

HOBBS OCD
SEP 28 2018
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30-025-45239



Lea County, NM (NAD 83 NME)

Mamba 30 State Com #504H

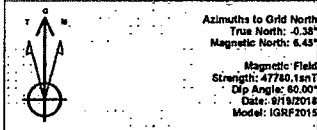
Plan #0.1

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: #504H

KB = 25 @ 3580.0usft
3555.0
Northing 431540.00 Easting 764478.00 Latitude 32° 11' 3.558 N Longitude 102° 36' 43.413 W



To convert a Magnetic Direction to a Grid Direction, Add 6.43°
To convert a Magnetic Direction to a True Direction, Add 6.83° East
To convert a True Direction to a Grid Direction, Subtract 0.38°

SECTION DETAILS

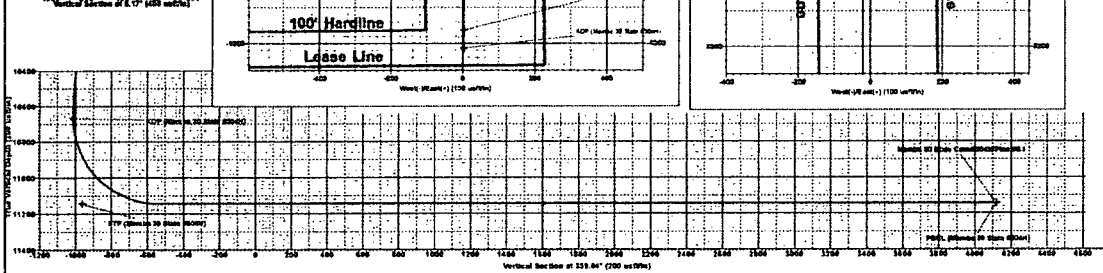
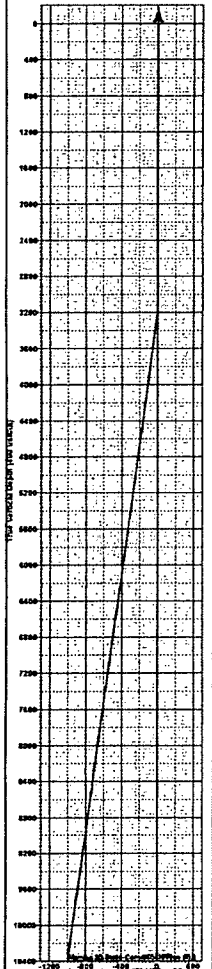
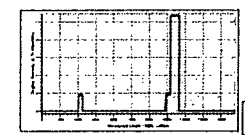
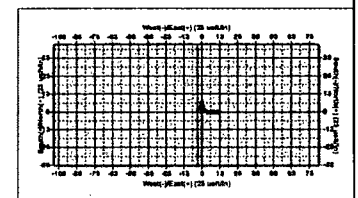
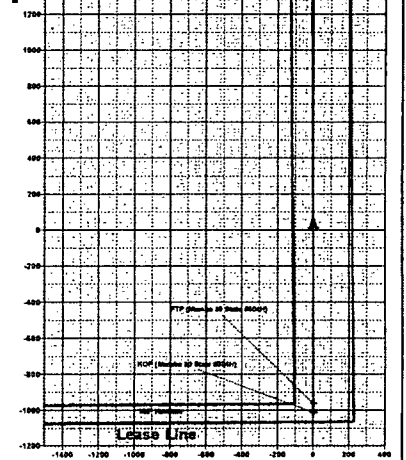
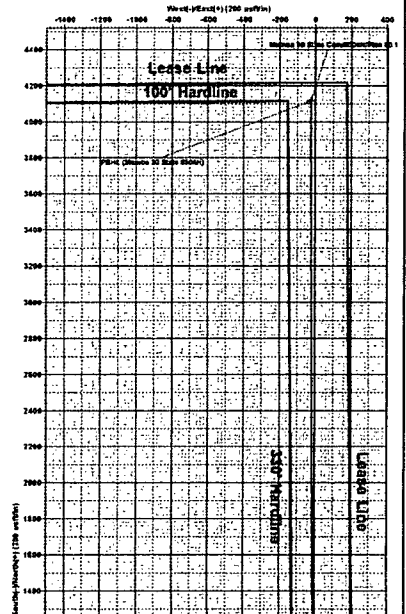
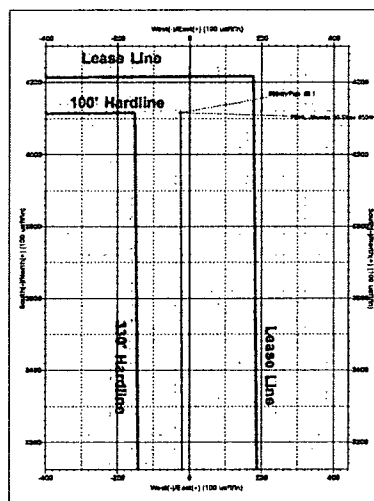
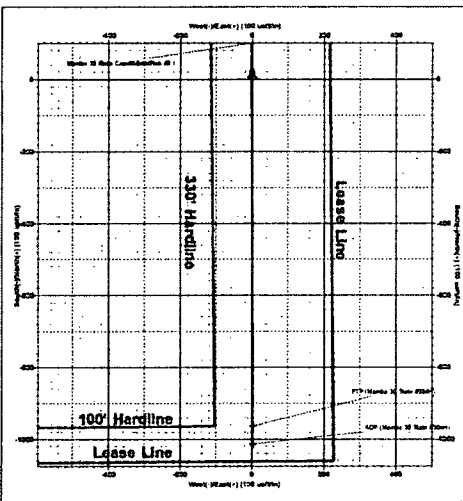
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3396.6	7.93	179.83	3395.3	-27.4	0.1	2.00	179.83	-27.4	
4	10339.9	7.93	179.83	10272.2	-985.6	2.9	0.00	0.00	-985.6	
5	10736.5	0.00	0.00	10667.5	-1013.0	3.0	2.00	180.00	-1013.0	KOP (Mamba 30 State #504H)
6	11486.5	90.00	359.68	11145.0	-535.5	0.3	12.00	359.68	-535.5	
7	16138.1	90.00	359.68	11145.0	4116.0	-26.0	0.00	0.00	4116.1	PBHL (Mamba 30 State #504H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (Mamba 30 State #504H)	10667.5	-1013.0	3.0	430527.00	764481.00
PBHL (Mamba 30 State #504H)	11145.0	4116.0	-26.0	430658.00	764462.00
FTP (Mamba 30 State #504H)	11145.0	-953.0	3.0	430677.00	764481.00





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Mamba 30 State Com

#504H

OH

Plan: Plan #0.1

Standard Planning Report

20 September, 2018



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #504H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3580.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3580.0usft
Site:	Mamba 30 State Com	North Reference:	Grid
Well:	#504H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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

Site	Mamba 30 State Com				
Site Position:		Northing:	430,807.00 usft	Latitude:	32° 10' 56.143 N
From:	Map	Easting:	767,053.00 usft	Longitude:	103° 36' 13.509 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#504H				
Well Position	+N/-S	733.0 usft	Northing:	431,540.00 usft	Latitude: 32° 11' 3.568 N
	+E/-W	-2,575.0 usft	Easting:	764,478.00 usft	Longitude: 103° 36' 43.413 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level:	3,555.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/19/2018	6.83	60.00	47,780.10129555

Design	Plan #0.1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.64

Plan Survey Tool Program	Date 9/20/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1 0.0	16,138.1	Plan #0.1 (OH)	MWD	
			OWSG MWD - Standard	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,396.6	7.93	179.83	3,395.3	-27.4	0.1	2.00	2.00	0.00	179.83	
10,339.9	7.93	179.83	10,272.2	-985.6	2.9	0.00	0.00	0.00	0.00	
10,736.5	0.00	0.00	10,667.5	-1,013.0	3.0	2.00	-2.00	0.00	180.00	KOP (Mamba 30 Stat
11,486.5	90.00	359.68	11,145.0	-535.5	0.3	12.00	12.00	-0.04	359.68	
16,138.1	90.00	359.68	11,145.0	4,116.0	-26.0	0.00	0.00	0.00	0.00	PBHL (Mamba 30 Sta



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #504H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3580.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3580.0usft
Site:	Mamba 30 State Com	North Reference:	Grid
Well:	#504H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	2.00	179.83	3,100.0	-1.7	0.0	-1.7	2.00	2.00	0.00
3,200.0	4.00	179.83	3,199.8	-7.0	0.0	-7.0	2.00	2.00	0.00
3,300.0	6.00	179.83	3,299.5	-15.7	0.0	-15.7	2.00	2.00	0.00
3,396.6	7.93	179.83	3,395.3	-27.4	0.1	-27.4	2.00	2.00	0.00
3,400.0	7.93	179.83	3,398.7	-27.9	0.1	-27.9	0.00	0.00	0.00
3,500.0	7.93	179.83	3,497.7	-41.7	0.1	-41.7	0.00	0.00	0.00
3,600.0	7.93	179.83	3,596.8	-55.5	0.2	-55.5	0.00	0.00	0.00
3,700.0	7.93	179.83	3,695.8	-69.3	0.2	-69.3	0.00	0.00	0.00
3,800.0	7.93	179.83	3,794.9	-83.1	0.2	-83.1	0.00	0.00	0.00
3,900.0	7.93	179.83	3,893.9	-96.9	0.3	-96.9	0.00	0.00	0.00
4,000.0	7.93	179.83	3,993.0	-110.7	0.3	-110.7	0.00	0.00	0.00
4,100.0	7.93	179.83	4,092.0	-124.5	0.4	-124.5	0.00	0.00	0.00
4,200.0	7.93	179.83	4,191.0	-138.3	0.4	-138.3	0.00	0.00	0.00
4,300.0	7.93	179.83	4,290.1	-152.1	0.5	-152.1	0.00	0.00	0.00
4,400.0	7.93	179.83	4,389.1	-165.9	0.5	-165.9	0.00	0.00	0.00
4,500.0	7.93	179.83	4,488.2	-179.7	0.5	-179.7	0.00	0.00	0.00
4,600.0	7.93	179.83	4,587.2	-193.5	0.6	-193.5	0.00	0.00	0.00
4,700.0	7.93	179.83	4,686.3	-207.3	0.6	-207.3	0.00	0.00	0.00
4,800.0	7.93	179.83	4,785.3	-221.1	0.7	-221.1	0.00	0.00	0.00
4,900.0	7.93	179.83	4,884.3	-234.9	0.7	-234.9	0.00	0.00	0.00
5,000.0	7.93	179.83	4,983.4	-248.7	0.7	-248.7	0.00	0.00	0.00
5,100.0	7.93	179.83	5,082.4	-262.5	0.8	-262.5	0.00	0.00	0.00
5,200.0	7.93	179.83	5,181.5	-276.3	0.8	-276.3	0.00	0.00	0.00

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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3580.0usft
Site:	Mamba 30 State Com	North Reference:	Grid
Well:	#504H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
5,300.0	7.93	179.83	5,280.5	-290.1	0.9	-290.1	0.00	0.00	0.00
5,400.0	7.93	179.83	5,379.6	-303.9	0.9	-303.9	0.00	0.00	0.00
5,500.0	7.93	179.83	5,478.6	-317.7	0.9	-317.7	0.00	0.00	0.00
5,600.0	7.93	179.83	5,577.7	-331.5	1.0	-331.5	0.00	0.00	0.00
5,700.0	7.93	179.83	5,676.7	-345.3	1.0	-345.3	0.00	0.00	0.00
5,800.0	7.93	179.83	5,775.7	-359.1	1.1	-359.1	0.00	0.00	0.00
5,900.0	7.93	179.83	5,874.8	-372.9	1.1	-372.9	0.00	0.00	0.00
6,000.0	7.93	179.83	5,973.8	-386.7	1.1	-386.7	0.00	0.00	0.00
6,100.0	7.93	179.83	6,072.9	-400.5	1.2	-400.5	0.00	0.00	0.00
6,200.0	7.93	179.83	6,171.9	-414.3	1.2	-414.3	0.00	0.00	0.00
6,300.0	7.93	179.83	6,271.0	-428.1	1.3	-428.1	0.00	0.00	0.00
6,400.0	7.93	179.83	6,370.0	-441.9	1.3	-441.9	0.00	0.00	0.00
6,500.0	7.93	179.83	6,469.0	-455.7	1.3	-455.7	0.00	0.00	0.00
6,600.0	7.93	179.83	6,568.1	-469.5	1.4	-469.5	0.00	0.00	0.00
6,700.0	7.93	179.83	6,667.1	-483.3	1.4	-483.3	0.00	0.00	0.00
6,800.0	7.93	179.83	6,766.2	-497.1	1.5	-497.1	0.00	0.00	0.00
6,900.0	7.93	179.83	6,865.2	-510.9	1.5	-510.9	0.00	0.00	0.00
7,000.0	7.93	179.83	6,964.3	-524.7	1.6	-524.7	0.00	0.00	0.00
7,100.0	7.93	179.83	7,063.3	-538.5	1.6	-538.5	0.00	0.00	0.00
7,200.0	7.93	179.83	7,162.3	-552.3	1.6	-552.3	0.00	0.00	0.00
7,300.0	7.93	179.83	7,261.4	-566.1	1.7	-566.1	0.00	0.00	0.00
7,400.0	7.93	179.83	7,360.4	-579.9	1.7	-579.9	0.00	0.00	0.00
7,500.0	7.93	179.83	7,459.5	-593.7	1.8	-593.7	0.00	0.00	0.00
7,600.0	7.93	179.83	7,558.5	-607.5	1.8	-607.5	0.00	0.00	0.00
7,700.0	7.93	179.83	7,657.6	-621.3	1.8	-621.3	0.00	0.00	0.00
7,800.0	7.93	179.83	7,756.6	-635.1	1.9	-635.1	0.00	0.00	0.00
7,900.0	7.93	179.83	7,855.6	-648.9	1.9	-648.9	0.00	0.00	0.00
8,000.0	7.93	179.83	7,954.7	-662.7	2.0	-662.7	0.00	0.00	0.00
8,100.0	7.93	179.83	8,053.7	-676.5	2.0	-676.5	0.00	0.00	0.00
8,200.0	7.93	179.83	8,152.8	-690.3	2.0	-690.3	0.00	0.00	0.00
8,300.0	7.93	179.83	8,251.8	-704.1	2.1	-704.1	0.00	0.00	0.00
8,400.0	7.93	179.83	8,350.9	-717.9	2.1	-717.9	0.00	0.00	0.00
8,500.0	7.93	179.83	8,449.9	-731.7	2.2	-731.7	0.00	0.00	0.00
8,600.0	7.93	179.83	8,548.9	-745.5	2.2	-745.5	0.00	0.00	0.00
8,700.0	7.93	179.83	8,648.0	-759.3	2.2	-759.3	0.00	0.00	0.00
8,800.0	7.93	179.83	8,747.0	-773.1	2.3	-773.1	0.00	0.00	0.00
8,900.0	7.93	179.83	8,846.1	-786.9	2.3	-786.9	0.00	0.00	0.00
9,000.0	7.93	179.83	8,945.1	-800.7	2.4	-800.7	0.00	0.00	0.00
9,100.0	7.93	179.83	9,044.2	-814.5	2.4	-814.5	0.00	0.00	0.00
9,200.0	7.93	179.83	9,143.2	-828.3	2.5	-828.3	0.00	0.00	0.00
9,300.0	7.93	179.83	9,242.2	-842.1	2.5	-842.1	0.00	0.00	0.00
9,400.0	7.93	179.83	9,341.3	-855.9	2.5	-855.9	0.00	0.00	0.00
9,500.0	7.93	179.83	9,440.3	-869.7	2.6	-869.7	0.00	0.00	0.00
9,600.0	7.93	179.83	9,539.4	-883.5	2.6	-883.5	0.00	0.00	0.00
9,700.0	7.93	179.83	9,638.4	-897.3	2.7	-897.3	0.00	0.00	0.00
9,800.0	7.93	179.83	9,737.5	-911.1	2.7	-911.1	0.00	0.00	0.00
9,900.0	7.93	179.83	9,836.5	-924.9	2.7	-924.9	0.00	0.00	0.00
10,000.0	7.93	179.83	9,935.6	-938.7	2.8	-938.7	0.00	0.00	0.00
10,100.0	7.93	179.83	10,034.6	-952.5	2.8	-952.5	0.00	0.00	0.00
10,200.0	7.93	179.83	10,133.6	-966.3	2.9	-966.3	0.00	0.00	0.00
10,300.0	7.93	179.83	10,232.7	-980.1	2.9	-980.1	0.00	0.00	0.00
10,339.9	7.93	179.83	10,272.2	-985.6	2.9	-985.6	0.00	0.00	0.00
10,400.0	6.73	179.83	10,331.8	-993.3	2.9	-993.3	2.00	-2.00	0.00
10,500.0	4.73	179.83	10,431.3	-1,003.2	3.0	-1,003.2	2.00	-2.00	0.00



Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #504H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3580.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3580.0usft
Site:	Mamba 30 State Com	North Reference:	Grid
Well:	#504H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)	
10,600.0	2.73	179.83	10,531.1	-1,009.8	3.0	-1,009.7	2.00	-2.00	0.00	
10,700.0	0.73	179.83	10,631.0	-1,012.8	3.0	-1,012.8	2.00	-2.00	0.00	
10,736.5	0.00	0.00	10,667.5	-1,013.0	3.0	-1,013.0	2.00	-2.00	0.00	
KOP (Mamba 30 State #504H)										
10,750.0	1.62	359.68	10,681.0	-1,012.8	3.0	-1,012.8	12.00	12.00	0.00	
10,775.0	4.62	359.68	10,706.0	-1,011.4	3.0	-1,011.4	12.00	12.00	0.00	
10,800.0	7.62	359.68	10,730.8	-1,008.8	3.0	-1,008.8	12.00	12.00	0.00	
10,825.0	10.62	359.68	10,755.5	-1,004.8	3.0	-1,004.8	12.00	12.00	0.00	
10,850.0	13.62	359.68	10,780.0	-999.6	2.9	-999.6	12.00	12.00	0.00	
10,875.0	16.62	359.68	10,804.1	-993.0	2.9	-993.0	12.00	12.00	0.00	
10,900.0	19.62	359.68	10,827.9	-985.3	2.8	-985.3	12.00	12.00	0.00	
10,925.0	22.62	359.68	10,851.2	-976.3	2.8	-976.3	12.00	12.00	0.00	
10,950.0	25.62	359.68	10,874.0	-966.0	2.7	-966.0	12.00	12.00	0.00	
10,975.0	28.62	359.68	10,896.2	-954.6	2.7	-954.6	12.00	12.00	0.00	
11,000.0	31.62	359.68	10,917.9	-942.1	2.6	-942.1	12.00	12.00	0.00	
11,025.0	34.62	359.68	10,938.8	-928.4	2.5	-928.4	12.00	12.00	0.00	
11,050.0	37.62	359.68	10,959.0	-913.7	2.4	-913.7	12.00	12.00	0.00	
11,075.0	40.62	359.68	10,978.4	-897.9	2.3	-897.9	12.00	12.00	0.00	
11,100.0	43.62	359.68	10,996.9	-881.2	2.3	-881.2	12.00	12.00	0.00	
11,125.0	46.62	359.68	11,014.6	-863.5	2.2	-863.4	12.00	12.00	0.00	
11,138.0	48.18	359.68	11,023.3	-853.9	2.1	-853.9	12.00	12.00	0.00	
FTP (Mamba 30 State #504H)										
11,150.0	49.62	359.68	11,031.2	-844.8	2.0	-844.8	12.00	12.00	0.00	
11,175.0	52.62	359.68	11,046.9	-825.4	1.9	-825.4	12.00	12.00	0.00	
11,200.0	55.62	359.68	11,061.6	-805.1	1.8	-805.1	12.00	12.00	0.00	
11,225.0	58.62	359.68	11,075.1	-784.1	1.7	-784.1	12.00	12.00	0.00	
11,250.0	61.62	359.68	11,087.6	-762.5	1.6	-762.5	12.00	12.00	0.00	
11,275.0	64.62	359.68	11,098.9	-740.2	1.5	-740.2	12.00	12.00	0.00	
11,300.0	67.62	359.68	11,109.0	-717.3	1.3	-717.3	12.00	12.00	0.00	
11,325.0	70.62	359.68	11,117.9	-693.9	1.2	-693.9	12.00	12.00	0.00	
11,350.0	73.62	359.68	11,125.6	-670.2	1.1	-670.1	12.00	12.00	0.00	
11,375.0	76.62	359.68	11,132.0	-646.0	0.9	-646.0	12.00	12.00	0.00	
11,400.0	79.62	359.68	11,137.2	-621.5	0.8	-621.5	12.00	12.00	0.00	
11,425.0	82.62	359.68	11,141.0	-596.8	0.6	-596.8	12.00	12.00	0.00	
11,450.0	85.62	359.68	11,143.6	-572.0	0.5	-572.0	12.00	12.00	0.00	
11,475.0	88.62	359.68	11,144.8	-547.0	0.4	-547.0	12.00	12.00	0.00	
11,486.5	90.00	359.68	11,145.0	-535.5	0.3	-535.5	12.00	12.00	0.00	
11,500.0	90.00	359.68	11,145.0	-522.0	0.2	-522.0	0.00	0.00	0.00	
11,600.0	90.00	359.68	11,145.0	-422.0	-0.3	-422.0	0.00	0.00	0.00	
11,700.0	90.00	359.68	11,145.0	-322.0	-0.9	-322.0	0.00	0.00	0.00	
11,800.0	90.00	359.68	11,145.0	-222.0	-1.5	-222.0	0.00	0.00	0.00	
11,900.0	90.00	359.68	11,145.0	-122.0	-2.0	-122.0	0.00	0.00	0.00	
12,000.0	90.00	359.68	11,145.0	-22.0	-2.6	-22.0	0.00	0.00	0.00	
12,100.0	90.00	359.68	11,145.0	78.0	-3.2	78.0	0.00	0.00	0.00	
12,200.0	90.00	359.68	11,145.0	178.0	-3.7	178.0	0.00	0.00	0.00	
12,300.0	90.00	359.68	11,145.0	278.0	-4.3	278.0	0.00	0.00	0.00	
12,400.0	90.00	359.68	11,145.0	378.0	-4.9	378.0	0.00	0.00	0.00	
12,500.0	90.00	359.68	11,145.0	478.0	-5.4	478.0	0.00	0.00	0.00	
12,600.0	90.00	359.68	11,145.0	578.0	-6.0	578.0	0.00	0.00	0.00	
12,700.0	90.00	359.68	11,145.0	678.0	-6.6	678.0	0.00	0.00	0.00	
12,800.0	90.00	359.68	11,145.0	778.0	-7.1	778.0	0.00	0.00	0.00	
12,900.0	90.00	359.68	11,145.0	878.0	-7.7	878.0	0.00	0.00	0.00	
13,000.0	90.00	359.68	11,145.0	978.0	-8.3	978.0	0.00	0.00	0.00	
13,100.0	90.00	359.68	11,145.0	1,078.0	-8.8	1,078.0	0.00	0.00	0.00	

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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3580.0usft
Site:	Mamba 30 State Com	North Reference:	Grid
Well:	#504H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
13,200.0	90.00	359.68	11,145.0	1,178.0	-9.4	1,178.0	0.00	0.00	0.00
13,300.0	90.00	359.68	11,145.0	1,278.0	-10.0	1,278.0	0.00	0.00	0.00
13,400.0	90.00	359.68	11,145.0	1,378.0	-10.5	1,378.0	0.00	0.00	0.00
13,500.0	90.00	359.68	11,145.0	1,478.0	-11.1	1,478.0	0.00	0.00	0.00
13,600.0	90.00	359.68	11,145.0	1,578.0	-11.6	1,578.0	0.00	0.00	0.00
13,700.0	90.00	359.68	11,145.0	1,678.0	-12.2	1,678.0	0.00	0.00	0.00
13,800.0	90.00	359.68	11,145.0	1,778.0	-12.8	1,778.0	0.00	0.00	0.00
13,900.0	90.00	359.68	11,145.0	1,878.0	-13.3	1,878.0	0.00	0.00	0.00
14,000.0	90.00	359.68	11,145.0	1,978.0	-13.9	1,978.0	0.00	0.00	0.00
14,100.0	90.00	359.68	11,145.0	2,078.0	-14.5	2,078.0	0.00	0.00	0.00
14,200.0	90.00	359.68	11,145.0	2,177.9	-15.0	2,178.0	0.00	0.00	0.00
14,300.0	90.00	359.68	11,145.0	2,277.9	-15.6	2,278.0	0.00	0.00	0.00
14,400.0	90.00	359.68	11,145.0	2,377.9	-16.2	2,378.0	0.00	0.00	0.00
14,500.0	90.00	359.68	11,145.0	2,477.9	-16.7	2,478.0	0.00	0.00	0.00
14,600.0	90.00	359.68	11,145.0	2,577.9	-17.3	2,578.0	0.00	0.00	0.00
14,700.0	90.00	359.68	11,145.0	2,677.9	-17.9	2,678.0	0.00	0.00	0.00
14,800.0	90.00	359.68	11,145.0	2,777.9	-18.4	2,778.0	0.00	0.00	0.00
14,900.0	90.00	359.68	11,145.0	2,877.9	-19.0	2,878.0	0.00	0.00	0.00
15,000.0	90.00	359.68	11,145.0	2,977.9	-19.6	2,978.0	0.00	0.00	0.00
15,100.0	90.00	359.68	11,145.0	3,077.9	-20.1	3,078.0	0.00	0.00	0.00
15,200.0	90.00	359.68	11,145.0	3,177.9	-20.7	3,178.0	0.00	0.00	0.00
15,300.0	90.00	359.68	11,145.0	3,277.9	-21.3	3,278.0	0.00	0.00	0.00
15,400.0	90.00	359.68	11,145.0	3,377.9	-21.8	3,378.0	0.00	0.00	0.00
15,500.0	90.00	359.68	11,145.0	3,477.9	-22.4	3,478.0	0.00	0.00	0.00
15,600.0	90.00	359.68	11,145.0	3,577.9	-23.0	3,578.0	0.00	0.00	0.00
15,700.0	90.00	359.68	11,145.0	3,677.9	-23.5	3,678.0	0.00	0.00	0.00
15,800.0	90.00	359.68	11,145.0	3,777.9	-24.1	3,778.0	0.00	0.00	0.00
15,900.0	90.00	359.68	11,145.0	3,877.9	-24.7	3,878.0	0.00	0.00	0.00
16,000.0	90.00	359.68	11,145.0	3,977.9	-25.2	3,978.0	0.00	0.00	0.00
16,100.0	90.00	359.68	11,145.0	4,077.9	-25.8	4,078.0	0.00	0.00	0.00
16,138.1	90.00	359.68	11,145.0	4,116.0	-26.0	4,116.1	0.00	0.00	0.00

PBHL (Mamba 30 State #504H)

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP (Mamba 30 State # - plan hits target center - Point	0.00	0.00	10,667.5	-1,013.0	3.0	430,527.00	764,481.00	32° 10' 53.544 N	103° 36' 43.457 W
PBHL (Mamba 30 State - plan hits target center - Point	0.00	0.00	11,145.0	4,116.0	-26.0	435,656.00	764,452.00	32° 11' 44.299 N	103° 36' 43.394 W
FTP (Mamba 30 State #: - plan misses target center by 163.4usft at 11138.0usft MD (11023.3 TVD, -853.9 N, 2.1 E) - Point	0.00	0.00	11,145.0	-963.0	3.0	430,577.00	764,481.00	32° 10' 54.039 N	103° 36' 43.453 W