



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ares 4 State

#702H

OH

Plan: Plan #0.2

Standard Planning Report

26 April, 2018

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ares 4 State
Well: #702H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #702H
TVD Reference: KB = 25' @ 3610.0usft
MD Reference: KB = 25' @ 3610.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project: Lea County, NM (NAD 83 NME)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

Site: Ares 4 State

Site Position: Northing: 451,993.00 usft Latitude: 32° 14' 25.072 N
From: Map Easting: 777,413.00 usft Longitude: 103° 34' 11.215 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.41 °

Well: #702H

Well Position: +N/-S 663.0 usft Northing: 452,656.00 usft Latitude: 32° 14' 31.688 N
+E/-W -792.0 usft Easting: 776,621.00 usft Longitude: 103° 34' 20.381 W
Position Uncertainty: 0.0 usft Wellhead Elevation: Ground Level: 3,585.0 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/19/2017	6.96	60.08	47,955.87085626

Design: Plan #0.2

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	3.71

Plan Survey Tool Program Date: 4/26/2018

Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	17,370.2 Plan #0.2 (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	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,735.9	7.36	163.18	4,733.9	-45.2	13.7	1.00	1.00	0.00	163.18	
12,041.4	7.36	163.18	11,979.2	-940.8	284.5	0.00	0.00	0.00	0.00	
12,850.2	90.00	359.53	12,515.0	-466.8	300.1	12.00	10.22	-20.23	-163.52	
17,370.2	90.00	359.53	12,515.0	4,053.0	263.0	0.00	0.00	0.00	0.00	PBHL (Ares 4 State #

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Local Co-ordinate Reference: Well #702H
 TVD Reference: KB = 25' @ 3610.0usft
 MD Reference: KB = 25' @ 3610.0usft
 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	163.18	4,100.0	-0.8	0.3	-0.8	1.00	1.00	0.00
4,200.0	2.00	163.18	4,200.0	-3.3	1.0	-3.3	1.00	1.00	0.00
4,300.0	3.00	163.18	4,299.9	-7.5	2.3	-7.4	1.00	1.00	0.00
4,400.0	4.00	163.18	4,399.7	-13.4	4.0	-13.1	1.00	1.00	0.00
4,500.0	5.00	163.18	4,499.4	-20.9	6.3	-20.4	1.00	1.00	0.00
4,600.0	6.00	163.18	4,598.9	-30.0	9.1	-29.4	1.00	1.00	0.00
4,700.0	7.00	163.18	4,698.3	-40.9	12.4	-40.0	1.00	1.00	0.00
4,735.9	7.36	163.18	4,733.9	-45.2	13.7	-44.2	1.00	1.00	0.00
4,800.0	7.36	163.18	4,797.5	-53.0	16.0	-51.9	0.00	0.00	0.00
4,900.0	7.36	163.18	4,896.6	-65.3	19.7	-63.9	0.00	0.00	0.00
5,000.0	7.36	163.18	4,995.8	-77.6	23.4	-75.9	0.00	0.00	0.00
5,100.0	7.36	163.18	5,095.0	-89.8	27.2	-87.9	0.00	0.00	0.00
5,200.0	7.36	163.18	5,194.2	-102.1	30.9	-99.9	0.00	0.00	0.00

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Well #702H
KB = 25' @ 3610.0usft
KB = 25' @ 3610.0usft
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	7.36	163.18	5,293.3	-114.3	34.6	-111.9	0.00	0.00	0.00
5,400.0	7.36	163.18	5,392.5	-126.6	38.3	-123.8	0.00	0.00	0.00
5,500.0	7.36	163.18	5,491.7	-138.9	42.0	-135.8	0.00	0.00	0.00
5,600.0	7.36	163.18	5,590.9	-151.1	45.7	-147.8	0.00	0.00	0.00
5,700.0	7.36	163.18	5,690.0	-163.4	49.4	-159.8	0.00	0.00	0.00
5,800.0	7.36	163.18	5,789.2	-175.6	53.1	-171.8	0.00	0.00	0.00
5,900.0	7.36	163.18	5,888.4	-187.9	56.8	-183.8	0.00	0.00	0.00
6,000.0	7.36	163.18	5,987.6	-200.2	60.5	-195.8	0.00	0.00	0.00
6,100.0	7.36	163.18	6,086.7	-212.4	64.2	-207.8	0.00	0.00	0.00
6,200.0	7.36	163.18	6,185.9	-224.7	67.9	-219.8	0.00	0.00	0.00
6,300.0	7.36	163.18	6,285.1	-236.9	71.6	-231.8	0.00	0.00	0.00
6,400.0	7.36	163.18	6,384.3	-249.2	75.3	-243.8	0.00	0.00	0.00
6,500.0	7.36	163.18	6,483.4	-261.5	79.1	-255.8	0.00	0.00	0.00
6,600.0	7.36	163.18	6,582.6	-273.7	82.8	-267.8	0.00	0.00	0.00
6,700.0	7.36	163.18	6,681.8	-286.0	86.5	-279.8	0.00	0.00	0.00
6,800.0	7.36	163.18	6,781.0	-298.2	90.2	-291.8	0.00	0.00	0.00
6,900.0	7.36	163.18	6,880.2	-310.5	93.9	-303.8	0.00	0.00	0.00
7,000.0	7.36	163.18	6,979.3	-322.8	97.6	-315.8	0.00	0.00	0.00
7,100.0	7.36	163.18	7,078.5	-335.0	101.3	-327.8	0.00	0.00	0.00
7,200.0	7.36	163.18	7,177.7	-347.3	105.0	-339.7	0.00	0.00	0.00
7,300.0	7.36	163.18	7,276.9	-359.5	108.7	-351.7	0.00	0.00	0.00
7,400.0	7.36	163.18	7,376.0	-371.8	112.4	-363.7	0.00	0.00	0.00
7,500.0	7.36	163.18	7,475.2	-384.1	116.1	-375.7	0.00	0.00	0.00
7,600.0	7.36	163.18	7,574.4	-396.3	119.8	-387.7	0.00	0.00	0.00
7,700.0	7.36	163.18	7,673.6	-408.6	123.5	-399.7	0.00	0.00	0.00
7,800.0	7.36	163.18	7,772.7	-420.8	127.2	-411.7	0.00	0.00	0.00
7,900.0	7.36	163.18	7,871.9	-433.1	131.0	-423.7	0.00	0.00	0.00
8,000.0	7.36	163.18	7,971.1	-445.4	134.7	-435.7	0.00	0.00	0.00
8,100.0	7.36	163.18	8,070.3	-457.6	138.4	-447.7	0.00	0.00	0.00
8,200.0	7.36	163.18	8,169.4	-469.9	142.1	-459.7	0.00	0.00	0.00
8,300.0	7.36	163.18	8,268.6	-482.1	145.8	-471.7	0.00	0.00	0.00
8,400.0	7.36	163.18	8,367.8	-494.4	149.5	-483.7	0.00	0.00	0.00
8,500.0	7.36	163.18	8,467.0	-506.7	153.2	-495.7	0.00	0.00	0.00
8,600.0	7.36	163.18	8,566.2	-518.9	156.9	-507.7	0.00	0.00	0.00
8,700.0	7.36	163.18	8,665.3	-531.2	160.6	-519.7	0.00	0.00	0.00
8,800.0	7.36	163.18	8,764.5	-543.4	164.3	-531.7	0.00	0.00	0.00
8,900.0	7.36	163.18	8,863.7	-555.7	168.0	-543.7	0.00	0.00	0.00
9,000.0	7.36	163.18	8,962.9	-568.0	171.7	-555.6	0.00	0.00	0.00
9,100.0	7.36	163.18	9,062.0	-580.2	175.4	-567.6	0.00	0.00	0.00
9,200.0	7.36	163.18	9,161.2	-592.5	179.1	-579.6	0.00	0.00	0.00
9,300.0	7.36	163.18	9,260.4	-604.7	182.9	-591.6	0.00	0.00	0.00
9,400.0	7.36	163.18	9,359.6	-617.0	186.6	-603.6	0.00	0.00	0.00
9,500.0	7.36	163.18	9,458.7	-629.3	190.3	-615.6	0.00	0.00	0.00
9,600.0	7.36	163.18	9,557.9	-641.5	194.0	-627.6	0.00	0.00	0.00
9,700.0	7.36	163.18	9,657.1	-653.8	197.7	-639.6	0.00	0.00	0.00
9,800.0	7.36	163.18	9,756.3	-666.0	201.4	-651.6	0.00	0.00	0.00
9,900.0	7.36	163.18	9,855.4	-678.3	205.1	-663.6	0.00	0.00	0.00
10,000.0	7.36	163.18	9,954.6	-690.6	208.8	-675.6	0.00	0.00	0.00
10,100.0	7.36	163.18	10,053.8	-702.8	212.5	-687.6	0.00	0.00	0.00
10,200.0	7.36	163.18	10,153.0	-715.1	216.2	-699.6	0.00	0.00	0.00
10,300.0	7.36	163.18	10,252.1	-727.3	219.9	-711.6	0.00	0.00	0.00
10,400.0	7.36	163.18	10,351.3	-739.6	223.6	-723.6	0.00	0.00	0.00
10,500.0	7.36	163.18	10,450.5	-751.9	227.3	-735.6	0.00	0.00	0.00
10,600.0	7.36	163.18	10,549.7	-764.1	231.0	-747.6	0.00	0.00	0.00

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Minimum Curvature

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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)
10,700.0	7.36	163.18	10,648.9	-776.4	234.8	-759.5	0.00	0.00	0.00
10,800.0	7.36	163.18	10,748.0	-788.6	238.5	-771.5	0.00	0.00	0.00
10,900.0	7.36	163.18	10,847.2	-800.9	242.2	-783.5	0.00	0.00	0.00
11,000.0	7.36	163.18	10,946.4	-813.2	245.9	-795.5	0.00	0.00	0.00
11,100.0	7.36	163.18	11,045.6	-825.4	249.6	-807.5	0.00	0.00	0.00
11,200.0	7.36	163.18	11,144.7	-837.7	253.3	-819.5	0.00	0.00	0.00
11,300.0	7.36	163.18	11,243.9	-849.9	257.0	-831.5	0.00	0.00	0.00
11,400.0	7.36	163.18	11,343.1	-862.2	260.7	-843.5	0.00	0.00	0.00
11,500.0	7.36	163.18	11,442.3	-874.5	264.4	-855.5	0.00	0.00	0.00
11,600.0	7.36	163.18	11,541.4	-886.7	268.1	-867.5	0.00	0.00	0.00
11,700.0	7.36	163.18	11,640.6	-899.0	271.8	-879.5	0.00	0.00	0.00
11,800.0	7.36	163.18	11,739.8	-911.2	275.5	-891.5	0.00	0.00	0.00
11,900.0	7.36	163.18	11,839.0	-923.5	279.2	-903.5	0.00	0.00	0.00
12,000.0	7.36	163.18	11,938.1	-935.8	282.9	-915.5	0.00	0.00	0.00
12,041.4	7.36	163.18	11,979.2	-940.8	284.5	-920.4	0.00	0.00	0.00
12,050.0	6.38	160.54	11,987.7	-941.8	284.8	-921.4	12.00	-11.43	-30.67
12,075.0	3.67	145.04	12,012.6	-943.8	285.7	-923.3	12.00	-10.81	-62.00
12,100.0	2.08	90.30	12,037.6	-944.4	286.6	-923.9	12.00	-6.37	-218.98
12,125.0	3.63	34.52	12,062.6	-943.8	287.5	-923.2	12.00	6.18	-223.11
12,150.0	6.32	18.69	12,087.5	-941.8	288.4	-921.2	12.00	10.78	-63.33
12,175.0	9.21	12.49	12,112.3	-938.6	289.3	-917.9	12.00	11.54	-24.78
12,200.0	12.15	9.25	12,136.8	-934.0	290.2	-913.3	12.00	11.76	-12.95
12,225.0	15.11	7.27	12,161.1	-928.2	291.0	-907.4	12.00	11.85	-7.95
12,250.0	18.09	5.92	12,185.1	-921.1	291.8	-900.3	12.00	11.90	-5.38
12,275.0	21.07	4.95	12,208.6	-912.8	292.6	-891.9	12.00	11.93	-3.90
12,300.0	24.06	4.20	12,231.7	-903.2	293.4	-882.3	12.00	11.95	-2.97
12,325.0	27.05	3.61	12,254.3	-892.4	294.1	-871.5	12.00	11.96	-2.35
12,350.0	30.04	3.14	12,276.2	-880.5	294.8	-859.6	12.00	11.97	-1.91
12,375.0	33.03	2.74	12,297.5	-867.5	295.5	-846.5	12.00	11.97	-1.60
12,400.0	36.02	2.40	12,318.1	-853.3	296.1	-832.3	12.00	11.98	-1.36
12,425.0	39.02	2.10	12,338.0	-838.1	296.7	-817.1	12.00	11.98	-1.18
12,450.0	42.01	1.84	12,357.0	-821.9	297.2	-800.9	12.00	11.98	-1.03
12,475.0	45.01	1.61	12,375.1	-804.7	297.8	-783.7	12.00	11.98	-0.92
12,500.0	48.01	1.41	12,392.3	-786.5	298.2	-765.6	12.00	11.98	-0.83
12,525.0	51.00	1.22	12,408.5	-767.5	298.7	-746.6	12.00	11.99	-0.75
12,550.0	54.00	1.04	12,423.7	-747.7	299.1	-726.8	12.00	11.99	-0.69
12,575.0	57.00	0.88	12,437.9	-727.1	299.4	-706.2	12.00	11.99	-0.64
12,600.0	59.99	0.73	12,451.0	-705.8	299.7	-684.9	12.00	11.99	-0.60
12,625.0	62.99	0.59	12,462.9	-683.8	300.0	-663.0	12.00	11.99	-0.56
12,650.0	65.99	0.46	12,473.7	-661.3	300.2	-640.4	12.00	11.99	-0.54
12,662.4	67.48	0.39	12,478.6	-649.9	300.3	-629.1	12.00	11.99	-0.52
FTP (Ares 4 State #702H)									
12,675.0	68.99	0.33	12,483.2	-638.2	300.3	-617.4	12.00	11.99	-0.51
12,700.0	71.98	0.21	12,491.6	-614.6	300.4	-593.9	12.00	11.99	-0.49
12,725.0	74.98	0.09	12,498.7	-590.6	300.5	-570.0	12.00	11.99	-0.47
12,750.0	77.98	359.97	12,504.5	-566.3	300.5	-545.7	12.00	11.99	-0.46
12,775.0	80.98	359.86	12,509.1	-541.8	300.5	-521.2	12.00	11.99	-0.45
12,800.0	83.98	359.75	12,512.4	-517.0	300.4	-496.4	12.00	11.99	-0.44
12,825.0	86.97	359.64	12,514.3	-492.1	300.3	-471.6	12.00	11.99	-0.44
12,850.2	90.00	359.53	12,515.0	-466.8	300.1	-446.4	12.00	11.99	-0.44
12,900.0	90.00	359.53	12,515.0	-417.1	299.7	-396.8	0.00	0.00	0.00
13,000.0	90.00	359.53	12,515.0	-317.1	298.8	-297.1	0.00	0.00	0.00
13,100.0	90.00	359.53	12,515.0	-217.1	298.0	-197.3	0.00	0.00	0.00

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ares 4 State
Well: #702H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #702H
TVD Reference: KB = 25' @ 3610.0usft
MD Reference: KB = 25' @ 3610.0usft
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)
13,200.0	90.00	359.53	12,515.0	-117.1	297.2	-97.6	0.00	0.00	0.00
13,300.0	90.00	359.53	12,515.0	-17.1	296.4	2.1	0.00	0.00	0.00
13,400.0	90.00	359.53	12,515.0	82.9	295.6	101.9	0.00	0.00	0.00
13,500.0	90.00	359.53	12,515.0	182.9	294.7	201.6	0.00	0.00	0.00
13,600.0	90.00	359.53	12,515.0	282.9	293.9	301.3	0.00	0.00	0.00
13,700.0	90.00	359.53	12,515.0	382.9	293.1	401.1	0.00	0.00	0.00
13,800.0	90.00	359.53	12,515.0	482.9	292.3	500.8	0.00	0.00	0.00
13,900.0	90.00	359.53	12,515.0	582.9	291.5	600.5	0.00	0.00	0.00
14,000.0	90.00	359.53	12,515.0	682.9	290.6	700.3	0.00	0.00	0.00
14,100.0	90.00	359.53	12,515.0	782.9	289.8	800.0	0.00	0.00	0.00
14,200.0	90.00	359.53	12,515.0	882.9	289.0	899.7	0.00	0.00	0.00
14,300.0	90.00	359.53	12,515.0	982.9	288.2	999.5	0.00	0.00	0.00
14,400.0	90.00	359.53	12,515.0	1,082.9	287.4	1,099.2	0.00	0.00	0.00
14,500.0	90.00	359.53	12,515.0	1,182.9	286.5	1,198.9	0.00	0.00	0.00
14,600.0	90.00	359.53	12,515.0	1,282.9	285.7	1,298.7	0.00	0.00	0.00
14,700.0	90.00	359.53	12,515.0	1,382.9	284.9	1,398.4	0.00	0.00	0.00
14,800.0	90.00	359.53	12,515.0	1,482.9	284.1	1,498.1	0.00	0.00	0.00
14,900.0	90.00	359.53	12,515.0	1,582.9	283.3	1,597.9	0.00	0.00	0.00
15,000.0	90.00	359.53	12,515.0	1,682.8	282.4	1,697.6	0.00	0.00	0.00
15,100.0	90.00	359.53	12,515.0	1,782.8	281.6	1,797.3	0.00	0.00	0.00
15,200.0	90.00	359.53	12,515.0	1,882.8	280.8	1,897.1	0.00	0.00	0.00
15,300.0	90.00	359.53	12,515.0	1,982.8	280.0	1,996.8	0.00	0.00	0.00
15,400.0	90.00	359.53	12,515.0	2,082.8	279.2	2,096.5	0.00	0.00	0.00
15,500.0	90.00	359.53	12,515.0	2,182.8	278.3	2,196.3	0.00	0.00	0.00
15,600.0	90.00	359.53	12,515.0	2,282.8	277.5	2,296.0	0.00	0.00	0.00
15,700.0	90.00	359.53	12,515.0	2,382.8	276.7	2,395.7	0.00	0.00	0.00
15,800.0	90.00	359.53	12,515.0	2,482.8	275.9	2,495.5	0.00	0.00	0.00
15,900.0	90.00	359.53	12,515.0	2,582.8	275.1	2,595.2	0.00	0.00	0.00
16,000.0	90.00	359.53	12,515.0	2,682.8	274.2	2,694.9	0.00	0.00	0.00
16,100.0	90.00	359.53	12,515.0	2,782.8	273.4	2,794.7	0.00	0.00	0.00
16,200.0	90.00	359.53	12,515.0	2,882.8	272.6	2,894.4	0.00	0.00	0.00
16,300.0	90.00	359.53	12,515.0	2,982.8	271.8	2,994.1	0.00	0.00	0.00
16,400.0	90.00	359.53	12,515.0	3,082.8	271.0	3,093.9	0.00	0.00	0.00
16,500.0	90.00	359.53	12,515.0	3,182.8	270.1	3,193.6	0.00	0.00	0.00
16,600.0	90.00	359.53	12,515.0	3,282.8	269.3	3,293.3	0.00	0.00	0.00
16,700.0	90.00	359.53	12,515.0	3,382.8	268.5	3,393.1	0.00	0.00	0.00
16,800.0	90.00	359.53	12,515.0	3,482.8	267.7	3,492.8	0.00	0.00	0.00
16,900.0	90.00	359.53	12,515.0	3,582.8	266.9	3,592.5	0.00	0.00	0.00
17,000.0	90.00	359.53	12,515.0	3,682.8	266.0	3,692.3	0.00	0.00	0.00
17,100.0	90.00	359.53	12,515.0	3,782.8	265.2	3,792.0	0.00	0.00	0.00
17,200.0	90.00	359.53	12,515.0	3,882.8	264.4	3,891.7	0.00	0.00	0.00
17,300.0	90.00	359.53	12,515.0	3,982.8	263.6	3,991.5	0.00	0.00	0.00
17,370.2	90.00	359.53	12,515.0	4,053.0	263.0	4,061.5	0.00	0.00	0.00

PBHL (Ares 4 State #702H)

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ares 4 State
Well: #702H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #702H
TVD Reference: KB = 25' @ 3610.0usft
MD Reference: KB = 25' @ 3610.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PBHL (Ares 4 State #702H) - plan hits target center - Point	0.00	0.01	12,515.0	4,053.0	263.0	456,709.00	776,884.00	32° 15' 11.774 N	103° 34' 16.984 W
FTP (Ares 4 State #702H) - plan misses target center by 39.5usft at 12662.4usft MD (12478.6 TVD, -649.9 N, 300.3 E) - Point	0.00	0.00	12,515.0	-665.0	302.0	451,991.00	776,923.00	32° 14' 25.086 N	103° 34' 16.920 W



Lea County, NM (NAD 83 NME)

Ares 4 State #702H

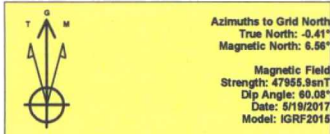
Plan #0.2

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

WELL DETAILS: #702H

Ground Level: 3585.0
KB = 28' @ 3810.0usft
Northing 8588.86.00 Easting 776621.00 Latitude 32° 14' 31.688 N Longitude 103° 34' 20.381 W



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.58°

Magnetic Field
Strength: 47955.9nT
Dip Angle: 60.08°
Date: 6/19/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.58°
To convert a Magnetic Direction to a True Direction, Add 6.96° East
To convert a True Direction to a Grid Direction, Subtract 6.41°

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0		
3	4735.9	7.36	163.18	4735.9	-46.2	15.7	1.00	163.18	-44.2		
4	12041.4	7.36	163.18	11979.2	-840.8	284.5	0.00	0.00	-920.4		
5	12850.2	90.00	359.53	12815.0	-466.8	300.1	12.00	-163.52	-446.4		
6	17370.2	90.00	359.53	12815.0	4053.0	263.0	0.00	0.00	4051.6		PBHL (Ares 4 State #702H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
PBHL (Ares 4 State #702H)	12515.0	4053.0	263.0	456709.00	776884.00
FTP (Ares 4 State #702H)	12515.0	-466.8	302.0	451991.00	776923.00

