

30-025-44368

HOBBS OCD

JUL 11 2018

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#714H

OH

Design: OH

PVA Report

05 April, 2018

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #714H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft
Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3342.0usft
Well:	#714H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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	#714H				
Well Position	+N/-S 0.0 usft	Northing:	383,084.00 usft	Latitude:	32° 3' 0.858 N
	+E/-W 0.0 usft	Easting:	808,798.00 usft	Longitude:	103° 28' 12.244 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,317.0 usft

Wellbore	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/10/2018	6.83	59.91	47,787.96691852

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	181.91	

PVA Report

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Well:	#714H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date	4/5/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
193.0	759.0	Trueshot MWD (OH)	MWD	OWSG MWD - Standard	
872.0	17,599.0	Phoenix MWD (OH)	MWD	OWSG MWD - Standard	

MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg ("100usft)	Build ("100usft)	Turn ("100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
193.0	1.00	266.60	193.0	-0.1	-1.7	0.52	0.52	0.00	-1.7	0.0
285.0	0.70	270.80	285.0	-0.1	-3.0	0.33	-0.33	4.57	-3.0	0.2
380.0	0.70	278.20	380.0	0.0	-4.2	0.10	0.00	7.79	-4.1	0.6
474.0	1.20	280.00	474.0	0.2	-5.7	0.53	0.53	1.91	-5.7	0.8
569.0	0.60	231.30	568.9	0.1	-7.1	0.97	-0.63	-51.26	-5.5	-4.5
663.0	0.60	221.80	662.9	-0.6	-7.8	0.11	0.00	-10.11	-5.7	-5.4
759.0	0.70	284.80	758.9	-0.8	-8.7	0.71	0.10	65.62	-8.2	3.0
872.0	0.75	250.70	871.9	-0.9	-10.1	0.38	0.04	-30.18	-9.8	-2.5
1,058.0	0.44	43.11	1,057.9	-0.8	-10.7	0.62	-0.17	81.94	7.9	7.3
1,243.0	0.72	49.23	1,242.9	0.5	-9.4	0.15	0.15	3.31	6.8	6.5
1,433.0	0.26	46.43	1,432.9	1.6	-8.2	0.24	-0.24	-1.47	4.8	6.8
1,623.0	0.15	67.22	1,622.9	2.0	-7.6	0.07	-0.06	10.94	6.3	4.8
1,813.0	0.15	70.65	1,812.9	2.1	-7.2	0.00	0.00	1.81	6.0	4.4
2,003.0	0.08	137.36	2,002.9	2.1	-6.8	0.07	-0.04	35.11	6.2	-3.6
2,193.0	0.20	134.82	2,192.9	1.8	-6.5	0.06	0.06	-1.34	5.9	-3.3
2,383.0	0.39	110.91	2,382.9	1.3	-5.7	0.12	0.10	-12.58	5.8	-0.8
2,573.0	0.35	91.52	2,572.9	1.1	-4.5	0.07	-0.02	-10.21	4.5	1.0
2,763.0	0.27	63.35	2,762.9	1.3	-3.5	0.09	-0.04	-14.83	2.6	2.7
2,954.0	0.44	39.40	2,953.9	2.0	-2.6	0.12	0.09	-12.54	0.1	3.3
3,144.0	0.62	52.85	3,143.9	3.2	-1.4	0.11	0.09	7.08	-0.9	3.4

PVA Report

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Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft
Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3342.0usft
Well:	#714H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Bulid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
3,334.0	1.15	63.62	3,333.9	4.7	1.2	0.29	0.28	5.67	-3.1	3.7	
3,524.0	1.29	49.82	3,523.8	6.9	4.5	0.17	0.07	-7.26	-7.9	2.4	
3,714.0	1.46	46.52	3,713.8	10.0	7.9	0.10	0.09	-1.74	-12.6	1.8	
3,904.0	1.21	44.76	3,903.7	13.1	11.1	0.13	-0.13	-0.93	-17.1	1.3	
4,094.0	1.15	47.53	4,093.7	15.8	13.9	0.04	-0.03	1.46	-20.9	2.2	
4,284.0	1.20	44.63	4,283.6	18.5	16.7	0.04	0.03	-1.53	-24.9	1.1	
4,474.0	1.34	43.57	4,473.6	21.5	19.6	0.07	0.07	-0.56	-29.1	0.6	
4,665.0	1.01	87.31	4,664.5	23.2	22.8	0.49	-0.17	22.90	-23.9	22.1	
4,854.0	1.01	96.27	4,853.5	23.1	26.2	0.08	0.00	4.74	-23.5	25.8	
5,045.0	1.42	108.80	5,044.5	22.1	30.1	0.25	0.21	6.56	-21.3	30.7	
5,194.0	1.18	109.72	5,193.4	21.0	33.3	0.16	-0.16	0.62	-24.2	31.0	
5,327.0	0.98	108.84	5,326.4	20.2	35.6	0.15	-0.15	-0.66	-25.0	28.7	
5,518.0	3.10	58.52	5,517.3	22.4	41.6	1.35	1.11	-26.35	-29.5	0.4	
5,708.0	5.00	69.15	5,706.8	28.0	53.7	1.07	1.00	5.59	-17.9	6.2	
5,898.0	6.96	68.98	5,895.8	35.1	72.2	1.03	1.03	-0.09	-13.0	5.8	
6,088.0	6.93	68.89	6,084.4	43.3	93.6	0.02	-0.02	-0.05	-11.3	5.4	
6,278.0	6.96	66.91	6,273.0	52.0	114.9	0.13	0.02	-1.04	-9.7	5.1	
6,468.0	6.75	65.64	6,461.6	61.1	135.7	0.14	-0.11	-0.67	-7.8	5.6	
6,658.0	7.61	69.02	6,650.1	70.2	157.6	0.50	0.45	1.78	-6.5	6.3	
6,848.0	7.64	67.26	6,838.5	79.6	181.0	0.12	0.02	-0.93	-7.2	6.1	
7,039.0	7.52	65.77	7,027.8	89.6	204.1	0.12	-0.06	-0.78	-7.7	6.6	
7,229.0	7.06	63.09	7,216.2	100.0	225.8	0.30	-0.24	-1.41	-7.5	7.8	
7,419.0	8.29	69.37	7,404.5	110.1	249.1	0.78	0.65	3.31	-7.2	9.2	
7,609.0	7.47	71.70	7,592.8	118.8	273.6	0.46	-0.43	1.23	-8.3	8.5	
7,799.0	5.48	73.68	7,781.5	125.3	294.1	1.05	-1.05	1.04	-4.9	6.8	
7,989.0	3.79	84.49	7,970.9	128.4	309.0	1.00	-0.89	5.69	-2.9	4.6	
8,179.0	3.09	88.32	8,160.6	129.2	320.4	0.39	-0.37	2.02	-10.0	3.8	

PVA Report

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Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3342.0usft
Well:	#714H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	EW (usft)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)	
8,369.0	2.59	91.35	8,350.3	129.2	329.8	0.27	-0.26	1.59	-19.2		4.6
8,559.0	2.12	92.97	8,540.2	128.9	337.6	0.25	-0.25	0.85	-26.9		5.2
8,749.0	1.21	148.75	8,730.1	127.0	342.2	0.92	-0.48	29.36	-14.8		28.1
8,939.0	1.56	164.66	8,920.0	122.8	343.9	0.27	0.18	8.37	-11.0		31.6
9,129.0	2.11	213.44	9,110.0	117.4	342.6	0.84	0.29	25.67	11.3		31.0
9,319.0	2.22	219.11	9,299.8	111.6	338.4	0.13	0.06	2.98	7.1		30.1
9,510.0	1.45	278.62	9,490.7	109.1	333.7	1.02	-0.40	31.16	25.3		12.3
9,700.0	1.37	279.33	9,680.7	109.9	329.0	0.04	-0.04	0.37	20.8		12.0
9,890.0	1.41	288.03	9,870.6	111.0	324.6	0.11	0.02	4.58	17.8		9.1
10,080.0	1.58	265.17	10,060.6	111.5	319.7	0.32	0.09	-12.03	8.1		14.4
10,270.0	1.69	299.37	10,250.5	112.6	314.7	0.51	0.06	18.00	9.8		8.8
10,460.0	2.19	359.27	10,440.4	117.6	312.2	1.04	0.26	31.53	7.5		-1.6
10,650.0	1.26	21.51	10,630.3	123.2	312.9	0.59	-0.49	11.71	0.9		-3.0
10,840.0	1.79	348.59	10,820.2	128.0	313.1	0.53	0.28	-17.33	-2.4		-3.1
11,030.0	1.53	13.95	11,010.2	133.4	313.1	0.41	-0.14	13.35	-8.7		-0.5
11,220.0	1.83	32.63	11,200.1	138.4	315.4	0.33	0.16	9.83	-13.9		3.1
11,411.0	1.40	72.80	11,391.0	141.7	319.3	0.62	-0.23	21.03	-13.3		13.3
11,601.0	0.64	25.99	11,581.0	143.3	321.9	0.56	-0.40	-24.64	-21.4		-2.3
11,791.0	0.83	266.01	11,771.0	144.2	321.0	0.67	0.10	-63.15	11.8		-18.3
11,886.0	0.82	206.72	11,866.0	143.5	320.0	0.86	-0.01	-62.41	20.8		0.2
12,083.0	1.89	188.70	12,062.9	139.1	318.9	0.58	0.54	-9.15	15.1		6.2
12,178.0	2.00	197.23	12,157.9	135.9	318.2	0.33	0.12	8.98	12.6		4.1
12,273.0	1.49	226.89	12,252.8	133.5	316.8	1.07	-0.54	31.22	10.3		-1.8
12,320.0	2.85	197.53	12,299.8	132.0	316.0	3.65	2.89	-62.47	8.2		3.2
12,347.5	7.04	191.79	12,327.1	129.7	315.4	15.35	15.26	-20.89	5.5		3.9
KOP (Nautilus 16 Fed Com #714H)											
12,368.0	10.19	190.59	12,347.4	126.6	314.8	15.35	15.33	-5.86	2.8		3.9

PVA Report

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Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3342.0usft
Well:	#714H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
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12,415.0	15.32	192.22	12,393.3	116.5	312.8	10.94	10.91	3.47	-3.3	3.0	
12,463.0	18.18	190.37	12,439.2	102.9	310.1	6.06	5.96	-3.85	-8.4	0.9	
12,510.0	24.37	186.55	12,483.0	86.1	307.6	13.49	13.17	-8.13	-12.2	-1.8	
12,558.0	30.46	185.89	12,525.6	64.1	305.3	12.70	12.69	-1.37	-16.3	-4.2	
12,605.0	37.31	185.67	12,564.6	38.0	302.6	14.58	14.57	-0.47	-20.8	-6.8	
12,653.0	44.96	182.50	12,600.7	6.6	300.5	16.51	15.94	-6.60	-26.1	-10.1	
12,701.0	49.57	179.95	12,633.3	-28.7	299.7	10.37	9.60	-5.31	-31.5	-12.0	
12,748.0	52.48	179.43	12,662.8	-65.2	299.9	6.25	6.19	-1.11	-35.1	-12.3	
12,796.0	57.20	178.99	12,690.5	-104.4	300.5	9.86	9.83	-0.92	-36.9	-12.2	
12,843.0	63.24	177.40	12,713.8	-145.2	301.8	13.18	12.85	-3.38	-38.0	-11.7	
12,890.0	62.97	176.52	12,735.1	-187.0	304.0	1.77	-0.57	-1.87	-36.5	-10.0	
12,893.9	63.13	176.43	12,736.8	-190.5	304.2	4.68	4.24	-2.22	-36.1	-9.8	
FTP (Nautilus 16 Fed Com #714H)											
12,938.0	65.01	175.47	12,756.1	-230.1	307.0	4.68	4.25	-2.18	-30.6	-7.3	
12,985.0	71.11	173.54	12,773.7	-273.4	311.2	13.53	12.98	-4.11	-23.3	-3.2	
13,033.0	74.95	178.94	12,787.7	-319.2	314.2	13.41	8.00	11.25	-15.1	-0.2	
13,080.0	77.26	177.05	12,799.0	-364.8	315.8	6.28	4.91	-4.02	-5.1	1.0	
13,128.0	80.00	176.09	12,808.4	-411.8	318.6	6.04	5.71	-2.00	4.0	3.5	
13,171.0	85.52	176.83	12,813.9	-454.3	321.2	12.95	12.84	1.72	9.2	5.7	
13,266.0	91.15	181.67	12,816.6	-549.2	322.5	7.81	5.93	5.09	11.4	6.1	
13,361.0	88.43	181.97	12,817.0	-644.2	319.5	2.88	-2.86	0.32	11.1	2.2	
13,456.0	88.27	182.94	12,819.7	-739.0	315.4	1.03	-0.17	1.02	13.2	-2.7	
13,551.0	91.08	182.28	12,820.2	-833.9	311.1	3.04	2.96	-0.69	13.2	-7.8	
13,646.0	91.32	179.34	12,818.2	-928.9	309.7	3.10	0.25	-3.09	10.6	-10.0	
13,697.5	90.66	178.72	12,817.4	-980.3	310.6	1.76	-1.28	-1.20	9.4	-9.6	
TGT 1 (Nautilus 16 Fed Com #714H)											
13,741.0	90.10	178.20	12,817.1	-1,023.9	311.8	1.76	-1.28	-1.20	8.9	-8.8	

PVA Report

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Site: Nautilus 16 State Com		MD Reference: KB = 25 @ 3342.0usft	
Well: #714H		North Reference: Grid	
Wellbore: OH		Survey Calculation Method: Minimum Curvature	
Design: OH		Database: EDM 5000.14	

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
13,836.0	88.42	177.44	12,818.3	-1,118.8	315.4	1.94	-1.77	-0.80	9.7	-6.0	
13,931.0	89.68	179.07	12,819.9	-1,213.7	318.3	2.17	1.33	1.72	10.9	-3.9	
14,026.0	96.05	180.92	12,815.1	-1,308.5	318.3	6.98	6.71	1.95	5.8	-4.7	
14,121.0	95.60	180.79	12,805.5	-1,403.0	316.9	0.49	-0.47	-0.14	-4.2	-7.0	
14,216.0	94.03	181.23	12,797.5	-1,497.7	315.2	1.72	-1.65	0.46	-12.5	-9.5	
14,311.0	91.53	178.85	12,792.9	-1,592.6	315.1	3.63	-2.63	-2.51	-17.5	-10.3	
14,406.0	91.92	178.94	12,790.0	-1,687.5	317.0	0.42	0.41	0.09	-20.8	-9.3	
14,501.0	90.19	178.24	12,788.3	-1,782.4	319.3	1.96	-1.82	-0.74	-22.9	-7.8	
14,596.0	89.07	178.15	12,788.9	-1,877.4	322.3	1.18	-1.18	-0.09	-22.7	-5.6	
14,691.0	89.82	177.84	12,789.8	-1,972.3	325.6	0.85	0.79	-0.33	-22.1	-3.1	
14,701.3	89.60	177.78	12,789.9	-1,982.6	326.0	2.24	-2.16	-0.59	-22.1	-2.8	
TGT 2 (Nautilus 16 Fed Com #714H)											
14,787.0	87.75	177.27	12,791.9	-2,068.2	329.7	2.24	-2.16	-0.59	-20.0	0.1	
14,882.0	87.00	178.81	12,796.2	-2,163.1	333.0	1.80	-0.79	1.62	-15.5	2.5	
14,977.0	89.67	178.72	12,799.0	-2,258.0	335.0	2.81	2.81	-0.09	-12.5	3.8	
15,072.0	88.03	178.77	12,800.9	-2,352.9	337.1	1.73	-1.73	0.05	-10.4	5.0	
15,167.0	89.05	179.82	12,803.3	-2,447.9	338.3	1.54	1.07	1.11	-7.8	5.4	
15,262.0	92.56	179.78	12,802.0	-2,542.9	338.6	3.69	3.69	-0.04	-8.9	4.9	
15,357.0	93.33	181.80	12,797.1	-2,637.7	337.3	2.27	0.81	2.13	-13.6	2.7	
15,452.0	93.90	181.05	12,791.1	-2,732.5	334.9	0.99	0.60	-0.79	-19.4	-0.4	
15,547.0	92.21	180.52	12,786.0	-2,827.4	333.6	1.86	-1.78	-0.56	-24.3	-2.6	
15,642.0	91.13	179.56	12,783.3	-2,922.3	333.6	1.52	-1.14	-1.01	-26.9	-3.5	
15,703.6	90.02	179.74	12,782.6	-2,983.9	333.9	1.83	-1.81	0.29	-27.4	-3.6	
TGT 3 (Nautilus 16 Fed Com #714H)											
15,737.0	89.41	179.84	12,782.8	-3,017.3	334.1	1.83	-1.81	0.29	-27.1	-3.8	
15,832.0	88.43	178.37	12,784.6	-3,112.3	335.5	1.86	-1.03	-1.55	-25.1	-3.1	
15,927.0	89.96	178.99	12,785.9	-3,207.3	337.7	1.74	1.61	0.65	-23.6	-1.8	

PVA Report

Company:	EOG Resources - Midland				Local Co-ordinate Reference:				Well #714H		
Project:	Lea County, NM (NAD 83 NME)				TVD Reference:				KB = 25 @ 3342.0usft		
Site:	Nautilus 16 State Com				MD Reference:				KB = 25 @ 3342.0usft		
Well:	#714H				North Reference:				Grid		
Wellbore:	OH				Survey Calculation Method:				Minimum Curvature		
Design:	OH				Database:				EDM 5000.14		
Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
16,022.0	89.98	178.54	12,786.0	-3,302.2	339.8	0.47	0.02	-0.47	-23.4		-0.5
16,118.0	89.92	178.72	12,786.1	-3,398.2	342.1	0.20	-0.06	0.19	-23.1		0.9
16,213.0	89.05	178.33	12,786.9	-3,493.2	344.5	1.00	-0.92	-0.41	-22.0		2.5
16,308.0	88.92	177.18	12,788.6	-3,588.1	348.2	1.22	-0.14	-1.21	-20.2		5.4
16,403.0	88.92	176.79	12,790.4	-3,682.9	353.2	0.41	0.00	-0.41	-18.2		9.6
16,498.0	90.23	178.24	12,791.1	-3,777.8	357.4	2.06	1.38	1.53	-17.3		12.9
16,593.0	90.22	177.54	12,790.7	-3,872.8	360.8	0.74	-0.01	-0.74	-17.5		15.6
16,688.0	89.02	177.36	12,791.4	-3,967.7	365.1	1.28	-1.26	-0.19	-16.7		19.0
16,706.0	88.85	177.53	12,791.7	-3,985.7	365.9	1.35	-0.94	0.97	-16.3		19.6
TGT 4 (Nautilus 16 Fed Com #714H)											
16,783.0	88.13	178.28	12,793.7	-4,062.6	368.7	1.35	-0.94	0.97	-13.9		21.8
16,878.0	88.24	179.03	12,796.7	-4,157.5	370.9	0.80	0.12	0.79	-10.5		23.2
16,963.0	88.26	180.04	12,799.3	-4,242.4	371.6	1.19	0.02	1.19	-7.5		23.1
17,058.0	91.21	182.02	12,799.8	-4,337.4	369.9	3.74	3.11	2.08	-6.7		20.6
17,153.0	90.04	181.84	12,798.7	-4,432.4	366.7	1.25	-1.23	-0.19	-7.3		16.6
17,249.0	89.86	180.52	12,798.8	-4,528.3	364.7	1.39	-0.19	-1.37	-6.8		13.8
17,344.0	89.29	178.85	12,799.5	-4,623.3	365.2	1.86	-0.60	-1.76	-5.6		13.5
17,439.0	90.11	178.85	12,800.0	-4,718.3	367.2	0.86	0.86	0.00	-4.7		14.5
17,534.0	90.06	177.36	12,799.9	-4,813.2	370.3	1.57	-0.05	-1.57	-4.4		16.9
17,544.0	90.04	177.23	12,799.9	-4,823.2	370.8	1.32	-0.20	-1.30	-4.4		17.2
17,597.9	90.04	177.23	12,799.8	-4,877.1	373.4	0.00	0.00	0.00	-4.2		19.4
PBHL (Nautilus 16 Fed Com #714H)											
17,599.0	90.04	177.23	12,799.8	-4,878.2	373.4	0.00	0.00	0.00	-4.2		19.4

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #714H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3342.0usft
Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3342.0usft
Well:	#714H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,857.4	12,720.3	-158.0	302.4	HL Crossing, MD:12857.4', TVD:12720.3', N/S:-158.0', E/W:302.4', INC:63.16
17,500.1	12,799.9	-4,779.4	368.9	HL Crossing, MD:17500.1', TVD:12799.9', N/S:-4779.4', E/W:368.9', INC:90.08
17,544.0	12,799.9	-4,823.2	370.8	Final MWD Survey (MD=17544.0')
17,599.0	12,799.8	-4,878.2	373.4	Final Projection to Bit (MD=17599.0')

Checked By: _____	Approved By: _____	Date: _____
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Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#714H

Plan #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



Azimuth to Grid North
True North: 0.45°
Magnetic North: 0.57°
Magnetic Field
Strength: 47.8 Gauss
Dip Angle: 66.5°
Date: 04/28/16
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.37°
To convert a Magnetic Direction to a True Direction, Add 6.33° East
To convert a True Direction to a Grid Direction, Subtract 0.45°

WELL DETAILS: #714H

3317.0
KB = 25 @ 3343.0usft
Northing 383084.00 Easting 808798.00 32° 3' 0.858 N 103° 28' 12.244 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
5200.0	0.00	0.00	5200.0	0.0	0.0	0.00	0.00	0.0
5573.5	7.47	68.06	5572.5	9.1	22.6	2.00	68.06	-7.4
7774.3	7.47	68.06	7754.5	116.0	287.9	0.00	0.00	-94.9
8147.8	0.00	0.00	8127.0	125.1	310.5	2.00	180.00	-102.3
12348.3	0.00	0.00	12327.5	125.1	310.5	0.00	0.00	-102.3
13095.2	89.63	179.50	12805.0	-349.3	314.6	12.00	179.50	371.1
13726.0	89.63	179.50	12809.0	-980.0	320.1	0.00	0.00	1000.6
13732.9	89.77	179.50	12809.0	-987.0	320.2	2.00	1.07	1007.5
14728.0	89.77	179.50	12813.0	-1982.0	328.8	0.00	0.00	2000.6
14745.3	90.12	179.50	12813.0	-1999.3	329.0	2.00	0.00	2017.8
15730.1	90.12	179.50	12811.0	-2984.0	337.6	0.00	0.00	3000.6
16732.1	90.11	179.50	12809.0	-3986.0	346.3	0.00	180.00	4000.6
16739.4	90.26	179.50	12809.0	-3993.3	346.3	2.00	0.00	4007.9
17624.1	90.26	179.50	12805.0	-4878.0	354.0	0.00	0.00	4890.8

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KCP (Nautilus 16 Fed Com #714H)	12377.5	125.1	310.5	383084.00	808798.00
FTP (Nautilus 16 Fed Com #714H)	12805.0	-187.0	313.0	382927.00	808111.00
PBH (Nautilus 16 Fed Com #714H)	12805.0	-4878.0	354.0	378206.00	808182.00
TOT 1 (Nautilus 16 Fed Com #714H)	12809.0	-980.0	320.1	382104.00	808115.10
TOT 4 (Nautilus 16 Fed Com #714H)	12809.0	-3986.0	346.3	379098.00	808144.25
TOT 3 (Nautilus 16 Fed Com #714H)	12811.0	-2984.0	337.6	380100.00	808135.65
TOT 2 (Nautilus 16 Fed Com #714H)	12813.0	-1982.0	328.8	381102.00	808126.55

