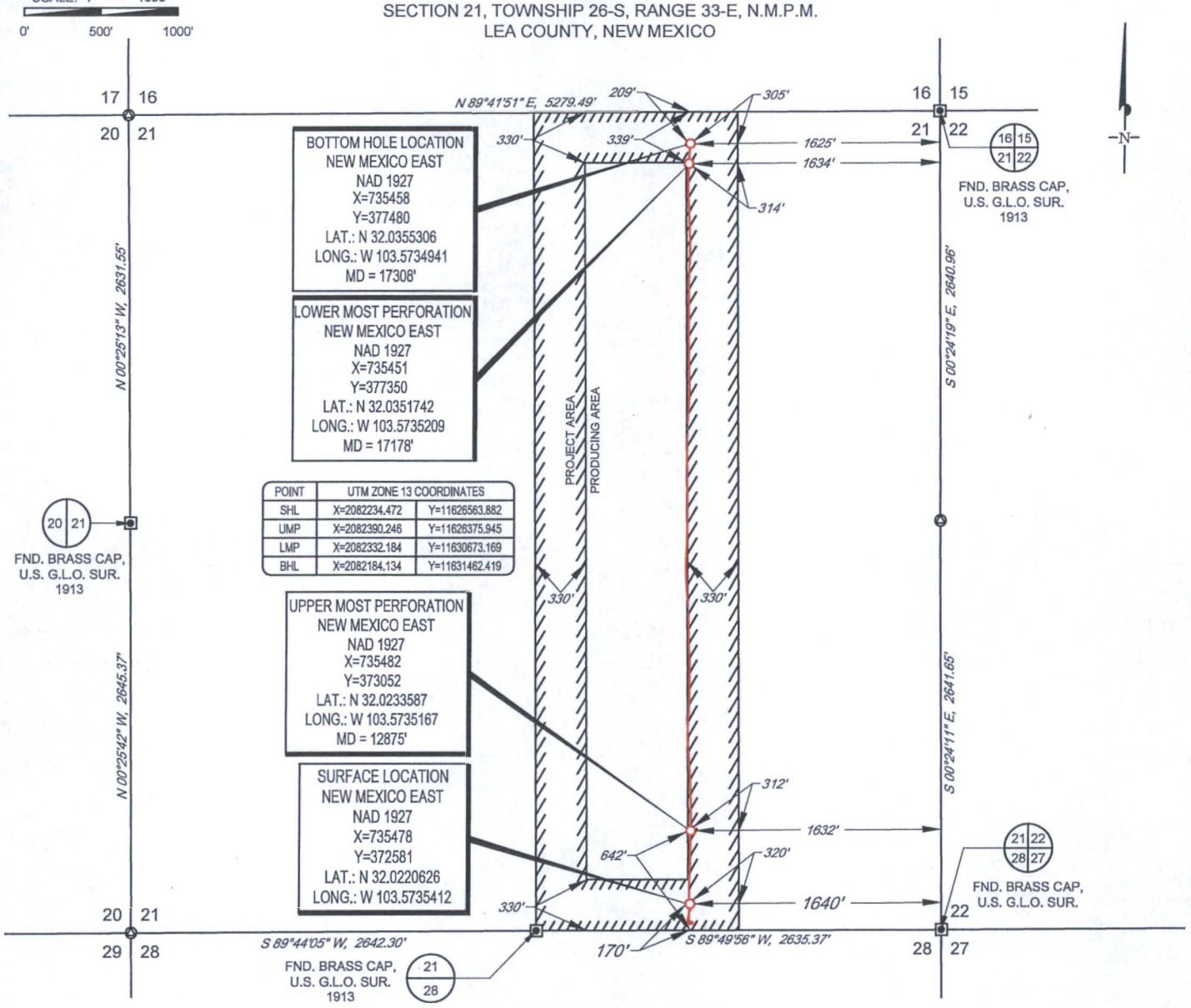
SCALE: 1" = 1000'

0' 500' 1000'

SECTION 21, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: THOR 21 FED COM #703H

SECTION 21 TWP 26-S RGE 33-E SURVEY N.M.P.M.

COUNTY LEA STATE NM ELEVATION 3256'

DESCRIPTION 170' FSL & 1640' FEL

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
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
JUNE 15, 2016

eog resources, inc.

THOR 21 FED COM #703H AS-COMPLETED	REVISION:
DATE: 06/21/16	
FILE: AD_THOR21FEDCOM_703H	
DRAWN BY: R.M.	
SHEET : 1 OF 1	

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 1 1"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 19 27.
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.

Y:\SURVEY\EOG_MIDLAND\THOR_21_FED_COM\FINAL_PRODUCTS\AD_THOR21FEDCOM_703H.DWG 6/24/2016 3:31:02 PM eochoa

eog resources

EOG Resources - Midland

Lea County, NM (NAD 27 NME)
Thor 21 Fed Com
#703H
OH

Survey: Driltech MWD #1

EOG PVA

29 April, 2016

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
Project:	Lea County, NM (NAD 27 NME)	**TVD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Site:	Thor 21 Fed Com	**MD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Well:	#703H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project Lea County, NM (NAD 27 NME)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Thor 21 Fed Com

Site Position:		**Northing:**	372,581.00 usft	**Latitude:**	32° 1' 19.428 N
From:	Map	**Easting:**	735,478.00 usft	**Longitude:**	103° 34' 24.750 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.40 °

Well #703H

Well Position	**+N/-S**	0.0 usft	**Northing:**	372,581.00 usft	**Latitude:**	32° 1' 19.428 N
	+E/-W	0.0 usft	**Easting:**	735,478.00 usft	**Longitude:**	103° 34' 24.750 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,256.0 usft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	4/4/2016	7.07	59.89	47,942

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	359.78

Survey Program **Date** 4/26/2016

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
196.0	17,160.0	Driltech MWD #1 (OH)	MWD	MWD - Standard

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
Project:	Lea County, NM (NAD 27 NME)	**TVD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Site:	Thor 21 Fed Com	**MD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Well:	#703H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
196.0	1.40	131.80	196.0	-1.6	1.8	0.71	0.71	0.00	0.0	0.0
256.0	1.80	120.20	256.0	-2.6	3.1	0.85	0.67	-19.33	0.0	0.0
313.0	1.40	126.90	312.9	-3.4	4.5	0.77	-0.70	11.75	0.0	0.0
411.0	1.10	109.20	410.9	-4.5	6.3	0.50	-0.31	-18.06	0.0	0.0
505.0	1.10	112.10	504.9	-5.1	8.0	0.06	0.00	3.09	0.0	0.0
599.0	1.20	98.10	598.9	-5.6	9.8	0.32	0.11	-14.89	0.0	0.0
693.0	0.70	103.20	692.9	-5.8	11.4	0.54	-0.53	5.43	0.0	0.0
787.0	1.20	138.70	786.9	-6.7	12.6	0.80	0.53	37.77	0.0	0.0
895.0	1.10	101.90	894.8	-7.8	14.3	0.68	-0.09	-34.07	0.0	0.0
971.0	1.40	107.60	970.8	-8.2	15.9	0.43	0.39	7.50	0.0	0.0
1,064.0	1.60	168.20	1,063.8	-9.8	17.3	1.64	0.22	65.16	0.0	0.0
1,252.0	2.50	216.40	1,251.7	-15.7	15.4	0.99	0.48	25.64	0.0	0.0
1,342.0	2.30	211.60	1,341.6	-18.8	13.3	0.31	-0.22	-5.33	0.0	0.0
1,432.0	2.60	205.50	1,431.5	-22.2	11.4	0.44	0.33	-6.78	0.0	0.0
1,521.0	2.50	202.80	1,520.4	-25.8	9.8	0.18	-0.11	-3.03	0.0	0.0
1,611.0	2.30	207.80	1,610.3	-29.2	8.2	0.32	-0.22	5.56	0.0	0.0
1,701.0	2.50	199.90	1,700.3	-32.6	6.7	0.43	0.22	-8.78	0.0	0.0
1,791.0	2.30	207.90	1,790.2	-36.1	5.2	0.43	-0.22	8.89	0.0	0.0
1,881.0	2.60	202.30	1,880.1	-39.6	3.6	0.43	0.33	-6.22	0.0	0.0
1,970.0	2.60	202.70	1,969.0	-43.3	2.0	0.02	0.00	0.45	0.0	0.0
2,060.0	2.10	205.70	2,058.9	-46.7	0.5	0.57	-0.56	3.33	0.0	0.0
2,150.0	2.10	200.70	2,148.9	-49.7	-0.8	0.20	0.00	-5.56	0.0	0.0
2,240.0	2.60	196.20	2,238.8	-53.2	-1.9	0.59	0.56	-5.00	0.0	0.0
2,329.0	2.30	203.40	2,327.7	-56.8	-3.2	0.48	-0.34	8.09	0.0	0.0
2,419.0	2.50	196.00	2,417.6	-60.3	-4.5	0.41	0.22	-8.22	0.0	0.0
2,509.0	2.10	198.40	2,507.6	-63.8	-5.5	0.46	-0.44	2.67	0.0	0.0

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
Project:	Lea County, NM (NAD 27 NME)	**TVD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Site:	Thor 21 Fed Com	**MD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Well:	#703H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

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)
2,599.0	2.50	189.00	2,597.5	-67.3	-6.3	0.61	0.44	-10.44	0.0	0.0
2,688.0	2.50	193.30	2,686.4	-71.1	-7.1	0.21	0.00	4.83	0.0	0.0
2,778.0	2.60	190.00	2,776.3	-75.0	-7.9	0.20	0.11	-3.67	0.0	0.0
2,867.0	3.00	190.50	2,865.2	-79.3	-8.7	0.45	0.45	0.56	0.0	0.0
2,957.0	2.80	196.00	2,955.1	-83.7	-9.7	0.38	-0.22	6.11	0.0	0.0
3,047.0	3.00	192.80	3,045.0	-88.1	-10.8	0.29	0.22	-3.56	0.0	0.0
3,137.0	3.20	184.00	3,134.9	-92.9	-11.5	0.57	0.22	-9.78	0.0	0.0
3,226.0	3.90	192.50	3,223.7	-98.4	-12.4	0.98	0.79	9.55	0.0	0.0
3,316.0	3.90	191.60	3,313.5	-104.3	-13.6	0.07	0.00	-1.00	0.0	0.0
3,406.0	3.90	186.80	3,403.3	-110.4	-14.6	0.36	0.00	-5.33	0.0	0.0
3,496.0	3.50	189.50	3,493.1	-116.1	-15.4	0.48	-0.44	3.00	0.0	0.0
3,586.0	3.30	186.00	3,582.9	-121.4	-16.2	0.32	-0.22	-3.89	0.0	0.0
3,675.0	2.80	173.80	3,671.8	-126.1	-16.2	0.92	-0.56	-13.71	0.0	0.0
3,765.0	1.80	154.90	3,761.7	-129.6	-15.4	1.38	-1.11	-21.00	0.0	0.0
3,944.0	1.60	71.90	3,940.7	-131.4	-11.8	1.26	-0.11	-46.37	-1.1	0.2
4,034.0	1.60	63.60	4,030.6	-130.4	-9.5	0.26	0.00	-9.22	-2.1	0.0
4,124.0	1.60	57.10	4,120.6	-129.2	-7.3	0.20	0.00	-7.22	-3.0	-0.1
4,214.0	1.40	52.20	4,210.6	-127.8	-5.4	0.26	-0.22	-5.44	-3.8	0.0
4,303.0	1.80	75.80	4,299.5	-126.8	-3.2	0.86	0.45	26.52	-4.4	1.7
4,393.0	1.80	76.10	4,389.5	-126.1	-0.4	0.01	0.00	0.33	-5.7	1.5
4,483.0	2.10	83.30	4,479.4	-125.6	2.6	0.43	0.33	8.00	-7.0	2.0
4,573.0	2.10	102.50	4,569.4	-125.8	5.8	0.78	0.00	21.33	-7.9	3.8
4,663.0	2.30	115.50	4,659.3	-126.9	9.1	0.60	0.22	14.44	-9.2	4.7
4,752.0	1.20	120.90	4,748.3	-128.1	11.5	1.25	-1.24	6.07	-10.5	4.4
4,842.0	0.50	115.00	4,838.3	-128.8	12.7	0.78	-0.78	-6.56	-11.2	2.1
4,932.0	0.70	96.50	4,928.3	-129.0	13.6	0.31	0.22	-20.56	-10.8	-2.5
5,021.0	0.00	49.20	5,017.3	-129.1	14.1	0.79	-0.79	0.00	4.3	-9.6

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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)
5,111.0	0.40	118.10	5,107.3	-129.2	14.4	0.44	0.44	0.00	-9.8	-0.5
5,201.0	0.50	49.70	5,197.3	-129.1	15.0	0.57	0.11	-76.00	-2.1	-9.1
5,290.0	0.70	65.40	5,286.2	-128.6	15.8	0.29	0.22	17.64	-3.9	-8.0
5,380.0	0.90	31.80	5,376.2	-127.8	16.6	0.56	0.22	-37.33	1.3	-8.2
5,470.0	1.20	37.60	5,466.2	-126.5	17.6	0.35	0.33	6.44	0.2	-7.5
5,559.0	1.40	28.50	5,555.2	-124.8	18.7	0.32	0.22	-10.22	0.6	-6.5
5,649.0	1.10	19.20	5,645.2	-123.0	19.5	0.40	-0.33	-10.33	0.7	-5.4
5,739.0	1.20	13.50	5,735.2	-121.3	20.0	0.17	0.11	-6.33	0.2	-4.3
5,828.0	1.10	6.00	5,824.1	-119.5	20.3	0.20	-0.11	-8.43	-0.9	-4.2
5,918.0	1.20	345.90	5,914.1	-117.7	20.1	0.46	0.11	-22.33	-1.2	-4.6
6,008.0	0.70	329.20	6,004.1	-116.3	19.6	0.63	-0.56	-18.56	-1.3	-5.0
6,098.0	0.90	290.20	6,094.1	-115.6	18.7	0.63	0.22	-43.33	1.0	-5.0
6,277.0	0.50	262.40	6,273.1	-115.2	16.6	0.29	-0.22	-15.53	1.2	-4.6
6,367.0	0.40	267.00	6,363.1	-115.3	15.9	0.12	-0.11	5.11	0.1	-4.7
6,457.0	0.50	318.30	6,453.1	-115.0	15.3	0.44	0.11	57.00	-4.2	-2.8
6,547.0	0.50	307.60	6,543.1	-114.5	14.7	0.10	0.00	-11.89	-4.4	-3.6
6,637.0	0.90	232.20	6,633.1	-114.7	13.9	1.01	0.44	-83.78	1.6	-5.5
6,726.0	1.20	248.20	6,722.1	-115.5	12.5	0.47	0.34	17.98	-1.6	-5.5
6,816.0	0.90	229.00	6,812.0	-116.3	11.0	0.51	-0.33	-21.33	-1.3	-6.1
6,906.0	1.10	236.60	6,902.0	-117.2	9.8	0.27	0.22	8.44	-3.7	-5.7
6,995.0	0.50	226.00	6,991.0	-118.0	8.8	0.69	-0.67	-11.91	-3.8	-6.5
7,085.0	1.40	216.00	7,081.0	-119.1	7.9	1.01	1.00	-11.11	-4.1	-7.1
7,177.0	0.50	268.80	7,173.0	-120.0	6.8	1.27	-0.98	57.39	-9.2	-0.2
7,267.0	0.70	354.50	7,263.0	-119.5	6.4	0.92	0.22	95.22	-1.4	9.5
7,356.0	0.50	335.20	7,352.0	-118.6	6.1	0.32	-0.22	-21.69	-5.4	8.4
7,446.0	0.50	307.80	7,442.0	-118.0	5.7	0.26	0.00	-30.44	-9.4	4.8
7,536.0	0.50	310.60	7,532.0	-117.5	5.1	0.03	0.00	3.11	-9.9	5.2

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
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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)
7,625.0	0.50	325.60	7,621.0	-116.9	4.5	0.15	0.00	16.85	-9.0	7.7
7,715.0	0.20	287.90	7,711.0	-116.6	4.2	0.40	-0.33	-41.89	-12.3	0.4
7,805.0	0.50	277.20	7,801.0	-116.5	3.6	0.34	0.33	-11.89	-12.7	-2.0
7,895.0	0.50	256.60	7,891.0	-116.5	2.9	0.20	0.00	-22.89	-12.0	-6.4
7,984.0	0.70	229.90	7,980.0	-117.0	2.1	0.38	0.22	-30.00	-8.7	-11.3
8,074.0	0.50	257.00	8,070.0	-117.4	1.3	0.38	-0.22	30.11	-13.8	-5.9
8,164.0	0.50	207.20	8,160.0	-117.8	0.7	0.47	0.00	-55.33	-5.1	-14.6
8,253.0	0.70	206.70	8,249.0	-118.7	0.3	0.22	0.22	-0.56	-5.9	-14.6
8,343.0	1.10	212.50	8,338.9	-119.9	-0.4	0.46	0.44	6.44	-8.7	-13.9
8,433.0	1.20	221.70	8,428.9	-121.3	-1.5	0.23	0.11	10.22	-12.6	-12.2
8,522.0	1.10	226.20	8,517.9	-122.6	-2.8	0.15	-0.11	5.06	-15.3	-11.1
8,612.0	1.40	226.60	8,607.9	-124.0	-4.2	0.33	0.33	0.44	-17.4	-11.0
8,702.0	2.10	230.40	8,697.8	-125.8	-6.2	0.79	0.78	4.22	-20.8	-9.7
8,792.0	1.90	195.80	8,787.8	-128.3	-7.9	1.34	-0.22	-38.44	-14.4	-20.8
8,971.0	1.80	75.90	8,966.7	-130.4	-6.0	1.79	-0.06	-66.98	23.9	-4.7
9,061.0	1.40	80.00	9,056.7	-129.9	-3.6	0.46	-0.44	4.56	21.0	-6.3
9,150.0	1.10	73.60	9,145.7	-129.5	-1.7	0.37	-0.34	-7.19	19.6	-4.1
9,240.0	1.10	75.20	9,235.7	-129.0	0.0	0.03	0.00	1.78	17.8	-4.6
9,330.0	0.50	22.80	9,325.7	-128.4	1.0	0.99	-0.67	-58.22	13.6	10.6
9,419.0	0.70	319.70	9,414.7	-127.6	0.8	0.73	0.22	-70.90	-4.0	16.5
9,508.0	0.50	282.80	9,503.7	-127.1	0.1	0.48	-0.22	-41.46	-14.0	10.5
9,598.0	0.50	15.50	9,593.7	-126.7	-0.2	0.80	0.00	103.00	10.8	13.8
9,688.0	0.70	23.70	9,683.6	-125.8	0.1	0.24	0.22	9.11	11.7	12.2
9,777.0	0.40	73.10	9,772.6	-125.2	0.6	0.60	-0.34	55.51	16.2	-0.5
9,867.0	0.50	265.60	9,862.6	-125.1	0.5	0.99	0.11	-186.11	-15.8	3.9
9,957.0	1.10	261.90	9,952.6	-125.3	-0.7	0.67	0.67	-4.11	-17.3	2.9
10,046.0	1.60	247.30	10,041.6	-125.9	-2.7	0.68	0.56	-16.40	-19.5	-1.8

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
Project:	Lea County, NM (NAD 27 NME)	**TVD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Site:	Thor 21 Fed Com	**MD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Well:	#703H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

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)
10,136.0	0.20	292.50	10,131.6	-126.3	-4.0	1.63	-1.56	50.22	-16.1	13.5
10,226.0	0.20	38.10	10,221.6	-126.1	-4.1	0.35	0.00	117.33	17.2	12.0
10,316.0	0.50	56.40	10,311.6	-125.8	-3.6	0.35	0.33	20.33	19.6	6.0
10,405.0	0.40	88.40	10,400.6	-125.6	-3.0	0.30	-0.11	35.96	19.1	-5.0
10,495.0	0.40	44.50	10,490.6	-125.3	-2.5	0.33	0.00	-48.78	16.7	9.4
10,585.0	0.70	7.50	10,580.6	-124.6	-2.2	0.50	0.33	-41.11	6.9	17.4
10,674.0	1.10	37.60	10,669.6	-123.3	-1.6	0.68	0.45	33.82	13.4	11.9
10,764.0	0.70	29.70	10,759.6	-122.2	-0.8	0.46	-0.44	-8.78	10.2	13.5
10,854.0	0.90	34.80	10,849.6	-121.1	-0.1	0.24	0.22	5.67	10.1	12.6
10,944.0	0.90	18.40	10,939.5	-119.9	0.5	0.29	0.00	-18.22	4.8	14.7
11,033.0	1.20	22.50	11,028.5	-118.4	1.1	0.35	0.34	4.61	4.2	14.4
11,123.0	1.80	22.80	11,118.5	-116.2	2.0	0.67	0.67	0.33	1.9	14.4
11,152.0	1.90	34.30	11,147.5	-115.4	2.5	1.32	0.34	39.66	3.8	13.8
11,296.0	1.60	16.50	11,291.4	-111.5	4.4	0.43	-0.21	-12.36	-4.9	13.6
11,386.0	1.40	336.10	11,381.4	-109.3	4.3	1.17	-0.22	-44.89	-14.6	6.4
11,476.0	1.40	310.90	11,471.4	-107.5	3.0	0.68	0.00	-28.00	-18.0	-0.9
11,565.0	1.60	320.80	11,560.3	-105.9	1.4	0.37	0.22	11.12	-20.2	2.4
11,655.0	1.20	312.20	11,650.3	-104.2	-0.1	0.50	-0.44	-9.56	-22.5	-0.9
11,745.0	1.40	312.40	11,740.3	-102.9	-1.6	0.22	0.22	0.22	-24.6	-0.8
11,835.0	1.10	288.40	11,830.3	-101.9	-3.2	0.66	-0.33	-26.67	-24.0	-11.1
11,925.0	0.70	294.10	11,920.2	-101.4	-4.6	0.45	-0.44	6.33	-26.4	-8.6
11,969.0	0.50	301.30	11,964.2	-101.2	-5.0	0.48	-0.45	16.36	-27.7	-5.2
12,013.0	0.90	356.70	12,008.2	-100.7	-5.2	1.68	0.91	125.91	-20.5	20.0
12,058.0	4.90	2.60	12,053.2	-98.4	-5.1	8.90	8.89	13.11	-20.5	22.1
12,103.0	12.10	357.70	12,097.7	-91.8	-5.2	16.07	16.00	-10.89	-25.9	20.2
12,148.0	21.30	357.00	12,140.7	-78.9	-5.8	20.45	20.44	-1.56	-31.6	20.3
12,193.0	27.10	359.30	12,181.7	-60.5	-6.4	13.06	12.89	5.11	-37.8	22.0

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
Project:	Lea County, NM (NAD 27 NME)	**TVD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Site:	Thor 21 Fed Com	**MD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Well:	#703H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

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)
12,238.0	29.00	0.20	12,221.5	-39.3	-6.4	4.33	4.22	2.00	-43.0	22.4
12,283.0	31.50	1.00	12,260.3	-16.6	-6.2	5.63	5.56	1.78	-45.3	22.4
12,328.0	35.40	359.50	12,297.9	8.2	-6.1	8.86	8.67	-3.33	-46.2	21.1
12,372.0	38.40	0.20	12,333.0	34.6	-6.2	6.88	6.82	1.59	-44.5	21.5
12,417.0	41.70	1.20	12,367.5	63.5	-5.8	7.47	7.33	2.22	-40.5	21.4
12,462.0	48.60	1.90	12,399.2	95.4	-4.9	15.37	15.33	1.56	-36.2	20.4
12,507.0	52.60	2.30	12,427.8	130.1	-3.7	8.92	8.89	0.89	-31.6	18.8
12,552.0	54.90	2.10	12,454.4	166.4	-2.3	5.12	5.11	-0.44	-25.0	16.9
12,585.8	57.83	2.10	12,473.1	194.5	-1.2	8.67	8.67	0.00	-18.7	15.6
FTP(Thor 21 Fed Com #703H)										
12,597.0	58.80	2.10	12,479.0	204.0	-0.9	8.67	8.67	0.00	-16.5	15.1
12,642.0	65.60	2.60	12,499.9	243.8	0.7	15.14	15.11	1.11	-7.9	12.9
12,687.0	72.50	1.20	12,516.0	285.8	2.1	15.61	15.33	-3.11	-0.6	11.0
12,732.0	76.70	359.10	12,528.0	329.1	2.2	10.36	9.33	-4.67	6.5	10.7
12,773.0	81.10	0.00	12,535.9	369.4	1.9	10.95	10.73	2.20	13.8	10.7
12,833.0	91.30	2.50	12,539.8	429.1	3.2	17.50	17.00	4.17	18.7	8.9
12,911.0	91.00	0.30	12,538.3	507.1	5.1	2.85	-0.38	-2.82	18.3	6.5
13,001.0	91.00	359.50	12,536.7	597.1	5.0	0.89	0.00	-0.89	18.1	6.0
13,090.0	91.30	358.40	12,534.9	686.0	3.3	1.28	0.34	-1.24	17.7	7.0
13,180.0	92.40	357.70	12,532.0	775.9	0.3	1.45	1.22	-0.78	16.1	9.4
13,270.0	91.70	357.40	12,528.8	865.8	-3.6	0.85	-0.78	-0.33	14.3	12.6
13,359.0	91.10	354.20	12,526.6	954.5	-10.1	3.66	-0.67	-3.60	13.5	18.5
13,449.0	91.50	356.10	12,524.6	1,044.2	-17.7	2.16	0.44	2.11	12.8	25.5
13,539.0	92.90	3.00	12,521.1	1,134.0	-18.4	7.82	1.56	7.67	10.5	25.6
13,629.0	91.10	3.90	12,518.0	1,223.8	-13.0	2.24	-2.00	1.00	8.8	19.5
13,718.0	89.00	0.30	12,517.9	1,312.7	-9.7	4.68	-2.36	-4.04	10.1	15.6
13,808.0	90.30	359.80	12,518.4	1,402.7	-9.6	1.55	1.44	-0.56	12.0	14.9

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
Project:	Lea County, NM (NAD 27 NME)	**TVD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Site:	Thor 21 Fed Com	**MD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Well:	#703H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

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)
13,898.0	92.20	0.70	12,516.5	1,492.7	-9.2	2.34	2.11	1.00	11.4	13.9
13,905.0	92.11	0.54	12,516.2	1,499.7	-9.2	2.69	-1.33	-2.33	11.2	13.8
TGT#1(Thor 21 Fed Com #703H)										
13,988.0	91.00	358.60	12,514.0	1,582.7	-9.8	2.69	-1.33	-2.33	10.7	13.8
14,077.0	91.10	356.80	12,512.3	1,671.6	-13.4	2.03	0.11	-2.02	11.1	16.7
14,167.0	93.10	359.80	12,509.0	1,761.5	-16.0	4.00	2.22	3.33	9.7	18.8
14,257.0	92.90	358.40	12,504.3	1,851.3	-17.4	1.57	-0.22	-1.56	7.0	19.6
14,280.0	94.00	359.30	12,502.9	1,874.3	-17.9	6.17	4.78	3.91	6.1	19.9
14,346.0	89.00	356.10	12,501.2	1,940.2	-20.6	8.99	-7.58	-4.85	5.9	22.1
14,436.0	91.80	355.60	12,500.6	2,029.9	-27.1	3.16	3.11	-0.56	7.3	27.9
14,526.0	91.10	356.50	12,498.3	2,119.7	-33.3	1.27	-0.78	1.00	7.0	33.5
14,616.0	92.40	2.10	12,495.6	2,209.6	-34.4	6.38	1.44	6.22	6.1	34.0
14,706.0	94.10	3.50	12,490.5	2,299.3	-30.0	2.45	1.89	1.56	2.9	29.0
14,795.0	86.60	359.50	12,489.9	2,388.2	-27.7	9.55	-8.43	-4.49	4.4	26.0
14,885.0	90.30	0.20	12,492.3	2,478.2	-27.9	4.18	4.11	0.78	8.9	25.6
14,975.0	91.80	359.80	12,490.7	2,568.2	-27.9	1.72	1.67	-0.44	9.2	25.0
15,064.0	92.20	359.80	12,487.6	2,657.1	-28.2	0.45	0.45	0.00	8.0	24.7
15,154.0	92.20	0.00	12,484.1	2,747.0	-28.4	0.22	0.00	0.22	6.6	24.2
15,244.0	91.30	358.10	12,481.4	2,837.0	-29.8	2.34	-1.00	-2.11	5.8	25.1
15,334.0	94.10	0.50	12,477.2	2,926.9	-30.9	4.10	3.11	2.67	3.5	25.6
15,407.1	90.85	0.91	12,474.0	2,999.9	-30.0	4.48	-4.44	0.56	2.0	24.1
TGT#2(Thor 21 Fed Com #703H)										
15,424.0	90.10	1.00	12,473.9	3,016.8	-29.8	4.48	-4.44	0.55	2.3	23.7
15,513.0	88.70	2.50	12,474.8	3,105.7	-27.0	2.31	-1.57	1.69	5.6	20.4
15,603.0	92.00	3.50	12,474.2	3,195.6	-22.3	3.83	3.67	1.11	7.3	15.1
15,693.0	93.10	2.80	12,470.2	3,285.3	-17.4	1.45	1.22	-0.78	5.6	9.5
15,783.0	90.60	358.10	12,467.3	3,375.3	-16.7	5.91	-2.78	-5.22	5.1	8.2

Company:	EOG Resources - Midland	**Local Co-ordinate Reference:**	Well #703H
Project:	Lea County, NM (NAD 27 NME)	**TVD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Site:	Thor 21 Fed Com	**MD Reference:**	KB = 25 @ 3281.0usft (H&P 415)
Well:	#703H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

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)
15,903.0	92.00	358.60	12,464.6	3,495.2	-20.2	1.24	1.17	0.42	5.5	10.8
15,993.0	90.60	358.60	12,462.6	3,585.1	-22.3	1.56	-1.56	0.00	5.8	12.4
16,083.0	92.40	359.60	12,460.2	3,675.1	-23.8	2.29	2.00	1.11	5.8	13.2
16,173.0	92.20	0.00	12,456.6	3,765.0	-24.1	0.50	-0.22	0.44	4.5	12.8
16,262.0	91.30	359.50	12,453.9	3,854.0	-24.5	1.16	-1.01	-0.56	4.2	12.6
16,352.0	90.40	0.30	12,452.5	3,944.0	-24.6	1.34	-1.00	0.89	5.2	12.1
16,442.0	91.10	1.90	12,451.4	4,033.9	-22.9	1.94	0.78	1.78	6.3	9.8
16,532.0	91.10	2.30	12,449.6	4,123.8	-19.6	0.44	0.00	0.44	6.9	5.9
16,621.0	91.30	0.50	12,447.8	4,212.8	-17.4	2.03	0.22	-2.02	7.4	3.1
16,711.0	92.20	358.90	12,445.0	4,302.8	-17.9	2.04	1.00	-1.78	7.0	2.9
16,801.0	92.70	357.70	12,441.2	4,392.6	-20.6	1.44	0.56	-1.33	5.5	4.9
16,891.0	92.70	356.80	12,436.9	4,482.4	-24.9	1.00	0.00	-1.00	3.6	8.6
16,981.0	93.60	357.50	12,432.0	4,572.2	-29.3	1.27	1.00	0.78	1.0	12.5
17,070.0	92.90	0.90	12,426.9	4,661.0	-30.6	3.89	-0.79	3.82	-1.7	13.1
17,160.0	93.10	2.10	12,422.2	4,750.9	-28.2	1.35	0.22	1.33	-4.1	10.1
17,249.0	93.40	3.70	12,417.2	4,839.6	-23.7	1.83	0.34	1.80	-6.8	5.0
Last MWD Survey										
17,287.2	93.40	3.70	12,414.9	4,877.7	-21.3	0.00	0.00	0.00	-8.1	2.3
PBHL(Thor 21 Fed Com #703H										
17,309.0	93.40	3.70	12,413.6	4,899.4	-19.9	0.00	0.00	0.00	-22.5	6.2
Projection To Bit										

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
17,249.0	12,417.2	4,839.6	-23.7	Last MWD Survey
17,309.0	12,413.6	4,899.4	-19.9	Projection To Bit