



Lea County, NM (NAD 83 NME)

Mamba 30 State #601H

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: #601H

KB = 25' @ 3547.0m
Northing 430738.00 Easting 706753.00
Latitude 32° 10' 33.480 N Longitude 103° 36' 17.005 W

SECTION DETAILS

Se	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSeet	Target
0	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0	
2	4558.9	5.59	254.28	4558.0	-7.4	-26.2	1.00	254.28	-3.2	
3	11774.6	5.59	254.28	11739.4	-197.8	-702.6	0.00	0.00	-84.6	
4	12536.9	90.00	359.57	12227.0	279.1	-752.2	12.00	105.23	394.2	
5	17186.9	90.00	359.57	12227.0	4929.0	-787.0	0.00	0.00	4991.4	PBHL (Mamba 30 State #601H)



Azimuths to Grid North
True North: -0.33°
Magnetic North: 8.50°
Magnetic Field
Strength: 47880.8mT
Dip Angle: 60.03°
Date: 9/25/2017
Model: KSRF2016

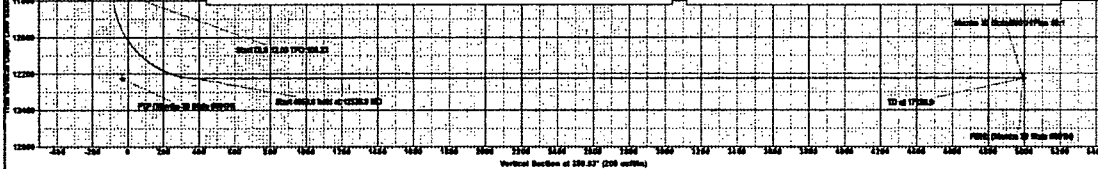
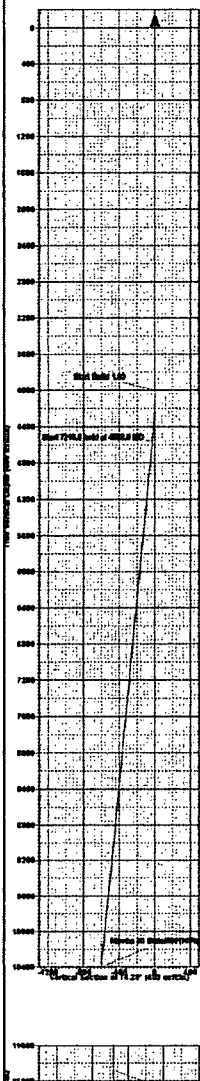
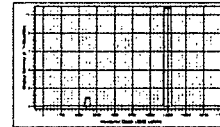
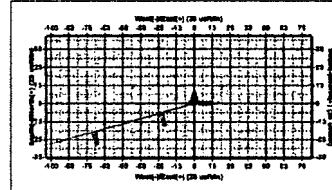
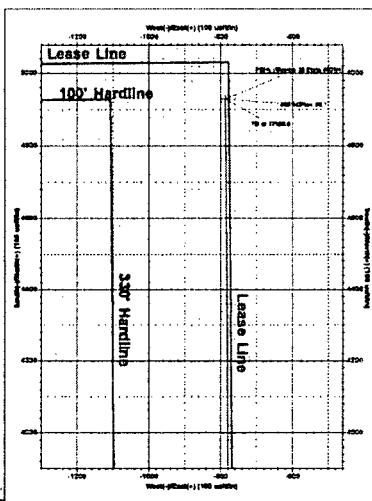
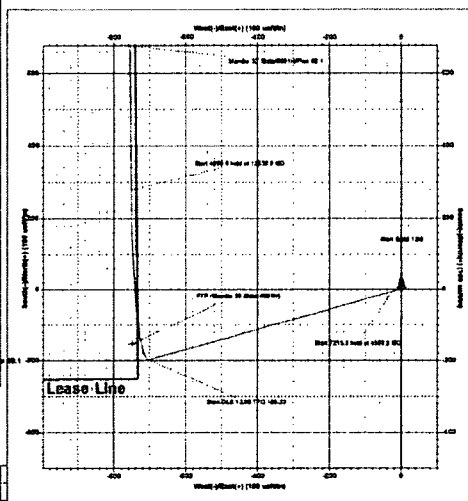
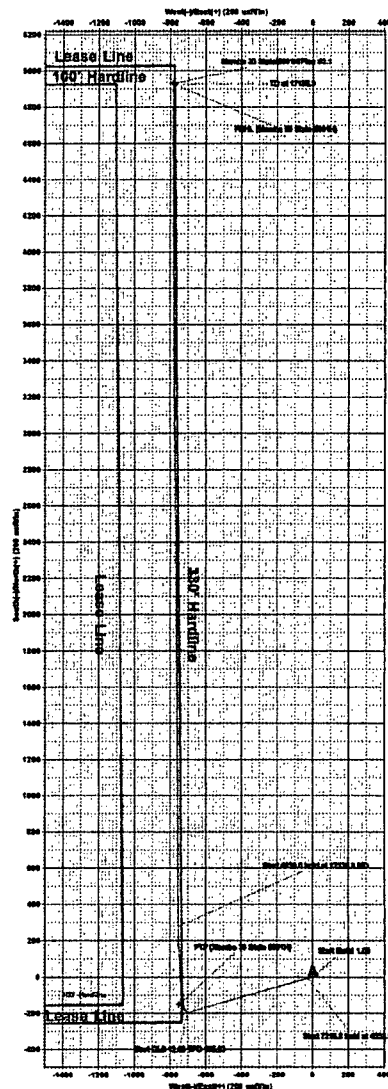
To convert a Magnetic Direction to a Grid Direction, Add 8.55°
To convert a Magnetic Direction to a True Direction, Add 8.84° East
To convert a True Direction to a Grid Direction, Subtract 0.33°

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
PBHL (Mamba 30 State #601H)	12227.0	4929.0	-787.0	430687.00	706806.00
FTP (Mamba 30 State #601H)	12227.0	-182.0	-749.0	430596.00	706904.00





HOBBS COO

JUL 05 2018

RECEIVED

EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Mamba 30 State

#601H

OH

Plan: Plan #0.1

Standard Planning Report

05 July, 2018



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Mamba 30 State
Well: #601H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #601H
TVD Reference: KB = 25' @ 3547.0usft
MD Reference: KB = 25' @ 3547.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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			
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	#601H			
Well Position	+N/-S	-69.0 usft	Northing: 430,738.00 usft	Latitude: 32° 10' 55.480 N
	+E/-W	-300.0 usft	Easting: 766,753.00 usft	Longitude: 103° 36' 17.005 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level: 3,522.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2015	9/25/2017	6.94	60.02	47,880.84763827

Design	Plan #0.1			
Audit Notes:				
Version:		Phase: PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	350.93

Plan Survey Tool Program	Date: 7/5/2018			
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks
(usft)	(usft)			
1 0.0	17,186.9	Plan #0.1 (OH)	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,558.9	5.59	254.28	4,558.0	-7.4	-26.2	1.00	1.00	0.00	254.28	
11,774.6	5.59	254.28	11,739.4	-197.8	-702.6	0.00	0.00	0.00	0.00	
12,536.9	90.00	359.57	12,227.0	279.1	-752.2	12.00	11.07	13.81	105.23	
17,186.9	90.00	359.57	12,227.0	4,929.0	-787.0	0.00	0.00	0.00	0.00	PBHL (Mamba 30 Sta



Planning Report

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 Site: Mamba 30 State
 Well: #601H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #601H
 TVD Reference: KB = 25' @ 3547.0usft
 MD Reference: KB = 25' @ 3547.0usft
 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)
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	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	1.00	254.28	4,100.0	-0.2	-0.8	-0.1	1.00	1.00	0.00
4,200.0	2.00	254.28	4,200.0	-0.9	-3.4	-0.4	1.00	1.00	0.00
4,300.0	3.00	254.28	4,299.9	-2.1	-7.6	-0.9	1.00	1.00	0.00
4,400.0	4.00	254.28	4,399.7	-3.8	-13.4	-1.6	1.00	1.00	0.00
4,500.0	5.00	254.28	4,499.4	-5.9	-21.0	-2.5	1.00	1.00	0.00
4,558.9	5.59	254.28	4,558.0	-7.4	-26.2	-3.2	1.00	1.00	0.00
4,600.0	5.59	254.28	4,598.9	-8.5	-30.1	-3.6	0.00	0.00	0.00
4,700.0	5.59	254.28	4,698.4	-11.1	-39.4	-4.7	0.00	0.00	0.00
4,800.0	5.59	254.28	4,798.0	-13.7	-48.8	-5.9	0.00	0.00	0.00
4,900.0	5.59	254.28	4,897.5	-16.4	-58.2	-7.0	0.00	0.00	0.00
5,000.0	5.59	254.28	4,997.0	-19.0	-67.6	-8.1	0.00	0.00	0.00
5,100.0	5.59	254.28	5,096.5	-21.7	-76.9	-9.3	0.00	0.00	0.00
5,200.0	5.59	254.28	5,196.1	-24.3	-86.3	-10.4	0.00	0.00	0.00



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Mamba 30 State
 Well: #601H
 Wellbore: OH
 Design: Plan #0.1

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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	5.59	254.28	5,295.6	-26.9	-95.7	-11.5	0.00	0.00	0.00
5,400.0	5.59	254.28	5,395.1	-29.6	-105.1	-12.6	0.00	0.00	0.00
5,500.0	5.59	254.28	5,494.6	-32.2	-114.4	-13.8	0.00	0.00	0.00
5,600.0	5.59	254.28	5,594.2	-34.9	-123.8	-14.9	0.00	0.00	0.00
5,700.0	5.59	254.28	5,693.7	-37.5	-133.2	-16.0	0.00	0.00	0.00
5,800.0	5.59	254.28	5,793.2	-40.1	-142.6	-17.2	0.00	0.00	0.00
5,900.0	5.59	254.28	5,892.7	-42.8	-151.9	-18.3	0.00	0.00	0.00
6,000.0	5.59	254.28	5,992.3	-45.4	-161.3	-19.4	0.00	0.00	0.00
6,100.0	5.59	254.28	6,091.8	-48.1	-170.7	-20.5	0.00	0.00	0.00
6,200.0	5.59	254.28	6,191.3	-50.7	-180.1	-21.7	0.00	0.00	0.00
6,300.0	5.59	254.28	6,290.8	-53.3	-189.4	-22.8	0.00	0.00	0.00
6,400.0	5.59	254.28	6,390.4	-56.0	-198.8	-23.9	0.00	0.00	0.00
6,500.0	5.59	254.28	6,489.9	-58.6	-208.2	-25.1	0.00	0.00	0.00
6,600.0	5.59	254.28	6,589.4	-61.3	-217.6	-26.2	0.00	0.00	0.00
6,700.0	5.59	254.28	6,688.9	-63.9	-226.9	-27.3	0.00	0.00	0.00
6,800.0	5.59	254.28	6,788.5	-66.5	-236.3	-28.4	0.00	0.00	0.00
6,900.0	5.59	254.28	6,888.0	-69.2	-245.7	-29.6	0.00	0.00	0.00
7,000.0	5.59	254.28	6,987.5	-71.8	-255.1	-30.7	0.00	0.00	0.00
7,100.0	5.59	254.28	7,087.0	-74.4	-264.4	-31.8	0.00	0.00	0.00
7,200.0	5.59	254.28	7,186.6	-77.1	-273.8	-33.0	0.00	0.00	0.00
7,300.0	5.59	254.28	7,286.1	-79.7	-283.2	-34.1	0.00	0.00	0.00
7,400.0	5.59	254.28	7,385.6	-82.4	-292.5	-35.2	0.00	0.00	0.00
7,500.0	5.59	254.28	7,485.1	-85.0	-301.9	-36.3	0.00	0.00	0.00
7,600.0	5.59	254.28	7,584.7	-87.6	-311.3	-37.5	0.00	0.00	0.00
7,700.0	5.59	254.28	7,684.2	-90.3	-320.7	-38.6	0.00	0.00	0.00
7,800.0	5.59	254.28	7,783.7	-92.9	-330.0	-39.7	0.00	0.00	0.00
7,900.0	5.59	254.28	7,883.2	-95.6	-339.4	-40.8	0.00	0.00	0.00
8,000.0	5.59	254.28	7,982.8	-98.2	-348.8	-42.0	0.00	0.00	0.00
8,100.0	5.59	254.28	8,082.3	-100.8	-358.2	-43.1	0.00	0.00	0.00
8,200.0	5.59	254.28	8,181.8	-103.5	-367.5	-44.2	0.00	0.00	0.00
8,300.0	5.59	254.28	8,281.3	-106.1	-376.9	-45.4	0.00	0.00	0.00
8,400.0	5.59	254.28	8,380.9	-108.8	-386.3	-46.5	0.00	0.00	0.00
8,500.0	5.59	254.28	8,480.4	-111.4	-395.7	-47.6	0.00	0.00	0.00
8,600.0	5.59	254.28	8,579.9	-114.0	-405.0	-48.7	0.00	0.00	0.00
8,700.0	5.59	254.28	8,679.4	-116.7	-414.4	-49.9	0.00	0.00	0.00
8,800.0	5.59	254.28	8,779.0	-119.3	-423.8	-51.0	0.00	0.00	0.00
8,900.0	5.59	254.28	8,878.5	-122.0	-433.2	-52.1	0.00	0.00	0.00
9,000.0	5.59	254.28	8,978.0	-124.6	-442.5	-53.3	0.00	0.00	0.00
9,100.0	5.59	254.28	9,077.5	-127.2	-451.9	-54.4	0.00	0.00	0.00
9,200.0	5.59	254.28	9,177.1	-129.9	-461.3	-55.5	0.00	0.00	0.00
9,300.0	5.59	254.28	9,276.6	-132.5	-470.7	-56.6	0.00	0.00	0.00
9,400.0	5.59	254.28	9,376.1	-135.1	-480.0	-57.8	0.00	0.00	0.00
9,500.0	5.59	254.28	9,475.6	-137.8	-489.4	-58.9	0.00	0.00	0.00
9,600.0	5.59	254.28	9,575.2	-140.4	-498.8	-60.0	0.00	0.00	0.00
9,700.0	5.59	254.28	9,674.7	-143.1	-508.2	-61.2	0.00	0.00	0.00
9,800.0	5.59	254.28	9,774.2	-145.7	-517.5	-62.3	0.00	0.00	0.00
9,900.0	5.59	254.28	9,873.7	-148.3	-526.9	-63.4	0.00	0.00	0.00
10,000.0	5.59	254.28	9,973.3	-151.0	-536.3	-64.5	0.00	0.00	0.00
10,100.0	5.59	254.28	10,072.8	-153.6	-545.7	-65.7	0.00	0.00	0.00
10,200.0	5.59	254.28	10,172.3	-156.3	-555.0	-66.8	0.00	0.00	0.00
10,300.0	5.59	254.28	10,271.8	-158.9	-564.4	-67.9	0.00	0.00	0.00
10,400.0	5.59	254.28	10,371.3	-161.5	-573.8	-69.1	0.00	0.00	0.00
10,500.0	5.59	254.28	10,470.9	-164.2	-583.2	-70.2	0.00	0.00	0.00
10,600.0	5.59	254.28	10,570.4	-166.8	-592.5	-71.3	0.00	0.00	0.00



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Well #601H
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KB = 25' @ 3547.0usft
Grid
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)
10,700.0	5.59	254.28	10,669.9	-169.5	-601.9	-72.4	0.00	0.00	0.00
10,800.0	5.59	254.28	10,769.4	-172.1	-611.3	-73.6	0.00	0.00	0.00
10,900.0	5.59	254.28	10,869.0	-174.7	-620.6	-74.7	0.00	0.00	0.00
11,000.0	5.59	254.28	10,968.5	-177.4	-630.0	-75.8	0.00	0.00	0.00
11,100.0	5.59	254.28	11,068.0	-180.0	-639.4	-76.9	0.00	0.00	0.00
11,200.0	5.59	254.28	11,167.5	-182.7	-648.8	-78.1	0.00	0.00	0.00
11,300.0	5.59	254.28	11,267.1	-185.3	-658.1	-79.2	0.00	0.00	0.00
11,400.0	5.59	254.28	11,366.6	-187.9	-667.5	-80.3	0.00	0.00	0.00
11,500.0	5.59	254.28	11,466.1	-190.6	-676.9	-81.5	0.00	0.00	0.00
11,600.0	5.59	254.28	11,565.6	-193.2	-686.3	-82.6	0.00	0.00	0.00
11,700.0	5.59	254.28	11,665.2	-195.9	-695.6	-83.7	0.00	0.00	0.00
11,774.6	5.59	254.28	11,739.4	-197.8	-702.6	-84.6	0.00	0.00	0.00
11,800.0	5.62	285.87	11,764.7	-197.8	-705.0	-84.2	12.00	0.11	124.47
11,825.0	7.07	309.98	11,789.6	-196.5	-707.4	-82.5	12.00	5.80	96.45
11,850.0	9.29	324.32	11,814.3	-193.9	-709.7	-79.5	12.00	8.89	57.37
11,875.0	11.85	332.85	11,838.9	-189.9	-712.1	-75.3	12.00	10.27	34.12
11,900.0	14.59	338.31	11,863.2	-184.7	-714.4	-69.8	12.00	10.93	21.82
11,925.0	17.40	342.05	11,887.2	-178.2	-716.7	-63.0	12.00	11.27	14.97
11,950.0	20.27	344.77	11,910.9	-170.5	-719.0	-55.0	12.00	11.48	10.88
11,975.0	23.18	346.83	11,934.1	-161.5	-721.3	-45.8	12.00	11.61	8.27
12,000.0	26.10	348.46	11,956.8	-151.4	-723.5	-35.4	12.00	11.69	6.51
12,025.0	29.04	349.78	11,979.0	-140.0	-725.7	-23.8	12.00	11.75	5.28
12,050.0	31.98	350.88	12,000.5	-127.5	-727.8	-11.1	12.00	11.79	4.38
12,075.0	34.94	351.81	12,021.4	-113.9	-729.9	2.6	12.00	11.82	3.72
12,100.0	37.90	352.61	12,041.5	-99.2	-731.9	17.5	12.00	11.85	3.20
12,125.0	40.87	353.31	12,060.8	-83.4	-733.8	33.3	12.00	11.87	2.80
12,150.0	43.84	353.93	12,079.3	-66.7	-735.7	50.2	12.00	11.88	2.49
12,175.0	46.81	354.49	12,096.9	-49.0	-737.5	67.9	12.00	11.89	2.23
12,185.8	48.09	354.71	12,104.2	-41.1	-738.2	75.8	12.00	11.90	2.08
FTP (Mamba 30 State #601H)									
12,200.0	49.79	354.99	12,113.5	-30.4	-739.2	86.5	12.00	11.91	1.98
12,225.0	52.77	355.46	12,129.1	-11.0	-740.8	106.0	12.00	11.91	1.85
12,250.0	55.75	355.89	12,143.7	9.3	-742.3	126.2	12.00	11.92	1.71
12,275.0	58.73	356.29	12,157.3	30.2	-743.8	147.1	12.00	11.92	1.60
12,300.0	61.71	356.66	12,169.7	51.9	-745.1	168.7	12.00	11.93	1.50
12,325.0	64.69	357.01	12,181.0	74.2	-746.3	190.9	12.00	11.93	1.42
12,350.0	67.68	357.35	12,191.0	97.0	-747.5	213.6	12.00	11.94	1.35
12,375.0	70.66	357.67	12,199.9	120.3	-748.5	236.9	12.00	11.94	1.29
12,400.0	73.65	357.98	12,207.6	144.1	-749.4	260.5	12.00	11.94	1.24
12,425.0	76.63	358.29	12,214.0	168.3	-750.2	284.4	12.00	11.94	1.21
12,450.0	79.62	358.58	12,219.2	192.7	-750.8	308.7	12.00	11.94	1.18
12,475.0	82.61	358.87	12,223.0	217.4	-751.4	333.2	12.00	11.95	1.16
12,500.0	85.59	359.15	12,225.6	242.3	-751.8	357.8	12.00	11.95	1.14
12,525.0	88.58	359.44	12,226.9	267.2	-752.1	382.5	12.00	11.95	1.13
12,536.9	90.00	359.57	12,227.0	279.1	-752.2	394.2	12.00	11.95	1.13
12,600.0	90.00	359.57	12,227.0	342.2	-752.7	456.6	0.00	0.00	0.00
12,700.0	90.00	359.57	12,227.0	442.2	-753.4	555.5	0.00	0.00	0.00
12,800.0	90.00	359.57	12,227.0	542.2	-754.2	654.4	0.00	0.00	0.00
12,900.0	90.00	359.57	12,227.0	642.2	-754.9	753.2	0.00	0.00	0.00
13,000.0	90.00	359.57	12,227.0	742.2	-755.7	852.1	0.00	0.00	0.00
13,100.0	90.00	359.57	12,227.0	842.2	-756.4	951.0	0.00	0.00	0.00
13,200.0	90.00	359.57	12,227.0	942.2	-757.2	1,049.8	0.00	0.00	0.00
13,300.0	90.00	359.57	12,227.0	1,042.2	-757.9	1,148.7	0.00	0.00	0.00



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Mamba 30 State
Well: #601H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Well #601H
KB = 25' @ 3547.0usft
KB = 25' @ 3547.0usft
Grid
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)
13,400.0	90.00	359.57	12,227.0	1,142.2	-758.7	1,247.6	0.00	0.00	0.00
13,500.0	90.00	359.57	12,227.0	1,242.2	-759.4	1,346.4	0.00	0.00	0.00
13,600.0	90.00	359.57	12,227.0	1,342.2	-760.2	1,445.3	0.00	0.00	0.00
13,700.0	90.00	359.57	12,227.0	1,442.2	-760.9	1,544.1	0.00	0.00	0.00
13,800.0	90.00	359.57	12,227.0	1,542.2	-761.7	1,643.0	0.00	0.00	0.00
13,900.0	90.00	359.57	12,227.0	1,642.2	-762.4	1,741.9	0.00	0.00	0.00
14,000.0	90.00	359.57	12,227.0	1,742.2	-763.2	1,840.7	0.00	0.00	0.00
14,100.0	90.00	359.57	12,227.0	1,842.2	-763.9	1,939.6	0.00	0.00	0.00
14,200.0	90.00	359.57	12,227.0	1,942.2	-764.7	2,038.5	0.00	0.00	0.00
14,300.0	90.00	359.57	12,227.0	2,042.2	-765.4	2,137.3	0.00	0.00	0.00
14,400.0	90.00	359.57	12,227.0	2,142.2	-766.2	2,236.2	0.00	0.00	0.00
14,500.0	90.00	359.57	12,227.0	2,242.2	-766.9	2,335.1	0.00	0.00	0.00
14,600.0	90.00	359.57	12,227.0	2,342.2	-767.7	2,433.9	0.00	0.00	0.00
14,700.0	90.00	359.57	12,227.0	2,442.2	-768.4	2,532.8	0.00	0.00	0.00
14,800.0	90.00	359.57	12,227.0	2,542.2	-769.1	2,631.7	0.00	0.00	0.00
14,900.0	90.00	359.57	12,227.0	2,642.2	-769.9	2,730.5	0.00	0.00	0.00
15,000.0	90.00	359.57	12,227.0	2,742.2	-770.6	2,829.4	0.00	0.00	0.00
15,100.0	90.00	359.57	12,227.0	2,842.2	-771.4	2,928.2	0.00	0.00	0.00
15,200.0	90.00	359.57	12,227.0	2,942.2	-772.1	3,027.1	0.00	0.00	0.00
15,300.0	90.00	359.57	12,227.0	3,042.2	-772.9	3,126.0	0.00	0.00	0.00
15,400.0	90.00	359.57	12,227.0	3,142.2	-773.6	3,224.8	0.00	0.00	0.00
15,500.0	90.00	359.57	12,227.0	3,242.2	-774.4	3,323.7	0.00	0.00	0.00
15,600.0	90.00	359.57	12,227.0	3,342.2	-775.1	3,422.6	0.00	0.00	0.00
15,700.0	90.00	359.57	12,227.0	3,442.2	-775.9	3,521.4	0.00	0.00	0.00
15,800.0	90.00	359.57	12,227.0	3,542.2	-776.6	3,620.3	0.00	0.00	0.00
15,900.0	90.00	359.57	12,227.0	3,642.1	-777.4	3,719.2	0.00	0.00	0.00
16,000.0	90.00	359.57	12,227.0	3,742.1	-778.1	3,818.0	0.00	0.00	0.00
16,100.0	90.00	359.57	12,227.0	3,842.1	-778.9	3,916.9	0.00	0.00	0.00
16,200.0	90.00	359.57	12,227.0	3,942.1	-779.6	4,015.8	0.00	0.00	0.00
16,300.0	90.00	359.57	12,227.0	4,042.1	-780.4	4,114.6	0.00	0.00	0.00
16,400.0	90.00	359.57	12,227.0	4,142.1	-781.1	4,213.5	0.00	0.00	0.00
16,500.0	90.00	359.57	12,227.0	4,242.1	-781.9	4,312.3	0.00	0.00	0.00
16,600.0	90.00	359.57	12,227.0	4,342.1	-782.6	4,411.2	0.00	0.00	0.00
16,700.0	90.00	359.57	12,227.0	4,442.1	-783.4	4,510.1	0.00	0.00	0.00
16,800.0	90.00	359.57	12,227.0	4,542.1	-784.1	4,608.9	0.00	0.00	0.00
16,900.0	90.00	359.57	12,227.0	4,642.1	-784.9	4,707.8	0.00	0.00	0.00
17,000.0	90.00	359.57	12,227.0	4,742.1	-785.6	4,806.7	0.00	0.00	0.00
17,100.0	90.00	359.57	12,227.0	4,842.1	-786.4	4,905.5	0.00	0.00	0.00
17,186.9	90.00	359.57	12,227.0	4,929.0	-787.0	4,991.4	0.00	0.00	0.00

PBHL (Mamba 30 State #601H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Mamba 30 State # - plan misses target center by 165.9usft at 12185.8usft MD (12104.2 TVD, -41.1 N, -738.2 E) - Point	0.00	0.00	12,227.0	-152.0	-749.0	430,586.00	766,004.00	32° 10' 54.026 N	103° 36' 25.732 W
PBHL (Mamba 30 State - plan hits target center - Point	0.00	0.00	12,227.0	4,929.0	-787.0	435,667.00	765,966.00	32° 11' 44.307 N	103° 36' 25.775 W



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Mamba 30 State
Well: #601H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #601H
TVD Reference: KB = 25' @ 3547.0usft
MD Reference: KB = 25' @ 3547.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

JUL 05 2018

Hydrogen Sulfide Plan Summary

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- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

- Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator
- Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

- H₂S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.

(Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
MAMBA 30 STATE COM #601H

- **Mud program:**
The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.
- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- **Communication:**
Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
MAMBA 30 STATE COM #601H

Emergency Assistance Telephone List

PUBLIC SAFETY: **911 or**

Lea County Sheriff's Department (575) 396-3611

Rod Coffman

Fire Department:

Carlsbad (575) 885-3125

Artesia (575) 746-5050

Hospitals:

Carlsbad (575) 887-4121

Artesia (575) 748-3333

Hobbs (575) 392-1979

Dept. of Public Safety/Carlsbad (575) 748-9718

Highway Department (575) 885-3281

New Mexico Oil Conservation (575) 476-3440

U.S. Dept. of Labor (575) 887-1174

EOG Resources, Inc.

EOG / Midland Office (432) 686-3600

Company Drilling Consultants:

David Dominque Cell (985) 518-5839

Mike Vann Cell (817) 980-5507

Drilling Engineer

Steve Munsell Office (432) 686-3609

Cell (432) 894-1256

Drilling Manager

Floyd Hernandez Office (432) 686-3716

Cell (817) 682-4569

Drilling Superintendent

Jason Fitzgerald Office (432) 848-9029

Cell (318) 347-3916

H&P Drilling

H&P Drilling Office (432) 563-5757

H&P 651 Drilling Rig Rig (903) 509-7131

Tool Pusher:

Johnathan Craig Cell (817) 760-6374

Brad Garrett

Safety

Brian Chandler (HSE Manager) Office (432) 686-3695

Cell (817) 239-0251

Permit Information:

Well Name: Mamba 30 State Com No. 601H

Location:

SL: 248' FSL & 580' FEL, Section 30, T-24-S, R-33-E, Lea Co., N.M.

BHL: 100' FNL & 1330' FEL, Section 30, T-24-S, R-33-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 - 1,200'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' - 4,800'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0 - 11,400'	7.625"	29.7#	HCP110	FXL	1.125	1.25	1.60
6.75"	0'-17,186'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1,200'	697	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂ (TOC @ Surface)
	333	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
4,800'	692	12.7	2.22	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	303	14.8	1.32	Tail: Class C + 0.13% C-20
11,400'	375	10.8	3.67	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,300')
	400	14.8	2.38	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
17,186'	950	14.8	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,900')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,200'	Fresh - Gel	8.6-8.8	28-34	N/c
1,200' - 4,800'	Brine	10.0-10.2	28-34	N/c
4,800' - 11,400'	Oil Base	8.7-9.4	58-68	N/c - 6
11,400' - 17,186' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

Mamba 30 State Com #601H
Lea County, New Mexico

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JUL 05 2018

248' FSL
580' FEL
Section 30
T-24-S, R-33-E

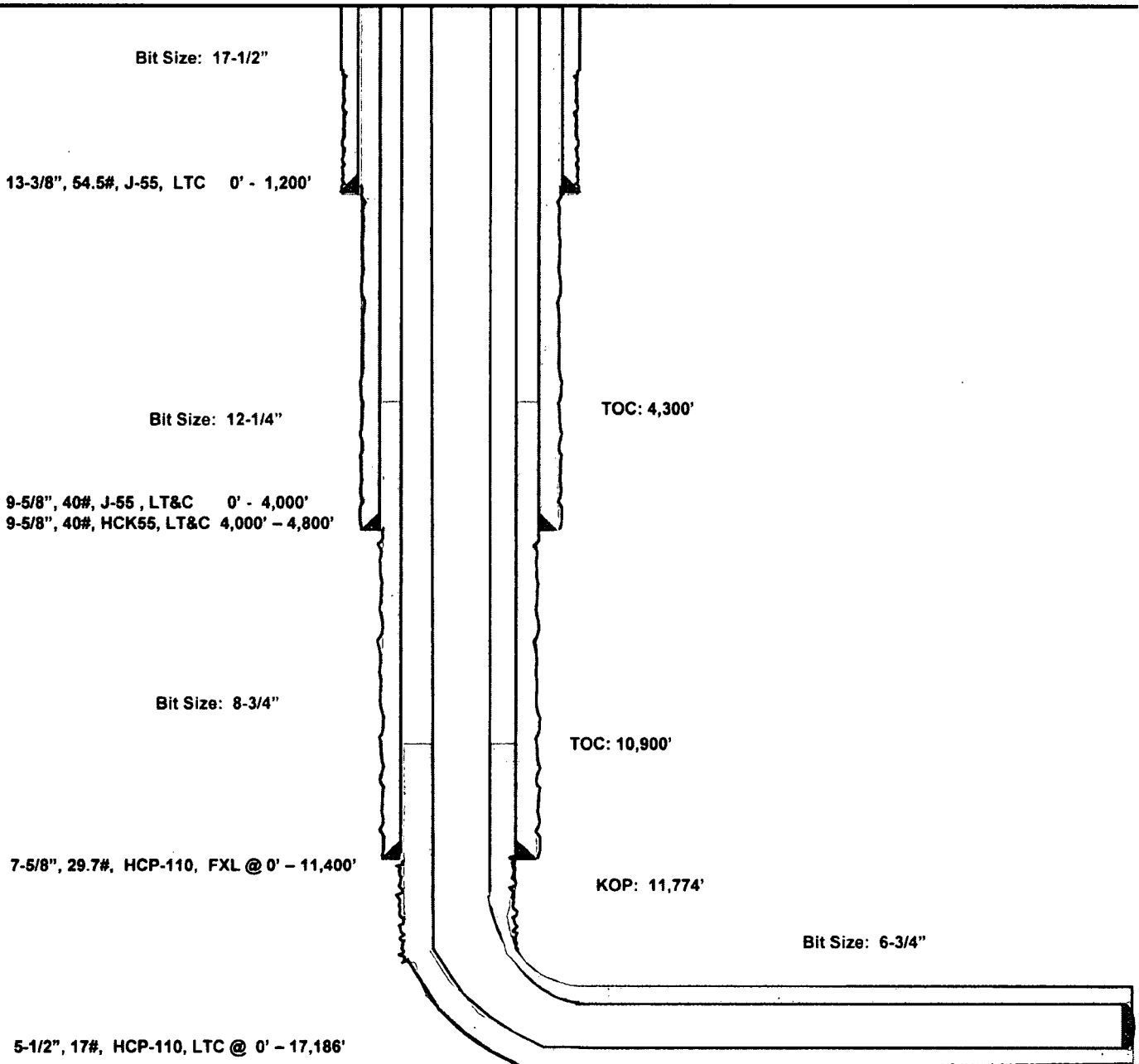
Proposed Wellbore

API: 30-025-*****

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KB: 3,547'

GL: 3,522'



Lateral: 17,186' MD, 12,227' TVD

BH Location: 100' FNL & 1330' FEL
Section 30
T-24-S, R-33-E