

HOBBS OCD

FEB 23 2018

RECEIVED



Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#615H

Plan #0.2

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



Azimuths to Grid North
True North: 0.48°
Magnetic North: 6.37°
Magnetic Field
Strength: 47788.0nT
Dip Angle: 59.91°
Date: 1/10/2018
Model: IGRF 2015

To convert a Magnetic Direction to a Grid Direction, Add 6.37°
To convert a Magnetic Direction to a True Direction, Add 9.85° East
To convert a True Direction to a Grid Direction, Subtract 0.48°

WELL DETAILS: #615H

3317.0
KB = 25 @ 3343.0usft
Northing 383084.00 Easting 808831.00 Latitude 32° 3' 0.856 N Longitude 103° 28' 11.860 W

SECTION DETAILS

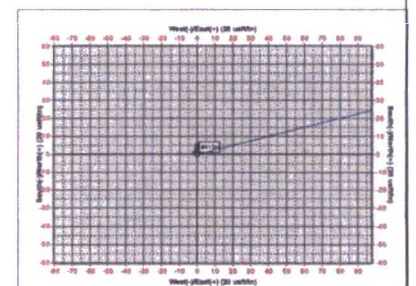
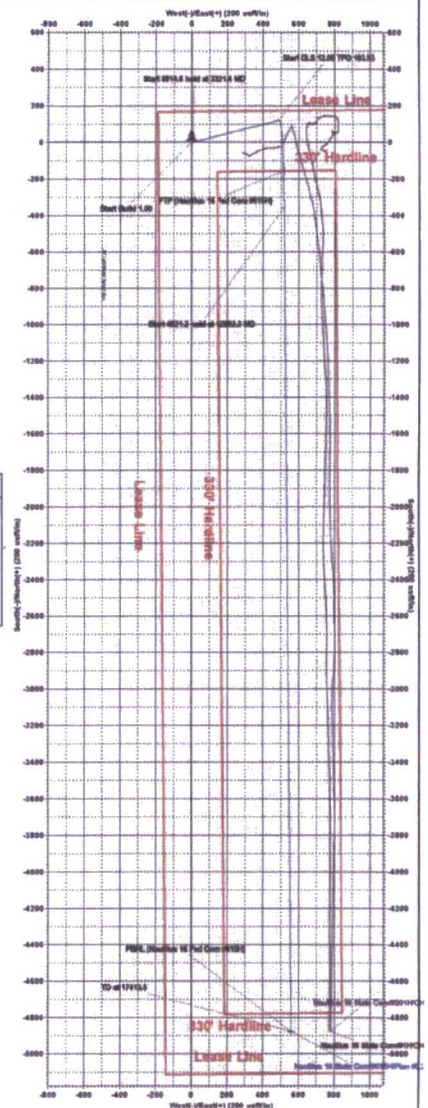
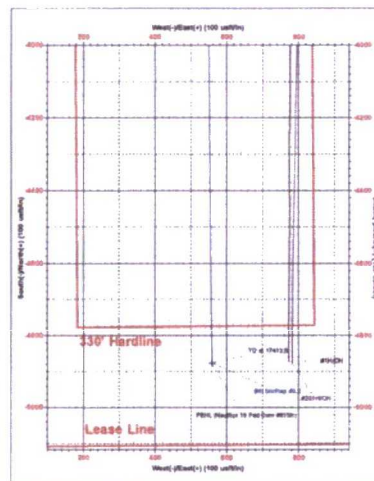
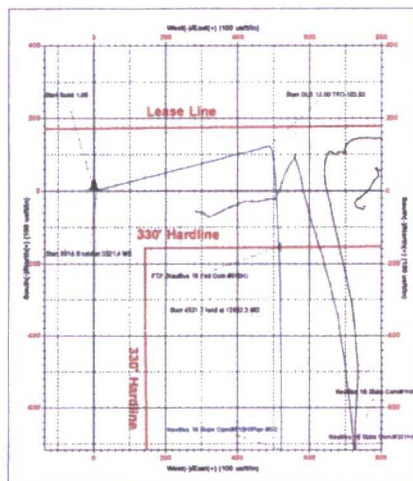
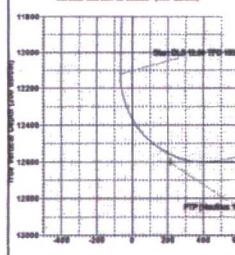
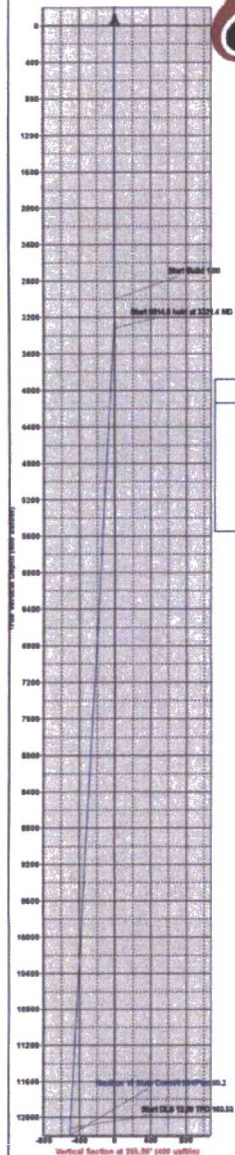
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0
3321.4	3.21	75.95	3321.3	2.2	8.7	1.00	75.95	-1.2
12136.0	3.21	75.95	12122.0	122.2	488.2	0.00	0.00	-65.9
12892.3	90.00	179.50	12805.0	-355.0	518.7	12.00	103.53	411.6
17413.5	90.00	179.50	12805.0	-4876.0	558.0	0.00	0.00	4907.8

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MXP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP (Nautilus 16 Fed Com #615H)	12805.0	-155.0	517.0	382929.00	809540.00
PBH (Nautilus 16 Fed Com #615H)	12805.0	-4876.0	558.0	378298.00	809389.00



Nautilus 16 State Com #615H
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#615H

OH

Plan: Plan #0.2

Standard Planning Report

22 February, 2018



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 State Com
Well: #615H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #615H
TVD Reference: KB = 25 @ 3343.0usft
MD Reference: KB = 25 @ 3343.0usft
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	Nautilus 16 State Com		
Site Position:		Northing:	383,047.00 usft
From:	Map	Easting:	806,402.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 0.681 N
		Longitude:	103° 28' 40.085 W
		Grid Convergence:	0.45 °

Well	#615H		
Well Position	+N/-S	37.0 usft	Northing: 383,084.00 usft
	+E/-W	2,429.0 usft	Easting: 808,831.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	3,317.0 usft
		Latitude:	32° 3' 0.856 N
		Longitude:	103° 28' 11.860 W
		Ground Level:	3,317.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	1/10/2018	(°)
			6.83
			(°)
			59.91
			47,787.97759588

Design	Plan #0.2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			173.47

Plan Survey Tool Program	Date 2/22/2018		
Depth From	Depth To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
1	0.0	17,413.5 Plan #0.2 (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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,321.4	3.21	75.95	3,321.3	2.2	8.7	1.00	1.00	0.00	75.95	
12,136.0	3.21	75.95	12,122.0	122.2	488.2	0.00	0.00	0.00	0.00	
12,892.3	90.00	179.50	12,605.0	-355.0	518.7	12.00	11.48	13.69	103.53	
17,413.5	90.00	179.50	12,605.0	-4,876.0	558.0	0.00	0.00	0.00	0.00	PBHL (Nautilus 16 Fe



Planning Report

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 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 State Com
 Well: #615H
 Wellbore: OH
 Design: Plan #0.2

Local Co-ordinate Reference:
 TVD Reference: KB = 25 @ 3343.0usft
 MD Reference: KB = 25 @ 3343.0usft
 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	1.00	75.95	3,100.0	0.2	0.8	-0.1	1.00	1.00	0.00
3,200.0	2.00	75.95	3,200.0	0.8	3.4	-0.5	1.00	1.00	0.00
3,300.0	3.00	75.95	3,299.9	1.9	7.6	-1.0	1.00	1.00	0.00
3,321.4	3.21	75.95	3,321.3	2.2	8.7	-1.2	1.00	1.00	0.00
3,400.0	3.21	75.95	3,399.7	3.3	13.0	-1.8	0.00	0.00	0.00
3,500.0	3.21	75.95	3,499.6	4.6	18.5	-2.5	0.00	0.00	0.00
3,600.0	3.21	75.95	3,599.4	6.0	23.9	-3.2	0.00	0.00	0.00
3,700.0	3.21	75.95	3,699.2	7.3	29.3	-4.0	0.00	0.00	0.00
3,800.0	3.21	75.95	3,799.1	8.7	34.8	-4.7	0.00	0.00	0.00
3,900.0	3.21	75.95	3,898.9	10.1	40.2	-5.4	0.00	0.00	0.00
4,000.0	3.21	75.95	3,998.8	11.4	45.7	-6.2	0.00	0.00	0.00
4,100.0	3.21	75.95	4,098.6	12.8	51.1	-6.9	0.00	0.00	0.00
4,200.0	3.21	75.95	4,198.4	14.2	56.5	-7.6	0.00	0.00	0.00
4,300.0	3.21	75.95	4,298.3	15.5	62.0	-8.4	0.00	0.00	0.00
4,400.0	3.21	75.95	4,398.1	16.9	67.4	-9.1	0.00	0.00	0.00
4,500.0	3.21	75.95	4,498.0	18.2	72.9	-9.8	0.00	0.00	0.00
4,600.0	3.21	75.95	4,597.8	19.6	78.3	-10.6	0.00	0.00	0.00
4,700.0	3.21	75.95	4,697.7	21.0	83.7	-11.3	0.00	0.00	0.00
4,800.0	3.21	75.95	4,797.5	22.3	89.2	-12.0	0.00	0.00	0.00
4,900.0	3.21	75.95	4,897.3	23.7	94.6	-12.8	0.00	0.00	0.00
5,000.0	3.21	75.95	4,997.2	25.0	100.1	-13.5	0.00	0.00	0.00
5,100.0	3.21	75.95	5,097.0	26.4	105.5	-14.2	0.00	0.00	0.00
5,200.0	3.21	75.95	5,196.9	27.8	110.9	-15.0	0.00	0.00	0.00



Planning Report

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 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
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 Wellbore: OH
 Design: Plan #0.2

Local Co-ordinate Reference: Well #615H
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 MD Reference: KB = 25 @ 3343.0usft
 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)
5,300.0	3.21	75.95	5,296.7	29.1	116.4	-15.7	0.00	0.00	0.00
5,400.0	3.21	75.95	5,396.6	30.5	121.8	-16.4	0.00	0.00	0.00
5,500.0	3.21	75.95	5,496.4	31.9	127.2	-17.2	0.00	0.00	0.00
5,600.0	3.21	75.95	5,596.2	33.2	132.7	-17.9	0.00	0.00	0.00
5,700.0	3.21	75.95	5,696.1	34.6	138.1	-18.6	0.00	0.00	0.00
5,800.0	3.21	75.95	5,795.9	35.9	143.6	-19.4	0.00	0.00	0.00
5,900.0	3.21	75.95	5,895.8	37.3	149.0	-20.1	0.00	0.00	0.00
6,000.0	3.21	75.95	5,995.6	38.7	154.4	-20.8	0.00	0.00	0.00
6,100.0	3.21	75.95	6,095.5	40.0	159.9	-21.6	0.00	0.00	0.00
6,200.0	3.21	75.95	6,195.3	41.4	165.3	-22.3	0.00	0.00	0.00
6,300.0	3.21	75.95	6,295.1	42.7	170.8	-23.1	0.00	0.00	0.00
6,400.0	3.21	75.95	6,395.0	44.1	176.2	-23.8	0.00	0.00	0.00
6,500.0	3.21	75.95	6,494.8	45.5	181.6	-24.5	0.00	0.00	0.00
6,600.0	3.21	75.95	6,594.7	46.8	187.1	-25.3	0.00	0.00	0.00
6,700.0	3.21	75.95	6,694.5	48.2	192.5	-26.0	0.00	0.00	0.00
6,800.0	3.21	75.95	6,794.4	49.6	198.0	-26.7	0.00	0.00	0.00
6,900.0	3.21	75.95	6,894.2	50.9	203.4	-27.5	0.00	0.00	0.00
7,000.0	3.21	75.95	6,994.0	52.3	208.8	-28.2	0.00	0.00	0.00
7,100.0	3.21	75.95	7,093.9	53.6	214.3	-28.9	0.00	0.00	0.00
7,200.0	3.21	75.95	7,193.7	55.0	219.7	-29.7	0.00	0.00	0.00
7,300.0	3.21	75.95	7,293.6	56.4	225.2	-30.4	0.00	0.00	0.00
7,400.0	3.21	75.95	7,393.4	57.7	230.6	-31.1	0.00	0.00	0.00
7,500.0	3.21	75.95	7,493.3	59.1	236.0	-31.9	0.00	0.00	0.00
7,600.0	3.21	75.95	7,593.1	60.4	241.5	-32.6	0.00	0.00	0.00
7,700.0	3.21	75.95	7,692.9	61.8	246.9	-33.3	0.00	0.00	0.00
7,800.0	3.21	75.95	7,792.8	63.2	252.4	-34.1	0.00	0.00	0.00
7,900.0	3.21	75.95	7,892.6	64.5	257.8	-34.8	0.00	0.00	0.00
8,000.0	3.21	75.95	7,992.5	65.9	263.2	-35.5	0.00	0.00	0.00
8,100.0	3.21	75.95	8,092.3	67.3	268.7	-36.3	0.00	0.00	0.00
8,200.0	3.21	75.95	8,192.2	68.6	274.1	-37.0	0.00	0.00	0.00
8,300.0	3.21	75.95	8,292.0	70.0	279.6	-37.7	0.00	0.00	0.00
8,400.0	3.21	75.95	8,391.8	71.3	285.0	-38.5	0.00	0.00	0.00
8,500.0	3.21	75.95	8,491.7	72.7	290.4	-39.2	0.00	0.00	0.00
8,600.0	3.21	75.95	8,591.5	74.1	295.9	-39.9	0.00	0.00	0.00
8,700.0	3.21	75.95	8,691.4	75.4	301.3	-40.7	0.00	0.00	0.00
8,800.0	3.21	75.95	8,791.2	76.8	306.8	-41.4	0.00	0.00	0.00
8,900.0	3.21	75.95	8,891.1	78.1	312.2	-42.1	0.00	0.00	0.00
9,000.0	3.21	75.95	8,990.9	79.5	317.6	-42.9	0.00	0.00	0.00
9,100.0	3.21	75.95	9,090.7	80.9	323.1	-43.6	0.00	0.00	0.00
9,200.0	3.21	75.95	9,190.6	82.2	328.5	-44.3	0.00	0.00	0.00
9,300.0	3.21	75.95	9,290.4	83.6	334.0	-45.1	0.00	0.00	0.00
9,400.0	3.21	75.95	9,390.3	85.0	339.4	-45.8	0.00	0.00	0.00
9,500.0	3.21	75.95	9,490.1	86.3	344.8	-46.5	0.00	0.00	0.00
9,600.0	3.21	75.95	9,590.0	87.7	350.3	-47.3	0.00	0.00	0.00
9,700.0	3.21	75.95	9,689.8	89.0	355.7	-48.0	0.00	0.00	0.00
9,800.0	3.21	75.95	9,789.6	90.4	361.2	-48.8	0.00	0.00	0.00
9,900.0	3.21	75.95	9,889.5	91.8	366.6	-49.5	0.00	0.00	0.00
10,000.0	3.21	75.95	9,989.3	93.1	372.0	-50.2	0.00	0.00	0.00
10,100.0	3.21	75.95	10,089.2	94.5	377.5	-51.0	0.00	0.00	0.00
10,200.0	3.21	75.95	10,189.0	95.8	382.9	-51.7	0.00	0.00	0.00
10,300.0	3.21	75.95	10,288.9	97.2	388.3	-52.4	0.00	0.00	0.00
10,400.0	3.21	75.95	10,388.7	98.6	393.8	-53.2	0.00	0.00	0.00
10,500.0	3.21	75.95	10,488.5	99.9	399.2	-53.9	0.00	0.00	0.00
10,600.0	3.21	75.95	10,588.4	101.3	404.7	-54.6	0.00	0.00	0.00



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10,700.0	3.21	75.95	10,888.2	102.7	410.1	-55.4	0.00	0.00	0.00
10,800.0	3.21	75.95	10,788.1	104.0	415.5	-56.1	0.00	0.00	0.00
10,900.0	3.21	75.95	10,887.9	105.4	421.0	-56.8	0.00	0.00	0.00
11,000.0	3.21	75.95	10,987.7	106.7	426.4	-57.6	0.00	0.00	0.00
11,100.0	3.21	75.95	11,087.6	108.1	431.9	-58.3	0.00	0.00	0.00
11,200.0	3.21	75.95	11,187.4	109.5	437.3	-59.0	0.00	0.00	0.00
11,300.0	3.21	75.95	11,287.3	110.8	442.7	-59.8	0.00	0.00	0.00
11,400.0	3.21	75.95	11,387.1	112.2	448.2	-60.5	0.00	0.00	0.00
11,500.0	3.21	75.95	11,487.0	113.5	453.6	-61.2	0.00	0.00	0.00
11,600.0	3.21	75.95	11,586.8	114.9	459.1	-62.0	0.00	0.00	0.00
11,700.0	3.21	75.95	11,686.6	116.3	464.5	-62.7	0.00	0.00	0.00
11,800.0	3.21	75.95	11,786.5	117.6	469.9	-63.4	0.00	0.00	0.00
11,900.0	3.21	75.95	11,886.3	119.0	475.4	-64.2	0.00	0.00	0.00
12,000.0	3.21	75.95	11,986.2	120.4	480.8	-64.9	0.00	0.00	0.00
12,100.0	3.21	75.95	12,086.0	121.7	486.3	-65.6	0.00	0.00	0.00
12,136.0	3.21	75.95	12,122.0	122.2	488.2	-65.9	0.00	0.00	0.00
12,150.0	3.26	106.00	12,135.9	122.2	489.0	-65.8	12.00	0.32	214.91
12,175.0	5.02	141.03	12,160.9	121.1	490.4	-64.6	12.00	7.03	140.13
12,200.0	7.59	155.33	12,185.7	118.8	491.7	-62.1	12.00	10.31	57.19
12,225.0	10.40	162.20	12,210.4	115.1	493.1	-58.3	12.00	11.23	27.47
12,250.0	13.29	166.14	12,234.9	110.2	494.5	-53.3	12.00	11.56	15.77
12,275.0	16.22	168.69	12,259.1	104.0	495.9	-46.9	12.00	11.72	10.19
12,300.0	19.17	170.47	12,282.9	96.5	497.2	-39.4	12.00	11.80	7.13
12,325.0	22.14	171.79	12,306.3	87.8	498.6	-30.5	12.00	11.86	5.28
12,350.0	25.11	172.81	12,329.2	77.9	499.9	-20.5	12.00	11.89	4.09
12,375.0	28.09	173.63	12,351.5	66.8	501.2	-9.3	12.00	11.91	3.27
12,400.0	31.07	174.30	12,373.3	54.5	502.5	3.0	12.00	11.93	2.69
12,425.0	34.05	174.87	12,394.3	41.1	503.8	16.4	12.00	11.94	2.26
12,450.0	37.04	175.35	12,414.7	26.6	505.0	31.0	12.00	11.95	1.94
12,475.0	40.03	175.78	12,434.2	11.1	506.2	46.5	12.00	11.95	1.69
12,500.0	43.02	176.15	12,452.9	-5.4	507.4	63.1	12.00	11.96	1.49
12,525.0	46.01	176.48	12,470.8	-22.9	508.5	80.6	12.00	11.96	1.33
12,550.0	49.00	176.78	12,487.6	-41.3	509.6	99.0	12.00	11.97	1.20
12,575.0	51.99	177.06	12,503.5	-60.6	510.6	118.2	12.00	11.97	1.10
12,600.0	54.98	177.31	12,518.4	-80.6	511.6	138.3	12.00	11.97	1.01
12,625.0	57.98	177.55	12,532.2	-101.5	512.6	159.1	12.00	11.97	0.94
12,650.0	60.97	177.77	12,544.9	-123.0	513.4	180.6	12.00	11.98	0.88
12,675.0	63.97	177.97	12,556.5	-145.1	514.3	202.7	12.00	11.98	0.83
12,700.0	66.96	178.17	12,566.9	-167.9	515.0	225.3	12.00	11.98	0.79
12,702.1	67.21	178.19	12,567.7	-169.8	515.1	227.3	12.00	11.98	0.77
FTP (Nautilus 16 Fed Com #615H)									
12,725.0	69.96	178.36	12,576.0	-191.1	515.7	248.5	12.00	11.98	0.76
12,750.0	72.95	178.54	12,584.0	-214.8	516.4	272.1	12.00	11.98	0.73
12,775.0	75.95	178.72	12,590.7	-238.9	516.9	296.1	12.00	11.98	0.71
12,800.0	78.94	178.89	12,596.1	-263.3	517.5	320.4	12.00	11.98	0.69
12,825.0	81.94	179.06	12,600.3	-287.9	517.9	344.9	12.00	11.98	0.67
12,850.0	84.93	179.23	12,603.1	-312.7	518.3	369.6	12.00	11.98	0.66
12,875.0	87.93	179.39	12,604.7	-337.7	518.6	394.5	12.00	11.98	0.66
12,892.3	90.00	179.50	12,605.0	-355.0	518.7	411.6	12.00	11.98	0.65
12,900.0	90.00	179.50	12,605.0	-362.7	518.8	419.3	0.00	0.00	0.00
13,000.0	90.00	179.50	12,605.0	-462.7	519.7	518.8	0.00	0.00	0.00
13,100.0	90.00	179.50	12,605.0	-562.7	520.5	618.2	0.00	0.00	0.00
13,200.0	90.00	179.50	12,605.0	-662.7	521.4	717.7	0.00	0.00	0.00



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 State Com
 Well: #615H
 Wellbore: OH
 Design: Plan #0.2

Local Co-ordinate Reference: Well #615H
 TVD Reference: KB = 25 @ 3343.0usft
 MD Reference: KB = 25 @ 3343.0usft
 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)
13,300.0	90.00	179.50	12,605.0	-762.7	522.3	817.1	0.00	0.00	0.00
13,400.0	90.00	179.50	12,605.0	-862.7	523.1	916.5	0.00	0.00	0.00
13,500.0	90.00	179.50	12,605.0	-962.7	524.0	1,016.0	0.00	0.00	0.00
13,600.0	90.00	179.50	12,605.0	-1,062.7	524.9	1,115.4	0.00	0.00	0.00
13,700.0	90.00	179.50	12,605.0	-1,162.6	525.8	1,214.9	0.00	0.00	0.00
13,800.0	90.00	179.50	12,605.0	-1,262.6	526.6	1,314.3	0.00	0.00	0.00
13,900.0	90.00	179.50	12,605.0	-1,362.6	527.5	1,413.8	0.00	0.00	0.00
14,000.0	90.00	179.50	12,605.0	-1,462.6	528.4	1,513.2	0.00	0.00	0.00
14,100.0	90.00	179.50	12,605.0	-1,562.6	529.2	1,612.7	0.00	0.00	0.00
14,200.0	90.00	179.50	12,605.0	-1,662.6	530.1	1,712.1	0.00	0.00	0.00
14,300.0	90.00	179.50	12,605.0	-1,762.6	531.0	1,811.6	0.00	0.00	0.00
14,400.0	90.00	179.50	12,605.0	-1,862.6	531.8	1,911.0	0.00	0.00	0.00
14,500.0	90.00	179.50	12,605.0	-1,962.6	532.7	2,010.5	0.00	0.00	0.00
14,600.0	90.00	179.50	12,605.0	-2,062.6	533.6	2,109.9	0.00	0.00	0.00
14,700.0	90.00	179.50	12,605.0	-2,162.6	534.4	2,209.4	0.00	0.00	0.00
14,800.0	90.00	179.50	12,605.0	-2,262.6	535.3	2,308.8	0.00	0.00	0.00
14,900.0	90.00	179.50	12,605.0	-2,362.6	536.2	2,408.2	0.00	0.00	0.00
15,000.0	90.00	179.50	12,605.0	-2,462.6	537.0	2,507.7	0.00	0.00	0.00
15,100.0	90.00	179.50	12,605.0	-2,562.6	537.9	2,607.1	0.00	0.00	0.00
15,200.0	90.00	179.50	12,605.0	-2,662.6	538.8	2,706.6	0.00	0.00	0.00
15,300.0	90.00	179.50	12,605.0	-2,762.6	539.6	2,806.0	0.00	0.00	0.00
15,400.0	90.00	179.50	12,605.0	-2,862.6	540.5	2,905.5	0.00	0.00	0.00
15,500.0	90.00	179.50	12,605.0	-2,962.6	541.4	3,004.9	0.00	0.00	0.00
15,600.0	90.00	179.50	12,605.0	-3,062.6	542.3	3,104.4	0.00	0.00	0.00
15,700.0	90.00	179.50	12,605.0	-3,162.6	543.1	3,203.8	0.00	0.00	0.00
15,800.0	90.00	179.50	12,605.0	-3,262.6	544.0	3,303.3	0.00	0.00	0.00
15,900.0	90.00	179.50	12,605.0	-3,362.6	544.9	3,402.7	0.00	0.00	0.00
16,000.0	90.00	179.50	12,605.0	-3,462.6	545.7	3,502.2	0.00	0.00	0.00
16,100.0	90.00	179.50	12,605.0	-3,562.6	546.6	3,601.6	0.00	0.00	0.00
16,200.0	90.00	179.50	12,605.0	-3,662.6	547.5	3,701.0	0.00	0.00	0.00
16,300.0	90.00	179.50	12,605.0	-3,762.5	548.3	3,800.5	0.00	0.00	0.00
16,400.0	90.00	179.50	12,605.0	-3,862.5	549.2	3,899.9	0.00	0.00	0.00
16,500.0	90.00	179.50	12,605.0	-3,962.5	550.1	3,999.4	0.00	0.00	0.00
16,600.0	90.00	179.50	12,605.0	-4,062.5	550.9	4,098.8	0.00	0.00	0.00
16,700.0	90.00	179.50	12,605.0	-4,162.5	551.8	4,198.3	0.00	0.00	0.00
16,800.0	90.00	179.50	12,605.0	-4,262.5	552.7	4,297.7	0.00	0.00	0.00
16,900.0	90.00	179.50	12,605.0	-4,362.5	553.5	4,397.2	0.00	0.00	0.00
17,000.0	90.00	179.50	12,605.0	-4,462.5	554.4	4,496.6	0.00	0.00	0.00
17,100.0	90.00	179.50	12,605.0	-4,562.5	555.3	4,596.1	0.00	0.00	0.00
17,200.0	90.00	179.50	12,605.0	-4,662.5	556.1	4,695.5	0.00	0.00	0.00
17,300.0	90.00	179.50	12,605.0	-4,762.5	557.0	4,795.0	0.00	0.00	0.00
17,400.0	90.00	179.50	12,605.0	-4,862.5	557.9	4,894.4	0.00	0.00	0.00
17,413.5	90.00	179.50	12,605.0	-4,876.0	558.0	4,907.8	0.00	0.00	0.00

PBHL (Nautilus 16 Fed Com #615H)



Planning Report

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Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 State Com
Well: #615H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #615H
TVD Reference: KB = 25 @ 3343.0usft
MD Reference: KB = 25 @ 3343.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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
FTP (Nautilus 16 Fed Cc - plan misses target center by 40.2usft at 12702.1usft MD (12567.7 TVD, -169.8 N, 515.1 E) - Point	0.00	0.00	12,605.0	-155.0	517.0	382,929.00	809,348.00	32° 2' 59.281 N	103° 28' 5.868 W
PBHL (Nautilus 16 Fed C - plan hits target center - Point	0.00	0.00	12,605.0	-4,876.0	558.0	378,208.00	809,389.00	32° 2' 12.562 N	103° 28' 5.831 W