

HOBBS
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Hawk 26 Fed

#705H

OH

Design: OH

PVA Report

01 February, 2018



PVA Report

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25 @ 3544.0usft
Site:	Hawk 26 Fed			MD Reference:	KB = 25 @ 3544.0usft
Well:	#705H			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	Hawk 26 Fed				
Site Position:		Northing:	431,092.00 usft	Latitude:	32° 10' 57.794 N
From:	Map	Easting:	783,852.00 usft	Longitude:	103° 32' 58.022 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	#705H					
Well Position	+N/-S	0.0 usft	Northing:	431,105.00 usft	Latitude:	32° 10' 57.768 N
	+E/-W	0.0 usft	Easting:	785,988.00 usft	Longitude:	103° 32' 33.167 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	3,519.0 usft

Wellbore	OH				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/29/2017	6.89	60.02	47,869.48692564

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	182.33	



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Survey Program	Date	2/1/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
186.0	1,298.0	Olebrook MWD (OH)	MWD	MWD - Standard	
1,358.0	17,717.0	Intrepid 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
186.0	0.79	283.03	186.0	0.3	-1.2	0.42	0.42	0.00	-1.3	0.0
233.0	0.62	333.74	233.0	0.6	-1.7	1.33	-0.36	107.89	-1.3	1.2
356.7	0.70	292.52	356.7	1.5	-2.7	0.38	0.06	-33.32	-3.0	-0.3
450.0	0.35	304.03	450.0	1.9	-3.4	0.39	-0.38	12.34	-3.9	0.4
545.0	0.35	297.44	545.0	2.2	-3.9	0.04	0.00	-6.94	-4.5	-0.1
639.0	0.26	281.88	639.0	2.3	-4.4	0.13	-0.10	-16.55	-4.8	-1.4
734.0	0.09	243.39	734.0	2.3	-4.7	0.21	-0.18	-40.52	-3.1	-4.2
842.0	0.00	3.45	842.0	2.3	-4.7	0.08	-0.08	0.00	-2.3	4.7
968.0	0.09	82.11	968.0	2.3	-4.7	0.07	0.07	0.00	4.3	2.9
1,063.0	0.18	97.49	1,063.0	2.3	-4.4	0.10	0.09	16.19	4.7	1.7
1,158.0	0.18	41.06	1,158.0	2.4	-4.2	0.18	0.00	-59.40	0.9	4.7
1,239.0	0.35	43.70	1,239.0	2.7	-3.9	0.21	0.21	3.26	0.8	4.7
1,298.0	0.44	74.64	1,298.0	2.9	-3.6	0.39	0.15	52.44	2.7	3.7
1,358.0	0.30	309.60	1,358.0	3.0	-3.5	1.10	-0.23	-208.40	-4.6	-0.1
1,544.0	0.50	49.10	1,544.0	3.9	-3.2	0.34	0.11	53.49	-0.1	5.0
1,729.0	0.40	17.60	1,729.0	5.0	-2.4	0.14	-0.05	-17.03	-4.0	3.8
1,917.0	0.40	358.50	1,917.0	6.3	-2.3	0.07	0.00	-10.16	-6.4	2.1
2,105.0	0.40	11.60	2,105.0	7.6	-2.1	0.05	0.00	6.97	-7.0	3.6
2,291.0	0.40	359.90	2,291.0	8.9	-2.0	0.04	0.00	-6.29	-8.9	2.0
2,479.0	0.70	346.60	2,478.9	10.7	-2.3	0.17	0.16	-7.07	-10.9	-0.2



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Well:	#705H	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)	
2,667.0	0.80	345.80	2,666.9	13.0	-2.9	0.05	0.05	-0.43	-13.3	-0.4	
2,854.0	1.10	347.70	2,853.9	16.1	-3.6	0.16	0.16	1.02	-16.5	0.1	
3,040.0	1.50	354.80	3,039.9	20.2	-4.2	0.23	0.22	3.82	-20.5	2.3	
3,228.0	0.70	14.30	3,227.8	23.8	-4.1	0.46	-0.43	10.37	-22.0	9.9	
3,414.0	1.20	41.30	3,413.8	26.4	-2.5	0.35	0.27	14.52	-18.1	19.3	
3,602.0	1.10	63.30	3,601.8	28.6	0.4	0.24	-0.05	11.70	-13.2	25.4	
3,789.0	0.30	94.60	3,788.7	29.4	2.5	0.46	-0.43	16.74	-0.1	29.5	
3,975.0	0.50	215.50	3,974.7	28.7	2.5	0.38	0.11	65.00	24.8	-14.7	
4,162.0	0.60	200.40	4,161.7	27.1	1.7	0.09	0.05	-8.07	26.0	-7.9	
4,348.0	0.80	156.00	4,347.7	25.0	1.8	0.30	0.11	-23.87	22.1	11.9	
4,535.0	1.50	166.40	4,534.7	21.5	2.9	0.39	0.37	5.56	20.2	7.9	
4,721.0	1.80	211.70	4,720.6	16.6	2.0	0.70	0.16	24.35	15.2	-7.0	
4,907.0	2.70	237.00	4,906.5	11.7	-3.2	0.71	0.48	13.60	5.2	-10.6	
5,062.0	4.20	259.10	5,061.2	8.7	-11.9	1.28	0.97	14.26	1.3	-8.6	
5,262.0	5.90	261.40	5,260.4	5.8	-29.2	0.86	0.85	1.15	3.7	-5.3	
5,449.0	6.90	261.30	5,446.2	2.6	-49.8	0.53	0.53	-0.05	2.2	-2.3	
5,635.0	6.50	260.50	5,631.0	-0.8	-71.3	0.22	-0.22	-0.43	-0.3	0.8	
5,823.0	5.40	282.50	5,818.0	-0.7	-90.4	1.34	-0.59	11.70	0.4	0.6	
6,010.0	5.50	287.10	6,004.1	3.9	-107.5	0.24	0.05	2.46	1.4	-4.5	
6,198.0	5.80	286.80	6,191.2	9.3	-125.2	0.16	0.16	-0.16	1.8	-10.2	
6,384.0	5.50	267.10	6,376.3	11.5	-143.1	1.05	-0.16	-10.59	6.8	-11.2	
6,571.0	5.40	260.90	6,562.5	9.7	-160.8	0.32	-0.05	-3.32	9.5	-8.3	
6,758.0	5.10	260.90	6,748.7	7.0	-177.7	0.16	-0.16	0.00	11.7	-5.2	
6,946.0	5.30	263.90	6,935.9	4.8	-194.6	0.18	0.11	1.60	14.0	-3.3	
7,133.0	6.00	265.30	7,122.0	3.0	-212.9	0.38	0.37	0.75	15.0	-1.8	
7,320.0	6.20	265.30	7,308.0	1.4	-232.7	0.11	0.11	0.00	14.6	-0.2	
7,507.0	3.80	258.10	7,494.2	-0.7	-248.8	1.32	-1.28	-3.85	15.9	4.1	



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Well:	#705H	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)	
7,695.0	2.90	238.80	7,681.9	-4.4	-259.0	0.76	-0.48	-10.27	9.3	10.9	
7,882.0	1.10	245.30	7,868.8	-7.6	-264.7	0.97	-0.96	3.48	4.1	10.3	
8,069.0	1.00	240.00	8,055.8	-9.2	-267.7	0.07	-0.05	-2.83	-0.3	10.5	
8,255.0	1.00	249.00	8,241.7	-10.6	-270.6	0.08	0.00	4.84	-1.9	10.6	
8,440.0	0.40	342.30	8,426.7	-10.6	-272.3	0.59	-0.32	50.43	10.2	2.9	
8,627.0	0.20	229.80	8,613.7	-10.2	-272.8	0.27	-0.11	-60.16	-6.7	7.7	
8,815.0	0.30	196.40	8,801.7	-10.8	-273.2	0.09	0.05	-17.77	-10.5	2.6	
9,002.0	0.40	201.50	8,988.7	-11.9	-273.6	0.06	0.05	2.73	-11.4	3.5	
9,188.0	0.50	166.70	9,174.7	-13.3	-273.6	0.15	0.05	-18.71	-12.7	-4.0	
9,376.0	0.60	134.10	9,362.7	-14.8	-272.7	0.17	0.05	-17.34	-10.3	-10.7	
9,564.0	0.80	86.50	9,550.7	-15.4	-270.7	0.32	0.11	-25.32	-1.0	-15.5	
9,751.0	0.20	114.00	9,737.7	-15.5	-269.1	0.34	-0.32	14.71	-9.5	-12.7	
9,938.0	1.30	209.00	9,924.7	-17.4	-269.8	0.71	0.59	50.80	-13.9	10.9	
10,124.0	0.50	205.30	10,110.6	-20.0	-271.2	0.43	-0.43	-1.99	-17.5	9.9	
10,311.0	0.80	203.50	10,297.6	-22.0	-272.1	0.16	0.16	-0.96	-19.9	9.3	
10,497.0	0.70	230.80	10,483.6	-23.9	-273.5	0.20	-0.05	14.68	-15.7	18.0	
10,684.0	0.70	235.20	10,670.6	-25.2	-275.3	0.03	0.00	2.35	-16.6	19.2	
10,870.0	1.30	243.40	10,856.6	-26.8	-278.1	0.33	0.32	4.41	-16.9	21.6	
11,057.0	1.80	298.40	11,043.5	-26.4	-282.6	0.80	0.27	29.41	3.8	27.9	
11,244.0	2.40	298.70	11,230.4	-23.1	-288.6	0.32	0.32	0.16	-2.9	27.9	
11,432.0	2.00	288.10	11,418.2	-20.2	-295.2	0.30	-0.21	-5.64	-15.1	26.2	
11,620.0	2.90	269.60	11,606.1	-19.2	-303.0	0.63	0.48	-9.84	-30.5	19.0	
11,820.0	1.50	72.20	11,806.0	-18.4	-305.6	2.18	-0.70	81.30	37.0	-7.5	
11,867.0	2.10	93.40	11,853.0	-18.3	-304.2	1.89	1.28	45.11	30.4	-20.2	
11,913.0	4.90	154.60	11,898.9	-20.1	-302.5	9.35	6.09	133.04	-5.4	-35.6	
11,920.0	5.72	155.85	11,905.9	-20.7	-302.2	11.77	11.65	17.73	-6.8	-35.5	
KOP (Hawk 26 Fed #705H)											



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11,960.0	10.40	159.20	11,945.5	-25.9	-300.1	11.77	11.71	8.39	-13.3	-34.4
12,005.0	17.10	160.20	11,989.2	-36.0	-296.4	14.90	14.89	2.22	-20.0	-32.4
12,052.0	24.10	161.20	12,033.1	-51.6	-291.0	14.91	14.89	2.13	-28.8	-29.0
12,099.0	30.50	166.70	12,074.9	-72.3	-285.1	14.62	13.62	11.70	-40.9	-22.5
12,146.0	34.50	170.10	12,114.5	-97.0	-280.1	9.35	8.51	7.23	-51.8	-16.4
12,192.0	39.50	171.10	12,151.2	-124.3	-275.6	10.95	10.87	2.17	-61.0	-12.1
12,239.0	44.30	171.90	12,186.2	-155.3	-271.0	10.28	10.21	1.70	-70.2	-7.5
12,285.0	47.20	173.50	12,218.3	-188.0	-266.8	6.78	6.30	3.48	-78.0	-2.1
12,332.0	50.20	176.40	12,249.3	-223.2	-263.7	7.89	6.38	6.17	-83.8	3.8
12,378.0	53.80	180.20	12,277.7	-259.4	-262.7	10.18	7.83	8.26	-87.5	8.5
12,425.0	56.00	186.90	12,304.7	-297.7	-265.1	12.56	4.68	14.26	-88.7	11.6
12,472.0	57.50	188.70	12,330.5	-336.7	-270.4	4.52	3.19	3.83	-87.8	6.3
12,520.0	58.60	188.70	12,355.9	-376.9	-276.6	2.29	2.29	0.00	-83.4	-1.7
12,567.0	60.50	187.50	12,379.7	-417.1	-282.3	4.60	4.04	-2.55	-75.7	-9.9
12,614.0	66.20	181.70	12,400.8	-458.9	-285.6	16.39	12.13	-12.34	-66.2	-16.5
12,661.0	68.50	176.80	12,418.9	-502.2	-285.0	10.79	4.89	-10.43	-55.9	-17.4
12,714.3	71.52	170.26	12,437.1	-552.0	-279.3	12.84	5.67	-12.26	-42.2	-12.1
FTP Crossing, MD:12714.3', TVD:12437.1', N/S:-552.0', E/W:-279.3', INC:71.52										
12,719.0	71.80	169.70	12,438.6	-556.4	-278.6	12.84	5.91	-12.01	-40.9	-11.2
12,727.4	72.74	170.03	12,441.1	-564.2	-277.2	11.88	11.28	3.92	-38.7	-9.8
FTP (Hawk 26 Fed #705H)										
12,750.0	75.30	170.90	12,447.4	-585.7	-273.6	11.88	11.29	3.85	-33.1	-6.1
12,781.0	80.00	172.00	12,454.0	-615.6	-269.1	15.55	15.16	3.55	-27.4	-1.7
12,875.0	94.50	172.70	12,458.5	-708.4	-256.6	15.44	15.43	0.74	-25.5	10.0
12,969.0	94.80	177.60	12,450.9	-801.7	-248.7	5.21	0.32	5.21	-35.7	17.3
13,063.0	93.40	180.60	12,444.2	-895.5	-247.2	3.51	-1.49	3.19	-45.1	18.0
13,157.0	89.80	181.90	12,441.5	-989.4	-249.3	4.07	-3.83	1.38	-50.4	15.1



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Survey											
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13,159.6	89.72	181.90	12,441.5	-992.0	-249.4	3.01	-3.01	0.11	-50.5	15.0	
TGT 1 (Hawk 26 Fed #705H)											
13,250.0	87.00	182.00	12,444.1	-1,082.3	-252.4	3.01	-3.01	0.11	-49.3	11.1	
13,344.0	81.80	180.40	12,453.3	-1,175.8	-254.4	5.79	-5.53	-1.70	-41.2	8.4	
13,438.0	88.40	178.90	12,461.3	-1,269.4	-253.8	7.20	7.02	-1.60	-34.3	8.1	
13,532.0	87.70	179.20	12,464.5	-1,363.3	-252.3	0.81	-0.74	0.32	-32.2	8.9	
13,626.0	87.60	178.50	12,468.4	-1,457.2	-250.4	0.75	-0.11	-0.74	-29.4	10.0	
13,719.0	89.90	177.40	12,470.4	-1,550.1	-247.0	2.74	2.47	-1.18	-28.5	12.5	
13,813.0	92.00	180.80	12,468.8	-1,644.1	-245.6	4.25	2.23	3.62	-31.1	13.3	
13,907.0	91.30	180.10	12,466.1	-1,738.0	-246.3	1.05	-0.74	-0.74	-34.9	11.7	
14,001.0	90.20	181.00	12,464.9	-1,832.0	-247.2	1.51	-1.17	0.96	-37.2	10.0	
14,094.0	88.10	181.20	12,466.3	-1,925.0	-249.0	2.27	-2.26	0.22	-36.9	7.5	
14,161.6	88.03	181.35	12,468.6	-1,992.5	-250.5	0.24	-0.11	0.22	-35.4	5.4	
TGT 2 (Hawk 26 Fed #705H)											
14,186.0	88.00	181.40	12,469.4	-2,016.9	-251.1	0.24	-0.11	0.22	-34.9	4.6	
14,280.0	87.00	180.60	12,473.5	-2,110.8	-252.7	1.36	-1.06	-0.85	-31.9	2.2	
14,373.0	88.60	181.10	12,477.1	-2,203.7	-254.1	1.80	1.72	0.54	-29.4	0.0	
14,467.0	88.90	181.70	12,479.1	-2,297.7	-256.4	0.71	0.32	0.64	-28.5	-3.0	
14,561.0	89.40	181.80	12,480.5	-2,391.6	-259.3	0.54	0.53	0.11	-28.2	-6.7	
14,655.0	88.90	181.70	12,481.9	-2,485.6	-262.1	0.54	-0.53	-0.11	-27.9	-10.4	
14,749.0	89.00	181.90	12,483.6	-2,579.5	-265.1	0.24	0.11	0.21	-27.3	-14.1	
14,842.0	88.40	181.80	12,485.8	-2,672.4	-268.1	0.65	-0.65	-0.11	-26.3	-17.9	
14,936.0	88.00	180.60	12,488.7	-2,766.4	-270.1	1.35	-0.43	-1.28	-24.5	-20.7	
15,030.0	88.60	179.30	12,491.5	-2,860.3	-270.0	1.52	0.64	-1.38	-22.9	-21.4	
15,123.0	87.00	179.30	12,495.1	-2,953.2	-268.8	1.72	-1.72	0.00	-20.4	-21.0	
15,163.7	86.96	178.74	12,497.2	-2,993.9	-268.1	1.39	-0.11	-1.38	-18.8	-20.7	
TGT 3 (Hawk 26 Fed #705H)											



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3544.0usft
Site:	Hawk 26 Fed	MD Reference:	KB = 25 @ 3544.0usft
Well:	#705H	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)	
15,217.0	86.90	178.00	12,500.1	-3,047.1	-266.6	1.39	-0.11	-1.38	-16.6	-19.6	
15,310.0	88.00	178.40	12,504.2	-3,139.9	-263.7	1.26	1.18	0.43	-13.6	-17.5	
15,403.0	88.90	178.30	12,506.7	-3,232.9	-261.0	0.97	0.97	-0.11	-12.2	-15.6	
15,497.0	88.70	178.40	12,508.7	-3,326.8	-258.3	0.24	-0.21	0.11	-11.4	-13.6	
15,591.0	89.90	179.00	12,509.8	-3,420.8	-256.2	1.43	1.28	0.64	-11.4	-12.3	
15,685.0	88.80	179.20	12,510.9	-3,514.8	-254.7	1.19	-1.17	0.21	-11.5	-11.6	
15,778.0	89.40	179.40	12,512.4	-3,607.7	-253.6	0.68	0.65	0.22	-11.1	-11.3	
15,871.0	89.40	179.60	12,513.3	-3,700.7	-252.8	0.22	0.00	0.22	-11.2	-11.2	
15,964.0	88.70	179.60	12,514.9	-3,793.7	-252.1	0.75	-0.75	0.00	-10.8	-11.4	
16,057.0	89.60	180.00	12,516.3	-3,886.7	-251.8	1.06	0.97	0.43	-10.5	-11.8	
16,150.0	89.00	180.10	12,517.4	-3,979.7	-251.9	0.65	-0.65	0.11	-10.4	-12.7	
16,164.1	89.00	179.99	12,517.6	-3,993.8	-251.9	0.74	0.00	-0.74	-10.4	-12.8	
TGT 4 (Hawk 26 Fed #705H)											
16,244.0	89.00	179.40	12,519.0	-4,073.7	-251.5	0.74	0.00	-0.74	-9.6	-13.1	
16,337.0	87.60	177.80	12,521.8	-4,166.6	-249.2	2.29	-1.51	-1.72	-7.5	-11.6	
16,431.0	88.20	178.90	12,525.2	-4,260.5	-246.5	1.33	0.64	1.17	-4.8	-9.7	
16,525.0	88.80	179.40	12,527.7	-4,354.5	-245.1	0.83	0.64	0.53	-3.1	-9.0	
16,619.0	90.40	179.40	12,528.4	-4,448.4	-244.1	1.70	1.70	0.00	-3.2	-8.9	
16,713.0	90.60	179.90	12,527.5	-4,542.4	-243.5	0.57	0.21	0.53	-4.7	-9.1	
16,806.0	89.40	179.60	12,527.5	-4,635.4	-243.1	1.33	-1.29	-0.32	-5.4	-9.4	
16,900.0	89.70	179.90	12,528.3	-4,729.4	-242.7	0.45	0.32	0.32	-5.4	-9.8	
16,993.0	89.80	179.80	12,528.7	-4,822.4	-242.5	0.15	0.11	-0.11	-5.7	-10.4	
17,087.0	90.20	179.20	12,528.7	-4,916.4	-241.7	0.77	0.43	-0.64	-6.4	-10.3	
17,180.0	89.70	178.80	12,528.8	-5,009.4	-240.0	0.69	-0.54	-0.43	-7.1	-9.5	
17,274.0	89.60	178.30	12,529.3	-5,103.4	-237.7	0.54	-0.11	-0.53	-7.2	-7.9	
17,367.0	89.00	178.20	12,530.5	-5,196.3	-234.8	0.65	-0.65	-0.11	-6.8	-5.8	
17,462.0	88.40	177.50	12,532.6	-5,291.2	-231.3	0.97	-0.63	-0.74	-5.4	-3.1	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3544.0usft
Site:	Hawk 26 Fed	MD Reference:	KB = 25 @ 3544.0usft
Well:	#705H	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)	
17,555.0	88.70	177.20	12,535.0	-5,384.1	-227.0	0.46	0.32	-0.32	-3.7	0.4	
17,622.0	88.48	178.45	12,536.6	-5,451.0	-224.4	1.90	-0.33	1.87	-2.6	2.4	
LTP Crossing, MD:17622.0', TVD:12536.6', N/S:-5451.0', E/W:-224.4', INC:88.48											
17,646.0	88.40	178.90	12,537.3	-5,475.0	-223.9	1.90	-0.33	1.87	-2.1	2.8	
Final MWD Survey (MD= 17646.0')											
17,717.0	88.40	178.90	12,539.3	-5,546.0	-222.5	0.00	0.00	0.00	-0.7	3.5	
Final Bit Projection (MD= 17717.0') - PBHL (Hawk 26 Fed #705H)											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,714.3	12,437.1	-552.0	-279.3	FTP Crossing, MD:12714.3', TVD:12437.1', N/S:-552.0', E/W:-279.3', INC:71.52
17,622.0	12,536.6	-5,451.0	-224.4	LTP Crossing, MD:17622.0', TVD:12536.6', N/S:-5451.0', E/W:-224.4', INC:88.48
17,646.0	12,537.3	-5,475.0	-223.9	Final MWD Survey (MD= 17646.0')
17,717.0	12,539.3	-5,546.0	-222.5	Final Bit Projection (MD= 17717.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Hawk 26 Fed #705H

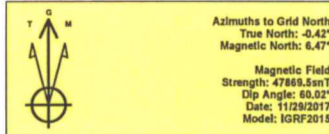
Plan #1

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: #705H

KB = 25 @ 3544.0usft 3519.0
Northing 431105.00 Easting 785988.00 Latitude 32° 10' 57.768 N Longitude 103° 32' 33.167 W



To convert a Magnetic Direction to a Grid Direction, Add 6.4°
To convert a Magnetic Direction to a True Direction, Add 6.8° East
To convert a True Direction to a Grid Direction, Subtract 0.4°

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Mag	TFace	V-Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4805.0	0.00	0.00	4805.0	0.0	0.0	0.00	0.00	0.0	
3	5105.0	6.00	270.00	5164.5	0.0	-15.7	2.00	270.00	0.6	
4	7413.2	6.00	270.00	7469.0	0.0	-57.7	0.00	0.00	10.8	
5	7713.2	0.00	0.00	7689.5	0.0	-272.7	2.00	180.00	11.1	
6	11920.7	0.00	0.00	11907.0	0.0	-272.7	0.00	0.00	11.1	
7	12864.5	88.38	179.52	12479.7	-556.7	-268.0	10.00	179.52	587.3	
8	13238.1	88.38	179.52	12492.0	-990.1	-264.3	0.00	0.00	1000.0	TGT 1 (Hawk 26 Fed #705H)
9	13286.0	89.34	178.52	12483.0	-1038.0	-263.9	2.00	0.11	1047.9	
10	14239.3	89.34	178.52	12504.0	-1991.2	-255.9	0.00	0.00	2000.0	TGT 2 (Hawk 26 Fed #705H)
11	16240.6	89.29	178.52	12516.0	-3982.4	-247.5	0.00	-179.89	3000.0	TGT 3 (Hawk 26 Fed #705H)
12	16241.8	89.34	178.52	12528.0	-3993.6	-239.1	0.00	0.11	4000.0	TGT 4 (Hawk 26 Fed #705H)
13	16251.1	89.66	178.52	12529.1	-4004.8	-239.0	2.00	-0.01	4011.2	
14	17799.4	89.56	179.52	12540.0	-5551.0	-226.0	0.00	0.00	5555.6	PBHL (Hawk 26 Fed #705H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
TGT 1 (Hawk 26 Fed #705H)	12492.0	-990.1	-264.3	430114.90	785723.69
TGT 2 (Hawk 26 Fed #705H)	12504.0	-1991.2	-255.9	429113.80	785732.10
TGT 3 (Hawk 26 Fed #705H)	12516.0	-3982.4	-247.5	428112.60	785740.51
TGT 4 (Hawk 26 Fed #705H)	12528.0	-3993.6	-239.1	427111.40	785748.92
PBHL (Hawk 26 Fed #705H)	12540.0	-5551.0	-226.0	425554.00	785762.00
KOP (Hawk 26 Fed #705H)	11907.0	0.0	-272.7	431105.00	785715.34

