

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-43897
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☐ FEE ☒
2. Name of Operator EOG Resources, Inc.		6. State Oil & Gas Lease No.
3. Address of Operator P.O. Box 2267 Midland, TX 79702		7. Lease Name or Unit Agreement Name Thor 21
4. Well Location Unit Letter P : 175 feet from the South line and 439 feet from the East line Section 21 Township 26S Range 33E NMPM County Lea		8. Well Number 709H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3253' GR		9. OGRID Number 7377
		10. Pool name or Wildcat Sanders Tank; Upper Wolfcamp

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

EOG Resources requests an amendment to our approved APD for this well to reflect a change in BHL.

Change BHL to 230' FNL & 660' FEL 21-26S-33E

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Stan Wagner TITLE Regulatory Analyst DATE 01/03/2018

Type or print name Stan Wagner E-mail address: _____ PHONE: 432-686-3689

For State Use Only

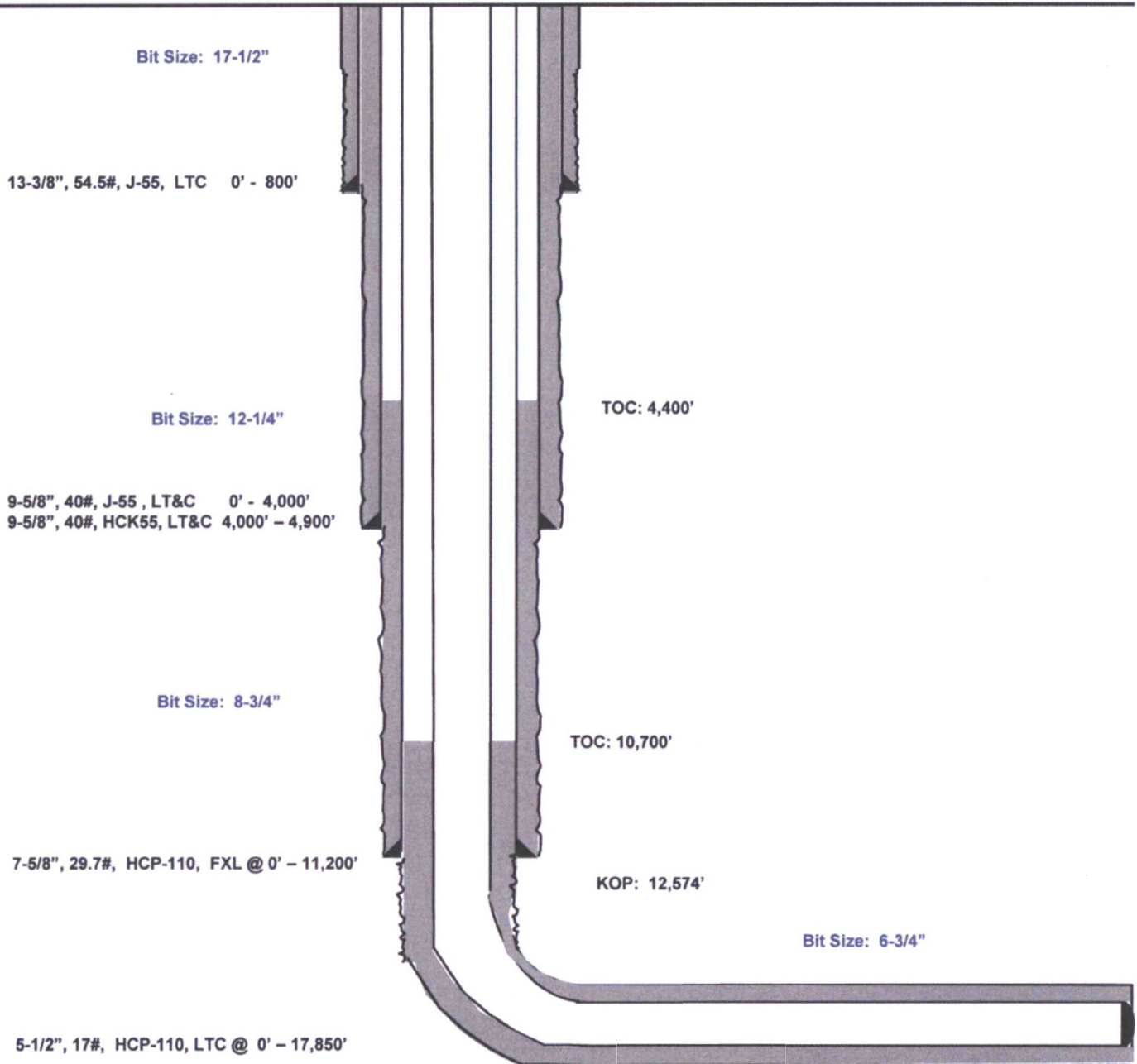
APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 01/03/18
Conditions of Approval (if any): _____

Thor 21 #709H
Lea County, New Mexico

175' FSL
439' FEL
Section 21
T-26-S, R-33-E

Proposed Wellbore
Revised 11/22/17
API: 30-025-43897

KB: 3,278'
GL: 3,253'



Lateral: 17,850' MD, 13,055' TVD

BH Location: 230' FNL & 660' FEL
Section 21
T-26-S, R-33-E

Revised Permit Information 11/22/17:

Well Name: Thor 21 No. 709H

Location:

SL: 175' FSL & 439' FEL, Section 21, T-26-S, R-33-E, Lea Co., N.M.

BHL: 230' FNL & 660' FEL, Section 21, T-26-S, R-33-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 800'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,900'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0 – 11,200'	7.625"	29.7#	HCP110	FXL	1.125	1.25	1.60
6.75"	0'-17,850'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
800'	600	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂ (TOC @ Surface)
	300	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
4,900'	900	12.7	2.22	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	225	14.8	1.32	Tail: Class C + 0.13% C-20
11,200'	375	10.8	3.67	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,400')
	400	14.8	2.38	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
17,850'	800	14.8	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,700')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 800'	Fresh - Gel	8.6-8.8	28-34	N/c
800' – 4,900'	Brine	10.0-10.2	28-34	N/c
4,900' – 11,200'	Oil Base	8.7-9.4	58-68	N/c - 6
11,200' – 17,850' Lateral	Oil Base	10.0-11.5	58-68	3 - 6



Lea County, NM (NAD 83 NME)

Thor 21 #709H

Plan #0.2

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: #709H

KB = 25' @ 3278.0usft
Northing 372646.00 Easting 777866.00 Latitude 32° 1' 19.875 N Longitude 103° 34' 12.486 W

SECTION DETAILS

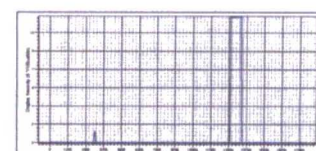
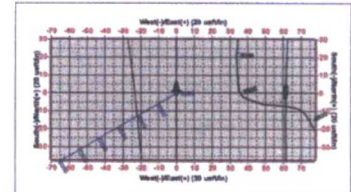
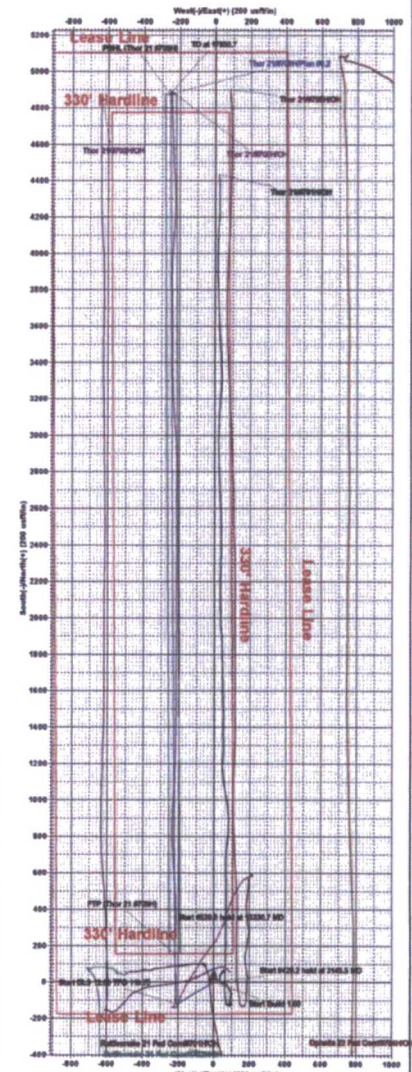
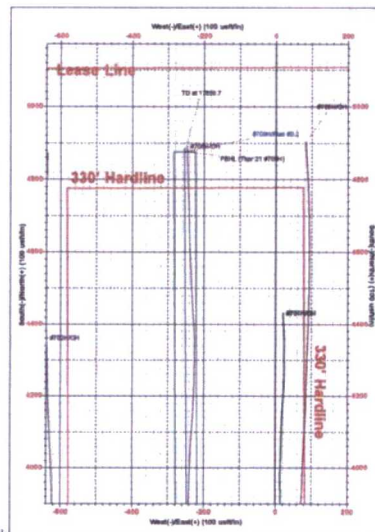
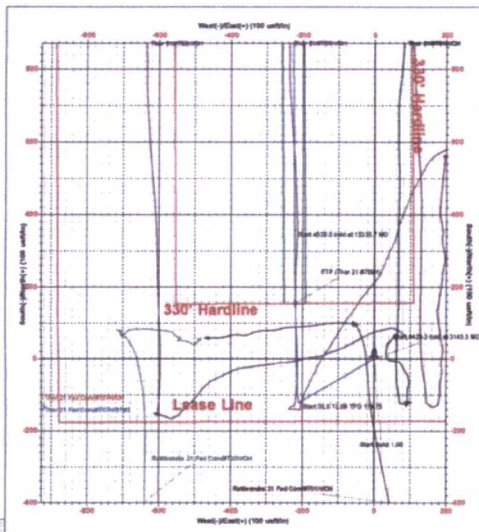
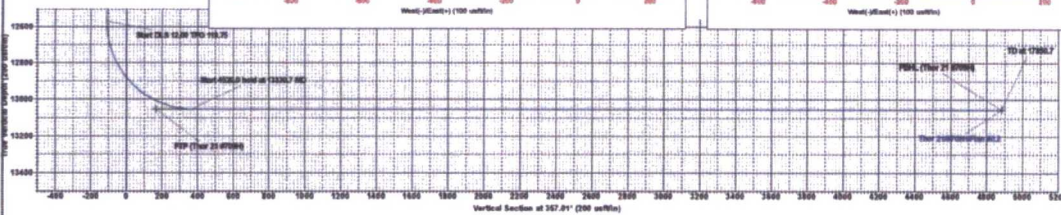
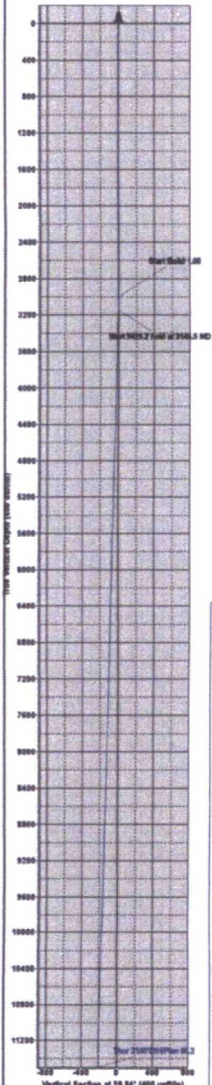
Sec	MD	Inc	Asl	TVD	+N-S	+E-W	Diag	TFace	VFace	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0		
3	3148.5	1.45	239.84	3148.5	-0.9	-1.8	1.00	239.84	-0.9		
4	12574.7	1.45	239.84	12571.5	-121.2	-308.9	0.00	0.00	-118.2		
5	13330.7	90.00	309.59	13055.0	366.1	-222.7	12.00	119.75	367.3		
6	17890.7	90.00	309.59	13055.0	4876.0	-255.0	0.00	0.00	4882.7		

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
PBHL (Thor 21 #709H)	13055.0	4876.0	-255.0	377822.00	777811.00
FTP (Thor 21 #709H)	13055.0	185.0	-221.0	372801.00	777845.00





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Thor 21

#709H

OH

Plan: Plan #0.2

Standard Planning Report

02 January, 2018



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #709H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #709H
TVD Reference: KB = 25' @ 3278.0usft
MD Reference: KB = 25' @ 3278.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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: Thor 21
Site Position: Northing: 372,646.00 usft Latitude: 32° 1' 19.875 N
From: Map Easting: 777,866.00 usft Longitude: 103° 34' 12.486 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.40 °

Well: #709H
Well Position: +N/-S 0.0 usft Northing: 372,646.00 usft Latitude: 32° 1' 19.875 N
+E/-W 0.0 usft Easting: 777,866.00 usft Longitude: 103° 34' 12.486 W
Position Uncertainty: 0.0 usft Wellhead Elevation: Ground Level: 3,253.0 usft

Wellbore: OH
Magnetics: Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)
 IGRF2015 7/17/2017 6.93 59.88 47,811.00403003

Design: Plan #0.2
Audit Notes:
Version: Phase: PLAN Tie On Depth: 0.0
Vertical Section: Depth From (TVD) (usft) +N/-S (usft) +E/-W (usft) Direction (°)
 0.0 0.0 0.0 357.01

Plan Survey Tool Program Date 12/28/2017

Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	17,850.7 Plan #0.2 (OH)	MWD	
			MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,145.5	1.45	239.84	3,145.5	-0.9	-1.6	1.00	1.00	0.00	239.84	
12,574.7	1.45	239.84	12,571.6	-121.2	-208.6	0.00	0.00	0.00	0.00	
13,330.7	90.00	359.59	13,055.0	356.1	-222.7	12.00	11.71	15.84	119.75	
17,850.7	90.00	359.59	13,055.0	4,876.0	-255.0	0.00	0.00	0.00	0.00	PBHL (Thor 21 #709H)



Planning Report

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Thor 21
Well: #709H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference:
TVD Reference: KB = 25' @ 3278.0usft
MD Reference: KB = 25' @ 3278.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	1.00	239.84	3,100.0	-0.4	-0.8	-0.4	1.00	1.00	0.00
3,145.5	1.45	239.84	3,145.5	-0.9	-1.6	-0.8	1.00	1.00	0.00
3,200.0	1.45	239.84	3,200.0	-1.6	-2.8	-1.5	0.00	0.00	0.00
3,300.0	1.45	239.84	3,299.9	-2.9	-5.0	-2.6	0.00	0.00	0.00
3,400.0	1.45	239.84	3,399.9	-4.2	-7.2	-3.8	0.00	0.00	0.00
3,500.0	1.45	239.84	3,499.9	-5.5	-9.4	-5.0	0.00	0.00	0.00
3,600.0	1.45	239.84	3,599.8	-6.7	-11.6	-6.1	0.00	0.00	0.00
3,700.0	1.45	239.84	3,699.8	-8.0	-13.8	-7.3	0.00	0.00	0.00
3,800.0	1.45	239.84	3,799.8	-9.3	-16.0	-8.4	0.00	0.00	0.00
3,900.0	1.45	239.84	3,899.7	-10.6	-18.2	-9.6	0.00	0.00	0.00
4,000.0	1.45	239.84	3,999.7	-11.8	-20.4	-10.8	0.00	0.00	0.00
4,100.0	1.45	239.84	4,099.7	-13.1	-22.5	-11.9	0.00	0.00	0.00
4,200.0	1.45	239.84	4,199.6	-14.4	-24.7	-13.1	0.00	0.00	0.00
4,300.0	1.45	239.84	4,299.6	-15.7	-26.9	-14.2	0.00	0.00	0.00
4,400.0	1.45	239.84	4,399.6	-16.9	-29.1	-15.4	0.00	0.00	0.00
4,500.0	1.45	239.84	4,499.5	-18.2	-31.3	-16.5	0.00	0.00	0.00
4,600.0	1.45	239.84	4,599.5	-19.5	-33.5	-17.7	0.00	0.00	0.00
4,700.0	1.45	239.84	4,699.5	-20.8	-35.7	-18.9	0.00	0.00	0.00
4,800.0	1.45	239.84	4,799.5	-22.0	-37.9	-20.0	0.00	0.00	0.00
4,900.0	1.45	239.84	4,899.4	-23.3	-40.1	-21.2	0.00	0.00	0.00
5,000.0	1.45	239.84	4,999.4	-24.6	-42.3	-22.3	0.00	0.00	0.00
5,100.0	1.45	239.84	5,099.4	-25.9	-44.5	-23.5	0.00	0.00	0.00
5,200.0	1.45	239.84	5,199.3	-27.1	-46.7	-24.7	0.00	0.00	0.00



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North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	1.45	239.84	5,299.3	-28.4	-48.9	-25.8	0.00	0.00	0.00
5,400.0	1.45	239.84	5,399.3	-29.7	-51.1	-27.0	0.00	0.00	0.00
5,500.0	1.45	239.84	5,499.2	-31.0	-53.3	-28.1	0.00	0.00	0.00
5,600.0	1.45	239.84	5,599.2	-32.2	-55.5	-29.3	0.00	0.00	0.00
5,700.0	1.45	239.84	5,699.2	-33.5	-57.7	-30.5	0.00	0.00	0.00
5,800.0	1.45	239.84	5,799.1	-34.8	-59.9	-31.6	0.00	0.00	0.00
5,900.0	1.45	239.84	5,899.1	-36.1	-62.1	-32.8	0.00	0.00	0.00
6,000.0	1.45	239.84	5,999.1	-37.3	-64.3	-33.9	0.00	0.00	0.00
6,100.0	1.45	239.84	6,099.0	-38.6	-66.5	-35.1	0.00	0.00	0.00
6,200.0	1.45	239.84	6,199.0	-39.9	-68.6	-36.3	0.00	0.00	0.00
6,300.0	1.45	239.84	6,299.0	-41.2	-70.8	-37.4	0.00	0.00	0.00
6,400.0	1.45	239.84	6,398.9	-42.4	-73.0	-38.6	0.00	0.00	0.00
6,500.0	1.45	239.84	6,498.9	-43.7	-75.2	-39.7	0.00	0.00	0.00
6,600.0	1.45	239.84	6,598.9	-45.0	-77.4	-40.9	0.00	0.00	0.00
6,700.0	1.45	239.84	6,698.8	-46.3	-79.6	-42.1	0.00	0.00	0.00
6,800.0	1.45	239.84	6,798.8	-47.6	-81.8	-43.2	0.00	0.00	0.00
6,900.0	1.45	239.84	6,898.8	-48.8	-84.0	-44.4	0.00	0.00	0.00
7,000.0	1.45	239.84	6,998.7	-50.1	-86.2	-45.5	0.00	0.00	0.00
7,100.0	1.45	239.84	7,098.7	-51.4	-88.4	-46.7	0.00	0.00	0.00
7,200.0	1.45	239.84	7,198.7	-52.7	-90.6	-47.9	0.00	0.00	0.00
7,300.0	1.45	239.84	7,298.6	-53.9	-92.8	-49.0	0.00	0.00	0.00
7,400.0	1.45	239.84	7,398.6	-55.2	-95.0	-50.2	0.00	0.00	0.00
7,500.0	1.45	239.84	7,498.6	-56.5	-97.2	-51.3	0.00	0.00	0.00
7,600.0	1.45	239.84	7,598.5	-57.8	-99.4	-52.5	0.00	0.00	0.00
7,700.0	1.45	239.84	7,698.5	-59.0	-101.6	-53.6	0.00	0.00	0.00
7,800.0	1.45	239.84	7,798.5	-60.3	-103.8	-54.8	0.00	0.00	0.00
7,900.0	1.45	239.84	7,898.5	-61.6	-106.0	-56.0	0.00	0.00	0.00
8,000.0	1.45	239.84	7,998.4	-62.9	-108.2	-57.1	0.00	0.00	0.00
8,100.0	1.45	239.84	8,098.4	-64.1	-110.4	-58.3	0.00	0.00	0.00
8,200.0	1.45	239.84	8,198.4	-65.4	-112.6	-59.4	0.00	0.00	0.00
8,300.0	1.45	239.84	8,298.3	-66.7	-114.7	-60.6	0.00	0.00	0.00
8,400.0	1.45	239.84	8,398.3	-68.0	-116.9	-61.8	0.00	0.00	0.00
8,500.0	1.45	239.84	8,498.3	-69.2	-119.1	-62.9	0.00	0.00	0.00
8,600.0	1.45	239.84	8,598.2	-70.5	-121.3	-64.1	0.00	0.00	0.00
8,700.0	1.45	239.84	8,698.2	-71.8	-123.5	-65.2	0.00	0.00	0.00
8,800.0	1.45	239.84	8,798.2	-73.1	-125.7	-66.4	0.00	0.00	0.00
8,900.0	1.45	239.84	8,898.1	-74.3	-127.9	-67.6	0.00	0.00	0.00
9,000.0	1.45	239.84	8,998.1	-75.6	-130.1	-68.7	0.00	0.00	0.00
9,100.0	1.45	239.84	9,098.1	-76.9	-132.3	-69.9	0.00	0.00	0.00
9,200.0	1.45	239.84	9,198.0	-78.2	-134.5	-71.0	0.00	0.00	0.00
9,300.0	1.45	239.84	9,298.0	-79.4	-136.7	-72.2	0.00	0.00	0.00
9,400.0	1.45	239.84	9,398.0	-80.7	-138.9	-73.4	0.00	0.00	0.00
9,500.0	1.45	239.84	9,497.9	-82.0	-141.1	-74.5	0.00	0.00	0.00
9,600.0	1.45	239.84	9,597.9	-83.3	-143.3	-75.7	0.00	0.00	0.00
9,700.0	1.45	239.84	9,697.9	-84.5	-145.5	-76.8	0.00	0.00	0.00
9,800.0	1.45	239.84	9,797.8	-85.8	-147.7	-78.0	0.00	0.00	0.00
9,900.0	1.45	239.84	9,897.8	-87.1	-149.9	-79.2	0.00	0.00	0.00
10,000.0	1.45	239.84	9,997.8	-88.4	-152.1	-80.3	0.00	0.00	0.00
10,100.0	1.45	239.84	10,097.7	-89.7	-154.3	-81.5	0.00	0.00	0.00
10,200.0	1.45	239.84	10,197.7	-90.9	-156.5	-82.6	0.00	0.00	0.00
10,300.0	1.45	239.84	10,297.7	-92.2	-158.6	-83.8	0.00	0.00	0.00
10,400.0	1.45	239.84	10,397.6	-93.5	-160.8	-85.0	0.00	0.00	0.00
10,500.0	1.45	239.84	10,497.6	-94.8	-163.0	-86.1	0.00	0.00	0.00
10,600.0	1.45	239.84	10,597.6	-96.0	-165.2	-87.3	0.00	0.00	0.00



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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.0	1.45	239.84	10,697.5	-97.3	-167.4	-88.4	0.00	0.00	0.00
10,800.0	1.45	239.84	10,797.5	-98.6	-169.6	-89.6	0.00	0.00	0.00
10,900.0	1.45	239.84	10,897.5	-99.9	-171.8	-90.7	0.00	0.00	0.00
11,000.0	1.45	239.84	10,997.5	-101.1	-174.0	-91.9	0.00	0.00	0.00
11,100.0	1.45	239.84	11,097.4	-102.4	-176.2	-93.1	0.00	0.00	0.00
11,200.0	1.45	239.84	11,197.4	-103.7	-178.4	-94.2	0.00	0.00	0.00
11,300.0	1.45	239.84	11,297.4	-105.0	-180.6	-95.4	0.00	0.00	0.00
11,400.0	1.45	239.84	11,397.3	-106.2	-182.8	-96.5	0.00	0.00	0.00
11,500.0	1.45	239.84	11,497.3	-107.5	-185.0	-97.7	0.00	0.00	0.00
11,600.0	1.45	239.84	11,597.3	-108.8	-187.2	-98.9	0.00	0.00	0.00
11,700.0	1.45	239.84	11,697.2	-110.1	-189.4	-100.0	0.00	0.00	0.00
11,800.0	1.45	239.84	11,797.2	-111.3	-191.6	-101.2	0.00	0.00	0.00
11,900.0	1.45	239.84	11,897.2	-112.6	-193.8	-102.3	0.00	0.00	0.00
12,000.0	1.45	239.84	11,997.1	-113.9	-196.0	-103.5	0.00	0.00	0.00
12,100.0	1.45	239.84	12,097.1	-115.2	-198.2	-104.7	0.00	0.00	0.00
12,200.0	1.45	239.84	12,197.1	-116.4	-200.4	-105.8	0.00	0.00	0.00
12,300.0	1.45	239.84	12,297.0	-117.7	-202.6	-107.0	0.00	0.00	0.00
12,400.0	1.45	239.84	12,397.0	-119.0	-204.7	-108.1	0.00	0.00	0.00
12,500.0	1.45	239.84	12,497.0	-120.3	-206.9	-109.3	0.00	0.00	0.00
12,574.7	1.45	239.84	12,571.6	-121.2	-208.6	-110.2	0.00	0.00	0.00
12,600.0	2.64	330.99	12,596.9	-120.9	-209.1	-109.8	12.00	4.67	360.16
12,625.0	5.46	346.26	12,621.9	-119.2	-209.7	-108.1	12.00	11.30	61.09
12,650.0	8.41	351.01	12,646.7	-116.3	-210.3	-105.1	12.00	11.79	19.01
12,675.0	11.38	353.30	12,671.3	-112.0	-210.8	-100.8	12.00	11.90	9.16
12,700.0	14.37	354.65	12,695.7	-106.5	-211.4	-95.3	12.00	11.94	5.40
12,725.0	17.36	355.55	12,719.7	-99.6	-212.0	-88.4	12.00	11.96	3.57
12,750.0	20.35	356.18	12,743.4	-91.6	-212.6	-80.4	12.00	11.97	2.55
12,775.0	23.35	356.66	12,766.6	-82.3	-213.2	-71.1	12.00	11.98	1.92
12,800.0	26.34	357.04	12,789.3	-71.8	-213.7	-60.6	12.00	11.98	1.50
12,825.0	29.34	357.34	12,811.4	-60.2	-214.3	-48.9	12.00	11.99	1.22
12,850.0	32.34	357.59	12,832.8	-47.4	-214.9	-36.1	12.00	11.99	1.01
12,875.0	35.33	357.81	12,853.6	-33.4	-215.4	-22.2	12.00	11.99	0.85
12,900.0	38.33	357.99	12,873.6	-18.5	-216.0	-7.2	12.00	11.99	0.74
12,925.0	41.33	358.15	12,892.8	-2.5	-216.5	8.8	12.00	11.99	0.65
12,950.0	44.33	358.30	12,911.1	14.5	-217.0	25.8	12.00	11.99	0.57
12,975.0	47.33	358.43	12,928.5	32.4	-217.6	43.8	12.00	11.99	0.51
13,000.0	50.33	358.54	12,945.0	51.2	-218.0	62.6	12.00	11.99	0.47
13,025.0	53.33	358.65	12,960.5	70.9	-218.5	82.2	12.00	12.00	0.43
13,050.0	56.32	358.75	12,974.9	91.3	-219.0	102.6	12.00	12.00	0.40
13,075.0	59.32	358.84	12,988.2	112.5	-219.4	123.8	12.00	12.00	0.37
13,100.0	62.32	358.93	13,000.4	134.3	-219.9	145.6	12.00	12.00	0.35
13,125.0	65.32	359.01	13,011.4	156.7	-220.3	168.0	12.00	12.00	0.33
13,150.0	68.32	359.09	13,021.2	179.7	-220.6	191.0	12.00	12.00	0.31
13,175.0	71.32	359.16	13,029.8	203.2	-221.0	214.4	12.00	12.00	0.30
13,200.0	74.32	359.24	13,037.2	227.0	-221.3	238.3	12.00	12.00	0.29
13,225.0	77.32	359.31	13,043.3	251.3	-221.6	262.5	12.00	12.00	0.28
13,250.0	80.32	359.37	13,048.2	275.8	-221.9	287.0	12.00	12.00	0.27
13,275.0	83.32	359.44	13,051.8	300.5	-222.2	311.7	12.00	12.00	0.27
13,300.0	86.32	359.51	13,054.0	325.4	-222.4	336.6	12.00	12.00	0.27
13,325.0	89.32	359.57	13,055.0	350.4	-222.6	361.6	12.00	12.00	0.26
13,330.7	90.00	359.59	13,055.0	356.1	-222.7	367.3	12.00	12.00	0.26
13,400.0	90.00	359.59	13,055.0	425.4	-223.2	436.5	0.00	0.00	0.00
13,500.0	90.00	359.59	13,055.0	525.4	-223.9	536.4	0.00	0.00	0.00
13,600.0	90.00	359.59	13,055.0	625.4	-224.6	636.3	0.00	0.00	0.00



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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,700.0	90.00	359.59	13,055.0	725.4	-225.3	736.2	0.00	0.00	0.00
13,800.0	90.00	359.59	13,055.0	825.4	-226.0	836.1	0.00	0.00	0.00
13,900.0	90.00	359.59	13,055.0	925.4	-226.7	936.0	0.00	0.00	0.00
14,000.0	90.00	359.59	13,055.0	1,025.4	-227.4	1,035.9	0.00	0.00	0.00
14,100.0	90.00	359.59	13,055.0	1,125.4	-228.2	1,135.8	0.00	0.00	0.00
14,200.0	90.00	359.59	13,055.0	1,225.4	-228.9	1,235.7	0.00	0.00	0.00
14,300.0	90.00	359.59	13,055.0	1,325.4	-229.6	1,335.6	0.00	0.00	0.00
14,400.0	90.00	359.59	13,055.0	1,425.4	-230.3	1,435.5	0.00	0.00	0.00
14,500.0	90.00	359.59	13,055.0	1,525.4	-231.0	1,535.4	0.00	0.00	0.00
14,600.0	90.00	359.59	13,055.0	1,625.4	-231.7	1,635.3	0.00	0.00	0.00
14,700.0	90.00	359.59	13,055.0	1,725.4	-232.5	1,735.2	0.00	0.00	0.00
14,800.0	90.00	359.59	13,055.0	1,825.4	-233.2	1,835.1	0.00	0.00	0.00
14,900.0	90.00	359.59	13,055.0	1,925.4	-233.9	1,935.0	0.00	0.00	0.00
15,000.0	90.00	359.59	13,055.0	2,025.4	-234.6	2,034.9	0.00	0.00	0.00
15,100.0	90.00	359.59	13,055.0	2,125.4	-235.3	2,134.8	0.00	0.00	0.00
15,200.0	90.00	359.59	13,055.0	2,225.4	-236.0	2,234.6	0.00	0.00	0.00
15,300.0	90.00	359.59	13,055.0	2,325.4	-236.7	2,334.5	0.00	0.00	0.00
15,400.0	90.00	359.59	13,055.0	2,425.4	-237.5	2,434.4	0.00	0.00	0.00
15,500.0	90.00	359.59	13,055.0	2,525.4	-238.2	2,534.3	0.00	0.00	0.00
15,600.0	90.00	359.59	13,055.0	2,625.3	-238.9	2,634.2	0.00	0.00	0.00
15,700.0	90.00	359.59	13,055.0	2,725.3	-239.6	2,734.1	0.00	0.00	0.00
15,800.0	90.00	359.59	13,055.0	2,825.3	-240.3	2,834.0	0.00	0.00	0.00
15,900.0	90.00	359.59	13,055.0	2,925.3	-241.0	2,933.9	0.00	0.00	0.00
16,000.0	90.00	359.59	13,055.0	3,025.3	-241.8	3,033.8	0.00	0.00	0.00
16,100.0	90.00	359.59	13,055.0	3,125.3	-242.5	3,133.7	0.00	0.00	0.00
16,200.0	90.00	359.59	13,055.0	3,225.3	-243.2	3,233.6	0.00	0.00	0.00
16,300.0	90.00	359.59	13,055.0	3,325.3	-243.9	3,333.5	0.00	0.00	0.00
16,400.0	90.00	359.59	13,055.0	3,425.3	-244.6	3,433.4	0.00	0.00	0.00
16,500.0	90.00	359.59	13,055.0	3,525.3	-245.3	3,533.3	0.00	0.00	0.00
16,600.0	90.00	359.59	13,055.0	3,625.3	-246.1	3,633.2	0.00	0.00	0.00
16,700.0	90.00	359.59	13,055.0	3,725.3	-246.8	3,733.1	0.00	0.00	0.00
16,800.0	90.00	359.59	13,055.0	3,825.3	-247.5	3,833.0	0.00	0.00	0.00
16,900.0	90.00	359.59	13,055.0	3,925.3	-248.2	3,932.9	0.00	0.00	0.00
17,000.0	90.00	359.59	13,055.0	4,025.3	-248.9	4,032.8	0.00	0.00	0.00
17,100.0	90.00	359.59	13,055.0	4,125.3	-249.6	4,132.7	0.00	0.00	0.00
17,200.0	90.00	359.59	13,055.0	4,225.3	-250.3	4,232.6	0.00	0.00	0.00
17,300.0	90.00	359.59	13,055.0	4,325.3	-251.1	4,332.5	0.00	0.00	0.00
17,400.0	90.00	359.59	13,055.0	4,425.3	-251.8	4,432.4	0.00	0.00	0.00
17,500.0	90.00	359.59	13,055.0	4,525.3	-252.5	4,532.3	0.00	0.00	0.00
17,600.0	90.00	359.59	13,055.0	4,625.3	-253.2	4,632.2	0.00	0.00	0.00
17,700.0	90.00	359.59	13,055.0	4,725.3	-253.9	4,732.1	0.00	0.00	0.00
17,800.0	90.00	359.59	13,055.0	4,825.3	-254.6	4,832.0	0.00	0.00	0.00
17,850.7	90.00	359.59	13,055.0	4,876.0	-255.0	4,882.7	0.00	0.00	0.00



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Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
FTP (Thor 21 #709H)	0.00	0.01	13,055.0	155.0	-221.0	372,801.00	777,645.00	32° 1' 21.424 N	103° 34' 15.040 W
- plan misses target center by 40.6usft at 13140.6usft MD (13017.7 TVD, 171.0 N, -220.5 E)									
- Point									
PBHL (Thor 21 #709H)	90.00	359.59	13,055.0	4,876.0	-255.0	377,522.00	777,611.00	32° 2' 8.143 N	103° 34' 15.048 W
- plan hits target center									
- Rectangle (sides W60.0 H0.0 D4,722.0)									