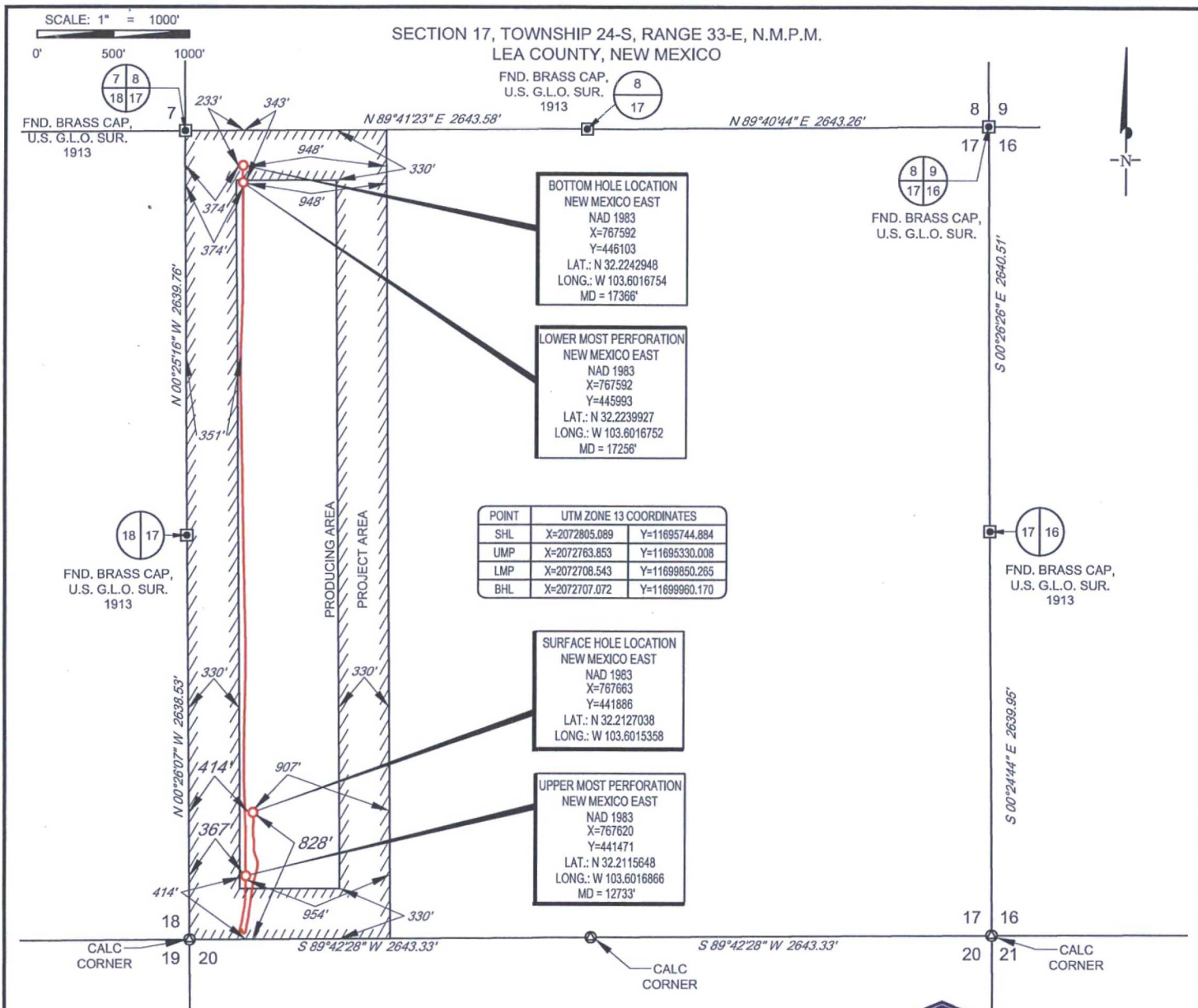
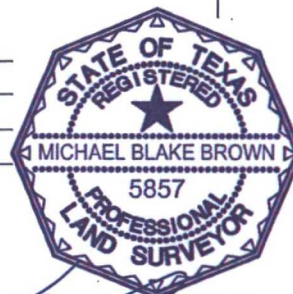




LEASE NAME & WELL NO.: HEARTTHROB 17 STATE #701H
SECTION 17 TWP 24-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3545'
DESCRIPTION 828' FSL & 414' FWL



eoog resources, inc.



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

Michael Blake Brown, P.S. No. 18329
APRIL 9, 2018

HEARTTHROB 17 STATE
#701H
AS-COMPLETED

REVISION:

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

DATE: 04/10/18

FILE: AD_HEARTTHROB_17_STATE_701H

DRAWN BY: H.B.

SHEET: 1 OF 1

30-025-44127

HOBBS OCD
MAY 02 2018
RECEIVED



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Heartthrob 17 state

#701H

OH

Design: OH

PVA Report

21 March, 2018



PVA Report

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #701H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25 @ 3570.0usft (HP 462)
Site:	Hearthrob 17 state			MD Reference:	KB = 25 @ 3570.0usft (HP 462)
Well:	#701H			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						Hearthrob 17 state					
Site Position:		Northing:		441,886.00 usft		Latitude:		32° 12' 45.730 N			
From: Map		Easting:		767,698.00 usft		Longitude:		103° 36' 5.126 W			
Position Uncertainty:		0.0 usft		Slot Radius:		13-3/16 "		Grid Convergence:		0.39 °	

Well						#701H							
Well Position		+N-S		0.0 usft		Northing:		441,886.00 usft		Latitude:		32° 12' 45.732 N	
		+E-W		0.0 usft		Easting:		767,663.00 usft		Longitude:		103° 36' 5.534 W	
Position Uncertainty		0.0 usft				Wellhead Elevation:		usft		Ground Level:		3,545.0 usft	

Wellbore						OH					
----------	--	--	--	--	--	----	--	--	--	--	--

Magnetics		Model Name		Sample Date		Declination (°)		Dip Angle (°)		Field Strength (nT)	
		IGRF2015		10/19/2017		6.93		60.04		47,892.45638675	

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		358.83			



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #701H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3570.0usft (HP 462)
Site:	Hearthrob 17 state	MD Reference:	KB = 25 @ 3570.0usft (HP 462)
Well:	#701H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date	3/2/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description		
204.0	1,214.0	Olebrook MWD (OH)	MWD	OWSG MWD - Standard		
1,259.0	17,367.0	Intrepid MWD (OH)	MWD	OWSG MWD - Standard		

MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg ("/100usft)	Buidl ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.0
204.0	1.23	351.79	204.0	2.2	-0.3	0.60	0.60	0.00	-2.2	0.0
296.0	0.35	113.69	296.0	3.0	-0.2	1.57	-0.96	132.50	1.4	2.7
389.0	0.25	146.21	389.0	2.7	0.2	0.21	-0.11	34.97	2.2	1.7
515.0	0.62	38.11	515.0	3.1	0.8	0.58	0.29	-85.79	-2.9	1.3
643.0	0.70	39.51	643.0	4.2	1.7	0.06	0.06	1.09	-4.3	1.4
769.0	0.62	43.56	769.0	5.3	2.6	0.07	-0.06	3.21	-5.7	1.7
863.0	0.44	75.72	863.0	5.8	3.3	0.36	-0.19	34.21	-4.7	4.8
1,020.0	0.53	271.63	1,020.0	5.9	3.2	0.61	0.06	-104.52	3.0	-6.0
1,117.0	0.26	95.50	1,117.0	5.9	3.0	0.81	-0.28	-181.58	-2.4	6.2
1,214.0	0.88	327.09	1,213.9	6.5	2.8	1.09	0.64	-132.38	-4.0	-5.9
1,259.0	0.70	201.00	1,258.9	6.5	2.5	3.13	-0.40	-280.20	7.0	0.0
1,446.0	3.70	181.70	1,445.8	-0.6	1.9	1.63	1.60	-10.32	3.2	2.0
1,635.0	3.30	181.90	1,634.4	-12.1	1.5	0.21	-0.21	0.11	4.3	2.4
1,824.0	5.10	165.70	1,822.9	-25.7	3.4	1.13	0.95	-8.57	2.4	6.0
2,014.0	4.90	179.00	2,012.2	-42.0	5.7	0.62	-0.11	7.00	0.6	8.3
2,203.0	5.10	179.00	2,200.5	-58.4	6.0	0.11	0.11	0.00	-2.7	9.3
2,393.0	5.00	181.20	2,389.8	-75.2	5.9	0.11	-0.05	1.16	-5.8	10.3
2,583.0	4.90	186.30	2,579.0	-91.5	4.9	0.24	-0.05	2.68	-8.0	10.8
2,773.0	4.90	185.60	2,768.3	-107.6	3.2	0.03	0.00	-0.37	-11.2	10.2
2,962.0	4.50	180.40	2,956.7	-123.1	2.3	0.31	-0.21	-2.75	-14.3	9.1



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #701H
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Site:	Hearthrob 17 state	MD Reference:	KB = 25 @ 3570.0usft (HP 462)
Well:	#701H	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)	
3,152.0	4.00	178.50	3,146.2	-137.2	2.5	0.27	-0.26	-1.00	-12.1	9.8	
3,342.0	3.90	171.80	3,335.7	-150.2	3.6	0.25	-0.05	-3.53	-6.7	11.6	
3,531.0	3.30	166.00	3,524.4	-161.8	5.8	0.37	-0.32	-3.07	-0.8	16.2	
3,721.0	4.10	167.80	3,714.0	-173.8	8.5	0.43	0.42	0.95	6.6	21.7	
3,911.0	5.80	180.40	3,903.3	-190.0	9.9	1.06	0.89	6.63	14.7	22.3	
4,101.0	5.60	185.40	4,092.3	-208.8	9.0	0.28	-0.11	2.63	17.6	21.1	
4,291.0	6.70	173.50	4,281.2	-229.1	9.4	0.88	0.58	-6.26	12.3	25.8	
4,481.0	6.80	174.30	4,469.9	-251.3	11.7	0.07	0.05	0.42	10.0	29.0	
4,671.0	8.00	159.90	4,658.3	-274.9	17.4	1.16	0.63	-7.58	-3.4	35.7	
4,860.0	8.00	156.50	4,845.5	-299.3	27.2	0.25	0.00	-1.80	-14.2	43.7	
4,943.0	7.00	156.80	4,927.8	-309.3	31.5	1.21	-1.20	0.36	-17.1	47.6	
5,130.0	7.10	179.30	5,113.4	-331.3	36.1	1.47	0.05	12.03	1.9	56.5	
5,320.0	11.20	192.70	5,301.0	-361.0	32.2	2.42	2.16	7.05	18.0	52.0	
5,509.0	11.30	194.00	5,486.4	-396.9	23.7	0.14	0.05	0.69	21.5	44.8	
5,698.0	12.10	194.00	5,671.4	-434.1	14.4	0.42	0.42	0.00	22.3	37.6	
5,888.0	11.80	194.70	5,857.3	-472.2	4.6	0.18	-0.16	0.37	22.7	29.9	
6,078.0	13.10	188.40	6,042.8	-512.3	-3.4	0.99	0.68	-3.32	18.3	26.6	
6,267.0	12.20	186.30	6,227.3	-553.4	-8.8	0.53	-0.48	-1.11	15.7	24.6	
6,456.0	14.10	188.50	6,411.3	-596.0	-14.4	1.04	1.01	1.16	13.1	21.3	
6,646.0	13.80	188.00	6,595.7	-641.3	-20.9	0.17	-0.16	-0.26	6.8	18.2	
6,835.0	12.20	187.00	6,779.8	-683.5	-26.5	0.85	-0.85	-0.53	3.7	15.5	
7,025.0	8.80	190.50	6,966.6	-717.7	-31.6	1.82	-1.79	1.84	9.0	11.7	
7,215.0	7.60	193.30	7,154.7	-744.2	-37.1	0.67	-0.63	1.47	11.3	7.1	
7,405.0	6.80	186.40	7,343.2	-767.6	-41.3	0.62	-0.42	-3.63	3.3	6.0	
7,594.0	5.50	211.90	7,531.1	-786.4	-47.3	1.58	-0.69	13.49	-9.8	6.8	
7,784.0	3.60	308.20	7,720.7	-790.5	-56.8	3.63	-1.00	50.68	2.8	18.1	
7,974.0	3.10	346.40	7,910.4	-781.8	-62.7	1.18	-0.26	20.11	3.6	16.1	



PVA Report

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Site:	Hearthrob 17 state	MD Reference:	KB = 25 @ 3570.0usft (HP 462)
Well:	#701H	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)	
8,164.0	2.50	341.80	8,100.2	-772.9	-65.2	0.34	-0.32	-2.42	-7.0	15.9	
8,354.0	1.70	330.90	8,290.1	-766.5	-67.9	0.47	-0.42	-5.74	-16.8	13.6	
8,544.0	1.20	295.80	8,480.0	-763.1	-71.1	0.52	-0.26	-18.47	-25.8	-0.2	
8,734.0	0.60	164.20	8,670.0	-763.2	-72.6	0.87	-0.32	-69.26	17.6	-20.7	
8,923.0	1.20	224.60	8,859.0	-765.6	-73.7	0.55	0.32	31.96	-11.7	-24.6	
9,113.0	0.70	96.60	9,049.0	-767.1	-73.9	0.91	-0.26	-67.37	26.7	4.3	
9,302.0	0.30	53.20	9,238.0	-767.0	-72.4	0.28	-0.21	-22.96	15.1	20.7	
9,492.0	0.70	296.00	9,428.0	-766.2	-73.0	0.46	0.21	-61.68	-26.3	3.5	
9,682.0	2.60	129.30	9,617.9	-768.4	-70.7	1.73	1.00	-87.74	21.6	-9.7	
9,872.0	0.80	167.30	9,807.8	-772.4	-67.1	1.07	-0.95	20.00	6.3	-18.3	
10,061.0	4.70	257.30	9,996.6	-775.4	-74.4	2.52	2.06	47.62	-26.0	-5.0	
10,251.0	4.40	261.20	10,186.0	-778.2	-89.2	0.23	-0.16	2.05	-41.4	-2.7	
10,441.0	2.20	246.70	10,375.7	-780.8	-99.7	1.23	-1.16	-7.63	-50.1	-14.8	
10,631.0	0.40	103.80	10,565.6	-782.4	-102.4	1.33	-0.95	-75.21	51.1	-20.7	
10,822.0	1.90	85.30	10,756.6	-782.3	-98.6	0.80	0.79	-9.69	51.2	-3.6	
11,012.0	1.30	93.90	10,946.5	-782.2	-93.4	0.34	-0.32	4.53	44.8	-10.7	
11,202.0	1.80	78.10	11,136.4	-781.7	-88.3	0.34	0.26	-8.32	41.0	1.3	
11,392.0	1.10	52.40	11,326.4	-780.0	-83.9	0.49	-0.37	-13.53	31.9	17.7	
11,536.0	0.70	26.50	11,470.4	-778.3	-82.4	0.39	-0.28	-17.99	18.8	29.2	
11,674.0	0.40	347.90	11,608.4	-777.1	-82.2	0.33	-0.22	-27.97	-4.6	34.0	
11,859.0	0.70	233.80	11,793.4	-777.1	-83.2	0.51	0.16	-61.68	-30.0	-18.7	
11,990.0	0.90	251.50	11,924.3	-777.9	-84.8	0.24	0.15	13.51	-36.1	-8.5	
12,085.0	3.40	12.20	12,019.3	-775.4	-84.9	4.14	2.63	127.05	8.7	36.0	
12,103.3	6.33	16.10	12,037.5	-773.9	-84.5	16.10	16.00	21.33	9.6	35.4	
KOP(HT 17 St #701H)											
12,179.0	18.50	19.10	12,111.3	-758.5	-79.4	16.10	16.08	3.96	0.6	33.0	
12,274.0	22.00	11.60	12,200.4	-726.8	-70.9	4.58	3.68	-7.89	-12.6	25.6	



PVA Report

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Site:	Hearthrob 17 state	MD Reference:	KB = 25 @ 3570.0usft (HP 462)
Well:	#701H	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)	
12,321.0	23.30	8.20	12,243.8	-709.0	-67.8	3.92	2.77	-7.23	-13.2	21.4	
12,369.0	27.50	9.60	12,287.2	-688.7	-64.6	8.84	8.75	2.92	-9.4	17.7	
12,416.0	32.60	12.00	12,327.8	-665.6	-60.2	11.15	10.85	5.11	-5.0	12.5	
12,463.0	34.80	10.40	12,366.9	-640.0	-55.1	5.05	4.68	-3.40	0.4	6.2	
12,510.0	42.40	6.50	12,403.7	-611.0	-50.9	16.97	16.17	-8.30	6.5	1.2	
12,558.0	50.40	4.30	12,436.7	-576.4	-47.7	16.99	16.67	-4.58	11.4	-2.3	
12,610.0	60.80	1.10	12,466.1	-533.6	-45.7	20.63	20.00	-6.15	13.8	-4.2	
12,648.2	69.77	1.82	12,482.0	-499.0	-44.8	23.55	23.49	1.88	12.5	-5.4	
HL Crossing, MD:12648.2', TVD:12482.0', N/S:-499.0', E/W:-44.8', INC:69.77'											
12,653.0	70.90	1.90	12,483.6	-494.5	-44.7	23.55	23.49	1.74	12.2	-5.5	
12,655.7	71.75	1.82	12,484.5	-491.9	-44.6	31.42	31.28	-3.03	11.9	-5.6	
FTP(HT 17 St #701H)											
12,684.0	80.60	1.00	12,491.3	-464.5	-43.9	31.42	31.29	-2.89	8.0	-6.4	
12,716.0	87.80	359.90	12,494.5	-432.7	-43.7	22.76	22.50	-3.44	1.1	-6.8	
12,779.0	88.40	359.30	12,496.6	-369.7	-44.1	1.35	0.95	-0.95	-10.7	-6.9	
12,874.0	90.10	358.90	12,497.8	-274.7	-45.6	1.84	1.79	-0.42	-14.9	-6.1	
12,969.0	92.00	0.00	12,496.1	-179.7	-46.5	2.31	2.00	1.16	-15.3	-5.9	
13,063.0	90.30	358.90	12,494.2	-85.8	-47.4	2.15	-1.81	-1.17	-15.9	-5.7	
13,158.0	89.00	357.50	12,494.8	9.2	-50.4	2.01	-1.37	-1.47	-14.0	-3.4	
13,253.0	88.90	357.80	12,496.5	104.1	-54.3	0.33	-0.11	0.32	-10.9	-0.3	
13,347.0	90.60	358.40	12,496.9	198.0	-57.4	1.92	1.81	0.64	-9.2	2.1	
13,442.0	92.00	359.90	12,494.8	293.0	-58.8	2.16	1.47	1.58	-10.0	2.8	
13,537.0	92.60	0.10	12,491.0	387.9	-58.8	0.67	0.63	0.21	-12.5	2.1	
13,631.0	91.70	0.90	12,487.4	481.8	-58.0	1.28	-0.96	0.85	-14.7	0.6	
13,725.0	92.80	1.60	12,483.8	575.7	-56.0	1.39	1.17	0.74	-17.1	-2.2	
13,820.0	90.90	1.00	12,480.7	670.7	-53.8	2.10	-2.00	-0.63	-18.9	-5.1	
13,914.0	91.20	0.70	12,479.0	764.6	-52.4	0.45	0.32	-0.32	-19.3	-7.2	



PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Heartthrob 17 state
 Well: #701H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #701H
 TVD Reference: KB = 25 @ 3570.0usft (HP 462)
 MD Reference: KB = 25 @ 3570.0usft (HP 462)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Buile (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
14,009.0	90.00	0.50	12,478.0	859.6	-51.4	1.28	-1.26	-0.21	-19.0	-8.9	
14,103.0	89.30	0.40	12,478.5	953.6	-50.7	0.75	-0.74	-0.11	-17.1	-10.4	
14,147.3	90.20	0.12	12,478.7	997.9	-50.5	2.12	2.02	-0.64	-16.3	-10.9	
TGT 1(HT 17 St #701H)											
14,197.0	91.20	359.80	12,478.1	1,047.6	-50.5	2.12	2.02	-0.64	-16.0	-11.2	
14,292.0	90.90	359.10	12,476.4	1,142.6	-51.4	0.80	-0.32	-0.74	-15.9	-11.1	
14,386.0	91.20	358.90	12,474.7	1,236.6	-53.1	0.38	0.32	-0.21	-15.8	-10.1	
14,480.0	91.00	359.30	12,472.9	1,330.5	-54.6	0.48	-0.21	0.43	-15.8	-9.4	
14,575.0	91.10	358.90	12,471.1	1,425.5	-56.1	0.43	0.11	-0.42	-15.8	-8.6	
14,669.0	90.30	358.60	12,470.0	1,519.5	-58.1	0.91	-0.85	-0.32	-15.1	-7.3	
14,764.0	90.20	358.40	12,469.6	1,614.4	-60.6	0.24	-0.11	-0.21	-13.7	-5.5	
14,858.0	91.00	359.00	12,468.6	1,708.4	-62.7	1.06	0.85	0.64	-12.9	-4.1	
14,953.0	90.40	358.50	12,467.4	1,803.4	-64.8	0.82	-0.63	-0.53	-12.3	-2.7	
15,047.0	91.80	359.70	12,465.6	1,897.3	-66.3	1.96	1.49	1.28	-12.3	-2.0	
15,141.0	91.60	359.20	12,462.8	1,991.3	-67.2	0.57	-0.21	-0.53	-13.3	-1.8	
15,147.4	91.59	359.15	12,462.6	1,997.7	-67.3	0.87	-0.21	-0.84	-13.4	-1.7	
TGT 2(HT 17 St #701H)											
15,236.0	91.40	358.40	12,460.3	2,086.2	-69.2	0.87	-0.21	-0.84	-14.1	-0.5	
15,331.0	90.50	358.90	12,458.8	2,181.2	-71.4	1.08	-0.95	0.53	-13.9	1.0	
15,425.0	91.30	359.00	12,457.3	2,275.2	-73.1	0.86	0.85	0.11	-13.7	2.0	
15,520.0	91.50	358.20	12,455.0	2,370.1	-75.4	0.87	0.21	-0.84	-14.3	3.6	
15,615.0	91.00	359.10	12,452.9	2,465.1	-77.7	1.08	-0.53	0.95	-14.7	5.1	
15,709.0	91.40	359.10	12,450.9	2,559.0	-79.2	0.43	0.43	0.00	-15.0	5.8	
15,804.0	90.70	358.90	12,449.2	2,654.0	-80.8	0.77	-0.74	-0.21	-15.0	6.8	
15,898.0	90.50	358.30	12,448.2	2,748.0	-83.1	0.67	-0.21	-0.64	-14.3	8.3	
15,993.0	90.90	359.00	12,447.0	2,842.9	-85.3	0.85	0.42	0.74	-13.8	9.8	
16,087.0	91.60	359.80	12,445.0	2,936.9	-86.3	1.13	0.74	0.85	-14.1	10.1	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #701H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3570.0usft (HP 462)
Site:	Hearthrob 17 state	MD Reference:	KB = 25 @ 3570.0usft (HP 462)
Well:	#701H	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)	
16,148.7	91.21	1.29	12,443.5	2,998.6	-85.7	2.50	-0.63	2.42	-14.5	9.0	
TGT 3(HT 17 St #701H)											
16,182.0	91.00	2.10	12,442.8	3,031.9	-84.8	2.50	-0.63	2.42	-14.7	7.8	
16,276.0	92.20	2.80	12,440.2	3,125.7	-80.7	1.48	1.28	0.74	-15.8	3.1	
16,370.0	90.70	1.90	12,437.8	3,219.6	-76.9	1.86	-1.60	-0.96	-16.7	-1.5	
16,465.0	89.10	0.90	12,438.0	3,314.6	-74.6	1.99	-1.68	-1.05	-15.1	-4.5	
16,559.0	88.20	0.80	12,440.2	3,408.6	-73.2	0.96	-0.96	-0.11	-11.4	-6.7	
16,654.0	89.20	0.20	12,442.4	3,503.5	-72.3	1.23	1.05	-0.63	-7.8	-8.2	
16,748.0	89.50	0.30	12,443.4	3,597.5	-71.9	0.34	0.32	0.11	-5.3	-9.3	
16,842.0	88.50	0.60	12,445.1	3,691.5	-71.2	1.11	-1.06	0.32	-2.2	-10.8	
16,937.0	89.30	0.80	12,446.9	3,786.5	-70.0	0.87	0.84	0.21	1.1	-12.7	
17,031.0	89.80	359.70	12,447.6	3,880.5	-69.6	1.29	0.53	-1.17	3.3	-13.8	
17,125.0	90.20	359.70	12,447.6	3,974.5	-70.1	0.43	0.43	0.00	4.8	-14.0	
17,220.0	89.50	359.50	12,447.9	4,069.5	-70.8	0.77	-0.74	-0.21	6.5	-14.1	
17,270.4	90.15	359.56	12,448.0	4,119.9	-71.2	1.29	1.28	0.13	7.5	-14.0	
HL Crossing, MD:17270.4, TVD:12448.0, N/S:4119.9, E/W:-71.2, INC:90.15											
17,298.0	90.50	359.60	12,447.9	4,147.5	-71.4	1.29	1.28	0.13	7.7	-14.1	
Last MWD Survey											
17,367.0	90.50	359.60	12,447.3	4,216.5	-71.9	0.00	0.00	0.00	8.2	-14.1	
Projection To Bit - PBHL(HT 17 St #701H)											



PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Heartthrob 17 state
Well: #701H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #701H
TVD Reference: KB = 25 @ 3570.0usft (HP 462)
MD Reference: KB = 25 @ 3570.0usft (HP 462)
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)	
12,648.2	12,482.0	-499.0	-44.8	HL Crossing, MD:12648.2', TVD:12482.0', N/S:-499.0', E/W:-44.8', INC:69.77
17,270.4	12,448.0	4,119.9	-71.2	HL Crossing, MD:17270.4', TVD:12448.0', N/S:4119.9', E/W:-71.2', INC:90.15
17,298.0	12,447.9	4,147.5	-71.4	Last MWD Survey
17,367.0	12,447.3	4,216.5	-71.9	Projection To Bit

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Hearththrob 17 state #701H

HP 462

Plan #2

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: #701H

KB = 25 @ 3570.0usft (HP 462)
Northing 441886.00 Easting 767863.00 Latitude 32° 12' 45.732 N Longitude 103° 30' 5.534 W



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.54°
Magnetic Field
Strength: 47892.5nT
Dip Angle: 60.64°
Date: 10/19/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.54°
To convert a Magnetic Direction to a True Direction, Add 6.93° East
To convert a True Direction to a Grid Direction, Subtract 0.39°

SECTION DETAILS

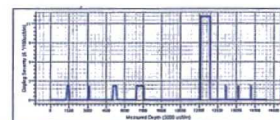
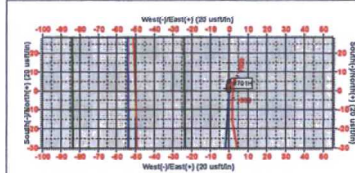
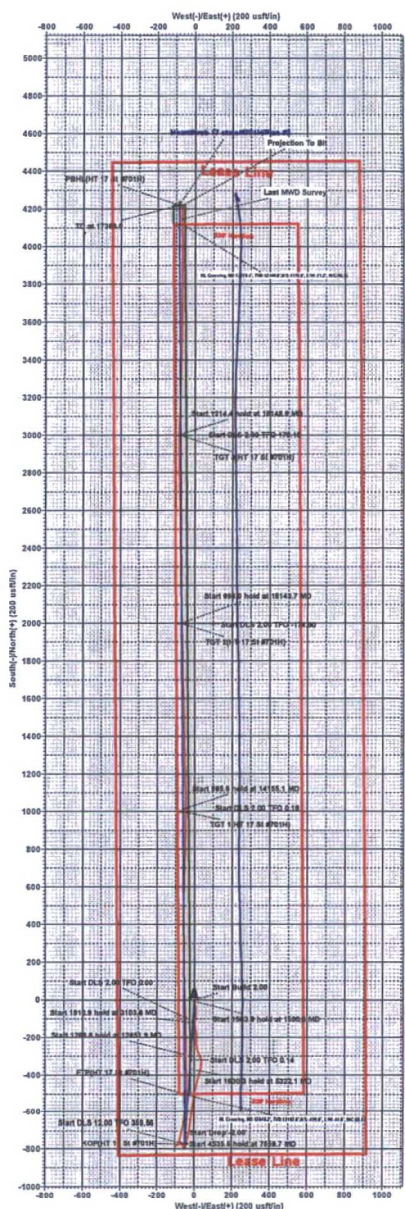
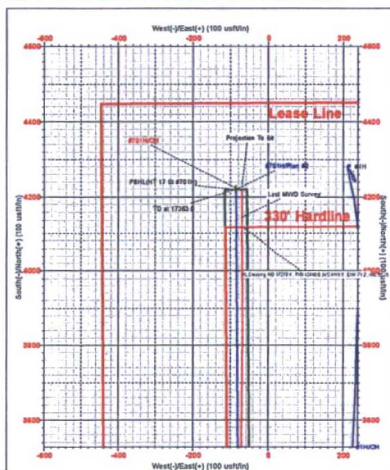
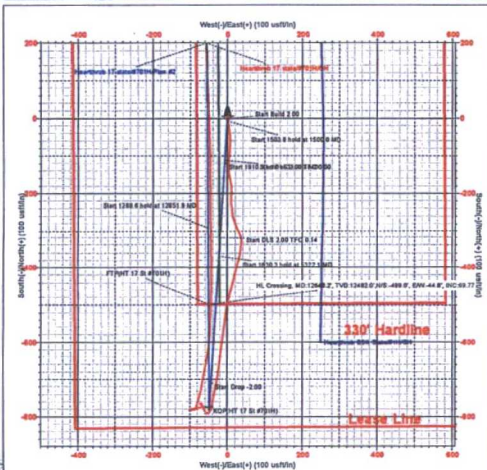
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1300.0	0.00	0.00	1300.0	0.0	0.0	0.00	0.00	0.0	
3	1500.0	4.00	183.50	1499.8	-7.0	-0.4	2.00	183.50	-7.0	
4	3003.8	4.00	183.50	3000.0	-111.7	-6.8	0.00	0.00	-111.5	
5	3103.8	6.00	183.50	3099.6	-120.4	-7.4	2.00	0.00	-120.2	
6	5014.7	6.00	183.50	5000.0	-319.7	-19.6	0.00	0.00	-319.3	
7	5322.1	12.15	183.57	5303.4	-368.1	-22.6	2.00	0.14	-367.6	
8	6952.3	12.15	183.57	6897.2	-710.5	-43.9	0.00	0.00	-709.4	
9	7559.7	0.00	0.00	7500.0	-774.5	-47.9	2.00	180.00	-773.4	
10	12095.2	0.00	0.00	12035.5	-774.5	-47.9	0.00	0.00	-773.4	
11	12851.9	90.80	359.56	12512.9	-290.4	-51.6	12.00	359.56	-289.3	TGT 1(HT 17 St #701H)
12	14140.4	90.80	359.56	12495.0	998.0	-61.4	0.00	0.00	999.0	TGT 2(HT 17 St #701H)
13	14155.1	91.09	359.56	12494.8	1012.7	-61.5	2.00	0.18	1013.7	TGT 3(HT 17 St #701H)
14	15140.6	91.09	359.56	12476.0	1998.0	-69.0	0.00	0.00	1999.0	PBHL(HT 17 St #701H)
15	15143.7	91.03	359.56	12475.9	2001.0	-69.0	2.00	-174.90	2002.0	
16	16141.6	91.03	359.56	12458.0	2998.8	-76.7	0.00	0.00	2999.7	
17	16148.6	90.89	359.56	12457.9	3005.8	-76.8	2.00	178.15	3006.7	
18	17363.0	90.89	359.56	12439.0	4220.0	-86.0	0.00	0.00	4220.9	

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KOPHT(17 St #701H)	12035.5	-774.5	-47.9	441111.49	767815.10
PBHL(HT 17 St #701H)	12439.0	4220.0	-86.0	446106.00	767577.00
TGT 1(HT 17 St #701H)	12458.0	2998.8	-76.7	444894.80	767586.30
TGT 2(HT 17 St #701H)	12476.0	1998.0	-69.0	443884.00	767594.00
TGT 3(HT 17 St #701H)	12495.0	998.0	-61.4	442884.00	767601.60
FTP(HT 17 St #701H)	12512.0	-499.0	-60.0	441387.00	767813.00



Last Modified: 10/19/2017
User: [Name]
Project: [Name]