

JAN 10 2018

RECEIVED



Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#712H

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



Azimuths to Grid North
True North: -0.46°
Magnetic North: 6.38°
Magnetic Field
Strength: 47787.9nT
Dip Angle: 59.91°
Date: 1/9/2018
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.38°
To convert a Magnetic Direction to a True Direction, Add 6.83° East
To convert a True Direction to a Grid Direction, Subtract 0.46°

WELL DETAILS: #712H

3323.0
KB = 25 @ 3348.0usft
Northing 383077.00 Easting 807999.00 Latitude $32^\circ 3' 0.852''$ N Longitude $103^\circ 28' 21.527''$ W

SECTION DETAILS

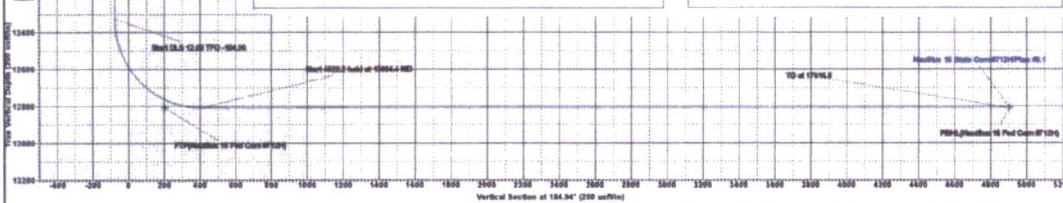
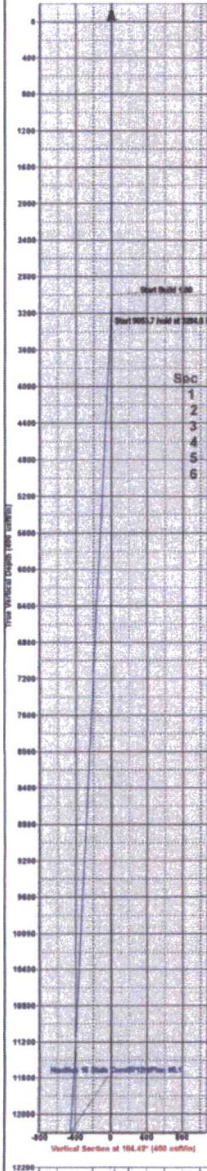
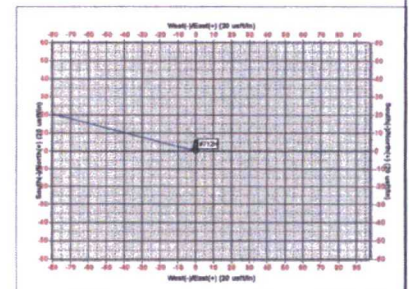
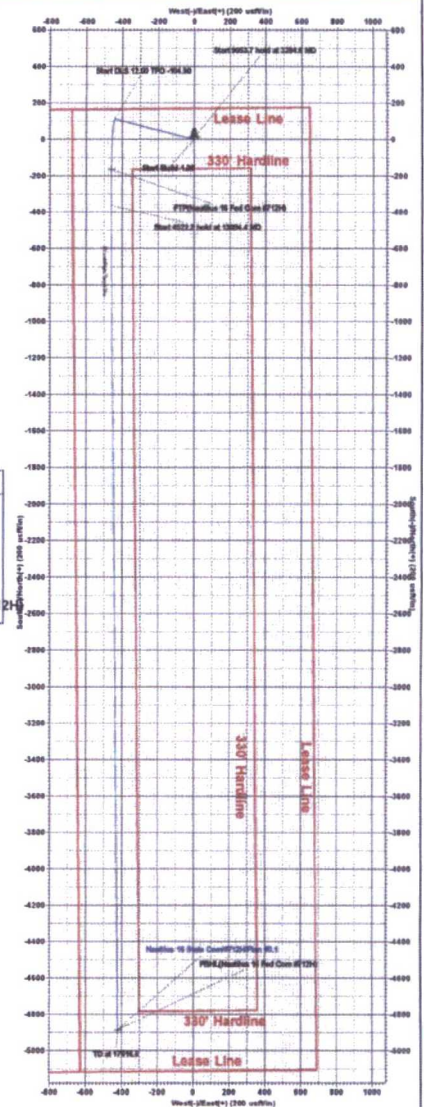
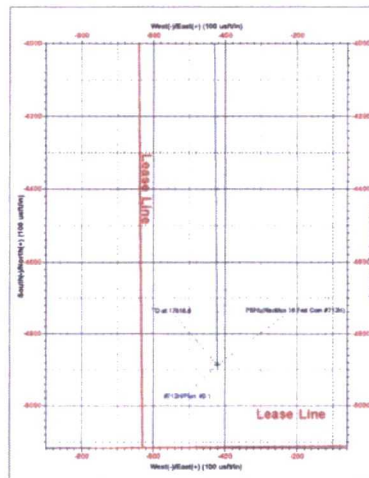
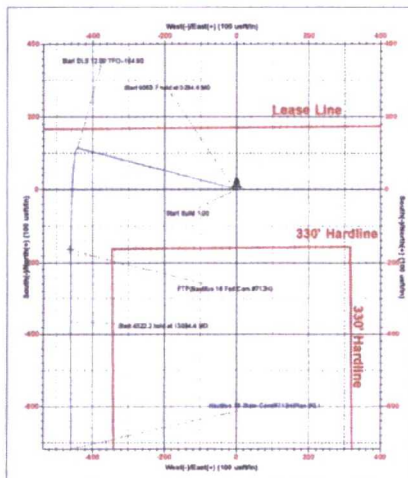
Spec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Deg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3284.6	2.85	284.42	3284.5	1.8	-6.8	1.00	284.42	-1.2	
4	12338.3	2.85	284.42	12327.0	113.7	-442.2	0.00	0.00	-75.2	
5	13094.4	90.00	179.50	12810.0	-363.9	-461.3	12.00	-104.90	402.3	
6	17616.6	90.00	179.50	12810.0	-4886.0	-422.0	0.00	0.00	4904.2	PBHL(Nautilus 16 Fed Com #712H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP(Nautilus 16 Fed Com #712H)	12810.0	-164.0	-493.0	382913.00	807636.00
PBHL(Nautilus 16 Fed Com #712H)	12810.0	-4886.0	-422.0	378191.00	807677.00



Lea County, NM (NAD 83 NME)
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#712H

OH

Plan: Plan #0.1

Standard Planning Report

09 January, 2018



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 State Com
Well: #712H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #712H
TVD Reference: KB = 25 @ 3348.0usft
MD Reference: KB = 25 @ 3348.0usft
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	Latitude:	32° 3' 0.681 N
From:	Map	Easting:	806,402.00 usft	Longitude:	103° 28' 40.085 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well	#712H					
Well Position	+N/-S	30.0 usft	Northing:	383,077.00 usft	Latitude:	32° 3' 0.852 N
	+E/-W	1,597.0 usft	Easting:	807,999.00 usft	Longitude:	103° 28' 21.527 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,323.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/9/2018	6.83	59.91	47,787.93987500

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	184.94

Plan Survey Tool Program	Date 1/9/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	17,616.6 Plan #0.1 (OH)	MWD	
			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	
3,284.6	2.85	284.42	3,284.5	1.8	-6.8	1.00	1.00	0.00	284.42	
12,338.3	2.85	284.42	12,327.0	113.7	-442.2	0.00	0.00	0.00	0.00	
13,094.4	90.00	179.50	12,810.0	-363.9	-461.3	12.00	11.53	-13.88	-104.90	
17,616.6	90.00	179.50	12,810.0	-4,886.0	-422.0	0.00	0.00	0.00	0.00	PBHL(Nautilus 16 Fex



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 State Com
 Well: #712H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #712H
 TVD Reference: KB = 25 @ 3348.0usft
 MD Reference: KB = 25 @ 3348.0usft
 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	284.42	3,100.0	0.2	-0.8	-0.1	1.00	1.00	0.00
3,200.0	2.00	284.42	3,200.0	0.9	-3.4	-0.6	1.00	1.00	0.00
3,284.6	2.85	284.42	3,284.5	1.8	-6.8	-1.2	1.00	1.00	0.00
3,300.0	2.85	284.42	3,299.9	1.9	-7.6	-1.3	0.00	0.00	0.00
3,400.0	2.85	284.42	3,399.7	3.2	-12.4	-2.1	0.00	0.00	0.00
3,500.0	2.85	284.42	3,499.6	4.4	-17.2	-2.9	0.00	0.00	0.00
3,600.0	2.85	284.42	3,599.5	5.7	-22.0	-3.7	0.00	0.00	0.00
3,700.0	2.85	284.42	3,699.4	6.9	-26.8	-4.6	0.00	0.00	0.00
3,800.0	2.85	284.42	3,799.2	8.1	-31.6	-5.4	0.00	0.00	0.00
3,900.0	2.85	284.42	3,899.1	9.4	-36.4	-6.2	0.00	0.00	0.00
4,000.0	2.85	284.42	3,999.0	10.6	-41.2	-7.0	0.00	0.00	0.00
4,100.0	2.85	284.42	4,098.9	11.8	-46.1	-7.8	0.00	0.00	0.00
4,200.0	2.85	284.42	4,198.8	13.1	-50.9	-8.7	0.00	0.00	0.00
4,300.0	2.85	284.42	4,298.6	14.3	-55.7	-9.5	0.00	0.00	0.00
4,400.0	2.85	284.42	4,398.5	15.5	-60.5	-10.3	0.00	0.00	0.00
4,500.0	2.85	284.42	4,498.4	16.8	-65.3	-11.1	0.00	0.00	0.00
4,600.0	2.85	284.42	4,598.3	18.0	-70.1	-11.9	0.00	0.00	0.00
4,700.0	2.85	284.42	4,698.1	19.3	-74.9	-12.7	0.00	0.00	0.00
4,800.0	2.85	284.42	4,798.0	20.5	-79.7	-13.6	0.00	0.00	0.00
4,900.0	2.85	284.42	4,897.9	21.7	-84.5	-14.4	0.00	0.00	0.00
5,000.0	2.85	284.42	4,997.8	23.0	-89.3	-15.2	0.00	0.00	0.00
5,100.0	2.85	284.42	5,097.6	24.2	-94.1	-16.0	0.00	0.00	0.00
5,200.0	2.85	284.42	5,197.5	25.4	-99.0	-16.8	0.00	0.00	0.00



Planning Report

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 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 State Com
 Well: #712H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Well #712H
 KB = 25 @ 3348.0usft
 KB = 25 @ 3348.0usft
 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)
5,300.0	2.85	284.42	5,297.4	26.7	-103.8	-17.6	0.00	0.00	0.00
5,400.0	2.85	284.42	5,397.3	27.9	-108.6	-18.5	0.00	0.00	0.00
5,500.0	2.85	284.42	5,497.2	29.1	-113.4	-19.3	0.00	0.00	0.00
5,600.0	2.85	284.42	5,597.0	30.4	-118.2	-20.1	0.00	0.00	0.00
5,700.0	2.85	284.42	5,696.9	31.6	-123.0	-20.9	0.00	0.00	0.00
5,800.0	2.85	284.42	5,796.8	32.9	-127.8	-21.7	0.00	0.00	0.00
5,900.0	2.85	284.42	5,896.7	34.1	-132.6	-22.6	0.00	0.00	0.00
6,000.0	2.85	284.42	5,996.5	35.3	-137.4	-23.4	0.00	0.00	0.00
6,100.0	2.85	284.42	6,096.4	36.6	-142.2	-24.2	0.00	0.00	0.00
6,200.0	2.85	284.42	6,196.3	37.8	-147.0	-25.0	0.00	0.00	0.00
6,300.0	2.85	284.42	6,296.2	39.0	-151.8	-25.8	0.00	0.00	0.00
6,400.0	2.85	284.42	6,396.0	40.3	-156.7	-26.6	0.00	0.00	0.00
6,500.0	2.85	284.42	6,495.9	41.5	-161.5	-27.5	0.00	0.00	0.00
6,600.0	2.85	284.42	6,595.8	42.7	-166.3	-28.3	0.00	0.00	0.00
6,700.0	2.85	284.42	6,695.7	44.0	-171.1	-29.1	0.00	0.00	0.00
6,800.0	2.85	284.42	6,795.5	45.2	-175.9	-29.9	0.00	0.00	0.00
6,900.0	2.85	284.42	6,895.4	46.5	-180.7	-30.7	0.00	0.00	0.00
7,000.0	2.85	284.42	6,995.3	47.7	-185.5	-31.6	0.00	0.00	0.00
7,100.0	2.85	284.42	7,095.2	48.9	-190.3	-32.4	0.00	0.00	0.00
7,200.0	2.85	284.42	7,195.1	50.2	-195.1	-33.2	0.00	0.00	0.00
7,300.0	2.85	284.42	7,294.9	51.4	-199.9	-34.0	0.00	0.00	0.00
7,400.0	2.85	284.42	7,394.8	52.6	-204.7	-34.8	0.00	0.00	0.00
7,500.0	2.85	284.42	7,494.7	53.9	-209.6	-35.6	0.00	0.00	0.00
7,600.0	2.85	284.42	7,594.6	55.1	-214.4	-36.5	0.00	0.00	0.00
7,700.0	2.85	284.42	7,694.4	56.3	-219.2	-37.3	0.00	0.00	0.00
7,800.0	2.85	284.42	7,794.3	57.6	-224.0	-38.1	0.00	0.00	0.00
7,900.0	2.85	284.42	7,894.2	58.8	-228.8	-38.9	0.00	0.00	0.00
8,000.0	2.85	284.42	7,994.1	60.1	-233.6	-39.7	0.00	0.00	0.00
8,100.0	2.85	284.42	8,093.9	61.3	-238.4	-40.5	0.00	0.00	0.00
8,200.0	2.85	284.42	8,193.8	62.5	-243.2	-41.4	0.00	0.00	0.00
8,300.0	2.85	284.42	8,293.7	63.8	-248.0	-42.2	0.00	0.00	0.00
8,400.0	2.85	284.42	8,393.6	65.0	-252.8	-43.0	0.00	0.00	0.00
8,500.0	2.85	284.42	8,493.5	66.2	-257.6	-43.8	0.00	0.00	0.00
8,600.0	2.85	284.42	8,593.3	67.5	-262.4	-44.6	0.00	0.00	0.00
8,700.0	2.85	284.42	8,693.2	68.7	-267.3	-45.5	0.00	0.00	0.00
8,800.0	2.85	284.42	8,793.1	69.9	-272.1	-46.3	0.00	0.00	0.00
8,900.0	2.85	284.42	8,893.0	71.2	-276.9	-47.1	0.00	0.00	0.00
9,000.0	2.85	284.42	8,992.8	72.4	-281.7	-47.9	0.00	0.00	0.00
9,100.0	2.85	284.42	9,092.7	73.7	-286.5	-48.7	0.00	0.00	0.00
9,200.0	2.85	284.42	9,192.6	74.9	-291.3	-49.5	0.00	0.00	0.00
9,300.0	2.85	284.42	9,292.5	76.1	-296.1	-50.4	0.00	0.00	0.00
9,400.0	2.85	284.42	9,392.3	77.4	-300.9	-51.2	0.00	0.00	0.00
9,500.0	2.85	284.42	9,492.2	78.6	-305.7	-52.0	0.00	0.00	0.00
9,600.0	2.85	284.42	9,592.1	79.8	-310.5	-52.8	0.00	0.00	0.00
9,700.0	2.85	284.42	9,692.0	81.1	-315.3	-53.6	0.00	0.00	0.00
9,800.0	2.85	284.42	9,791.8	82.3	-320.2	-54.5	0.00	0.00	0.00
9,900.0	2.85	284.42	9,891.7	83.5	-325.0	-55.3	0.00	0.00	0.00
10,000.0	2.85	284.42	9,991.6	84.8	-329.8	-56.1	0.00	0.00	0.00
10,100.0	2.85	284.42	10,091.5	86.0	-334.6	-56.9	0.00	0.00	0.00
10,200.0	2.85	284.42	10,191.4	87.3	-339.4	-57.7	0.00	0.00	0.00
10,300.0	2.85	284.42	10,291.2	88.5	-344.2	-58.5	0.00	0.00	0.00
10,400.0	2.85	284.42	10,391.1	89.7	-349.0	-59.4	0.00	0.00	0.00
10,500.0	2.85	284.42	10,491.0	91.0	-353.8	-60.2	0.00	0.00	0.00
10,600.0	2.85	284.42	10,590.9	92.2	-358.6	-61.0	0.00	0.00	0.00



Planning Report

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.0	2.85	284.42	10,690.7	93.4	-363.4	-61.8	0.00	0.00	0.00
10,800.0	2.85	284.42	10,790.6	94.7	-368.2	-62.6	0.00	0.00	0.00
10,900.0	2.85	284.42	10,890.5	95.9	-373.0	-63.4	0.00	0.00	0.00
11,000.0	2.85	284.42	10,990.4	97.1	-377.9	-64.3	0.00	0.00	0.00
11,100.0	2.85	284.42	11,090.2	98.4	-382.7	-65.1	0.00	0.00	0.00
11,200.0	2.85	284.42	11,190.1	99.6	-387.5	-65.9	0.00	0.00	0.00
11,300.0	2.85	284.42	11,290.0	100.9	-392.3	-66.7	0.00	0.00	0.00
11,400.0	2.85	284.42	11,389.9	102.1	-397.1	-67.5	0.00	0.00	0.00
11,500.0	2.85	284.42	11,489.8	103.3	-401.9	-68.4	0.00	0.00	0.00
11,600.0	2.85	284.42	11,589.6	104.6	-406.7	-69.2	0.00	0.00	0.00
11,700.0	2.85	284.42	11,689.5	105.8	-411.5	-70.0	0.00	0.00	0.00
11,800.0	2.85	284.42	11,789.4	107.0	-416.3	-70.8	0.00	0.00	0.00
11,900.0	2.85	284.42	11,889.3	108.3	-421.1	-71.6	0.00	0.00	0.00
12,000.0	2.85	284.42	11,989.1	109.5	-425.9	-72.4	0.00	0.00	0.00
12,100.0	2.85	284.42	12,089.0	110.7	-430.7	-73.3	0.00	0.00	0.00
12,200.0	2.85	284.42	12,188.9	112.0	-435.6	-74.1	0.00	0.00	0.00
12,300.0	2.85	284.42	12,288.8	113.2	-440.4	-74.9	0.00	0.00	0.00
12,338.3	2.85	284.42	12,327.0	113.7	-442.2	-75.2	0.00	0.00	0.00
12,350.0	2.83	255.71	12,338.7	113.7	-442.8	-75.2	12.00	-0.12	-244.83
12,375.0	4.59	216.26	12,363.7	112.7	-444.0	-74.1	12.00	7.03	-157.78
12,400.0	7.22	201.80	12,388.5	110.5	-445.1	-71.7	12.00	10.51	-57.87
12,425.0	10.05	195.22	12,413.2	106.9	-446.3	-68.1	12.00	11.35	-26.30
12,450.0	12.97	191.55	12,437.7	102.0	-447.4	-63.2	12.00	11.64	-14.70
12,475.0	15.91	189.21	12,461.9	95.9	-448.5	-57.0	12.00	11.77	-9.36
12,500.0	18.87	187.58	12,485.8	88.5	-449.6	-49.5	12.00	11.84	-6.49
12,525.0	21.84	186.39	12,509.2	79.9	-450.7	-40.8	12.00	11.88	-4.78
12,550.0	24.82	185.46	12,532.2	70.0	-451.7	-30.9	12.00	11.91	-3.69
12,575.0	27.80	184.73	12,554.6	59.0	-452.7	-19.8	12.00	11.93	-2.94
12,600.0	30.79	184.13	12,576.4	46.8	-453.6	-7.6	12.00	11.94	-2.41
12,625.0	33.77	183.62	12,597.5	33.5	-454.5	5.7	12.00	11.95	-2.02
12,650.0	36.76	183.19	12,617.9	19.1	-455.4	20.2	12.00	11.96	-1.73
12,675.0	39.75	182.81	12,637.6	3.6	-456.2	35.6	12.00	11.96	-1.50
12,700.0	42.75	182.48	12,656.4	-12.8	-456.9	52.1	12.00	11.97	-1.33
12,725.0	45.74	182.19	12,674.3	-30.3	-457.6	69.5	12.00	11.97	-1.18
12,750.0	48.73	181.92	12,691.2	-48.6	-458.3	87.9	12.00	11.97	-1.07
12,775.0	51.73	181.67	12,707.2	-67.8	-458.9	107.0	12.00	11.98	-0.98
12,800.0	54.72	181.45	12,722.2	-87.8	-459.4	127.0	12.00	11.98	-0.90
12,825.0	57.72	181.24	12,736.1	-108.6	-459.9	147.8	12.00	11.98	-0.83
12,850.0	60.71	181.05	12,748.9	-130.1	-460.4	169.2	12.00	11.98	-0.78
12,875.0	63.71	180.86	12,760.5	-152.2	-460.7	191.3	12.00	11.98	-0.74
12,900.0	66.70	180.69	12,771.0	-174.9	-461.0	213.9	12.00	11.98	-0.70
12,904.4	67.23	180.66	12,772.7	-178.9	-461.1	217.9	12.00	11.98	-0.68
FTP(Nautilus 16 Fed Com #712H)									
12,925.0	69.70	180.52	12,780.3	-198.1	-461.3	237.0	12.00	11.98	-0.67
12,950.0	72.70	180.36	12,788.4	-221.7	-461.5	260.6	12.00	11.98	-0.64
12,975.0	75.69	180.20	12,795.2	-245.8	-461.6	284.6	12.00	11.99	-0.62
13,000.0	78.69	180.05	12,800.7	-270.2	-461.6	308.9	12.00	11.99	-0.61
13,025.0	81.68	179.90	12,805.0	-294.8	-461.6	333.4	12.00	11.99	-0.59
13,050.0	84.68	179.76	12,807.9	-319.6	-461.5	358.1	12.00	11.99	-0.58
13,075.0	87.68	179.61	12,809.6	-344.6	-461.4	383.0	12.00	11.99	-0.58
13,094.4	90.00	179.50	12,810.0	-363.9	-461.3	402.3	12.00	11.99	-0.58
13,100.0	90.00	179.50	12,810.0	-369.5	-461.2	407.9	0.00	0.00	0.00
13,200.0	90.00	179.50	12,810.0	-469.5	-460.3	507.4	0.00	0.00	0.00



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 State Com
 Well: #712H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #712H
 TVD Reference: KB = 25 @ 3348.0usft
 MD Reference: KB = 25 @ 3348.0usft
 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	12,810.0	-569.5	-459.5	607.0	0.00	0.00	0.00
13,400.0	90.00	179.50	12,810.0	-669.5	-458.6	706.5	0.00	0.00	0.00
13,500.0	90.00	179.50	12,810.0	-769.5	-457.7	806.1	0.00	0.00	0.00
13,600.0	90.00	179.50	12,810.0	-869.5	-456.9	905.6	0.00	0.00	0.00
13,700.0	90.00	179.50	12,810.0	-969.5	-456.0	1,005.2	0.00	0.00	0.00
13,800.0	90.00	179.50	12,810.0	-1,069.5	-455.1	1,104.7	0.00	0.00	0.00
13,900.0	90.00	179.50	12,810.0	-1,169.5	-454.3	1,204.3	0.00	0.00	0.00
14,000.0	90.00	179.50	12,810.0	-1,269.5	-453.4	1,303.8	0.00	0.00	0.00
14,100.0	90.00	179.50	12,810.0	-1,369.5	-452.5	1,403.4	0.00	0.00	0.00
14,200.0	90.00	179.50	12,810.0	-1,469.5	-451.7	1,502.9	0.00	0.00	0.00
14,300.0	90.00	179.50	12,810.0	-1,569.5	-450.8	1,602.5	0.00	0.00	0.00
14,400.0	90.00	179.50	12,810.0	-1,669.5	-449.9	1,702.0	0.00	0.00	0.00
14,500.0	90.00	179.50	12,810.0	-1,769.5	-449.1	1,801.6	0.00	0.00	0.00
14,600.0	90.00	179.50	12,810.0	-1,869.5	-448.2	1,901.1	0.00	0.00	0.00
14,700.0	90.00	179.50	12,810.0	-1,969.5	-447.3	2,000.7	0.00	0.00	0.00
14,800.0	90.00	179.50	12,810.0	-2,069.5	-446.5	2,100.2	0.00	0.00	0.00
14,900.0	90.00	179.50	12,810.0	-2,169.5	-445.6	2,199.8	0.00	0.00	0.00
15,000.0	90.00	179.50	12,810.0	-2,269.5	-444.7	2,299.3	0.00	0.00	0.00
15,100.0	90.00	179.50	12,810.0	-2,369.5	-443.9	2,398.9	0.00	0.00	0.00
15,200.0	90.00	179.50	12,810.0	-2,469.5	-443.0	2,498.4	0.00	0.00	0.00
15,300.0	90.00	179.50	12,810.0	-2,569.5	-442.1	2,598.0	0.00	0.00	0.00
15,400.0	90.00	179.50	12,810.0	-2,669.5	-441.2	2,697.5	0.00	0.00	0.00
15,500.0	90.00	179.50	12,810.0	-2,769.5	-440.4	2,797.1	0.00	0.00	0.00
15,600.0	90.00	179.50	12,810.0	-2,869.5	-439.5	2,896.6	0.00	0.00	0.00
15,700.0	90.00	179.50	12,810.0	-2,969.4	-438.6	2,996.2	0.00	0.00	0.00
15,800.0	90.00	179.50	12,810.0	-3,069.4	-437.8	3,095.7	0.00	0.00	0.00
15,900.0	90.00	179.50	12,810.0	-3,169.4	-436.9	3,195.3	0.00	0.00	0.00
16,000.0	90.00	179.50	12,810.0	-3,269.4	-436.0	3,294.8	0.00	0.00	0.00
16,100.0	90.00	179.50	12,810.0	-3,369.4	-435.2	3,394.4	0.00	0.00	0.00
16,200.0	90.00	179.50	12,810.0	-3,469.4	-434.3	3,493.9	0.00	0.00	0.00
16,300.0	90.00	179.50	12,810.0	-3,569.4	-433.4	3,593.5	0.00	0.00	0.00
16,400.0	90.00	179.50	12,810.0	-3,669.4	-432.6	3,693.0	0.00	0.00	0.00
16,500.0	90.00	179.50	12,810.0	-3,769.4	-431.7	3,792.6	0.00	0.00	0.00
16,600.0	90.00	179.50	12,810.0	-3,869.4	-430.8	3,892.1	0.00	0.00	0.00
16,700.0	90.00	179.50	12,810.0	-3,969.4	-430.0	3,991.7	0.00	0.00	0.00
16,800.0	90.00	179.50	12,810.0	-4,069.4	-429.1	4,091.2	0.00	0.00	0.00
16,900.0	90.00	179.50	12,810.0	-4,169.4	-428.2	4,190.8	0.00	0.00	0.00
17,000.0	90.00	179.50	12,810.0	-4,269.4	-427.4	4,290.3	0.00	0.00	0.00
17,100.0	90.00	179.50	12,810.0	-4,369.4	-426.5	4,389.9	0.00	0.00	0.00
17,200.0	90.00	179.50	12,810.0	-4,469.4	-425.6	4,489.4	0.00	0.00	0.00
17,300.0	90.00	179.50	12,810.0	-4,569.4	-424.7	4,589.0	0.00	0.00	0.00
17,400.0	90.00	179.50	12,810.0	-4,669.4	-423.9	4,688.5	0.00	0.00	0.00
17,500.0	90.00	179.50	12,810.0	-4,769.4	-423.0	4,788.1	0.00	0.00	0.00
17,600.0	90.00	179.50	12,810.0	-4,869.4	-422.1	4,887.6	0.00	0.00	0.00
17,616.6	90.00	179.50	12,810.0	-4,886.0	-422.0	4,904.2	0.00	0.00	0.00

PBHL(Nautilus 16 Fed Com #712H)



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 State Com
Well: #712H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #712H
TVD Reference: KB = 25 @ 3348.0usft
MD Reference: KB = 25 @ 3348.0usft
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
PBHL(Nautilus 16 Fed C - plan hits target center - Point	0.00	0.00	12,810.0	-4,886.0	-422.0	378,191.00	807,577.00	32° 2' 12.537 N	103° 28' 26.882 W
FTP(Nautilus 16 Fed Co - plan misses target center by 40.2usft at 12904.4usft MD (12772.7 TVD, -178.9 N, -461.1 E) - Point	0.00	0.00	12,810.0	-164.0	-463.0	382,913.00	807,536.00	32° 2' 59.266 N	103° 28' 26.922 W