

HOBBS OCD

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Caballo 23 Fed

#710H

OH

Design: OH

Midland PVA

18 March, 2019



Midland PVA

Company: EOG Resources - Midland Project: Lea County, NM (NAD 83 NME) Site: Caballo 23 Fed Well: #710H Wellbore: OH Design: OH		Local Co-ordinate Reference: Well #710H TVD Reference: KB = 25 @ 3370.0usft MD Reference: KB = 25 @ 3370.0usft North Reference: Grid Survey Calculation Method: Minimum Curvature Database: EDM 5000.14											
Project Lea County, NM (NAD 83 NME)													
Map System: US State Plane 1983 Geo Datum: North American Datum 1983 Map Zone: New Mexico Eastern Zone		System Datum: Mean Sea Level											
Site Caballo 23 Fed													
Site Position: From: Map Position Uncertainty: 0.0 usft		Northing: 404,499.00 usft Easting: 785,117.00 usft Grid Radius: 13-3/16 " Latitude: 32° 6' 34.558 N Longitude: 103° 32' 45.568 W Grid Convergence: 0.42 "											
Well #710H													
Well Position +N-S 0.0 usft +E-W 0.0 usft Position Uncertainty 0.0 usft		Northing: 404,518.00 usft Easting: 788,005.00 usft Wellhead Elevation: usft Latitude: 32° 6' 34.536 N Longitude: 103° 32' 11.888 W Ground Level: 3,345.0 usft											
Wellbore OH													
Magnetics <table border="1"> <thead> <tr> <th>Model Name</th> <th>Sample Date</th> <th>Declination (°)</th> <th>Dip Angle (°)</th> <th>Field Strength (nT)</th> </tr> </thead> <tbody> <tr> <td>IGRF2015</td> <td>5/17/2018</td> <td>8.83</td> <td>59.95</td> <td>47,780.36430225</td> </tr> </tbody> </table>				Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	IGRF2015	5/17/2018	8.83	59.95	47,780.36430225
Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)									
IGRF2015	5/17/2018	8.83	59.95	47,780.36430225									
Design OH													
Audit Notes:													
Version: 1.0		Phase: ACTUAL Tie On Depth: 0.0											
Vertical Section:		Direction (°)											
Depth From (TVD) (usft)		+N-S (usft)											
+E-W (usft)		Direction (°)											
0.0		0.0											
0.0		357.11											
Survey Program													
Date 3/18/2019		Survey (Wellbore)											
From (usft)	To (usft)	Tool Name	Description										
194.0	19,995.0	Newaco MWD (OH)	MWD										
			OWSG MWD - Standard										



Midland PVA

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Site:	Caballo 23 Fed	MD Reference:	KB = 25 @ 3370.0usft
Well:	#710H	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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	
194.0	0.50	23.70	194.0	0.8	0.3	0.26	0.26	0.00	0.0	0.0	
310.0	0.70	54.10	310.0	1.7	1.1	0.32	0.17	26.21	0.0	0.0	
486.0	0.80	45.40	486.0	3.1	2.9	0.09	0.06	-4.94	0.0	0.0	
672.0	1.00	51.20	672.0	5.1	5.1	0.12	0.11	3.12	0.0	0.0	
859.0	0.90	46.10	859.0	7.1	7.4	0.07	-0.05	-2.73	0.0	0.0	
1,047.0	1.10	67.20	1,046.9	8.6	10.1	0.22	0.11	11.22	0.0	0.0	
1,210.0	1.20	72.70	1,209.9	10.0	13.2	0.09	0.06	3.37	0.0	0.0	
1,328.0	1.10	60.80	1,327.8	10.9	15.4	0.22	-0.08	-10.08	0.0	0.2	
1,516.0	0.90	64.00	1,515.6	12.4	16.3	0.11	-0.11	1.70	-1.9	0.4	
1,703.0	1.50	208.10	1,702.8	10.9	18.4	1.22	0.32	77.06	0.5	1.8	
1,891.0	1.60	204.70	1,890.7	6.3	16.2	0.07	0.05	-1.81	-4.7	1.5	
2,078.0	1.80	204.30	2,077.6	1.3	13.9	0.11	0.11	-0.21	-10.2	1.5	
2,265.0	1.90	205.60	2,264.5	-4.2	11.3	0.06	0.05	0.70	-16.2	1.8	
2,453.0	1.90	187.30	2,452.4	-10.1	9.6	0.32	0.00	-9.73	-18.8	-1.9	
2,640.0	2.90	173.70	2,639.3	-17.9	9.7	0.61	0.53	-7.27	-15.8	5.4	
2,828.0	5.50	190.60	2,826.8	-31.5	8.6	1.52	1.38	8.99	-11.0	22.2	
3,016.0	5.20	231.20	3,014.0	-45.7	0.3	1.98	-0.16	21.60	10.0	27.9	
3,204.0	3.30	221.00	3,201.5	-55.1	-9.9	1.08	-1.01	-5.43	10.6	29.2	
3,391.0	5.00	224.90	3,388.0	-64.9	-19.2	0.92	0.91	2.09	16.4	28.9	
3,579.0	5.40	268.90	3,575.3	-70.9	-33.8	2.08	0.21	23.40	32.7	0.3	
3,766.0	8.30	277.40	3,760.9	-69.3	-56.0	1.64	1.55	4.55	22.1	-16.4	
3,953.0	9.60	267.40	3,945.7	-68.3	-65.0	1.08	0.70	-5.35	10.5	-29.6	
4,141.0	6.40	215.40	4,132.0	-77.6	-106.8	4.02	-1.70	-27.66	28.7	-19.2	
4,328.0	5.70	204.80	4,318.0	-94.5	-116.7	0.70	-0.37	-5.67	30.3	-8.6	
4,517.0	6.80	166.40	4,506.0	-113.9	-118.0	2.24	0.58	-20.32	20.9	22.8	
4,705.0	9.20	182.90	4,692.1	-139.7	-116.1	1.75	1.28	6.78	15.2	32.2	



Midland PVA

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Well:	#710H	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)	
4,882.0	9.00	185.30	4,878.8	-189.2	-118.2	0.23	-0.11	1.28	1.9	44.8	
5,080.0	5.10	247.30	5,063.6	-187.1	-127.3	4.25	-2.07	32.98	42.8	25.4	
5,268.0	4.20	250.70	5,250.9	-192.6	-141.5	0.50	-0.48	1.81	46.6	14.9	
5,455.0	4.30	243.30	5,437.4	-188.0	-154.3	0.30	0.05	-3.96	49.0	13.9	
5,643.0	4.50	231.50	5,624.9	-205.8	-166.3	0.48	0.11	-6.28	50.2	20.0	
5,830.0	4.70	228.30	5,811.3	-215.4	-177.8	0.17	0.11	-1.71	53.4	21.4	
6,018.0	4.70	228.50	5,998.8	-225.7	-189.3	0.01	0.00	0.11	55.7	20.2	
6,205.0	3.80	231.20	6,185.1	-234.8	-199.9	0.49	-0.48	1.44	49.2	17.3	
6,392.0	3.80	232.70	6,371.7	-242.1	-209.4	0.12	-0.11	0.80	37.5	16.1	
6,580.0	3.80	234.10	6,559.3	-249.3	-219.1	0.12	0.11	0.74	25.8	15.4	
6,768.0	3.10	242.60	6,747.0	-255.3	-228.7	0.46	-0.37	4.52	16.5	12.3	
6,956.0	2.40	261.10	6,934.8	-258.2	-237.1	0.80	-0.37	9.84	10.8	8.0	
7,143.0	1.80	311.20	7,121.7	-256.9	-243.2	0.99	-0.32	26.79	7.8	-0.2	
7,332.0	1.80	312.50	7,310.6	-253.0	-247.6	0.02	0.00	0.69	1.7	-0.3	
7,520.0	1.40	308.80	7,498.5	-248.5	-251.5	0.22	-0.21	-1.97	-3.5	-0.3	
7,708.0	1.20	300.70	7,686.5	-247.1	-255.0	0.14	-0.11	-4.31	-7.7	-1.2	
7,894.0	1.10	287.70	7,872.4	-246.1	-258.5	0.35	-0.05	-17.74	-9.2	-6.2	
8,082.0	1.50	257.70	8,060.4	-246.7	-262.7	0.24	0.21	-5.32	-12.3	-8.1	
8,270.0	1.50	265.90	8,248.3	-247.4	-267.6	0.11	0.00	4.36	-18.2	-5.9	
8,458.0	1.30	259.70	8,436.3	-248.0	-272.1	0.13	-0.11	-3.30	-22.0	-8.1	
8,646.0	1.50	248.10	8,624.2	-249.3	-276.5	0.18	0.11	-6.17	-24.8	-12.8	
8,834.0	1.50	235.10	8,812.1	-251.6	-280.8	0.18	0.00	-6.91	-25.9	-18.5	
9,021.0	1.50	221.70	8,999.1	-254.9	-284.4	0.19	0.00	-7.17	-25.7	-24.6	
9,209.0	1.40	217.40	9,187.0	-258.5	-287.5	0.08	-0.05	-2.29	-28.6	-26.6	
9,396.0	0.50	39.10	9,374.0	-258.7	-288.3	1.02	-0.48	-65.35	30.8	25.7	
9,585.0	0.70	27.60	9,563.0	-258.0	-287.3	0.12	0.11	-6.08	23.1	31.1	
9,772.0	0.40	153.80	9,750.0	-257.6	-286.5	0.53	-0.16	67.49	11.5	-36.1	



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9,960.0	1.50	112.80	9,938.0	-259.2	-283.9	0.65	0.59	-21.81	29.4	-20.1	
10,147.0	0.90	76.20	10,124.9	-259.8	-280.2	0.61	-0.32	-19.57	32.2	-0.1	
10,335.0	1.60	105.80	10,312.9	-260.1	-276.3	0.49	0.37	15.74	24.0	-15.2	
10,522.0	1.30	343.10	10,499.8	-258.8	-274.4	1.36	-0.16	-65.61	-0.9	26.2	
10,710.0	2.00	329.90	10,687.8	-253.9	-276.6	0.42	0.37	-7.02	-12.2	24.9	
10,898.0	2.40	289.90	10,875.8	-249.7	-282.0	0.82	0.21	-21.28	-31.8	9.1	
11,085.0	2.40	284.20	11,062.5	-247.4	-289.5	0.13	0.00	-3.05	-40.3	5.5	
11,273.0	1.00	357.60	11,250.4	-244.8	-293.3	1.23	-0.74	39.04	-9.0	44.0	
11,461.0	2.20	318.10	11,438.3	-240.5	-295.8	0.83	0.84	-21.01	-39.8	27.2	
11,649.0	2.50	28.30	11,626.2	-234.2	-298.3	1.44	0.16	37.34	6.8	50.1	
11,773.0	2.10	45.90	11,750.1	-230.3	-293.4	0.65	-0.32	14.19	16.7	46.5	
11,960.0	1.70	66.00	11,937.0	-226.3	-288.6	0.28	-0.21	5.40	18.5	43.4	
12,054.0	2.90	68.70	12,030.9	-224.7	-285.2	1.38	1.28	13.51	24.1	37.4	
12,148.0	16.20	6.80	12,123.5	-210.7	-281.4	16.01	14.15	-65.85	-20.0	32.7	
12,242.0	33.20	2.40	12,208.8	-171.7	-278.8	16.18	16.09	-4.68	-27.2	24.1	
12,335.0	47.90	2.40	12,279.1	-111.4	-276.3	15.81	15.81	0.00	-39.5	15.4	
12,430.0	60.90	359.90	12,334.3	-34.4	-274.9	13.85	13.68	-2.63	-52.9	3.8	
12,467.0	64.20	359.10	12,351.3	-1.6	-275.2	9.12	8.92	-2.16	-57.9	-0.3	
12,523.0	65.40	359.50	12,375.2	49.1	-275.8	2.24	2.14	0.71	-61.4	-6.0	
12,617.0	70.60	358.10	12,410.2	136.3	-277.6	5.91	5.74	-1.49	-55.6	-16.3	
12,711.0	76.00	356.60	12,437.1	226.2	-281.8	5.74	5.53	-1.80	-37.7	-24.1	
12,804.0	76.30	354.60	12,459.3	316.2	-288.7	2.11	0.32	-2.15	-15.3	-26.2	
12,898.0	77.00	355.20	12,481.0	407.3	-296.9	0.97	0.74	0.64	6.1	-24.2	
12,991.0	88.20	356.30	12,483.0	499.2	-303.7	12.10	12.04	1.18	18.1	-20.8	
13,086.0	90.50	355.20	12,494.1	593.9	-310.7	2.68	2.42	-1.16	19.1	-14.8	
13,180.0	91.20	358.20	12,492.7	687.7	-316.1	3.28	0.74	3.19	17.7	-10.1	
13,274.0	90.20	358.00	12,491.5	781.7	-319.2	1.08	-1.06	-0.21	16.6	-7.7	



Midland PVA

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13,367.0	88.30	355.80	12,482.8	874.5	-324.3	3.13	-2.04	-2.37	17.8	-3.4	
13,461.0	92.50	359.60	12,482.1	968.4	-328.0	6.02	4.47	4.04	17.1	-0.4	
13,554.0	93.50	359.60	12,487.2	1,061.3	-328.7	1.08	1.08	0.00	12.5	-0.5	
13,648.0	90.60	0.40	12,483.9	1,155.2	-328.7	3.20	-3.09	0.85	9.5	-1.2	
13,741.0	90.80	0.30	12,482.7	1,248.2	-328.1	0.24	0.22	-0.11	8.8	-2.5	
13,835.0	89.10	0.10	12,482.8	1,342.2	-327.8	1.82	-1.81	-0.21	9.2	-3.5	
13,929.0	91.60	0.20	12,482.2	1,436.2	-327.5	2.66	2.66	0.11	9.0	-4.5	
14,022.0	88.00	358.70	12,482.6	1,529.1	-328.4	4.19	-3.87	-1.81	9.7	-4.3	
14,116.0	88.80	359.70	12,485.2	1,623.1	-329.7	1.36	0.85	1.06	12.7	-3.8	
14,210.0	89.10	359.60	12,486.9	1,717.1	-330.3	0.34	0.32	-0.11	14.8	-3.9	
14,304.0	91.50	359.30	12,486.4	1,811.1	-331.2	2.57	2.55	-0.32	14.7	-3.7	
14,397.0	91.50	358.50	12,484.0	1,904.0	-333.0	0.88	0.00	-0.86	12.7	-2.7	
14,490.0	93.50	359.00	12,479.9	1,996.9	-335.0	2.22	2.15	0.54	9.0	-1.4	
14,584.0	91.10	359.50	12,476.2	2,090.8	-336.3	2.81	-2.55	0.53	5.6	-0.8	
14,678.0	89.90	359.80	12,475.3	2,184.6	-336.8	1.32	-1.28	0.32	5.1	-1.0	
14,772.0	89.40	0.30	12,475.9	2,278.6	-336.8	0.75	-0.53	0.53	6.1	-1.8	
14,866.0	88.00	359.50	12,478.1	2,372.6	-336.9	1.72	-1.49	-0.85	8.6	-2.4	
14,960.0	88.80	359.30	12,480.7	2,466.7	-337.9	0.88	0.85	-0.21	11.6	-2.1	
15,053.0	89.60	359.40	12,482.0	2,559.7	-339.0	0.87	0.86	0.11	13.1	-1.8	
15,146.0	90.40	359.40	12,482.0	2,652.7	-339.9	0.86	0.86	0.00	13.2	-1.5	
15,241.0	89.90	359.50	12,481.7	2,747.7	-340.8	0.54	-0.53	0.11	13.1	-1.3	
15,334.0	90.50	359.40	12,481.4	2,840.7	-341.7	0.65	0.65	-0.11	12.9	-1.2	
15,429.0	90.50	0.10	12,480.6	2,935.7	-342.1	0.74	0.00	0.74	12.2	-1.5	
15,522.0	91.00	0.70	12,479.4	3,028.7	-341.5	0.84	0.54	0.65	11.1	-2.6	
15,616.0	91.60	1.10	12,477.2	3,122.6	-340.0	0.77	0.64	0.43	9.1	-5.1	
15,709.0	90.70	1.00	12,475.4	3,215.6	-338.3	0.97	-0.97	-0.11	7.3	-7.5	
15,803.0	90.00	1.10	12,474.8	3,309.6	-336.6	0.75	-0.74	0.11	6.9	-8.9	



Midland PVA

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15,897.0	88.70	0.40	12,475.8	3,403.6	-335.4	1.57	-1.38	-0.74	8.1	-11.9	
15,990.0	89.10	0.10	12,477.6	3,496.5	-335.0	0.54	0.43	-0.32	10.0	-13.0	
16,083.0	90.50	0.40	12,478.0	3,589.5	-334.6	1.54	1.51	0.32	10.4	-14.1	
16,177.0	90.20	359.30	12,477.4	3,683.5	-334.8	1.21	-0.32	-1.17	10.0	-14.6	
16,270.0	89.70	359.40	12,477.5	3,778.5	-335.9	0.55	-0.54	0.11	10.2	-14.3	
16,363.0	93.70	0.20	12,474.7	3,869.5	-336.2	4.39	4.30	0.86	7.5	-14.7	
16,456.0	88.20	0.70	12,473.2	3,962.4	-335.4	5.94	-5.91	0.54	6.1	-16.1	
16,550.0	90.70	1.80	12,474.1	4,056.4	-333.4	2.91	2.86	1.17	6.8	-18.1	
16,643.0	87.70	359.80	12,475.4	4,149.4	-332.0	3.82	-3.23	-2.04	7.6	-21.0	
16,736.0	90.00	0.50	12,477.2	4,242.3	-331.7	2.56	2.47	0.65	8.9	-22.0	
16,830.0	89.00	359.60	12,478.1	4,336.3	-331.6	1.43	-1.06	-0.96	9.2	-22.8	
16,924.0	90.20	359.80	12,478.7	4,430.3	-332.1	1.29	1.28	0.21	9.4	-23.1	
17,017.0	91.70	359.90	12,477.2	4,523.3	-332.3	1.62	1.61	0.11	7.4	-23.6	
17,111.0	90.30	0.80	12,475.5	4,617.3	-331.8	1.77	-1.49	0.96	5.2	-24.9	
17,205.0	90.80	1.00	12,474.6	4,711.3	-330.3	0.57	0.53	0.21	3.8	-27.1	
17,298.0	87.80	359.90	12,475.8	4,804.2	-329.6	3.44	-3.23	-1.18	4.4	-28.5	
17,391.0	88.00	357.50	12,479.2	4,897.1	-331.7	2.59	0.22	-2.58	7.4	-27.1	
17,485.0	88.60	358.30	12,482.0	4,991.0	-335.1	1.06	0.64	0.85	9.8	-24.4	
17,579.0	90.90	359.10	12,482.4	5,085.0	-337.2	2.59	2.45	0.85	9.5	-23.0	
17,673.0	90.40	359.00	12,481.3	5,179.0	-338.8	0.54	-0.53	-0.11	8.0	-22.2	
17,767.0	89.80	359.70	12,481.3	5,273.0	-339.9	1.13	-0.85	0.74	7.5	-21.8	
17,861.0	90.00	0.80	12,481.6	5,367.0	-339.5	1.25	0.43	1.17	7.3	-23.0	
17,954.0	89.80	359.50	12,481.8	5,460.0	-339.2	1.41	-0.22	-1.40	6.9	-23.9	
18,048.0	91.30	358.30	12,480.9	5,554.0	-341.0	2.04	1.60	-1.28	5.5	-22.9	
18,142.0	92.60	358.80	12,477.7	5,647.9	-343.4	1.48	1.38	0.53	1.7	-21.2	
18,236.0	90.40	359.60	12,475.2	5,741.8	-344.7	2.49	-2.34	0.85	-1.3	-20.6	
18,330.0	88.80	358.50	12,475.9	5,835.8	-346.3	2.07	-1.70	-1.17	-1.2	-19.8	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #710H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3370.0usft
Site:	Caballo 23 Fed	MD Reference:	KB = 25 @ 3370.0usft
Well:	#710H	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)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
18,424.0	90.20	358.70	12,476.7	5,829.8	-348.6	1.50	1.49	0.21	-0.9	-18.2	
18,517.0	88.90	357.50	12,479.1	6,022.7	-351.6	3.78	-3.55	-1.29	0.9	-15.8	
18,610.0	90.60	359.20	12,480.9	6,115.6	-354.3	4.57	4.19	1.83	2.2	-13.9	
18,704.0	88.60	357.50	12,481.4	6,209.5	-357.0	2.96	-2.34	-1.81	2.1	-11.9	
18,798.0	88.40	357.30	12,483.9	6,303.4	-361.3	0.30	-0.21	-0.21	4.0	-8.4	
18,892.0	92.50	358.90	12,483.1	6,397.3	-364.4	4.68	4.36	1.70	2.7	-6.0	
18,986.0	91.60	358.00	12,479.8	6,491.2	-367.0	1.35	-0.96	-0.96	-1.2	-4.2	
19,080.0	91.40	359.40	12,477.3	6,585.2	-369.1	1.50	-0.21	1.49	-3.4	-2.8	
19,174.0	88.60	0.20	12,477.3	6,679.2	-369.4	3.10	-2.98	0.85	-3.1	-3.2	
19,268.0	87.40	358.60	12,480.6	6,773.1	-370.4	2.13	-1.28	-1.70	0.6	-2.9	
19,362.0	88.00	359.00	12,484.4	6,867.0	-372.4	0.77	0.64	0.43	4.8	-1.7	
19,455.0	88.90	359.70	12,486.9	6,960.0	-373.4	1.23	0.97	0.75	7.6	-1.3	
19,549.0	89.30	0.20	12,488.4	7,053.9	-373.5	0.68	0.43	0.53	9.5	-2.0	
19,642.0	91.70	1.80	12,487.5	7,146.9	-371.9	3.10	2.56	1.72	9.1	-4.3	
19,736.0	90.00	1.20	12,486.2	7,240.9	-369.4	1.92	-1.81	-0.64	8.1	-7.5	
19,830.0	88.60	3.20	12,487.3	7,334.8	-365.8	2.80	-1.49	2.13	9.6	-11.6	
19,932.0	89.10	3.50	12,489.4	7,436.6	-359.8	0.57	0.49	0.29	12.1	-16.6	
19,995.0	89.10	3.50	12,490.3	7,499.5	-356.0	0.00	0.00	0.00	13.3	-22.9	

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,030.0	12,007.0	-225.1	-286.3	KOP, MD:12030.0', TVD:12007.0', N/S:-225.1', E/W:-286.3', INC:2.58
12,175.4	12,149.5	-202.0	-280.6	FTP Crossing, MD:12175.4', TVD:12149.5', N/S:-202.0', E/W:-280.6', INC:21.14
19,932.0	12,489.4	7,436.6	-359.8	Last MWD Survey (MD=19932.0')
19,995.0	12,490.3	7,499.5	-356.0	Projection to Bit (MD=19995.0')



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #710H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3370.0usft
Site:	Caballo 23 Fed	MD Reference:	KB = 25 @ 3370.0usft
Well:	#710H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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

Caballo 23 Fed #710H

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: #710H

KB = 25 @ 3370.0usft 3348.0
Northing 404518.00 Easting 788003.00 Latitude 32° 6' 34.636 N Longitude 103° 32' 11.858 W

To convert a Magnetic Direction to a Grid Direction, Add 8.41°
To convert a Magnetic Direction to a True Direction, Add 8.63° East
To convert a True Direction to a Grid Direction, Subtract 0.42°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSect	Target
1	1234.0	1.18	70.45	1233.9	10.1	13.7	0.00	0.00	9.4	
2	1334.0	1.18	70.45	1333.8	10.8	15.8	0.00	0.00	10.0	
3	1451.6	0.00	0.00	1451.4	11.2	16.7	1.00	180.00	10.3	
4	2300.2	0.00	0.00	2300.0	11.2	16.7	0.00	0.00	10.3	
5	2597.4	5.95	225.27	2596.7	0.4	5.8	2.00	225.27	0.1	
6	5910.8	5.95	225.27	5892.3	-241.2	-238.1	0.00	0.00	-228.9	
7	6208.1	0.00	0.00	6189.0	-252.0	-249.0	2.00	180.00	-239.1	
8	12016.6	0.00	0.00	11897.5	-252.0	-249.0	0.00	0.00	-239.1	
9	12766.6	90.00	353.24	12475.0	222.1	-305.2	12.00	353.24	237.2	
10	13082.0	90.00	359.55	12475.0	536.8	-325.0	2.00	90.03	552.5	
11	13529.9	90.00	359.55	12475.0	984.7	-328.6	0.00	0.00	1000.0	TGT#1(Caballo 23 Fed Com #710H)
12	13541.6	90.23	359.56	12475.0	996.4	-328.6	2.00	2.10	1011.7	
13	15031.3	90.23	359.56	12469.0	2488.0	-340.2	0.00	0.00	2500.0	TGT#2(Caballo 23 Fed Com #710H)
14	15039.0	90.08	359.56	12469.0	2493.7	-340.2	2.00	-179.89	2507.7	
15	16532.6	90.08	359.56	12467.0	3987.3	-351.8	0.00	0.00	4000.0	TGT#3(Caballo 23 Fed Com #710H)
16	16551.8	89.69	359.56	12467.0	4008.5	-351.9	2.00	180.00	4019.1	
17	18034.1	89.69	359.56	12475.0	5488.7	-363.4	0.00	0.00	5500.0	TGT#4(Caballo 23 Fed Com #710H)
18	18035.9	89.66	359.56	12475.0	5490.5	-363.4	2.00	-180.00	5501.6	
19	19034.9	89.66	359.56	12481.0	6489.5	-371.1	0.00	0.00	6500.0	TGT#5(Caballo 23 Fed Com #710H)
20	19063.7	90.23	359.56	12481.0	6489.5	-371.1	0.00	0.00	6500.0	
21										

CASING DETAILS

No casing data is available

WELLSBore TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top (Caballo 23 Fed Com #710H)	7789.0	-282.0	-348.9	404288.00	787784.00
TGT#1(Caballo 23 Fed Com #710H)	12467.0	2887.3	-361.8	405005.30	787853.23
TGT#2(Caballo 23 Fed Com #710H)	12488.0	2488.0	-340.2	407004.00	787884.84
FTP (Caballo 23 Fed Com #710H)	13476.0	-292.0	-318.0	404318.00	787639.00
TGT#3(Caballo 23 Fed Com #710H)	12476.0	884.7	-329.8	405002.70	787878.44
TGT#4(Caballo 23 Fed Com #710H)	12476.0	6488.7	-363.4	410008.70	787841.83
PDH (Caballo 23 Fed Com #710H)	13477.0	7811.0	-378.0	412028.00	787629.00
TGT#5(Caballo 23 Fed Com #710H)	12481.0	6489.5	-371.1	411007.80	787823.90

