



HOBBS OCD
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Hawk 26 Fed

#706H

OH

Design: OH

PVA Report

21 February, 2018



PVA Report

Company: EOG Resources - Midland Project: Lea County, NM (NAD 83 NME) Site: Hawk 26 Fed Well: #706H Wellbore: OH Design: OH		Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:		Well #706H KB = 25 @ 3544.0usft (H&P 473) KB = 25 @ 3544.0usft (H&P 473) Grid Minimum Curvature 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 Hawk 26 Fed																	
Site Position: From: Map Position Uncertainty: 0.0 usft		Northing: 431,092.00 usft Easting: 783,852.00 usft Slot Radius: 13-3/16 "		Latitude: 32° 10' 57.794 N Longitude: 103° 32' 58.022 W Grid Convergence: 0.42 °													
Well #706H																	
Well Position +N/-S 0.0 usft + E/-W 0.0 usft Position Uncertainty 0.0 usft		Northing: 431,106.00 usft Easting: 786,018.00 usft Wellhead Elevation: usft		Latitude: 32° 10' 57.775 N Longitude: 103° 32' 32.818 W Ground Level: 3,519.0 usft													
Wellbore OH																	
<table border="1"> <thead> <tr> <th>Magnetics</th> <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></td> <td>IGRF2015</td> <td>11/29/2017</td> <td>6.89</td> <td>60.02</td> <td>47,869.49838175</td> </tr> </tbody> </table>						Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)		IGRF2015	11/29/2017	6.89	60.02	47,869.49838175
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	IGRF2015	11/29/2017	6.89	60.02	47,869.49838175												
Design OH																	
Audit Notes: Version: 1.0 Phase: ACTUAL Tie On Depth:																	
<table border="1"> <thead> <tr> <th>Vertical Section:</th> <th>Depth From (TVD) (usft)</th> <th>+N/-S (usft)</th> <th>+E/-W (usft)</th> <th>Direction (°)</th> </tr> </thead> <tbody> <tr> <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>177.48</td> </tr> </tbody> </table>						Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)		0.0	0.0	0.0	177.48		
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PVA Report

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Site:	Hawk 26 Fed	MD Reference:	KB = 25 @ 3544.0usft (H&P 473)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date 2/21/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
171.0	1,300.0	Olebrook MWD (OH)	MWD	OWSG MWD - Standard	
1,454.0	17,687.0	Intrepid MWD (OH)	MWD	OWSG 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
171.0	0.97	278.37	171.0	0.2	-1.4	0.57	0.57	0.00	-1.4	0.0
261.0	0.53	299.90	261.0	0.5	-2.5	0.57	-0.49	23.92	-2.5	0.8
387.0	0.53	287.60	387.0	1.0	-3.6	0.09	0.00	-9.76	-3.7	0.1
481.0	0.44	235.30	481.0	0.9	-4.3	0.46	-0.10	-55.64	-3.0	-3.2
607.0	0.53	267.65	607.0	0.6	-5.3	0.23	0.07	25.67	-5.3	-0.8
671.0	0.44	260.65	671.0	0.6	-5.8	0.17	-0.14	-10.94	-5.7	-1.5
797.0	0.18	211.84	797.0	0.3	-6.4	0.28	-0.21	-38.74	-3.1	-5.6
891.0	0.09	189.86	891.0	0.1	-6.5	0.11	-0.10	-23.38	-1.0	-6.4
985.0	0.18	122.45	985.0	0.0	-6.4	0.18	0.10	-71.71	5.4	-3.5
1,080.0	0.18	90.72	1,080.0	-0.1	-6.1	0.10	0.00	-33.40	6.1	-0.2
1,175.0	1.06	159.80	1,175.0	-0.9	-5.7	1.06	0.93	72.72	1.1	-5.6
1,269.0	0.35	57.24	1,269.0	-1.6	-5.1	1.26	-0.76	-109.11	5.2	1.4
1,300.0	0.44	68.93	1,300.0	-1.5	-4.9	0.39	0.29	37.71	5.1	0.4
1,454.0	0.40	31.00	1,454.0	-0.8	-4.1	0.18	-0.03	-24.63	2.8	3.1
1,639.0	0.60	4.40	1,638.9	0.7	-3.7	0.16	0.11	-14.38	-0.4	3.7
1,825.0	0.60	336.30	1,824.9	2.6	-4.0	0.16	0.00	-15.11	-4.0	2.7
2,013.0	0.60	331.80	2,012.9	4.3	-4.9	0.03	0.00	-2.39	-6.1	2.3
2,201.0	1.20	39.10	2,200.9	6.7	-4.1	0.59	0.32	35.80	-2.6	7.4
2,387.0	1.60	48.20	2,386.8	10.0	-0.9	0.25	0.22	4.89	-5.9	8.1
2,575.0	1.80	54.90	2,574.8	13.4	3.4	0.15	0.11	3.56	-10.5	9.0



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Well:	#706H	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)	
2,763.0	0.60	108.10	2,762.7	14.8	6.8	0.81	-0.64	28.30	-1.9	16.2	
2,949.0	0.60	63.20	2,948.7	14.9	8.6	0.25	0.00	-24.14	-14.4	9.5	
3,137.0	1.00	58.50	3,136.7	16.2	10.9	0.22	0.21	-2.50	-17.7	8.2	
3,323.0	1.60	54.00	3,322.6	18.6	14.3	0.33	0.32	-2.42	-22.5	6.6	
3,511.0	1.40	91.00	3,510.6	20.1	18.8	0.52	-0.11	19.68	-18.4	20.4	
3,698.0	0.90	87.60	3,697.5	20.1	22.5	0.27	-0.27	-1.82	-23.3	19.2	
3,884.0	0.40	121.90	3,883.5	19.9	24.5	0.33	-0.27	18.44	-10.3	29.8	
4,071.0	0.70	180.50	4,070.5	18.4	25.1	0.32	0.16	31.34	18.6	24.9	
4,258.0	0.50	170.20	4,257.5	16.4	25.2	0.12	-0.11	-5.51	11.9	27.6	
4,444.0	1.10	131.70	4,443.5	14.4	26.7	0.42	0.32	-20.70	-10.3	28.5	
4,631.0	2.50	140.80	4,630.4	10.1	30.6	0.76	0.75	4.87	-11.5	30.1	
4,816.0	1.60	143.00	4,815.3	4.9	34.7	0.49	-0.49	1.19	-17.0	30.7	
5,003.0	1.60	118.10	5,002.2	1.6	38.6	0.37	0.00	-13.32	-33.3	19.6	
5,080.0	1.10	97.80	5,079.2	1.0	40.2	0.89	-0.65	-26.36	-39.7	6.4	
5,260.0	2.00	87.30	5,259.1	0.9	45.1	0.52	0.50	-5.83	-44.5	-1.2	
5,447.0	4.40	74.90	5,445.8	2.9	55.3	1.33	1.28	-6.63	-43.8	-8.8	
5,633.0	5.30	72.50	5,631.2	7.3	70.4	0.50	0.48	-1.29	-43.6	-6.0	
5,821.0	5.00	75.40	5,818.4	12.0	86.6	0.21	-0.16	1.54	-44.8	0.8	
6,008.0	5.20	80.40	6,004.7	15.5	102.8	0.26	0.11	2.67	-45.0	8.1	
6,196.0	5.00	75.50	6,191.9	19.0	119.1	0.25	-0.11	-2.61	-46.3	7.7	
6,382.0	4.40	80.80	6,377.3	22.1	134.0	0.40	-0.32	2.85	-44.5	15.2	
6,569.0	4.10	93.50	6,563.8	22.9	147.8	0.53	-0.16	6.79	-37.4	25.2	
6,756.0	4.10	91.20	6,750.3	22.3	161.1	0.09	0.00	-1.23	-35.4	23.1	
6,944.0	3.70	89.20	6,937.9	22.3	173.9	0.22	-0.21	-1.06	-32.5	21.8	
7,130.0	2.20	93.10	7,123.6	22.2	183.5	0.81	-0.81	2.10	-24.2	23.5	
7,317.0	2.20	96.20	7,310.5	21.6	190.7	0.06	0.00	1.66	-13.8	23.2	
7,505.0	1.40	99.40	7,498.4	20.8	196.5	0.43	-0.43	1.70	-2.7	21.5	



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7,693.0	1.30	116.10	7,686.3	19.5	200.7	0.22	-0.05	8.88	5.3	19.1	
7,880.0	1.30	119.70	7,873.3	17.5	204.4	0.04	0.00	1.93	2.2	18.9	
8,067.0	1.30	122.30	8,060.2	15.3	208.1	0.03	0.00	1.39	-1.2	18.9	
8,253.0	1.20	128.10	8,246.2	13.0	211.4	0.09	-0.05	3.12	-3.3	19.1	
8,438.0	1.10	135.10	8,431.2	10.5	214.2	0.09	-0.05	3.78	-4.6	19.6	
8,625.0	1.20	149.50	8,618.1	7.6	216.4	0.16	0.05	7.70	-3.3	20.6	
8,813.0	1.30	159.70	8,806.1	3.9	218.2	0.13	0.05	5.43	-3.7	21.2	
9,000.0	1.30	170.20	8,993.0	-0.2	219.3	0.13	0.00	5.61	-4.0	21.9	
9,187.0	1.10	191.50	9,180.0	-4.0	219.3	0.26	-0.11	11.39	0.5	22.6	
9,375.0	1.10	205.70	9,367.9	-7.4	218.1	0.14	0.00	7.55	2.5	22.3	
9,563.0	0.70	211.30	9,555.9	-10.0	216.7	0.22	-0.21	2.98	1.7	22.1	
9,749.0	0.90	219.30	9,741.9	-12.1	215.2	0.12	0.11	4.30	2.1	21.8	
9,936.0	2.30	194.00	9,928.8	-16.9	213.4	0.82	0.75	-13.53	-12.4	20.0	
10,122.0	2.60	209.20	10,114.7	-24.2	210.4	0.38	0.16	8.17	-14.6	23.5	
10,309.0	0.80	148.20	10,301.6	-29.0	209.0	1.24	-0.96	-32.62	-31.0	-5.1	
10,496.0	0.90	212.70	10,488.6	-31.4	208.9	0.49	0.05	34.49	-20.0	27.0	
10,682.0	0.90	318.00	10,674.6	-31.5	207.2	0.77	0.00	56.61	30.2	13.5	
10,869.0	1.10	233.30	10,861.5	-31.5	204.7	0.72	0.11	-45.29	-12.6	29.9	
11,056.0	0.70	252.40	11,048.5	-32.9	202.2	0.26	-0.21	10.21	-5.0	33.0	
11,242.0	0.80	314.40	11,234.5	-32.4	200.2	0.42	0.05	33.33	24.9	20.9	
11,430.0	0.70	298.60	11,422.5	-30.9	198.3	0.12	-0.05	-8.40	15.9	26.5	
11,618.0	1.40	267.60	11,610.4	-30.4	195.0	0.47	0.37	-16.49	-3.3	30.3	
11,751.0	2.00	255.90	11,743.4	-31.1	191.1	0.52	0.45	-8.80	-13.3	28.7	
11,824.0	2.40	243.80	11,816.3	-32.1	188.5	0.84	0.55	-16.58	-21.8	25.0	
11,886.0	7.34	205.36	11,878.1	-36.2	185.6	9.12	7.96	-61.96	-37.6	5.3	
KOP (Hawk 26 Fed #706H)											
11,916.0	10.00	201.20	11,907.8	-40.4	183.9	9.12	8.88	-13.88	-41.8	2.1	



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11,963.0	18.30	195.50	11,953.3	-51.3	180.4	17.89	17.66	-12.13	-49.2	-3.8	
12,008.0	26.40	192.80	11,994.9	-67.9	176.3	18.14	18.00	-6.00	-58.6	-8.6	
12,055.0	31.60	192.40	12,036.0	-90.1	171.3	11.07	11.06	-0.85	-70.0	-12.2	
12,102.0	36.00	190.80	12,075.0	-115.7	166.1	9.55	9.36	-3.40	-80.8	-18.0	
12,149.0	39.80	187.40	12,112.1	-144.2	161.6	9.22	8.09	-7.23	-89.8	-26.5	
12,195.0	41.90	182.50	12,146.9	-174.2	159.0	8.33	4.57	-10.65	-95.4	-35.7	
12,242.0	43.60	179.20	12,181.4	-206.1	158.5	5.98	3.62	-7.02	-98.9	-40.7	
12,288.0	45.40	176.80	12,214.2	-238.3	159.7	5.36	3.91	-5.22	-99.8	-42.7	
12,335.0	47.50	175.70	12,246.6	-272.3	161.9	4.78	4.47	-2.34	-98.5	-41.6	
12,382.0	48.60	175.60	12,278.0	-307.1	164.6	2.35	2.34	-0.21	-94.3	-39.0	
12,429.0	49.80	175.60	12,308.7	-342.6	167.3	2.55	2.55	0.00	-86.5	-36.2	
12,475.0	52.30	175.60	12,337.7	-378.3	170.0	5.43	5.43	0.00	-76.1	-33.3	
12,522.0	55.30	178.10	12,365.4	-416.1	172.1	7.69	6.38	5.32	-63.9	-30.0	
12,569.0	60.10	180.50	12,390.5	-455.8	172.6	11.09	10.21	5.11	-50.7	-29.0	
12,616.0	65.50	178.70	12,412.0	-497.6	172.9	11.98	11.49	-3.83	-36.9	-29.2	
12,663.0	69.60	177.40	12,430.0	-541.0	174.4	9.09	8.72	-2.77	-23.2	-27.9	
12,671.5	70.59	177.16	12,432.8	-549.0	174.7	11.99	11.69	-2.84	-20.8	-27.6	
FTP Crossing, MD:12671.5', TVD:12432.8', N/S:-549.0', E/W:174.7', INC:70.59											
12,679.6	71.54	176.93	12,435.5	-556.6	175.1	11.99	11.70	-2.80	-18.4	-27.2	
FTP (Hawk 26 Fed #706H)											
12,710.0	75.10	176.10	12,444.2	-585.7	176.9	11.99	11.71	-2.74	-10.2	-25.3	
12,756.0	79.30	172.70	12,454.4	-630.4	181.3	11.63	9.13	-7.39	-0.4	-21.1	
12,803.0	81.40	173.40	12,462.3	-676.3	186.9	4.70	4.47	1.49	7.0	-15.8	
12,849.0	83.60	178.40	12,468.3	-721.8	190.1	11.79	4.78	10.87	12.6	-13.0	
12,876.0	84.60	179.40	12,471.0	-748.7	190.7	5.22	3.70	3.70	15.2	-12.7	
12,971.0	86.90	179.20	12,478.1	-843.4	191.8	2.43	2.42	-0.21	21.8	-12.3	
13,065.0	88.60	178.50	12,481.8	-937.3	193.7	1.96	1.81	-0.74	25.0	-11.2	



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13,119.5	89.07	178.15	12,482.9	-991.8	195.3	1.08	0.86	-0.65	25.9	-10.1	
TGT#1 (Hawk 26 Fed #706H)											
13,158.0	89.40	177.90	12,483.4	-1,030.2	196.6	1.08	0.86	-0.65	26.1	-9.1	
13,252.0	90.30	176.20	12,483.6	-1,124.1	201.5	2.05	0.96	-1.81	25.4	-5.0	
13,346.0	88.90	176.20	12,484.3	-1,217.9	207.7	1.49	-1.49	0.00	25.1	0.4	
13,439.0	87.50	177.00	12,487.2	-1,310.7	213.2	1.73	-1.51	0.86	27.1	5.1	
13,534.0	91.00	177.70	12,488.5	-1,405.6	217.6	3.76	3.68	0.74	27.4	8.7	
13,627.0	90.10	177.40	12,487.6	-1,498.5	221.6	1.02	-0.97	-0.32	25.5	11.9	
13,721.0	88.60	176.50	12,488.6	-1,592.3	226.6	1.86	-1.60	-0.96	25.7	16.1	
13,814.0	90.70	175.90	12,489.2	-1,685.1	232.7	2.35	2.26	-0.65	25.3	21.4	
13,908.0	83.80	174.70	12,493.7	-1,778.6	240.4	7.45	-7.34	-1.28	28.7	28.5	
13,964.0	86.70	176.20	12,498.4	-1,834.3	244.8	5.83	5.18	2.68	32.9	32.4	
14,002.0	88.60	178.80	12,499.9	-1,872.2	246.5	8.47	5.00	6.84	34.1	33.7	
14,095.0	91.70	180.80	12,499.7	-1,965.2	246.8	3.97	3.33	2.15	32.9	33.2	
14,122.3	90.60	180.41	12,499.1	-1,992.5	246.5	4.26	-4.02	-1.41	32.1	32.7	
TGT#2 (Hawk 26 Fed #706H)											
14,187.0	88.00	179.50	12,499.9	-2,057.1	246.6	4.26	-4.02	-1.41	32.1	32.2	
14,281.0	88.60	180.80	12,502.7	-2,151.1	246.3	1.52	0.64	1.38	33.8	31.1	
14,374.0	89.90	182.40	12,503.9	-2,244.1	243.7	2.22	1.40	1.72	33.9	27.7	
14,468.0	93.10	185.60	12,501.5	-2,337.8	237.2	4.81	3.40	3.40	30.3	20.4	
14,562.0	94.20	185.80	12,495.5	-2,431.1	227.9	1.19	1.17	0.21	23.2	10.3	
14,656.0	94.40	185.80	12,488.4	-2,524.4	218.4	0.21	0.21	0.00	15.0	0.0	
14,749.0	93.60	187.20	12,481.9	-2,616.5	207.9	1.73	-0.86	1.51	7.5	-11.2	
14,843.0	90.30	187.00	12,478.7	-2,709.8	196.3	3.52	-3.51	-0.21	3.2	-23.7	
14,938.0	89.50	180.00	12,478.9	-2,804.5	190.5	7.42	-0.84	-7.37	2.2	-30.3	
15,032.0	88.20	178.10	12,480.8	-2,898.5	192.1	2.45	-1.38	-2.02	3.0	-29.5	
15,126.0	86.90	177.70	12,484.8	-2,992.3	195.5	1.45	-1.38	-0.43	5.9	-26.8	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:				Well #706H	
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:				KB = 25 @ 3544.0usft (H&P 473)	
Site:	Hawk 26 Fed	MD Reference:				KB = 25 @ 3544.0usft (H&P 473)	
Well:	#706H	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)
15,127.8	86.97	177.69	12,484.9	-2,994.1	195.6	3.68	3.66	-0.43	5.9	-26.8
TGT#3 (Hawk 26 Fed #706H)										
15,219.0	90.30	177.30	12,487.1	-3,085.2	199.6	3.68	3.66	-0.43	7.0	-23.6
15,312.0	90.10	175.10	12,486.8	-3,178.0	205.7	2.38	-0.22	-2.37	5.6	-18.2
15,406.0	90.20	177.90	12,486.5	-3,271.8	211.5	2.98	0.11	2.98	4.2	-13.3
15,499.0	87.70	175.50	12,488.2	-3,364.6	216.8	3.73	-2.69	-2.58	4.8	-8.7
15,593.0	89.90	176.60	12,490.2	-3,458.4	223.3	2.62	2.34	1.17	5.6	-3.0
15,687.0	90.80	178.50	12,489.6	-3,552.3	227.3	2.24	0.96	2.02	3.9	0.2
15,780.0	90.90	178.50	12,488.2	-3,645.2	229.7	0.11	0.11	0.00	1.4	1.9
15,874.0	90.80	179.80	12,486.8	-3,739.2	231.1	1.39	-0.11	1.38	-1.1	2.5
15,966.0	88.20	179.20	12,487.6	-3,831.2	231.9	2.90	-2.83	-0.65	-1.4	2.5
16,060.0	88.70	178.90	12,490.2	-3,925.1	233.5	0.62	0.53	-0.32	0.0	3.2
16,128.5	90.62	178.97	12,490.6	-3,993.6	234.8	2.80	2.80	0.11	-0.4	3.9
TGT#4 (Hawk 26 Fed #706H)										
16,153.0	91.30	179.00	12,490.2	-4,018.1	235.2	2.80	2.80	0.11	-1.0	4.2
16,246.0	88.60	178.90	12,490.3	-4,111.1	236.9	2.91	-2.90	-0.11	-1.7	5.1
16,340.0	92.40	181.60	12,489.4	-4,205.1	236.5	4.96	4.04	2.87	-3.2	3.9
16,433.0	90.30	185.60	12,487.2	-4,297.8	230.6	4.86	-2.26	4.30	-6.1	-2.7
16,527.0	84.40	182.50	12,491.6	-4,391.4	224.0	7.09	-6.28	-3.30	-2.5	-10.2
16,621.0	87.00	181.40	12,498.6	-4,485.1	220.8	3.00	2.77	-1.17	3.8	-14.2
16,715.0	87.70	179.60	12,503.0	-4,579.0	220.0	2.05	0.74	-1.91	7.5	-15.8
16,808.0	84.90	177.30	12,509.0	-4,671.8	222.5	3.89	-3.01	-2.47	12.8	-14.0
16,902.0	89.90	178.00	12,513.3	-4,765.6	226.4	5.37	5.32	0.74	16.3	-11.0
16,996.0	90.80	179.00	12,512.7	-4,859.5	228.8	1.43	0.96	1.06	15.0	-9.3
17,089.0	90.60	178.20	12,511.5	-4,952.5	231.1	0.89	-0.22	-0.86	13.1	-7.9
17,183.0	90.40	178.40	12,510.7	-5,046.4	233.9	0.30	-0.21	0.21	11.6	-5.9
17,246.0	88.60	178.30	12,511.3	-5,109.4	235.7	2.86	-2.86	-0.16	11.7	-4.6



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3544.0usft (H&P 473)
Site:	Hawk 26 Fed	MD Reference:	KB = 25 @ 3544.0usft (H&P 473)
Well:	#706H	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)	
17,276.0	89.30	177.40	12,511.8	-5,139.4	236.8	3.80	2.33	-3.00	12.0	-3.7	
17,370.0	87.60	176.00	12,514.4	-5,233.2	242.2	2.34	-1.81	-1.49	13.8	0.9	
17,464.0	84.90	174.80	12,520.5	-5,326.7	249.7	3.14	-2.87	-1.28	19.2	7.7	
17,557.0	83.30	173.50	12,530.1	-5,418.7	259.2	2.21	-1.72	-1.40	28.0	16.4	
17,587.7	83.13	173.25	12,533.7	-5,449.0	262.7	0.98	-0.55	-0.82	31.4	19.7	
HL Crossing, MD:17587.7', TVD:12533.7', N/S:-5449.0', E/W:262.7', INC:83.13											
17,630.0	82.90	172.90	12,538.8	-5,490.7	267.8	0.98	-0.55	-0.82	36.2	24.4	
Final MWD Survey (MD= 17630.0')											
17,680.1	82.90	172.90	12,545.0	-5,540.0	273.9	0.00	0.00	0.00	41.9	30.2	
PBHL (Hawk 26 Fed #706H)											
17,687.0	82.90	172.90	12,545.9	-5,546.8	274.7	0.00	0.00	0.00	42.7	31.0	
Final Bit Projection (MD= 17687.0')											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,671.5	12,432.8	-549.0	174.7	FTP Crossing, MD:12671.5', TVD:12432.8', N/S:-549.0', E/W:174.7', INC:70.59
17,587.7	12,533.7	-5,449.0	262.7	HL Crossing, MD:17587.7', TVD:12533.7', N/S:-5449.0', E/W:262.7', INC:83.13
17,630.0	12,538.8	-5,490.7	267.8	Final MWD Survey (MD= 17630.0')
17,687.0	12,545.9	-5,546.8	274.7	Final Bit Projection (MD= 17687.0')

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

Hawk 26 Fed #706H

H&P 473

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: #706H

KB = 25 @ 3544.0ush (H&P 473) 3519.0
Northing 431105.00 Easting 786018.00 Latitude 32° 10' 57.75 N Longitude 103° 32' 32.818 W

SECTION DETAILS

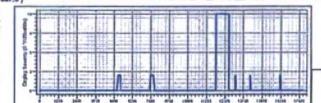
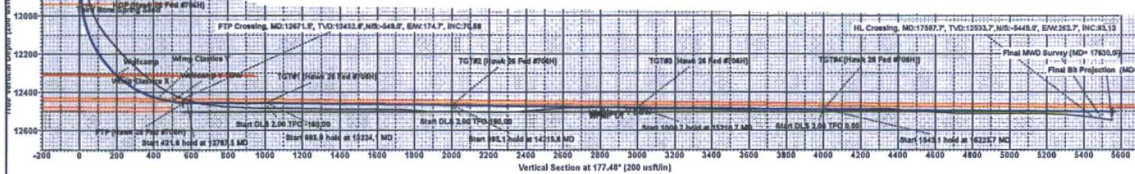
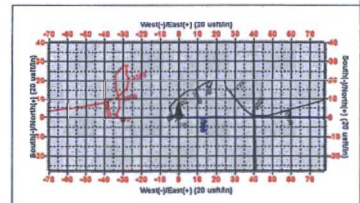
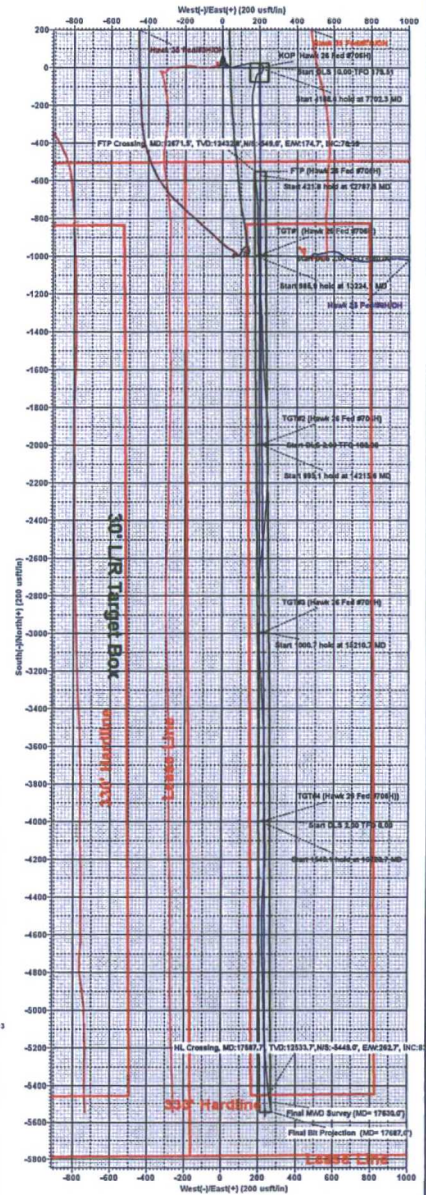
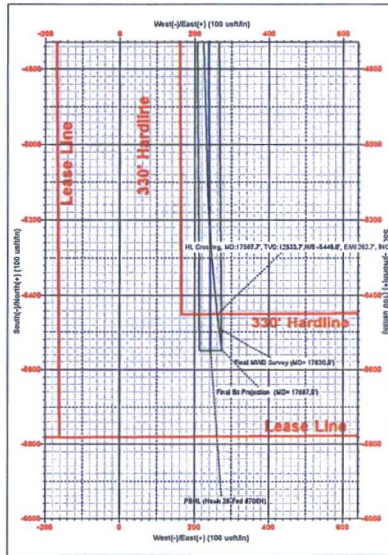
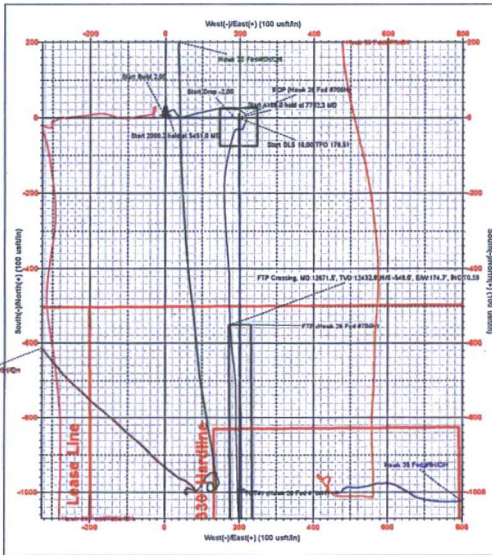
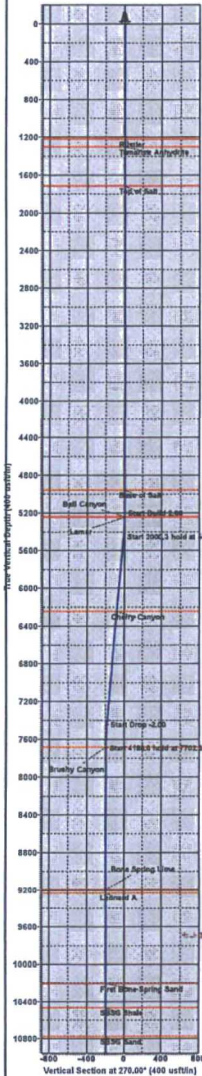
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VFace	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	5200.0	0.00	0.00	5200.0	0.0	0.0	0.00	0.00	0.0		
3	5451.6	5.02	90.00	5450.7	0.0	11.0	2.00	90.00	0.5		
4	7451.3	5.02	90.00	7443.3	0.0	186.0	0.00	0.00	8.2		
5	7702.3	0.00	0.00	7694.0	0.0	187.0	2.00	180.00	8.7		
6	11890.3	0.00	0.00	11892.0	0.0	187.0	0.00	0.00	8.7		
7	12787.5	89.72	178.51	12455.0	-570.2	201.8	10.00	179.51	578.5	TGT#1 (Hawk 26 Fed #706H)	
8	13209.3	89.72	178.51	12457.0	-891.9	205.4	0.00	0.00	1000.0		
9	13224.1	89.43	178.51	12457.1	-1006.7	205.5	2.00	-180.00	1014.8	TGT#2 (Hawk 26 Fed #706H)	
10	14210.0	89.43	178.51	12467.0	-1992.5	213.9	0.00	0.00	2000.0		
11	14215.6	89.31	178.51	12467.1	-1998.1	213.9	2.00	180.00	2005.6	TGT#3 (Hawk 26 Fed #706H)	
12	15210.7	89.31	178.51	12470.0	-2993.1	222.4	0.00	0.00	3000.0		
13	16211.4	89.31	178.51	12491.0	-3993.7	230.8	0.00	0.00	4000.0		
14	16223.7	89.56	178.51	12491.1	-4006.0	230.9	2.00	0.00	4012.3	TGT#4 (Hawk 26 Fed #706H)	
15	17766.8	89.56	178.51	12503.0	-5548.0	244.0	0.00	0.00	5554.4	PBHL (Hawk 26 Fed #706H)	

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 #706H)	12457.0	-891.9	205.4	430114.15	786223.40
TGT#2 (Hawk 26 Fed #706H)	12467.0	-1992.5	213.9	429113.50	786231.89
TGT#3 (Hawk 26 Fed #706H)	12470.0	-2993.1	222.4	428112.90	786240.35
TGT#4 (Hawk 26 Fed #706H)	12491.0	-3993.7	230.8	427112.30	786248.83
PBHL (Hawk 26 Fed #706H)	12503.0	-5548.0	244.0	425557.00	786262.00
FTP (Hawk 26 Fed #706H)	12485.0	-548.0	202.0	430557.00	786220.00
KOP (Hawk 26 Fed #706H)	11892.0	0.0	187.0	431106.00	786215.00



Lea County, NM (NAD 83 NME)
H&P 473
Plan #1
10/15/2018