

HOBBS OCD

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Caravan 28 State Com

#704H

OH

Design: OH

Midland PVA

14 May, 2019



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3559.0usft
Site:	Caravan 28 State Com	MD Reference:	KB = 25 @ 3559.0usft
Well:	#704H	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	Caravan 28 State Com		
Site Position:		Northing:	435,288.00 usft
From:	Map	Easting:	774,878.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 39.963 N
		Longitude:	103° 34' 44.423 W
		Grid Convergence:	0.40 "

Well	#704H		
Well Position	+N-S 0.0 usft	Northing:	435,324.00 usft
	+E-W 0.0 usft	Easting:	772,978.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 11' 40.437 N
		Longitude:	103° 35' 4.203 W
		Ground Level:	3,534.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	9/27/2018	8.82
			Dip Angle (°)
			60.02
			Field Strength (nT)
			47,786.95474173

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 (°)	177.10

Survey Program	Date 5/14/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
135.0	22,720.0	Newsco MWD (OH)	MWD
			Description
			OWSG MWD - Standard



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 TVD Reference: KB = 25 @ 3559.0usft
 MD Reference: KB = 25 @ 3559.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey												
MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (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		
135.0	1.00	270.50	135.0	0.0	-1.2	0.74	0.74	0.00	-1.2	0.0		
313.0	1.70	251.00	312.9	-0.8	-5.2	0.48	0.39	-10.96	-5.2	-0.9		
488.0	1.90	240.80	487.9	-3.1	-10.2	0.22	0.11	-5.83	-10.4	-2.3		
672.0	1.70	248.10	671.8	-5.6	-15.4	0.17	-0.11	3.97	-16.4	-0.5		
860.0	1.80	276.50	859.7	-8.3	-20.6	0.43	-0.05	15.11	-19.8	8.6		
1,047.0	1.80	282.20	1,046.6	-5.5	-25.8	0.09	0.00	3.05	-24.0	10.8		
1,235.0	1.60	269.00	1,234.5	-5.0	-30.9	0.20	0.00	-7.02	-31.0	4.5		
1,420.0	1.10	10.10	1,419.5	-3.3	-33.2	1.14	-0.27	54.65	11.1	33.5		
1,608.0	5.80	48.60	1,607.1	4.8	-25.8	2.65	2.50	20.48	32.4	18.6		
1,786.0	5.80	50.00	1,794.2	17.2	-11.4	0.08	0.00	0.74	33.0	17.3		
1,983.0	7.50	47.80	1,979.9	31.4	4.9	0.92	0.91	-1.18	29.8	17.3		
2,171.0	8.30	51.40	2,166.1	48.1	24.6	0.50	0.43	1.91	24.0	14.0		
2,358.0	7.40	48.80	2,351.4	64.5	44.2	0.52	-0.48	-1.39	16.8	13.2		
2,545.0	8.80	48.90	2,536.5	81.8	64.1	0.75	0.75	0.05	9.5	11.8		
2,733.0	9.10	46.70	2,722.2	101.5	85.7	0.24	0.16	-1.17	-1.1	11.0		
2,921.0	9.00	47.70	2,907.9	121.6	107.4	0.10	-0.05	0.53	-11.3	10.4		
3,108.0	8.90	50.00	3,092.6	140.7	129.3	0.20	-0.05	1.23	-21.0	9.7		
3,297.0	9.00	52.50	3,279.3	159.1	152.2	0.21	0.05	1.32	-30.9	8.7		
3,484.0	7.60	53.10	3,464.3	175.4	173.7	0.75	-0.75	0.32	-39.0	6.5		
3,671.0	6.40	47.80	3,649.9	189.9	191.3	0.73	-0.64	-2.83	-43.1	0.8		
3,859.0	5.50	40.40	3,836.9	203.8	204.9	0.63	-0.48	-3.94	-43.1	-4.6		
4,047.0	5.20	40.30	4,024.1	217.1	216.3	0.16	-0.16	-0.05	-41.5	-3.1		
4,234.0	4.70	42.80	4,210.4	229.2	227.0	0.29	-0.27	1.34	-38.6	-0.2		
4,422.0	6.50	48.40	4,397.5	241.9	240.2	1.00	0.96	2.98	-37.5	3.1		
4,609.0	6.80	50.60	4,583.2	256.1	256.8	0.25	0.21	1.18	-40.2	3.1		
4,786.0	7.10	71.80	4,768.9	266.8	276.4	1.38	0.11	11.34	-41.4	12.8		



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 Site: Caravan 28 State Com
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 Wellbore: OH
 Design: OH

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 TVD Reference: KB = 25 @ 3559.0usft
 MD Reference: KB = 25 @ 3559.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	NIS (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
4,984.0	7.20	64.30	4,955.4	275.6	288.1	0.50	0.05	-3.99	-47.9	-0.6
5,171.0	6.00	50.00	5,141.2	286.9	316.1	1.08	-0.64	-7.65	-48.4	-17.0
5,358.0	5.90	47.50	5,327.2	296.7	330.7	0.15	-0.05	-1.34	-47.9	-20.3
5,546.0	5.40	46.70	5,514.3	312.3	344.3	0.27	-0.27	-0.43	-47.0	-21.7
5,732.0	5.30	45.60	5,699.4	324.3	356.8	0.08	-0.05	-0.59	-44.9	-23.0
5,918.0	7.70	55.10	5,884.2	337.5	373.1	1.41	1.29	5.11	-50.3	-17.3
6,106.0	9.00	40.40	6,070.3	355.9	393.0	1.32	0.69	-7.82	-52.1	-31.1
6,293.0	8.60	37.30	6,255.1	378.1	411.0	0.33	-0.21	-1.66	-60.1	-32.1
6,481.0	7.80	36.00	6,441.1	399.8	427.1	0.39	-0.37	-0.89	-67.4	-30.8
6,667.0	7.80	34.90	6,625.4	420.5	441.8	0.10	-0.05	-0.59	-73.5	-29.0
6,855.0	7.00	34.60	6,811.8	440.3	455.6	0.43	-0.43	-0.16	-76.7	-26.0
7,043.0	6.30	28.00	6,998.5	458.9	467.0	0.55	-0.37	-3.51	-78.6	-30.5
7,231.0	2.40	22.40	7,186.0	471.6	473.3	2.08	-2.07	-2.98	-71.7	-31.7
7,418.0	1.80	33.90	7,372.8	477.8	476.5	0.35	-0.27	6.15	-66.7	-12.8
7,606.0	0.50	143.70	7,560.8	479.8	478.7	1.13	-0.74	58.40	8.8	64.0
7,794.0	0.20	74.60	7,748.8	479.2	479.5	0.25	-0.16	-36.78	-56.9	31.2
7,982.0	0.60	183.10	7,936.8	478.3	479.8	0.37	0.21	57.71	46.8	44.3
8,170.0	0.40	155.70	8,124.8	476.7	480.0	0.16	-0.11	-14.57	19.6	60.4
8,357.0	0.70	118.50	8,311.8	475.6	481.3	0.24	0.16	-19.89	-22.6	59.6
8,544.0	0.90	155.40	8,498.8	473.7	482.9	0.29	0.11	19.73	15.3	61.9
8,732.0	1.10	94.00	8,686.7	472.2	485.3	0.55	0.11	-32.66	-49.5	41.8
8,920.0	1.40	195.80	8,874.7	469.9	486.5	1.04	0.16	54.15	49.1	41.7
9,107.0	1.50	211.70	9,061.7	465.6	484.6	0.22	0.05	8.50	54.0	27.3
9,294.0	1.40	231.40	9,248.6	462.1	481.5	0.27	-0.05	10.53	55.4	8.3
9,481.0	2.10	258.50	9,435.5	460.0	478.4	0.57	0.37	14.49	47.7	-16.8
9,668.0	4.00	266.30	9,622.2	458.9	466.5	1.04	1.02	4.17	35.0	-22.7
9,856.0	1.40	252.30	9,810.0	457.8	457.8	1.42	-1.38	-7.45	30.8	-15.1



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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10,044.0	2.10	246.10	9,997.9	455.7	452.4	0.39	0.37	-3.30	26.6	-11.9
10,231.0	1.70	235.40	10,184.8	452.7	447.0	0.29	-0.21	-5.72	22.2	-7.4
10,419.0	1.80	238.70	10,372.7	449.6	442.2	0.08	0.05	1.76	16.0	-8.5
10,607.0	1.10	267.90	10,560.7	448.0	437.9	0.53	-0.37	15.53	5.4	-13.8
10,794.0	1.10	244.80	10,747.6	447.2	434.5	0.24	0.00	-12.35	6.9	-11.3
10,982.0	1.70	243.50	10,935.6	445.1	430.3	0.32	0.32	-0.69	2.6	-11.2
11,169.0	2.90	284.00	11,122.4	443.4	423.2	0.77	0.64	10.96	-8.8	-10.4
11,357.0	1.00	355.00	11,310.3	444.5	418.3	1.64	-1.01	48.40	-11.8	13.7
11,545.0	2.70	296.90	11,498.2	448.2	414.2	1.24	0.90	-30.90	-23.2	-4.1
11,744.0	2.50	275.00	11,697.0	450.7	405.7	0.51	-0.10	-11.01	-28.7	-14.3
11,967.0	2.50	274.10	11,819.9	451.1	400.3	0.03	0.00	-0.73	-33.8	-14.7
11,959.0	2.30	266.50	11,911.9	451.1	396.5	0.41	-0.22	-8.26	-35.4	-19.3
12,054.0	7.20	198.80	12,006.5	445.4	392.7	7.02	5.16	-71.26	-2.2	-41.9
12,148.0	18.50	191.10	12,098.0	425.1	387.9	12.13	12.02	-8.19	-10.3	-44.0
12,242.0	26.00	196.90	12,185.0	390.7	379.0	8.30	7.98	6.17	-26.2	-49.0
12,335.0	33.10	189.90	12,265.9	346.1	368.7	8.48	7.63	-7.53	-25.0	-61.6
12,430.0	44.30	181.00	12,340.0	287.2	363.6	13.14	11.79	-9.37	-16.9	-70.1
12,523.0	58.00	180.40	12,398.2	214.9	362.8	14.74	14.73	-0.65	-18.1	-71.6
12,617.0	65.80	182.10	12,442.4	132.1	360.9	8.45	8.30	1.81	-19.3	-73.8
12,710.0	75.10	173.60	12,473.5	44.7	364.4	13.19	10.00	-9.14	-11.5	-71.6
12,803.0	80.80	168.90	12,493.0	-45.1	378.3	7.87	6.13	-5.05	-0.8	-58.1
12,897.0	91.40	174.00	12,499.3	-137.7	392.2	12.51	11.28	5.43	4.4	-44.8
12,990.0	88.80	174.20	12,499.2	-230.2	401.7	2.80	-2.80	0.22	5.0	-35.9
13,108.0	90.60	171.80	12,499.8	-347.3	416.1	2.54	1.53	-2.03	6.3	-22.3
13,201.0	94.00	175.40	12,496.1	-439.6	426.5	5.32	3.66	3.67	3.0	-12.6
13,294.0	93.50	179.20	12,490.0	-532.3	430.8	4.11	-0.54	4.09	-2.4	-8.9
13,388.0	91.60	179.30	12,485.8	-626.2	432.1	2.02	-2.02	0.11	-8.0	-9.3



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13,482.0	89.30	180.70	12,485.1	-720.2	432.1	2.88	-2.45	1.49	-8.1	-8.9
13,575.0	89.80	181.40	12,485.8	-813.2	430.4	0.82	0.54	0.75	-4.8	-11.3
13,669.0	90.50	183.00	12,485.5	-907.1	426.7	1.88	0.74	1.70	-4.4	-15.5
13,763.0	89.70	180.40	12,485.4	-1,001.0	424.0	2.89	-0.85	-2.77	-4.0	-19.0
13,856.0	90.00	177.40	12,485.6	-1,094.0	425.7	3.24	0.32	-3.23	-3.2	-17.8
13,950.0	91.30	176.90	12,484.6	-1,187.9	430.4	1.48	1.38	-0.53	-3.7	-13.8
14,044.0	89.80	178.60	12,483.7	-1,281.8	434.1	2.41	-1.60	1.81	-4.0	-10.8
14,115.0	90.60	178.70	12,483.4	-1,352.8	435.8	1.14	1.13	0.14	-3.8	-9.6
14,209.0	92.00	178.40	12,481.3	-1,446.7	438.2	1.52	1.49	-0.32	-5.3	-7.9
14,302.0	91.30	178.60	12,478.6	-1,539.7	440.8	0.78	-0.75	0.22	-7.4	-6.1
14,396.0	90.90	179.50	12,476.8	-1,633.6	442.1	1.05	-0.43	0.96	-8.6	-5.2
14,490.0	90.70	181.40	12,475.5	-1,727.6	441.4	2.03	-0.21	2.02	-9.3	-6.6
14,583.0	87.30	181.40	12,477.1	-1,820.6	439.1	3.66	-3.66	0.00	-7.1	-9.5
14,677.0	88.60	179.00	12,480.5	-1,914.5	438.8	2.80	1.38	-2.55	-3.1	-10.5
14,771.0	90.30	180.60	12,481.4	-2,008.5	439.1	2.48	1.81	1.70	-1.6	-10.8
14,865.0	91.50	182.40	12,479.8	-2,102.4	438.7	2.30	1.28	1.91	-2.5	-13.9
14,959.0	89.50	179.50	12,478.1	-2,196.4	435.1	3.75	-2.13	-3.09	-2.7	-16.1
15,053.0	87.60	179.40	12,481.4	-2,290.4	436.0	2.02	-2.02	-0.11	0.2	-15.8
15,148.0	86.30	179.90	12,486.4	-2,383.2	436.6	1.50	-1.40	0.54	5.8	-15.9
15,240.0	88.50	177.60	12,480.7	-2,477.1	438.6	3.38	2.34	-2.45	10.6	-14.5
15,334.0	91.20	177.20	12,480.9	-2,571.0	442.9	2.80	2.87	-0.43	10.8	-10.9
15,427.0	90.30	176.10	12,489.7	-2,663.8	448.3	1.53	-0.97	-1.18	9.4	-6.1
15,521.0	92.10	176.30	12,487.7	-2,757.6	454.6	1.93	1.91	0.21	7.3	-0.5
15,614.0	90.70	175.70	12,485.4	-2,850.3	461.1	1.84	-1.51	-0.65	4.8	5.3
15,709.0	88.90	176.60	12,485.8	-2,945.2	465.8	3.59	-1.89	3.05	4.9	9.4
15,803.0	88.10	178.40	12,488.2	-3,039.1	468.2	0.88	-0.85	-0.21	7.2	11.2
15,896.0	89.00	179.30	12,490.6	-3,132.1	470.1	1.37	0.97	0.97	8.4	12.4



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15,990.0	89.80	179.70	12,491.6	-3,226.1	470.9	0.95	0.85	0.43	10.2	12.6
16,084.0	92.50	180.60	12,489.7	-3,320.0	470.7	3.03	2.67	0.98	8.1	11.7
16,177.0	91.90	180.90	12,488.1	-3,413.0	469.5	0.72	-0.65	0.32	4.3	9.8
16,271.0	89.90	179.90	12,484.6	-3,508.9	468.8	2.38	-2.13	-1.08	2.6	8.5
16,365.0	88.50	181.10	12,486.0	-3,600.9	468.0	1.98	-1.49	1.28	3.8	7.0
16,458.0	91.30	180.10	12,486.1	-3,693.9	467.0	3.20	3.01	-1.08	3.7	5.4
16,552.0	90.60	180.80	12,484.6	-3,787.9	466.3	1.05	-0.74	0.74	2.0	4.0
16,647.0	91.20	182.70	12,483.1	-3,882.8	463.4	2.10	0.63	2.00	0.3	0.5
16,740.0	91.60	185.00	12,480.8	-3,975.6	457.1	2.51	0.43	2.47	-2.2	-6.4
16,834.0	91.40	183.00	12,478.3	-4,069.3	450.6	2.14	-0.21	-2.13	-4.8	-13.6
16,928.0	95.10	181.10	12,473.0	-4,163.1	447.2	4.42	3.94	-2.02	-10.3	-17.7
17,022.0	93.40	180.00	12,466.0	-4,256.8	446.3	2.15	-1.81	-1.17	-17.5	-19.2
17,116.0	89.70	179.10	12,463.5	-4,350.8	447.1	4.05	-3.94	-0.96	-20.2	-19.1
17,210.0	87.10	179.60	12,466.1	-4,444.7	448.1	2.82	-2.77	0.53	-17.8	-18.7
17,303.0	87.80	179.80	12,470.3	-4,537.6	448.6	0.78	0.75	0.22	-13.9	-16.8
17,397.0	88.90	179.80	12,473.0	-4,631.6	449.1	1.19	1.17	-0.21	-11.5	-19.0
17,490.0	89.40	180.40	12,474.3	-4,724.6	449.1	1.01	0.54	0.86	-10.4	-18.6
17,583.0	89.40	177.80	12,475.3	-4,817.5	450.6	2.80	0.00	-2.80	-9.7	-18.8
17,677.0	88.90	177.60	12,476.7	-4,911.5	454.3	0.57	-0.53	-0.21	-8.6	-15.7
17,771.0	91.50	178.90	12,476.4	-5,005.3	458.8	2.88	2.77	-0.74	-9.2	-11.8
17,865.0	88.40	177.70	12,476.5	-5,099.2	463.3	3.41	-3.30	0.85	-9.4	-8.0
17,959.0	88.10	177.00	12,481.0	-5,193.0	467.6	2.66	-2.45	-0.74	-5.1	-4.4
18,053.0	86.80	177.60	12,486.8	-5,286.7	472.0	0.98	0.74	0.64	0.4	-0.8
18,147.0	88.50	178.10	12,480.7	-5,380.6	474.7	2.41	1.81	1.60	4.0	1.5
18,241.0	87.10	178.80	12,494.3	-5,474.5	476.5	1.52	-1.49	-0.32	7.3	2.5
18,334.0	87.50	178.40	12,498.6	-5,567.4	478.7	0.61	0.43	-0.43	11.4	4.2
18,428.0	95.10	180.60	12,496.5	-5,662.3	479.6	8.33	8.00	2.32	8.9	4.4



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Caravan 28 State Com
 Well: #704H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25 @ 3559.0usft
 MD Reference: KB = 25 @ 3559.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLag (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
18,452.0	95.50	180.60	12,494.4	-5,685.2	479.3	1.74	1.74	0.00	6.7	4.0
18,545.0	94.10	180.50	12,488.6	-5,777.8	478.4	1.51	-1.51	-0.11	-1.3	2.4
18,638.0	92.30	179.90	12,481.4	-5,870.7	478.1	2.04	-1.94	-0.85	-8.8	1.4
18,732.0	94.30	177.90	12,476.0	-5,964.5	479.9	3.01	2.13	-2.13	-12.5	2.6
18,825.0	92.70	178.70	12,470.3	-6,057.3	482.7	1.92	-1.72	0.86	-18.4	4.7
18,918.0	89.50	179.20	12,468.5	-6,150.2	484.4	3.48	-3.44	0.54	-20.5	5.8
19,012.0	87.70	178.90	12,470.8	-6,244.2	485.9	1.94	-1.91	-0.32	-18.5	6.7
19,106.0	88.40	179.80	12,474.0	-6,338.1	487.0	1.21	0.74	0.96	-15.5	7.1
19,200.0	86.90	179.20	12,477.9	-6,432.1	487.8	1.72	-1.60	-0.84	-12.0	7.3
19,294.0	87.30	179.60	12,482.6	-6,525.9	488.8	0.60	0.43	0.43	-7.6	7.6
19,388.0	87.60	179.10	12,486.8	-6,619.8	489.8	0.62	0.32	-0.53	-3.9	8.0
19,481.0	88.90	180.60	12,488.6	-6,712.8	490.1	2.13	1.40	1.81	-1.6	7.6
19,575.0	90.20	181.80	12,490.4	-6,806.8	488.1	1.88	1.38	1.28	-1.3	5.0
19,669.0	89.50	181.60	12,490.6	-6,900.7	485.3	0.77	-0.74	-0.21	-1.6	1.5
19,762.0	89.00	181.60	12,491.8	-6,993.7	482.7	0.54	-0.54	0.00	-0.9	-1.7
19,855.0	88.50	181.60	12,493.1	-7,086.6	480.1	0.54	0.54	0.00	-0.1	-4.9
19,948.0	88.40	180.90	12,494.8	-7,179.6	478.1	1.40	-1.18	-0.75	1.1	-7.6
20,041.0	88.80	181.00	12,497.0	-7,272.5	478.6	0.44	0.43	0.11	2.8	-9.8
20,135.0	89.50	180.80	12,498.4	-7,366.5	475.1	0.77	0.74	-0.21	3.7	-11.9
20,228.0	90.00	180.60	12,498.8	-7,459.5	474.0	0.58	0.54	-0.22	3.6	-13.7
20,322.0	89.40	179.50	12,499.3	-7,553.5	473.9	1.33	-0.84	-1.17	3.6	-14.4
20,416.0	89.40	179.40	12,500.3	-7,647.5	474.8	0.11	0.00	-0.11	4.1	-14.2
20,506.0	90.60	178.80	12,500.3	-7,737.5	478.2	1.49	1.33	-0.67	3.6	-13.4
20,603.0	93.30	179.80	12,497.0	-7,834.4	477.4	2.97	2.78	1.03	-0.2	-12.9
20,696.0	93.00	179.90	12,491.9	-7,927.3	477.6	0.34	-0.32	0.11	-5.8	-13.3
20,789.0	91.60	179.20	12,488.2	-8,020.2	478.3	1.68	-1.51	-0.75	-9.9	-13.2
20,882.0	92.40	179.20	12,484.9	-8,113.1	479.6	0.86	0.86	0.00	-13.3	-12.5



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3559.0usft
Site:	Caravan 28 State Corn	MD Reference:	KB = 25 @ 3559.0usft
Well:	#704H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey												
MD (usft)	Inc (°)	Asl (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
20,976.0	91.10	178.10	12,482.1	-8,207.1	481.9	1.81	-1.38	-1.17	-18.4	-11.0		
21,070.0	90.00	178.40	12,481.2	-8,301.0	484.7	1.21	-1.17	0.32	-17.5	-8.8		
21,164.0	91.30	177.90	12,480.1	-8,394.9	487.8	1.48	1.38	-0.53	-18.8	-8.4		
21,257.0	89.50	178.90	12,479.4	-8,487.9	490.4	2.21	-1.94	1.08	-19.8	-4.4		
21,351.0	89.90	179.50	12,479.9	-8,581.9	491.7	0.77	0.43	0.64	-19.3	-3.8		
21,445.0	91.20	180.20	12,479.0	-8,675.9	491.9	1.57	1.38	0.74	-20.4	-4.2		
21,538.0	89.60	179.20	12,478.4	-8,768.9	492.4	2.03	-1.72	-1.08	-21.2	-4.3		
21,631.0	88.70	178.90	12,478.8	-8,861.9	493.9	1.02	-0.97	-0.32	-20.0	-3.4		
21,725.0	89.90	180.10	12,480.9	-8,955.8	494.8	1.81	1.28	1.28	-19.1	-3.2		
21,818.0	90.20	179.90	12,480.8	-9,048.8	494.8	0.39	0.32	-0.22	-19.3	-3.9		
21,912.0	92.30	180.70	12,478.8	-9,142.8	494.3	2.39	2.23	0.85	-21.8	-5.0		
22,005.0	90.60	180.70	12,478.4	-9,235.8	493.1	1.83	-1.83	0.00	-24.1	-8.8		
22,098.0	87.70	180.20	12,477.8	-9,328.7	492.4	3.13	-3.09	-0.53	-22.9	-8.2		
22,193.0	87.50	180.20	12,481.8	-9,423.7	492.1	0.21	-0.21	0.00	-19.2	-8.2		
22,286.0	89.80	181.20	12,483.9	-9,516.6	490.9	2.70	2.47	1.08	-17.2	-11.0		
22,381.0	91.00	181.40	12,483.3	-9,611.6	488.8	1.28	1.28	0.21	-18.0	-13.8		
22,474.0	91.70	182.70	12,481.1	-9,704.5	485.5	1.59	0.75	1.40	-20.4	-17.7		
22,568.0	89.50	178.40	12,480.1	-9,798.5	484.6	5.14	-2.34	-4.57	-21.8	-19.3		
22,664.0	90.10	179.80	12,480.4	-9,894.5	486.1	1.59	0.62	1.46	-21.4	-18.5		
22,720.0	90.10	179.80	12,480.3	-9,950.5	486.3	0.00	0.00	0.00	-21.6	-18.6		



Midland PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Caravan 28 State Com
Well: #704H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3559.0usft
MD Reference: KB = 25 @ 3559.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
11,948.0	11,898.9	451.2	397.0	KOP, MD:11948.0', TVD:11898.9', N/S:451.2', E/W:397.0', INC:2.33
12,257.6	12,188.9	384.0	377.1	FTP Crossing, MD:12257.6', TVD:12188.9', N/S:384.0', E/W:377.1', INC:27.16
22,664.0	12,480.4	-9,894.5	488.1	Last MWD Survey (MD=22664.0')
22,720.0	12,480.3	-9,950.5	488.3	Projection to Bit (MD=22720.0')

Checked By: _____ Approved By: _____ Date: _____

I certify this survey to be true and correct to the best of my belief and knowledge.

Signed Kay Maddox 11/15/2019
Date



Lea County, NM (NAD 83 NME)

Caravan 28 State Com #704H

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: #704H

KB = 25 @ 3559.0ust
Northing 435324.00 Easting 772978.00
Latitude 32° 11' 40.437 N Longitude 103° 35' 4.203 W

Assemble to Grid North
True North - 0.45°
Magnetic North - 0.45°
Magnetic Declination - 0.45°
Date: 08/27/2018
Sheet: 10072018



To convert a Magnetic Direction to a Grid Direction, Add 0.45°
To convert a Magnetic Direction to a True Direction, Add 0.45° East
To convert a True Direction to a Grid Direction, Subtract 0.45°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.00	0.00	0.0	0.0	
2	1300.0	0.00	0.00	1300.0	0.0	0.00	0.00	0.00	0.0	
3	1593.2	5.86	44.93	1592.7	10.6	2.00	44.93	-10.1		
4	7300.7	5.86	44.93	7270.3	423.4	422.4	0.00	0.00	-401.5	
5	7593.9	0.00	0.00	7593.0	434.0	433.0	2.00	180.00	-411.5	Brushy Top (Caravan 28 State Com #704H)
6	12048.9	0.00	0.00	12018.0	434.0	433.0	0.00	0.00	-411.5	
7	12801.9	90.38	179.60	12495.5	-48.5	436.3	12.00	179.60	68.5	
8	15235.7	90.38	179.60	12480.0	-2480.2	453.2	0.00	0.00	2500.0	TGT#1 (Caravan 28 State Com #704H)
9	15259.8	89.88	179.60	12479.9	-2524.3	453.3	2.00	-180.00	2524.0	
10	17237.7	89.88	179.60	12484.0	-4482.1	467.0	0.00	0.00	4500.0	TGT#2 (Caravan 28 State Com #704H)
11	17240.4	89.83	179.60	12484.0	-4484.8	467.1	2.00	180.00	4502.7	
12	19239.6	89.83	179.60	12490.0	-6494.0	480.9	0.00	0.00	6500.0	TGT#3 (Caravan 28 State Com #704H)
13	19248.3	89.89	179.60	12490.0	-6490.7	480.9	2.00	-180.00	6508.7	
14	20741.1	89.69	179.60	12498.0	-7985.4	491.3	0.00	0.00	8000.0	TGT#4 (Caravan 28 State Com #704H)
15	20750.5	89.88	179.60	12498.0	-7984.9	491.4	2.00	0.00	8009.5	
16	22719.8	89.88	179.60	12502.0	-9984.0	505.0	0.00	0.00	9978.8	PBHL (Caravan 28 State Com #704H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top (Caravan 28 State Com #704H)	7593.0	434.0	433.0	435768.00	774111.00
TGT#1 (Caravan 28 State Com #704H)	12480.0	-2480.2	453.2	432543.80	774311.18
TGT#2 (Caravan 28 State Com #704H)	12484.0	-4482.1	467.0	432941.80	774483.04
TGT#3 (Caravan 28 State Com #704H)	12490.0	-6494.0	480.9	432945.00	774538.80
TGT#4 (Caravan 28 State Com #704H)	12498.0	-7985.4	491.3	432708.00	774111.00
PBHL (Caravan 28 State Com #704H)	12502.0	-9984.0	505.0	432382.00	774483.00

