

HOBBS OCD
MAR 21 2018
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Neptune 10 State Com

#703H

OH

Design: OH

PVA Report

09 November, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Well:	#703H	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	Neptune 10 State Com		
Site Position:		Northing:	446,557.00 usft
From:	Map	Easting:	778,964.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 31.172 N
		Longitude:	103° 33' 53.609 W
		Grid Convergence:	0.41 °

Well		#703H				
Well Position	+N/-S	0.0 usft	Northing:	446,558.00 usft	Latitude:	32° 13' 31.179 N
	+E/-W	0.0 usft	Easting:	778,999.00 usft	Longitude:	103° 33' 53.202 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,613.0 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/11/2017	6.94	60.06	47,931.52416145

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	359.30	

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Survey Program		Date	11/9/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
235.0	1,316.0	Olebrook MWD (OH)	MWD	MWD - Standard	
1,460.0	22,540.0	Intrepid MWD (OH)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
235.0	0.26	75.79	235.0	0.1	0.5	0.11	0.11	0.00	-0.5	0.0	0.0
423.0	0.79	40.28	423.0	1.2	1.8	0.32	0.28	-18.89	-2.1	-0.6	-0.6
612.0	0.79	293.50	612.0	2.7	1.4	0.67	0.00	-56.50	0.2	-3.1	-3.1
802.0	0.26	156.30	802.0	2.9	0.4	0.52	-0.28	-72.21	2.5	1.5	1.5
999.0	0.53	79.13	999.0	2.6	1.5	0.27	0.14	-39.17	-1.9	2.3	2.3
1,180.0	0.88	346.32	1,180.0	4.1	2.0	0.58	0.19	-51.28	-3.6	-2.9	-2.9
1,316.0	0.70	358.27	1,315.9	6.0	1.7	0.18	-0.13	8.79	-5.9	-1.9	-1.9
1,460.0	0.20	19.60	1,459.9	7.1	1.7	0.36	-0.35	14.81	-7.3	0.7	0.7
1,583.0	0.70	11.70	1,582.9	8.0	2.0	0.41	0.41	-6.42	-8.3	-0.3	-0.3
1,769.0	0.90	17.90	1,768.9	10.5	2.6	0.12	0.11	3.33	-10.8	0.7	0.7
1,954.0	1.00	356.70	1,953.9	13.5	3.0	0.20	0.05	-11.46	-13.3	-3.8	-3.8
2,142.0	0.90	351.30	2,141.9	16.6	2.7	0.07	-0.05	-2.87	-16.0	-5.2	-5.2
2,329.0	1.10	351.10	2,328.8	19.9	2.2	0.11	0.11	-0.11	-19.3	-5.2	-5.2
2,515.0	2.30	209.40	2,514.8	18.4	0.1	1.74	0.65	-76.18	16.0	-9.0	-9.0
2,701.0	2.20	216.70	2,700.7	12.3	-3.9	0.16	-0.05	3.92	7.5	-10.4	-10.4
2,888.0	1.90	230.40	2,887.5	7.4	-8.4	0.31	-0.16	7.33	-1.8	-11.1	-11.1
3,074.0	1.70	244.90	3,073.4	4.3	-13.3	0.27	-0.11	7.80	-10.2	-9.5	-9.5
3,262.0	1.30	258.00	3,261.4	2.6	-17.9	0.28	-0.21	6.97	-17.0	-6.3	-6.3
3,450.0	1.00	288.60	3,449.3	2.7	-21.6	0.36	-0.16	16.28	-21.3	4.3	4.3
3,637.0	1.80	231.00	3,636.3	1.4	-25.4	0.81	0.43	-30.80	-18.8	-17.1	-17.1

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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)	
3,824.0	1.60	245.90	3,823.2	-1.5	-30.0	0.26	-0.11	7.97	-26.2	-12.6	
4,012.0	4.50	211.20	4,010.9	-8.9	-36.3	1.76	1.54	-18.46	-17.3	-27.6	
4,199.0	3.70	196.00	4,197.5	-21.0	-41.7	0.72	-0.43	-8.13	-16.2	-32.3	
4,385.0	3.60	182.80	4,383.1	-32.6	-43.7	0.45	-0.05	-7.10	-14.0	-34.2	
4,572.0	3.20	158.40	4,569.8	-43.3	-42.0	0.80	-0.21	-13.05	-4.6	-34.7	
4,759.0	2.60	174.00	4,756.5	-52.4	-39.7	0.53	-0.32	8.34	-17.4	-27.5	
4,946.0	3.10	175.10	4,943.3	-61.6	-38.8	0.27	0.27	0.59	-21.5	-24.0	
5,132.0	2.20	187.50	5,129.1	-70.2	-38.8	0.57	-0.48	6.67	-28.4	-16.0	
5,319.0	1.30	197.10	5,316.0	-75.8	-39.9	0.50	-0.48	5.13	-29.8	-9.7	
5,505.0	1.30	196.30	5,502.0	-79.8	-41.1	0.01	0.00	-0.43	-27.4	-9.3	
5,692.0	1.30	186.70	5,688.9	-84.0	-42.0	0.12	0.00	-5.13	-23.5	-12.2	
5,879.0	0.90	159.90	5,875.9	-87.4	-41.7	0.34	-0.21	-14.33	-14.1	-17.9	
6,066.0	1.10	165.80	6,062.9	-90.6	-40.8	0.12	0.11	3.16	-14.0	-12.2	
6,253.0	1.00	167.10	6,249.8	-93.9	-40.0	0.05	-0.05	0.70	-12.4	-8.0	
6,439.0	0.90	181.40	6,435.8	-96.9	-39.6	0.14	-0.05	7.69	-11.0	-1.8	
6,626.0	0.90	187.40	6,622.8	-99.9	-39.9	0.05	0.00	3.21	-7.8	1.3	
6,813.0	1.10	180.60	6,809.7	-103.1	-40.1	0.12	0.11	-3.64	-5.2	2.8	
6,998.0	0.70	188.90	6,994.7	-106.0	-40.3	0.23	-0.22	4.49	-1.4	5.4	
7,184.0	1.50	210.40	7,180.7	-109.2	-41.7	0.48	0.43	11.56	-0.9	5.7	
7,369.0	1.40	255.40	7,365.6	-111.9	-45.1	0.60	-0.05	24.32	-0.6	6.3	
7,557.0	1.60	310.50	7,553.6	-110.8	-49.3	0.74	0.11	29.31	0.9	6.0	
7,744.0	1.20	299.60	7,740.5	-108.1	-53.0	0.26	-0.21	-5.83	-4.7	5.6	
7,931.0	0.90	250.00	7,927.5	-107.6	-56.1	0.49	-0.16	-26.52	-10.0	-1.5	
8,117.0	0.80	226.90	8,113.5	-109.0	-58.4	0.19	-0.05	-12.42	-11.3	-5.9	
8,304.0	0.90	210.10	8,300.5	-111.2	-60.1	0.14	0.05	-8.98	-11.8	-9.3	
8,490.0	1.00	220.10	8,486.4	-113.7	-61.9	0.10	0.05	5.38	-16.3	-6.8	
8,663.0	0.60	335.00	8,659.4	-114.0	-63.2	0.79	-0.23	66.42	0.4	19.0	

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8,850.0	0.50	305.00	8,846.4	-112.7	-64.3	0.16	-0.05	-16.04	-10.8	16.2	
9,037.0	0.70	284.50	9,033.4	-111.9	-66.1	0.16	0.11	-10.96	-17.7	11.1	
9,223.0	0.80	256.00	9,219.4	-111.9	-68.4	0.21	0.05	-15.32	-23.2	0.7	
9,410.0	0.50	2.70	9,406.4	-111.4	-69.7	0.57	-0.16	57.06	6.9	23.2	
9,598.0	0.40	107.60	9,594.4	-110.8	-69.0	0.38	-0.05	55.80	20.2	-11.9	
9,786.0	0.70	94.10	9,782.4	-111.1	-67.2	0.17	0.16	-7.18	20.7	-7.0	
9,972.0	1.70	141.30	9,968.3	-113.3	-64.4	0.71	0.54	25.38	5.4	-19.1	
10,158.0	1.90	183.10	10,154.2	-118.6	-62.8	0.70	0.11	22.47	-13.8	-16.0	
10,345.0	2.40	78.70	10,341.2	-120.9	-59.1	1.82	0.27	-55.83	15.7	-12.5	
10,532.0	2.30	91.40	10,528.0	-120.2	-51.6	0.28	-0.05	6.79	5.1	-14.7	
10,717.0	0.70	118.60	10,712.9	-120.8	-46.9	0.92	-0.86	14.70	-6.7	-13.7	
10,905.0	1.40	148.30	10,900.9	-123.3	-44.6	0.46	0.37	15.80	-15.9	-8.1	
11,092.0	0.60	281.10	11,087.9	-125.1	-44.4	0.99	-0.43	71.02	5.5	18.8	
11,278.0	2.40	293.50	11,273.8	-123.4	-48.9	0.98	0.97	6.67	4.5	17.4	
11,467.0	2.60	302.30	11,462.6	-119.5	-56.2	0.23	0.11	4.66	-1.1	17.1	
11,653.0	2.90	292.20	11,648.4	-115.5	-64.1	0.31	0.16	-5.43	-12.9	15.9	
11,818.0	2.80	301.90	11,813.2	-111.8	-71.4	0.30	-0.06	5.88	-18.2	18.6	
11,999.0	5.30	341.30	11,993.8	-101.5	-77.8	1.99	1.38	21.77	-12.3	29.3	
12,046.0	14.40	2.50	12,040.1	-93.6	-78.3	20.53	19.36	45.11	-3.1	32.2	
12,093.0	22.40	9.90	12,084.6	-78.9	-76.5	17.70	17.02	15.74	-4.8	31.4	
12,140.0	25.40	4.90	12,127.6	-60.0	-74.1	7.70	6.38	-10.64	-13.5	28.9	
12,186.0	28.10	3.30	12,168.7	-39.4	-72.6	6.07	5.87	-3.48	-18.9	27.1	
12,233.0	31.10	2.30	12,209.5	-16.2	-71.5	6.47	6.38	-2.13	-22.3	25.6	
12,280.0	34.90	4.50	12,248.9	9.3	-69.9	8.48	8.09	4.68	-23.4	24.6	
12,327.0	38.20	3.90	12,286.7	37.3	-67.9	7.06	7.02	-1.28	-24.4	22.1	
12,373.0	39.50	359.60	12,322.5	66.1	-67.0	6.51	2.83	-9.35	-24.1	19.6	
12,420.0	45.10	358.30	12,357.3	97.7	-67.6	12.06	11.91	-2.77	-21.8	19.6	

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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)	
12,467.0	50.00	358.00	12,389.0	132.3	-68.7	10.44	10.43	-0.64	-19.6	20.5	
12,507.2	55.73	359.73	12,413.3	164.4	-69.4	14.66	14.25	4.31	-17.8	21.2	
FTP Crossing, MD:12507.2', TVD:12413.3', N/S:164.4', E/W:-69.4', INC:55.73											
12,514.0	56.70	0.00	12,417.0	170.0	-69.4	14.66	14.28	3.95	-17.6	21.2	
12,560.0	61.00	0.80	12,440.8	209.4	-69.1	9.47	9.35	1.74	-16.6	20.7	
12,607.0	63.10	0.80	12,462.9	250.9	-68.5	4.47	4.47	0.00	-14.3	19.8	
12,654.0	70.30	358.30	12,481.4	294.0	-68.9	16.08	15.32	-5.32	-12.3	19.6	
12,701.0	77.20	355.20	12,494.6	339.0	-71.5	15.99	14.68	-6.60	-12.0	21.7	
12,748.0	79.80	354.20	12,503.9	384.9	-75.7	5.91	5.53	-2.13	-11.4	25.6	
12,773.0	80.90	354.30	12,508.1	409.4	-78.2	4.42	4.40	0.40	-10.3	28.0	
12,820.0	82.50	355.10	12,514.9	455.7	-82.5	3.80	3.40	1.70	-6.2	32.0	
12,867.0	84.20	356.20	12,520.4	502.3	-86.0	4.30	3.62	2.34	-0.7	35.2	
12,914.0	87.90	357.60	12,523.6	549.1	-88.5	8.41	7.87	2.98	2.8	37.4	
12,960.0	90.20	358.90	12,524.4	595.1	-89.9	5.74	5.00	2.83	3.7	38.5	
13,054.0	91.40	358.90	12,523.1	689.0	-91.8	1.28	1.28	0.00	2.6	39.6	
13,149.0	92.30	359.90	12,520.0	784.0	-92.7	1.42	0.95	1.05	-0.3	39.8	
13,242.0	92.60	359.40	12,516.0	876.9	-93.3	0.63	0.32	-0.54	-4.1	39.7	
13,335.0	91.80	1.30	12,512.4	969.8	-92.7	2.22	-0.86	2.04	-7.5	38.4	
13,429.0	91.30	1.30	12,509.9	1,063.7	-90.6	0.53	-0.53	0.00	-9.8	35.5	
13,523.0	90.20	1.70	12,508.7	1,157.7	-88.2	1.25	-1.17	0.43	-10.8	32.4	
13,615.0	89.60	3.10	12,508.8	1,249.6	-84.3	1.66	-0.65	1.52	-10.4	27.8	
13,707.0	89.30	2.80	12,509.7	1,341.5	-79.6	0.46	-0.33	-0.33	-9.4	22.4	
13,800.0	90.40	2.50	12,510.0	1,434.4	-75.3	1.23	1.18	-0.32	-8.9	17.4	
13,894.0	90.80	2.10	12,509.0	1,528.3	-71.5	0.60	0.43	-0.43	-9.7	12.9	
13,988.0	92.30	1.80	12,506.4	1,622.2	-68.3	1.63	1.60	-0.32	-12.0	9.0	
14,082.0	89.80	0.70	12,504.7	1,716.2	-66.2	2.91	-2.66	-1.17	-13.6	6.2	
14,175.0	90.70	0.90	12,504.3	1,809.2	-65.0	0.99	0.97	0.22	-13.8	4.2	

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14,269.0	90.90	359.80	12,503.0	1,903.1	-64.4	1.19	0.21	-1.17	-14.9	2.9	
14,363.0	88.50	0.70	12,503.5	1,997.1	-64.0	2.73	-2.55	0.96	-14.2	1.8	
14,456.0	85.90	0.40	12,508.0	2,090.0	-63.1	2.81	-2.80	-0.32	-9.4	0.2	
14,550.0	91.00	359.60	12,510.6	2,183.9	-63.1	5.49	5.43	-0.85	-6.7	-0.5	
14,644.0	88.40	358.00	12,511.1	2,277.9	-65.0	3.25	-2.77	-1.70	-6.0	0.7	
14,738.0	85.40	358.90	12,516.1	2,371.7	-67.6	3.33	-3.19	0.96	-0.9	2.5	
14,832.0	86.50	357.80	12,522.8	2,465.5	-70.3	1.65	1.17	-1.17	5.7	4.5	
14,925.0	87.00	358.10	12,528.1	2,558.2	-73.6	0.63	0.54	0.32	10.8	7.1	
15,019.0	88.40	357.30	12,531.8	2,652.1	-77.4	1.72	1.49	-0.85	14.6	10.2	
15,112.0	86.30	355.70	12,536.1	2,744.8	-83.0	2.84	-2.26	-1.72	18.8	15.2	
15,206.0	86.20	354.40	12,542.3	2,838.3	-91.1	1.38	-0.11	-1.38	24.8	22.6	
15,291.0	87.50	355.30	12,546.9	2,922.8	-98.8	1.86	1.53	1.06	29.4	29.5	
15,385.0	91.60	357.00	12,547.7	3,016.5	-105.1	4.72	4.36	1.81	30.2	35.0	
15,478.0	91.50	358.10	12,545.2	3,109.4	-109.0	1.19	-0.11	1.18	27.5	38.3	
15,570.0	91.90	1.10	12,542.4	3,201.4	-109.7	3.29	0.43	3.26	24.7	38.3	
15,663.0	92.00	1.40	12,539.3	3,294.3	-107.7	0.34	0.11	0.32	21.5	35.5	
15,756.0	91.80	1.70	12,536.2	3,387.2	-105.1	0.39	-0.22	0.32	18.3	32.3	
15,850.0	90.50	1.90	12,534.3	3,481.1	-102.2	1.40	-1.38	0.21	16.4	28.6	
15,943.0	89.80	1.90	12,534.1	3,574.1	-99.1	0.75	-0.75	0.00	16.1	24.8	
16,038.0	89.00	1.30	12,535.1	3,669.0	-96.5	1.05	-0.84	-0.63	17.0	21.4	
16,132.0	90.80	1.90	12,535.2	3,763.0	-93.8	2.02	1.91	0.64	17.1	18.1	
16,225.0	91.50	2.70	12,533.3	3,855.9	-90.1	1.14	0.75	0.86	15.1	13.7	
16,317.0	90.50	2.60	12,531.7	3,947.8	-85.8	1.09	-1.09	-0.11	13.4	8.7	
16,411.0	89.50	2.10	12,531.7	4,041.7	-82.0	1.19	-1.06	-0.53	13.4	4.1	
16,505.0	90.50	1.60	12,531.7	4,135.7	-79.0	1.19	1.06	-0.53	13.3	0.4	
16,598.0	91.20	1.40	12,530.4	4,228.6	-76.5	0.78	0.75	-0.22	11.8	-2.8	
16,693.0	89.80	0.50	12,529.5	4,323.6	-74.9	1.75	-1.47	-0.95	10.9	-5.1	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Well:	#703H	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)	
16,787.0	89.70	0.40	12,529.9	4,417.6	-74.2	0.15	-0.11	-0.11	11.3	-6.6	
16,881.0	89.90	0.50	12,530.3	4,511.6	-73.5	0.24	0.21	0.11	11.5	-8.0	
16,974.0	88.70	0.80	12,531.4	4,604.6	-72.4	1.33	-1.29	0.32	12.6	-9.8	
17,067.0	89.20	1.20	12,533.1	4,697.6	-70.8	0.69	0.54	0.43	14.2	-12.1	
17,161.0	91.80	1.10	12,532.3	4,791.5	-68.9	2.77	2.77	-0.11	13.3	-14.7	
17,254.0	92.20	1.00	12,529.0	4,884.4	-67.2	0.44	0.43	-0.11	10.2	-17.1	
17,347.0	89.80	0.30	12,527.4	4,977.4	-66.1	2.69	-2.58	-0.75	8.8	-18.9	
17,440.0	89.80	1.20	12,527.7	5,070.4	-64.9	0.97	0.00	0.97	9.3	-20.8	
17,533.0	87.60	1.20	12,529.9	5,163.4	-63.0	2.37	-2.37	0.00	11.6	-23.5	
17,627.0	87.20	0.30	12,534.1	5,257.3	-61.8	1.05	-0.43	-0.96	16.1	-25.5	
17,721.0	89.40	359.60	12,536.9	5,351.2	-61.8	2.46	2.34	-0.74	19.1	-26.1	
17,814.0	89.60	359.50	12,537.7	5,444.2	-62.6	0.24	0.22	-0.11	20.1	-26.1	
17,907.0	89.70	0.10	12,538.3	5,537.2	-62.9	0.65	0.11	0.65	20.9	-26.5	
18,001.0	90.30	359.30	12,538.3	5,631.2	-63.4	1.06	0.64	-0.85	21.1	-26.7	
18,094.0	90.60	357.40	12,537.6	5,724.2	-66.1	2.07	0.32	-2.04	20.6	-24.8	
18,187.0	91.20	359.00	12,536.1	5,817.1	-69.0	1.84	0.65	1.72	19.3	-22.6	
18,281.0	91.20	359.60	12,534.1	5,911.1	-70.1	0.64	0.00	0.64	17.6	-22.1	
18,374.0	90.70	359.10	12,532.6	6,004.0	-71.2	0.76	-0.54	-0.54	16.3	-21.8	
18,467.0	90.80	359.60	12,531.4	6,097.0	-72.2	0.55	0.11	0.54	15.2	-21.4	
18,560.0	90.50	358.90	12,530.3	6,190.0	-73.5	0.82	-0.32	-0.75	14.4	-20.9	
18,653.0	90.90	359.00	12,529.2	6,283.0	-75.2	0.44	0.43	0.11	13.5	-20.0	
18,746.0	90.50	358.50	12,528.0	6,376.0	-77.2	0.69	-0.43	-0.54	12.5	-18.6	
18,839.0	92.90	358.50	12,525.3	6,468.9	-79.6	2.58	2.58	0.00	10.0	-16.9	
18,932.0	92.90	358.20	12,520.6	6,561.7	-82.3	0.32	0.00	-0.32	5.5	-15.0	
19,026.0	90.20	357.40	12,518.0	6,655.6	-85.9	3.00	-2.87	-0.85	3.2	-12.1	
19,120.0	90.20	357.20	12,517.7	6,749.5	-90.3	0.21	0.00	-0.21	3.0	-8.4	
19,212.0	90.30	356.50	12,517.3	6,841.4	-95.4	0.77	0.11	-0.76	2.8	-4.0	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Well:	#703H	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)	
19,307.0	89.80	357.50	12,517.2	6,936.2	-100.4	1.18	-0.53	1.05	3.0	0.2	
19,398.0	90.70	357.70	12,516.8	7,027.2	-104.2	1.01	0.99	0.22	2.8	3.3	
19,492.0	90.20	357.40	12,516.1	7,121.1	-108.2	0.62	-0.53	-0.32	2.3	6.6	
19,585.0	89.90	0.40	12,516.0	7,214.0	-110.0	3.24	-0.32	3.23	2.4	7.7	
19,679.0	90.30	0.50	12,515.8	7,308.0	-109.2	0.44	0.43	0.11	2.4	6.2	
19,772.0	90.20	0.80	12,515.4	7,401.0	-108.2	0.34	-0.11	0.32	2.2	4.5	
19,866.0	90.80	1.60	12,514.6	7,495.0	-106.2	1.06	0.64	0.85	1.6	1.8	
19,960.0	89.80	1.50	12,514.1	7,589.0	-103.7	1.07	-1.06	-0.11	1.6	-1.5	
20,054.0	89.40	2.00	12,514.8	7,682.9	-100.8	0.68	-0.43	0.53	2.7	-5.1	
20,148.0	90.90	1.30	12,514.5	7,776.9	-98.1	1.76	1.60	-0.74	2.9	-8.5	
20,241.0	91.90	1.10	12,512.3	7,869.8	-96.1	1.10	1.08	-0.22	1.1	-11.2	
20,336.0	92.00	0.80	12,509.0	7,964.8	-94.6	0.33	0.11	-0.32	-1.7	-13.5	
20,429.0	90.70	0.20	12,506.8	8,057.7	-93.8	1.54	-1.40	-0.65	-3.4	-15.0	
20,523.0	92.40	1.60	12,504.3	8,151.7	-92.3	2.34	1.81	1.49	-5.5	-17.2	
20,616.0	90.30	1.10	12,502.1	8,244.6	-90.1	2.32	-2.26	-0.54	-7.3	-20.1	
20,720.0	89.80	1.30	12,502.0	8,348.6	-87.9	0.52	-0.48	0.19	-6.9	-23.1	
20,812.0	89.20	359.70	12,502.8	8,440.6	-87.1	1.86	-0.65	-1.74	-5.6	-24.6	
20,907.0	88.80	0.30	12,504.5	8,535.6	-87.1	0.76	-0.42	0.63	-3.5	-25.4	
21,001.0	88.40	0.10	12,506.8	8,629.5	-86.8	0.48	-0.43	-0.21	-0.7	-26.4	
21,094.0	88.30	0.70	12,509.5	8,722.5	-86.1	0.65	-0.11	0.65	2.4	-27.8	
21,188.0	88.70	0.20	12,511.9	8,816.5	-85.4	0.68	0.43	-0.53	5.3	-29.2	
21,282.0	90.30	359.80	12,512.7	8,910.5	-85.4	1.75	1.70	-0.43	6.6	-30.0	
21,376.0	90.50	359.60	12,512.1	9,004.4	-85.9	0.30	0.21	-0.21	6.4	-30.2	
21,470.0	89.40	358.90	12,512.2	9,098.4	-87.1	1.39	-1.17	-0.74	7.0	-29.7	
21,564.0	87.60	358.10	12,514.6	9,192.4	-89.6	2.10	-1.91	-0.85	9.9	-27.9	
21,657.0	90.40	357.40	12,516.2	9,285.3	-93.2	3.10	3.01	-0.75	11.9	-25.0	
21,751.0	90.70	357.60	12,515.3	9,379.2	-97.3	0.38	0.32	0.21	11.5	-21.6	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (H&P 473)
Well:	#703H	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)	
21,844.0	91.10	358.00	12,513.9	9,472.1	-100.9	0.61	0.43	0.43	10.5	-18.8	
21,938.0	92.70	358.90	12,510.8	9,566.0	-103.4	1.95	1.70	0.96	7.8	-17.0	
22,031.0	95.10	359.20	12,504.4	9,658.8	-105.0	2.60	2.58	0.32	1.9	-16.1	
22,124.0	93.50	358.70	12,497.5	9,751.5	-106.7	1.80	-1.72	-0.54	-4.6	-15.1	
22,218.0	94.00	358.20	12,491.3	9,845.3	-109.2	0.75	0.53	-0.53	-10.2	-13.3	
22,313.0	96.60	359.90	12,482.5	9,939.8	-110.8	3.27	2.74	1.79	-18.5	-12.6	
22,407.0	94.00	358.40	12,473.9	10,033.4	-112.2	3.19	-2.77	-1.60	-26.8	-11.8	
22,436.3	93.86	358.45	12,471.9	10,062.6	-113.0	0.49	-0.47	0.16	-28.6	-11.3	
LTP Crossing, MD:22436.3', TVD:12471.9',N/S:10062.6', E/W:-113.0', INC:93.86											
22,471.0	93.70	358.50	12,469.6	10,097.2	-113.9	0.49	-0.47	0.16	-43.4	-16.9	
Final MWD Survey (MD=22471.0')											
22,540.0	93.70	358.50	12,465.1	10,166.1	-115.7	0.00	0.00	0.00	-100.9	-39.3	
Final Projection to Bit (MD=22540.0')											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,507.2	12,413.3	164.4	-69.4	FTP Crossing, MD:12507.2', TVD:12413.3',N/S:164.4', E/W:-69.4', INC:55.73
22,436.3	12,471.9	10,062.6	-113.0	LTP Crossing, MD:22436.3', TVD:12471.9',N/S:10062.6', E/W:-113.0', INC:93.86
22,471.0	12,469.6	10,097.2	-113.9	Final MWD Survey (MD=22471.0')
22,540.0	12,465.1	10,166.1	-115.7	Final Projection to Bit (MD=22540.0')

Checked By: _____ Approved By: _____ Date: _____

