

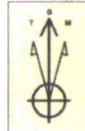
HOBBS CCD
FEB 23 2018
RECEIVED



Lea County, NM (NAD 83 NME)
Nautilus 16 State Com #717H
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: -0.48°
Magnetic North: 6.38°
Magnetic Field
Strength: 47775.7 nT
Dip Angle: 66.91°
Date: 2/22/2018
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.38°
To convert a Magnetic Direction to a True Direction, Add 6.82° East
To convert a True Direction to a Grid Direction, Subtract 0.48°

WELL DETAILS: #717H

3322.0
KB = 25 @ 3347.0 uft
Northing 383081.00 Easting 808432.00 32° 3' 0.857 N Longitude 103° 28' 16.496 W

SECTION DETAILS

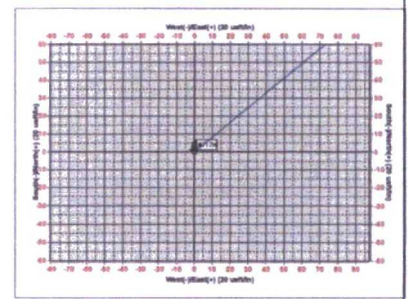
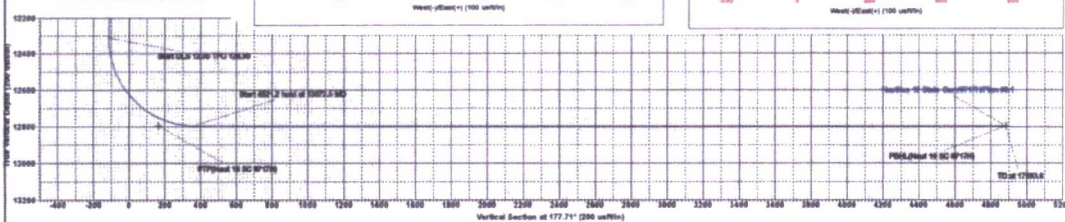
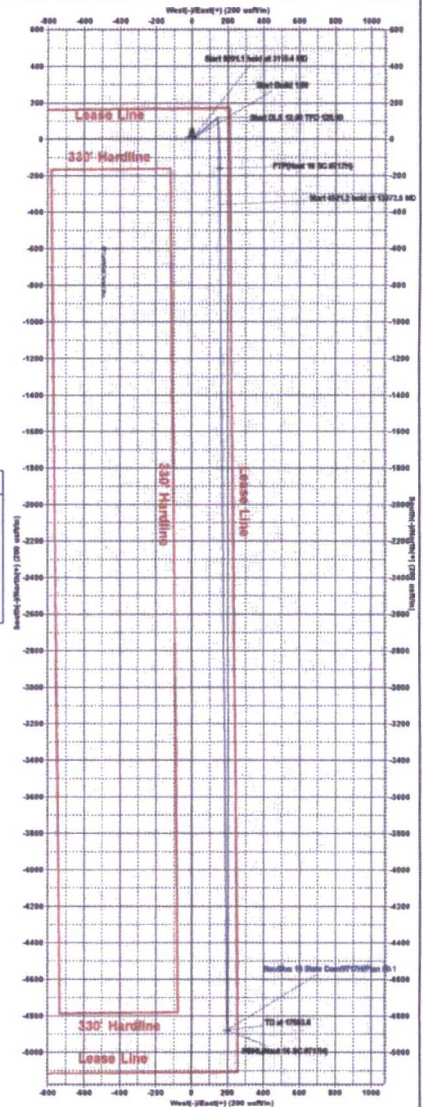
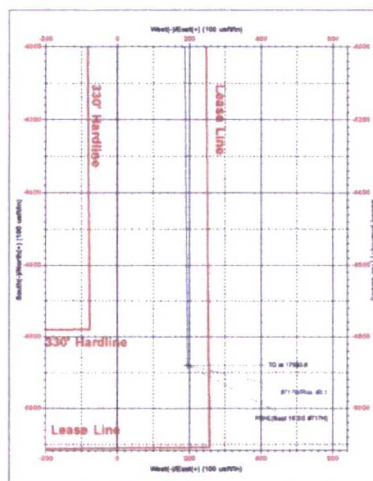
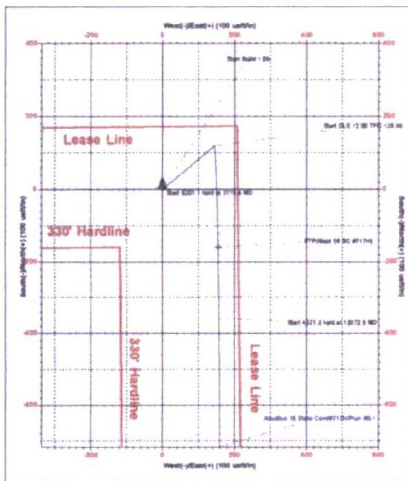
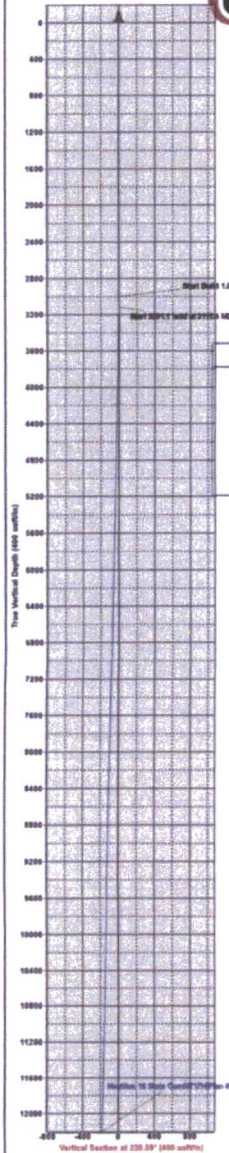
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0
3115.4	1.15	50.59	3115.3	0.7	0.9	1.00	50.59	-0.7
12316.4	1.15	50.59	12314.6	118.3	144.0	0.00	0.00	-112.5
13072.5	90.00	179.50	12798.0	-359.0	155.7	12.00	128.90	364.9
17593.6	90.00	179.50	12798.0	-4880.0	195.0	0.00	0.00	4883.9

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
FTPL/Nautilus 16 SC #717H	12798.0	-159.0	184.0	382922.00	808686.00
FTPL/Nautilus 16 SC #717H	12798.0	-4880.0	195.0	378291.00	808627.00



Nautilus 16 State Com #717H
Plan #0.1



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#717H

OH

Plan: Plan #0.1

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: #717H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #717H
TVD Reference: KB = 25 @ 3347.0usft
MD Reference: KB = 25 @ 3347.0usft
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	#717H					
Well Position	+N/-S	34.0 usft	Northing:	383,081.00 usft	Latitude:	32° 3' 0.857 N
	+E/-W	2,030.0 usft	Easting:	808,432.00 usft	Longitude:	103° 28' 16.496 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level:	3,322.0 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/22/2018	6.82	59.91	47,775.71994633

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	177.71

Plan Survey Tool Program			Date	2/22/2018	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	17,593.6	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	
3,115.4	1.15	50.59	3,115.3	0.7	0.9	1.00	1.00	0.00	50.59	
12,316.4	1.15	50.59	12,314.6	118.3	144.0	0.00	0.00	0.00	0.00	
13,072.5	90.00	179.50	12,798.0	-359.0	155.7	12.00	11.75	17.05	128.90	
17,593.6	90.00	179.50	12,798.0	-4,880.0	195.0	0.00	0.00	0.00	0.00	PBHL(Naut 16 SC #7)



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 State Com
Well: #717H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #717H
TVD Reference: KB = 25 @ 3347.0usft
MD Reference: KB = 25 @ 3347.0usft
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	50.59	3,100.0	0.6	0.7	-0.5	1.00	1.00	0.00
3,115.4	1.15	50.59	3,115.3	0.7	0.9	-0.7	1.00	1.00	0.00
3,200.0	1.15	50.59	3,200.0	1.8	2.2	-1.7	0.00	0.00	0.00
3,300.0	1.15	50.59	3,300.0	3.1	3.8	-2.9	0.00	0.00	0.00
3,400.0	1.15	50.59	3,399.9	4.4	5.3	-4.2	0.00	0.00	0.00
3,500.0	1.15	50.59	3,499.9	5.7	6.9	-5.4	0.00	0.00	0.00
3,600.0	1.15	50.59	3,599.9	6.9	8.4	-6.6	0.00	0.00	0.00
3,700.0	1.15	50.59	3,699.9	8.2	10.0	-7.8	0.00	0.00	0.00
3,800.0	1.15	50.59	3,799.9	9.5	11.5	-9.0	0.00	0.00	0.00
3,900.0	1.15	50.59	3,899.8	10.8	13.1	-10.2	0.00	0.00	0.00
4,000.0	1.15	50.59	3,999.8	12.0	14.7	-11.4	0.00	0.00	0.00
4,100.0	1.15	50.59	4,099.8	13.3	16.2	-12.7	0.00	0.00	0.00
4,200.0	1.15	50.59	4,199.8	14.6	17.8	-13.9	0.00	0.00	0.00
4,300.0	1.15	50.59	4,299.8	15.9	19.3	-15.1	0.00	0.00	0.00
4,400.0	1.15	50.59	4,399.7	17.2	20.9	-16.3	0.00	0.00	0.00
4,500.0	1.15	50.59	4,499.7	18.4	22.4	-17.5	0.00	0.00	0.00
4,600.0	1.15	50.59	4,599.7	19.7	24.0	-18.7	0.00	0.00	0.00
4,700.0	1.15	50.59	4,699.7	21.0	25.5	-20.0	0.00	0.00	0.00
4,800.0	1.15	50.59	4,799.7	22.3	27.1	-21.2	0.00	0.00	0.00
4,900.0	1.15	50.59	4,899.6	23.5	28.7	-22.4	0.00	0.00	0.00
5,000.0	1.15	50.59	4,999.6	24.8	30.2	-23.6	0.00	0.00	0.00
5,100.0	1.15	50.59	5,099.6	26.1	31.8	-24.8	0.00	0.00	0.00
5,200.0	1.15	50.59	5,199.6	27.4	33.3	-26.0	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: #717H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #717H
TVD Reference: KB = 25 @ 3347.0usft
MD Reference: KB = 25 @ 3347.0usft
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	1.15	50.59	5,299.5	28.7	34.9	-27.2	0.00	0.00	0.00
5,400.0	1.15	50.59	5,399.5	29.9	36.4	-28.5	0.00	0.00	0.00
5,500.0	1.15	50.59	5,499.5	31.2	38.0	-29.7	0.00	0.00	0.00
5,600.0	1.15	50.59	5,599.5	32.5	39.5	-30.9	0.00	0.00	0.00
5,700.0	1.15	50.59	5,699.5	33.8	41.1	-32.1	0.00	0.00	0.00
5,800.0	1.15	50.59	5,799.4	35.0	42.7	-33.3	0.00	0.00	0.00
5,900.0	1.15	50.59	5,899.4	36.3	44.2	-34.5	0.00	0.00	0.00
6,000.0	1.15	50.59	5,999.4	37.6	45.8	-35.7	0.00	0.00	0.00
6,100.0	1.15	50.59	6,099.4	38.9	47.3	-37.0	0.00	0.00	0.00
6,200.0	1.15	50.59	6,199.4	40.2	48.9	-38.2	0.00	0.00	0.00
6,300.0	1.15	50.59	6,299.3	41.4	50.4	-39.4	0.00	0.00	0.00
6,400.0	1.15	50.59	6,399.3	42.7	52.0	-40.6	0.00	0.00	0.00
6,500.0	1.15	50.59	6,499.3	44.0	53.5	-41.8	0.00	0.00	0.00
6,600.0	1.15	50.59	6,599.3	45.3	55.1	-43.0	0.00	0.00	0.00
6,700.0	1.15	50.59	6,699.3	46.5	56.7	-44.2	0.00	0.00	0.00
6,800.0	1.15	50.59	6,799.2	47.8	58.2	-45.5	0.00	0.00	0.00
6,900.0	1.15	50.59	6,899.2	49.1	59.8	-46.7	0.00	0.00	0.00
7,000.0	1.15	50.59	6,999.2	50.4	61.3	-47.9	0.00	0.00	0.00
7,100.0	1.15	50.59	7,099.2	51.7	62.9	-49.1	0.00	0.00	0.00
7,200.0	1.15	50.59	7,199.2	52.9	64.4	-50.3	0.00	0.00	0.00
7,300.0	1.15	50.59	7,299.1	54.2	66.0	-51.5	0.00	0.00	0.00
7,400.0	1.15	50.59	7,399.1	55.5	67.5	-52.8	0.00	0.00	0.00
7,500.0	1.15	50.59	7,499.1	56.8	69.1	-54.0	0.00	0.00	0.00
7,600.0	1.15	50.59	7,599.1	58.1	70.7	-55.2	0.00	0.00	0.00
7,700.0	1.15	50.59	7,699.1	59.3	72.2	-56.4	0.00	0.00	0.00
7,800.0	1.15	50.59	7,799.0	60.6	73.8	-57.6	0.00	0.00	0.00
7,900.0	1.15	50.59	7,899.0	61.9	75.3	-58.8	0.00	0.00	0.00
8,000.0	1.15	50.59	7,999.0	63.2	76.9	-60.0	0.00	0.00	0.00
8,100.0	1.15	50.59	8,099.0	64.4	78.4	-61.3	0.00	0.00	0.00
8,200.0	1.15	50.59	8,199.0	65.7	80.0	-62.5	0.00	0.00	0.00
8,300.0	1.15	50.59	8,298.9	67.0	81.5	-63.7	0.00	0.00	0.00
8,400.0	1.15	50.59	8,398.9	68.3	83.1	-64.9	0.00	0.00	0.00
8,500.0	1.15	50.59	8,498.9	69.6	84.7	-66.1	0.00	0.00	0.00
8,600.0	1.15	50.59	8,598.9	70.8	86.2	-67.3	0.00	0.00	0.00
8,700.0	1.15	50.59	8,698.9	72.1	87.8	-68.5	0.00	0.00	0.00
8,800.0	1.15	50.59	8,798.8	73.4	89.3	-69.8	0.00	0.00	0.00
8,900.0	1.15	50.59	8,898.8	74.7	90.9	-71.0	0.00	0.00	0.00
9,000.0	1.15	50.59	8,998.8	75.9	92.4	-72.2	0.00	0.00	0.00
9,100.0	1.15	50.59	9,098.8	77.2	94.0	-73.4	0.00	0.00	0.00
9,200.0	1.15	50.59	9,198.8	78.5	95.5	-74.6	0.00	0.00	0.00
9,300.0	1.15	50.59	9,298.7	79.8	97.1	-75.8	0.00	0.00	0.00
9,400.0	1.15	50.59	9,398.7	81.1	98.7	-77.1	0.00	0.00	0.00
9,500.0	1.15	50.59	9,498.7	82.3	100.2	-78.3	0.00	0.00	0.00
9,600.0	1.15	50.59	9,598.7	83.6	101.8	-79.5	0.00	0.00	0.00
9,700.0	1.15	50.59	9,698.7	84.9	103.3	-80.7	0.00	0.00	0.00
9,800.0	1.15	50.59	9,798.6	86.2	104.9	-81.9	0.00	0.00	0.00
9,900.0	1.15	50.59	9,898.6	87.4	106.4	-83.1	0.00	0.00	0.00
10,000.0	1.15	50.59	9,998.6	88.7	108.0	-84.3	0.00	0.00	0.00
10,100.0	1.15	50.59	10,098.6	90.0	109.5	-85.6	0.00	0.00	0.00
10,200.0	1.15	50.59	10,198.6	91.3	111.1	-86.8	0.00	0.00	0.00
10,300.0	1.15	50.59	10,298.5	92.6	112.7	-88.0	0.00	0.00	0.00
10,400.0	1.15	50.59	10,398.5	93.8	114.2	-89.2	0.00	0.00	0.00
10,500.0	1.15	50.59	10,498.5	95.1	115.8	-90.4	0.00	0.00	0.00
10,600.0	1.15	50.59	10,598.5	96.4	117.3	-91.6	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: #717H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #717H
 TVD Reference: KB = 25 @ 3347.0usft
 MD Reference: KB = 25 @ 3347.0usft
 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)
10,700.0	1.15	50.59	10,698.5	97.7	118.9	-92.8	0.00	0.00	0.00
10,800.0	1.15	50.59	10,798.4	98.9	120.4	-94.1	0.00	0.00	0.00
10,900.0	1.15	50.59	10,898.4	100.2	122.0	-95.3	0.00	0.00	0.00
11,000.0	1.15	50.59	10,998.4	101.5	123.5	-96.5	0.00	0.00	0.00
11,100.0	1.15	50.59	11,098.4	102.8	125.1	-97.7	0.00	0.00	0.00
11,200.0	1.15	50.59	11,198.4	104.1	126.7	-98.9	0.00	0.00	0.00
11,300.0	1.15	50.59	11,298.3	105.3	128.2	-100.1	0.00	0.00	0.00
11,400.0	1.15	50.59	11,398.3	106.6	129.8	-101.3	0.00	0.00	0.00
11,500.0	1.15	50.59	11,498.3	107.9	131.3	-102.6	0.00	0.00	0.00
11,600.0	1.15	50.59	11,598.3	109.2	132.9	-103.8	0.00	0.00	0.00
11,700.0	1.15	50.59	11,698.3	110.4	134.4	-105.0	0.00	0.00	0.00
11,800.0	1.15	50.59	11,798.2	111.7	136.0	-106.2	0.00	0.00	0.00
11,900.0	1.15	50.59	11,898.2	113.0	137.5	-107.4	0.00	0.00	0.00
12,000.0	1.15	50.59	11,998.2	114.3	139.1	-108.6	0.00	0.00	0.00
12,100.0	1.15	50.59	12,098.2	115.6	140.7	-109.9	0.00	0.00	0.00
12,200.0	1.15	50.59	12,198.2	116.8	142.2	-111.1	0.00	0.00	0.00
12,300.0	1.15	50.59	12,298.1	118.1	143.8	-112.3	0.00	0.00	0.00
12,316.4	1.15	50.59	12,314.6	118.3	144.0	-112.5	0.00	0.00	0.00
12,325.0	0.95	108.21	12,323.1	118.4	144.2	-112.5	12.00	-2.40	672.28
12,350.0	3.42	164.32	12,348.1	117.6	144.5	-111.7	12.00	9.90	224.44
12,375.0	6.37	171.43	12,373.0	115.5	145.0	-109.6	12.00	11.77	28.45
12,400.0	9.35	174.04	12,397.8	112.1	145.4	-106.2	12.00	11.92	10.44
12,425.0	12.34	175.39	12,422.3	107.4	145.8	-101.5	12.00	11.96	5.42
12,450.0	15.33	176.23	12,446.6	101.5	146.2	-95.5	12.00	11.97	3.33
12,475.0	18.33	176.79	12,470.5	94.2	146.7	-88.3	12.00	11.98	2.26
12,500.0	21.32	177.20	12,494.0	85.8	147.1	-79.8	12.00	11.99	1.64
12,525.0	24.32	177.52	12,517.1	76.1	147.6	-70.1	12.00	11.99	1.25
12,550.0	27.32	177.76	12,539.6	65.2	148.0	-59.2	12.00	11.99	0.99
12,575.0	30.32	177.97	12,561.5	53.2	148.5	-47.2	12.00	11.99	0.81
12,600.0	33.31	178.14	12,582.7	40.0	148.9	-34.0	12.00	11.99	0.68
12,625.0	36.31	178.28	12,603.3	25.7	149.3	-19.7	12.00	12.00	0.58
12,650.0	39.31	178.41	12,623.0	10.4	149.8	-4.4	12.00	12.00	0.50
12,675.0	42.31	178.52	12,641.9	-5.9	150.2	11.9	12.00	12.00	0.44
12,700.0	45.31	178.61	12,660.0	-23.2	150.7	29.2	12.00	12.00	0.39
12,725.0	48.31	178.70	12,677.1	-41.4	151.1	47.4	12.00	12.00	0.35
12,750.0	51.31	178.78	12,693.2	-60.5	151.5	66.5	12.00	12.00	0.32
12,775.0	54.31	178.86	12,708.3	-80.4	151.9	86.4	12.00	12.00	0.30
12,800.0	57.31	178.93	12,722.4	-101.1	152.3	107.1	12.00	12.00	0.27
12,825.0	60.31	178.99	12,735.3	-122.5	152.7	128.5	12.00	12.00	0.26
12,850.0	63.31	179.05	12,747.1	-144.5	153.1	150.5	12.00	12.00	0.24
12,875.0	66.31	179.11	12,757.7	-167.1	153.4	173.1	12.00	12.00	0.23
12,882.7	67.23	179.13	12,760.8	-174.2	153.5	180.2	12.00	12.00	0.22
FTP(Naut 16 SC #717H)									
12,900.0	69.31	179.16	12,767.2	-190.3	153.8	196.3	12.00	12.00	0.22
12,925.0	72.31	179.22	12,775.4	-213.9	154.1	219.9	12.00	12.00	0.21
12,950.0	75.31	179.27	12,782.4	-237.9	154.4	243.9	12.00	12.00	0.20
12,975.0	78.31	179.32	12,788.1	-262.2	154.7	268.2	12.00	12.00	0.20
13,000.0	81.31	179.37	12,792.5	-286.8	155.0	292.8	12.00	12.00	0.19
13,025.0	84.30	179.41	12,795.6	-311.6	155.3	317.6	12.00	12.00	0.19
13,050.0	87.30	179.46	12,797.5	-336.6	155.5	342.5	12.00	12.00	0.19
13,072.5	90.00	179.50	12,798.0	-359.0	155.7	364.9	12.00	12.00	0.19
13,100.0	90.00	179.50	12,798.0	-386.5	156.0	392.5	0.00	0.00	0.00
13,200.0	90.00	179.50	12,798.0	-486.5	156.8	492.4	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: #717H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #717H
 TVD Reference: KB = 25 @ 3347.0usft
 MD Reference: KB = 25 @ 3347.0usft
 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	12,798.0	-586.5	157.7	592.4	0.00	0.00	0.00
13,400.0	90.00	179.50	12,798.0	-686.5	158.6	692.3	0.00	0.00	0.00
13,500.0	90.00	179.50	12,798.0	-786.5	159.4	792.3	0.00	0.00	0.00
13,600.0	90.00	179.50	12,798.0	-886.5	160.3	892.2	0.00	0.00	0.00
13,700.0	90.00	179.50	12,798.0	-986.5	161.2	992.2	0.00	0.00	0.00
13,800.0	90.00	179.50	12,798.0	-1,086.5	162.1	1,092.1	0.00	0.00	0.00
13,900.0	90.00	179.50	12,798.0	-1,186.5	162.9	1,192.1	0.00	0.00	0.00
14,000.0	90.00	179.50	12,798.0	-1,286.5	163.8	1,292.0	0.00	0.00	0.00
14,100.0	90.00	179.50	12,798.0	-1,386.5	164.7	1,392.0	0.00	0.00	0.00
14,200.0	90.00	179.50	12,798.0	-1,486.5	165.5	1,491.9	0.00	0.00	0.00
14,300.0	90.00	179.50	12,798.0	-1,586.5	166.4	1,591.9	0.00	0.00	0.00
14,400.0	90.00	179.50	12,798.0	-1,686.5	167.3	1,691.8	0.00	0.00	0.00
14,500.0	90.00	179.50	12,798.0	-1,786.5	168.1	1,791.8	0.00	0.00	0.00
14,600.0	90.00	179.50	12,798.0	-1,886.5	169.0	1,891.7	0.00	0.00	0.00
14,700.0	90.00	179.50	12,798.0	-1,986.5	169.9	1,991.7	0.00	0.00	0.00
14,800.0	90.00	179.50	12,798.0	-2,086.5	170.7	2,091.6	0.00	0.00	0.00
14,900.0	90.00	179.50	12,798.0	-2,186.5	171.6	2,191.6	0.00	0.00	0.00
15,000.0	90.00	179.50	12,798.0	-2,286.5	172.5	2,291.5	0.00	0.00	0.00
15,100.0	90.00	179.50	12,798.0	-2,386.5	173.3	2,391.5	0.00	0.00	0.00
15,200.0	90.00	179.50	12,798.0	-2,486.5	174.2	2,491.4	0.00	0.00	0.00
15,300.0	90.00	179.50	12,798.0	-2,586.5	175.1	2,591.4	0.00	0.00	0.00
15,400.0	90.00	179.50	12,798.0	-2,686.5	175.9	2,691.3	0.00	0.00	0.00
15,500.0	90.00	179.50	12,798.0	-2,786.5	176.8	2,791.3	0.00	0.00	0.00
15,600.0	90.00	179.50	12,798.0	-2,886.5	177.7	2,891.2	0.00	0.00	0.00
15,700.0	90.00	179.50	12,798.0	-2,986.5	178.6	2,991.2	0.00	0.00	0.00
15,800.0	90.00	179.50	12,798.0	-3,086.4	179.4	3,091.1	0.00	0.00	0.00
15,900.0	90.00	179.50	12,798.0	-3,186.4	180.3	3,191.1	0.00	0.00	0.00
16,000.0	90.00	179.50	12,798.0	-3,286.4	181.2	3,291.1	0.00	0.00	0.00
16,100.0	90.00	179.50	12,798.0	-3,386.4	182.0	3,391.0	0.00	0.00	0.00
16,200.0	90.00	179.50	12,798.0	-3,486.4	182.9	3,491.0	0.00	0.00	0.00
16,300.0	90.00	179.50	12,798.0	-3,586.4	183.8	3,590.9	0.00	0.00	0.00
16,400.0	90.00	179.50	12,798.0	-3,686.4	184.6	3,690.9	0.00	0.00	0.00
16,500.0	90.00	179.50	12,798.0	-3,786.4	185.5	3,790.8	0.00	0.00	0.00
16,600.0	90.00	179.50	12,798.0	-3,886.4	186.4	3,890.8	0.00	0.00	0.00
16,700.0	90.00	179.50	12,798.0	-3,986.4	187.2	3,990.7	0.00	0.00	0.00
16,800.0	90.00	179.50	12,798.0	-4,086.4	188.1	4,090.7	0.00	0.00	0.00
16,900.0	90.00	179.50	12,798.0	-4,186.4	189.0	4,190.6	0.00	0.00	0.00
17,000.0	90.00	179.50	12,798.0	-4,286.4	189.8	4,290.6	0.00	0.00	0.00
17,100.0	90.00	179.50	12,798.0	-4,386.4	190.7	4,390.5	0.00	0.00	0.00
17,200.0	90.00	179.50	12,798.0	-4,486.4	191.6	4,490.5	0.00	0.00	0.00
17,300.0	90.00	179.50	12,798.0	-4,586.4	192.5	4,590.4	0.00	0.00	0.00
17,400.0	90.00	179.50	12,798.0	-4,686.4	193.3	4,690.4	0.00	0.00	0.00
17,500.0	90.00	179.50	12,798.0	-4,786.4	194.2	4,790.3	0.00	0.00	0.00
17,593.6	90.00	179.50	12,798.0	-4,880.0	195.0	4,883.9	0.00	0.00	0.00

PBHL(Naut 16 SC #717H)



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 State Com
Well: #717H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #717H
TVD Reference: KB = 25 @ 3347.0usft
MD Reference: KB = 25 @ 3347.0usft
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(Naut 16 SC #717I) - plan hits target center - Point	0.00	0.00	12,798.0	-4,880.0	195.0	378,201.00	808,627.00	32° 2' 12.553 N	103° 28' 14.683 W
FTP(Naut 16 SC #717H) - plan misses target center by 40.2usft at 12882.7usft MD (12760.8 TVD, -174.2 N, 153.5 E) - Point	0.00	0.00	12,798.0	-159.0	154.0	382,922.00	808,586.00	32° 2' 59.272 N	103° 28' 14.722 W

EOG RESOURCES, INC.
NAUTILUS 16 STATE COM #717H

Hydrogen Sulfide Plan Summary

OCD
FEB 23 2018
FILED

- 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.
NAUTILUS 16 STATE COM #717H

- **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.
NAUTILUS 16 STATE COM #717H

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
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Company Drilling Consultants:

David Dominique	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