

30-025-44344

HOBBS OCD

SEP 26 2018

RECEIVED



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Hemlock 32 State

#702H

OH

Design: OH

Midland PVA

19 July, 2018





Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
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	Hemlock 32 State		
Site Position:		Northing:	457,257.00 usft
From:	Map	Easting:	767,769.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 17.825 N
		Longitude:	103° 36' 3.080 W
		Grid Convergence:	0.39 °

Well	#702H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Ground Level:

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	1/9/2018	6.91
			Dip Angle
			60.08
			Field Strength
			47,893.67422685

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			1.69



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
Well:	#702H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date	7/19/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
192.0	4,973.0	Gordon MWD Cartel 18 22' KB + 3' (OH)	MWD	OWSG MWD - Standard	
5,035.0	17,526.0	Newsco MWD (OH)	MWD	OWSG MWD - Standard	

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0
192.0	0.18	221.28	192.0	-0.2	-0.2	0.09	0.09	0.00	0.0	0.0
357.0	0.25	207.75	357.0	-0.7	-0.5	0.05	0.04	-8.20	0.0	0.0
531.0	0.38	198.99	531.0	-1.6	-0.9	0.08	0.07	-5.03	0.0	0.0
706.0	0.39	233.15	706.0	-2.5	-1.6	0.13	0.01	19.52	0.0	0.0
880.0	0.38	249.41	880.0	-3.1	-2.6	0.06	-0.01	9.34	0.0	0.0
1,047.0	0.59	239.41	1,047.0	-3.7	-3.8	0.14	0.13	-5.99	0.0	0.0
1,221.0	0.56	246.86	1,221.0	-4.5	-5.4	0.05	-0.02	4.28	0.0	0.0
1,316.0	0.55	252.80	1,316.0	-4.8	-6.3	0.06	-0.01	6.25	0.0	0.0
1,427.0	0.33	292.62	1,427.0	-4.9	-7.1	0.33	-0.20	35.87	0.0	0.0
1,602.0	0.54	279.60	1,602.0	-4.5	-8.3	0.13	0.12	-7.44	0.0	0.0
1,777.0	3.14	172.69	1,776.9	-9.1	-8.5	1.91	1.49	-61.09	0.0	0.0
1,951.0	4.94	155.76	1,950.4	-20.7	-4.9	1.23	1.03	-9.73	0.0	0.0
2,126.0	4.07	139.55	2,124.9	-32.3	2.3	0.88	-0.50	-9.26	0.0	0.0
2,300.0	3.74	135.72	2,298.5	-41.1	10.2	0.24	-0.19	-2.20	0.0	0.0
2,474.0	2.84	161.76	2,472.2	-49.2	15.5	0.99	-0.52	14.97	0.0	0.0
2,649.0	2.73	146.75	2,647.0	-56.8	19.2	0.42	-0.06	-8.58	0.0	0.0
2,823.0	2.25	147.28	2,820.8	-63.2	23.3	0.28	-0.28	0.30	0.0	0.0
2,998.0	2.47	142.88	2,995.7	-69.1	27.4	0.16	0.13	-2.51	0.0	0.0
3,172.0	2.80	148.80	3,169.5	-75.7	31.9	0.25	0.19	3.40	0.0	0.0
3,347.0	2.33	144.07	3,344.3	-82.2	36.2	0.29	-0.27	-2.70	0.0	0.0



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lee County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
Well:	#702H	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)	EW (usft)	DLeg (°/100usft)	BuSd (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
3,521.0	2.86	148.95	3,518.2	-88.8	40.5	0.33	0.30	2.80	0.0	0.0	0.0
3,696.0	2.74	151.50	3,693.0	-96.2	44.8	0.10	-0.07	1.46	0.0	0.0	0.0
3,870.0	3.35	161.59	3,866.7	-104.7	48.4	0.47	0.35	5.80	0.0	0.0	0.0
4,045.0	3.05	152.33	4,041.4	-113.7	52.1	0.34	-0.17	-5.29	0.0	0.0	0.0
4,220.0	2.33	148.34	4,216.2	-120.8	56.2	0.42	-0.41	-2.28	0.0	0.0	0.0
4,394.0	3.71	136.68	4,390.0	-127.9	61.9	0.86	0.79	-6.70	0.0	0.0	0.0
4,567.0	3.66	134.11	4,562.6	-135.8	69.7	0.10	-0.03	-1.49	0.0	0.0	0.0
4,741.0	3.30	151.26	4,736.3	-144.1	76.1	0.63	-0.21	9.86	0.0	0.0	0.0
4,916.0	2.86	146.92	4,911.1	-152.3	81.0	0.24	-0.19	-2.48	0.0	0.0	0.0
4,973.0	2.63	146.50	4,968.0	-154.6	82.5	0.58	-0.58	-0.74	0.0	0.0	0.0
5,035.0	2.10	150.00	5,029.9	-156.8	83.8	0.89	-0.85	5.64	0.3	-0.1	-0.1
5,181.0	5.20	144.40	5,175.6	-164.5	89.0	2.13	2.12	-3.84	0.8	0.8	0.8
5,369.0	4.90	140.00	5,362.9	-177.6	99.2	0.26	-0.16	-2.34	-1.3	2.7	2.7
5,556.0	4.70	131.10	5,549.3	-188.7	110.1	0.41	-0.11	-4.76	-3.5	6.2	6.2
5,743.0	4.40	126.90	5,735.7	-198.1	121.6	0.24	-0.16	-2.25	-5.4	11.2	11.2
5,931.0	5.40	131.40	5,923.0	-208.3	134.0	0.57	0.53	2.39	-6.6	17.0	17.0
6,118.0	5.00	153.00	6,109.2	-221.3	144.3	1.06	-0.21	11.55	-1.7	20.9	20.9
6,307.0	4.60	147.10	6,297.6	-235.0	152.1	0.34	-0.21	-3.12	-4.8	20.7	20.7
6,494.0	4.40	145.70	6,484.0	-247.3	160.2	0.12	-0.11	-0.75	-5.4	21.7	21.7
6,681.0	4.20	144.60	6,670.5	-258.8	168.3	0.12	-0.11	-0.59	-5.3	23.0	23.0
6,869.0	4.60	172.60	6,857.9	-271.9	173.2	1.15	0.21	14.89	6.1	20.5	20.5
7,057.0	4.40	178.20	7,045.3	-286.5	174.4	0.26	-0.11	2.98	6.4	13.8	13.8
7,244.0	4.40	176.00	7,231.8	-300.9	175.1	0.09	0.00	-1.18	4.7	7.5	7.5
7,432.0	3.60	190.80	7,419.3	-313.9	174.5	0.69	-0.43	7.87	-0.4	2.8	2.8
7,619.0	1.40	238.10	7,606.2	-320.8	171.5	1.52	-1.18	25.29	-4.5	6.4	6.4
7,807.0	1.50	272.10	7,794.1	-322.0	167.1	0.45	0.05	18.09	-4.5	9.1	9.1
7,901.0	1.30	281.20	7,888.1	-322.1	164.8	0.35	-0.21	-11.60	-8.4	7.9	7.9



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
Well:	#702H	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)
8,087.0	1.00	248.30	8,074.0	-323.0	161.2	0.21	-0.16	-6.94	-13.6	5.3
8,275.0	1.10	229.30	8,262.0	-324.8	158.3	0.19	0.05	-10.11	-18.0	0.1
8,461.0	1.10	222.80	8,448.0	-327.3	155.8	0.07	0.00	-3.49	-21.4	-2.2
8,650.0	1.00	199.40	8,636.9	-330.1	154.0	0.23	-0.05	-12.38	-22.1	-11.2
8,837.0	1.10	209.20	8,823.9	-333.2	152.6	0.11	0.05	5.24	-27.1	-7.0
9,023.0	0.90	327.50	9,009.9	-333.6	150.9	0.92	-0.11	63.60	6.1	28.8
9,211.0	1.30	332.00	9,197.9	-330.4	149.1	0.22	0.21	2.39	4.7	28.3
9,398.0	1.60	336.50	9,384.8	-326.2	147.1	0.17	0.16	2.41	2.2	28.0
9,586.0	1.30	354.20	9,572.7	-321.7	145.8	0.28	-0.16	9.41	6.0	26.8
9,773.0	1.50	27.10	9,759.7	-317.4	146.7	0.44	0.11	17.59	15.4	20.4
9,960.0	1.20	61.60	9,946.6	-314.3	149.5	0.45	-0.16	18.45	20.3	9.5
10,148.0	1.60	351.40	10,134.6	-310.7	150.9	0.87	0.21	-37.34	-5.4	20.4
10,335.0	1.50	343.80	10,321.5	-305.8	149.8	0.12	-0.05	-4.06	-13.1	19.2
10,521.0	2.50	341.10	10,507.4	-299.6	147.8	0.54	0.54	-1.45	-20.4	18.5
10,708.0	3.20	356.20	10,694.2	-290.5	146.2	0.55	0.37	8.07	-24.1	24.2
10,897.0	3.00	13.90	10,882.9	-280.5	147.0	0.52	-0.11	9.37	-25.6	32.0
11,084.0	2.20	10.00	11,069.7	-272.2	148.8	0.44	-0.43	-2.09	-36.1	29.9
11,272.0	0.50	345.20	11,257.7	-267.8	149.2	0.94	-0.90	-13.19	-49.4	10.4
11,460.0	1.20	51.70	11,445.6	-265.8	150.5	0.59	0.37	35.37	-12.5	50.2
11,647.0	1.00	54.00	11,632.6	-263.7	153.4	0.11	-0.11	1.23	-14.0	50.8
11,672.2	0.86	44.71	11,657.8	-263.4	153.7	0.82	-0.56	-36.85	-22.4	47.8
FTP Crossing 11672.2' MD; 11657.8' TVD; -263.4'; 153.7'; 0.86										
11,828.0	1.00	318.70	11,813.6	-261.5	153.6	0.82	0.09	-55.21	-50.7	-20.2
11,944.0	1.50	19.40	11,929.8	-259.4	153.5	1.15	0.43	52.33	-44.5	35.2
12,038.0	0.60	13.10	12,023.6	-257.7	154.0	0.96	-0.96	-6.70	-49.8	30.0
12,088.0	0.97	7.91	12,073.5	-257.0	154.1	0.75	0.74	-10.39	-53.0	25.3
KOP 12088.0' MD; 12073.5' TVD; -257.0'; 154.1'; 0.97										



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
Well:	#702H	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)	
12,132.0	1.30	5.80	12,117.5	-256.2	154.2	0.75	0.75	-4.79	-52.2	23.1	
12,179.0	4.20	9.20	12,164.5	-253.9	154.5	6.18	6.17	7.23	-45.4	24.9	
12,226.0	9.10	12.00	12,211.1	-248.6	155.6	10.45	10.43	5.96	-37.2	24.3	
12,273.0	12.50	8.80	12,257.3	-239.9	157.1	7.34	7.23	-6.81	-29.8	19.2	
12,319.0	13.60	7.50	12,302.1	-229.7	158.6	2.47	2.39	-2.83	-18.8	15.6	
12,366.0	17.90	4.90	12,347.3	-217.0	159.9	9.27	9.15	-5.53	-5.5	12.0	
12,414.0	23.00	0.50	12,392.3	-200.2	160.7	11.09	10.62	-9.17	8.1	10.6	
12,435.0	23.20	358.80	12,411.6	-192.0	160.6	3.32	0.95	-8.10	14.7	11.1	
12,461.0	27.60	357.20	12,435.1	-180.9	160.2	17.13	16.92	-6.15	23.3	12.1	
12,486.0	30.80	356.40	12,456.9	-168.7	159.5	12.89	12.80	-3.20	31.2	13.2	
12,507.0	34.00	356.30	12,474.7	-157.5	158.8	15.24	15.24	-0.48	37.7	14.0	
12,554.0	42.10	359.00	12,511.6	-128.5	157.7	17.59	17.23	5.74	51.1	13.7	
12,601.0	57.00	2.00	12,542.0	-92.9	158.1	32.07	31.70	6.38	59.1	11.2	
12,646.0	72.10	4.20	12,561.3	-52.4	160.3	33.84	33.56	4.89	58.5	7.9	
12,676.0	82.70	5.00	12,567.9	-23.3	162.7	35.43	35.33	2.67	53.4	5.6	
12,702.0	88.00	5.20	12,570.0	2.5	165.0	20.40	20.38	0.77	46.8	3.5	
12,749.0	88.30	6.00	12,571.5	49.3	169.6	1.82	0.64	1.70	35.6	-1.0	
12,796.0	90.60	4.80	12,571.9	96.0	174.0	5.52	4.89	-2.55	27.6	-5.2	
12,890.0	92.50	2.30	12,569.4	189.8	179.8	3.34	2.02	-2.66	20.8	-11.3	
12,937.0	89.10	0.40	12,568.7	236.8	180.9	8.29	-7.23	-4.04	20.8	-12.7	
12,984.0	90.20	0.70	12,569.0	283.8	181.4	2.43	2.34	0.64	21.7	-13.5	
13,038.0	94.80	1.10	12,566.7	337.7	182.2	8.55	8.52	0.74	20.2	-14.7	
13,077.0	96.70	1.20	12,562.8	376.5	183.0	4.88	4.87	0.26	16.8	-15.8	
13,171.0	93.00	7.00	12,554.8	469.9	189.7	7.30	-3.94	6.17	10.4	-23.0	
13,227.0	92.90	8.20	12,551.9	525.3	197.1	2.15	-0.18	2.14	8.4	-30.8	
13,265.0	89.80	8.90	12,551.0	562.9	202.7	8.36	-8.16	1.84	7.9	-36.8	
13,293.0	87.00	8.90	12,551.8	590.5	207.1	10.00	-10.00	0.00	8.7	-41.3	



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
Well:	#702H	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)
13,358.0	85.60	8.30	12,556.0	654.7	216.8	2.34	-2.15	-0.92	13.6	-51.6
13,388.0	89.10	5.00	12,557.4	684.4	220.2	16.03	11.67	-11.00	15.9	-55.1
13,452.0	95.70	359.00	12,554.7	748.2	222.5	13.93	10.31	-9.37	14.0	-57.8
13,477.0	95.80	358.60	12,552.2	773.1	222.0	1.64	0.40	-1.60	11.9	-57.4
13,508.0	93.00	356.90	12,549.8	804.0	220.7	10.56	-9.03	-5.48	9.9	-56.4
13,546.0	91.30	355.00	12,548.4	841.9	218.1	6.71	-4.47	-5.00	9.1	-54.0
13,591.0	91.00	354.60	12,547.5	886.7	214.0	1.11	-0.67	-0.89	8.9	-50.2
13,640.0	91.20	356.80	12,546.6	935.5	210.3	4.51	0.41	4.49	8.7	-46.9
13,734.0	90.30	357.90	12,545.3	1,029.4	206.0	1.51	-0.96	1.17	9.0	-43.2
13,781.0	90.30	357.60	12,545.1	1,076.4	204.1	0.64	0.00	-0.64	9.8	-41.6
13,828.0	90.40	358.60	12,544.8	1,123.4	202.6	2.14	0.21	2.13	10.5	-40.4
13,875.0	88.60	358.20	12,545.2	1,170.3	201.2	3.92	-3.83	-0.85	12.0	-39.4
13,922.0	88.20	358.20	12,546.5	1,217.3	199.8	0.85	-0.85	0.00	14.3	-38.2
14,016.0	90.70	357.60	12,547.4	1,311.2	196.3	2.74	2.66	-0.64	17.3	-35.4
14,085.0	93.70	358.10	12,544.8	1,380.1	193.7	4.41	4.35	0.72	16.1	-33.3
14,111.0	94.10	358.40	12,543.0	1,406.0	192.9	1.92	1.54	1.15	14.9	-32.7
14,205.0	93.40	358.60	12,536.9	1,499.8	190.5	0.77	-0.74	0.21	10.9	-30.9
14,298.0	89.20	357.40	12,534.8	1,592.7	187.2	4.70	-4.52	-1.29	10.9	-28.3
14,392.0	91.90	357.30	12,533.9	1,666.6	182.9	2.87	2.87	-0.11	12.0	-24.6
14,439.0	93.20	356.90	12,531.8	1,733.5	180.5	2.89	2.77	-0.85	10.9	-22.5
14,485.0	94.70	357.50	12,528.6	1,779.3	178.3	3.51	3.26	1.30	8.7	-20.6
14,532.0	93.10	357.80	12,525.4	1,826.2	176.4	3.46	-3.40	0.64	6.6	-19.0
14,579.0	92.80	358.50	12,523.0	1,873.1	174.8	1.62	-0.64	1.49	5.2	-17.8
14,673.0	91.60	0.40	12,519.4	1,967.0	173.9	2.39	-1.28	2.02	3.7	-17.5
14,768.0	91.10	357.50	12,517.1	2,061.9	172.2	3.10	-0.53	-3.05	2.9	-16.4
14,861.0	89.90	358.00	12,516.3	2,154.9	168.6	1.40	-1.29	0.54	2.8	-13.4
14,955.0	90.00	358.30	12,516.4	2,248.8	165.5	0.34	0.11	0.32	3.6	-11.0



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
Well:	#702H	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)	
15,050.0	91.30	358.40	12,515.3	2,343.8	162.8	1.37	1.37	0.11	3.3	-8.9	
15,144.0	88.90	357.60	12,515.2	2,437.7	159.5	2.69	-2.55	-0.85	3.9	-6.2	
15,237.0	91.10	358.00	12,515.2	2,530.6	155.9	2.41	2.37	0.43	4.6	-3.3	
15,323.0	91.40	357.80	12,513.3	2,616.5	152.8	0.42	0.35	-0.23	3.4	-0.7	
15,417.0	91.90	357.40	12,510.6	2,710.4	148.9	0.68	0.53	-0.43	1.4	2.6	
15,511.0	91.00	357.20	12,508.2	2,804.3	144.4	0.98	-0.96	-0.21	-0.3	6.3	
15,606.0	90.20	359.20	12,507.2	2,899.2	141.4	2.27	-0.84	2.11	-0.5	8.7	
15,699.0	90.60	359.80	12,506.6	2,992.2	140.6	0.78	0.43	0.65	-0.5	8.9	
15,793.0	90.50	359.80	12,505.7	3,086.2	140.3	0.11	-0.11	0.00	-0.5	8.6	
15,886.0	91.00	0.80	12,504.4	3,179.2	140.8	1.20	0.54	1.08	-0.8	7.4	
15,980.0	88.00	3.00	12,505.3	3,273.1	143.9	3.96	-3.19	2.34	1.0	3.7	
16,073.0	87.90	3.40	12,508.6	3,365.9	149.1	0.44	-0.11	0.43	5.3	-2.1	
16,167.0	91.60	1.40	12,509.0	3,459.8	153.0	4.47	3.94	-2.13	6.6	-6.7	
16,262.0	90.70	0.50	12,507.1	3,554.8	154.6	1.34	-0.95	-0.95	5.7	-8.9	
16,355.0	89.40	0.00	12,507.0	3,647.8	155.0	1.50	-1.40	-0.54	6.5	-10.0	
16,449.0	92.10	359.60	12,505.8	3,741.7	154.7	2.90	2.87	-0.43	6.2	-10.3	
16,542.0	91.40	357.70	12,502.9	3,834.7	152.5	2.18	-0.75	-2.04	4.3	-8.7	
16,636.0	89.40	355.80	12,502.3	3,928.5	147.2	2.93	-2.13	-2.02	4.6	-4.0	
16,730.0	91.50	354.50	12,501.5	4,022.2	139.2	2.63	2.23	-1.38	4.8	3.3	
16,824.0	92.50	357.90	12,498.3	4,115.9	133.0	3.77	1.06	3.62	2.5	8.9	
16,917.0	92.40	358.80	12,494.3	4,208.8	130.3	0.97	-0.11	0.97	-0.6	10.9	
17,012.0	91.20	357.40	12,491.3	4,303.7	127.2	1.94	-1.26	-1.47	-2.6	13.4	
17,106.0	93.00	359.30	12,487.9	4,397.5	124.5	2.78	1.91	2.02	-5.1	15.5	
17,201.0	90.60	359.90	12,484.9	4,492.5	123.8	2.60	-2.53	0.63	-7.1	15.5	
17,295.0	90.30	358.60	12,484.1	4,586.5	122.6	1.42	-0.32	-1.38	-6.9	16.1	
17,389.0	90.30	356.50	12,483.6	4,680.4	118.5	2.23	0.00	-2.23	-6.4	19.5	



Midland PVA



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3685.0usft
Site:	Hemlock 32 State	MD Reference:	KB = 25 @ 3685.0usft
Well:	#702H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Incl (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
17,466.0	90.80	354.90	12,482.9	4,757.2	112.8	2.18	0.65	-2.08	-6.4	24.8
Last MWD Survey (MD = 17466.0)										
17,526.0	90.80	354.90	12,482.1	4,816.9	107.4	0.00	0.00	0.00	-6.6	29.7
Projection to Bit (MD = 17526.0)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
11,672.2	11,657.8	-263.4	153.7	FTP Crossing 11672.2' MD; 11657.8' TVD; -263.4'; 153.7'; 0.86
12,088.0	12,073.5	-257.0	154.1	KOP 12088.0' MD; 12073.5' TVD; -257.0'; 154.1'; 0.97
17,466.0	12,482.9	4,757.2	112.8	Last MWD Survey (MD = 17466.0)
17,526.0	12,482.1	4,816.9	107.4	Projection to Bit (MD = 17526.0)

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Hemlock 32 State #702H

Plan #3

PROJECT DETAILS: Lea County NM (NAD 83 NME)

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

WELL DETAILS: #702H

KB ~ 25 @ 3685.0uoft 3660.0
Northing 457257.00 Easting 767802.00 Latitude 32° 15' 17.822 N Longitude 103° 36' 2.696 W

SECTION DETAILS

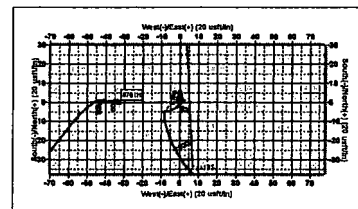
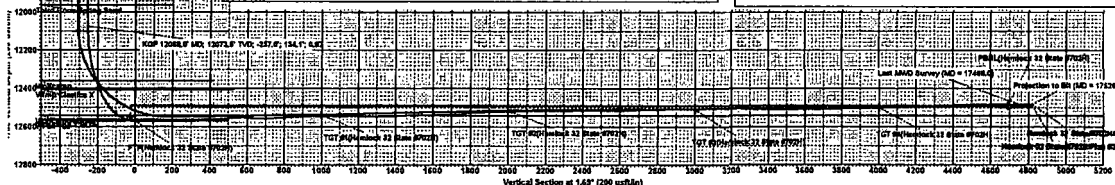
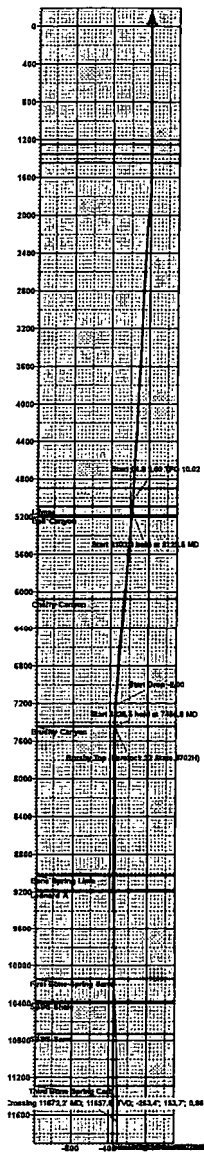
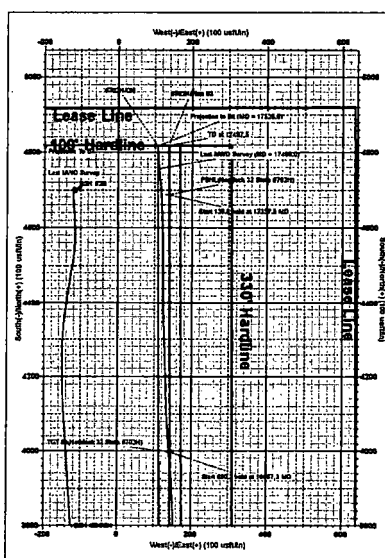
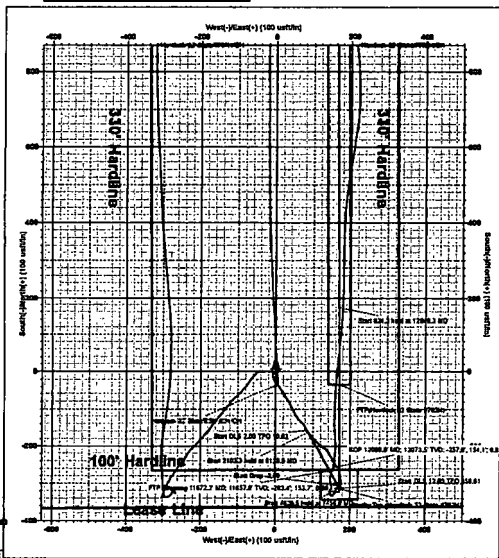
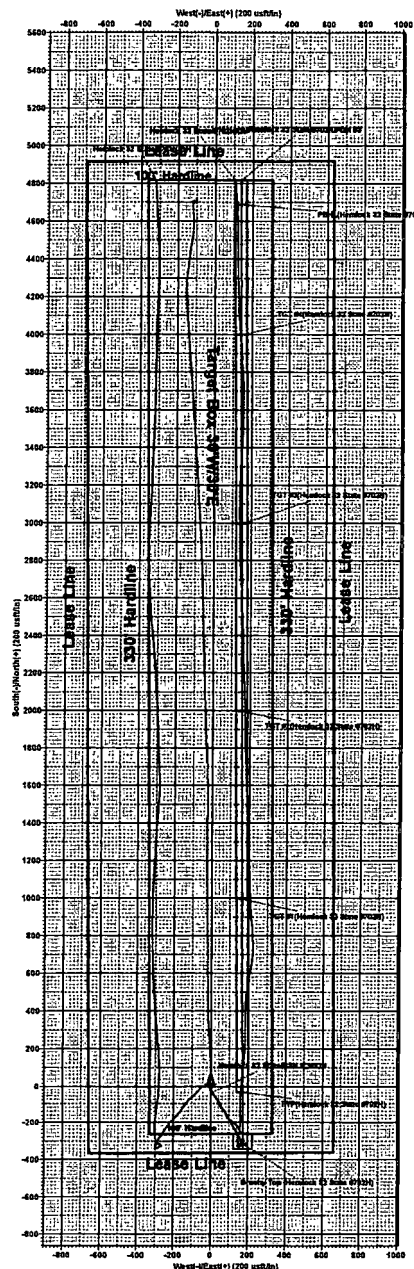
Sec	MD	Inc	Asl	TVD	+N-S	+E-W	Dleg	TFace	VFace	Target	Annotation
1	6038.0	2.69	146.60	6038.0	-167.0	84.1	0.00	0.00	-164.8		
2	6128.5	4.48	160.67	6124.2	-162.0	87.1	2.00	10.02	-159.4		
3	7232.7	4.48	150.67	7231.1	-355.3	167.6	0.00	0.00	-350.3		
4	7458.9	0.00	0.00	7445.0	-313.0	171.9	2.00	180.00	-307.8		
5	12083.4	0.00	0.00	12071.5	-313.0	171.9	0.00	0.00	-307.8		
6	12840.3	90.83	359.61	12549.9	171.4	168.6	12.00	359.61	176.3		
7	13164.7	90.83	359.61	12537.0	855.6	161.0	0.00	0.00	1000.0		
8	13586.5	91.26	359.61	12536.8	1017.4	162.8	2.00	0.06	1021.7		
9	14656.6	91.26	359.61	12515.0	1996.3	156.2	0.00	0.00	2000.0		
10	14705.8	90.44	359.61	12514.4	2037.4	156.0	2.00	150.00	2041.2		
11	15668.3	90.44	359.61	12507.0	2996.3	149.8	0.00	0.00	3000.0		
12	15672.9	90.57	359.61	12506.9	3003.5	149.4	2.00	0.00	3006.8		
13	16167.0	90.57	359.61	12487.0	3987.5	142.7	0.00	0.00	4000.0		
14	16867.3	90.59	359.61	12487.0	3987.9	142.7	2.00	0.00	4000.4		
15	17357.5	90.59	359.61	12490.0	4688.0	138.0	0.00	0.00	4690.0		
16	17467.5	90.59	359.61	12468.7	4818.0	137.1	0.00	0.00	4818.9		

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top (Hemlock 32 State #702H)	7448.0	-313.0	171.9	456344.01	767873.90
TGT #1(Hemlock 32 State #702H)	12537.0	855.6	163.0	456352.60	767965.03
TGT #2(Hemlock 32 State #702H)	12515.0	1996.3	156.2	456253.30	767858.25
TGT #3(Hemlock 32 State #702H)	12607.0	2996.3	149.5	460253.30	767851.48
TGT #4(Hemlock 32 State #702H)	12497.0	3987.5	142.7	461254.50	767944.68
PBHL(Hemlock 32 State #702H)	12490.0	4688.0	138.0	461945.00	767940.00
FTPH(Hemlock 32 State #702H)	12550.0	-33.0	170.0	457224.00	767972.00



Lea County, NM (NAD 83 NME)
Hemlock 32 State #702H
Plan #3