

HOBBS OCD

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Valiant 24 Fed Com

#725H

OH

Design: OH

Midland PVA

19 November, 2019



Midland PVA

Company: EOG Resources - Midland Project: Lea County, NM (NAD 83 NME) Site: Valiant 24 Fed Com Well: #725H Wellbore: OH Design: OH		Local Co-ordinate Reference: Well #725H TVD Reference: KB = 25 @ 3487.0usft MD Reference: KB = 25 @ 3487.0usft North Reference: Grid Survey Calculation Method: Minimum Curvature Database: EDM	
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 Valiant 24 Fed Com			
Site Position: From: Map Position Uncertainty: 0.0 usft		Northing: 406,151.00 usft Easting: 760,107.00 usft Slot Radius: 13-3/16 "	
		Latitude: 32° 6' 52.620 N Longitude: 103° 37' 38.212 W Grid Convergence: 0.38 °	
Well #725H			
Well Position +N-S 0.0 usft +E-W 0.0 usft Position Uncertainty 0.0 usft		Northing: 405,885.00 usft Easting: 761,732.00 usft Wellhead Elevation: usft	
		Latitude: 32° 6' 49.882 N Longitude: 103° 37' 17.339 W Ground Level: 3,462.0 usft	
Wellbore OH			
Magnetics			
Model Name	Sample Date	Declination (°)	Dip Angle (°)
IGRF2015	9/8/2019	6.73	59.92
			Field Strength (nT) 47,639.08610402
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 (°) 181.08
Survey Program			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
194.0	20,086.0	Drilltech MWD (OH)	MWD
			Description OWSG MWD - Standard



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Site:	Valiant 24 Fed Corn	MD Reference:	KB = 25 @ 3487.0usft
Well:	#725H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLog (°/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	0.0
194.0	1.00	354.55	194.0	1.7	-0.2	0.52	0.52	0.00	-1.7	0.0	
394.0	2.02	344.10	393.9	6.8	-1.3	0.53	0.51	-5.22	-6.9	-0.6	
578.0	2.46	333.20	575.8	13.4	-3.9	0.34	0.24	-5.89	-13.7	-2.5	
759.0	2.81	358.88	758.6	21.4	-5.8	0.87	0.19	14.02	-21.5	5.4	
942.0	3.17	329.51	941.4	30.2	-8.4	0.85	0.20	-16.04	-30.3	-8.1	
1,126.0	2.90	328.28	1,125.1	38.6	-13.5	0.15	-0.15	-0.67	-37.3	-7.9	
1,221.0	3.87	350.42	1,219.9	43.8	-15.3	1.70	1.02	23.31	-37.2	7.2	
1,316.0	6.07	2.82	1,314.6	51.9	-15.6	2.56	2.32	13.05	-34.3	13.2	
1,410.0	8.97	359.48	1,407.8	64.2	-15.4	3.12	3.09	-3.55	-38.3	8.4	
1,504.0	9.85	0.44	1,500.5	79.6	-15.4	0.95	0.94	1.02	-40.4	6.5	
1,599.0	10.02	2.29	1,594.1	96.0	-15.0	0.38	0.18	1.95	-45.4	4.9	
1,694.0	10.38	5.28	1,687.6	112.8	-13.9	0.67	0.38	3.15	-51.0	4.1	
1,789.0	10.82	355.17	1,780.9	130.2	-13.8	2.01	0.46	-10.64	-56.9	-8.1	
1,884.0	11.87	352.36	1,874.1	148.8	-15.9	1.25	1.11	-2.86	-63.7	-12.4	
1,979.0	12.40	352.88	1,967.0	168.6	-18.5	0.57	0.56	0.55	-72.4	-13.0	
2,073.0	12.75	353.50	2,058.7	188.9	-20.9	0.40	0.37	0.66	-81.7	-13.4	
2,167.0	13.37	355.35	2,150.3	210.0	-22.9	0.80	0.68	1.97	-82.1	-12.2	
2,262.0	13.37	350.60	2,242.7	231.8	-25.6	1.16	0.00	-5.00	-101.4	-21.4	
2,357.0	13.98	348.67	2,335.0	253.9	-29.7	0.80	0.64	-2.03	-111.6	-25.6	
2,451.0	13.01	349.02	2,426.4	275.4	-33.9	1.04	-1.03	0.37	-122.4	-25.2	
2,546.0	13.72	349.11	2,518.8	297.0	-38.1	0.75	0.75	0.09	-133.0	-25.5	
2,641.0	13.19	349.19	2,611.2	318.7	-42.2	0.56	-0.56	0.08	-143.8	-25.7	
2,831.0	12.75	349.19	2,796.4	360.6	-50.2	0.23	-0.23	0.00	-163.5	-26.7	
2,926.0	13.45	352.62	2,888.9	381.8	-53.6	1.10	0.74	3.61	-175.0	-17.4	
3,018.0	13.54	357.72	2,978.4	403.2	-55.4	1.30	0.10	5.54	-186.4	-3.0	
3,113.0	13.72	1.85	3,070.7	425.6	-55.5	1.04	0.19	4.35	-197.5	8.3	



Midland PVA

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Site:	Valiant 24 Fed Com	MD Reference:	KB = 25 @ 3487.0usft
Well:	#725H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Bufl4 (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
3,208.0	13.19	0.36	3,183.1	447.7	-55.1	0.67	-0.56	-1.57	-208.6	0.1	
3,301.0	11.78	354.12	3,253.9	467.7	-56.0	2.10	-1.52	-6.71	-216.3	-25.1	
3,394.0	11.70	351.65	3,345.0	486.5	-58.3	0.55	-0.09	-2.66	-222.8	-35.7	
3,490.0	12.40	349.28	3,438.8	506.3	-61.7	0.89	0.73	-2.47	-229.6	-45.8	
3,583.0	12.31	349.02	3,529.7	525.8	-65.4	0.11	-0.10	-0.28	-238.1	-47.3	
3,678.0	11.61	351.57	3,622.6	545.2	-68.7	0.92	-0.74	2.68	-248.2	-37.1	
3,773.0	10.29	354.55	3,715.9	563.1	-70.9	1.51	-1.39	3.14	-256.4	-25.2	
3,867.0	9.58	3.43	3,808.5	579.3	-71.3	1.79	-0.76	9.45	-262.4	12.4	
3,960.0	10.20	352.97	3,900.1	595.2	-71.8	2.04	0.67	-11.25	-265.0	-37.8	
4,053.0	9.67	349.37	3,991.7	611.0	-74.3	0.88	-0.57	-3.87	-266.9	-55.2	
4,148.0	8.27	347.79	4,085.6	625.5	-77.2	1.50	-1.47	-1.66	-268.6	-62.9	
4,243.0	7.03	347.61	4,179.7	637.9	-79.9	1.31	-1.31	-0.19	-269.5	-63.9	
4,338.0	5.54	355.87	4,274.1	648.1	-81.4	1.83	-1.57	8.69	-274.7	-25.8	
4,432.0	6.16	341.55	4,367.7	657.5	-83.4	1.68	0.66	-15.23	-258.0	-92.5	
4,527.0	6.42	335.31	4,462.1	667.1	-87.2	0.77	0.27	-6.57	-245.5	-118.0	
4,621.0	4.48	337.15	4,555.7	675.3	-90.8	2.07	-2.06	1.96	-246.8	-108.2	
4,716.0	3.17	348.40	4,650.4	681.3	-92.8	1.58	-1.38	11.84	-257.7	-57.9	
4,811.0	5.01	339.17	4,745.2	687.7	-94.8	2.05	1.94	-9.72	-240.5	-97.0	
4,906.0	4.31	338.73	4,839.9	694.9	-97.6	0.74	-0.74	-0.46	-235.9	-97.3	
5,001.0	5.80	344.01	4,934.5	702.9	-100.2	1.64	1.57	5.56	-240.7	-74.4	
5,096.0	6.86	344.45	5,028.9	712.9	-103.0	1.12	1.12	0.46	-240.1	-72.0	
5,191.0	7.30	341.37	5,123.2	724.1	-106.5	0.61	0.46	-3.24	-236.1	-83.9	
5,286.0	7.91	341.02	5,217.4	736.0	-110.5	0.64	0.64	-0.37	-236.7	-84.2	
5,381.0	7.30	332.67	5,311.5	747.6	-115.4	1.33	-0.64	-8.79	-223.4	-115.5	
5,475.0	4.75	325.73	5,405.0	756.1	-120.4	2.82	-2.71	-7.38	-207.0	-138.2	
5,568.0	1.76	331.44	5,497.9	760.5	-123.2	3.23	-3.22	6.14	-213.7	-114.0	
5,662.0	0.88	317.03	5,591.8	762.3	-124.4	0.99	-0.94	-15.33	-170.7	-158.4	



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 Design: OH

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 MD Reference: KB = 25 @ 3487.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM

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)
5,754.0	0.97	323.27	5,683.8	763.5	-125.3	0.15	0.10	6.76	-178.1	-134.3
5,850.0	1.14	310.87	5,779.8	764.7	-126.5	0.30	0.18	-12.92	-137.5	-162.7
5,943.0	1.14	314.92	5,872.8	766.0	-127.9	0.09	0.00	4.35	-140.8	-146.5
6,037.0	1.14	316.85	5,966.8	767.3	-129.2	0.04	0.00	2.05	-137.6	-135.9
6,132.0	1.23	308.41	6,061.7	768.7	-130.6	0.21	0.09	-8.88	-109.1	-147.6
6,228.0	1.23	302.88	6,157.7	769.9	-132.3	0.12	0.00	-5.76	-88.0	-149.4
6,323.0	1.32	302.10	6,252.7	771.0	-134.1	0.10	0.09	-0.82	-79.9	-142.4
6,418.0	1.32	301.14	6,347.7	772.2	-136.0	0.02	0.00	-1.01	-71.6	-135.5
6,513.0	1.32	300.17	6,442.6	773.3	-137.9	0.02	0.00	-1.02	-63.5	-128.2
6,608.0	1.49	307.29	6,537.6	774.6	-139.8	0.26	0.18	7.49	-72.3	-111.9
6,701.0	1.41	298.41	6,630.6	775.8	-141.7	0.26	-0.09	-9.55	-49.0	-113.4
6,796.0	1.41	288.87	6,725.6	777.0	-143.8	0.01	0.00	0.27	-44.1	-104.6
6,889.0	1.14	288.04	6,818.5	777.8	-145.7	0.38	-0.29	-11.43	-20.2	-101.4
6,984.0	1.06	283.84	6,913.5	778.3	-147.4	0.12	-0.08	-4.63	-9.0	-92.4
7,077.0	1.06	291.29	7,006.5	778.8	-149.1	0.15	0.00	8.23	-16.5	-80.9
7,172.0	0.88	279.25	7,101.5	779.2	-150.6	0.29	-0.19	-12.67	3.6	-72.1
7,266.0	0.88	284.88	7,195.5	779.5	-152.0	0.09	0.00	5.99	0.5	-61.9
7,360.0	0.44	267.56	7,289.5	779.7	-153.1	0.51	-0.47	-18.43	20.0	-47.9
7,455.0	0.35	272.04	7,384.5	779.7	-153.7	0.10	-0.09	4.72	18.4	-38.6
7,549.0	0.62	233.20	7,478.5	779.4	-154.4	0.44	0.29	-41.32	34.5	-11.2
7,645.0	0.70	198.13	7,574.5	778.6	-155.0	0.42	0.08	-38.53	29.1	13.1
7,740.0	0.97	183.19	7,669.5	777.2	-155.3	0.36	0.28	-15.73	21.4	20.6
7,785.9	1.13	181.73	7,725.4	776.2	-155.3	0.29	0.28	-2.61	19.8	21.1
Brushy Top(VAL 24 FC #725H)										
7,832.0	1.23	180.89	7,781.4	775.4	-155.3	0.29	0.28	-2.06	18.8	21.4
7,926.0	1.41	184.42	7,855.4	773.3	-155.4	0.21	0.19	3.65	17.9	20.3
8,019.0	1.67	182.75	7,948.4	770.8	-155.6	0.28	0.28	-1.80	14.8	20.7



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Well:	#725H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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8,113.0	1.78	184.33	8,042.3	768.0	-155.7	0.11	0.10	1.88	12.5	20.4	
8,206.0	1.85	179.06	8,135.3	765.0	-155.8	0.20	0.10	-5.67	7.7	21.3	
8,301.0	1.85	175.01	8,230.2	762.0	-155.7	0.14	0.00	-4.26	3.1	21.7	
8,398.0	1.78	175.98	8,325.2	759.0	-155.4	0.10	-0.09	1.02	0.5	21.6	
8,481.0	1.78	181.78	8,420.1	756.1	-155.4	0.19	0.00	6.11	-0.2	21.6	
8,586.0	1.85	182.39	8,515.1	753.1	-155.5	0.10	0.09	0.64	-3.0	21.7	
8,680.0	1.67	187.58	8,609.1	750.2	-155.7	0.26	-0.19	5.52	-3.9	22.0	
8,775.0	1.85	190.57	8,704.0	747.3	-156.2	0.21	0.19	3.15	-5.7	22.2	
8,869.0	1.85	188.17	8,798.0	744.3	-156.6	0.15	0.00	-4.68	-10.4	21.6	
8,964.0	1.78	190.74	8,892.9	741.4	-157.1	0.18	-0.09	4.81	-11.6	22.5	
9,057.0	1.41	196.55	8,985.9	738.9	-157.7	0.41	-0.38	6.25	-11.9	23.7	
9,151.0	1.41	200.06	9,079.8	736.7	-158.4	0.09	0.00	3.73	-12.7	24.4	
9,245.0	0.97	182.04	9,173.8	734.8	-158.8	0.61	-0.47	-19.17	-21.5	19.0	
9,338.0	0.53	158.93	9,268.8	733.6	-158.7	0.57	-0.47	-24.85	-28.4	8.7	
9,432.0	0.62	113.75	9,360.8	733.0	-158.1	0.48	0.10	-48.06	-27.0	-14.3	
9,527.0	0.53	117.80	9,455.8	732.6	-157.2	0.10	-0.09	4.28	-28.9	-12.4	
9,622.0	0.70	124.91	9,550.8	732.1	-156.3	0.20	0.18	7.48	-31.2	-8.6	
9,717.0	0.79	135.81	9,645.8	731.3	-155.4	0.18	0.09	11.47	-33.5	-2.5	
9,812.0	0.88	124.74	9,740.8	730.4	-154.4	0.19	0.09	-11.65	-33.8	-9.0	
9,907.0	1.67	124.65	9,835.8	729.2	-152.6	0.83	0.83	-0.09	-35.9	-9.0	
10,002.0	2.64	139.68	9,930.7	728.7	-150.1	1.17	1.02	15.82	-40.5	0.9	
10,097.0	1.78	144.43	10,025.6	723.9	-147.8	0.95	-0.93	5.00	-43.9	4.5	
10,189.0	1.49	125.27	10,117.8	722.0	-146.0	0.66	-0.29	-20.83	-45.5	-10.7	
10,284.0	1.23	108.11	10,212.6	721.0	-144.0	0.55	-0.27	-20.17	-41.7	-25.4	
10,379.0	0.88	121.66	10,307.5	720.4	-142.4	0.47	-0.37	16.37	-48.7	-13.0	
10,470.0	0.79	182.57	10,398.5	719.4	-141.8	0.93	-0.10	66.93	-36.0	36.8	
10,564.0	1.78	171.94	10,492.5	717.3	-141.7	1.06	1.03	-11.31	-44.3	29.4	



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 Design: OH

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 North Reference: Grd
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Survey											
MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLag (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
10,658.0	2.02	167.81	10,588.5	714.2	-141.1	0.31	0.28	-4.39	-49.4		26.1
10,752.0	2.29	157.70	10,680.4	710.9	-140.1	0.49	0.29	-10.76	-56.7		16.7
10,847.0	1.93	186.17	10,775.3	707.5	-139.5	1.15	-0.38	29.97	-45.1		42.6
10,863.3	1.85	185.94	10,791.6	707.0	-139.6	0.47	-0.46	-1.41	-45.8		42.4
FTP Crossing, MD:10863.3, TVD:10791.6, N/S:707.0, E/W:-139.6, INC:1.83											
10,942.0	1.49	184.50	10,870.3	704.7	-139.8	0.47	-0.46	-1.83	-49.2		41.2
11,037.0	0.44	194.00	10,965.3	703.1	-140.0	1.11	-1.11	10.00	-43.3		49.0
11,132.0	1.14	190.82	11,060.3	701.8	-140.2	0.74	0.74	-3.24	-47.2		46.8
11,227.0	1.41	215.35	11,155.2	700.0	-141.1	0.63	0.28	25.72	-25.7		62.3
11,322.0	1.67	244.27	11,250.2	698.4	-143.0	0.85	0.27	30.44	5.2		67.5
11,417.0	2.64	235.66	11,345.1	698.6	-146.1	1.07	1.02	-9.06	-8.5		67.3
11,512.0	3.08	234.34	11,440.0	693.9	-149.9	0.47	0.46	-1.39	-14.8		67.1
11,657.0	2.64	242.42	11,584.8	690.0	-156.1	0.41	-0.30	5.57	-12.4		69.0
11,751.0	2.46	254.20	11,678.8	688.5	-159.9	0.59	-0.19	12.53	-2.2		70.6
11,846.0	2.64	255.08	11,773.7	687.4	-164.0	0.19	0.19	0.83	-5.4		70.6
11,941.0	2.46	244.97	11,868.6	685.9	-168.0	0.51	-0.19	-10.64	-21.9		68.2
12,036.0	2.90	233.46	11,963.5	683.6	-171.7	0.73	0.46	-12.12	-39.4		62.1
12,132.0	3.08	235.48	12,059.3	680.7	-175.8	0.22	0.19	2.10	-42.2		63.5
12,185.0	6.69	195.81	12,092.2	678.4	-177.1	14.38	10.95	-120.22	-75.4		21.3
KOP, MD:12165.0, TVD:12092.2, N/S:678.4, E/W:-177.1, INC:6.69											
12,228.0	15.12	181.78	12,152.1	687.0	-178.3	14.38	13.81	-23.00	-82.9		1.2
12,321.0	25.32	182.83	12,241.1	634.2	-179.7	10.74	10.74	1.11	-86.9		0.9
12,415.0	34.21	186.79	12,322.6	587.8	-183.8	9.68	9.46	4.21	-83.9		0.3
12,507.0	43.62	180.20	12,394.2	530.2	-187.0	11.16	10.23	-7.16	-73.6		-11.1
FTP(VAL 24 FC #725H)											
12,600.0	56.10	176.33	12,454.0	459.4	-184.6	13.79	13.42	-4.16	-59.9		-11.1
12,695.0	67.80	182.31	12,498.6	375.7	-183.9	13.50	12.32	6.29	-45.6		-8.8



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Valiant 24 Fed Com
 Well: #725H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #725H
 TVD Reference: KB = 25 @ 3487.0usft
 MD Reference: KB = 25 @ 3487.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM

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)
12,742.0	71.58	182.66	12,514.9	331.7	-185.8	8.07	8.04	0.74	-38.9	-11.3
12,780.0	74.57	183.45	12,528.9	285.8	-188.2	6.43	6.23	1.65	-25.9	-14.4
12,885.0	85.21	178.87	12,545.6	182.5	-190.1	12.12	11.20	-4.72	-9.4	-18.7
12,978.0	87.87	179.58	12,551.3	99.7	-189.0	2.72	2.65	0.68	-3.8	-18.0
13,073.0	88.02	179.41	12,554.9	4.8	-188.1	0.41	0.37	-0.18	0.0	-15.8
13,168.0	88.55	180.20	12,557.8	-90.2	-187.8	1.00	0.56	0.83	2.8	-16.0
13,260.0	88.20	180.73	12,560.4	-182.2	-188.6	0.69	-0.38	0.58	5.4	-17.4
13,351.0	89.87	179.49	12,561.9	-273.1	-188.7	2.29	1.84	-1.36	6.9	-18.1
13,446.0	90.22	179.14	12,561.8	-368.1	-187.6	0.52	0.37	-0.37	6.9	-17.6
13,540.0	88.99	177.91	12,562.5	-462.1	-185.2	1.85	-1.31	-1.31	7.5	-15.7
13,635.0	90.22	180.46	12,563.1	-557.1	-183.8	2.98	1.29	2.68	8.2	-14.9
13,729.0	91.54	182.48	12,561.7	-651.0	-186.2	2.57	1.40	2.15	6.7	-17.9
13,823.0	89.69	180.46	12,560.7	-745.0	-188.6	2.91	-1.97	-2.15	5.7	-20.9
13,918.0	90.13	181.69	12,560.8	-840.0	-190.4	1.38	0.46	1.29	5.9	-23.3
14,013.0	90.48	180.20	12,560.3	-934.9	-192.0	1.61	0.37	-1.57	5.4	-25.5
14,108.0	92.15	177.74	12,558.1	-1,029.9	-190.3	3.13	1.76	-2.59	3.1	-24.3
14,203.0	90.57	178.24	12,555.9	-1,124.7	-185.3	2.29	-1.66	-1.58	0.9	-19.9
14,298.0	89.43	175.10	12,555.9	-1,219.5	-178.1	1.70	-1.20	-1.20	0.9	-13.3
14,393.0	90.22	177.12	12,556.2	-1,314.2	-171.7	2.28	0.83	2.13	1.2	-7.5
14,488.0	90.66	176.95	12,555.4	-1,409.1	-166.8	0.50	0.46	-0.18	0.5	-3.2
14,583.0	90.04	177.56	12,554.9	-1,504.0	-162.2	0.82	-0.65	0.84	-0.1	0.8
14,677.0	91.45	180.55	12,553.6	-1,598.0	-160.7	3.52	1.50	3.18	-1.3	1.8
14,772.0	91.89	181.08	12,550.9	-1,692.9	-162.0	0.72	0.46	0.58	-4.1	-0.2
14,866.0	92.33	181.43	12,547.4	-1,786.8	-164.1	0.60	0.47	0.37	-7.6	-2.8
14,961.0	89.08	180.46	12,546.2	-1,881.8	-165.6	3.57	-3.42	-1.02	-8.7	-5.0
15,052.0	91.45	183.45	12,545.8	-1,972.7	-168.7	4.19	2.60	3.29	-9.2	-8.6
15,147.0	90.31	183.01	12,544.4	-2,067.5	-174.1	1.29	-1.20	-0.46	-10.8	-14.6



Midland PVA

Company:	EOG Resources - Midland					Local Co-ordinate Reference:	Well #725H				
Project:	Lea County, NM (NAD 83 NME)					TVD Reference:	KB = 25 @ 3487.0usft				
Site:	Valiant 24 Fed Com					MD Reference:	KB = 25 @ 3487.0usft				
Well:	#725H					North Reference:	Grid				
Wellbore:	OH					Survey Calculation Method:	Minimum Curvature				
Design:	OH					Database:	EDM				

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	SuId (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,242.0	88.84	180.81	12,545.2	-2,162.6	-177.3	2.91	-1.78	-2.32	-8.8	-18.3	
15,337.0	88.11	180.37	12,547.9	-2,257.4	-178.2	0.72	-0.58	-0.46	-7.1	-18.9	
15,430.0	88.81	180.99	12,550.4	-2,350.4	-179.3	1.01	0.75	0.67	-4.8	-21.6	
15,525.0	87.85	180.55	12,553.2	-2,445.3	-180.6	1.11	-1.01	-0.46	-1.8	-23.4	
15,620.0	88.02	180.73	12,556.6	-2,540.3	-181.7	0.26	0.18	0.19	1.6	-25.1	
15,715.0	88.90	179.41	12,559.2	-2,635.2	-181.8	1.67	0.83	-1.39	4.2	-25.8	
15,810.0	88.90	179.41	12,561.0	-2,730.2	-180.8	0.00	0.00	0.00	6.0	-25.4	
15,905.0	90.48	178.97	12,561.5	-2,825.2	-179.5	1.73	1.68	-0.46	6.5	-24.6	
16,000.0	92.15	179.85	12,559.3	-2,920.2	-178.5	1.99	1.78	0.93	4.3	-24.2	
16,095.0	92.24	178.62	12,555.7	-3,015.1	-177.2	1.30	0.09	-1.29	0.7	-23.6	
16,188.0	92.51	180.37	12,551.8	-3,108.0	-178.4	1.90	0.29	1.88	-3.1	-23.3	
16,284.0	93.21	180.29	12,547.0	-3,203.9	-177.0	0.73	0.73	-0.08	-7.9	-24.5	
16,379.0	92.68	179.58	12,542.2	-3,298.8	-178.9	0.93	-0.58	-0.75	-12.8	-24.8	
16,474.0	93.12	179.78	12,537.4	-3,393.6	-176.3	0.50	0.46	0.19	-17.8	-25.0	
16,568.0	92.24	178.62	12,533.0	-3,487.5	-175.0	1.53	-0.94	-1.21	-22.0	-24.2	
16,663.0	90.04	177.91	12,531.1	-3,582.4	-172.1	2.43	-2.32	-0.75	-23.9	-21.9	
16,758.0	87.93	178.88	12,532.8	-3,677.3	-167.8	2.48	-2.22	-1.11	-22.2	-18.2	
16,853.0	91.45	178.88	12,533.3	-3,772.2	-164.2	4.27	3.71	2.13	-21.7	-15.3	
16,948.0	93.03	179.58	12,529.6	-3,867.2	-163.0	1.82	1.68	0.74	-25.4	-14.6	
17,043.0	92.59	179.23	12,524.9	-3,962.0	-162.0	0.59	-0.46	-0.37	-30.1	-14.2	
17,138.0	92.15	178.70	12,521.0	-4,056.9	-160.3	0.72	-0.46	-0.56	-34.0	-13.0	
17,233.0	91.80	179.49	12,517.7	-4,151.9	-158.8	0.91	-0.37	0.83	-37.3	-12.1	
17,328.0	90.13	179.32	12,516.1	-4,246.8	-157.8	1.77	-1.78	-0.18	-38.9	-11.7	
17,423.0	91.01	179.67	12,515.2	-4,341.8	-156.9	1.00	0.93	0.37	-39.8	-11.5	
17,518.0	90.92	179.58	12,513.6	-4,436.8	-156.3	0.13	-0.09	-0.09	-41.4	-11.4	
17,613.0	92.51	180.55	12,510.7	-4,531.8	-156.4	1.98	1.67	1.02	-44.3	-12.2	
17,707.0	90.84	178.79	12,508.0	-4,625.7	-155.9	2.58	-1.78	-1.87	-47.0	-12.2	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #725H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3487.0usft
Site:	Valiant 24 Fed Com	MD Reference:	KB = 25 @ 3487.0usft
Well:	#725H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

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)	
17,802.0	89.52	178.62	12,507.7	-4,720.7	-153.7	1.40	-1.39	-0.18	-47.3	-10.6	
17,897.0	88.99	178.44	12,508.9	-4,815.7	-151.3	0.59	-0.56	-0.19	-46.1	-8.8	
17,992.0	87.67	178.53	12,511.7	-4,810.6	-148.8	1.39	-1.39	0.09	-43.3	-6.9	
18,081.2	88.26	178.78	12,514.8	-4,899.7	-146.7	0.72	0.66	0.28	-40.2	-5.3	
TGT#1(VAL 24 FC #725H)											
18,086.0	88.29	178.79	12,515.0	-5,004.5	-146.6	0.72	0.66	0.28	-40.0	-5.2	
18,181.0	88.99	179.41	12,517.2	-5,099.5	-145.1	0.98	0.74	0.65	-38.1	-4.3	
18,273.0	89.08	179.67	12,518.8	-5,191.4	-144.4	0.30	0.10	0.28	-38.8	-4.2	
18,368.0	88.81	181.69	12,520.5	-5,286.4	-145.5	2.14	-0.28	2.13	-35.4	-5.9	
18,462.0	87.23	182.22	12,523.8	-5,380.3	-148.7	1.77	-1.68	0.56	-32.5	-6.6	
18,556.0	84.94	180.46	12,530.2	-5,474.0	-150.9	3.07	-2.44	-1.87	-28.4	-12.5	
18,649.0	88.81	178.79	12,535.3	-5,566.9	-150.3	4.53	4.16	-1.80	-21.6	-12.4	
18,743.0	90.92	180.55	12,535.5	-5,660.9	-149.7	2.92	2.24	1.87	-21.7	-12.4	
18,837.0	90.13	180.73	12,534.6	-5,754.9	-150.8	0.86	-0.84	0.19	-22.9	-14.1	
18,932.0	89.43	180.20	12,535.0	-5,849.9	-151.6	0.92	-0.74	-0.56	-22.8	-15.4	
19,027.0	86.17	178.62	12,538.6	-5,944.8	-150.6	3.81	-3.43	-1.66	-19.5	-15.1	
19,121.0	86.70	178.70	12,544.5	-6,038.6	-148.4	0.57	0.56	0.09	-14.0	-13.4	
19,216.0	87.32	178.79	12,549.4	-6,133.4	-146.3	0.66	0.65	0.09	-9.3	-11.9	
19,281.7	87.62	179.22	12,552.3	-6,199.1	-145.2	0.80	0.46	0.65	-6.7	-11.2	
TGT#2(VAL 24 FC #725H)											
19,311.0	87.76	179.41	12,553.5	-6,228.3	-144.8	0.80	0.46	0.65	-5.7	-11.0	
19,406.0	88.55	179.67	12,556.6	-6,323.3	-144.1	0.88	0.83	0.27	-3.3	-10.9	
19,501.0	89.43	179.32	12,558.3	-6,418.2	-143.2	1.00	0.93	-0.37	-2.4	-10.6	
19,596.0	88.37	178.70	12,560.1	-6,513.2	-141.6	1.29	-1.12	-0.65	-1.2	-9.6	
19,691.0	86.97	177.74	12,563.9	-6,608.1	-138.6	1.79	-1.47	-1.01	1.9	-7.2	
19,786.0	89.96	178.97	12,566.5	-6,703.0	-135.9	3.40	3.15	1.29	3.7	-5.0	
19,945.0	89.78	175.89	12,566.8	-6,861.8	-128.8	1.94	-0.11	-1.94	2.9	1.1	

Last MWD Survey (MD=19945.0)



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #725H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3487.0usft
Site:	Vallant 24 Fed Com	MD Reference:	KB = 25 @ 3487.0usft
Well:	#725H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM

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)
20,086.0	89.78	175.89	12,567.4	-7,002.4	-118.7	0.00	0.00	0.00	2.4	10.3
Projection to Bit (MD=20086.0) - PBHL(VALL 24 FC #725H)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
10,883.3	10,791.6	707.0	-139.6	FTP Crossing, MD:10883.3', TVD:10791.6' N/S:707.0', E/W:-139.6', INC:1.85
12,165.0	12,092.2	678.4	-177.1	KOP, MD:12165.0', TVD:12092.2', N/S:678.4', E/W:-177.1', INC:6.69
19,945.0	12,568.8	-6,861.8	-128.8	Last MWD Survey (MD=19945.0')
20,086.0	12,567.4	-7,002.4	-118.7	Projection to Bit (MD=20086.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Valiant 24 Fed Com

#725H

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



Antenna to Grid North
True North: 4.04°
Magnetic North: 4.04°

Magnetic True
Magnetic: 4.04°
True: 4.04°
Magnetic: 4.04°

To convert a Magnetic Direction to a Grid Direction, Add 0.35°
To convert a True Direction to a Grid Direction, Subtract 0.35°

WELL DETAILS: #725H

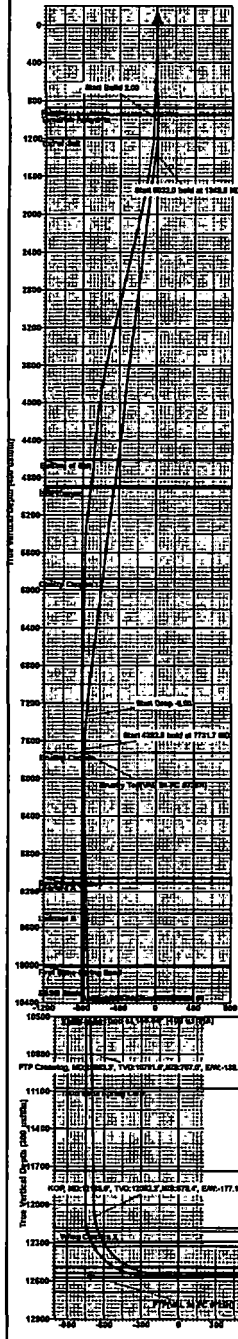
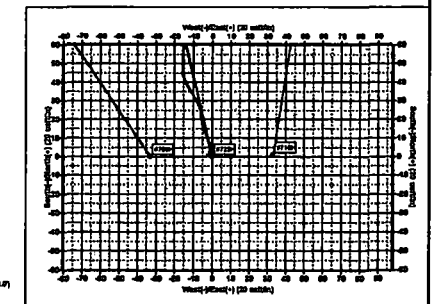
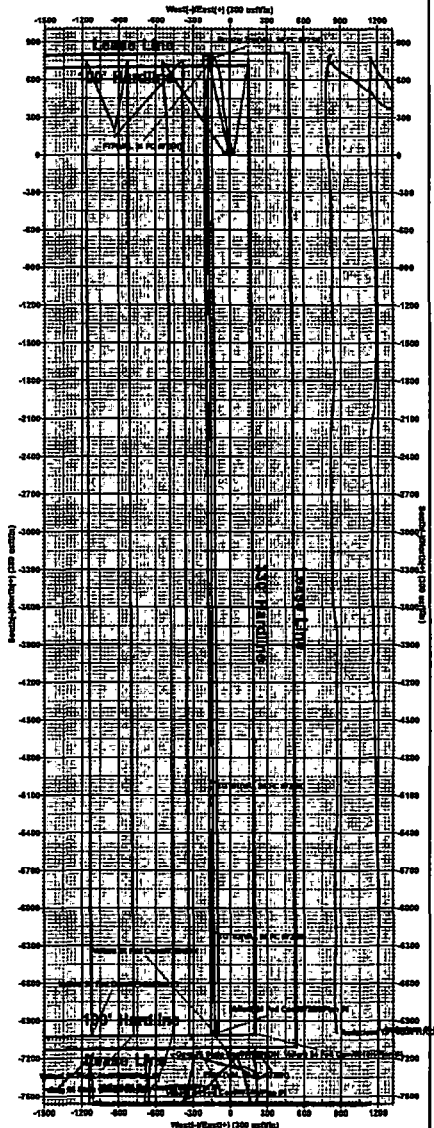
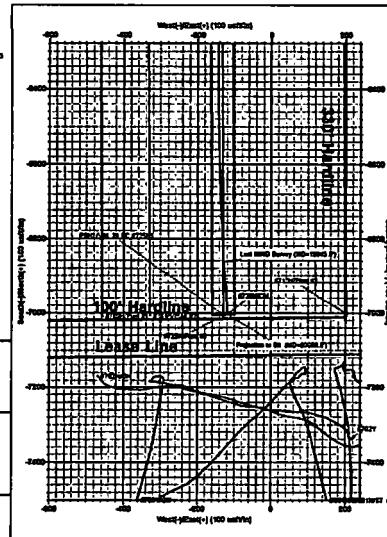
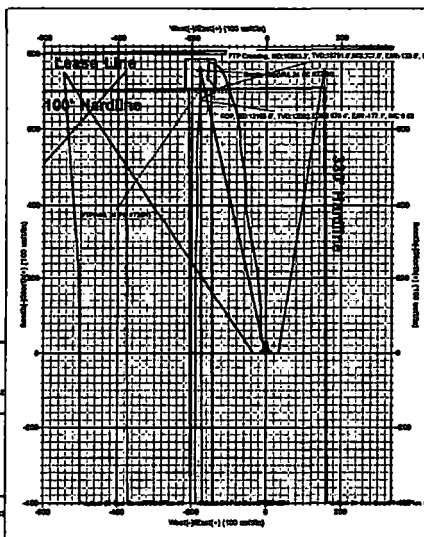
3462.0
KB = 25 @ 3467.0
Northing Easting Latitude Longitude
405885.00 761732.00 32° 5' 49.882 N 103° 57' 17.339 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1349.8	7.00	348.84	1349.0	20.8	-4.9	2.00	348.84	-20.7	
4	7381.8	7.00	348.84	7338.0	738.2	-172.1	0.00	0.00	-732.9	
5	7731.7	0.00	0.00	7685.0	757.0	-177.0	2.00	180.00	-753.6	
6	12124.2	0.00	0.00	12077.5	757.0	-177.0	0.00	0.00	-753.6	
7	12674.2	90.00	179.65	12555.0	279.5	-174.0	12.00	179.65	-276.3	
8	18152.0	90.00	179.65	12555.0	-4988.2	-141.4	0.00	0.00	5000.0	TGT#1(VAL 24 FC #725H)
9	18161.6	89.81	179.65	12555.0	-5007.8	-141.3	2.00	-180.00	5009.5	
10	19352.4	89.81	179.65	12559.0	-6198.6	-134.0	0.00	0.00	6200.0	TGT#2(VAL 24 FC #725H)
11	19384.3	89.57	179.65	12559.1	-6210.4	-133.9	2.00	180.00	6211.9	
12	20157.9	89.57	179.65	12565.0	-7004.0	-129.0	0.00	0.00	7005.2	PBHL(VAL 24 FC #725H)

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Shushy Top(VAL 24 FC #725H)	7731.7	757.0	-177.0	405885.00	761658.00	Polygon
PTP(VAL 24 FC #725H)	12555.0	757.0	-177.0	405882.00	761658.00	Point
TGT#1(VAL 24 FC #725H)	12555.0	-4988.2	-141.4	405888.80	761690.59	Point
TGT#2(VAL 24 FC #725H)	12559.0	-6198.6	-134.0	405898.40	761698.02	Point
PBHL(VAL 24 FC #725H)	12565.0	-7004.0	-129.0	405891.00	761693.00	Rectangle (Sides: L&D W&D.0)



Lea County, NM (NAD 83 NME)
Valiant 24 Fed Com
#725H
Plan #1