



Lea County, NM (NAD 27 NME)

Orrtanna 20 Fed #707H

Plan #0.1

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: #707H

Ground Level: 3241.0
KB = 25' @ 3266.0usft
Northing: 373167.00
Easting: 731368.00
Latitude: 32° 1' 25.511 N
Longitude: 103° 35' 12.440 W



Azimuths to Grid North
True North: -0.40°
Magnetic North: 6.60°
Magnetic Field
Strength: 47861.4nT
Dip Angle: 59.30°
Date: 1/16/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 0.80°
To convert a Magnetic Direction to a True Direction, Add 0.99° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

SECTION DETAILS

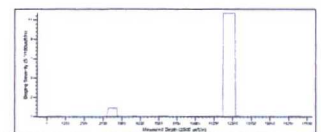
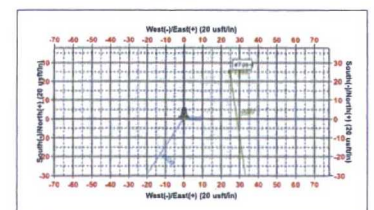
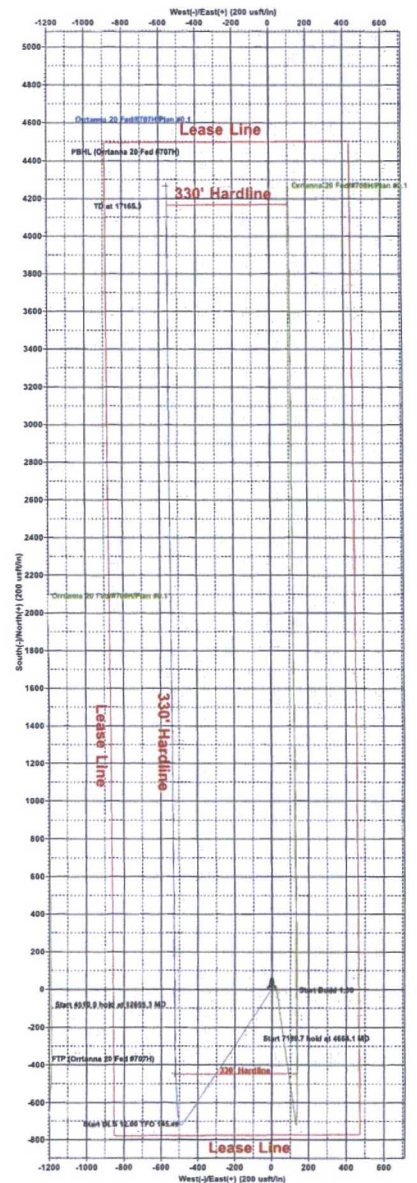
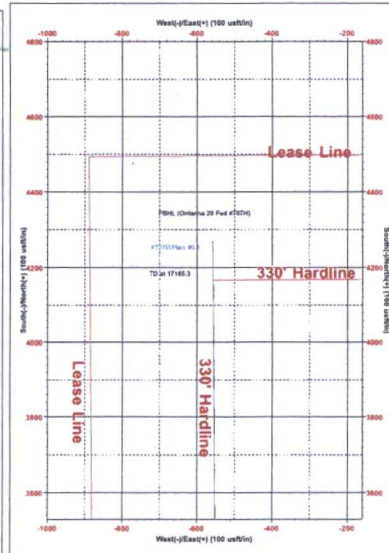
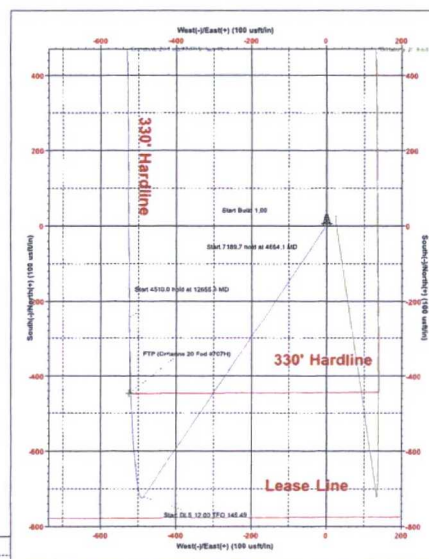
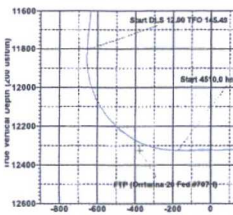
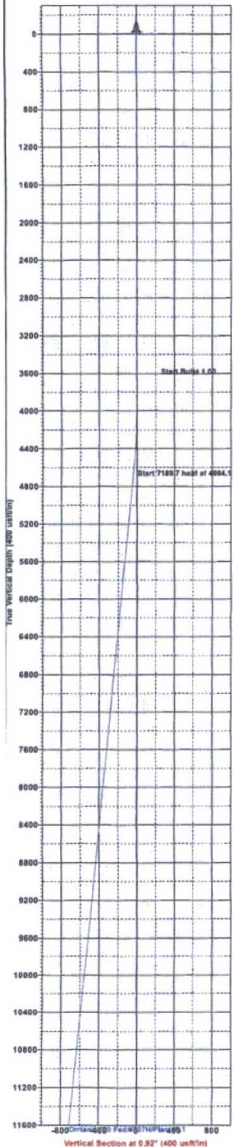
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	VSeet	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0		
3	4664.1	6.64	213.86	4662.6	-31.9	-21.4	1.00	213.86	-28.9		
4	11853.9	6.64	213.86	11854.1	-722.4	-484.8	0.00	0.00	-653.7		
5	12655.3	90.70	359.58	12326.0	-241.5	-522.9	12.00	145.49	-172.0		
6	17165.3	90.70	359.58	12270.9	4268.0	-556.0	0.00	0.00	4304.1	PBHL (Orrtanna 20 Fed #707H)	

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
PBHL (Orrtanna 20 Fed #707H)	12270.9	4268.0	-556.0	377435.00	730812.00
FTP (Orrtanna 20 Fed #707H)	12326.0	-446.0	-522.0	372721.00	730846.00



Lea County, NM (NAD 27 NME)
Orrtanna 20 Fed #707H
Plan #0.1
1/16/2017



HOBBS OCD

APR 17 2017

RECEIVED

EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Orrtanna 20 Fed

#707H

OH

Plan: Plan #0.1

Standard Survey Report

16 January, 2017



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Ortanna 20 Fed
Well: #707H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
TVD Reference: KB = 25' @ 3266.0usft
MD Reference: KB = 25' @ 3266.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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	Ortanna 20 Fed				
Site Position:		Northing:	372,591.00 usft	Latitude:	32° 1' 20.073 N
From:	Map	Easting:	727,501.00 usft	Longitude:	103° 35' 57.401 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#707H					
Well Position	+N/-S	0.0 usft	Northing:	373,167.00 usft	Latitude:	32° 1' 25.511 N
	+E/-W	0.0 usft	Easting:	731,368.00 usft	Longitude:	103° 35' 12.440 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,241.0 usft	

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

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/16/2017	6.99	59.88	47,861

Design	Plan #0.1			
--------	-----------	--	--	--

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	352.58

Survey Tool Program		Date	1/16/2017	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	17,165.3	Plan #0.1 (OH)	MWD	MWD - Standard

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



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Ortanna 20 Fed
Well: #707H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
TVD Reference: KB = 25' @ 3266.0usft
MD Reference: KB = 25' @ 3266.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
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	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	1.00	213.86	4,100.0	-0.7	-0.5	-0.7	1.00	1.00	0.00
4,200.0	2.00	213.86	4,200.0	-2.9	-1.9	-2.6	1.00	1.00	0.00
4,300.0	3.00	213.86	4,299.9	-6.5	-4.4	-5.9	1.00	1.00	0.00
4,400.0	4.00	213.86	4,399.7	-11.6	-7.8	-10.5	1.00	1.00	0.00
4,500.0	5.00	213.86	4,499.4	-18.1	-12.1	-16.4	1.00	1.00	0.00
4,600.0	6.00	213.86	4,598.9	-26.1	-17.5	-23.6	1.00	1.00	0.00
4,664.1	6.64	213.86	4,662.6	-31.9	-21.4	-28.9	1.00	1.00	0.00
4,700.0	6.64	213.86	4,698.3	-35.4	-23.7	-32.0	0.00	0.00	0.00
4,800.0	6.64	213.86	4,797.6	-45.0	-30.2	-40.7	0.00	0.00	0.00
4,900.0	6.64	213.86	4,896.9	-54.6	-36.6	-49.4	0.00	0.00	0.00
5,000.0	6.64	213.86	4,996.3	-64.2	-43.1	-58.1	0.00	0.00	0.00
5,100.0	6.64	213.86	5,095.6	-73.8	-49.5	-66.8	0.00	0.00	0.00
5,200.0	6.64	213.86	5,194.9	-83.4	-56.0	-75.5	0.00	0.00	0.00



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Ortanna 20 Fed
Well: #707H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
TVD Reference: KB = 25' @ 3266.0usft
MD Reference: KB = 25' @ 3266.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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	6.64	213.86	5,294.2	-93.0	-62.4	-84.1	0.00	0.00	0.00
5,400.0	6.64	213.86	5,393.6	-102.6	-68.8	-92.8	0.00	0.00	0.00
5,500.0	6.64	213.86	5,492.9	-112.2	-75.3	-101.5	0.00	0.00	0.00
5,600.0	6.64	213.86	5,592.2	-121.8	-81.7	-110.2	0.00	0.00	0.00
5,700.0	6.64	213.86	5,691.6	-131.4	-88.2	-118.9	0.00	0.00	0.00
5,800.0	6.64	213.86	5,790.9	-141.0	-94.6	-127.6	0.00	0.00	0.00
5,900.0	6.64	213.86	5,890.2	-150.6	-101.1	-136.3	0.00	0.00	0.00
6,000.0	6.64	213.86	5,989.5	-160.2	-107.5	-145.0	0.00	0.00	0.00
6,100.0	6.64	213.86	6,088.9	-169.8	-114.0	-153.7	0.00	0.00	0.00
6,200.0	6.64	213.86	6,188.2	-179.4	-120.4	-162.4	0.00	0.00	0.00
6,300.0	6.64	213.86	6,287.5	-189.0	-126.8	-171.1	0.00	0.00	0.00
6,400.0	6.64	213.86	6,386.9	-198.6	-133.3	-179.7	0.00	0.00	0.00
6,500.0	6.64	213.86	6,486.2	-208.2	-139.7	-188.4	0.00	0.00	0.00
6,600.0	6.64	213.86	6,585.5	-217.8	-146.2	-197.1	0.00	0.00	0.00
6,700.0	6.64	213.86	6,684.9	-227.4	-152.6	-205.8	0.00	0.00	0.00
6,800.0	6.64	213.86	6,784.2	-237.0	-159.1	-214.5	0.00	0.00	0.00
6,900.0	6.64	213.86	6,883.5	-246.6	-165.5	-223.2	0.00	0.00	0.00
7,000.0	6.64	213.86	6,982.8	-256.2	-172.0	-231.9	0.00	0.00	0.00
7,100.0	6.64	213.86	7,082.2	-265.8	-178.4	-240.6	0.00	0.00	0.00
7,200.0	6.64	213.86	7,181.5	-275.4	-184.8	-249.3	0.00	0.00	0.00
7,300.0	6.64	213.86	7,280.8	-285.1	-191.3	-258.0	0.00	0.00	0.00
7,400.0	6.64	213.86	7,380.2	-294.7	-197.7	-266.6	0.00	0.00	0.00
7,500.0	6.64	213.86	7,479.5	-304.3	-204.2	-275.3	0.00	0.00	0.00
7,600.0	6.64	213.86	7,578.8	-313.9	-210.6	-284.0	0.00	0.00	0.00
7,700.0	6.64	213.86	7,678.1	-323.5	-217.1	-292.7	0.00	0.00	0.00
7,800.0	6.64	213.86	7,777.5	-333.1	-223.5	-301.4	0.00	0.00	0.00
7,900.0	6.64	213.86	7,876.8	-342.7	-230.0	-310.1	0.00	0.00	0.00
8,000.0	6.64	213.86	7,976.1	-352.3	-236.4	-318.8	0.00	0.00	0.00
8,100.0	6.64	213.86	8,075.5	-361.9	-242.8	-327.5	0.00	0.00	0.00
8,200.0	6.64	213.86	8,174.8	-371.5	-249.3	-336.2	0.00	0.00	0.00
8,300.0	6.64	213.86	8,274.1	-381.1	-255.7	-344.9	0.00	0.00	0.00
8,400.0	6.64	213.86	8,373.4	-390.7	-262.2	-353.5	0.00	0.00	0.00
8,500.0	6.64	213.86	8,472.8	-400.3	-268.6	-362.2	0.00	0.00	0.00
8,600.0	6.64	213.86	8,572.1	-409.9	-275.1	-370.9	0.00	0.00	0.00
8,700.0	6.64	213.86	8,671.4	-419.5	-281.5	-379.6	0.00	0.00	0.00
8,800.0	6.64	213.86	8,770.8	-429.1	-288.0	-388.3	0.00	0.00	0.00
8,900.0	6.64	213.86	8,870.1	-438.7	-294.4	-397.0	0.00	0.00	0.00
9,000.0	6.64	213.86	8,969.4	-448.3	-300.8	-405.7	0.00	0.00	0.00
9,100.0	6.64	213.86	9,068.7	-457.9	-307.3	-414.4	0.00	0.00	0.00
9,200.0	6.64	213.86	9,168.1	-467.5	-313.7	-423.1	0.00	0.00	0.00
9,300.0	6.64	213.86	9,267.4	-477.1	-320.2	-431.8	0.00	0.00	0.00
9,400.0	6.64	213.86	9,366.7	-486.7	-326.6	-440.4	0.00	0.00	0.00
9,500.0	6.64	213.86	9,466.1	-496.3	-333.1	-449.1	0.00	0.00	0.00



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Orrtanna 20 Fed
Well: #707H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
TVD Reference: KB = 25' @ 3266.0usft
MD Reference: KB = 25' @ 3266.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
9,600.0	6.64	213.86	9,565.4	-505.9	-339.5	-457.8	0.00	0.00	0.00
9,700.0	6.64	213.86	9,664.7	-515.5	-346.0	-466.5	0.00	0.00	0.00
9,800.0	6.64	213.86	9,764.1	-525.1	-352.4	-475.2	0.00	0.00	0.00
9,900.0	6.64	213.86	9,863.4	-534.7	-358.8	-483.9	0.00	0.00	0.00
10,000.0	6.64	213.86	9,962.7	-544.3	-365.3	-492.6	0.00	0.00	0.00
10,100.0	6.64	213.86	10,062.0	-553.9	-371.7	-501.3	0.00	0.00	0.00
10,200.0	6.64	213.86	10,161.4	-563.5	-378.2	-510.0	0.00	0.00	0.00
10,300.0	6.64	213.86	10,260.7	-573.1	-384.6	-518.7	0.00	0.00	0.00
10,400.0	6.64	213.86	10,360.0	-582.8	-391.1	-527.4	0.00	0.00	0.00
10,500.0	6.64	213.86	10,459.4	-592.4	-397.5	-536.0	0.00	0.00	0.00
10,600.0	6.64	213.86	10,558.7	-602.0	-404.0	-544.7	0.00	0.00	0.00
10,700.0	6.64	213.86	10,658.0	-611.6	-410.4	-553.4	0.00	0.00	0.00
10,800.0	6.64	213.86	10,757.3	-621.2	-416.8	-562.1	0.00	0.00	0.00
10,900.0	6.64	213.86	10,856.7	-630.8	-423.3	-570.8	0.00	0.00	0.00
11,000.0	6.64	213.86	10,956.0	-640.4	-429.7	-579.5	0.00	0.00	0.00
11,100.0	6.64	213.86	11,055.3	-650.0	-436.2	-588.2	0.00	0.00	0.00
11,200.0	6.64	213.86	11,154.7	-659.6	-442.6	-596.9	0.00	0.00	0.00
11,300.0	6.64	213.86	11,254.0	-669.2	-449.1	-605.6	0.00	0.00	0.00
11,400.0	6.64	213.86	11,353.3	-678.8	-455.5	-614.3	0.00	0.00	0.00
11,500.0	6.64	213.86	11,452.6	-688.4	-462.0	-622.9	0.00	0.00	0.00
11,600.0	6.64	213.86	11,552.0	-698.0	-468.4	-631.6	0.00	0.00	0.00
11,700.0	6.64	213.86	11,651.3	-707.6	-474.8	-640.3	0.00	0.00	0.00
11,800.0	6.64	213.86	11,750.6	-717.2	-481.3	-649.0	0.00	0.00	0.00
11,853.8	6.64	213.86	11,804.1	-722.4	-484.8	-653.7	0.00	0.00	0.00
11,875.0	4.77	231.45	11,825.2	-723.9	-486.1	-655.1	12.00	-8.84	83.05
11,900.0	3.76	270.46	11,850.1	-724.6	-487.8	-655.5	12.00	-4.05	156.04
11,925.0	4.84	308.75	11,875.0	-723.9	-489.4	-654.6	12.00	4.35	153.16
11,950.0	7.13	327.86	11,899.9	-721.9	-491.1	-652.4	12.00	9.13	76.41
11,975.0	9.80	337.20	11,924.6	-718.7	-492.7	-649.0	12.00	10.70	37.37
12,000.0	12.62	342.49	11,949.1	-714.1	-494.4	-644.2	12.00	11.29	21.15
12,025.0	15.51	345.85	11,973.4	-708.2	-496.0	-638.2	12.00	11.55	13.45
12,050.0	18.43	348.17	11,997.3	-701.1	-497.6	-631.0	12.00	11.69	9.30
12,075.0	21.38	349.88	12,020.8	-692.8	-499.2	-622.5	12.00	11.77	6.82
12,100.0	24.34	351.19	12,043.8	-683.2	-500.8	-612.8	12.00	11.83	5.23
12,125.0	27.30	352.23	12,066.3	-672.4	-502.4	-601.9	12.00	11.86	4.16
12,150.0	30.27	353.08	12,088.3	-660.5	-503.9	-589.8	12.00	11.89	3.40
12,175.0	33.25	353.79	12,109.5	-647.4	-505.4	-576.7	12.00	11.91	2.84
12,200.0	36.23	354.39	12,130.0	-633.2	-506.9	-562.5	12.00	11.92	2.43
12,225.0	39.21	354.92	12,149.8	-618.0	-508.3	-547.2	12.00	11.93	2.10
12,250.0	42.20	355.38	12,168.8	-601.8	-509.7	-530.9	12.00	11.94	1.85
12,275.0	45.18	355.79	12,186.8	-584.6	-511.0	-513.6	12.00	11.95	1.65
12,300.0	48.17	356.16	12,204.0	-566.4	-512.3	-495.5	12.00	11.95	1.49
12,325.0	51.16	356.50	12,220.2	-547.4	-513.5	-476.5	12.00	11.96	1.35



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Orrtanna 20 Fed
 Well: #707H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
 TVD Reference: KB = 25' @ 3266.0usft
 MD Reference: KB = 25' @ 3266.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

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)
12,350.0	54.15	356.81	12,235.3	-527.6	-514.7	-456.7	12.00	11.96	1.24
12,375.0	57.14	357.10	12,249.4	-506.9	-515.8	-436.1	12.00	11.96	1.15
12,400.0	60.13	357.37	12,262.5	-485.6	-516.8	-414.8	12.00	11.96	1.08
12,425.0	63.12	357.63	12,274.3	-463.7	-517.7	-392.9	12.00	11.97	1.02
12,450.0	66.12	357.87	12,285.0	-441.1	-518.6	-370.4	12.00	11.97	0.96
12,461.2	67.45	357.97	12,289.5	-430.8	-519.0	-360.2	12.00	11.97	0.93
FTP (Orrtanna 20 Fed #707H)									
12,475.0	69.11	358.10	12,294.6	-418.0	-519.4	-347.4	12.00	11.97	0.91
12,500.0	72.10	358.32	12,302.9	-394.4	-520.2	-323.9	12.00	11.97	0.88
12,525.0	75.09	358.53	12,309.9	-370.5	-520.8	-300.1	12.00	11.97	0.85
12,550.0	78.09	358.74	12,315.7	-346.1	-521.4	-275.9	12.00	11.97	0.83
12,575.0	81.08	358.94	12,320.2	-321.6	-521.9	-251.4	12.00	11.97	0.81
12,600.0	84.07	359.14	12,323.5	-296.8	-522.3	-226.8	12.00	11.97	0.80
12,625.0	87.07	359.34	12,325.4	-271.9	-522.7	-202.1	12.00	11.97	0.79
12,650.0	90.06	359.54	12,326.0	-246.9	-522.9	-177.3	12.00	11.97	0.79
12,655.3	90.70	359.58	12,326.0	-241.5	-522.9	-172.0	12.00	11.97	0.79
12,700.0	90.70	359.58	12,325.5	-196.9	-523.3	-127.6	0.00	0.00	0.00
12,800.0	90.70	359.58	12,324.2	-96.9	-524.0	-28.4	0.00	0.00	0.00
12,900.0	90.70	359.58	12,323.0	3.1	-524.7	70.9	0.00	0.00	0.00
13,000.0	90.70	359.58	12,321.8	103.1	-525.5	170.1	0.00	0.00	0.00
13,100.0	90.70	359.58	12,320.6	203.1	-526.2	269.4	0.00	0.00	0.00
13,200.0	90.70	359.58	12,319.3	303.1	-526.9	368.6	0.00	0.00	0.00
13,300.0	90.70	359.58	12,318.1	403.1	-527.7	467.9	0.00	0.00	0.00
13,400.0	90.70	359.58	12,316.9	503.1	-528.4	567.1	0.00	0.00	0.00
13,500.0	90.70	359.58	12,315.7	603.0	-529.1	666.3	0.00	0.00	0.00
13,600.0	90.70	359.58	12,314.5	703.0	-529.9	765.6	0.00	0.00	0.00
13,700.0	90.70	359.58	12,313.2	803.0	-530.6	864.8	0.00	0.00	0.00
13,800.0	90.70	359.58	12,312.0	903.0	-531.3	964.1	0.00	0.00	0.00
13,900.0	90.70	359.58	12,310.8	1,003.0	-532.1	1,063.3	0.00	0.00	0.00
14,000.0	90.70	359.58	12,309.6	1,103.0	-532.8	1,162.6	0.00	0.00	0.00
14,100.0	90.70	359.58	12,308.3	1,203.0	-533.5	1,261.8	0.00	0.00	0.00
14,200.0	90.70	359.58	12,307.1	1,303.0	-534.3	1,361.1	0.00	0.00	0.00
14,300.0	90.70	359.58	12,305.9	1,403.0	-535.0	1,460.3	0.00	0.00	0.00
14,400.0	90.70	359.58	12,304.7	1,503.0	-535.7	1,559.6	0.00	0.00	0.00
14,500.0	90.70	359.58	12,303.5	1,602.9	-536.5	1,658.8	0.00	0.00	0.00
14,600.0	90.70	359.58	12,302.2	1,702.9	-537.2	1,758.1	0.00	0.00	0.00
14,700.0	90.70	359.58	12,301.0	1,802.9	-537.9	1,857.3	0.00	0.00	0.00
14,800.0	90.70	359.58	12,299.8	1,902.9	-538.7	1,956.6	0.00	0.00	0.00
14,900.0	90.70	359.58	12,298.6	2,002.9	-539.4	2,055.8	0.00	0.00	0.00
15,000.0	90.70	359.58	12,297.4	2,102.9	-540.1	2,155.0	0.00	0.00	0.00
15,100.0	90.70	359.58	12,296.1	2,202.9	-540.9	2,254.3	0.00	0.00	0.00
15,200.0	90.70	359.58	12,294.9	2,302.9	-541.6	2,353.5	0.00	0.00	0.00
15,300.0	90.70	359.58	12,293.7	2,402.9	-542.3	2,452.8	0.00	0.00	0.00
15,400.0	90.70	359.58	12,292.5	2,502.9	-543.1	2,552.0	0.00	0.00	0.00



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Orrtanna 20 Fed
Well: #707H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #707H
TVD Reference: KB = 25' @ 3266.0usft
MD Reference: KB = 25' @ 3266.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
15,500.0	90.70	359.58	12,291.2	2,602.8	-543.8	2,651.3	0.00	0.00	0.00
15,600.0	90.70	359.58	12,290.0	2,702.8	-544.5	2,750.5	0.00	0.00	0.00
15,700.0	90.70	359.58	12,288.8	2,802.8	-545.3	2,849.8	0.00	0.00	0.00
15,800.0	90.70	359.58	12,287.6	2,902.8	-546.0	2,949.0	0.00	0.00	0.00
15,900.0	90.70	359.58	12,286.4	3,002.8	-546.7	3,048.3	0.00	0.00	0.00
16,000.0	90.70	359.58	12,285.1	3,102.8	-547.5	3,147.5	0.00	0.00	0.00
16,100.0	90.70	359.58	12,283.9	3,202.8	-548.2	3,246.8	0.00	0.00	0.00
16,200.0	90.70	359.58	12,282.7	3,302.8	-548.9	3,346.0	0.00	0.00	0.00
16,300.0	90.70	359.58	12,281.5	3,402.8	-549.7	3,445.3	0.00	0.00	0.00
16,400.0	90.70	359.58	12,280.2	3,502.7	-550.4	3,544.5	0.00	0.00	0.00
16,500.0	90.70	359.58	12,279.0	3,602.7	-551.1	3,643.7	0.00	0.00	0.00
16,600.0	90.70	359.58	12,277.8	3,702.7	-551.9	3,743.0	0.00	0.00	0.00
16,700.0	90.70	359.58	12,276.6	3,802.7	-552.6	3,842.2	0.00	0.00	0.00
16,800.0	90.70	359.58	12,275.4	3,902.7	-553.3	3,941.5	0.00	0.00	0.00
16,900.0	90.70	359.58	12,274.1	4,002.7	-554.1	4,040.7	0.00	0.00	0.00
17,000.0	90.70	359.58	12,272.9	4,102.7	-554.8	4,140.0	0.00	0.00	0.00
17,100.0	90.70	359.58	12,271.7	4,202.7	-555.5	4,239.2	0.00	0.00	0.00
17,165.3	90.70	359.58	12,270.9	4,268.0	-556.0	4,304.1	0.00	0.00	0.00

PBHL (Orrtanna 20 Fed #707H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL (Orrtanna 20 Fed	0.00	0.00	12,270.9	4,268.0	-556.0	377,435.00	730,812.00	32° 2' 7.784 N	103° 35' 18.556 W
- plan hits target center									
- Point									
FTP (Orrtanna 20 Fed #	0.00	0.00	12,326.0	-446.0	-522.0	372,721.00	730,846.00	32° 1' 21.133 N	103° 35' 18.539 W
- plan misses target center by 39.7usft at 12461.2usft MD (12289.5 TVD, -430.8 N, -519.0 E)									
- Point									

Checked By: _____ Approved By: _____ Date: _____