



HOBBS OCD
MAR 01 2018
RECEIVED

Lea County, NM (NAD 83 NME)

Neptune 10 State Com #702H

HP 473

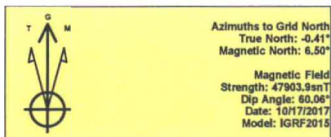
Plan #3

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

KB= 25' @ 3638.0usft (HP 473) 3613.0
Northing 446557.00 Easting 778964.00 Latitude 32° 13' 31.172 N Longitude 103° 33' 53.609 W



To convert a Magnetic Direction to a Grid Direction, Add 6.50°
To convert a Magnetic Direction to a True Direction, Add 6.91° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

SECTION DETAILS

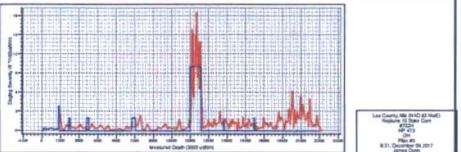
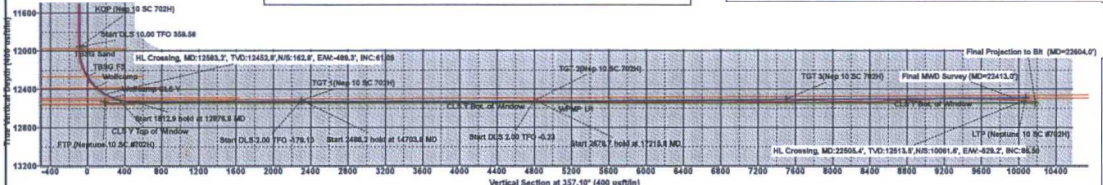
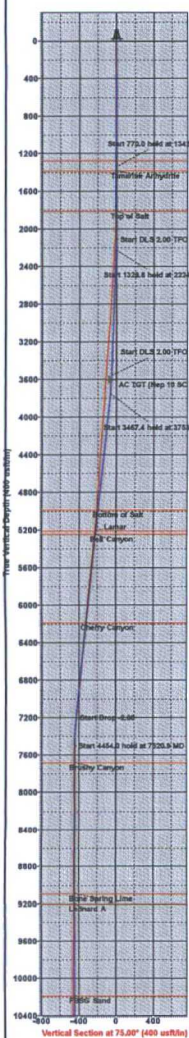
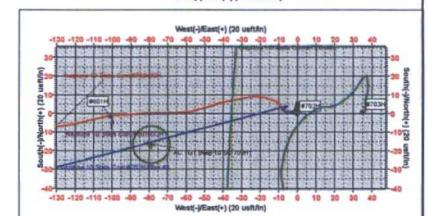
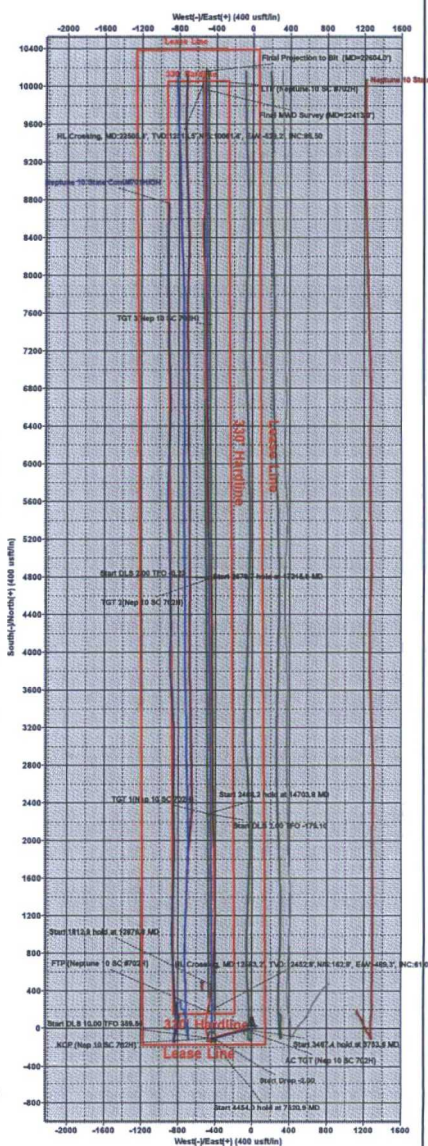
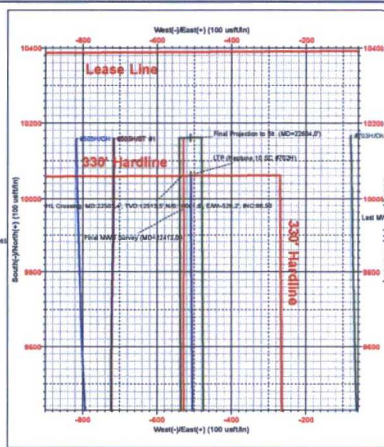
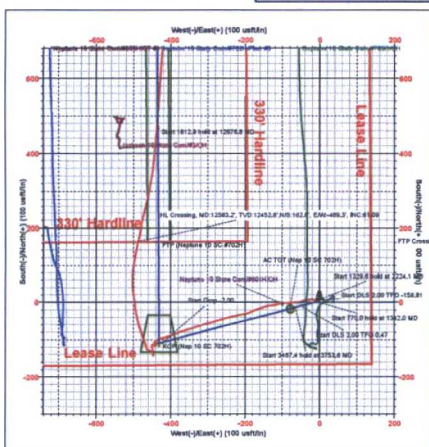
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	1342.0	0.26	52.24	1342.0	2.1	-8.2	0.00	0.00	2.5	
2	2112.0	0.26	52.24	2112.0	4.3	-5.4	0.00	0.00	4.5	
3	2224.1	2.00	255.00	2224.0	3.9	-7.1	2.00	-159.81	4.3	
4	3553.7	2.00	255.00	3552.8	-8.1	-51.9	0.00	0.00	-5.5	
5	3753.6	6.00	255.32	3752.2	-11.7	-65.4	2.00	0.47	-8.3	
6	7221.0	6.00	255.32	7200.6	-103.5	-415.9	0.00	0.00	-82.3	
7	7520.9	0.00	0.00	7500.0	-107.5	-431.1	2.00	180.00	-85.6	
8	11974.9	0.00	0.00	11954.0	-107.5	-431.1	0.00	0.00	-85.6	KOP (Nep 10 SC 702H)
9	12876.8	90.19	359.56	12527.0	467.3	-435.5	10.00	359.56	488.8	
10	14689.7	90.19	359.56	12521.0	2280.2	-449.3	0.00	0.00	2300.0	TGT 1(Nep 10 SC 702H)
11	14703.8	89.91	359.56	12521.0	2294.2	-449.4	2.00	-179.10	2314.0	
12	17192.0	89.91	359.56	12525.0	4782.4	-468.6	0.00	0.00	4800.0	TGT 2(Nep 10 SC 702H)
13	17215.8	90.38	359.56	12524.9	4806.2	-468.8	2.00	-0.23	4823.8	
14	19894.6	90.38	359.56	12507.0	7484.8	-489.5	0.00	0.00	7500.0	TGT 3(Nep 10 SC 702H)
15	22471.9	90.47	359.57	12487.7	10062.0	-509.2	0.00	5.84	10074.9	LTP (Neptune 10 SC #702H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (Nep 10 SC 702H)	11954.0	-107.5	-431.1	446448.82	778932.80
TGT 1(Nep 10 SC 702H)	12521.0	2280.2	-449.3	448837.20	778514.70
TGT 2(Nep 10 SC 702H)	12525.0	4782.4	-468.6	451339.40	778495.43
TGT 3(Nep 10 SC 702H)	12507.0	7484.8	-489.5	450441.80	778474.83
LTP (Neptune 10 SC #702H)	12487.7	10062.0	-509.2	456619.00	778454.80
AC TOT (Nep 10 SC 702H)	3589.7	-16.8	-79.8	446540.48	778895.19
FTP (Neptune 10 SC #702H)	12527.0	165.0	-433.0	446720.00	778531.00
PHL (Neptune 10 SC #702H)	12642.0	10162.0	-510.0	456719.00	778454.00



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Neptune 10 State Com

#702H

OH

Design: OH

PVA Report

06 December, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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	#702H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 13' 31.172 N
		Longitude:	103° 33' 53.609 W
		Ground Level:	3,613.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	10/17/2017	6.91
			Dip Angle (°)
			60.06
			Field Strength (nT)
			47,903.88383333

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)
	0.0	0.0	0.0
			Direction (°)
			357.13

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date	12/6/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
178.0	1,342.0	Olebrook MWD (OH)	MWD	MWD - Standard	
1,363.0	22,604.0	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
178.0	0.79	283.04	178.0	0.3	-1.2	0.44	0.44	0.00	0.0	0.0	0.0
350.0	0.53	310.11	350.0	1.1	-3.0	0.23	-0.15	15.74	0.0	0.0	0.0
535.0	0.70	259.04	535.0	1.4	-4.7	0.30	0.09	-27.61	0.0	0.0	0.0
727.0	0.18	76.85	727.0	1.2	-5.6	0.46	-0.27	92.61	0.0	0.0	0.0
916.0	0.35	242.96	916.0	1.0	-5.8	0.28	0.09	87.89	0.0	0.0	0.0
1,167.0	0.53	330.15	1,167.0	1.7	-7.1	0.25	0.07	34.74	0.0	0.0	0.0
1,322.0	0.53	253.51	1,322.0	2.1	-8.1	0.42	0.00	-49.45	0.0	0.0	0.0
1,342.0	0.26	52.24	1,342.0	2.1	-8.2	3.89	-1.35	793.65	0.0	0.0	0.0
1,363.0	0.40	289.40	1,363.0	2.2	-8.2	2.78	0.67	-584.95	-0.1	0.0	0.0
1,549.0	0.80	337.30	1,548.9	3.6	-9.3	0.33	0.22	25.75	-1.6	1.4	1.4
1,735.0	0.70	325.80	1,734.9	5.7	-10.4	0.10	-0.05	-6.18	-4.2	1.6	1.6
1,920.0	2.30	291.00	1,919.9	8.0	-14.5	0.96	0.86	-18.81	-9.4	-1.0	-1.0
2,108.0	3.60	272.60	2,107.6	9.6	-24.0	0.85	0.69	-9.79	-18.8	-4.5	-4.5
2,395.0	4.10	247.20	2,394.0	6.0	-42.4	0.61	0.17	-8.85	-25.9	-14.9	-14.9
2,481.0	3.80	252.20	2,479.8	4.0	-48.0	0.53	-0.35	5.81	-30.0	-12.1	-12.1
2,667.0	3.50	260.50	2,665.4	1.2	-59.4	0.33	-0.16	4.46	-36.7	-7.4	-7.4
2,854.0	2.90	277.50	2,852.1	0.8	-69.8	0.60	-0.32	9.09	-41.5	2.8	2.8
3,040.0	4.70	263.20	3,037.7	0.5	-82.0	1.09	0.97	-7.69	-46.6	-9.6	-9.6
3,228.0	4.00	268.90	3,225.2	-0.5	-96.2	0.44	-0.37	3.03	-55.2	-5.7	-5.7
3,416.0	4.30	254.90	3,412.7	-2.5	-109.6	0.56	0.16	-7.45	-59.0	-20.5	-20.5

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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)
3,603.0	4.00	258.00	3,599.2	-5.6	-122.7	0.20	-0.16	1.66	-66.7	-17.2
3,790.0	3.50	267.50	3,785.8	-7.2	-134.8	0.43	-0.27	5.08	-65.4	-8.3
3,978.0	5.20	249.60	3,973.2	-10.5	-148.5	1.15	0.90	-9.52	-54.1	-27.7
4,165.0	4.50	256.50	4,159.6	-15.1	-163.6	0.49	-0.37	3.69	-53.2	-20.4
4,351.0	4.20	248.00	4,345.0	-19.4	-177.0	0.38	-0.16	-4.57	-44.3	-26.7
4,538.0	3.20	237.70	4,531.7	-24.7	-187.8	0.64	-0.53	-5.51	-32.2	-29.5
4,725.0	4.00	263.20	4,718.3	-28.3	-198.6	0.95	0.43	13.64	-33.6	-13.2
4,912.0	3.50	256.80	4,904.9	-30.4	-210.7	0.35	-0.27	-3.42	-24.5	-18.1
5,098.0	4.10	260.40	5,090.5	-32.8	-222.8	0.35	0.32	1.94	-18.5	-17.9
5,285.0	5.60	254.90	5,276.8	-36.3	-238.2	0.84	0.80	-2.94	-12.9	-20.1
5,471.0	5.40	253.00	5,462.0	-41.2	-255.3	0.15	-0.11	-1.02	-10.7	-20.0
5,658.0	5.70	252.90	5,648.1	-46.5	-272.6	0.16	0.16	-0.05	-9.2	-19.2
5,845.0	6.20	254.40	5,834.1	-51.9	-291.2	0.28	0.27	0.80	-9.5	-18.4
6,032.0	5.80	253.10	6,020.0	-57.4	-310.0	0.23	-0.21	-0.70	-9.1	-18.1
6,219.0	5.10	251.50	6,206.2	-62.8	-326.9	0.38	-0.37	-0.86	-6.9	-17.3
6,405.0	4.70	252.00	6,391.5	-67.8	-342.0	0.22	-0.22	0.27	-3.5	-16.1
6,592.0	4.70	254.20	6,577.9	-72.2	-356.6	0.10	0.00	1.18	0.1	-15.2
6,778.0	6.10	252.80	6,763.1	-77.2	-373.4	0.76	0.75	-0.75	2.4	-14.6
6,964.0	6.70	248.60	6,947.9	-84.1	-392.9	0.41	0.32	-2.26	2.1	-12.8
7,149.0	5.30	250.60	7,131.9	-90.9	-411.1	0.77	-0.76	1.08	1.6	-10.9
7,335.0	4.30	258.60	7,317.2	-95.1	-426.0	0.65	-0.54	4.30	1.6	-10.8
7,523.0	3.50	241.20	7,504.8	-99.3	-437.9	0.76	-0.43	-9.26	-2.0	-10.5
7,710.0	3.10	209.90	7,691.5	-106.4	-445.5	0.97	-0.21	-16.74	-6.2	-13.0
7,897.0	1.70	67.60	7,878.4	-109.7	-445.4	2.44	-0.75	-76.10	14.1	3.4
8,068.0	1.00	73.60	8,049.4	-108.3	-441.6	0.42	-0.41	3.51	10.3	2.1
8,255.0	0.80	69.20	8,236.4	-107.4	-438.8	0.11	-0.11	-2.35	7.2	2.8
8,441.0	1.30	205.00	8,422.3	-108.9	-438.5	1.05	0.27	73.01	-4.4	-6.1

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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)
8,628.0	0.50	213.20	8,609.3	-111.5	-439.9	0.43	-0.43	4.39	-8.1	-5.2
8,816.0	0.50	207.50	8,797.3	-112.9	-440.7	0.03	0.00	-3.03	-9.2	-6.0
9,002.0	0.30	185.70	8,983.3	-114.1	-441.1	0.13	-0.11	-11.72	-7.6	-9.3
9,188.0	0.30	219.00	9,169.3	-115.0	-441.5	0.09	0.00	17.90	-12.3	-3.4
9,375.0	1.20	299.30	9,356.3	-114.4	-443.5	0.63	0.48	42.94	-7.4	12.1
9,563.0	0.50	323.30	9,544.3	-112.8	-445.7	0.41	-0.37	12.77	-4.5	14.9
9,751.0	1.70	283.60	9,732.2	-111.4	-448.9	0.72	0.64	-21.12	-16.4	8.0
9,937.0	1.30	194.50	9,918.2	-112.8	-452.1	1.14	-0.22	-47.90	-10.4	-19.0
10,124.0	1.30	162.20	10,105.1	-116.9	-452.0	0.39	0.00	-17.27	-2.6	-22.8
10,312.0	2.30	161.80	10,293.0	-122.5	-450.2	0.53	0.53	-0.21	-8.3	-22.8
10,499.0	1.60	164.80	10,479.9	-128.6	-448.3	0.38	-0.37	1.60	-15.9	-22.1
10,684.0	2.20	186.80	10,664.8	-134.6	-448.0	0.50	0.32	11.89	-29.0	-13.6
10,872.0	1.90	172.40	10,852.7	-141.3	-448.1	0.32	-0.16	-7.66	-31.3	-21.3
11,058.0	1.40	350.00	11,038.7	-142.1	-448.0	1.77	-0.27	95.48	31.2	22.7
11,244.0	1.80	340.60	11,224.6	-137.1	-449.4	0.26	0.22	-5.05	21.9	27.1
11,433.0	1.50	336.50	11,413.5	-132.1	-451.4	0.17	-0.16	-2.17	14.4	28.4
11,619.0	1.80	303.80	11,599.5	-128.2	-454.8	0.52	0.16	-17.58	-8.2	30.4
11,806.0	2.70	280.80	11,786.3	-125.7	-461.6	0.67	0.48	-12.30	-26.5	23.7
11,902.0	1.20	302.10	11,882.3	-124.8	-464.6	1.71	-1.56	22.19	-19.2	32.5
11,994.0	0.10	39.70	11,974.3	-124.2	-465.4	1.32	-1.20	106.09	35.0	15.5
12,041.0	2.90	353.30	12,021.2	-123.0	-465.5	6.03	5.96	-98.72	15.2	36.4
12,088.0	9.80	345.60	12,067.9	-117.9	-466.6	14.76	14.68	-16.38	12.1	39.6
12,135.0	17.20	340.10	12,113.6	-107.5	-470.0	15.96	15.74	-11.70	8.1	43.7
12,182.0	24.40	339.70	12,157.5	-91.8	-475.7	15.32	15.32	-0.85	5.2	48.5
12,213.0	26.20	339.50	12,185.5	-79.4	-480.4	5.81	5.81	-0.65	2.7	52.4
12,244.0	27.30	342.20	12,213.2	-66.3	-484.9	5.29	3.55	8.71	3.4	56.4
12,275.0	29.10	345.90	12,240.5	-52.2	-488.9	8.09	5.81	11.94	6.1	60.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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)
12,306.0	31.60	349.60	12,267.3	-36.9	-492.2	10.07	8.06	11.94	9.6	62.7
12,338.0	34.90	351.00	12,294.0	-19.6	-495.2	10.59	10.31	4.37	11.2	65.3
12,369.0	39.50	351.90	12,318.7	-1.0	-498.0	14.94	14.84	2.90	11.9	67.6
12,400.0	42.70	351.90	12,342.1	19.1	-500.8	10.32	10.32	0.00	11.3	70.2
12,431.0	46.30	356.10	12,364.2	40.7	-503.1	15.00	11.61	13.55	14.2	71.5
12,463.0	50.40	0.50	12,385.5	64.6	-503.8	16.42	12.81	13.75	16.3	71.2
12,494.0	53.60	6.60	12,404.6	89.0	-502.2	18.62	10.32	19.68	19.0	68.4
12,525.0	56.40	9.40	12,422.3	114.1	-498.7	11.67	9.03	9.03	18.6	64.4
12,556.0	58.30	11.50	12,439.1	139.8	-493.9	8.37	6.13	6.77	17.9	59.3
12,583.2	61.09	11.36	12,452.8	162.8	-489.3	10.27	10.26	-0.52	16.0	54.8
HL Crossing, MD:12583.2', TVD:12452.8', N/S:162.8', E/W:-489.3', INC:61.09										
12,595.0	62.30	11.30	12,458.4	173.0	-487.2	10.27	10.26	-0.50	15.2	52.8
12,650.0	70.00	11.90	12,480.6	222.2	-477.1	14.04	14.00	1.09	10.3	42.8
12,697.0	73.00	12.80	12,495.5	265.7	-467.6	6.64	6.38	1.91	6.5	33.3
12,744.0	79.10	11.90	12,506.8	310.3	-457.9	13.11	12.98	-1.91	2.2	23.5
12,791.0	83.30	6.80	12,514.0	356.1	-450.3	13.96	8.94	-10.85	-2.1	15.7
12,869.0	88.30	4.80	12,519.7	433.5	-442.5	6.90	6.41	-2.56	-6.3	7.3
12,962.0	88.60	4.50	12,522.3	526.1	-434.9	0.46	0.32	-0.32	-4.5	-1.0
13,056.0	88.80	3.80	12,524.4	619.8	-428.1	0.77	0.21	-0.74	-2.1	-8.5
13,151.0	89.00	3.30	12,526.2	714.6	-422.2	0.57	0.21	-0.53	0.1	-15.1
13,244.0	88.50	2.80	12,528.2	807.5	-417.3	0.76	-0.54	-0.54	2.4	-20.8
13,338.0	89.20	2.20	12,530.1	901.4	-413.2	0.98	0.74	-0.64	4.6	-25.6
13,431.0	90.20	0.90	12,530.6	994.3	-410.7	1.76	1.08	-1.40	5.4	-28.8
13,525.0	90.80	0.40	12,529.8	1,088.3	-409.6	0.83	0.64	-0.53	4.9	-30.6
13,619.0	91.60	359.50	12,527.8	1,182.3	-409.7	1.28	0.85	-0.96	3.2	-31.2
13,712.0	92.20	359.50	12,524.8	1,275.2	-410.5	0.65	0.65	0.00	0.4	-31.1
13,806.0	91.70	359.10	12,521.6	1,369.2	-411.7	0.68	-0.53	-0.43	-2.4	-30.7

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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)
13,900.0	90.00	358.50	12,520.2	1,463.2	-413.6	1.92	-1.81	-0.64	-3.5	-29.4
13,994.0	89.20	359.00	12,520.8	1,557.1	-415.7	1.00	-0.85	0.53	-2.6	-28.1
14,087.0	88.70	359.70	12,522.5	1,650.1	-416.7	0.92	-0.54	0.75	-0.6	-27.8
14,181.0	88.00	0.70	12,525.2	1,744.1	-416.4	1.30	-0.74	1.06	2.4	-28.8
14,275.0	87.40	359.60	12,529.0	1,838.0	-416.2	1.33	-0.64	-1.17	6.5	-29.8
14,369.0	88.50	357.00	12,532.4	1,931.9	-418.9	3.00	1.17	-2.77	10.2	-27.7
14,462.0	89.70	356.80	12,533.8	2,024.7	-424.0	1.31	1.29	-0.22	12.0	-23.4
14,555.0	90.30	356.10	12,533.8	2,117.5	-429.7	0.99	0.65	-0.75	12.3	-18.3
14,647.0	91.40	357.00	12,532.5	2,209.4	-435.3	1.54	1.20	0.98	11.2	-13.5
14,741.0	91.30	358.30	12,530.2	2,303.3	-439.1	1.39	-0.11	1.38	9.2	-10.4
14,834.0	90.40	359.80	12,528.9	2,396.2	-440.7	1.88	-0.97	1.61	7.7	-9.5
14,927.0	89.50	359.30	12,528.9	2,489.2	-441.4	1.11	-0.97	-0.54	7.6	-9.5
15,021.0	89.30	0.40	12,529.9	2,583.2	-441.6	1.19	-0.21	1.17	8.5	-10.0
15,115.0	89.30	0.00	12,531.1	2,677.2	-441.3	0.43	0.00	-0.43	9.5	-11.0
15,209.0	90.70	359.50	12,531.1	2,771.2	-441.7	1.58	1.49	-0.53	9.3	-11.4
15,302.0	90.00	359.10	12,530.5	2,864.2	-442.9	0.87	-0.75	-0.43	8.6	-10.9
15,395.0	91.60	359.70	12,529.2	2,957.2	-443.8	1.84	1.72	0.65	7.2	-10.7
15,489.0	92.40	359.10	12,525.9	3,051.1	-444.8	1.06	0.85	-0.64	3.7	-10.4
15,583.0	91.20	359.20	12,523.0	3,145.1	-446.2	1.28	-1.28	0.11	0.6	-9.8
15,676.0	90.20	0.00	12,521.8	3,238.0	-446.9	1.38	-1.08	0.86	-0.7	-9.8
15,770.0	90.20	359.90	12,521.5	3,332.0	-446.9	0.11	0.00	-0.11	-1.1	-10.5
15,865.0	88.60	359.40	12,522.5	3,427.0	-447.5	1.76	-1.68	-0.53	-0.3	-10.6
15,958.0	88.30	359.50	12,525.0	3,520.0	-448.4	0.34	-0.32	0.11	2.1	-10.4
16,051.0	88.20	0.00	12,527.9	3,613.0	-448.8	0.55	-0.11	0.54	4.7	-10.7
16,145.0	88.70	359.70	12,530.4	3,706.9	-449.1	0.62	0.53	-0.32	7.1	-11.2
16,239.0	90.70	0.00	12,530.9	3,800.9	-449.3	2.15	2.13	0.32	7.5	-11.7
16,332.0	91.30	0.20	12,529.3	3,893.9	-449.2	0.68	0.65	0.22	5.7	-12.6

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Corn	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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)	
16,425.0	90.50	0.60	12,527.8	3,986.9	-448.5	0.96	-0.86	0.43	4.1	-13.9	
16,517.0	89.30	0.60	12,528.0	4,078.9	-447.5	1.30	-1.30	0.00	4.1	-15.6	
16,611.0	89.60	0.30	12,528.9	4,172.9	-446.8	0.45	0.32	-0.32	4.9	-17.1	
16,704.0	91.30	359.70	12,528.1	4,265.9	-446.8	1.94	1.83	-0.65	4.0	-17.8	
16,798.0	92.50	359.40	12,525.0	4,359.8	-447.5	1.32	1.28	-0.32	0.7	-17.8	
16,891.0	92.00	358.90	12,521.4	4,452.7	-448.9	0.76	-0.54	-0.54	-3.1	-17.1	
16,984.0	90.90	358.60	12,519.0	4,545.7	-450.9	1.23	-1.18	-0.32	-5.6	-15.8	
17,078.0	90.10	357.90	12,518.2	4,639.6	-453.8	1.13	-0.85	-0.74	-6.6	-13.7	
17,171.0	90.00	358.40	12,518.1	4,732.6	-456.8	0.55	-0.11	0.54	-6.8	-11.4	
17,264.0	90.10	358.30	12,518.0	4,825.5	-459.5	0.15	0.11	-0.11	-6.8	-9.4	
17,358.0	89.40	358.00	12,518.5	4,919.5	-462.5	0.81	-0.74	-0.32	-5.7	-7.1	
17,451.0	89.20	357.80	12,519.6	5,012.4	-465.9	0.30	-0.22	-0.22	-4.0	-4.4	
17,545.0	89.30	357.40	12,520.8	5,106.3	-469.9	0.44	0.11	-0.43	-2.1	-1.2	
17,637.0	88.90	357.10	12,522.3	5,198.2	-474.3	0.54	-0.43	-0.33	-0.1	2.5	
17,730.0	88.50	356.90	12,524.4	5,291.1	-479.2	0.48	-0.43	-0.22	2.7	6.6	
17,823.0	88.30	356.50	12,527.0	5,383.9	-484.5	0.48	-0.22	-0.43	5.9	11.3	
17,917.0	88.10	358.40	12,529.9	5,477.7	-488.7	2.03	-0.21	2.02	9.5	14.7	
18,010.0	88.70	359.50	12,532.5	5,570.7	-490.4	1.35	0.65	1.18	12.7	15.7	
18,104.0	89.60	359.70	12,533.9	5,664.7	-491.0	0.98	0.96	0.21	14.7	15.6	
18,197.0	90.60	0.30	12,533.8	5,757.7	-491.0	1.25	1.08	0.65	15.2	14.9	
18,290.0	90.60	359.70	12,532.8	5,850.6	-491.0	0.65	0.00	-0.65	14.8	14.2	
18,384.0	90.00	359.10	12,532.3	5,944.6	-492.0	0.90	-0.64	-0.64	15.0	14.5	
18,476.0	90.90	0.00	12,531.6	6,036.6	-492.8	1.38	0.98	0.98	14.9	14.5	
18,570.0	91.60	0.00	12,529.5	6,130.6	-492.8	0.74	0.74	0.00	13.4	13.8	
18,663.0	91.30	359.90	12,527.2	6,223.6	-492.8	0.34	-0.32	-0.11	11.7	13.1	
18,757.0	91.40	359.50	12,524.9	6,317.5	-493.3	0.44	0.11	-0.43	10.1	12.9	
18,853.0	91.40	358.60	12,522.6	6,413.5	-494.9	0.94	0.00	-0.94	8.4	13.7	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
18,946.0	91.60	358.70	12,520.2	6,506.4	-497.1	0.24	0.22	0.11	6.6	15.2	
19,040.0	91.60	357.20	12,517.5	6,600.3	-500.5	1.60	0.00	-1.60	4.6	17.8	
19,134.0	89.40	358.80	12,516.7	6,694.3	-503.7	2.89	-2.34	1.70	4.4	20.4	
19,229.0	90.60	359.70	12,516.7	6,789.3	-505.0	1.58	1.26	0.95	5.1	20.9	
19,322.0	88.60	359.70	12,517.4	6,882.3	-505.5	2.15	-2.15	0.00	6.3	20.7	
19,416.0	87.60	358.20	12,520.5	6,976.2	-507.2	1.92	-1.06	-1.60	10.1	21.7	
19,510.0	88.40	359.20	12,523.8	7,070.1	-509.3	1.36	0.85	1.06	14.0	23.1	
19,604.0	88.60	359.30	12,526.2	7,164.1	-510.6	0.24	0.21	0.11	17.1	23.6	
19,697.0	90.10	359.50	12,527.3	7,257.1	-511.5	1.63	1.61	0.22	18.8	23.8	
19,791.0	91.30	359.00	12,526.1	7,351.0	-512.8	1.38	1.28	-0.53	18.2	24.3	
19,884.0	91.00	0.40	12,524.3	7,444.0	-513.3	1.54	-0.32	1.51	17.0	24.1	
19,978.0	93.90	1.70	12,520.2	7,537.9	-511.5	3.38	3.09	1.38	13.6	21.7	
20,073.0	93.10	1.10	12,514.4	7,632.7	-509.2	1.05	-0.84	-0.63	8.4	18.6	
20,166.0	92.20	358.20	12,510.1	7,725.6	-509.8	3.26	-0.97	-3.12	4.8	18.4	
20,260.0	86.30	358.20	12,511.4	7,819.5	-512.7	6.28	-6.28	0.00	6.6	20.7	
20,353.0	85.80	358.10	12,517.8	7,912.2	-515.7	0.55	-0.54	-0.11	13.6	23.0	
20,448.0	88.70	356.80	12,522.3	8,007.0	-520.0	3.34	3.05	-1.37	18.9	26.5	
20,541.0	88.20	355.80	12,524.9	8,099.8	-526.0	1.20	-0.54	-1.08	22.1	31.7	
20,635.0	91.00	356.00	12,525.5	8,193.5	-532.7	2.99	2.98	0.21	23.5	37.7	
20,729.0	89.50	357.30	12,525.1	8,287.4	-538.2	2.11	-1.60	1.38	23.7	42.5	
20,819.0	89.70	359.00	12,525.7	8,377.3	-541.1	1.90	0.22	1.89	25.0	44.7	
20,913.0	94.50	0.80	12,522.3	8,471.2	-541.2	5.45	5.11	1.91	22.1	44.2	
21,007.0	94.30	2.70	12,515.1	8,564.9	-538.4	2.03	-0.21	2.02	15.5	40.6	
21,100.0	91.10	4.90	12,510.7	8,657.6	-532.2	4.17	-3.44	2.37	12.0	33.7	
21,194.0	90.20	2.50	12,509.6	8,751.3	-526.1	2.73	-0.96	-2.55	11.6	26.9	
21,288.0	91.80	2.10	12,508.0	8,845.3	-522.4	1.75	1.70	-0.43	10.6	22.4	
21,382.0	93.00	0.80	12,504.1	8,939.1	-520.0	1.88	1.28	-1.38	7.4	19.4	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB= 25' @ 3638.0usft (HP 473)
Site:	Neptune 10 State Com	MD Reference:	KB= 25' @ 3638.0usft (HP 473)
Well:	#702H	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)
21,476.0	93.50	358.00	12,498.7	9,033.0	-521.0	3.02	0.53	-2.98	2.9	19.6
21,570.0	92.90	357.70	12,493.5	9,126.8	-524.5	0.71	-0.64	-0.32	-1.7	22.4
21,664.0	88.50	359.30	12,492.3	9,220.7	-527.0	4.98	-4.68	1.70	-2.1	24.2
21,758.0	90.10	359.40	12,493.5	9,314.7	-528.0	1.71	1.70	0.11	-0.2	24.5
21,851.0	89.60	0.00	12,493.7	9,407.7	-528.5	0.84	-0.54	0.65	0.7	24.3
21,945.0	89.00	359.60	12,494.9	9,501.7	-528.8	0.77	-0.64	-0.43	2.6	23.9
22,038.0	90.00	359.70	12,495.7	9,594.7	-529.4	1.08	1.08	0.11	4.2	23.8
22,132.0	89.90	0.40	12,495.8	9,688.7	-529.3	0.75	-0.11	0.74	5.0	23.0
22,226.0	87.60	0.40	12,497.8	9,782.6	-528.7	2.45	-2.45	0.00	7.8	21.6
22,319.0	86.80	0.20	12,502.4	9,875.5	-528.2	0.89	-0.86	-0.22	13.1	20.4
22,413.0	86.50	359.50	12,507.8	9,969.4	-528.4	0.81	-0.32	-0.74	19.4	20.0
Final MWD Survey (MD=22413.0')										
22,505.4	86.50	359.50	12,513.5	10,061.6	-529.2	0.00	0.00	0.00	25.8	20.1
HL Crossing, MD:22505.4', TVD:12513.5', N/S:10061.6', E/W:-529.2', INC:86.50										
22,604.0	86.50	359.50	12,519.5	10,160.0	-530.1	0.00	0.00	0.00	83.0	64.6
Final Projection to Bit (MD=22604.0')										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,583.2	12,452.8	162.8	-489.3	HL Crossing, MD:12583.2', TVD:12452.8', N/S:162.8', E/W:-489.3', INC:61.09
22,413.0	12,507.8	9,969.4	-528.4	Final MWD Survey (MD=22413.0')
22,505.4	12,513.5	10,061.6	-529.2	HL Crossing, MD:22505.4', TVD:12513.5', N/S:10061.6', E/W:-529.2', INC:86.50
22,604.0	12,519.5	10,160.0	-530.1	Final Projection to Bit (MD=22604.0')

Checked By: _____ Approved By: _____ Date: _____