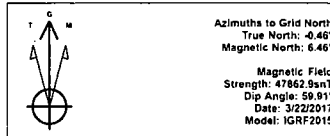




Lea County, NM (NAD 83 NME)

Nautilus 16 Fed Com #709H

Plan #0.1



To convert a Magnetic Direction to a Grid Direction, Add 6.46°
To convert a Magnetic Direction to a True Direction, Add 6.92° East
To convert a True Direction to a Grid Direction, Subtract 0.46°

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: #709H

Ground Level: 3312.00
KB = 25' @ 3337.00usft
Northing: 378255.00
Easting: 809071.00
Latitude: 32.83685904
Longitude: -103.46931129

SECTION DETAILS

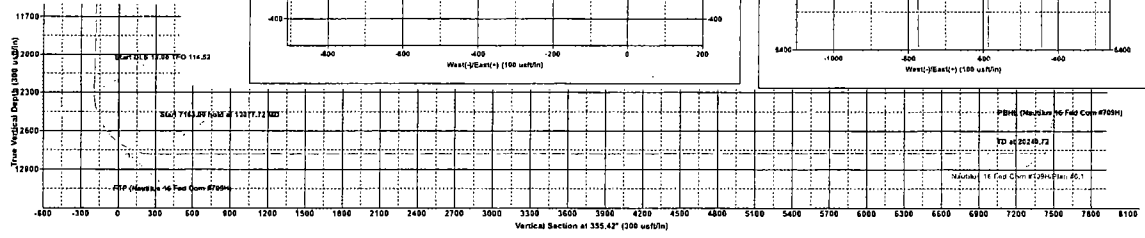
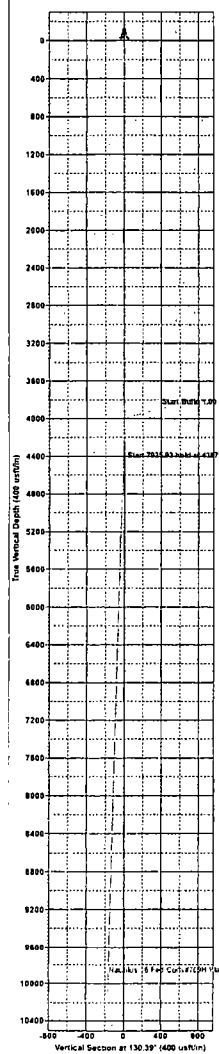
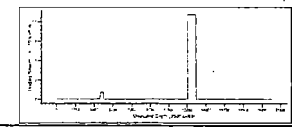
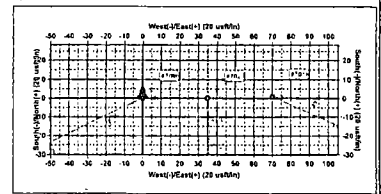
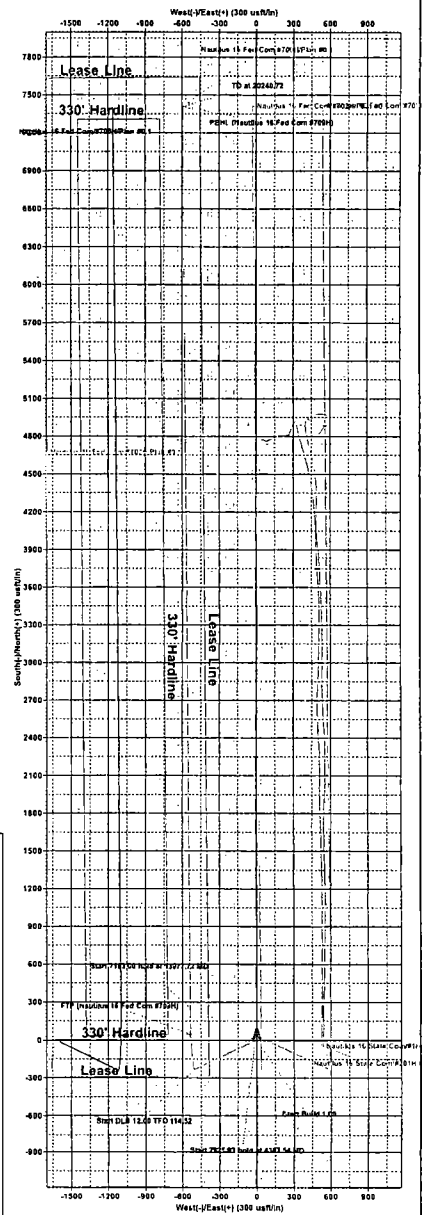
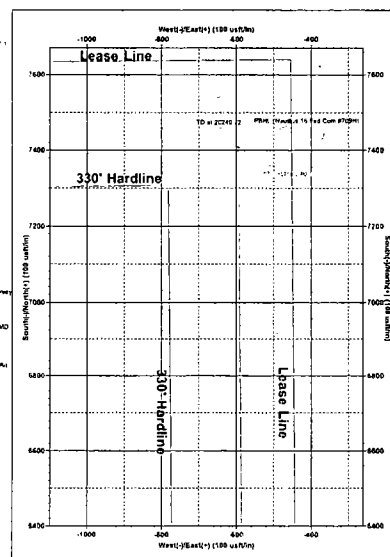
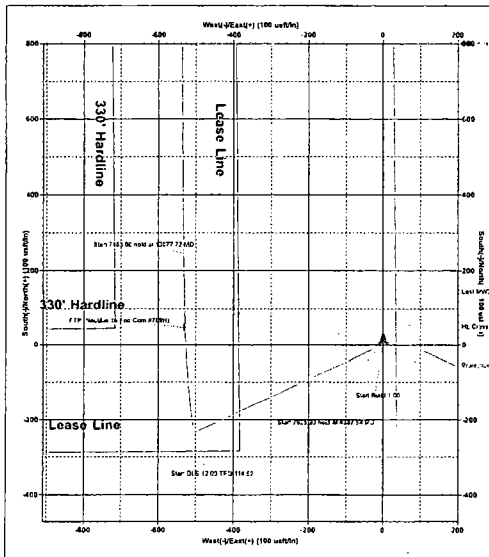
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00	
3	4387.54	3.88	244.93	4387.24	-5.55	-11.87	1.00	244.93	-4.59	
4	12313.47	3.88	244.93	12295.05	-232.54	-497.08	0.00	0.00	-192.07	
5	13077.72	90.10	359.50	12785.00	245.28	-531.49	12.00	114.52	286.98	
6	20240.72	90.10	359.50	12772.50	7408.00	-594.00	0.00	0.00	7431.78	PBHL (Nautilus 16 Fed Com #709H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (Nautilus 16 Fed Com #709H)	12772.50	7408.00	-594.00	378255.00	808477.08
FTP (Nautilus 16 Fed Com #709H)	12785.00	45.00	-530.00	378300.00	808541.09





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Nautilus 16 Fed Com

#709H

OH

Plan: Plan #0.1

Standard Planning Report

23 March, 2017

HOBBS COO

SEP 28 2017

RECEIVED



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 Fed Com
Well: #709H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3337.00usft
MD Reference: KB = 25' @ 3337.00usft
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 Fed Com

Site Position: Northing: 378,256.00 usft Latitude: 32.03696026
From: Map Easting: 809,141.00 usft Longitude: -103.46908538
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16" Grid Convergence: 0.46 °

Well #709H

Well Position +N/-S -1.00 usft Northing: 378,255.00 usft Latitude: 32.03695905
+E/-W -70.00 usft Easting: 809,071.00 usft Longitude: -103.46931129
Position Uncertainty 0.00 usft Wellhead Elevation: 0.00 usft Ground Level: 3,312.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/22/2017	6.92	59.91	47,863

Design Plan #0.1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00

Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
(usft) (usft) (usft) (°)
0.00 0.00 0.00 355.42

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,387.54	3.88	244.93	4,387.24	-5.55	-11.87	1.00	1.00	0.00	244.93	
12,313.47	3.88	244.93	12,295.05	-232.54	-497.08	0.00	0.00	0.00	0.00	
13,077.72	90.10	359.50	12,785.00	245.28	-531.49	12.00	11.28	14.99	114.52	
20,240.72	90.10	359.50	12,772.50	7,408.00	-594.00	0.00	0.00	0.00	0.00	PBHL (Nautilus 16 Fe



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 Fed Com
 Well: #709H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
 TVD Reference: KB = 25' @ 3337.00usft
 MD Reference: KB = 25' @ 3337.00usft
 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	1.00	244.93	4,100.00	-0.37	-0.79	-0.31	1.00	1.00	0.00
4,200.00	2.00	244.93	4,199.96	-1.48	-3.16	-1.22	1.00	1.00	0.00
4,300.00	3.00	244.93	4,299.86	-3.33	-7.11	-2.75	1.00	1.00	0.00
4,387.54	3.88	244.93	4,387.24	-5.55	-11.87	-4.59	1.00	1.00	0.00
4,400.00	3.88	244.93	4,399.68	-5.91	-12.63	-4.88	0.00	0.00	0.00
4,500.00	3.88	244.93	4,499.45	-8.77	-18.75	-7.25	0.00	0.00	0.00
4,600.00	3.88	244.93	4,599.22	-11.64	-24.87	-9.61	0.00	0.00	0.00
4,700.00	3.88	244.93	4,698.99	-14.50	-31.00	-11.98	0.00	0.00	0.00
4,800.00	3.88	244.93	4,798.76	-17.36	-37.12	-14.34	0.00	0.00	0.00
4,900.00	3.88	244.93	4,898.53	-20.23	-43.24	-16.71	0.00	0.00	0.00
5,000.00	3.88	244.93	4,998.30	-23.09	-49.36	-19.07	0.00	0.00	0.00
5,100.00	3.88	244.93	5,098.08	-25.96	-55.48	-21.44	0.00	0.00	0.00
5,200.00	3.88	244.93	5,197.85	-28.82	-61.60	-23.80	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Nautilus 16 Fed Com
Well: #709H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3337.00usft
MD Reference: KB = 25' @ 3337.00usft
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)
5,300.00	3.88	244.93	5,297.62	-31.68	-67.73	-26.17	0.00	0.00	0.00
5,400.00	3.88	244.93	5,397.39	-34.55	-73.85	-28.53	0.00	0.00	0.00
5,500.00	3.88	244.93	5,497.16	-37.41	-79.97	-30.90	0.00	0.00	0.00
5,600.00	3.88	244.93	5,596.93	-40.28	-86.09	-33.27	0.00	0.00	0.00
5,700.00	3.88	244.93	5,696.70	-43.14	-92.21	-35.63	0.00	0.00	0.00
5,800.00	3.88	244.93	5,796.47	-46.00	-98.34	-38.00	0.00	0.00	0.00
5,900.00	3.88	244.93	5,896.25	-48.87	-104.46	-40.36	0.00	0.00	0.00
6,000.00	3.88	244.93	5,996.02	-51.73	-110.58	-42.73	0.00	0.00	0.00
6,100.00	3.88	244.93	6,095.79	-54.59	-116.70	-45.09	0.00	0.00	0.00
6,200.00	3.88	244.93	6,195.56	-57.46	-122.82	-47.46	0.00	0.00	0.00
6,300.00	3.88	244.93	6,295.33	-60.32	-128.95	-49.82	0.00	0.00	0.00
6,400.00	3.88	244.93	6,395.10	-63.19	-135.07	-52.19	0.00	0.00	0.00
6,500.00	3.88	244.93	6,494.87	-66.05	-141.19	-54.55	0.00	0.00	0.00
6,600.00	3.88	244.93	6,594.65	-68.91	-147.31	-56.92	0.00	0.00	0.00
6,700.00	3.88	244.93	6,694.42	-71.78	-153.43	-59.28	0.00	0.00	0.00
6,800.00	3.88	244.93	6,794.19	-74.64	-159.56	-61.65	0.00	0.00	0.00
6,900.00	3.88	244.93	6,893.96	-77.51	-165.68	-64.02	0.00	0.00	0.00
7,000.00	3.88	244.93	6,993.73	-80.37	-171.80	-66.38	0.00	0.00	0.00
7,100.00	3.88	244.93	7,093.50	-83.23	-177.92	-68.75	0.00	0.00	0.00
7,200.00	3.88	244.93	7,193.27	-86.10	-184.04	-71.11	0.00	0.00	0.00
7,300.00	3.88	244.93	7,293.05	-88.96	-190.16	-73.48	0.00	0.00	0.00
7,400.00	3.88	244.93	7,392.82	-91.83	-196.29	-75.84	0.00	0.00	0.00
7,500.00	3.88	244.93	7,492.59	-94.69	-202.41	-78.21	0.00	0.00	0.00
7,600.00	3.88	244.93	7,592.36	-97.55	-208.53	-80.57	0.00	0.00	0.00
7,700.00	3.88	244.93	7,692.13	-100.42	-214.65	-82.94	0.00	0.00	0.00
7,800.00	3.88	244.93	7,791.90	-103.28	-220.77	-85.30	0.00	0.00	0.00
7,900.00	3.88	244.93	7,891.67	-106.14	-226.90	-87.67	0.00	0.00	0.00
8,000.00	3.88	244.93	7,991.44	-109.01	-233.02	-90.04	0.00	0.00	0.00
8,100.00	3.88	244.93	8,091.22	-111.87	-239.14	-92.40	0.00	0.00	0.00
8,200.00	3.88	244.93	8,190.99	-114.74	-245.26	-94.77	0.00	0.00	0.00
8,300.00	3.88	244.93	8,290.76	-117.60	-251.38	-97.13	0.00	0.00	0.00
8,400.00	3.88	244.93	8,390.53	-120.46	-257.51	-99.50	0.00	0.00	0.00
8,500.00	3.88	244.93	8,490.30	-123.33	-263.63	-101.86	0.00	0.00	0.00
8,600.00	3.88	244.93	8,590.07	-126.19	-269.75	-104.23	0.00	0.00	0.00
8,700.00	3.88	244.93	8,689.84	-129.06	-275.87	-106.59	0.00	0.00	0.00
8,800.00	3.88	244.93	8,789.62	-131.92	-281.99	-108.96	0.00	0.00	0.00
8,900.00	3.88	244.93	8,889.39	-134.78	-288.11	-111.32	0.00	0.00	0.00
9,000.00	3.88	244.93	8,989.16	-137.65	-294.24	-113.69	0.00	0.00	0.00
9,100.00	3.88	244.93	9,088.93	-140.51	-300.36	-116.06	0.00	0.00	0.00
9,200.00	3.88	244.93	9,188.70	-143.38	-306.48	-118.42	0.00	0.00	0.00
9,300.00	3.88	244.93	9,288.47	-146.24	-312.60	-120.79	0.00	0.00	0.00
9,400.00	3.88	244.93	9,388.24	-149.10	-318.72	-123.15	0.00	0.00	0.00
9,500.00	3.88	244.93	9,488.01	-151.97	-324.85	-125.52	0.00	0.00	0.00
9,600.00	3.88	244.93	9,587.79	-154.83	-330.97	-127.88	0.00	0.00	0.00
9,700.00	3.88	244.93	9,687.56	-157.70	-337.09	-130.25	0.00	0.00	0.00
9,800.00	3.88	244.93	9,787.33	-160.56	-343.21	-132.61	0.00	0.00	0.00
9,900.00	3.88	244.93	9,887.10	-163.42	-349.33	-134.98	0.00	0.00	0.00
10,000.00	3.88	244.93	9,986.87	-166.29	-355.46	-137.34	0.00	0.00	0.00
10,100.00	3.88	244.93	10,086.64	-169.15	-361.58	-139.71	0.00	0.00	0.00
10,200.00	3.88	244.93	10,186.41	-172.01	-367.70	-142.08	0.00	0.00	0.00
10,300.00	3.88	244.93	10,286.19	-174.88	-373.82	-144.44	0.00	0.00	0.00
10,400.00	3.88	244.93	10,385.96	-177.74	-379.94	-146.81	0.00	0.00	0.00
10,500.00	3.88	244.93	10,485.73	-180.61	-386.06	-149.17	0.00	0.00	0.00
10,600.00	3.88	244.93	10,585.50	-183.47	-392.19	-151.54	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 Fed Com
 Well: #709H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well #709H
 KB = 25' @ 3337.00usft
 KB = 25' @ 3337.00usft
 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)
10,700.00	3.88	244.93	10,685.27	-186.33	-398.31	-153.90	0.00	0.00	0.00
10,800.00	3.88	244.93	10,785.04	-189.20	-404.43	-156.27	0.00	0.00	0.00
10,900.00	3.88	244.93	10,884.81	-192.06	-410.55	-158.63	0.00	0.00	0.00
11,000.00	3.88	244.93	10,984.58	-194.93	-416.67	-161.00	0.00	0.00	0.00
11,100.00	3.88	244.93	11,084.36	-197.79	-422.80	-163.36	0.00	0.00	0.00
11,200.00	3.88	244.93	11,184.13	-200.65	-428.92	-165.73	0.00	0.00	0.00
11,300.00	3.88	244.93	11,283.90	-203.52	-435.04	-168.09	0.00	0.00	0.00
11,400.00	3.88	244.93	11,383.67	-206.38	-441.16	-170.46	0.00	0.00	0.00
11,500.00	3.88	244.93	11,483.44	-209.25	-447.28	-172.83	0.00	0.00	0.00
11,600.00	3.88	244.93	11,583.21	-212.11	-453.41	-175.19	0.00	0.00	0.00
11,700.00	3.88	244.93	11,682.98	-214.97	-459.53	-177.56	0.00	0.00	0.00
11,800.00	3.88	244.93	11,782.76	-217.84	-465.65	-179.92	0.00	0.00	0.00
11,900.00	3.88	244.93	11,882.53	-220.70	-471.77	-182.29	0.00	0.00	0.00
12,000.00	3.88	244.93	11,982.30	-223.56	-477.89	-184.65	0.00	0.00	0.00
12,100.00	3.88	244.93	12,082.07	-226.43	-484.02	-187.02	0.00	0.00	0.00
12,200.00	3.88	244.93	12,181.84	-229.29	-490.14	-189.38	0.00	0.00	0.00
12,300.00	3.88	244.93	12,281.61	-232.16	-496.26	-191.75	0.00	0.00	0.00
12,313.47	3.88	244.93	12,295.05	-232.54	-497.08	-192.07	0.00	0.00	0.00
12,325.00	3.53	265.82	12,306.56	-232.73	-497.79	-192.20	12.00	-2.97	181.15
12,350.00	4.48	307.73	12,331.50	-232.19	-499.33	-191.54	12.00	3.81	167.64
12,375.00	6.76	328.19	12,356.38	-230.34	-500.88	-189.57	12.00	9.11	81.85
12,400.00	9.45	337.77	12,381.13	-227.19	-502.43	-186.31	12.00	10.75	38.33
12,425.00	12.28	343.06	12,405.68	-222.75	-503.99	-181.75	12.00	11.33	21.15
12,450.00	15.18	346.37	12,429.96	-217.02	-505.53	-175.92	12.00	11.59	13.25
12,475.00	18.11	348.63	12,453.91	-210.03	-507.07	-168.83	12.00	11.72	9.07
12,500.00	21.06	350.29	12,477.47	-201.79	-508.59	-160.50	12.00	11.80	6.61
12,525.00	24.02	351.55	12,500.55	-192.33	-510.10	-150.94	12.00	11.84	5.04
12,550.00	26.99	352.55	12,523.12	-181.67	-511.58	-140.20	12.00	11.88	3.99
12,575.00	29.96	353.36	12,545.09	-169.84	-513.04	-128.29	12.00	11.90	3.25
12,600.00	32.94	354.04	12,566.41	-156.88	-514.47	-115.25	12.00	11.92	2.72
12,625.00	35.92	354.62	12,587.03	-142.81	-515.87	-101.12	12.00	11.93	2.31
12,650.00	38.91	355.12	12,606.89	-127.68	-517.22	-85.94	12.00	11.94	2.00
12,675.00	41.89	355.56	12,625.92	-111.54	-518.54	-69.73	12.00	11.95	1.76
12,700.00	44.88	355.95	12,644.09	-94.41	-519.81	-52.56	12.00	11.95	1.57
12,725.00	47.87	356.30	12,661.33	-76.36	-521.03	-34.47	12.00	11.96	1.41
12,750.00	50.86	356.62	12,677.61	-57.42	-522.20	-15.50	12.00	11.96	1.28
12,775.00	53.85	356.91	12,692.88	-37.66	-523.32	4.29	12.00	11.96	1.18
12,800.00	56.84	357.19	12,707.09	-17.13	-524.37	24.84	12.00	11.97	1.09
12,825.00	59.84	357.44	12,720.21	4.13	-525.37	46.11	12.00	11.97	1.02
12,850.00	62.83	357.68	12,732.20	26.04	-526.30	68.02	12.00	11.97	0.96
12,875.00	65.82	357.91	12,743.03	48.55	-527.17	90.53	12.00	11.97	0.91
12,888.00	67.38	358.02	12,748.19	60.47	-527.59	102.45	12.00	11.97	0.88
FTP (Nautilus 16 Fed Com #709H)									
12,900.00	68.82	358.13	12,752.67	71.60	-527.97	113.57	12.00	11.97	0.86
12,925.00	71.81	358.33	12,761.09	95.13	-528.69	137.08	12.00	11.97	0.83
12,950.00	74.80	358.53	12,768.27	119.06	-529.35	160.99	12.00	11.98	0.80
12,975.00	77.80	358.73	12,774.19	143.34	-529.93	185.24	12.00	11.98	0.78
13,000.00	80.79	358.92	12,778.84	167.90	-530.43	209.76	12.00	11.98	0.76
13,025.00	83.79	359.11	12,782.19	192.67	-530.85	234.48	12.00	11.98	0.75
13,050.00	86.78	359.30	12,784.25	217.58	-531.20	259.34	12.00	11.98	0.74
13,075.00	89.77	359.48	12,785.00	242.56	-531.47	284.26	12.00	11.98	0.74
13,077.72	90.10	359.50	12,785.00	245.28	-531.49	286.98	12.00	11.98	0.74
13,100.00	90.10	359.50	12,784.96	267.56	-531.69	309.20	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 Fed Com
 Well: #709H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
 TVD Reference: KB = 25' @ 3337.00usft
 MD Reference: KB = 25' @ 3337.00usft
 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)
13,200.00	90.10	359.50	12,784.79	367.56	-532.56	408.95	0.00	0.00	0.00
13,300.00	90.10	359.50	12,784.61	467.55	-533.43	508.69	0.00	0.00	0.00
13,400.00	90.10	359.50	12,784.44	567.55	-534.30	608.44	0.00	0.00	0.00
13,500.00	90.10	359.50	12,784.27	667.54	-535.18	708.18	0.00	0.00	0.00
13,600.00	90.10	359.50	12,784.09	767.54	-536.05	807.93	0.00	0.00	0.00
13,700.00	90.10	359.50	12,783.92	867.54	-536.92	907.68	0.00	0.00	0.00
13,800.00	90.10	359.50	12,783.74	967.53	-537.79	1,007.42	0.00	0.00	0.00
13,900.00	90.10	359.50	12,783.57	1,067.53	-538.67	1,107.17	0.00	0.00	0.00
14,000.00	90.10	359.50	12,783.39	1,167.52	-539.54	1,206.91	0.00	0.00	0.00
14,100.00	90.10	359.50	12,783.22	1,267.52	-540.41	1,306.66	0.00	0.00	0.00
14,200.00	90.10	359.50	12,783.04	1,367.52	-541.29	1,406.41	0.00	0.00	0.00
14,300.00	90.10	359.50	12,782.87	1,467.51	-542.16	1,506.15	0.00	0.00	0.00
14,400.00	90.10	359.50	12,782.69	1,567.51	-543.03	1,605.90	0.00	0.00	0.00
14,500.00	90.10	359.50	12,782.52	1,667.51	-543.90	1,705.64	0.00	0.00	0.00
14,600.00	90.10	359.50	12,782.35	1,767.50	-544.78	1,805.39	0.00	0.00	0.00
14,700.00	90.10	359.50	12,782.17	1,867.50	-545.65	1,905.13	0.00	0.00	0.00
14,800.00	90.10	359.50	12,782.00	1,967.49	-546.52	2,004.88	0.00	0.00	0.00
14,900.00	90.10	359.50	12,781.82	2,067.49	-547.39	2,104.63	0.00	0.00	0.00
15,000.00	90.10	359.50	12,781.65	2,167.49	-548.27	2,204.37	0.00	0.00	0.00
15,100.00	90.10	359.50	12,781.47	2,267.48	-549.14	2,304.12	0.00	0.00	0.00
15,200.00	90.10	359.50	12,781.30	2,367.48	-550.01	2,403.86	0.00	0.00	0.00
15,300.00	90.10	359.50	12,781.12	2,467.47	-550.88	2,503.61	0.00	0.00	0.00
15,400.00	90.10	359.50	12,780.95	2,567.47	-551.76	2,603.36	0.00	0.00	0.00
15,500.00	90.10	359.50	12,780.77	2,667.47	-552.63	2,703.10	0.00	0.00	0.00
15,600.00	90.10	359.50	12,780.60	2,767.46	-553.50	2,802.85	0.00	0.00	0.00
15,700.00	90.10	359.50	12,780.43	2,867.46	-554.38	2,902.59	0.00	0.00	0.00
15,800.00	90.10	359.50	12,780.25	2,967.45	-555.25	3,002.34	0.00	0.00	0.00
15,900.00	90.10	359.50	12,780.08	3,067.45	-556.12	3,102.09	0.00	0.00	0.00
16,000.00	90.10	359.50	12,779.90	3,167.45	-556.99	3,201.83	0.00	0.00	0.00
16,100.00	90.10	359.50	12,779.73	3,267.44	-557.87	3,301.58	0.00	0.00	0.00
16,200.00	90.10	359.50	12,779.55	3,367.44	-558.74	3,401.32	0.00	0.00	0.00
16,300.00	90.10	359.50	12,779.38	3,467.43	-559.61	3,501.07	0.00	0.00	0.00
16,400.00	90.10	359.50	12,779.20	3,567.43	-560.48	3,600.81	0.00	0.00	0.00
16,500.00	90.10	359.50	12,779.03	3,667.43	-561.36	3,700.56	0.00	0.00	0.00
16,600.00	90.10	359.50	12,778.85	3,767.42	-562.23	3,800.31	0.00	0.00	0.00
16,700.00	90.10	359.50	12,778.68	3,867.42	-563.10	3,900.05	0.00	0.00	0.00
16,800.00	90.10	359.50	12,778.51	3,967.41	-563.97	3,999.80	0.00	0.00	0.00
16,900.00	90.10	359.50	12,778.33	4,067.41	-564.85	4,099.54	0.00	0.00	0.00
17,000.00	90.10	359.50	12,778.16	4,167.41	-565.72	4,199.29	0.00	0.00	0.00
17,100.00	90.10	359.50	12,777.98	4,267.40	-566.59	4,299.04	0.00	0.00	0.00
17,200.00	90.10	359.50	12,777.81	4,367.40	-567.47	4,398.78	0.00	0.00	0.00
17,300.00	90.10	359.50	12,777.63	4,467.39	-568.34	4,498.53	0.00	0.00	0.00
17,400.00	90.10	359.50	12,777.46	4,567.39	-569.21	4,598.27	0.00	0.00	0.00
17,500.00	90.10	359.50	12,777.28	4,667.39	-570.08	4,698.02	0.00	0.00	0.00
17,600.00	90.10	359.50	12,777.11	4,767.38	-570.96	4,797.77	0.00	0.00	0.00
17,700.00	90.10	359.50	12,776.93	4,867.38	-571.83	4,897.51	0.00	0.00	0.00
17,800.00	90.10	359.50	12,776.76	4,967.37	-572.70	4,997.26	0.00	0.00	0.00
17,900.00	90.10	359.50	12,776.59	5,067.37	-573.57	5,097.00	0.00	0.00	0.00
18,000.00	90.10	359.50	12,776.41	5,167.37	-574.45	5,196.75	0.00	0.00	0.00
18,100.00	90.10	359.50	12,776.24	5,267.36	-575.32	5,296.49	0.00	0.00	0.00
18,200.00	90.10	359.50	12,776.06	5,367.36	-576.19	5,396.24	0.00	0.00	0.00
18,300.00	90.10	359.50	12,775.89	5,467.35	-577.06	5,495.99	0.00	0.00	0.00
18,400.00	90.10	359.50	12,775.71	5,567.35	-577.94	5,595.73	0.00	0.00	0.00
18,500.00	90.10	359.50	12,775.54	5,667.35	-578.81	5,695.48	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Nautilus 16 Fed Com
 Well: #709H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #709H
 TVD Reference: KB = 25' @ 3337.00usft
 MD Reference: KB = 25' @ 3337.00usft
 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)
18,600.00	90.10	359.50	12,775.36	5,767.34	-579.68	5,795.22	0.00	0.00	0.00
18,700.00	90.10	359.50	12,775.19	5,867.34	-580.55	5,894.97	0.00	0.00	0.00
18,800.00	90.10	359.50	12,775.01	5,967.34	-581.43	5,994.72	0.00	0.00	0.00
18,900.00	90.10	359.50	12,774.84	6,067.33	-582.30	6,094.46	0.00	0.00	0.00
19,000.00	90.10	359.50	12,774.67	6,167.33	-583.17	6,194.21	0.00	0.00	0.00
19,100.00	90.10	359.50	12,774.49	6,267.32	-584.05	6,293.95	0.00	0.00	0.00
19,200.00	90.10	359.50	12,774.32	6,367.32	-584.92	6,393.70	0.00	0.00	0.00
19,300.00	90.10	359.50	12,774.14	6,467.32	-585.79	6,493.44	0.00	0.00	0.00
19,400.00	90.10	359.50	12,773.97	6,567.31	-586.66	6,593.19	0.00	0.00	0.00
19,500.00	90.10	359.50	12,773.79	6,667.31	-587.54	6,692.94	0.00	0.00	0.00
19,600.00	90.10	359.50	12,773.62	6,767.30	-588.41	6,792.68	0.00	0.00	0.00
19,700.00	90.10	359.50	12,773.44	6,867.30	-589.28	6,892.43	0.00	0.00	0.00
19,800.00	90.10	359.50	12,773.27	6,967.30	-590.15	6,992.17	0.00	0.00	0.00
19,900.00	90.10	359.50	12,773.09	7,067.29	-591.03	7,091.92	0.00	0.00	0.00
20,000.00	90.10	359.50	12,772.92	7,167.29	-591.90	7,191.67	0.00	0.00	0.00
20,100.00	90.10	359.50	12,772.75	7,267.28	-592.77	7,291.41	0.00	0.00	0.00
20,200.00	90.10	359.50	12,772.57	7,367.28	-593.64	7,391.16	0.00	0.00	0.00
20,240.72	90.10	359.50	12,772.50	7,408.00	-594.00	7,431.78	0.00	0.00	0.00

PBHL (Nautilus 16 Fed Com #709H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (Nautilus 16 Fed C - hit/miss target - Shape - Point	0.00	0.00	12,772.50	7,408.00	-594.00	385,663.00	808,477.00	32.05733425	-103.47103713
FTP (Nautilus 16 Fed C - plan hits target center - Point	0.00	0.00	12,785.00	45.00	-530.00	378,300.00	808,541.00	32.03709438	-103.47102037