

HOES3 OCD

AUG 23 2018

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Lea County, NM (NAD 83 NME)

Cobalt 32 State #704H

Plan #0.1



Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.33°
Magnetic Field
Strength: 47792.0nT
Dip Angle: 60.01°
Date: 8/21/2018
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.33°
To convert a Magnetic Direction to a True Direction, Add 6.78° East
To convert a True Direction to a Grid Direction, Subtract 0.45°

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: #704H

KB = 25 @ 3444.0usft 3419.0
Northing 429435.00 Easting 802450.00 Latitude 32° 10' 2.404 N Longitude 103° 29' 32.127 W

SECTION DETAILS

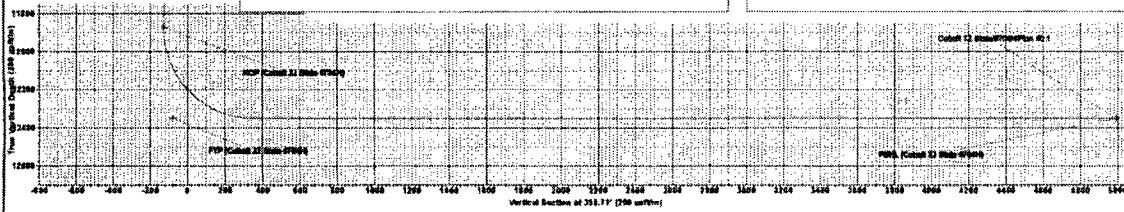
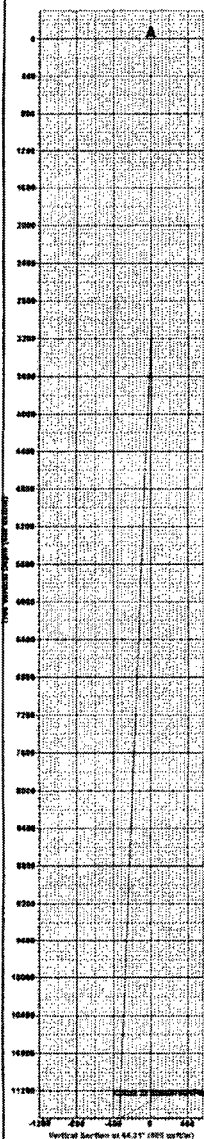
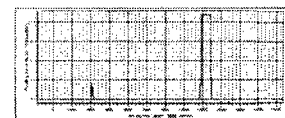
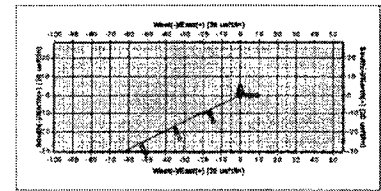
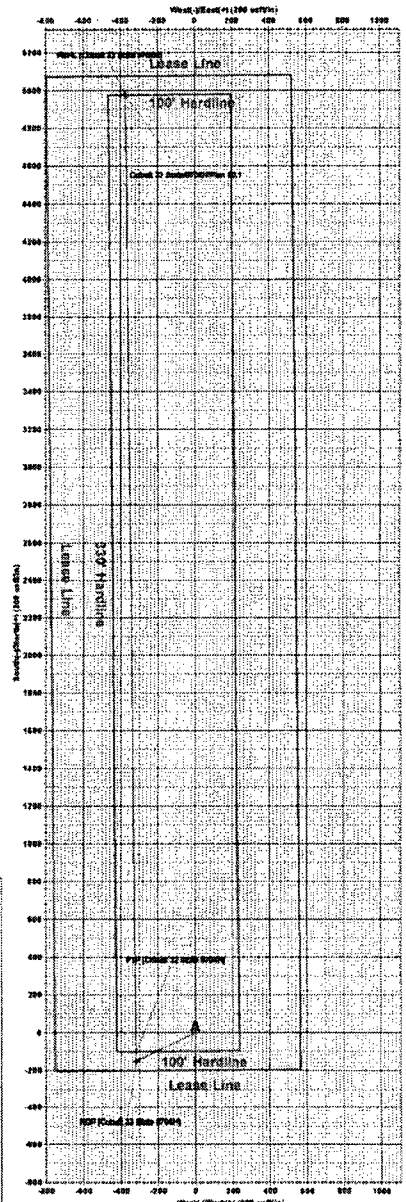
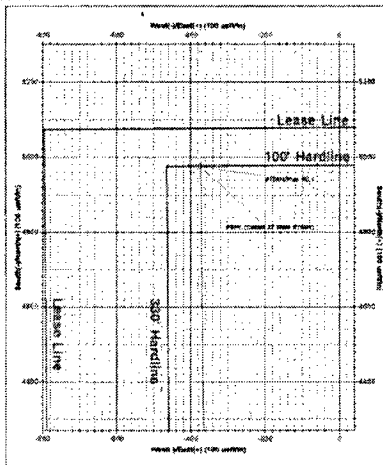
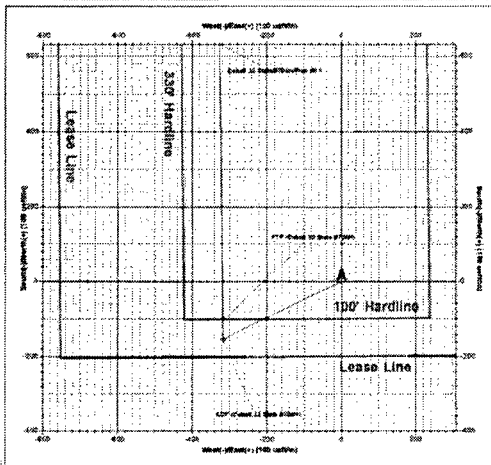
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dlog	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3115.4	2.31	244.31	3115.4	-1.0	-2.1	2.00	244.31	-0.8	
4	11764.2	2.31	244.31	11757.1	-152.0	-315.9	0.00	0.00	-128.0	
5	11679.6	0.00	0.00	11672.5	-153.0	-318.0	2.00	180.00	-128.8	KOP (Cobalt 32 State #704H)
6	12629.6	90.00	359.39	12350.0	324.4	-323.1	12.00	359.39	347.7	
7	17281.4	90.00	359.39	12350.0	4976.0	-373.0	0.00	0.00	4990.0	PBHL (Cobalt 32 State #704H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (Cobalt 32 State #704H)	11972.6	-153.0	-318.0	429442.00	802152.00
PTP (Cobalt 32 State #704H)	12350.0	103.0	-318.0	429512.00	802152.00
PBHL (Cobalt 32 State #704H)	12850.0	4976.0	-373.0	432611.00	802077.00





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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Cobalt 32 State

#704H

OH

Plan: Plan #0.1

Standard Planning Report

21 August, 2018

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Cobalt 32 State
Well: #704H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3444.0usft
MD Reference: KB = 25 @ 3444.0usft
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: Cobalt 32 State
Site Position:
From: Map
Position Uncertainty: 0.0 usft
Northing: 425,645.00 usft
Easting: 803,691.00 usft
Slot Radius: 13-3/16"
Latitude: 32° 10' 2.406 N
Longitude: 103° 29' 7.689 W
Grid Convergence: 0.45°

Well: #704H
Well Position:
+N/-S: -10.0 usft
+E/-W: -1,241.0 usft
Position Uncertainty: 0.0 usft
Wellhead Elevation:
Ground Level: 3,419.0 usft
Northing: 425,635.00 usft
Easting: 802,450.00 usft
Latitude: 32° 10' 2.404 N
Longitude: 103° 29' 22.127 W

Wellbore: OH
Magnetics:
Model Name: IGRF2015
Sample Date: 8/21/2018
Declination: 6.78
Dip Angle: 60.01
Field Strength: 47,791.97710477 nT

Design: Plan #0.1
Audit Notes:
Version:
Phase: PLAN
Tie On Depth: 0.0
Vertical Section:
Depth From (TVD) (usft): 0.0
+N/-S (usft): 0.0
+E/-W (usft): 0.0
Direction (°): 355.71

Plan Survey Tool Program Date: 8/21/2018

Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1 0.0	17,281.4	Plan #0.1 (OH)	MWD	
			OWSG 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	
3,115.4	2.31	244.31	3,115.4	-1.0	-2.1	2.00	2.00	0.00	244.31	
11,764.2	2.31	244.31	11,757.1	-152.0	-315.9	0.00	0.00	0.00	0.00	
11,879.6	0.00	0.00	11,872.5	-153.0	-318.0	2.00	-2.00	0.00	180.00	KOP (Cobalt 32 State)
12,629.6	90.00	359.39	12,350.0	324.4	-323.1	12.00	12.00	-0.08	359.39	
17,281.4	90.00	359.39	12,350.0	4,976.0	-373.0	0.00	0.00	0.00	0.00	PBHL (Cobalt 32 Stat)



Planning Report

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 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Cobalt 32 State
 Well: #704H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25 @ 3444.0usft
 MD Reference: KB = 25 @ 3444.0usft
 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	2.00	244.31	3,100.0	-0.8	-1.6	-0.6	2.00	2.00	0.00
3,115.4	2.31	244.31	3,115.4	-1.0	-2.1	-0.8	2.00	2.00	0.00
3,200.0	2.31	244.31	3,199.9	-2.5	-5.2	-2.1	0.00	0.00	0.00
3,300.0	2.31	244.31	3,299.8	-4.2	-8.8	-3.6	0.00	0.00	0.00
3,400.0	2.31	244.31	3,399.7	-6.0	-12.4	-5.0	0.00	0.00	0.00
3,500.0	2.31	244.31	3,499.7	-7.7	-16.0	-6.5	0.00	0.00	0.00
3,600.0	2.31	244.31	3,599.6	-9.5	-19.7	-8.0	0.00	0.00	0.00
3,700.0	2.31	244.31	3,699.5	-11.2	-23.3	-9.4	0.00	0.00	0.00
3,800.0	2.31	244.31	3,799.4	-13.0	-26.9	-10.9	0.00	0.00	0.00
3,900.0	2.31	244.31	3,899.3	-14.7	-30.6	-12.4	0.00	0.00	0.00
4,000.0	2.31	244.31	3,999.3	-16.5	-34.2	-13.8	0.00	0.00	0.00
4,100.0	2.31	244.31	4,099.2	-18.2	-37.8	-15.3	0.00	0.00	0.00
4,200.0	2.31	244.31	4,199.1	-19.9	-41.4	-16.8	0.00	0.00	0.00
4,300.0	2.31	244.31	4,299.0	-21.7	-45.1	-18.3	0.00	0.00	0.00
4,400.0	2.31	244.31	4,398.9	-23.4	-48.7	-19.7	0.00	0.00	0.00
4,500.0	2.31	244.31	4,498.8	-25.2	-52.3	-21.2	0.00	0.00	0.00
4,600.0	2.31	244.31	4,598.8	-26.9	-56.0	-22.7	0.00	0.00	0.00
4,700.0	2.31	244.31	4,698.7	-28.7	-59.6	-24.1	0.00	0.00	0.00
4,800.0	2.31	244.31	4,798.6	-30.4	-63.2	-25.6	0.00	0.00	0.00
4,900.0	2.31	244.31	4,898.5	-32.2	-66.8	-27.1	0.00	0.00	0.00
5,000.0	2.31	244.31	4,998.4	-33.9	-70.5	-28.5	0.00	0.00	0.00
5,100.0	2.31	244.31	5,098.4	-35.7	-74.1	-30.0	0.00	0.00	0.00
5,200.0	2.31	244.31	5,198.3	-37.4	-77.7	-31.5	0.00	0.00	0.00

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Cobalt 32 State
Well: #704H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3444.0usft
MD Reference: KB = 25 @ 3444.0usft
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)
5,300.0	2.31	244.31	5,298.2	-39.1	-81.4	-33.0	0.00	0.00	0.00
5,400.0	2.31	244.31	5,398.1	-40.9	-85.0	-34.4	0.00	0.00	0.00
5,500.0	2.31	244.31	5,498.0	-42.6	-88.6	-35.9	0.00	0.00	0.00
5,600.0	2.31	244.31	5,598.0	-44.4	-92.2	-37.4	0.00	0.00	0.00
5,700.0	2.31	244.31	5,697.9	-46.1	-95.9	-38.8	0.00	0.00	0.00
5,800.0	2.31	244.31	5,797.8	-47.9	-99.5	-40.3	0.00	0.00	0.00
5,900.0	2.31	244.31	5,897.7	-49.6	-103.1	-41.8	0.00	0.00	0.00
6,000.0	2.31	244.31	5,997.6	-51.4	-106.8	-43.2	0.00	0.00	0.00
6,100.0	2.31	244.31	6,097.5	-53.1	-110.4	-44.7	0.00	0.00	0.00
6,200.0	2.31	244.31	6,197.5	-54.9	-114.0	-46.2	0.00	0.00	0.00
6,300.0	2.31	244.31	6,297.4	-56.6	-117.6	-47.7	0.00	0.00	0.00
6,400.0	2.31	244.31	6,397.3	-58.3	-121.3	-49.1	0.00	0.00	0.00
6,500.0	2.31	244.31	6,497.2	-60.1	-124.9	-50.6	0.00	0.00	0.00
6,600.0	2.31	244.31	6,597.1	-61.8	-128.5	-52.1	0.00	0.00	0.00
6,700.0	2.31	244.31	6,697.1	-63.6	-132.2	-53.5	0.00	0.00	0.00
6,800.0	2.31	244.31	6,797.0	-65.3	-135.8	-55.0	0.00	0.00	0.00
6,900.0	2.31	244.31	6,896.9	-67.1	-139.4	-56.5	0.00	0.00	0.00
7,000.0	2.31	244.31	6,996.8	-68.8	-143.0	-57.9	0.00	0.00	0.00
7,100.0	2.31	244.31	7,096.7	-70.6	-146.7	-59.4	0.00	0.00	0.00
7,200.0	2.31	244.31	7,196.7	-72.3	-150.3	-60.9	0.00	0.00	0.00
7,300.0	2.31	244.31	7,296.6	-74.1	-153.9	-62.3	0.00	0.00	0.00
7,400.0	2.31	244.31	7,396.5	-75.8	-157.6	-63.8	0.00	0.00	0.00
7,500.0	2.31	244.31	7,496.4	-77.6	-161.2	-65.3	0.00	0.00	0.00
7,600.0	2.31	244.31	7,596.3	-79.3	-164.8	-66.8	0.00	0.00	0.00
7,700.0	2.31	244.31	7,696.3	-81.0	-168.4	-68.2	0.00	0.00	0.00
7,800.0	2.31	244.31	7,796.2	-82.8	-172.1	-69.7	0.00	0.00	0.00
7,900.0	2.31	244.31	7,896.1	-84.5	-175.7	-71.2	0.00	0.00	0.00
8,000.0	2.31	244.31	7,996.0	-86.3	-179.3	-72.6	0.00	0.00	0.00
8,100.0	2.31	244.31	8,095.9	-88.0	-183.0	-74.1	0.00	0.00	0.00
8,200.0	2.31	244.31	8,195.8	-89.8	-186.6	-75.6	0.00	0.00	0.00
8,300.0	2.31	244.31	8,295.8	-91.5	-190.2	-77.0	0.00	0.00	0.00
8,400.0	2.31	244.31	8,395.7	-93.3	-193.8	-78.5	0.00	0.00	0.00
8,500.0	2.31	244.31	8,495.6	-95.0	-197.5	-80.0	0.00	0.00	0.00
8,600.0	2.31	244.31	8,595.5	-96.8	-201.1	-81.5	0.00	0.00	0.00
8,700.0	2.31	244.31	8,695.4	-98.5	-204.7	-82.9	0.00	0.00	0.00
8,800.0	2.31	244.31	8,795.4	-100.2	-208.4	-84.4	0.00	0.00	0.00
8,900.0	2.31	244.31	8,895.3	-102.0	-212.0	-85.9	0.00	0.00	0.00
9,000.0	2.31	244.31	8,995.2	-103.7	-215.6	-87.3	0.00	0.00	0.00
9,100.0	2.31	244.31	9,095.1	-105.5	-219.2	-88.8	0.00	0.00	0.00
9,200.0	2.31	244.31	9,195.0	-107.2	-222.9	-90.3	0.00	0.00	0.00
9,300.0	2.31	244.31	9,295.0	-109.0	-226.5	-91.7	0.00	0.00	0.00
9,400.0	2.31	244.31	9,394.9	-110.7	-230.1	-93.2	0.00	0.00	0.00
9,500.0	2.31	244.31	9,494.8	-112.5	-233.8	-94.7	0.00	0.00	0.00
9,600.0	2.31	244.31	9,594.7	-114.2	-237.4	-96.1	0.00	0.00	0.00
9,700.0	2.31	244.31	9,694.6	-116.0	-241.0	-97.6	0.00	0.00	0.00
9,800.0	2.31	244.31	9,794.5	-117.7	-244.6	-99.1	0.00	0.00	0.00
9,900.0	2.31	244.31	9,894.5	-119.4	-248.3	-100.6	0.00	0.00	0.00
10,000.0	2.31	244.31	9,994.4	-121.2	-251.9	-102.0	0.00	0.00	0.00
10,100.0	2.31	244.31	10,094.3	-122.9	-255.5	-103.5	0.00	0.00	0.00
10,200.0	2.31	244.31	10,194.2	-124.7	-259.2	-105.0	0.00	0.00	0.00
10,300.0	2.31	244.31	10,294.1	-126.4	-262.8	-106.4	0.00	0.00	0.00
10,400.0	2.31	244.31	10,394.1	-128.2	-266.4	-107.9	0.00	0.00	0.00
10,500.0	2.31	244.31	10,494.0	-129.9	-270.0	-109.4	0.00	0.00	0.00
10,600.0	2.31	244.31	10,593.9	-131.7	-273.7	-110.8	0.00	0.00	0.00

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Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3444.0usft
MD Reference: KB = 25 @ 3444.0usft
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)
10,700.0	2.31	244.31	10,693.8	-133.4	-277.3	-112.3	0.00	0.00	0.00
10,800.0	2.31	244.31	10,793.7	-135.2	-280.9	-113.8	0.00	0.00	0.00
10,900.0	2.31	244.31	10,893.7	-136.9	-284.6	-115.3	0.00	0.00	0.00
11,000.0	2.31	244.31	10,993.6	-138.7	-288.2	-116.7	0.00	0.00	0.00
11,100.0	2.31	244.31	11,093.5	-140.4	-291.8	-118.2	0.00	0.00	0.00
11,200.0	2.31	244.31	11,193.4	-142.1	-295.4	-119.7	0.00	0.00	0.00
11,300.0	2.31	244.31	11,293.3	-143.9	-299.1	-121.1	0.00	0.00	0.00
11,400.0	2.31	244.31	11,393.3	-145.6	-302.7	-122.6	0.00	0.00	0.00
11,500.0	2.31	244.31	11,493.2	-147.4	-306.3	-124.1	0.00	0.00	0.00
11,600.0	2.31	244.31	11,593.1	-149.1	-309.9	-125.5	0.00	0.00	0.00
11,700.0	2.31	244.31	11,693.0	-150.9	-313.6	-127.0	0.00	0.00	0.00
11,764.2	2.31	244.31	11,757.1	-152.0	-315.9	-128.0	0.00	0.00	0.00
11,800.0	1.59	244.31	11,792.9	-152.5	-317.0	-128.4	2.00	-2.00	0.00
11,879.6	0.00	0.00	11,872.5	-153.0	-318.0	-128.8	2.00	-2.00	0.00
KOP (Cobalt 32 State #704H)									
11,900.0	2.45	359.39	11,892.9	-152.6	-318.0	-128.4	12.00	12.00	0.00
11,925.0	5.45	359.39	11,917.9	-150.8	-318.0	-126.6	12.00	12.00	0.00
11,950.0	8.45	359.39	11,942.7	-147.8	-318.1	-123.6	12.00	12.00	0.00
11,975.0	11.45	359.39	11,967.3	-143.5	-318.1	-119.3	12.00	12.00	0.00
12,000.0	14.45	359.39	11,991.7	-137.9	-318.2	-113.7	12.00	12.00	0.00
12,025.0	17.45	359.39	12,015.7	-131.0	-318.2	-106.9	12.00	12.00	0.00
12,050.0	20.45	359.39	12,039.3	-122.9	-318.3	-98.8	12.00	12.00	0.00
12,075.0	23.45	359.39	12,062.5	-113.6	-318.4	-89.4	12.00	12.00	0.00
12,100.0	26.45	359.39	12,085.2	-103.0	-318.5	-78.9	12.00	12.00	0.00
12,125.0	29.45	359.39	12,107.3	-91.3	-318.7	-67.2	12.00	12.00	0.00
12,150.0	32.45	359.39	12,128.7	-78.4	-318.8	-54.4	12.00	12.00	0.00
12,175.0	35.45	359.39	12,149.4	-64.5	-318.9	-40.5	12.00	12.00	0.00
12,200.0	38.45	359.39	12,169.4	-49.5	-319.1	-25.5	12.00	12.00	0.00
12,225.0	41.45	359.39	12,188.6	-33.4	-319.3	-9.5	12.00	12.00	0.00
12,250.0	44.45	359.39	12,206.9	-16.4	-319.5	7.5	12.00	12.00	0.00
12,275.0	47.45	359.39	12,224.2	1.6	-319.7	25.5	12.00	12.00	0.00
12,278.7	47.90	359.39	12,226.7	4.3	-319.7	28.2	12.00	12.00	0.00
FTP (Cobalt 32 State #704H)									
12,300.0	50.45	359.39	12,240.7	20.4	-319.9	44.3	12.00	12.00	0.00
12,325.0	53.45	359.39	12,256.1	40.1	-320.1	63.9	12.00	12.00	0.00
12,350.0	56.45	359.39	12,270.4	60.6	-320.3	84.4	12.00	12.00	0.00
12,375.0	59.45	359.39	12,283.7	81.8	-320.5	105.5	12.00	12.00	0.00
12,400.0	62.45	359.39	12,295.8	103.6	-320.8	127.3	12.00	12.00	0.00
12,425.0	65.45	359.39	12,306.8	126.1	-321.0	149.7	12.00	12.00	0.00
12,450.0	68.45	359.39	12,316.6	149.1	-321.2	172.7	12.00	12.00	0.00
12,475.0	71.45	359.39	12,325.2	172.6	-321.5	196.1	12.00	12.00	0.00
12,500.0	74.45	359.39	12,332.5	196.5	-321.7	220.0	12.00	12.00	0.00
12,525.0	77.45	359.39	12,338.6	220.7	-322.0	244.2	12.00	12.00	0.00
12,550.0	80.45	359.39	12,343.3	245.2	-322.3	268.6	12.00	12.00	0.00
12,575.0	83.45	359.39	12,346.8	270.0	-322.5	293.3	12.00	12.00	0.00
12,600.0	86.45	359.39	12,349.0	294.9	-322.8	318.2	12.00	12.00	0.00
12,625.0	89.45	359.39	12,349.9	319.9	-323.1	343.1	12.00	12.00	0.00
12,629.6	90.00	359.39	12,350.0	324.4	-323.1	347.7	12.00	12.00	0.00
12,700.0	90.00	359.39	12,350.0	394.9	-323.9	418.0	0.00	0.00	0.00
12,800.0	90.00	359.39	12,350.0	494.9	-324.9	517.8	0.00	0.00	0.00
12,900.0	90.00	359.39	12,350.0	594.8	-326.0	617.6	0.00	0.00	0.00
13,000.0	90.00	359.39	12,350.0	694.8	-327.1	717.3	0.00	0.00	0.00
13,100.0	90.00	359.39	12,350.0	794.8	-328.2	817.1	0.00	0.00	0.00
13,200.0	90.00	359.39	12,350.0	894.8	-329.2	916.9	0.00	0.00	0.00

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Cobalt 32 State
Well: #704H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3444.0usft
MD Reference: KB = 25 @ 3444.0usft
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)
13,300.0	90.00	359.39	12,350.0	994.8	-330.3	1,016.7	0.00	0.00	0.00
13,400.0	90.00	359.39	12,350.0	1,094.8	-331.4	1,116.5	0.00	0.00	0.00
13,500.0	90.00	359.39	12,350.0	1,194.8	-332.5	1,216.3	0.00	0.00	0.00
13,600.0	90.00	359.39	12,350.0	1,294.8	-333.5	1,316.1	0.00	0.00	0.00
13,700.0	90.00	359.39	12,350.0	1,394.8	-334.6	1,415.9	0.00	0.00	0.00
13,800.0	90.00	359.39	12,350.0	1,494.8	-335.7	1,515.7	0.00	0.00	0.00
13,900.0	90.00	359.39	12,350.0	1,594.8	-336.7	1,615.5	0.00	0.00	0.00
14,000.0	90.00	359.39	12,350.0	1,694.8	-337.8	1,715.3	0.00	0.00	0.00
14,100.0	90.00	359.39	12,350.0	1,794.8	-338.9	1,815.1	0.00	0.00	0.00
14,200.0	90.00	359.39	12,350.0	1,894.8	-340.0	1,914.9	0.00	0.00	0.00
14,300.0	90.00	359.39	12,350.0	1,994.8	-341.0	2,014.7	0.00	0.00	0.00
14,400.0	90.00	359.39	12,350.0	2,094.8	-342.1	2,114.5	0.00	0.00	0.00
14,500.0	90.00	359.39	12,350.0	2,194.8	-343.2	2,214.3	0.00	0.00	0.00
14,600.0	90.00	359.39	12,350.0	2,294.7	-344.2	2,314.1	0.00	0.00	0.00
14,700.0	90.00	359.39	12,350.0	2,394.7	-345.3	2,413.9	0.00	0.00	0.00
14,800.0	90.00	359.39	12,350.0	2,494.7	-346.4	2,513.6	0.00	0.00	0.00
14,900.0	90.00	359.39	12,350.0	2,594.7	-347.5	2,613.4	0.00	0.00	0.00
15,000.0	90.00	359.39	12,350.0	2,694.7	-348.5	2,713.2	0.00	0.00	0.00
15,100.0	90.00	359.39	12,350.0	2,794.7	-349.6	2,813.0	0.00	0.00	0.00
15,200.0	90.00	359.39	12,350.0	2,894.7	-350.7	2,912.8	0.00	0.00	0.00
15,300.0	90.00	359.39	12,350.0	2,994.7	-351.8	3,012.6	0.00	0.00	0.00
15,400.0	90.00	359.39	12,350.0	3,094.7	-352.8	3,112.4	0.00	0.00	0.00
15,500.0	90.00	359.39	12,350.0	3,194.7	-353.9	3,212.2	0.00	0.00	0.00
15,600.0	90.00	359.39	12,350.0	3,294.7	-355.0	3,312.0	0.00	0.00	0.00
15,700.0	90.00	359.39	12,350.0	3,394.7	-356.0	3,411.8	0.00	0.00	0.00
15,800.0	90.00	359.39	12,350.0	3,494.7	-357.1	3,511.6	0.00	0.00	0.00
15,900.0	90.00	359.39	12,350.0	3,594.7	-358.2	3,611.4	0.00	0.00	0.00
16,000.0	90.00	359.39	12,350.0	3,694.7	-359.3	3,711.2	0.00	0.00	0.00
16,100.0	90.00	359.39	12,350.0	3,794.7	-360.3	3,811.0	0.00	0.00	0.00
16,200.0	90.00	359.39	12,350.0	3,894.7	-361.4	3,910.8	0.00	0.00	0.00
16,300.0	90.00	359.39	12,350.0	3,994.6	-362.5	4,010.6	0.00	0.00	0.00
16,400.0	90.00	359.39	12,350.0	4,094.6	-363.5	4,110.4	0.00	0.00	0.00
16,500.0	90.00	359.39	12,350.0	4,194.6	-364.6	4,210.2	0.00	0.00	0.00
16,600.0	90.00	359.39	12,350.0	4,294.6	-365.7	4,310.0	0.00	0.00	0.00
16,700.0	90.00	359.39	12,350.0	4,394.6	-366.8	4,409.7	0.00	0.00	0.00
16,800.0	90.00	359.39	12,350.0	4,494.6	-367.8	4,509.5	0.00	0.00	0.00
16,900.0	90.00	359.39	12,350.0	4,594.6	-368.9	4,609.3	0.00	0.00	0.00
17,000.0	90.00	359.39	12,350.0	4,694.6	-370.0	4,709.1	0.00	0.00	0.00
17,100.0	90.00	359.39	12,350.0	4,794.6	-371.1	4,808.9	0.00	0.00	0.00
17,200.0	90.00	359.39	12,350.0	4,894.6	-372.1	4,908.7	0.00	0.00	0.00
17,281.4	90.00	359.39	12,350.0	4,976.0	-373.0	4,990.0	0.00	0.00	0.00

PBHL (Cobalt 32 State #704H)



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #704H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3444.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3444.0usft
Site:	Cobalt 32 State	North Reference:	Grid
Well:	#704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
KOP (Cobalt 32 State #7 - plan hits target center - Point	0.00	0.00	11,872.5	-153.0	-318.0	425,482.00	802,132.00	32° 10' 0.915 N	103° 29' 25.840 W
FTP (Cobalt 32 State #7 - plan misses target center by 163.4usft at 12278.7usft MD (12226.7 TVD, 4.3 N, -319.7 E) - Point	0.00	0.00	12,350.0	-103.0	-318.0	425,532.00	802,132.00	32° 10' 1.409 N	103° 29' 25.835 W
PBHL (Cobalt 32 State # - plan hits target center - Point	0.00	0.00	12,350.0	4,976.0	-373.0	430,611.00	802,077.00	32° 10' 51.671 N	103° 29' 26.013 W