



Lea County, NM (NAD 83 NME)

Dogwood 23 Fed Com #703H

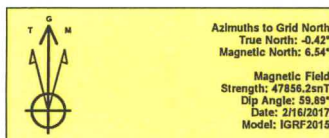
Plan #1

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: #703H

Ground Level: 3318.0
Northing: 372734.00
Easting: 787295.00
Latitude: 32° 1' 20.074 N
Longitude: 103° 32' 23.076 W



To convert a Magnetic Direction to a Grid Direction, Add 6.54°
To convert a Magnetic Direction to a True Direction, Add 6.96° East
To convert a True Direction to a Grid Direction, Subtract 0.42°

SECTION DETAILS

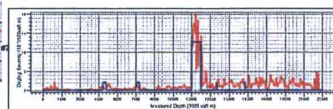
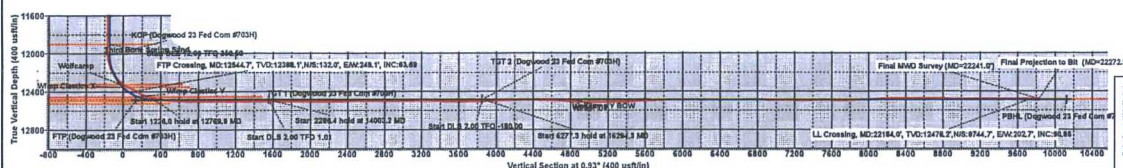
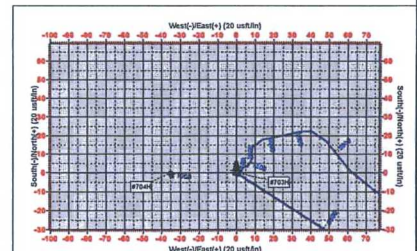
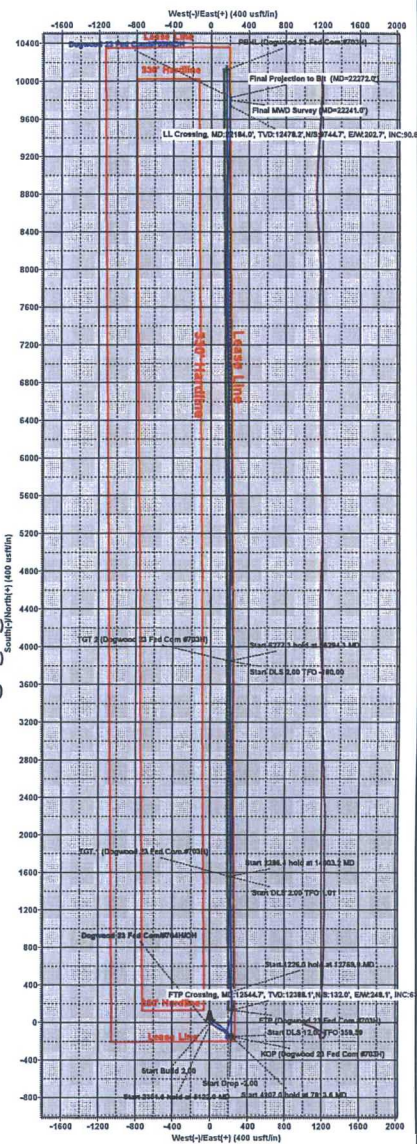
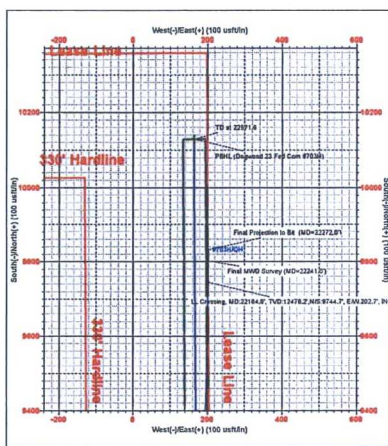
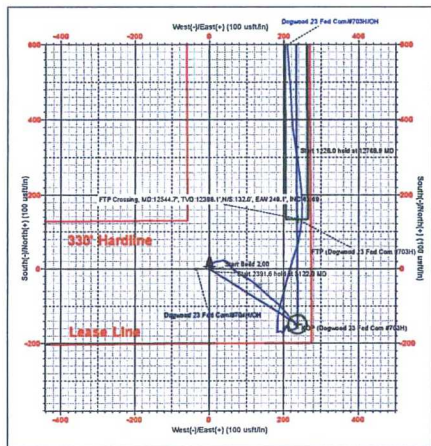
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V/Sect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
4822.0	0.00	0.00	4822.0	0.0	0.0	0.00	0.00	0.0	
5122.0	6.00	122.00	5121.5	-8.3	13.3	2.00	122.00	-8.1	
7513.6	6.00	122.00	7500.0	-140.8	225.3	0.00	0.00	-137.1	
7813.6	0.00	0.00	7799.5	-149.1	238.6	2.00	180.00	-145.2	
12020.7	0.00	0.00	12006.5	-149.1	238.6	0.00	0.00	-145.2	
12769.9	89.90	359.59	12484.0	327.5	235.2	12.00	359.59	331.3	
13995.9	89.90	359.59	12486.0	1553.5	226.4	0.00	0.00	1557.0	
14003.2	90.05	359.59	12486.0	1560.8	226.3	2.00	1.01	1564.2	
16289.5	90.05	359.59	12484.0	3847.1	210.0	0.00	0.00	3850.0	TGT 1 (Dogwood 23 Fed Com #703H)
16294.3	89.95	359.59	12484.0	3851.9	209.9	2.00	-180.00	3854.8	TGT 2 (Dogwood 23 Fed Com #703H)
22571.6	89.95	359.59	12489.0	10129.0	165.0	0.00	0.00	10130.3	PBHL (Dogwood 23 Fed Com #703H)

CASING DETAILS

No casing data is available.

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (Dogwood 23 Fed Com #703H)	12006.5	-149.1	238.6	372894.89	787523.63
FTP (Dogwood 23 Fed Com #703H)	12484.0	132.0	238.0	372896.00	787523.00
TGT 2 (Dogwood 23 Fed Com #703H)	12484.0	3847.1	210.0	376581.10	787494.95
TGT 1 (Dogwood 23 Fed Com #703H)	12486.0	1553.5	226.4	374297.50	787511.37
PBHL (Dogwood 23 Fed Com #703H)	12489.0	10129.0	165.0	382863.00	787450.00



Lea County, NM (NAD 83 NME)
Dogwood 23 Fed Com #703H
Plan #1
10-03-2017 12:12 PM
eogresources



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Dogwood 23 Fed Com

#703H

OH

Design: OH

PVA Report

12 February, 2018

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
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	Dogwood 23 Fed Com		
Site Position:		Northing:	372,741.00 usft
From:	Map	Easting:	788,311.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 20.069 N
		Longitude:	103° 32' 11.158 W
		Grid Convergence:	0.42 °

Well		#703H				
Well Position	+N/-S	0.0 usft	Northing:	372,734.00 usft	Latitude:	32° 1' 20.074 N
	+E/-W	0.0 usft	Easting:	787,285.00 usft	Longitude:	103° 32' 23.076 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,318.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/16/2017	6.96	59.89	47,856.20303499

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	0.93	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
Well:	#703H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program	Date	2/12/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
143.0	993.0	Olebrook MWD (OH)	MWD	MWD - Standard	
1,082.0	21,829.0	Pro MWD (OH)	MWD	MWD - Standard	
21,855.0	22,272.0	Leam MWD (OH)	MWD	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
143.0	0.62	252.18	143.0	-0.2	-0.7	0.43	0.43	0.00	-0.8	0.0
266.0	0.26	197.16	266.0	-0.7	-1.5	0.42	-0.29	-44.73	-1.1	-1.2
359.0	0.70	107.16	359.0	-1.1	-1.0	0.80	0.47	-96.77	0.6	-1.3
486.0	0.79	96.79	486.0	-1.4	0.6	0.13	0.07	-8.17	-0.8	-1.3
581.0	0.44	116.12	581.0	-1.6	1.6	0.42	-0.37	20.35	-2.2	-0.8
677.0	1.06	21.46	677.0	-1.0	2.3	1.23	0.65	-98.60	0.1	-2.5
771.0	1.23	22.87	770.9	0.8	3.0	0.18	0.18	1.50	-1.9	-2.5
865.0	1.32	31.40	864.9	2.6	3.9	0.22	0.10	9.07	-4.3	-2.0
929.0	0.53	104.79	928.9	3.2	4.6	1.99	-1.23	114.67	-3.6	4.2
993.0	0.79	97.49	992.9	3.0	5.3	0.43	0.41	-11.41	-4.9	3.7
1,082.0	0.40	39.12	1,081.9	3.2	6.1	0.76	-0.44	-65.58	-6.3	-2.7
1,272.0	0.53	36.30	1,271.9	4.4	7.1	0.07	0.07	-1.48	-7.7	-3.1
1,461.0	0.31	23.82	1,460.9	5.6	7.8	0.13	-0.12	-6.60	-8.3	-4.9
1,651.0	0.57	21.80	1,650.9	6.9	8.4	0.14	0.14	-1.06	-9.5	-5.2
1,842.0	0.26	50.28	1,841.9	8.1	9.0	0.19	-0.16	14.91	-12.1	0.4
2,032.0	0.48	314.30	2,031.9	8.9	8.8	0.30	0.12	-50.52	0.1	-12.5
2,222.0	0.35	6.60	2,221.9	10.1	8.3	0.20	-0.07	27.53	-10.9	-7.1
2,412.0	0.35	0.53	2,411.9	11.2	8.4	0.02	0.00	-3.19	-11.3	-8.3
2,602.0	0.31	9.94	2,601.9	12.3	8.5	0.04	-0.02	4.95	-13.6	-6.2

PVA Report

Company:	EOG Resources - Midland					Local Co-ordinate Reference:			Well #703H		
Project:	Lea County, NM (NAD 83 NME)					TVD Reference:			KB = 25' @ 3343.0usft		
Site:	Dogwood 23 Fed Com					MD Reference:			KB = 25' @ 3343.0usft		
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)	
2,792.0	0.44	30.68	2,791.9	13.4	8.9	0.10	0.07	10.92	-16.1	-0.8	
2,982.0	0.13	22.42	2,981.9	14.3	9.4	0.16	-0.16	-4.35	-16.8	-3.2	
3,172.0	0.48	66.71	3,171.9	14.8	10.2	0.21	0.18	23.31	-15.2	9.5	
3,362.0	0.40	57.13	3,361.9	15.4	11.5	0.06	-0.04	-5.04	-18.0	6.7	
3,551.0	0.62	34.02	3,550.9	16.7	12.6	0.16	0.12	-12.23	-20.9	-1.1	
3,742.0	0.79	75.33	3,741.8	17.8	14.5	0.27	0.09	21.63	-18.5	13.6	
3,932.0	1.63	80.69	3,931.8	18.6	18.4	0.45	0.44	2.82	-21.2	15.4	
4,122.0	1.80	75.77	4,121.7	19.8	24.0	0.12	0.09	-2.59	-28.1	13.3	
4,312.0	1.58	79.72	4,311.6	21.0	29.4	0.13	-0.12	2.08	-32.7	15.4	
4,502.0	1.49	70.84	4,501.6	22.3	34.3	0.13	-0.05	-4.67	-39.7	9.8	
4,692.0	2.64	100.73	4,691.4	22.3	41.0	0.81	0.61	15.73	-36.1	29.5	
4,882.0	3.43	141.95	4,881.2	17.0	48.8	1.19	0.42	21.69	-16.1	48.7	
4,971.0	3.21	140.19	4,970.0	13.0	52.0	0.27	-0.25	-1.98	-19.7	47.0	
5,158.0	4.48	141.42	5,156.6	3.2	59.9	0.68	0.68	0.66	-16.5	42.3	
5,348.0	7.25	123.31	5,345.6	-9.2	74.6	1.74	1.46	-9.53	-27.9	32.4	
5,538.0	6.24	120.33	5,534.3	-21.0	93.5	0.56	-0.53	-1.57	-32.1	30.9	
5,728.0	6.51	122.52	5,723.1	-32.0	111.5	0.19	0.14	1.15	-32.1	32.3	
5,918.0	7.30	132.63	5,911.8	-45.9	129.5	0.76	0.42	5.32	-29.1	35.6	
6,109.0	6.95	130.87	6,101.3	-61.7	147.1	0.22	-0.18	-0.92	-34.2	31.2	
6,299.0	6.20	130.70	6,290.0	-75.9	163.6	0.39	-0.39	-0.09	-36.4	28.1	
6,489.0	5.93	128.24	6,479.0	-88.7	179.1	0.20	-0.14	-1.29	-37.9	23.9	
6,679.0	5.76	139.31	6,668.0	-102.0	193.0	0.60	-0.09	5.83	-32.8	26.7	
6,869.0	5.41	137.64	6,857.1	-115.8	205.3	0.20	-0.18	-0.88	-33.0	20.1	
7,059.0	4.44	136.59	7,046.4	-127.8	216.4	0.51	-0.51	-0.55	-30.4	14.3	
7,249.0	4.04	133.07	7,235.9	-137.7	226.3	0.25	-0.21	-1.85	-25.7	8.2	
7,439.0	3.38	154.52	7,425.5	-147.3	233.6	0.80	-0.35	11.29	-16.0	8.8	
7,629.0	0.66	181.76	7,615.3	-153.5	236.0	1.48	-1.43	14.34	-7.4	2.6	

PVA Report

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Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
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)	
7,819.0	0.88	202.33	7,805.3	-155.9	235.4	0.18	0.12	10.83	-7.5	-0.4	
8,010.0	1.23	196.62	7,996.3	-159.3	234.2	0.19	0.18	-2.99	-11.0	-1.3	
8,200.0	0.84	270.09	8,186.3	-161.2	232.3	0.67	-0.21	38.67	-6.3	12.1	
8,390.0	0.84	257.61	8,376.2	-161.5	229.5	0.10	0.00	-6.57	-11.6	10.2	
8,580.0	1.05	243.99	8,566.2	-162.6	226.6	0.16	0.11	-7.17	-16.7	6.8	
8,770.0	1.10	245.83	8,756.2	-164.1	223.4	0.03	0.03	0.97	-20.1	7.4	
8,960.0	1.19	237.92	8,946.1	-165.9	220.0	0.10	0.05	-4.16	-24.7	4.3	
9,150.0	1.19	240.03	9,136.1	-167.9	216.6	0.02	0.00	1.11	-28.4	5.3	
9,340.0	1.41	349.11	9,326.1	-166.6	214.5	1.12	0.12	57.41	12.6	27.0	
9,530.0	1.93	333.99	9,516.0	-161.4	212.6	0.36	0.27	-7.96	-0.3	28.8	
9,720.0	0.92	334.08	9,705.9	-157.2	210.6	0.53	-0.53	0.05	-5.0	28.8	
9,911.0	1.32	354.47	9,896.9	-153.6	209.7	0.29	0.21	10.68	1.7	29.2	
10,101.0	1.49	250.67	10,086.9	-152.3	207.1	1.17	0.09	-54.63	-30.7	-7.5	
10,291.0	1.58	185.45	10,276.8	-155.7	204.6	0.87	0.05	-34.33	-9.8	-33.3	
10,482.0	1.80	170.95	10,467.7	-161.3	204.8	0.25	0.12	-7.59	-6.7	-35.3	
10,672.0	1.98	222.37	10,657.6	-166.6	203.0	0.87	0.09	27.06	-36.9	-14.5	
10,862.0	1.89	247.42	10,847.5	-170.3	197.9	0.44	-0.05	13.18	-45.7	3.9	
11,052.0	0.22	32.00	11,037.5	-171.2	195.2	1.09	-0.88	76.09	41.7	25.1	
11,242.0	1.27	15.82	11,227.5	-168.8	196.0	0.56	0.55	-8.52	30.6	35.6	
11,432.0	2.11	264.64	11,417.4	-167.1	193.1	1.49	0.44	-58.52	-47.0	13.7	
11,622.0	1.93	240.74	11,607.3	-169.0	186.8	0.45	-0.09	-12.58	-54.9	-8.0	
11,806.0	0.22	242.49	11,791.3	-170.7	183.8	0.93	-0.93	0.95	-58.6	-6.2	
11,995.0	0.92	10.95	11,980.3	-169.4	183.8	0.57	0.37	67.97	30.3	50.0	
12,022.0	3.03	4.53	12,007.3	-168.4	183.9	7.85	7.81	-23.78	23.6	53.1	
12,023.4	3.22	4.10	12,008.6	-168.4	183.9	13.73	13.62	-31.11	23.1	53.2	
KOP (Dogwood 23 Fed Com #703H)											
12,067.0	9.19	359.61	12,052.0	-163.7	183.9	13.73	13.69	-10.29	16.2	54.8	

PVA Report

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Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
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)	
12,117.0	14.73	0.05	12,100.9	-153.3	183.9	11.08	11.08	0.88	13.4	54.6	
12,162.0	21.49	3.83	12,143.6	-139.3	184.5	15.24	15.02	8.40	13.2	53.3	
12,212.0	29.20	9.70	12,188.8	-118.1	187.2	16.20	15.42	11.74	12.3	50.0	
12,257.0	36.40	13.90	12,226.6	-94.3	192.2	16.77	16.00	9.33	8.1	45.3	
12,307.0	43.60	15.20	12,264.9	-63.2	200.3	14.50	14.40	2.60	-0.9	38.6	
12,352.0	52.10	16.00	12,295.0	-31.1	209.3	18.93	18.89	1.78	-11.0	31.1	
12,403.0	60.20	16.60	12,323.4	9.5	221.2	15.91	15.88	1.18	-24.2	21.5	
12,448.0	62.60	16.80	12,345.0	47.3	232.5	5.35	5.33	0.44	-36.0	11.7	
12,498.0	63.90	12.10	12,367.5	90.5	243.7	8.79	2.60	-9.40	-45.7	-1.2	
12,543.0	63.70	3.30	12,387.4	130.5	249.1	17.55	-0.44	-19.56	-48.6	-11.0	
12,544.7	63.69	3.18	12,388.1	132.0	249.1	6.12	-0.68	-6.78	-48.6	-11.1	
FTP Crossing, MD:12544.7", TVD:12388.1", N/S:132.0", E/W:249.1", INC:63.69											
12,587.2	63.43	0.30	12,407.0	170.0	250.3	6.12	-0.61	-6.80	-46.8	-13.8	
FTP (Dogwood 23 Fed Com #703H)											
12,593.0	63.40	359.90	12,409.6	175.2	250.3	6.12	-0.53	-6.82	-46.2	-14.0	
12,638.0	65.10	354.10	12,429.2	215.7	248.2	12.21	3.78	-12.89	-39.6	-13.4	
12,688.0	69.60	351.40	12,448.5	261.4	242.3	10.29	9.00	-5.40	-30.3	-7.5	
12,733.0	74.20	351.40	12,462.4	303.7	235.9	10.22	10.22	0.00	-20.9	-0.8	
12,783.0	79.70	351.80	12,473.7	351.9	228.8	11.03	11.00	0.80	-10.3	6.1	
12,808.0	82.40	353.90	12,477.6	376.4	225.8	13.62	10.80	8.40	-6.5	9.0	
12,854.0	85.10	357.10	12,482.6	422.0	222.2	9.07	5.87	6.96	-1.5	12.3	
12,904.0	84.70	356.70	12,487.1	471.7	219.5	1.13	-0.80	-0.80	2.8	14.7	
12,999.0	85.60	355.30	12,495.1	566.1	212.9	1.75	0.95	-1.47	10.6	20.6	
13,094.0	87.40	356.30	12,500.9	660.7	205.9	2.17	1.89	1.05	16.3	26.9	
13,189.0	89.60	0.40	12,503.4	755.6	203.2	4.90	2.32	4.32	18.7	28.9	
13,284.0	89.70	1.10	12,504.0	850.6	204.5	0.74	0.11	0.74	19.1	27.0	
13,379.0	89.00	1.20	12,505.0	945.5	206.4	0.74	-0.74	0.11	20.1	24.4	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
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)	
13,475.0	90.60	2.40	12,505.4	1,041.5	209.4	2.08	1.67	1.25	20.2	20.7	
13,569.0	89.90	2.60	12,505.0	1,135.4	213.5	0.77	-0.74	0.21	19.7	15.9	
13,665.0	90.70	1.00	12,504.5	1,231.3	216.5	1.86	0.83	-1.67	19.0	12.2	
13,760.0	90.90	1.20	12,503.1	1,326.3	218.3	0.30	0.21	0.21	17.5	9.7	
13,855.0	91.30	1.50	12,501.3	1,421.3	220.5	0.53	0.42	0.32	15.5	6.8	
13,950.0	90.90	2.80	12,499.5	1,516.2	224.1	1.43	-0.42	1.37	13.6	2.5	
13,987.5	90.47	2.88	12,499.0	1,553.6	226.0	1.18	-1.16	0.21	13.0	0.4	
TGT 1 (Dogwood 23 Fed Com #703H)											
14,045.0	89.80	3.00	12,498.9	1,611.1	228.9	1.18	-1.16	0.21	13.0	-3.0	
14,140.0	89.80	0.30	12,499.2	1,706.0	231.7	2.84	0.00	-2.84	13.4	-6.4	
14,235.0	89.00	0.50	12,500.2	1,801.0	232.3	0.87	-0.84	0.21	14.4	-7.7	
14,330.0	90.00	1.00	12,501.1	1,896.0	233.6	1.18	1.05	0.53	15.4	-9.6	
14,425.0	89.70	2.20	12,501.3	1,990.9	236.2	1.30	-0.32	1.26	15.7	-13.0	
14,520.0	89.90	1.60	12,501.6	2,085.9	239.4	0.67	0.21	-0.63	16.1	-16.8	
14,615.0	89.80	358.90	12,501.9	2,180.9	239.8	2.84	-0.11	-2.84	16.4	-17.9	
14,710.0	90.90	359.40	12,501.3	2,275.9	238.4	1.27	1.16	0.53	15.9	-17.2	
14,805.0	89.30	359.10	12,501.2	2,370.9	237.1	1.71	-1.68	-0.32	15.9	-16.6	
14,900.0	90.80	359.80	12,501.1	2,465.9	236.2	1.74	1.58	0.74	15.9	-16.4	
14,995.0	89.50	358.80	12,500.8	2,560.8	235.1	1.73	-1.37	-1.05	15.7	-15.9	
15,090.0	91.40	359.70	12,500.1	2,655.8	233.8	2.21	2.00	0.95	15.0	-15.3	
15,185.0	88.90	359.70	12,499.8	2,750.8	233.3	2.63	-2.63	0.00	14.9	-15.5	
15,280.0	90.50	359.20	12,500.3	2,845.8	232.4	1.76	1.68	-0.53	15.4	-15.3	
15,375.0	90.50	358.20	12,499.5	2,940.8	230.2	1.05	0.00	-1.05	14.7	-13.8	
15,470.0	91.20	358.60	12,498.1	3,035.7	227.6	0.85	0.74	0.42	13.4	-11.8	
15,565.0	91.20	357.30	12,496.1	3,130.6	224.2	1.37	0.00	-1.37	11.5	-9.1	
15,660.0	90.00	357.40	12,495.1	3,225.5	219.8	1.27	-1.26	0.11	10.6	-5.4	
15,755.0	88.40	357.00	12,496.4	3,320.4	215.2	1.74	-1.68	-0.42	12.0	-1.4	

PVA Report

Company:	EOG Resources - Midland					Local Co-ordinate Reference:		Well #703H				
Project:	Lea County, NM (NAD 83 NME)					TVD Reference:		KB = 25' @ 3343.0usft				
Site:	Dogwood 23 Fed Com					MD Reference:		KB = 25' @ 3343.0usft				
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)		
15,850.0	88.50	356.50	12,499.0	3,415.2	209.8	0.54	0.11	-0.53	14.6		3.3	
15,945.0	89.80	358.10	12,500.4	3,510.1	205.3	2.17	1.37	1.68	16.1		7.1	
16,040.0	88.10	357.40	12,502.1	3,605.0	201.6	1.94	-1.79	-0.74	17.9		10.1	
16,135.0	90.60	358.60	12,503.2	3,699.9	198.3	2.92	2.63	1.26	19.1		12.7	
16,230.0	91.30	359.60	12,501.6	3,794.9	196.8	1.28	0.74	1.05	17.6		13.6	
16,282.6	91.69	359.77	12,500.3	3,847.5	196.5	0.80	0.74	0.32	16.3		13.5	
TGT 2 (Dogwood 23 Fed Com #703H)												
16,325.0	92.00	359.90	12,498.9	3,889.9	196.4	0.80	0.74	0.32	14.9		13.3	
16,420.0	91.80	359.20	12,495.8	3,984.8	195.6	0.77	-0.21	-0.74	11.7		13.4	
16,515.0	93.00	359.50	12,491.8	4,079.7	194.5	1.30	1.26	0.32	7.6		13.8	
16,610.0	89.60	0.00	12,489.6	4,174.7	194.1	3.62	-3.58	0.53	5.4		13.5	
16,706.0	90.10	0.20	12,489.9	4,270.7	194.3	0.56	0.52	0.21	5.5		12.6	
16,801.0	89.80	0.80	12,490.0	4,365.7	195.1	0.71	-0.32	0.63	5.6		11.1	
16,896.0	89.40	2.30	12,490.6	4,460.6	197.7	1.63	-0.42	1.58	6.2		7.9	
16,991.0	89.10	3.70	12,491.9	4,555.5	202.7	1.51	-0.32	1.47	7.3		2.2	
17,086.0	87.80	3.00	12,494.4	4,650.3	208.2	1.55	-1.37	-0.74	9.8		-4.0	
17,191.0	86.20	0.10	12,499.9	4,755.1	211.0	3.15	-1.52	-2.76	15.2		-7.6	
17,287.0	86.80	358.50	12,505.8	4,850.9	209.9	1.78	0.62	-1.67	21.0		-7.1	
17,382.0	87.30	358.00	12,510.7	4,945.7	207.0	0.74	0.53	-0.53	25.8		-4.9	
17,477.0	90.30	358.70	12,512.7	5,040.7	204.2	3.24	3.16	0.74	27.7		-2.8	
17,572.0	91.30	359.10	12,511.4	5,135.6	202.4	1.13	1.05	0.42	26.3		-1.7	
17,667.0	90.00	356.50	12,510.3	5,230.6	198.8	3.06	-1.37	-2.74	25.2		1.3	
17,762.0	91.70	356.50	12,508.9	5,325.4	193.0	1.79	1.79	0.00	23.7		6.4	
17,858.0	92.60	358.70	12,505.3	5,421.2	189.0	2.47	0.94	2.29	20.0		9.7	
17,953.0	92.60	359.30	12,501.0	5,516.1	187.3	0.63	0.00	0.63	15.6		10.7	
18,048.0	92.30	359.20	12,496.9	5,611.0	186.1	0.33	-0.32	-0.11	11.5		11.3	
18,143.0	92.20	359.10	12,493.2	5,705.9	184.6	0.15	-0.11	-0.11	7.7		12.0	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
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)	
18,238.0	93.10	0.30	12,488.8	5,800.8	184.1	1.58	0.95	1.26	3.2	11.8	
18,333.0	89.80	1.80	12,486.4	5,895.7	185.9	3.82	-3.47	1.58	0.7	9.4	
18,428.0	88.00	0.80	12,488.2	5,990.7	188.0	2.17	-1.89	-1.05	2.5	6.6	
18,523.0	89.80	359.20	12,490.0	6,085.7	188.0	2.53	1.89	-1.68	4.2	5.9	
18,619.0	90.80	359.50	12,489.5	6,181.7	187.0	1.09	1.04	0.31	3.7	6.3	
18,714.0	90.90	0.80	12,488.1	6,276.7	187.2	1.37	0.11	1.37	2.2	5.4	
18,809.0	88.80	358.60	12,488.4	6,371.6	186.7	3.20	-2.21	-2.32	2.3	5.2	
18,904.0	89.60	358.90	12,489.7	6,466.6	184.6	0.90	0.84	0.32	3.6	6.6	
18,999.0	91.20	359.70	12,489.0	6,561.6	183.5	1.88	1.68	0.84	2.9	7.1	
19,094.0	92.20	1.30	12,486.2	6,656.5	184.3	1.99	1.05	1.68	0.0	5.5	
19,189.0	88.90	0.70	12,485.3	6,751.5	186.0	3.53	-3.47	-0.63	-1.0	3.2	
19,284.0	87.00	358.90	12,488.7	6,846.4	185.6	2.75	-2.00	-1.89	2.3	2.9	
19,379.0	89.60	358.80	12,491.5	6,941.4	183.7	2.74	2.74	-0.11	5.0	4.1	
19,474.0	88.90	358.50	12,492.7	7,036.3	181.5	0.80	-0.74	-0.32	6.2	5.6	
19,570.0	90.20	358.30	12,493.5	7,132.3	178.8	1.37	1.35	-0.21	6.9	7.6	
19,665.0	89.30	358.10	12,493.9	7,227.2	175.8	0.97	-0.95	-0.21	7.2	9.9	
19,760.0	89.40	358.20	12,495.0	7,322.2	172.8	0.15	0.11	0.11	8.2	12.3	
19,854.0	91.60	359.20	12,494.2	7,416.2	170.6	2.57	2.34	1.06	7.3	13.8	
19,949.0	90.20	358.80	12,492.7	7,511.1	169.0	1.53	-1.47	-0.42	5.8	14.8	
20,044.0	88.20	357.90	12,494.0	7,606.1	166.2	2.31	-2.11	-0.95	7.0	16.8	
20,140.0	91.30	358.50	12,494.4	7,702.0	163.2	3.29	3.23	0.62	7.4	19.1	
20,235.0	92.80	359.60	12,491.0	7,796.9	161.6	1.96	1.58	1.16	3.9	20.0	
20,376.0	91.50	0.50	12,485.7	7,937.8	161.8	1.12	-0.92	0.64	-1.5	18.9	
20,471.0	93.30	0.60	12,481.8	8,032.7	162.7	1.90	1.89	0.11	-5.6	17.3	
20,567.0	92.60	359.80	12,476.8	8,128.6	163.0	1.11	-0.73	-0.83	-10.6	16.3	
20,662.0	92.60	0.70	12,472.5	8,223.5	163.4	0.95	0.00	0.95	-15.0	15.2	
20,757.0	89.80	0.50	12,470.5	8,318.5	164.4	2.95	-2.95	-0.21	-17.0	13.5	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
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)	
20,849.0	88.50	0.70	12,471.9	8,410.5	165.4	1.43	-1.41	0.22	-15.7	11.9	
20,944.0	90.70	0.90	12,472.5	8,505.4	166.7	2.33	2.32	0.21	-15.2	9.9	
21,039.0	90.50	1.10	12,471.5	8,600.4	168.4	0.30	-0.21	0.21	-16.2	7.6	
21,134.0	88.80	1.40	12,472.1	8,695.4	170.4	1.82	-1.79	0.32	-15.7	4.8	
21,229.0	90.10	1.50	12,473.0	8,790.4	172.8	1.37	1.37	0.11	-14.9	1.7	
21,324.0	88.90	0.80	12,473.9	8,885.3	174.7	1.46	-1.26	-0.74	-14.1	-0.8	
21,419.0	89.90	2.00	12,474.9	8,980.3	177.1	1.64	1.05	1.26	-13.2	-3.8	
21,514.0	90.20	3.20	12,474.8	9,075.2	181.4	1.30	0.32	1.26	-13.4	-8.8	
21,609.0	89.10	2.70	12,475.4	9,170.1	186.3	1.27	-1.16	-0.53	-12.9	-14.4	
21,704.0	89.60	2.70	12,476.4	9,265.0	190.7	0.53	0.53	0.00	-11.9	-19.5	
21,799.0	89.10	2.30	12,477.5	9,359.9	194.9	0.67	-0.53	-0.42	-10.9	-24.4	
21,829.0	89.20	2.30	12,478.0	9,389.8	196.1	0.33	0.33	0.00	-10.5	-25.8	
21,855.0	89.40	2.20	12,478.3	9,415.8	197.1	0.86	0.77	-0.38	-10.2	-27.0	
21,885.0	89.90	1.50	12,478.5	9,445.8	198.1	2.87	1.67	-2.33	-10.0	-28.2	
21,892.0	90.00	1.50	12,478.5	9,452.8	198.3	1.43	1.43	0.00	-10.0	-28.4	
21,924.0	90.80	1.10	12,478.2	9,484.8	199.0	2.80	2.50	-1.25	-10.2	-29.4	
21,955.0	90.60	1.30	12,477.9	9,515.8	199.6	0.91	-0.65	0.65	-10.6	-30.2	
21,987.0	90.70	1.30	12,477.5	9,547.8	200.4	0.31	0.31	0.00	-11.0	-31.2	
22,019.0	90.40	0.90	12,477.2	9,579.7	201.0	1.56	-0.94	-1.25	-11.4	-32.0	
22,050.0	89.20	0.20	12,477.3	9,610.7	201.3	4.48	-3.87	-2.26	-11.3	-32.6	
22,082.0	89.20	0.40	12,477.8	9,642.7	201.4	0.62	0.00	0.62	-10.9	-33.0	
22,114.0	89.30	0.40	12,478.2	9,674.7	201.7	0.31	0.31	0.00	-10.5	-33.4	
22,146.0	89.80	0.60	12,478.4	9,706.7	201.9	1.68	1.56	0.62	-10.2	-33.9	
22,177.0	90.70	1.50	12,478.3	9,737.7	202.5	4.11	2.90	2.90	-10.4	-34.7	
22,184.0	90.85	1.57	12,478.2	9,744.7	202.7	2.38	2.19	0.94	-10.5	-35.0	
LL Crossing, MD:22184.0', TVD:12478.2',N/S:9744.7', E/W:202.7', INC:90.85											
22,209.0	91.40	1.80	12,477.7	9,769.7	203.4	2.38	2.19	0.94	-11.0	-35.9	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3343.0usft
Site:	Dogwood 23 Fed Com	MD Reference:	KB = 25' @ 3343.0usft
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)	
22,241.0	90.90	1.30	12,477.1	9,801.7	204.3	2.21	-1.56	-1.56	-11.7	-37.0	
Final MWD Survey (MD=22241.0')											
22,272.0	90.90	1.30	12,476.6	9,832.7	205.0	0.00	0.00	0.00	-12.2	-37.9	
Final Projection to Bit (MD=22272.0') - PBHL (Dogwood 23 Fed Com #703H)											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,544.7	12,388.1	132.0	249.1	FTP Crossing, MD:12544.7', TVD:12388.1', N/S:132.0', E/W:249.1', INC:63.69
22,184.0	12,478.2	9,744.7	202.7	LL Crossing, MD:22184.0', TVD:12478.2', N/S:9744.7', E/W:202.7', INC:90.85
22,241.0	12,477.1	9,801.7	204.3	Final MWD Survey (MD=22241.0')
22,272.0	12,476.6	9,832.7	205.0	Final Projection to Bit (MD=22272.0')

Checked By: _____ Approved By: _____ Date: _____