

# One Energy Partners

Lea County, NM (NAD 27) Lobo Rojo B  
API#

## Lobo Rojo B3 State Com 2H

380' FSL, 685' FWL of Sec12

Wellbore #1

Plan: Plan 1

# Sperry Drilling Services

## Combo Report

11 August, 2017

Well Coordinates: 32° 23' 59.58" N  
103° 25' 46.06" W

NAD 1927 (NADCON CONUS)  
New Mexico East 3001  
510,371.40 N  
778,977.60 E

Ground Level: 3,580.00 usft

Local Coordinate Origin:

Centered on Well Lobo Rojo B3 State Com 2H

Viewing Datum:

GL3580+25ft @ 3605.0usft

TVDs to System:

N

**North Reference:**

**Grid**

Unit System:

API - US Survey Feet

Version: 5000.1 Build: 81D

Report Version: Midcon Combo v1.11

**HALLIBURTON**

**Plan Report for Lobo Rojo B3 State Com 2H - Plan 1**

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing	Easting	Northing	Easting			
0.0	0.00	0.00	-3,605.0	0.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
100.0	0.00	0.00	-3,505.0	100.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
200.0	0.00	0.00	-3,405.0	200.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
300.0	0.00	0.00	-3,305.0	300.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
400.0	0.00	0.00	-3,205.0	400.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
500.0	0.00	0.00	-3,105.0	500.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
600.0	0.00	0.00	-3,005.0	600.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
700.0	0.00	0.00	-2,905.0	700.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
800.0	0.00	0.00	-2,805.0	800.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
900.0	0.00	0.00	-2,705.0	900.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,000.0	0.00	0.00	-2,605.0	1,000.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,100.0	0.00	0.00	-2,505.0	1,100.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,200.0	0.00	0.00	-2,405.0	1,200.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,300.0	0.00	0.00	-2,305.0	1,300.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,400.0	0.00	0.00	-2,205.0	1,400.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,500.0	0.00	0.00	-2,105.0	1,500.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,600.0	0.00	0.00	-2,005.0	1,600.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,669.0	0.00	0.00	-1,936.0	1,669.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	Rustler
1,700.0	0.00	0.00	-1,905.0	1,700.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,800.0	0.00	0.00	-1,805.0	1,800.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
1,900.0	0.00	0.00	-1,705.0	1,900.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
2,000.0	0.00	0.00	-1,605.0	2,000.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
2,033.0	0.00	0.00	-1,572.0	2,033.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	Top of Salt
2,100.0	0.00	0.00	-1,505.0	2,100.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
2,200.0	0.00	0.00	-1,405.0	2,200.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
2,300.0	0.00	0.00	-1,305.0	2,300.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
2,400.0	0.00	0.00	-1,205.0	2,400.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	
2,500.0	0.00	0.00	-1,105.0	2,500.0	0.00 N	0.00 E	510,371.40	778,977.60	0.00	0.0	Start Nudge
2,600.0	2.00	90.00	-1,005.0	2,600.0	0.00 N	1.75 E	510,371.40	778,979.35	2.00	0.0	
2,700.0	4.00	90.00	-905.2	2,699.8	0.00 N	6.98 E	510,371.40	778,984.58	2.00	0.1	
2,800.0	6.00	90.00	-805.5	2,799.5	0.00 N	15.69 E	510,371.40	778,993.29	2.00	0.3	
2,837.7	6.75	90.00	-768.1	2,836.9	0.00 S	19.88 E	510,371.40	778,997.48	2.00	0.4	Hold 6.75°Inc
2,900.0	6.75	90.00	-706.2	2,898.8	0.00 N	27.21 E	510,371.40	779,004.81	0.00	0.5	
3,000.0	6.75	90.00	-606.9	2,998.1	0.00 N	38.97 E	510,371.40	779,016.57	0.00	0.8	
3,100.0	6.75	90.00	-507.6	3,097.4	0.00 N	50.73 E	510,371.40	779,028.33	0.00	1.0	
3,133.8	6.75	90.00	-474.0	3,131.0	0.00 N	54.70 E	510,371.40	779,032.30	0.00	1.1	Base of Salt
3,200.0	6.75	90.00	-408.3	3,196.7	0.00 N	62.49 E	510,371.40	779,040.09	0.00	1.2	
3,300.0	6.75	90.00	-309.0	3,296.0	0.00 N	74.24 E	510,371.40	779,051.84	0.00	1.5	
3,400.0	6.75	90.00	-209.7	3,395.3	0.00 N	86.00 E	510,371.40	779,063.60	0.00	1.7	
3,500.0	6.75	90.00	-110.4	3,494.6	0.00 N	97.76 E	510,371.40	779,075.36	0.00	1.9	
3,600.0	6.75	90.00	-11.1	3,593.9	0.00 N	109.52 E	510,371.40	779,087.12	0.00	2.2	



Plan Report for Lobo Rojo B3 State Com 2H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing	Easting	Northing	Easting			
3,675.6	6.75	90.00	64.0	3,669.0	0.00 N	118.41 E	510,371.40	779,096.01	0.00	2.4	Delaware
3,700.0	6.75	90.00	88.2	3,693.2	0.00 N	121.28 E	510,371.40	779,098.88	0.00	2.4	
3,800.0	6.75	90.00	187.5	3,792.5	0.00 N	133.04 E	510,371.40	779,110.64	0.00	2.6	
3,900.0	6.75	90.00	286.8	3,891.8	0.00 N	144.80 E	510,371.40	779,122.40	0.00	2.9	
4,000.0	6.75	90.00	386.2	3,991.2	0.00 N	156.56 E	510,371.40	779,134.16	0.00	3.1	
4,100.0	6.75	90.00	485.5	4,090.5	0.00 N	168.32 E	510,371.40	779,145.92	0.00	3.4	
4,173.2	6.75	90.00	558.1	4,163.1	0.00 S	176.92 E	510,371.40	779,154.52	0.00	3.5	EOH
4,200.0	6.22	90.00	584.8	4,189.8	0.00 S	179.95 E	510,371.40	779,157.55	2.00	3.6	
4,300.0	4.22	90.00	684.4	4,289.4	0.00 N	189.05 E	510,371.40	779,166.65	2.00	3.8	
4,400.0	2.22	90.00	784.2	4,389.2	0.00 S	194.66 E	510,371.40	779,172.26	2.00	3.9	
4,500.0	0.22	90.00	884.2	4,489.2	0.00 S	196.78 E	510,371.40	779,174.38	2.00	3.9	
4,510.8	0.00	0.00	895.0	4,500.0	0.00 S	196.80 E	510,371.40	779,174.40	2.00	3.9	Vertical
4,600.0	0.00	0.00	984.2	4,589.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
4,700.0	0.00	0.00	1,084.2	4,689.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
4,800.0	0.00	0.00	1,184.2	4,789.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
4,900.0	0.00	0.00	1,284.2	4,889.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,000.0	0.00	0.00	1,384.2	4,989.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,100.0	0.00	0.00	1,484.2	5,089.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,200.0	0.00	0.00	1,584.2	5,189.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,300.0	0.00	0.00	1,684.2	5,289.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,400.0	0.00	0.00	1,784.2	5,389.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,500.0	0.00	0.00	1,884.2	5,489.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,600.0	0.00	0.00	1,984.2	5,589.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,700.0	0.00	0.00	2,084.2	5,689.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,800.0	0.00	0.00	2,184.2	5,789.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
5,900.0	0.00	0.00	2,284.2	5,889.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,000.0	0.00	0.00	2,384.2	5,989.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,100.0	0.00	0.00	2,484.2	6,089.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,200.0	0.00	0.00	2,584.2	6,189.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,300.0	0.00	0.00	2,684.2	6,289.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,400.0	0.00	0.00	2,784.2	6,389.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,500.0	0.00	0.00	2,884.2	6,489.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,600.0	0.00	0.00	2,984.2	6,589.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,700.0	0.00	0.00	3,084.2	6,689.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,800.0	0.00	0.00	3,184.2	6,789.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
6,900.0	0.00	0.00	3,284.2	6,889.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,000.0	0.00	0.00	3,384.2	6,989.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,100.0	0.00	0.00	3,484.2	7,089.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,200.0	0.00	0.00	3,584.2	7,189.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,300.0	0.00	0.00	3,684.2	7,289.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,400.0	0.00	0.00	3,784.2	7,389.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	





Plan Report for Lobo Rojo B3 State Com 2H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing (usft)	Easting (usft)	Northing (usft)	Easting (usft)			
7,500.0	0.00	0.00	3,884.2	7,489.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,600.0	0.00	0.00	3,984.2	7,589.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,700.0	0.00	0.00	4,084.2	7,689.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,800.0	0.00	0.00	4,184.2	7,789.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
7,900.0	0.00	0.00	4,284.2	7,889.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,000.0	0.00	0.00	4,384.2	7,989.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,085.8	0.00	0.00	4,470.0	8,075.0	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	Bone Spring
8,100.0	0.00	0.00	4,484.2	8,089.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,114.8	0.00	0.00	4,499.0	8,104.0	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	Avalon
8,200.0	0.00	0.00	4,584.2	8,189.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,300.0	0.00	0.00	4,684.2	8,289.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,400.0	0.00	0.00	4,784.2	8,389.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,500.0	0.00	0.00	4,884.2	8,489.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,600.0	0.00	0.00	4,984.2	8,589.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,700.0	0.00	0.00	5,084.2	8,689.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,800.0	0.00	0.00	5,184.2	8,789.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
8,900.0	0.00	0.00	5,284.2	8,889.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,000.0	0.00	0.00	5,384.2	8,989.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,068.8	0.00	0.00	5,453.0	9,058.0	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	1st Bone Spring
9,100.0	0.00	0.00	5,484.2	9,089.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,200.0	0.00	0.00	5,584.2	9,189.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,300.0	0.00	0.00	5,684.2	9,289.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,400.0	0.00	0.00	5,784.2	9,389.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,491.8	0.00	0.00	5,876.0	9,481.0	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	2nd Bone Spring
9,500.0	0.00	0.00	5,884.2	9,489.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,600.0	0.00	0.00	5,984.2	9,589.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,700.0	0.00	0.00	6,084.2	9,689.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,800.0	0.00	0.00	6,184.2	9,789.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
9,900.0	0.00	0.00	6,284.2	9,889.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,000.0	0.00	0.00	6,384.2	9,989.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,100.0	0.00	0.00	6,484.2	10,089.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,200.0	0.00	0.00	6,584.2	10,189.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,300.0	0.00	0.00	6,684.2	10,289.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,400.0	0.00	0.00	6,784.2	10,389.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,500.0	0.00	0.00	6,884.2	10,489.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,600.0	0.00	0.00	6,984.2	10,589.2	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	
10,705.4	0.00	0.00	7,089.6	10,694.6	0.00 S	196.80 E	510,371.40	779,174.40	0.00	3.9	KOP
10,725.0	2.35	0.00	7,109.2	10,714.2	0.40 N	196.80 E	510,371.80	779,174.40	12.00	4.3	
10,750.0	5.35	0.00	7,134.1	10,739.1	2.08 N	196.80 E	510,373.48	779,174.40	12.00	6.0	
10,775.0	8.35	0.00	7,158.9	10,763.9	5.06 N	196.80 E	510,376.46	779,174.40	12.00	9.0	
10,800.0	11.35	0.00	7,183.6	10,788.6	9.34 N	196.80 E	510,380.74	779,174.40	12.00	13.3	



Plan Report for Lobo Rojo B3 State Com 2H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing	Easting	Northing	Easting			
10,825.0	14.35	0.00	7,207.9	10,812.9	14.90 N	196.80 E	510,386.30	779,174.40	12.00	18.8	
10,850.0	17.35	0.00	7,232.0	10,837.0	21.72 N	196.80 E	510,393.12	779,174.40	12.00	25.6	
10,858.4	18.36	360.00	7,240.0	10,845.0	24.31 N	196.80 E	510,395.71	779,174.40	12.00	28.2	3rd Bone Spring
10,875.0	20.35	0.00	7,255.6	10,860.6	29.80 N	196.80 E	510,401.20	779,174.40	12.00	33.7	
10,900.0	23.35	0.00	7,278.8	10,883.8	39.10 N	196.80 E	510,410.50	779,174.40	12.00	43.0	
10,925.0	26.35	0.00	7,301.5	10,906.5	49.61 N	196.80 E	510,421.01	779,174.40	12.00	53.5	
10,950.0	29.35	0.00	7,323.6	10,928.6	61.28 N	196.80 E	510,432.68	779,174.40	12.00	65.2	
10,975.0	32.35	0.00	7,345.1	10,950.1	74.10 N	196.80 E	510,445.50	779,174.40	12.00	78.0	
11,000.0	35.35	0.00	7,365.8	10,970.8	88.03 N	196.80 E	510,459.43	779,174.40	12.00	91.9	
11,025.0	38.35	0.00	7,385.8	10,990.8	103.02 N	196.80 E	510,474.42	779,174.40	12.00	106.9	
11,050.0	41.35	0.00	7,405.0	11,010.0	119.04 N	196.80 E	510,490.44	779,174.40	12.00	122.9	
11,075.0	44.35	0.00	7,423.4	11,028.4	136.04 N	196.80 E	510,507.44	779,174.40	12.00	139.9	
11,100.0	47.35	0.00	7,440.8	11,045.8	153.97 N	196.80 E	510,525.37	779,174.40	12.00	157.9	
11,125.0	50.35	0.00	7,457.2	11,062.2	172.79 N	196.80 E	510,544.19	779,174.40	12.00	176.7	
11,150.0	53.35	0.00	7,472.7	11,077.7	192.45 N	196.80 E	510,563.85	779,174.40	12.00	196.3	
11,175.0	56.35	0.00	7,487.0	11,092.0	212.89 N	196.80 E	510,584.29	779,174.40	12.00	216.8	
11,200.0	59.35	0.00	7,500.4	11,105.4	234.05 N	196.80 E	510,605.45	779,174.40	12.00	237.9	
11,225.0	62.35	0.00	7,512.5	11,117.5	255.88 N	196.80 E	510,627.28	779,174.40	12.00	259.8	
11,250.0	65.35	0.00	7,523.5	11,128.5	278.32 N	196.80 E	510,649.72	779,174.40	12.00	282.2	
11,275.0	68.35	0.00	7,533.4	11,138.4	301.31 N	196.80 E	510,672.71	779,174.40	12.00	305.2	
11,300.0	71.35	0.00	7,542.0	11,147.0	324.77 N	196.80 E	510,696.17	779,174.40	12.00	328.6	
11,325.0	74.35	0.00	7,549.4	11,154.4	348.66 N	196.80 E	510,720.06	779,174.40	12.00	352.5	
11,350.0	77.35	0.00	7,555.5	11,160.5	372.90 N	196.80 E	510,744.30	779,174.40	12.00	376.7	
11,375.0	80.35	0.00	7,560.3	11,165.3	397.42 N	196.80 E	510,768.82	779,174.40	12.00	401.3	
11,400.0	83.35	0.00	7,563.8	11,168.8	422.17 N	196.80 E	510,793.57	779,174.40	12.00	426.0	
11,425.0	86.35	0.00	7,566.1	11,171.1	447.07 N	196.80 E	510,818.47	779,174.40	12.00	450.9	
11,448.1	89.12	0.00	7,567.0	11,172.0	470.12 N	196.80 E	510,841.52	779,174.40	12.00	473.9	Target (0 KBTVD @ 90.5°)
11,450.0	89.35	0.00	7,567.0	11,172.0	472.04 N	196.80 E	510,843.44	779,174.40	12.00	475.9	
11,459.6	90.50	0.00	7,567.0	11,172.0	481.63 N	196.80 E	510,853.03	779,174.40	12.00	485.5	Landing Point
11,500.0	90.50	0.00	7,566.7	11,171.7	522.04 N	196.80 E	510,893.44	779,174.40	0.00	525.9	
11,600.0	90.50	0.00	7,565.8	11,170.8	622.04 N	196.80 E	510,993.44	779,174.40	0.00	625.8	
11,700.0	90.50	0.00	7,564.9	11,169.9	722.04 N	196.80 E	511,093.44	779,174.40	0.00	725.8	
11,800.0	90.50	0.00	7,564.1	11,169.1	822.03 N	196.80 E	511,193.43	779,174.40	0.00	825.8	
11,900.0	90.50	0.00	7,563.2	11,168.2	922.03 N	196.80 E	511,293.43	779,174.40	0.00	925.8	
12,000.0	90.50	0.00	7,562.3	11,167.3	1,022.02 N	196.80 E	511,393.42	779,174.40	0.00	1,025.7	
12,100.0	90.50	0.00	7,561.4	11,166.4	1,122.02 N	196.80 E	511,493.42	779,174.40	0.00	1,125.7	
12,200.0	90.50	0.00	7,560.6	11,165.6	1,222.02 N	196.80 E	511,593.42	779,174.40	0.00	1,225.7	
12,300.0	90.50	0.00	7,559.7	11,164.7	1,322.01 N	196.80 E	511,693.41	779,174.40	0.00	1,325.7	
12,400.0	90.50	0.00	7,558.8	11,163.8	1,422.01 N	196.80 E	511,793.41	779,174.40	0.00	1,425.6	
12,500.0	90.50	0.00	7,558.0	11,163.0	1,522.00 N	196.80 E	511,893.40	779,174.40	0.00	1,525.6	
12,600.0	90.50	0.00	7,557.1	11,162.1	1,622.00 N	196.80 E	511,993.40	779,174.40	0.00	1,625.6	





Plan Report for Lobo Rojo B3 State Com 2H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing	Easting	Northing	Easting			
12,700.0	90.50	0.00	7,556.2	11,161.2	1,722.00 N	196.80 E	512,093.40	779,174.40	0.00	1,725.6	
12,800.0	90.50	0.00	7,555.3	11,160.3	1,821.99 N	196.80 E	512,193.39	779,174.40	0.00	1,825.6	
12,900.0	90.50	0.00	7,554.5	11,159.5	1,921.99 N	196.80 E	512,293.39	779,174.40	0.00	1,925.5	
13,000.0	90.50	0.00	7,553.6	11,158.6	2,021.99 N	196.80 E	512,393.39	779,174.40	0.00	2,025.5	
13,100.0	90.50	0.00	7,552.7	11,157.7	2,121.98 N	196.80 E	512,493.38	779,174.40	0.00	2,125.5	
13,200.0	90.50	0.00	7,551.9	11,156.9	2,221.98 N	196.80 E	512,593.38	779,174.40	0.00	2,225.5	
13,300.0	90.50	0.00	7,551.0	11,156.0	2,321.97 N	196.80 E	512,693.37	779,174.40	0.00	2,325.4	
13,400.0	90.50	0.00	7,550.1	11,155.1	2,421.97 N	196.80 E	512,793.37	779,174.40	0.00	2,425.4	
13,500.0	90.50	0.00	7,549.2	11,154.2	2,521.97 N	196.80 E	512,893.37	779,174.40	0.00	2,525.4	
13,600.0	90.50	0.00	7,548.4	11,153.4	2,621.96 N	196.80 E	512,993.36	779,174.40	0.00	2,625.4	
13,700.0	90.50	0.00	7,547.5	11,152.5	2,721.96 N	196.80 E	513,093.36	779,174.40	0.00	2,725.3	
13,800.0	90.50	0.00	7,546.6	11,151.6	2,821.96 N	196.80 E	513,193.36	779,174.40	0.00	2,825.3	
13,900.0	90.50	0.00	7,545.7	11,150.7	2,921.95 N	196.80 E	513,293.35	779,174.40	0.00	2,925.3	
14,000.0	90.50	0.00	7,544.9	11,149.9	3,021.95 N	196.80 E	513,393.35	779,174.40	0.00	3,025.3	
14,100.0	90.50	0.00	7,544.0	11,149.0	3,121.94 N	196.80 E	513,493.34	779,174.40	0.00	3,125.2	
14,200.0	90.50	0.00	7,543.1	11,148.1	3,221.94 N	196.80 E	513,593.34	779,174.40	0.00	3,225.2	
14,300.0	90.50	0.00	7,542.3	11,147.3	3,321.94 N	196.80 E	513,693.34	779,174.40	0.00	3,325.2	
14,400.0	90.50	0.00	7,541.4	11,146.4	3,421.93 N	196.80 E	513,793.33	779,174.40	0.00	3,425.2	
14,500.0	90.50	0.00	7,540.5	11,145.5	3,521.93 N	196.80 E	513,893.33	779,174.40	0.00	3,525.1	
14,600.0	90.50	0.00	7,539.6	11,144.6	3,621.92 N	196.80 E	513,993.32	779,174.40	0.00	3,625.1	
14,700.0	90.50	0.00	7,538.8	11,143.8	3,721.92 N	196.80 E	514,093.32	779,174.40	0.00	3,725.1	
14,800.0	90.50	0.00	7,537.9	11,142.9	3,821.92 N	196.80 E	514,193.32	779,174.40	0.00	3,825.1	
14,900.0	90.50	0.00	7,537.0	11,142.0	3,921.91 N	196.80 E	514,293.31	779,174.40	0.00	3,925.1	
15,000.0	90.50	0.00	7,536.1	11,141.1	4,021.91 N	196.80 E	514,393.31	779,174.40	0.00	4,025.0	
15,100.0	90.50	0.00	7,535.3	11,140.3	4,121.91 N	196.80 E	514,493.31	779,174.40	0.00	4,125.0	
15,200.0	90.50	0.00	7,534.4	11,139.4	4,221.90 N	196.80 E	514,593.30	779,174.40	0.00	4,225.0	
15,300.0	90.50	0.00	7,533.5	11,138.5	4,321.90 N	196.80 E	514,693.30	779,174.40	0.00	4,325.0	
15,400.0	90.50	0.00	7,532.7	11,137.7	4,421.89 N	196.80 E	514,793.29	779,174.40	0.00	4,424.9	
15,500.0	90.50	0.00	7,531.8	11,136.8	4,521.89 N	196.80 E	514,893.29	779,174.40	0.00	4,524.9	
15,600.0	90.50	0.00	7,530.9	11,135.9	4,621.89 N	196.80 E	514,993.29	779,174.40	0.00	4,624.9	
15,700.0	90.50	0.00	7,530.0	11,135.0	4,721.88 N	196.80 E	515,093.28	779,174.40	0.00	4,724.9	
15,800.0	90.50	0.00	7,529.2	11,134.2	4,821.88 N	196.80 E	515,193.28	779,174.40	0.00	4,824.8	
15,900.0	90.50	0.00	7,528.3	11,133.3	4,921.88 N	196.80 E	515,293.28	779,174.40	0.00	4,924.8	
16,000.0	90.50	0.00	7,527.4	11,132.4	5,021.87 N	196.80 E	515,393.27	779,174.40	0.00	5,024.8	
16,100.0	90.50	0.00	7,526.5	11,131.5	5,121.87 N	196.80 E	515,493.27	779,174.40	0.00	5,124.8	
16,200.0	90.50	0.00	7,525.7	11,130.7	5,221.86 N	196.80 E	515,593.26	779,174.40	0.00	5,224.7	
16,300.0	90.50	0.00	7,524.8	11,129.8	5,321.86 N	196.80 E	515,693.26	779,174.40	0.00	5,324.7	
16,400.0	90.50	0.00	7,523.9	11,128.9	5,421.86 N	196.80 E	515,793.26	779,174.40	0.00	5,424.7	
16,500.0	90.50	0.00	7,523.1	11,128.1	5,521.85 N	196.80 E	515,893.25	779,174.40	0.00	5,524.7	
16,600.0	90.50	0.00	7,522.2	11,127.2	5,621.85 N	196.80 E	515,993.25	779,174.40	0.00	5,624.7	
16,700.0	90.50	0.00	7,521.3	11,126.3	5,721.84 N	196.80 E	516,093.24	779,174.40	0.00	5,724.6	



Plan Report for Lobo Rojo B3 State Com 2H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing	Easting	Northing	Easting			
16,800.0	90.50	0.00	7,520.4	11,125.4	5,821.84 N	196.80 E	516,193.24	779,174.40	0.00	5,824.6	
16,900.0	90.50	0.00	7,519.6	11,124.6	5,921.84 N	196.80 E	516,293.24	779,174.40	0.00	5,924.6	
17,000.0	90.50	0.00	7,518.7	11,123.7	6,021.83 N	196.80 E	516,393.23	779,174.40	0.00	6,024.6	
17,100.0	90.50	0.00	7,517.8	11,122.8	6,121.83 N	196.80 E	516,493.23	779,174.40	0.00	6,124.5	
17,200.0	90.50	0.00	7,516.9	11,121.9	6,221.83 N	196.80 E	516,593.23	779,174.40	0.00	6,224.5	
17,300.0	90.50	0.00	7,516.1	11,121.1	6,321.82 N	196.80 E	516,693.22	779,174.40	0.00	6,324.5	
17,400.0	90.50	0.00	7,515.2	11,120.2	6,421.82 N	196.80 E	516,793.22	779,174.40	0.00	6,424.5	
17,500.0	90.50	0.00	7,514.3	11,119.3	6,521.81 N	196.80 E	516,893.21	779,174.40	0.00	6,524.4	
17,600.0	90.50	0.00	7,513.5	11,118.5	6,621.81 N	196.80 E	516,993.21	779,174.40	0.00	6,624.4	
17,700.0	90.50	0.00	7,512.6	11,117.6	6,721.81 N	196.80 E	517,093.21	779,174.40	0.00	6,724.4	
17,800.0	90.50	0.00	7,511.7	11,116.7	6,821.80 N	196.80 E	517,193.20	779,174.40	0.00	6,824.4	
17,900.0	90.50	0.00	7,510.8	11,115.8	6,921.80 N	196.80 E	517,293.20	779,174.40	0.00	6,924.3	
18,000.0	90.50	0.00	7,510.0	11,115.0	7,021.80 N	196.80 E	517,393.20	779,174.40	0.00	7,024.3	
18,100.0	90.50	0.00	7,509.1	11,114.1	7,121.79 N	196.80 E	517,493.19	779,174.40	0.00	7,124.3	
18,200.0	90.50	0.00	7,508.2	11,113.2	7,221.79 N	196.80 E	517,593.19	779,174.40	0.00	7,224.3	
18,300.0	90.50	0.00	7,507.3	11,112.3	7,321.78 N	196.80 E	517,693.18	779,174.40	0.00	7,324.3	
18,400.0	90.50	0.00	7,506.5	11,111.5	7,421.78 N	196.80 E	517,793.18	779,174.40	0.00	7,424.2	
18,500.0	90.50	0.00	7,505.6	11,110.6	7,521.78 N	196.80 E	517,893.18	779,174.40	0.00	7,524.2	
18,600.0	90.50	0.00	7,504.7	11,109.7	7,621.77 N	196.80 E	517,993.17	779,174.40	0.00	7,624.2	
18,700.0	90.50	0.00	7,503.9	11,108.9	7,721.77 N	196.80 E	518,093.17	779,174.40	0.00	7,724.2	
18,800.0	90.50	0.00	7,503.0	11,108.0	7,821.76 N	196.80 E	518,193.16	779,174.40	0.00	7,824.1	
18,900.0	90.50	0.00	7,502.1	11,107.1	7,921.76 N	196.80 E	518,293.16	779,174.40	0.00	7,924.1	
19,000.0	90.50	0.00	7,501.2	11,106.2	8,021.76 N	196.80 E	518,393.16	779,174.40	0.00	8,024.1	
19,100.0	90.50	0.00	7,500.4	11,105.4	8,121.75 N	196.80 E	518,493.15	779,174.40	0.00	8,124.1	
19,200.0	90.50	0.00	7,499.5	11,104.5	8,221.75 N	196.80 E	518,593.15	779,174.40	0.00	8,224.0	
19,300.0	90.50	0.00	7,498.6	11,103.6	8,321.75 N	196.80 E	518,693.15	779,174.40	0.00	8,324.0	
19,400.0	90.50	0.00	7,497.7	11,102.7	8,421.74 N	196.80 E	518,793.14	779,174.40	0.00	8,424.0	
19,500.0	90.50	0.00	7,496.9	11,101.9	8,521.74 N	196.80 E	518,893.14	779,174.40	0.00	8,524.0	
19,600.0	90.50	0.00	7,496.0	11,101.0	8,621.73 N	196.80 E	518,993.13	779,174.40	0.00	8,623.9	
19,700.0	90.50	0.00	7,495.1	11,100.1	8,721.73 N	196.80 E	519,093.13	779,174.40	0.00	8,723.9	
19,800.0	90.50	0.00	7,494.3	11,099.3	8,821.73 N	196.80 E	519,193.13	779,174.40	0.00	8,823.9	
19,900.0	90.50	0.00	7,493.4	11,098.4	8,921.72 N	196.80 E	519,293.12	779,174.40	0.00	8,923.9	
20,000.0	90.50	0.00	7,492.5	11,097.5	9,021.72 N	196.80 E	519,393.12	779,174.40	0.00	9,023.8	
20,100.0	90.50	0.00	7,491.6	11,096.6	9,121.72 N	196.80 E	519,493.12	779,174.40	0.00	9,123.8	
20,200.0	90.50	0.00	7,490.8	11,095.8	9,221.71 N	196.80 E	519,593.11	779,174.40	0.00	9,223.8	
20,300.0	90.50	0.00	7,489.9	11,094.9	9,321.71 N	196.80 E	519,693.11	779,174.40	0.00	9,323.8	
20,400.0	90.50	0.00	7,489.0	11,094.0	9,421.70 N	196.80 E	519,793.10	779,174.40	0.00	9,423.8	
20,500.0	90.50	0.00	7,488.1	11,093.1	9,521.70 N	196.80 E	519,893.10	779,174.40	0.00	9,523.7	
20,600.0	90.50	0.00	7,487.3	11,092.3	9,621.70 N	196.80 E	519,993.10	779,174.40	0.00	9,623.7	
20,700.0	90.50	0.00	7,486.4	11,091.4	9,721.69 N	196.80 E	520,093.09	779,174.40	0.00	9,723.7	
20,800.0	90.50	0.00	7,485.5	11,090.5	9,821.69 N	196.80 E	520,193.09	779,174.40	0.00	9,823.7	

## Plan Report for Lobo Rojo B3 State Com 2H - Plan 1

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	TVD below System (usft)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Dogleg Rate (°/100usft)	Vertical Section (usft)	Comments
					Northing	Easting	Northing	Easting			
20,860.6	90.50	0.00	7,485.0	11,090.0	9,882.30 N	196.80 E	520,253.70	779,174.40	0.00	9,884.3	BHL

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates (usft)		Comment
		+N/-S	+E/-W	
2,500.0	2,500.0	0.0	0.0	Start Nudge
2,837.7	2,836.9	0.0	19.9	Hold 6.75°Inc
4,173.2	4,163.1	0.0	176.9	EOH
4,510.8	4,500.0	0.0	196.8	Vertical
10,705.4	10,694.6	0.0	196.8	KOP
11,459.6	11,172.0	481.6	196.8	Landing Point
20,860.6	11,090.0	9,882.3	196.8	BHL

### Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin (usft)		Start TVD (usft)
				+N/_S	+E/-W	
Target	BHL (LB B3 State Com 2H)	1.14	Slot	0.0	0.0	0.0

### Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.0	20,860.6	Plan 1	MWD+SC

### Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
900.0	900.0	13 3/8"	13-3/8	17-1/2



## Plan Report for Lobo Rojo B3 State Com 2H - Plan 1

### Formation Details

Measured Depth (usft)	Vertical Depth (usft)	TVDSS (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,669.0	1,669.0	-1,936.00	Rustler		0.00	
2,033.0	2,033.0	-1,572.00	Top of Salt		0.00	
3,133.8	3,131.0	-474.00	Base of Salt		0.00	
3,675.6	3,669.0	64.00	Delaware		0.00	
8,085.8	8,075.0	4,470.00	Bone Spring		0.00	
8,114.8	8,104.0	4,499.00	Avalon		0.00	
9,068.8	9,058.0	5,453.00	1st Bone Spring		0.00	
9,491.8	9,481.0	5,876.00	2nd Bone Spring		0.00	
10,858.4	10,845.0	7,240.00	3rd Bone Spring		0.00	
11,448.1	11,172.0	7,567.00	Target (0 KBTVD @ 90.5°)		0.00	

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL (LB B3 State Com 2H) ()	0.00	0.00	11,090.0	9,882.3	196.8	520,253.70	779,174.40	32° 25' 37.349 N	103° 25' 42.790 W
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

### Directional Difficulty Index

Average Dogleg over Survey:	0.00 °/100usft	Maximum Dogleg over Survey:	0.00 °/100usft at 0.0 usft
Net Tortousity applicable to Plans:	0.00 °/100usft	Directional Difficulty Index:	6.578

### Audit Info

**North Reference Sheet for Lobo Rojo B - Lobo Rojo B3 State Com 2H - Wellbore #1**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.  
 Vertical Depths are relative to GL3580+25ft @ 3605.0usft. Northing and Easting are relative to Lobo Rojo B3 State Com 2H  
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866  
 Projection method is Transverse Mercator (Gauss-Kruger)  
 Central Meridian is 104° 20' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°  
 False Easting: 500,000.00usft, False Northing: 0.00usft, Scale Reduction: 0.99999823

Grid Coordinates of Well: 510,371.40 usft N, 778,977.60 usft E  
 Geographical Coordinates of Well: 32° 23' 59.58" N, 103° 25' 46.06" W  
 Grid Convergence at Surface is: 0.48°

Based upon Minimum Curvature type calculations, at a Measured Depth of 20,860.61usft  
 the Bottom Hole Displacement is 9,884.26usft in the Direction of 1.14° (Grid).  
 Magnetic Convergence at surface is: -6.44° (28 September 2017, , BGGM2017)

