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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Nautilus 16 State Com

#713H

OH

Design: OH

Midland PVA

10 May, 2018





Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #713H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3349.0usft (H&P 473)
Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3349.0usft (H&P 473)
Well:	#713H	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	#713H					
Well Position	+N-S	0.0 usft	Northing:	383,077.00 usft	Latitude:	32° 3' 0.849 N
	+E-W	0.0 usft	Easting:	808,032.00 usft	Longitude:	103° 28' 21.144 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,324.0 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/10/2018	6.83	59.91	47,787.66367718

Design:	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVP) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.0	0.0	0.0	179.18	



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Survey Program		Date	5/10/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	5,190.0	Phoenix Gyro (OH)	NSG-CT_WL	Continuous north-seeking gyro on wireline	
5,360.0	17,539.0	Intrepid MWD (OH)	MWD	OWSG MWD - Standard	

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Bulld (°/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
100.0	0.57	199.85	100.0	-0.5	-0.2	0.57	0.57	0.00	0.0	0.0
200.0	0.85	188.30	200.0	-1.7	-0.4	0.31	0.28	-11.55	0.0	0.0
300.0	0.87	196.92	300.0	-3.1	-0.8	0.13	0.02	8.62	0.0	0.0
400.0	0.94	213.84	400.0	-4.5	-1.5	0.28	0.07	16.92	0.0	0.0
500.0	0.96	214.28	500.0	-5.9	-2.4	0.02	0.02	0.44	0.0	0.0
600.0	0.84	212.19	599.9	-7.2	-3.2	0.12	-0.12	-2.09	0.0	0.0
700.0	0.84	213.40	699.9	-8.5	-4.0	0.02	0.00	1.21	0.0	0.0
800.0	0.91	202.07	799.9	-9.8	-4.7	0.19	0.07	-11.33	0.0	0.0
900.0	0.98	194.47	899.9	-11.4	-5.2	0.14	0.07	-7.60	0.0	0.0
1,000.0	0.99	177.26	999.9	-13.1	-5.4	0.29	0.01	-17.21	0.0	0.0
1,100.0	2.27	67.41	1,099.9	-13.2	-3.6	2.77	1.28	-109.85	0.0	0.0
1,200.0	2.32	6.61	1,199.8	-10.4	-1.5	2.32	0.05	-60.80	0.0	0.0
1,300.0	1.31	346.71	1,299.7	-7.3	-1.5	1.18	-1.01	-19.90	0.0	0.0
1,400.0	0.14	100.55	1,399.7	-6.2	-1.7	1.37	-1.17	113.84	0.0	0.0
1,500.0	0.19	307.44	1,499.7	-6.1	-1.7	0.32	0.05	-153.11	0.0	0.0
1,600.0	0.15	306.01	1,599.7	-5.9	-1.9	0.04	-0.04	-1.43	0.0	0.0
1,700.0	0.55	266.43	1,699.7	-5.9	-2.5	0.44	0.40	-39.58	0.0	0.0
1,800.0	0.82	251.89	1,799.7	-6.1	-3.7	0.32	0.27	-14.54	0.0	0.0
1,900.0	0.89	233.95	1,899.7	-6.8	-5.0	0.28	0.07	-17.94	0.0	0.0
2,000.0	0.65	223.98	1,999.7	-7.7	-6.0	0.27	-0.24	-9.97	0.0	0.0



Midland PVA



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Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3349.0usft (H&P 473)
Well:	#713H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
2,100.0	0.90	227.07	2,099.7	-8.6	-7.0	0.25	0.25	3.09	0.0	0.0	0.0
2,200.0	1.22	215.24	2,199.7	-10.0	-8.1	0.39	0.32	-11.83	0.0	0.0	0.0
2,300.0	1.52	210.07	2,299.7	-12.0	-9.4	0.32	0.30	-5.17	0.0	0.0	0.0
2,400.0	1.26	161.38	2,399.6	-14.2	-9.7	1.17	-0.26	-48.69	0.0	0.0	0.0
2,500.0	1.53	149.91	2,499.6	-16.4	-8.7	0.39	0.27	-11.47	0.0	0.0	0.0
2,600.0	1.83	140.68	2,599.6	-18.8	-7.0	0.40	0.30	-9.23	0.0	0.0	0.0
2,700.0	2.21	135.20	2,699.5	-21.4	-4.7	0.43	0.38	-5.48	0.0	0.0	0.0
2,800.0	2.48	129.29	2,799.4	-24.2	-1.6	0.36	0.27	-5.91	0.0	0.0	0.0
2,900.0	0.90	104.23	2,899.4	-25.7	0.8	1.71	-1.58	-25.06	0.0	0.0	0.0
3,000.0	0.84	87.38	2,999.4	-25.9	2.3	0.26	-0.06	-16.85	0.0	0.0	0.0
3,100.0	1.03	80.95	3,099.3	-25.7	3.9	0.22	0.19	-6.43	0.0	0.0	0.0
3,200.0	1.63	70.00	3,199.3	-25.1	6.1	0.65	0.60	-10.95	0.0	0.0	0.0
3,300.0	0.34	116.49	3,299.3	-24.7	7.7	1.42	-1.29	46.49	0.0	0.0	0.0
3,400.0	0.15	153.62	3,399.3	-25.0	8.1	0.24	-0.19	37.13	0.0	0.0	0.0
3,500.0	0.16	38.72	3,499.3	-25.0	8.2	0.26	0.01	-114.90	0.0	0.0	0.0
3,600.0	0.25	23.69	3,599.3	-24.7	8.4	0.10	0.09	-15.03	0.0	0.0	0.0
3,700.0	0.61	8.51	3,699.3	-23.9	8.6	0.37	0.36	-15.18	0.0	0.0	0.0
3,800.0	0.93	23.02	3,799.3	-22.7	9.0	0.37	0.32	14.51	0.0	0.0	0.0
3,900.0	1.21	23.12	3,899.3	-21.0	9.7	0.28	0.28	0.10	0.0	0.0	0.0
4,000.0	1.45	22.57	3,999.2	-18.8	10.6	0.24	0.24	-0.55	0.0	0.0	0.0
4,100.0	0.95	23.09	4,099.2	-16.9	11.4	0.50	-0.50	0.52	0.0	0.0	0.0
4,200.0	0.51	266.70	4,199.2	-16.1	11.3	1.26	-0.44	-116.39	0.0	0.0	0.0
4,300.0	0.63	280.47	4,299.2	-16.1	10.3	0.18	0.12	13.77	0.0	0.0	0.0
4,400.0	0.77	287.15	4,399.2	-15.8	9.1	0.16	0.14	6.68	0.0	0.0	0.0
4,500.0	0.92	300.62	4,499.2	-15.2	7.8	0.25	0.15	13.47	0.0	0.0	0.0
4,600.0	1.16	347.92	4,599.2	-13.8	6.9	0.86	0.24	47.30	0.0	0.0	0.0
4,700.0	0.96	8.78	4,699.2	-11.9	6.8	0.43	-0.20	20.86	0.0	0.0	0.0



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Well:	#713H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
4,800.0	0.31	310.29	4,799.1	-10.9	6.7	0.84	-0.65	-58.49	0.0	0.0	
4,900.0	0.08	95.46	4,899.1	-10.8	6.6	0.38	-0.23	-145.17	0.0	0.0	
5,000.0	0.88	109.39	4,999.1	-11.0	7.4	0.80	0.80	13.93	0.0	0.0	
5,100.0	1.71	123.46	5,099.1	-12.1	9.3	0.88	0.83	14.07	0.0	0.0	
5,190.0	0.45	121.62	5,189.1	-13.0	10.8	1.40	-1.40	-2.04	0.0	0.0	
5,360.0	1.10	152.70	5,359.1	-14.8	12.1	0.44	0.38	18.28	-1.1	-0.3	
5,546.0	1.20	154.30	5,545.0	-18.2	13.7	0.06	0.05	0.86	-3.6	-1.1	
5,733.0	1.40	144.30	5,732.0	-21.8	15.9	0.16	0.11	-5.35	-6.2	-2.6	
5,920.0	0.70	140.30	5,919.0	-24.5	18.0	0.38	-0.37	-2.14	-8.0	-3.6	
6,105.0	0.60	146.10	6,104.0	-26.2	19.2	0.06	-0.05	3.14	-9.1	-3.3	
6,292.0	0.60	151.30	6,290.9	-27.9	20.3	0.03	0.00	2.78	-10.1	-3.1	
6,479.0	0.80	62.10	6,477.9	-28.1	21.9	0.53	0.11	-47.70	2.5	-10.0	
6,667.0	3.30	41.30	6,665.8	-23.4	26.6	1.37	1.33	-11.06	5.9	-13.3	
6,854.0	6.40	27.50	6,852.1	-10.2	35.0	1.76	1.66	-7.38	9.2	-20.2	
7,041.0	6.50	26.30	7,037.9	8.6	44.5	0.09	0.05	-0.64	5.6	-27.6	
7,227.0	6.20	24.40	7,222.8	27.2	53.3	0.20	-0.16	-1.02	2.9	-34.5	
7,415.0	6.20	23.30	7,409.7	45.7	61.5	0.06	0.00	-0.59	0.6	-41.2	
7,602.0	4.70	23.70	7,595.8	62.0	68.6	0.80	-0.80	0.21	-0.2	-47.8	
7,789.0	3.30	6.70	7,782.4	74.4	72.3	0.97	-0.75	-9.09	19.4	-49.3	
7,978.0	3.30	355.60	7,971.1	85.2	72.5	0.34	0.00	-5.87	34.1	-43.7	
8,165.0	3.30	326.70	8,157.8	95.1	69.1	0.88	0.00	-15.45	45.0	-21.4	
8,352.0	2.40	329.70	8,344.5	103.0	64.2	0.49	-0.48	1.60	34.6	-23.4	
8,540.0	1.80	326.60	8,532.4	108.8	60.6	0.32	-0.32	-1.65	28.9	-21.7	
8,727.0	1.60	333.10	8,719.3	113.6	57.8	0.15	-0.11	3.48	20.7	-24.5	
8,915.0	1.00	312.00	8,907.3	117.0	55.4	0.40	-0.32	-11.22	24.1	-16.4	
9,103.0	0.90	302.30	9,095.3	118.9	52.9	0.10	-0.05	-5.16	23.4	-12.3	
9,290.0	0.90	289.10	9,282.2	120.2	50.3	0.11	0.00	-7.06	22.7	-7.0	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
9,477.0	0.70	283.00	9,469.2	120.9	47.8	0.12	-0.11	-3.26	20.7	-4.7
9,664.0	0.10	299.00	9,656.2	121.3	46.5	0.32	-0.32	8.56	17.3	-9.9
9,850.0	0.80	63.30	9,842.2	121.9	47.6	0.46	0.38	66.83	-19.2	-8.6
10,036.0	0.50	333.70	10,028.2	123.2	48.4	0.51	-0.16	-48.17	7.6	-20.5
10,224.0	0.70	302.50	10,216.2	124.6	47.0	0.20	0.11	-16.60	15.3	-14.0
10,410.0	2.50	351.10	10,402.1	129.2	45.4	1.13	0.97	26.13	-5.2	-19.9
10,598.0	1.90	4.90	10,590.0	136.4	45.1	0.42	-0.32	7.34	-16.9	-17.1
10,785.0	1.50	1.30	10,776.9	141.9	45.4	0.22	-0.21	-1.93	-21.3	-18.3
10,973.0	0.30	290.90	10,964.8	144.5	45.0	0.76	-0.64	-37.45	8.8	-28.6
11,159.0	1.20	250.20	11,150.8	144.0	42.7	0.53	0.48	-21.88	23.0	-16.2
11,346.0	0.40	289.20	11,337.8	143.6	40.2	0.49	-0.43	20.86	5.5	-25.8
11,533.0	3.30	41.00	11,524.7	147.9	43.2	1.85	1.55	59.79	-31.2	5.1
11,720.0	1.10	229.30	11,711.6	150.8	45.3	2.35	-1.18	-91.82	33.6	-10.3
11,907.0	2.20	216.60	11,898.6	146.7	41.8	0.62	0.59	-6.79	29.8	-3.1
12,070.0	1.90	239.30	12,061.4	142.8	37.6	0.53	-0.18	13.93	20.7	-13.1
12,207.0	1.90	251.90	12,198.4	141.0	33.5	0.30	0.00	9.20	12.8	-16.8
12,300.0	3.90	183.10	12,291.3	137.3	31.9	3.94	2.15	-73.98	16.6	4.4
12,347.0	14.80	175.20	12,337.6	129.7	32.3	23.30	23.19	-16.81	8.1	6.6
12,395.0	25.90	175.60	12,382.5	113.1	33.6	23.13	23.13	0.83	-5.6	6.8
12,441.0	33.10	180.60	12,422.5	90.5	34.3	16.53	15.65	10.87	-21.4	8.4
12,488.0	41.70	184.00	12,459.8	62.0	33.0	18.81	18.30	7.23	-39.6	9.8
12,535.0	46.30	182.10	12,493.6	29.4	31.3	10.18	9.79	-4.04	-59.4	7.0
12,582.0	53.00	178.80	12,524.1	-6.4	31.1	15.22	14.26	-7.02	-78.9	2.8
12,629.0	55.50	177.30	12,551.5	-44.5	32.4	5.92	5.32	-3.19	-97.0	1.4
12,676.0	55.80	176.20	12,578.0	-83.2	34.6	2.03	0.64	-2.34	-111.0	1.5
12,722.0	55.20	176.30	12,604.1	-121.1	37.1	1.32	-1.30	0.22	-119.1	4.1
12,769.0	53.80	176.20	12,631.4	-159.2	39.6	2.98	-2.98	-0.21	-120.5	6.7



Midland PVA



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Well:	#713H	North Reference:	Grid
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Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	Diag ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)	
12,770.5	53.75	176.18	12,632.3	-160.5	39.7	3.28	-3.05	-1.50	-120.5	6.8	
FTP Crossing 12770.5' MD; 12632.3' TVD; -160.5' 39.7' 53.75											
12,815.0	52.40	175.50	12,659.0	-195.9	42.2	3.28	-3.04	-1.52	-114.9	9.5	
12,862.0	51.80	175.50	12,687.9	-232.9	45.2	1.28	-1.28	0.00	-102.5	13.8	
12,909.0	55.10	175.90	12,715.9	-270.5	48.0	7.05	7.02	0.85	-85.6	18.0	
12,957.0	63.50	178.60	12,740.3	-311.7	49.9	18.15	17.50	5.63	-67.9	20.6	
13,004.0	74.20	178.20	12,757.3	-355.5	51.1	22.78	22.77	-0.85	-53.4	21.1	
13,051.0	76.80	178.20	12,769.0	-401.0	52.6	5.53	5.53	0.00	-41.7	21.9	
13,098.0	77.90	179.70	12,779.3	-446.8	53.4	3.90	2.34	3.19	-31.4	22.3	
13,145.0	82.90	180.60	12,787.2	-493.1	53.3	10.80	10.64	1.91	-23.7	21.5	
13,239.0	87.80	179.70	12,794.8	-586.8	53.0	5.30	5.21	-0.96	-16.2	20.3	
13,332.0	90.90	178.80	12,795.8	-679.8	54.3	3.47	3.33	-0.97	-15.1	20.7	
13,426.0	91.40	178.50	12,794.0	-773.7	56.5	0.62	0.53	-0.32	-17.0	22.1	
13,519.0	90.90	178.90	12,792.1	-866.7	58.6	0.69	-0.54	0.43	-18.9	23.4	
13,613.0	91.60	181.00	12,790.0	-960.6	58.7	2.35	0.74	2.23	-20.9	22.7	
13,706.0	90.50	181.30	12,788.3	-1,053.6	56.8	1.23	-1.18	0.32	-22.6	20.0	
13,800.0	89.20	182.00	12,788.6	-1,147.6	54.1	1.57	-1.38	0.74	-22.4	16.5	
13,895.0	88.30	182.10	12,790.7	-1,242.5	50.7	0.95	-0.95	0.11	-20.3	12.3	
13,988.0	90.60	181.30	12,791.5	-1,335.4	47.9	2.62	2.47	-0.86	-19.4	8.7	
14,081.0	90.90	180.70	12,790.3	-1,428.4	46.3	0.72	0.32	-0.65	-20.6	6.3	
14,175.0	91.10	180.40	12,788.7	-1,522.4	45.4	0.38	0.21	-0.32	-22.3	4.6	
14,268.0	91.50	179.30	12,786.6	-1,615.4	45.7	1.26	0.43	-1.18	-24.4	4.0	
14,362.0	90.00	181.10	12,785.3	-1,709.3	45.3	2.49	-1.60	1.91	-25.6	2.9	
14,455.0	89.10	179.90	12,786.1	-1,802.3	44.5	1.61	-0.97	-1.29	-24.9	1.3	
14,549.0	88.90	180.30	12,787.7	-1,896.3	44.4	0.48	-0.21	0.43	-23.3	0.3	
14,643.0	88.90	180.70	12,789.5	-1,990.3	43.5	0.43	0.00	0.43	-21.5	-1.4	
14,736.0	89.50	181.30	12,790.8	-2,083.3	41.9	0.91	0.65	0.65	-20.2	-3.8	



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #713H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3349.0usft (H&P 473)
Site:	Nautilus 16 State Com.	MD Reference:	KB = 25 @ 3349.0usft (H&P 473)
Well:	#713H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
14,829.0	90.40	181.50	12,790.9	-2,176.2	39.6	0.99	0.97	0.22	-20.1	-6.9	
14,921.0	91.70	181.20	12,789.2	-2,268.2	37.5	1.45	1.41	-0.33	-21.8	-9.8	
15,014.0	92.90	180.40	12,785.5	-2,361.1	36.2	1.55	1.29	-0.86	-25.5	-12.0	
15,109.0	92.30	179.10	12,781.2	-2,456.0	36.6	1.51	-0.63	-1.37	-29.8	-12.4	
15,202.0	92.30	179.90	12,777.4	-2,548.9	37.4	0.86	0.00	0.86	-33.5	-12.4	
15,296.0	91.60	179.40	12,774.2	-2,642.9	38.0	0.91	-0.74	-0.53	-38.7	-12.6	
15,388.0	90.10	180.70	12,772.9	-2,734.9	37.9	2.16	-1.63	1.41	-38.1	-13.5	
15,493.0	92.00	181.30	12,771.0	-2,839.8	36.1	1.90	1.81	0.57	-40.0	-16.2	
15,575.0	92.20	182.30	12,768.0	-2,921.7	33.5	1.24	0.24	1.22	-43.0	-19.5	
15,775.0	83.10	186.10	12,776.1	-3,120.8	18.9	4.93	-4.55	1.90	-35.1	-35.6	
15,888.0	88.10	179.40	12,784.8	-3,233.2	13.5	7.38	4.42	-5.93	-26.2	-42.2	
15,950.0	90.00	175.80	12,785.9	-3,295.1	16.1	6.56	3.06	-5.81	-25.2	-40.1	
15,981.0	90.50	175.20	12,785.7	-3,326.0	18.5	2.52	1.81	-1.94	-25.3	-37.9	
16,075.0	90.60	175.20	12,784.8	-3,419.7	26.4	0.11	0.11	0.00	-26.2	-30.9	
16,168.0	89.60	175.30	12,784.7	-3,512.4	34.1	1.08	-1.08	0.11	-26.4	-24.0	
16,261.0	90.20	175.20	12,784.8	-3,605.1	41.8	0.65	0.65	-0.11	-26.2	-17.1	
16,448.0	89.80	175.20	12,784.8	-3,791.4	57.5	0.21	-0.21	0.00	-26.2	-3.1	
16,635.0	92.30	179.90	12,781.4	-3,978.1	65.5	2.85	1.34	2.51	-29.6	3.3	
16,822.0	88.60	181.60	12,779.9	-4,165.1	63.0	2.18	-1.98	0.91	-31.1	-0.8	
16,916.0	90.20	181.50	12,780.9	-4,259.0	60.5	1.71	1.70	-0.11	-30.1	-4.1	
17,010.0	88.30	178.40	12,782.1	-4,353.0	60.5	3.87	-2.02	-3.30	-28.9	-4.9	
17,102.0	89.80	177.80	12,783.7	-4,444.9	63.6	1.76	1.63	-0.65	-27.3	-2.6	
17,197.0	89.00	179.30	12,784.7	-4,539.9	66.0	1.79	-0.84	1.58	-26.3	-1.0	
17,290.0	87.40	179.10	12,787.6	-4,632.9	67.3	1.73	-1.72	-0.22	-23.4	-0.6	
17,384.0	87.90	179.10	12,791.4	-4,726.8	68.8	0.53	0.53	0.00	-19.6	0.1	
17,437.6	87.90	179.10	12,793.4	-4,780.4	69.6	0.00	0.00	0.00	-17.6	0.5	

Last MWD Survey (MD = 17437.6)



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #713H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3349.0usft (H&P 473)
Site:	Nautilus 16 State Com	MD Reference:	KB = 25 @ 3349.0usft (H&P 473)
Well:	#713H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
17,437.7	87.90	179.10	12,793.4	-4,780.5	69.6	0.00	0.00	0.00	-17.6	0.5
LTP Crossing 17437.7' MD; 12793.4' TVD; -4780.5'; 69.6'; 87.90										
17,539.0	87.90	179.10	12,797.1	-4,881.6	71.2	0.00	0.00	0.00	-13.9	1.2
Projection to Bit (MD = 17539.0)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,770.5	12,632.3	-160.5	39.7	FTP Crossing 12770.5' MD; 12632.3' TVD; -160.5'; 39.7'; 53.75
17,437.6	12,793.4	-4,780.4	69.6	Last MWD Survey (MD = 17437.6)
17,437.7	12,793.4	-4,780.5	69.6	LTP Crossing 17437.7' MD; 12793.4' TVD; -4780.5'; 69.6'; 87.90
17,539.0	12,797.1	-4,881.6	71.2	Projection to Bit (MD = 17539.0)

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

Nautilus 16 State Com

#713H

H&P 473

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



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 0.45°

WELL DETAILS: #713H

3324.0
KB = 25 @ 3349.0usft (H&P 473)
Northing 383077.00 Easting 808032.00 Latitude 32° 3' 0.849 N Longitude 103° 28' 21.144 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	V Sect	Target
5190.0	0.45	121.62	5189.1	-13.0	10.8	0.00	0.00	13.2	
6441.0	0.45	121.62	6440.1	-18.2	19.1	0.00	0.00	18.5	
6735.6	5.66	2.65	6734.2	-4.3	20.8	2.00	-122.79	4.6	
7865.4	5.66	2.65	7858.4	107.0	25.9	0.00	0.00	-106.7	
8148.4	0.00	0.00	8141.0	121.0	26.6	2.00	180.00	-120.6	KOP (Nautilus 16 Fed Com #713H)
12340.9	0.00	0.00	12333.5	121.0	26.6	0.00	0.00	-120.6	
13090.9	90.00	179.50	12811.0	-356.5	30.7	12.00	179.50	356.9	
17615.6	90.00	179.50	12811.0	-4881.0	70.0	0.00	0.00	4881.5	PBHL(Nautilus 16 Fed Com #713H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KOP (Nautilus 16 Fed Com #713H)	8141.0	121.0	26.6	383197.99	808056.57
FTP (Nautilus 16 Fed Com #713H)	12811.0	-159.0	25.0	382918.00	808061.00
PBHL(Nautilus 16 Fed Com #713H)	12811.0	-4881.0	70.0	378196.00	808102.00

