

HOBBS OCD

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Valiant 24 Fed Com

#706H

OH

Design: OH

Midland PVA

09 October, 2019



Midland PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Valiant 24 Fed Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25 @ 3463.0usft
MD Reference: KB = 25 @ 3463.0usft
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	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Valiant 24 Fed Com		
Site Position:		Northing:	406,151.00 usft
From:	Map	Easting:	760,107.00 usft
Position Uncertainty:	0.0 usft	Grid Radius:	13-3/16 "
		Latitude:	32° 6' 52.620 N
		Longitude:	103° 37' 36.212 W
		Grid Convergence:	0.38 °

Well	#706H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 6' 52.595 N
		Longitude:	103° 37' 36.979 W
		Ground Level:	3,458.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	1/7/2019	(°)
			6.80
			Dip Angle
			(°)
			59.93
			Field Strength
			(nT)
			47,708.99973535

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
			(°)
			180.69

Survey Program	Date 10/8/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
169.0	19,820.0	Pro MWD (OH)	MWD
			Description
			OWSG MWD - Standard



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0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
169.0	0.50	331.00	169.0	0.6	-0.4	0.30	0.30	0.00	-0.7	0.0	
342.0	0.10	56.40	342.0	1.4	-0.6	0.29	-0.23	49.36	-0.3	1.5	
485.0	0.10	247.00	485.0	1.4	-0.6	0.14	0.00	-118.46	0.0	-1.5	
674.0	0.30	220.50	674.0	1.0	-1.1	0.11	0.11	-14.02	0.0	-1.5	
862.0	0.60	230.70	862.0	0.0	-2.2	0.16	0.16	5.43	-1.7	-1.3	
1,040.0	0.70	216.70	1,040.0	-1.5	-3.5	0.11	0.06	-7.87	-3.3	-1.8	
1,228.0	0.90	234.60	1,228.0	-3.3	-5.4	0.17	0.11	9.52	-8.3	-0.5	
1,417.0	0.90	249.50	1,416.9	-4.6	-8.0	0.12	0.00	7.88	-8.1	1.5	
1,604.0	3.50	351.10	1,603.8	0.5	-10.3	2.02	1.39	54.33	-0.2	8.9	
1,793.0	4.70	355.80	1,792.3	13.9	-11.7	0.66	0.63	2.49	-0.1	7.6	
1,981.0	7.60	359.20	1,979.2	34.3	-12.5	1.66	1.65	1.81	-1.2	2.9	
2,169.0	8.30	358.80	2,165.3	60.7	-12.9	0.27	0.27	-0.21	-8.6	-2.2	
2,356.0	8.40	359.40	2,350.4	87.8	-13.4	0.07	0.05	0.32	-17.0	-7.1	
2,543.0	7.70	342.90	2,535.5	113.5	-17.2	1.29	-0.37	-8.82	-20.4	-15.1	
2,730.0	8.00	348.70	2,720.8	138.2	-23.4	0.45	0.16	3.10	-27.9	-13.4	
2,917.0	8.90	356.00	2,905.8	165.4	-27.0	0.75	0.48	3.90	-37.7	-12.1	
3,104.0	6.20	338.70	3,091.1	189.2	-31.7	1.87	-1.44	-9.25	-36.9	-25.2	
3,292.0	6.20	343.60	3,278.0	208.4	-38.2	0.28	0.00	2.61	-39.5	-21.0	
3,480.0	5.60	345.40	3,465.1	227.0	-43.4	0.33	-0.32	0.96	-39.9	-19.9	
3,667.0	5.30	356.30	3,651.2	244.5	-46.3	0.58	-0.16	5.83	-41.4	-14.5	
3,856.0	5.20	10.50	3,839.4	261.6	-45.3	0.69	-0.05	7.51	-43.0	-10.6	
4,044.0	6.20	348.50	4,028.5	280.0	-45.7	1.27	0.53	-11.70	-34.4	-30.6	
4,231.0	5.40	6.00	4,212.6	298.6	-46.8	1.03	-0.43	9.36	-42.3	-23.2	
4,418.0	6.00	346.90	4,398.7	316.9	-48.1	1.06	0.32	-10.21	-31.0	-39.6	
4,604.0	3.30	346.20	4,584.0	331.5	-51.6	1.45	-1.45	-0.38	-26.2	-40.9	
4,791.0	4.80	342.00	4,770.6	344.2	-55.3	0.82	0.80	-2.25	-16.8	-42.4	



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 Database: EDM 5000.14

Survey											
MD (usft)	Inc (")	Asd (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)	
4,979.0	5.40	341.70	4,957.8	380.1	-80.5	0.32	0.32	-0.16	-13.7	-41.7	
5,167.0	5.50	337.30	5,145.0	376.8	-66.8	0.23	0.05	-2.34	-8.7	-41.0	
5,356.0	5.50	336.60	5,333.1	393.5	-73.9	0.04	0.00	-0.37	-6.8	-38.7	
5,543.0	5.70	337.90	5,519.2	410.3	-80.9	0.13	0.11	0.70	-6.5	-38.3	
5,730.0	5.80	335.50	5,705.2	427.6	-88.4	0.17	0.11	-1.28	-4.5	-34.0	
5,919.0	5.50	336.30	5,893.3	444.6	-96.1	0.22	-0.21	0.42	-4.2	-31.2	
6,108.0	5.10	332.80	6,078.5	460.4	-103.5	0.27	-0.21	-1.87	-0.4	-28.1	
6,294.0	5.20	328.60	6,266.8	475.1	-111.7	0.21	0.05	-2.23	2.9	-23.7	
6,482.0	5.10	326.30	6,454.0	489.3	-120.8	0.12	-0.05	-1.22	-4.6	-21.2	
6,669.0	3.00	322.50	6,640.5	500.1	-128.4	1.13	-1.12	-2.03	-16.1	-21.9	
6,762.0	3.00	320.00	6,733.4	503.9	-131.4	0.14	0.00	-2.69	-20.0	-22.7	
6,856.0	1.10	321.50	6,827.3	506.5	-133.6	2.02	-2.02	1.60	-23.9	-22.1	
6,950.0	1.40	136.30	6,921.3	506.4	-133.3	2.66	0.32	185.98	21.6	24.3	
7,044.0	1.00	143.00	7,015.3	504.9	-132.1	0.45	-0.43	7.13	22.3	21.7	
7,137.0	1.10	146.90	7,108.3	503.5	-131.1	0.17	0.11	7.42	23.0	19.0	
7,230.0	1.00	153.60	7,201.3	502.0	-130.3	0.13	-0.11	3.98	22.6	17.5	
7,324.0	1.00	145.50	7,285.3	500.5	-129.5	0.15	0.00	-8.62	18.2	20.4	
7,418.0	1.10	160.00	7,389.2	499.0	-128.7	0.30	0.11	15.43	21.0	15.4	
7,511.0	1.10	160.50	7,482.2	497.3	-128.1	0.01	0.00	0.54	19.4	15.2	
7,605.0	1.10	162.00	7,576.2	495.6	-127.5	0.03	0.00	1.60	18.0	14.7	
7,699.0	1.10	162.00	7,670.2	493.9	-127.0	0.00	0.00	0.00	16.2	14.7	
7,712.1	1.07	162.43	7,683.3	493.7	-126.9	0.23	-0.22	3.25	16.0	14.6	
Brushy Top(VAL 24 FC #708H)											
7,782.0	0.90	165.60	7,763.2	492.4	-126.5	0.23	-0.21	3.97	15.4	13.8	
7,886.0	0.90	171.60	7,857.2	490.9	-126.2	0.10	0.00	6.60	15.3	12.1	
7,980.0	1.10	173.80	7,951.1	489.3	-126.0	0.22	0.21	2.13	14.1	11.6	
8,073.0	1.10	172.60	8,044.1	487.5	-125.8	0.02	0.00	-1.29	12.1	11.8	



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8,260.0	1.20	159.00	8,231.1	483.9	-124.8	0.16	0.05	-7.27	5.3	13.9
8,447.0	1.50	179.50	8,418.0	479.6	-124.2	0.30	0.16	10.96	5.5	11.9
8,633.0	1.50	188.10	8,604.0	474.8	-124.5	0.12	0.00	4.62	2.4	11.3
8,820.0	1.50	190.10	8,790.9	470.0	-125.3	0.03	0.00	1.07	-2.1	11.3
9,007.0	1.60	197.80	8,977.8	465.1	-126.5	0.12	0.05	4.12	-5.6	11.8
9,196.0	2.50	157.90	9,166.7	458.7	-125.7	0.86	0.48	-21.11	-18.0	3.8
9,383.0	1.50	175.10	9,353.6	452.5	-124.0	0.62	-0.53	9.20	-22.4	10.1
9,572.0	1.90	173.10	9,542.5	446.9	-123.4	0.21	0.21	-1.06	-28.4	9.3
9,759.0	1.90	161.30	9,729.4	440.9	-122.0	0.21	0.00	-6.31	-35.8	2.6
9,946.0	2.70	166.40	9,916.3	433.7	-120.0	0.44	0.43	2.73	-42.9	6.1
10,040.0	0.70	158.00	10,010.2	431.0	-119.3	2.14	-2.13	-8.94	-46.1	-0.6
10,133.0	0.70	150.40	10,103.2	430.0	-118.8	0.10	0.00	-8.17	-46.8	-8.8
10,227.0	0.20	187.80	10,187.2	429.3	-118.5	0.59	-0.53	39.79	-41.9	23.4
10,414.0	0.60	234.40	10,384.2	428.4	-119.4	0.26	0.21	24.92	-13.0	46.7
10,602.0	0.80	196.20	10,572.2	426.6	-120.5	0.26	0.11	-20.32	-41.2	28.1
10,731.6	1.56	185.03	10,701.8	424.0	-120.9	0.61	0.59	-8.62	-48.5	19.4
FTP Crossing, MD:10731.6", TVD:10701.8", N/S:434.0", EW:-120.9", INC:1.56										
10,788.0	1.90	183.00	10,758.2	422.3	-121.0	0.61	0.60	-3.61	-50.9	17.6
10,882.0	0.30	258.10	10,852.1	420.7	-121.4	1.96	-1.70	79.89	3.3	55.2
10,975.0	1.00	318.10	10,945.1	421.2	-122.2	0.98	0.75	64.52	48.5	24.9
11,069.0	0.80	323.30	11,039.1	422.4	-123.1	0.23	-0.21	5.53	49.1	20.5
11,162.0	0.40	240.50	11,132.1	422.7	-123.8	0.91	-0.43	-89.03	-14.6	50.7
11,256.0	0.50	262.40	11,226.1	422.5	-124.5	0.21	0.11	23.30	4.6	52.6
11,350.0	0.70	256.80	11,320.1	422.3	-125.4	0.22	0.21	-5.96	-1.5	52.7
11,444.0	1.40	199.00	11,414.1	421.1	-126.4	1.26	0.74	-61.49	-46.9	26.3
11,608.0	3.30	196.90	11,577.9	414.7	-128.4	1.16	1.16	-1.28	-54.5	24.6
11,755.0	4.00	195.40	11,724.6	405.7	-131.0	0.48	0.48	-1.02	-64.5	23.0



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11,781.0	3.80	185.70	11,750.6	404.0	-131.4	0.77	-0.77	1.15	-66.1	23.4	
11,811.0	5.85	200.52	11,780.5	401.6	-132.2	6.95	6.83	18.06	-66.4	29.0	
KOP, MD:11811.0', TVD:11780.5', N/S:401.6', E/W:-132.2', INC:5.85											
11,874.0	10.20	204.30	11,842.8	393.5	-135.7	6.95	6.91	6.00	-69.6	31.4	
11,987.0	23.00	164.40	11,932.0	369.3	-134.2	17.69	13.76	-42.90	-75.8	-17.9	
12,061.0	34.90	159.20	12,014.1	325.4	-119.6	12.93	12.66	-5.53	-78.2	-7.6	
12,154.0	35.70	151.60	12,090.1	276.6	-97.3	4.80	0.86	-8.17	-72.9	12.8	
12,202.3	37.94	149.88	12,128.8	251.3	-83.1	5.09	4.63	-3.55	-65.4	29.9	
FTP(VALL 24 FC #706H)											
12,223.0	38.90	149.20	12,145.0	240.3	-76.6	5.09	4.66	-3.30	-61.8	37.7	
12,320.0	46.70	154.20	12,216.1	182.2	-45.6	8.77	8.04	5.15	-35.5	81.7	
12,350.0	53.10	160.00	12,235.4	161.1	-36.7	25.94	21.33	19.33	-19.1	95.5	
12,381.0	57.40	163.80	12,253.1	136.9	-28.6	17.14	13.87	12.26	-5.6	105.5	
12,412.0	63.10	167.20	12,268.5	110.8	-22.1	20.70	18.39	10.97	7.4	113.0	
12,457.0	72.80	168.90	12,285.3	70.1	-13.5	22.06	21.78	3.78	21.2	121.3	
12,506.0	82.20	168.00	12,285.9	23.2	-3.9	19.06	18.98	-1.84	30.6	130.0	
12,599.0	93.90	176.80	12,299.0	-68.6	8.3	15.73	12.58	9.46	38.3	140.9	
12,692.0	94.80	183.20	12,292.0	-161.3	8.3	6.93	0.97	6.88	27.8	140.5	
12,785.0	95.30	182.80	12,283.8	-253.8	3.5	0.69	0.54	-0.43	19.4	135.1	
12,876.0	93.60	184.80	12,276.5	-347.3	-2.7	2.79	-1.81	2.13	11.8	128.2	
12,972.0	92.80	185.90	12,271.3	-439.8	-11.4	1.46	-0.86	1.18	6.5	119.0	
13,066.0	90.00	187.00	12,269.0	-533.2	-21.9	3.20	-2.98	1.17	4.5	107.6	
13,159.0	89.50	186.90	12,269.4	-625.5	-33.2	0.55	-0.54	-0.11	4.8	98.0	
13,253.0	90.30	187.30	12,269.6	-718.8	-44.8	0.95	0.85	0.43	4.5	83.8	
13,348.0	87.60	186.40	12,271.3	-813.0	-56.1	3.00	-2.84	-0.85	6.4	71.9	
13,442.0	90.00	186.50	12,273.3	-906.4	-66.7	2.56	2.55	0.11	7.7	60.7	
13,537.0	90.40	188.10	12,273.0	-1,000.7	-78.6	1.74	0.42	1.68	7.1	48.1	



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13,631.0	93.60	188.50	12,269.7	-1,093.8	-82.3	3.43	3.40	0.43	3.2	34.0	
13,725.0	90.80	184.50	12,266.1	-1,188.9	-103.0	5.19	-2.98	-4.26	-0.4	22.8	
13,819.0	92.00	179.70	12,283.8	-1,280.8	-108.4	5.28	1.28	-5.11	-2.9	18.7	
13,913.0	92.40	178.20	12,260.2	-1,374.7	-104.7	1.65	0.43	-1.60	-6.8	19.9	
14,007.0	93.90	177.30	12,255.0	-1,468.5	-101.0	1.86	1.60	-0.96	-12.2	23.0	
14,100.0	92.30	177.50	12,250.0	-1,561.2	-96.8	1.73	-1.72	0.22	-17.5	26.8	
14,194.0	91.30	178.90	12,247.0	-1,655.1	-83.8	1.83	-1.08	1.49	-20.8	28.0	
14,288.0	91.00	181.70	12,245.1	-1,748.1	-84.3	3.00	-0.32	2.98	-22.9	27.9	
14,381.0	90.50	182.30	12,243.9	-1,842.0	-87.8	0.84	-0.54	0.65	-24.4	24.1	
14,475.0	88.00	182.80	12,245.1	-1,935.9	-101.8	2.71	-2.68	0.53	-23.4	19.3	
14,568.0	87.80	182.50	12,248.7	-2,028.8	-106.1	0.54	-0.43	-0.32	-20.1	14.5	
14,662.0	86.80	182.30	12,253.2	-2,122.6	-110.0	0.77	-0.74	-0.21	-15.9	10.0	
14,756.0	89.70	180.70	12,256.0	-2,216.5	-112.4	3.43	2.98	-1.70	-13.4	8.9	
14,849.0	88.70	178.50	12,257.3	-2,309.5	-111.8	2.60	-1.08	-2.37	-12.4	7.0	
14,943.0	93.60	178.70	12,255.4	-2,403.4	-109.5	5.22	5.21	0.21	-14.5	8.7	
15,037.0	93.60	177.80	12,249.5	-2,497.2	-108.6	0.96	0.00	-0.96	-20.7	11.0	
15,131.0	94.20	178.20	12,243.1	-2,590.9	-103.4	0.77	0.64	0.43	-27.4	13.7	
15,224.0	93.60	178.20	12,238.8	-2,683.6	-100.4	0.43	-0.43	0.00	-34.1	16.1	
15,317.0	92.90	180.10	12,231.2	-2,776.4	-99.1	2.26	-0.87	2.04	-39.8	16.8	
15,410.0	86.50	180.50	12,231.7	-2,869.4	-99.6	6.90	-8.88	0.43	-39.6	15.8	
15,504.0	84.60	178.80	12,239.0	-2,963.1	-99.8	2.15	-2.02	-0.74	-32.6	15.0	
15,598.0	87.30	178.60	12,245.6	-3,056.9	-99.3	2.88	2.87	-0.21	-26.2	14.9	
15,691.0	89.20	180.00	12,248.5	-3,149.8	-99.0	2.09	2.04	0.43	-23.7	14.6	
15,785.0	89.70	179.60	12,249.4	-3,243.8	-98.7	0.68	0.53	-0.43	-23.0	14.3	
15,877.0	88.90	179.30	12,250.5	-3,335.6	-97.8	0.93	-0.87	-0.33	-22.2	14.7	
15,971.0	92.50	179.80	12,249.3	-3,429.8	-86.9	3.84	3.83	0.32	-23.6	15.0	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Valiant 24 Fed Com
 Well: #706H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3483.0usft
 MD Reference: KB = 25 @ 3483.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 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)	
15,991.6	91.71	179.40	12,248.6	-3,450.4	-88.7	3.95	-3.83	-0.96	-24.4	15.0	
TGT#1(VAL 24 FC #706H)											
16,065.0	88.90	178.70	12,248.2	-3,523.7	-85.5	3.95	-3.83	-0.96	-25.2	15.8	
16,159.0	87.50	179.10	12,251.1	-3,617.7	-93.7	1.55	-1.49	0.43	-22.9	17.0	
16,253.0	94.10	181.60	12,249.8	-3,711.6	-94.2	7.51	7.02	2.66	-24.7	15.9	
16,346.0	94.20	181.90	12,243.1	-3,804.3	-97.1	0.34	0.11	0.32	-32.0	12.5	
16,440.0	94.70	181.20	12,235.8	-3,898.0	-99.6	0.91	0.53	-0.74	-39.9	9.4	
16,533.0	90.50	180.50	12,231.8	-3,990.9	-101.0	4.58	-4.52	-0.75	-44.7	7.4	
16,627.0	88.70	180.70	12,232.2	-4,084.9	-102.0	1.93	-1.91	0.21	-44.8	5.8	
16,721.0	87.60	180.40	12,235.3	-4,178.8	-102.9	1.21	-1.17	-0.32	-42.2	4.4	
16,814.0	88.20	179.60	12,238.7	-4,271.7	-102.9	1.07	0.65	-0.66	-39.3	3.8	
16,907.0	87.40	179.50	12,242.3	-4,364.7	-102.1	0.87	-0.86	-0.11	-36.3	3.9	
17,001.0	88.70	179.60	12,245.5	-4,458.6	-101.4	1.39	1.38	0.11	-33.7	4.1	
17,093.0	89.10	179.80	12,247.2	-4,550.6	-100.8	0.43	0.43	0.00	-32.5	4.2	
17,187.0	90.20	180.50	12,247.8	-4,644.6	-100.9	1.51	1.17	0.96	-32.5	3.5	
17,280.0	89.20	180.00	12,248.3	-4,737.6	-101.3	1.20	-1.08	-0.54	-32.6	2.5	
17,374.0	88.10	179.70	12,250.5	-4,831.5	-101.0	1.21	-1.17	-0.32	-31.0	2.2	
17,468.0	87.70	179.60	12,253.9	-4,925.5	-100.4	0.44	-0.43	-0.11	-28.1	2.2	
17,561.0	93.10	181.50	12,253.3	-5,018.4	-101.3	6.16	5.81	2.04	-29.3	0.7	
17,628.5	91.62	181.71	12,250.6	-5,083.9	-103.2	2.28	-2.26	0.32	-32.4	-1.5	
TGT#2(VAL 24 FC #706H)											
17,654.0	91.00	181.80	12,250.0	-5,111.3	-104.0	2.28	-2.28	0.32	-33.3	-2.5	
17,748.0	89.50	180.40	12,249.6	-5,205.3	-105.8	2.18	-1.60	-1.49	-34.6	-4.9	
17,841.0	88.90	179.10	12,250.9	-5,298.3	-105.4	1.54	-0.65	-1.40	-34.2	-5.1	
17,934.0	87.30	179.40	12,253.9	-5,391.2	-104.2	1.75	-1.72	0.32	-32.0	-4.5	
18,027.0	87.00	178.30	12,258.6	-5,484.1	-102.3	1.22	-0.32	-1.18	-28.3	-3.2	
18,121.0	87.80	178.90	12,263.0	-5,578.0	-100.0	0.90	0.64	0.64	-24.8	-1.5	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Valiant 24 Fed Com
 Well: #706H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3483.0usft
 MD Reference: KB = 25 @ 3483.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 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)	
18,214.0	90.20	179.30	12,264.8	-5,670.9	-88.6	2.83	2.80	0.43	-23.9	-0.6	
18,308.0	90.60	179.30	12,264.1	-5,764.9	-97.4	0.43	0.43	0.00	-25.5	0.0	
18,401.0	90.90	179.10	12,262.8	-5,857.9	-98.1	0.39	0.32	-0.22	-27.6	0.7	
18,494.0	91.80	178.60	12,260.7	-5,950.9	-94.3	1.11	0.97	-0.54	-30.7	2.0	
18,588.0	91.00	180.40	12,258.4	-6,044.8	-93.4	2.09	-0.85	1.91	-33.9	2.3	
18,653.7	91.49	181.17	12,257.0	-6,110.5	-94.3	1.39	0.74	1.17	-36.0	1.0	
TGT#3(VAL 24 FC #706H)											
18,662.0	91.70	181.50	12,256.2	-6,138.8	-95.0	1.39	0.74	1.17	-37.2	0.1	
18,775.0	88.60	183.70	12,256.0	-6,231.7	-89.2	4.09	-3.33	2.37	-39.0	-4.6	
18,869.0	88.50	182.50	12,260.0	-6,325.4	-104.3	2.57	-2.23	-1.28	-38.6	-10.3	
18,862.0	88.10	182.50	12,266.0	-6,418.2	-108.3	0.43	-0.43	0.00	-32.2	-14.9	
19,056.0	88.10	182.80	12,272.4	-6,511.8	-112.7	0.32	0.00	0.32	-27.4	-19.8	
19,149.0	84.70	179.70	12,278.8	-6,604.5	-114.7	3.65	-1.51	-3.33	-21.5	-22.5	
19,242.0	85.00	178.20	12,288.2	-6,697.1	-113.0	1.64	0.32	-1.81	-14.7	-21.4	
19,335.0	89.40	177.50	12,292.7	-6,789.9	-109.5	4.78	4.73	-0.75	-11.8	-18.4	
19,428.0	89.20	178.60	12,293.9	-6,882.8	-104.7	0.99	-0.22	-0.97	-12.2	-14.2	
19,521.0	87.90	176.00	12,296.2	-6,975.6	-98.7	1.54	-1.40	-0.85	-11.5	-8.8	
19,615.0	87.30	175.90	12,300.1	-7,069.2	-92.1	0.65	-0.64	-0.11	-9.1	-2.8	
19,709.0	86.90	175.70	12,304.9	-7,162.9	-85.2	0.48	-0.43	-0.21	-6.0	3.5	
Last MWD Survey (MD=19709.0')											
19,820.0	88.90	175.70	12,310.9	-7,273.4	-76.9	0.00	0.00	0.00	-1.9	11.2	
Projection to Bit (MD=19820.0') - PBHL(VAL 24 FC #706H)											



Midland PVA

Company: EOG Resources - Midland
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Site: Valiant 24 Fed Com
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Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25 @ 3483.0usft
MD Reference: KB = 25 @ 3483.0usft
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)	
10,731.6	10,701.8	424.0	-120.9	FTP Crossing, MD:10731.6', TVD:10701.8', N/S:424.0', E/W:-120.9', INC:1.56
11,811.0	11,780.5	401.6	-132.2	KOP, MD:11811.0', TVD:11780.5', N/S:401.6', E/W:-132.2', INC:5.85
19,709.0	12,304.9	-7,162.9	-85.2	Last MWD Survey (MD=19709.0')
19,820.0	12,310.9	-7,273.4	-76.8	Projection to Bit (MD=19820.0')

Checked By: _____ Approved By: _____ Date: _____

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

Kay Maddox 2/19/2020
Signed Date



Lea County, NM (NAD 83 NME)

Vallant 24 Fed Com

#706H

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



Abscissa to Grid North
True North: 0.0°
Magnetic North: 8.43°
Magnetic Field
Strength: 47.97 kA/m
Dip Angle: 66.07°
Date: 9/7/2016
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 8.43°
To convert a Magnetic Direction to a True Direction, Add 8.60° East
To convert a True Direction to a Grid Direction, Subtract 0.17°

WELL DETAILS: #706H

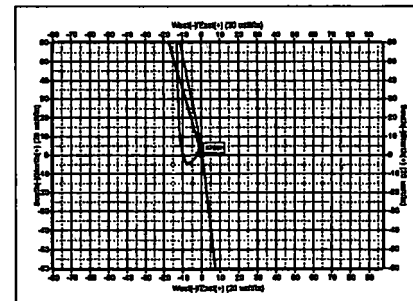
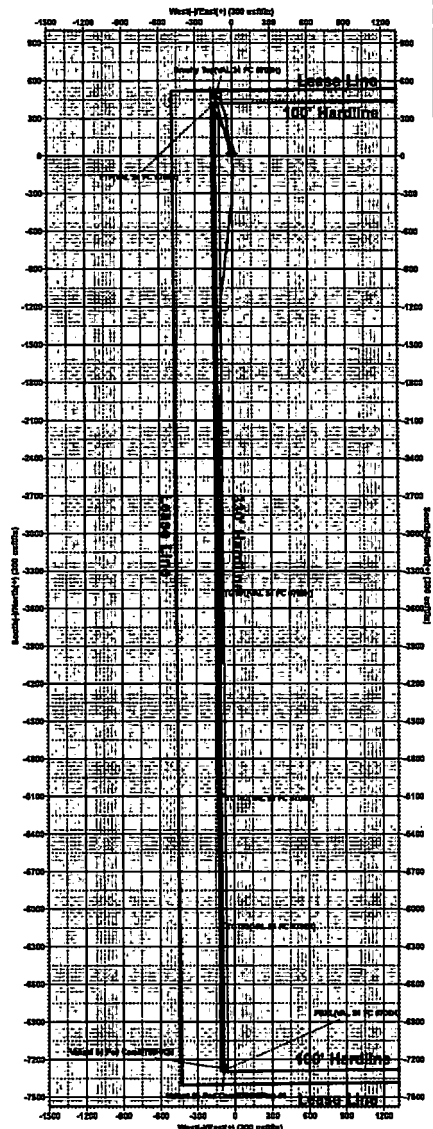
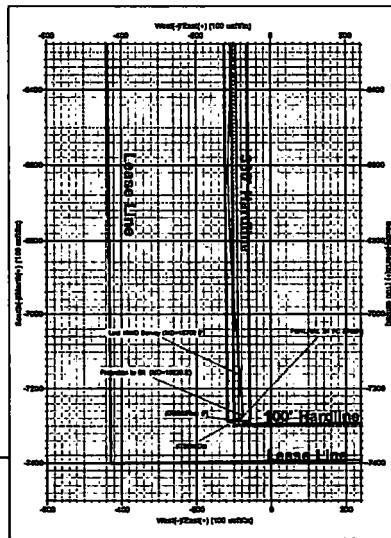
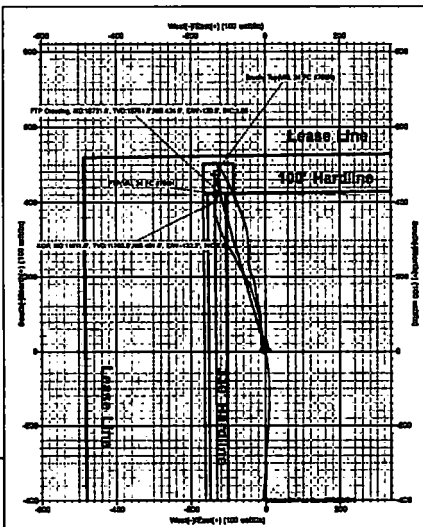
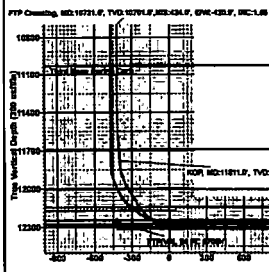
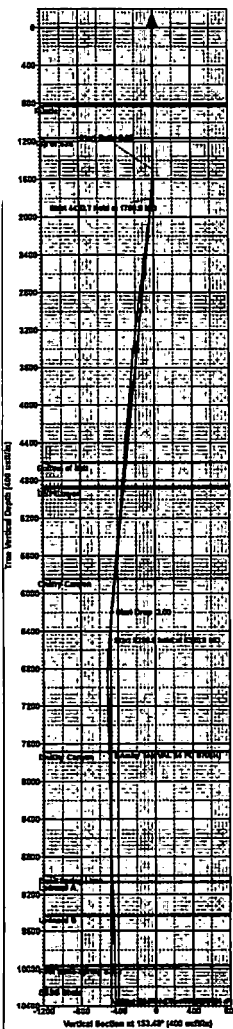
	+N-S	+E-W	North	3458.0 K3 = 25 @ 3458.0m	Latitude	Longitude	Site
	0.0	0.0	408148.00	780041.00	32° 0' 52.595 N	103° 57' 36.979 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSeal	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1799.8	8.00	343.99	1799.3	15.1	-4.3	2.00	343.99	-15.0	
4	6220.5	8.00	343.99	6195.7	458.9	-131.7	0.00	0.00	-457.3	
5	6520.3	0.00	0.00	6495.0	474.0	-136.0	2.00	180.00	-472.3	
6	11810.8	0.00	0.00	11785.5	474.0	-136.0	0.00	0.00	-472.3	
7	12559.4	89.83	179.65	12263.0	2.1	-133.1	12.00	179.65	3.7	
8	16008.3	89.83	179.65	12273.0	-3450.8	-111.7	0.00	0.00	3452.0	TGT#1 (VAL 24 FC #706H)
9	16017.5	89.65	179.65	12273.0	-3460.1	-111.7	2.00	180.00	3461.2	
10	17642.6	89.65	179.65	12283.0	-5085.1	-101.6	0.00	0.00	5086.0	TGT#2 (VAL 24 FC #706H)
11	17653.0	89.44	179.65	12283.1	-5095.5	-101.6	2.00	-180.00	5096.4	
12	18968.8	89.44	179.65	12293.0	-6111.3	-93.3	0.00	0.00	6112.0	TGT#3 (VAL 24 FC #706H)
13	18989.8	89.02	179.65	12293.3	-6132.2	-93.1	2.00	-180.00	6132.9	
14	19844.7	89.02	179.65	12313.0	-7287.0	-88.0	0.00	0.00	7287.5	PBHL (VAL 24 FC #706H)

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	North	East	Shape
Brushy Top (VAL 24 FC #706H)	7833.0	474.0	-136.0	408622.00	78906.00	Polygon
FTP (VAL 24 FC #706H)	12253.0	624.0	-136.0	408671.00	78906.00	Point
TGT#1 (VAL 24 FC #706H)	12273.0	-3450.8	-111.7	402897.10	78928.37	Point
TGT#2 (VAL 24 FC #706H)	12283.0	-5085.1	-101.6	401062.90	78928.38	Point
TGT#3 (VAL 24 FC #706H)	12293.0	-6111.3	-93.1	400638.70	78945.73	Point
PBHL (VAL 24 FC #706H)	12313.0	-7287.0	-88.0	398961.00	78953.00	Rectangle (Sides: L&D V&D.0)



Line MMD Survey (802-16791.6)

Projection to 802 (802-16791.6)

Projection to 802 (802-16791.6)

Projection to 802 (802-16791.6)

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