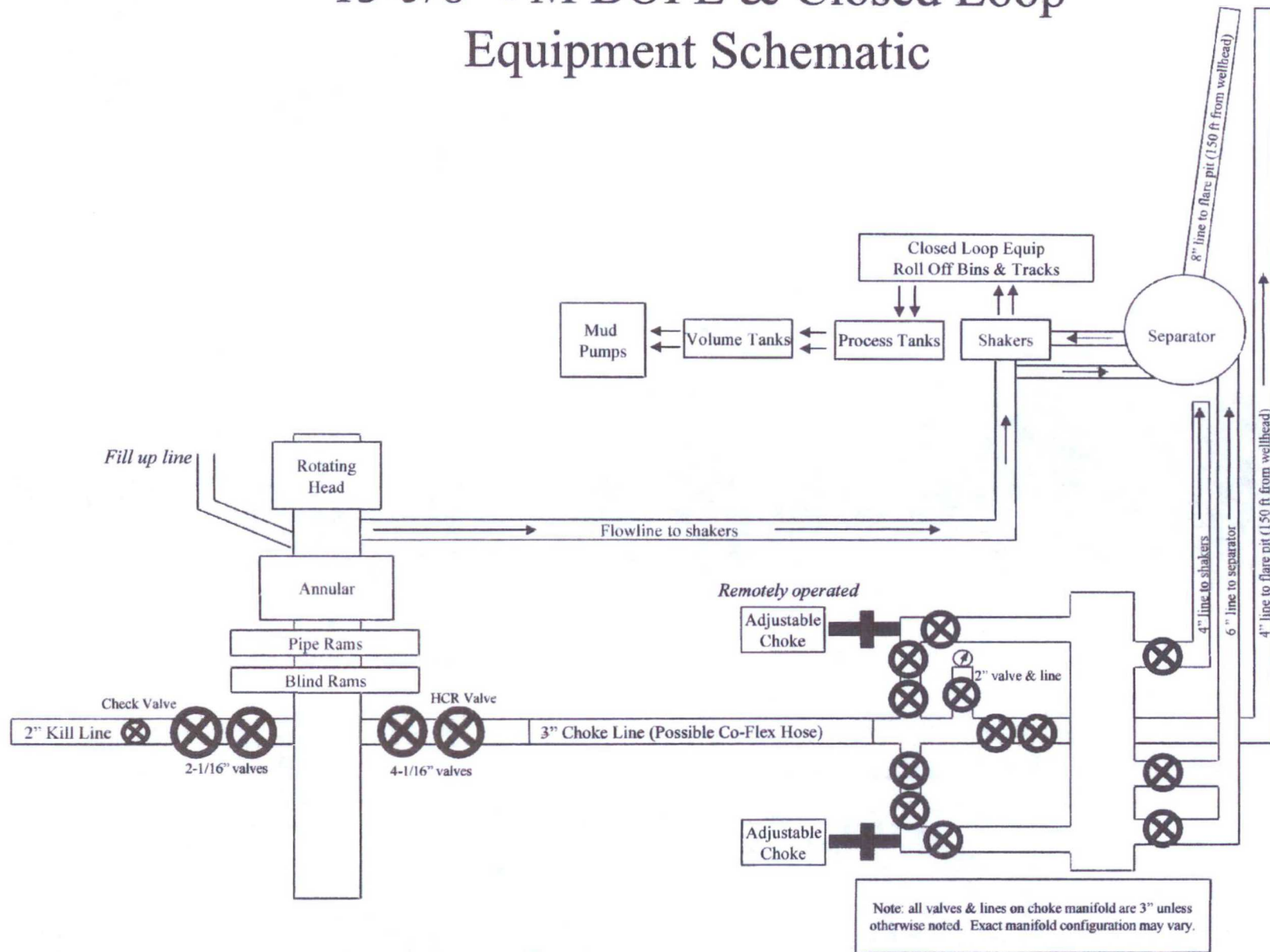
Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,590.00	1,590.00	Rustler		0.00	
2,030.00	2,030.00	Top of Salt		0.00	
5,091.00	5,091.00	Base of Salt		0.00	
5,158.00	5,158.00	Delaware		0.00	
8,370.60	8,360.00	LWR Brushey		0.00	
8,561.77	8,551.00	Bone Spring		0.00	
9,580.78	9,570.00	1st BSPG Sand		0.00	
10,199.78	10,189.00	2nd BSPG Sand		0.00	
10,581.78	10,571.00	3rd BSPG Lime		0.00	
11,159.29	11,130.00	3rd BSPG Sand		0.00	

NOTES REGARDING BLOWOUT PREVENTERS

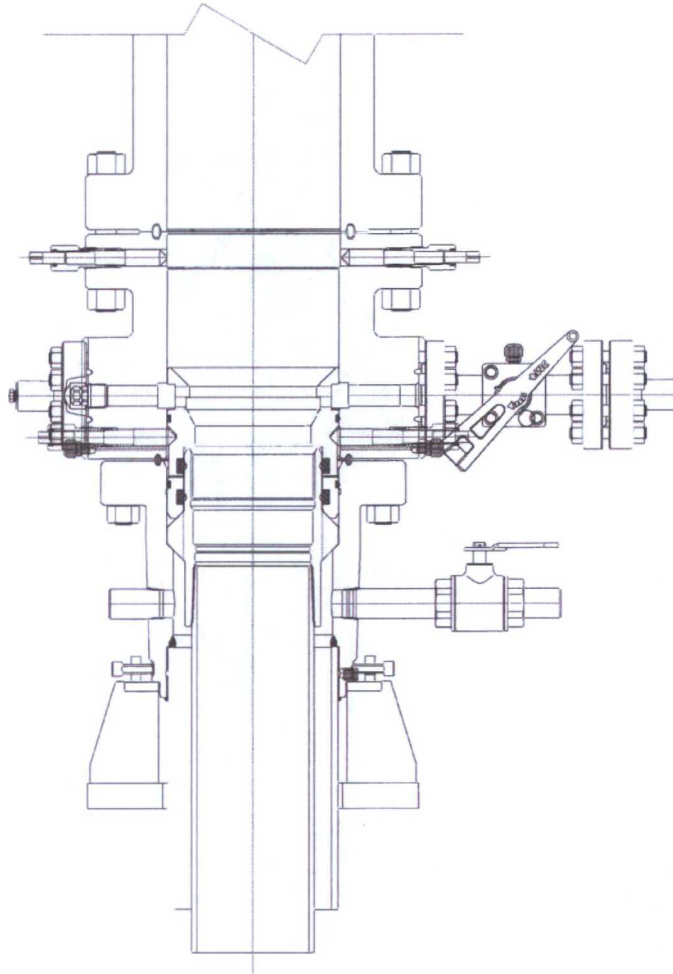
Devon Energy Production Company, L.P.
Gaucho Unit 99H

1. Drilling Nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated filings will be in operable condition to withstand a minimum of 5000psi working pressure.
4. All fittings will be flanged.
5. A fill bore safety valve tested to a minimum of 5000psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

13-5/8" 5M BOPE & Closed Loop Equipment Schematic



Multibowl Wellhead Manufacturer



PRIMARY MODE

DEVON ENERGY

ARTESIA

S.E.N.M

13 3/8 X 9 5/8

QUOTE LAYOUT
F18648
REF: DM100161737
DM100151315

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REVISIONS

A	05-08-13
B	1-22-14
C	5-13-14

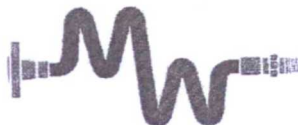
DESCRIPTION

SURFACE WELLHEAD LAYOUT
UNIHEAD, UH-1, SOW,
DEVON ENERGY, ODESSA

DRAWN BY	K. VU	05-08-13
DRAFTING REVIEW	Z. MARQUEZ	05-08-13
DESIGN REVIEW	K. TAHA	05-08-13
APPROVED BY	R. HAMILTON	05-08-13

FMC Technologies

DRAWING NUMBER
DM100161771-2A



Midwest Hose
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST CERTIFICATE

Customer: CACTUS		Customer P.O. Number: RE-CERT M5322&M1075
HOSE SPECIFICATIONS		
Type: Rotary/Vibrator Hose CHOKE HC / API 7K	Hose Length: 35 FEET	
I.D. INCHES	O.D. INCHES	
WORKING PRESSURE 5,000 PSI	TEST PRESSURE 10,000 PSI	BURST PRESSURE N/A PSI
COUPLINGS		
Part Number	Stem Lot Number	Ferrule Lot Number
Type of Coupling: SWAGE-IT	Die Size:	
PROCEDURE		
<i>Hose assembly pressure tested with water at ambient temperature.</i>		
TIME HELD AT TEST PRESSURE 12 3/4 MIN.		ACTUAL BURST PRESSURE: N/A PSI
Hose Assembly Serial Number: 194103-2		Hose Serial Number:
Comments: ASSET# M5322		
Date: 3/6/2013	Tested: Billy Bales	Approved: [Signature]



Internal Hydrostatic Test Graph

March 17, 2013

Customer: Cactus

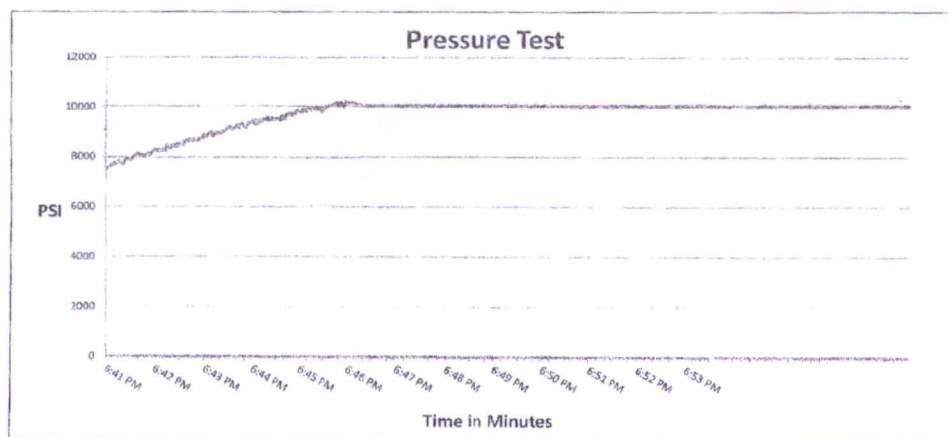
Pick Ticket #: 194103

Hose Specifications

Hose Type	Length
C&K	35'
I.D.	O.D.
"	0
Working Pressure	Burst Pressure
5000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	Final O.D.
0	0
Hose Serial #	Hose Assembly Serial #
0	194103-2



Test Pressure
10000 PSI

Time Held at Test Pressure
12 3/4 Minutes

Actual Burst Pressure

Peak Pressure
10253 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Billy Bolak

Approved By: Joshua Dahlem

DATE: 03/18/13 10:10AM

PACKING LIST

PAGE: 1 OF 1



**Midwest Hose
& Specialty, Inc.**

Ship From
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Road
Oklahoma City OK 73129
USA

Ship To

Cactus Drilling Co., LLC
ATTN: John Andrade
8300 SW 15th
Oklahoma City OK
USA

Bill To

Cactus Drilling Co., LLC
ATTN: Accounts Payable
8300 SW 15th Street
Oklahoma City OK 73128-9594
USA

Payment Terms	1% 10 - NET 30 DAYS (1NET30)
Ship Method	PICKUP
Freight Terms	Prepaid
Customer Ship	CACTUS01
Cartons	1
Weight	0.00
Tracking Nbrs	

Shipping Notes:

Cust phone: 577-5347
Written by: ESPARKMAN

Customer PO: Re-Cert M5322 & M1075

Mark Number: John Andrade

Packing List #:00194103

INVOICE REQUIREMENTS:

1. Purchase Order Number and Rig # Required
2. Proof of Delivery Required

Received By: _____
Date Received: _____

Print Name: _____
Work Phone #: _____

LIN P	ITEM / DESCRIPTION	UOM	QUANTITY ORDERED	QUANTITY SHIP	QUANTITY BACK ORDERED	QUANTITY TOTAL QUANTITY
0010	TESTLABOR Internal Hydrostratic Test Labor Your item # is: M5322 & M1075	EA	2.00	0.00	0.00 Unit Price: 500.00	2.00 Ext. Price: 1,000.00
	PL#: 00194103 Picked by: BBALAK SO#: 00162217 Shipped by: ESPARKMAN				AMOUNT FREIGHT/INSUR/HANDLE SALES TAX TOTAL	1,000.00 0.00 \$83.75 1,083.75

Questions? Phone: (800) 375-2358



Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2010

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

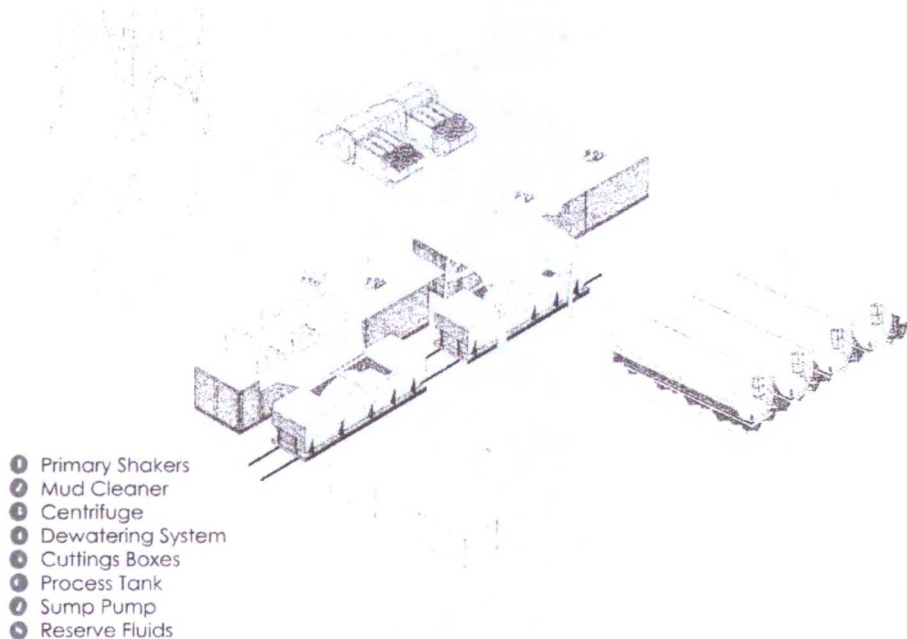
II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.

devon

Closed Loop Schematic



MI SWACO

Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

Rig Location Layout

2 Well Pad

