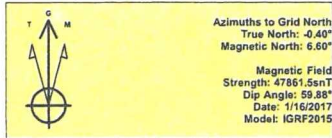




Lea County, NM (NAD 27 NME)

Orrtanna 20 Fed #708H

Plan #0.1



To convert a Magnetic Direction to a Grid Direction, Add 6.60°
 To convert a Magnetic Direction to a True Direction, Add 6.69° East
 To convert a True Direction to a Grid Direction, Subtract 0.40°

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: #708H

Ground Level: 3240.0
 KB = 25' @ 3265.0usft
 Northing 373192.00 Easting 731993.00 Latitude 32° 1' 25.756 N Longitude 103° 35' 12.148 W

SECTION DETAILS

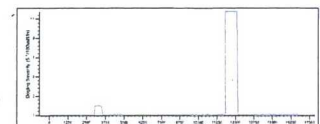
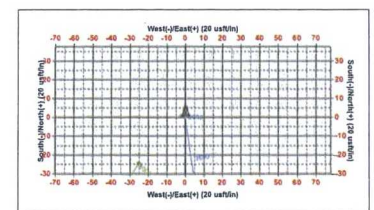
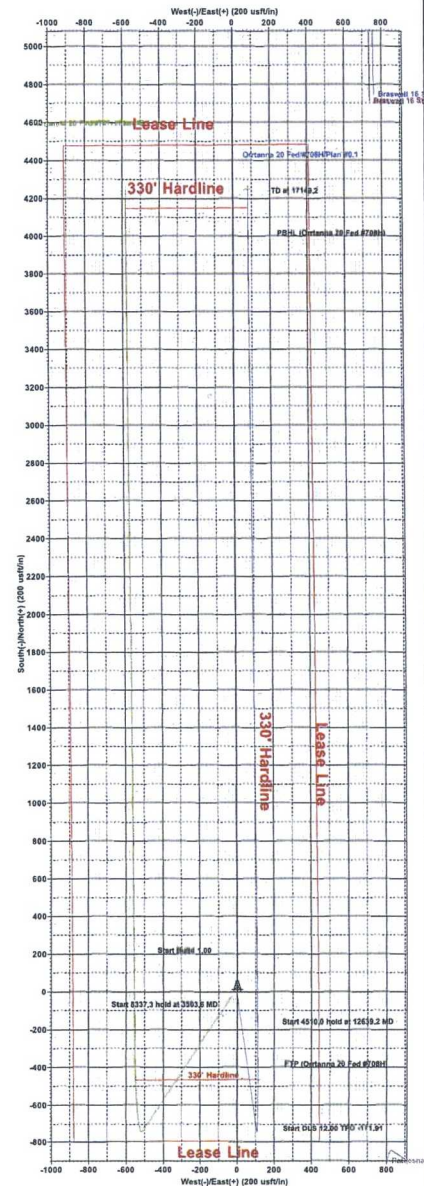
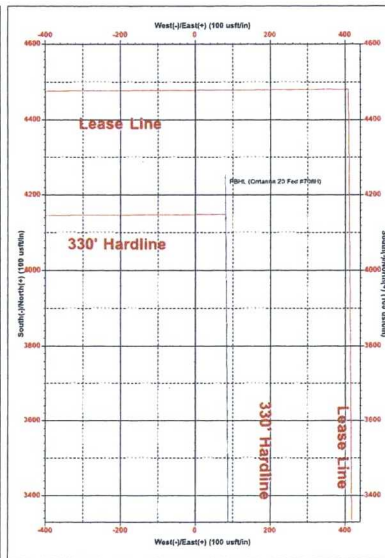
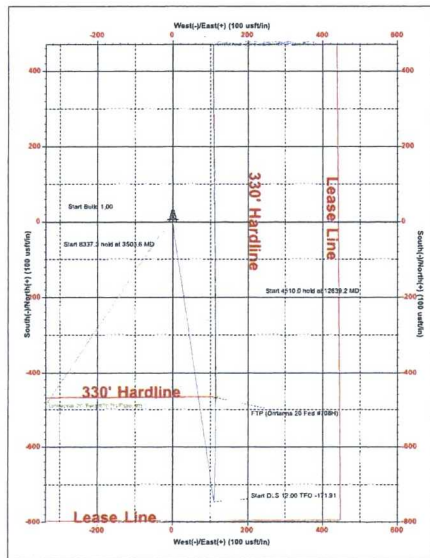
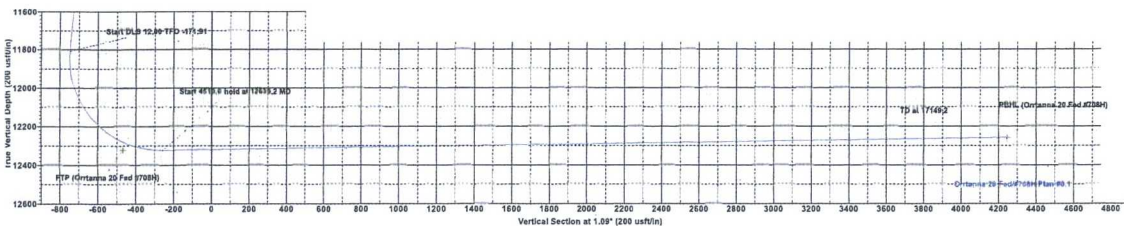
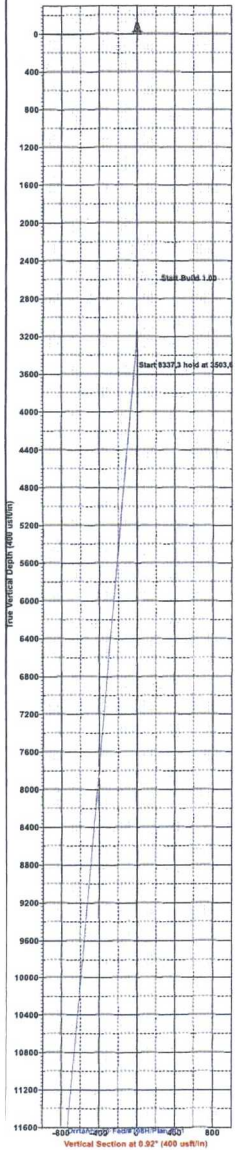
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V'Sect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0		
3	3503.0	5.04	171.53	3503.0	-21.9	3.3	1.00	171.53	-21.8		
4	11840.0	5.04	171.53	11840.1	-745.8	111.1	0.00	0.00	-743.5		
5	12639.2	96.80	359.58	12327.0	-263.4	114.1	12.00	-171.91	-261.2		
6	17149.2	96.80	359.58	12264.0	4246.0	81.0	0.00	0.00	4246.8	PBHL (Orrtanna 20 Fed #708H)	

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 #708H)	12264.0	4246.0	81.0	377438.00	731474.00
FTP (Orrtanna 20 Fed #708H)	12327.0	-468.0	116.0	372724.00	731509.00



Lea County, NM (NAD 27 NME)
 Orrtanna 20 Fed #708H
 Plan #0.1
 Date: 1/16/2017



EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Orrtanna 20 Fed

#708H

OH

Plan: Plan #0.1

Standard Survey Report

16 January, 2017

HOBBS OGD
APR 17 2017
RECEIVED



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Orrtanna 20 Fed
 Well: #708H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #708H
 TVD Reference: KB = 25' @ 3265.0usft
 MD Reference: KB = 25' @ 3265.0usft
 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	Orrtanna 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	#708H					
Well Position	+N-S	0.0 usft	Northing:	373,192.00 usft	Latitude:	32° 1' 25.756 N
	+E-W	0.0 usft	Easting:	731,393.00 usft	Longitude:	103° 35' 12.148 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	0.0 usft	Ground Level:	3,240.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	1/16/2017	(°)	(°)	(nT)
			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)	+N-S	+E-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	1.09	

Survey Tool Program	Date	1/16/2017			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
0.0	17,149.2	Plan #0.1 (OH)	MWD	MWD - Standard	

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	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	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	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	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	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	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	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	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	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	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: #708H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #708H
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 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	1.00	171.53	3,100.0	-0.9	0.1	-0.9	1.00	1.00	0.00
3,200.0	2.00	171.53	3,200.0	-3.5	0.5	-3.4	1.00	1.00	0.00
3,300.0	3.00	171.53	3,299.9	-7.8	1.2	-7.7	1.00	1.00	0.00
3,400.0	4.00	171.53	3,399.7	-13.8	2.1	-13.8	1.00	1.00	0.00
3,503.6	5.04	171.53	3,503.0	-21.9	3.3	-21.8	1.00	1.00	0.00
3,600.0	5.04	171.53	3,599.0	-30.2	4.5	-30.2	0.00	0.00	0.00
3,700.0	5.04	171.53	3,698.6	-38.9	5.8	-38.8	0.00	0.00	0.00
3,800.0	5.04	171.53	3,798.2	-47.6	7.1	-47.5	0.00	0.00	0.00
3,900.0	5.04	171.53	3,897.8	-56.3	8.4	-56.1	0.00	0.00	0.00
4,000.0	5.04	171.53	3,997.4	-65.0	9.7	-64.8	0.00	0.00	0.00
4,100.0	5.04	171.53	4,097.0	-73.7	11.0	-73.4	0.00	0.00	0.00
4,200.0	5.04	171.53	4,196.7	-82.3	12.3	-82.1	0.00	0.00	0.00
4,300.0	5.04	171.53	4,296.3	-91.0	13.6	-90.8	0.00	0.00	0.00
4,400.0	5.04	171.53	4,395.9	-99.7	14.9	-99.4	0.00	0.00	0.00
4,500.0	5.04	171.53	4,495.5	-108.4	16.1	-108.1	0.00	0.00	0.00
4,600.0	5.04	171.53	4,595.1	-117.1	17.4	-116.7	0.00	0.00	0.00
4,700.0	5.04	171.53	4,694.7	-125.8	18.7	-125.4	0.00	0.00	0.00
4,800.0	5.04	171.53	4,794.3	-134.4	20.0	-134.0	0.00	0.00	0.00
4,900.0	5.04	171.53	4,894.0	-143.1	21.3	-142.7	0.00	0.00	0.00
5,000.0	5.04	171.53	4,993.6	-151.8	22.6	-151.3	0.00	0.00	0.00
5,100.0	5.04	171.53	5,093.2	-160.5	23.9	-160.0	0.00	0.00	0.00
5,200.0	5.04	171.53	5,192.8	-169.2	25.2	-168.7	0.00	0.00	0.00
5,300.0	5.04	171.53	5,292.4	-177.9	26.5	-177.3	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: #708H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #708H
 TVD Reference: KB = 25' @ 3265.0usft
 MD Reference: KB = 25' @ 3265.0usft
 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)
5,400.0	5.04	171.53	5,392.0	-186.5	27.8	-186.0	0.00	0.00	0.00
5,500.0	5.04	171.53	5,491.6	-195.2	29.1	-194.6	0.00	0.00	0.00
5,600.0	5.04	171.53	5,591.3	-203.9	30.4	-203.3	0.00	0.00	0.00
5,700.0	5.04	171.53	5,690.9	-212.6	31.7	-211.9	0.00	0.00	0.00
5,800.0	5.04	171.53	5,790.5	-221.3	33.0	-220.6	0.00	0.00	0.00
5,900.0	5.04	171.53	5,890.1	-230.0	34.3	-229.3	0.00	0.00	0.00
6,000.0	5.04	171.53	5,989.7	-238.6	35.5	-237.9	0.00	0.00	0.00
6,100.0	5.04	171.53	6,089.3	-247.3	36.8	-246.6	0.00	0.00	0.00
6,200.0	5.04	171.53	6,188.9	-256.0	38.1	-255.2	0.00	0.00	0.00
6,300.0	5.04	171.53	6,288.6	-264.7	39.4	-263.9	0.00	0.00	0.00
6,400.0	5.04	171.53	6,388.2	-273.4	40.7	-272.5	0.00	0.00	0.00
6,500.0	5.04	171.53	6,487.8	-282.0	42.0	-281.2	0.00	0.00	0.00
6,600.0	5.04	171.53	6,587.4	-290.7	43.3	-289.9	0.00	0.00	0.00
6,700.0	5.04	171.53	6,687.0	-299.4	44.6	-298.5	0.00	0.00	0.00
6,800.0	5.04	171.53	6,786.6	-308.1	45.9	-307.2	0.00	0.00	0.00
6,900.0	5.04	171.53	6,886.2	-316.8	47.2	-315.8	0.00	0.00	0.00
7,000.0	5.04	171.53	6,985.9	-325.5	48.5	-324.5	0.00	0.00	0.00
7,100.0	5.04	171.53	7,085.5	-334.1	49.8	-333.1	0.00	0.00	0.00
7,200.0	5.04	171.53	7,185.1	-342.8	51.1	-341.8	0.00	0.00	0.00
7,300.0	5.04	171.53	7,284.7	-351.5	52.4	-350.5	0.00	0.00	0.00
7,400.0	5.04	171.53	7,384.3	-360.2	53.7	-359.1	0.00	0.00	0.00
7,500.0	5.04	171.53	7,483.9	-368.9	54.9	-367.8	0.00	0.00	0.00
7,600.0	5.04	171.53	7,583.5	-377.6	56.2	-376.4	0.00	0.00	0.00
7,700.0	5.04	171.53	7,683.2	-386.2	57.5	-385.1	0.00	0.00	0.00
7,800.0	5.04	171.53	7,782.8	-394.9	58.8	-393.7	0.00	0.00	0.00
7,900.0	5.04	171.53	7,882.4	-403.6	60.1	-402.4	0.00	0.00	0.00
8,000.0	5.04	171.53	7,982.0	-412.3	61.4	-411.0	0.00	0.00	0.00
8,100.0	5.04	171.53	8,081.6	-421.0	62.7	-419.7	0.00	0.00	0.00
8,200.0	5.04	171.53	8,181.2	-429.7	64.0	-428.4	0.00	0.00	0.00
8,300.0	5.04	171.53	8,280.8	-438.3	65.3	-437.0	0.00	0.00	0.00
8,400.0	5.04	171.53	8,380.4	-447.0	66.6	-445.7	0.00	0.00	0.00
8,500.0	5.04	171.53	8,480.1	-455.7	67.9	-454.3	0.00	0.00	0.00
8,600.0	5.04	171.53	8,579.7	-464.4	69.2	-463.0	0.00	0.00	0.00
8,700.0	5.04	171.53	8,679.3	-473.1	70.5	-471.6	0.00	0.00	0.00
8,800.0	5.04	171.53	8,778.9	-481.8	71.8	-480.3	0.00	0.00	0.00
8,900.0	5.04	171.53	8,878.5	-490.4	73.1	-489.0	0.00	0.00	0.00
9,000.0	5.04	171.53	8,978.1	-499.1	74.4	-497.6	0.00	0.00	0.00
9,100.0	5.04	171.53	9,077.7	-507.8	75.6	-506.3	0.00	0.00	0.00
9,200.0	5.04	171.53	9,177.4	-516.5	76.9	-514.9	0.00	0.00	0.00
9,300.0	5.04	171.53	9,277.0	-525.2	78.2	-523.6	0.00	0.00	0.00
9,400.0	5.04	171.53	9,376.6	-533.9	79.5	-532.2	0.00	0.00	0.00
9,500.0	5.04	171.53	9,476.2	-542.5	80.8	-540.9	0.00	0.00	0.00
9,600.0	5.04	171.53	9,575.8	-551.2	82.1	-549.6	0.00	0.00	0.00



EOG Resources, Inc.

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 Site: Orrtanna 20 Fed
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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)
9,700.0	5.04	171.53	9,675.4	-559.9	83.4	-558.2	0.00	0.00	0.00
9,800.0	5.04	171.53	9,775.0	-568.6	84.7	-566.9	0.00	0.00	0.00
9,900.0	5.04	171.53	9,874.7	-577.3	86.0	-575.5	0.00	0.00	0.00
10,000.0	5.04	171.53	9,974.3	-586.0	87.3	-584.2	0.00	0.00	0.00
10,100.0	5.04	171.53	10,073.9	-594.6	88.6	-592.8	0.00	0.00	0.00
10,200.0	5.04	171.53	10,173.5	-603.3	89.9	-601.5	0.00	0.00	0.00
10,300.0	5.04	171.53	10,273.1	-612.0	91.2	-610.1	0.00	0.00	0.00
10,400.0	5.04	171.53	10,372.7	-620.7	92.5	-618.8	0.00	0.00	0.00
10,500.0	5.04	171.53	10,472.3	-629.4	93.8	-627.5	0.00	0.00	0.00
10,600.0	5.04	171.53	10,572.0	-638.0	95.0	-636.1	0.00	0.00	0.00
10,700.0	5.04	171.53	10,671.6	-646.7	96.3	-644.8	0.00	0.00	0.00
10,800.0	5.04	171.53	10,771.2	-655.4	97.6	-653.4	0.00	0.00	0.00
10,900.0	5.04	171.53	10,870.8	-664.1	98.9	-662.1	0.00	0.00	0.00
11,000.0	5.04	171.53	10,970.4	-672.8	100.2	-670.7	0.00	0.00	0.00
11,100.0	5.04	171.53	11,070.0	-681.5	101.5	-679.4	0.00	0.00	0.00
11,200.0	5.04	171.53	11,169.6	-690.1	102.8	-688.1	0.00	0.00	0.00
11,300.0	5.04	171.53	11,269.3	-698.8	104.1	-696.7	0.00	0.00	0.00
11,400.0	5.04	171.53	11,368.9	-707.5	105.4	-705.4	0.00	0.00	0.00
11,500.0	5.04	171.53	11,468.5	-716.2	106.7	-714.0	0.00	0.00	0.00
11,600.0	5.04	171.53	11,568.1	-724.9	108.0	-722.7	0.00	0.00	0.00
11,700.0	5.04	171.53	11,667.7	-733.6	109.3	-731.3	0.00	0.00	0.00
11,800.0	5.04	171.53	11,767.3	-742.2	110.6	-740.0	0.00	0.00	0.00
11,840.9	5.04	171.53	11,808.1	-745.8	111.1	-743.5	0.00	0.00	0.00
11,850.0	3.96	169.31	11,817.1	-746.5	111.2	-744.2	12.00	-11.85	-24.45
11,875.0	1.15	141.39	11,842.1	-747.5	111.5	-745.3	12.00	-11.27	-111.68
11,900.0	2.22	18.22	11,867.1	-747.3	111.8	-745.0	12.00	4.28	-492.71
11,925.0	5.15	7.47	11,892.0	-745.7	112.1	-743.4	12.00	11.73	-42.97
11,950.0	8.13	4.55	11,916.9	-742.8	112.4	-740.6	12.00	11.93	-11.68
11,975.0	11.12	3.19	11,941.5	-738.7	112.7	-736.4	12.00	11.97	-5.43
12,000.0	14.12	2.41	11,965.9	-733.2	113.0	-730.9	12.00	11.98	-3.15
12,025.0	17.11	1.89	11,990.0	-726.5	113.2	-724.2	12.00	11.99	-2.07
12,050.0	20.11	1.52	12,013.7	-718.5	113.4	-716.2	12.00	11.99	-1.47
12,075.0	23.11	1.25	12,036.9	-709.3	113.7	-707.0	12.00	11.99	-1.10
12,100.0	26.11	1.04	12,059.6	-698.9	113.9	-696.6	12.00	11.99	-0.86
12,125.0	29.11	0.86	12,081.8	-687.3	114.1	-685.0	12.00	12.00	-0.69
12,150.0	32.11	0.72	12,103.3	-674.6	114.2	-672.3	12.00	12.00	-0.57
12,175.0	35.11	0.60	12,124.1	-660.8	114.4	-658.4	12.00	12.00	-0.48
12,200.0	38.11	0.49	12,144.2	-645.8	114.5	-643.5	12.00	12.00	-0.42
12,225.0	41.11	0.40	12,163.5	-629.9	114.7	-627.6	12.00	12.00	-0.37
12,250.0	44.10	0.32	12,181.9	-613.0	114.8	-610.7	12.00	12.00	-0.32
12,275.0	47.10	0.25	12,199.3	-595.1	114.9	-592.8	12.00	12.00	-0.29
12,300.0	50.10	0.18	12,215.9	-576.4	114.9	-574.1	12.00	12.00	-0.26
12,325.0	53.10	0.12	12,231.4	-556.8	115.0	-554.5	12.00	12.00	-0.24



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Orrtanna 20 Fed
 Well: #708H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #708H
 TVD Reference: KB = 25' @ 3265.0usft
 MD Reference: KB = 25' @ 3265.0usft
 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	56.10	0.07	12,245.9	-536.4	115.0	-534.1	12.00	12.00	-0.22
12,375.0	59.10	0.01	12,259.3	-515.3	115.0	-513.0	12.00	12.00	-0.21
12,400.0	62.10	359.96	12,271.5	-493.5	115.0	-491.2	12.00	12.00	-0.20
12,425.0	65.10	359.92	12,282.7	-471.1	115.0	-468.9	12.00	12.00	-0.18
12,445.5	67.56	359.88	12,290.9	-452.4	115.0	-450.1	12.00	12.00	-0.18
FTP (Orrtanna 20 Fed #708H)									
12,450.0	68.10	359.87	12,292.6	-448.2	115.0	-445.9	12.00	12.00	-0.17
12,475.0	71.10	359.83	12,301.3	-424.8	114.9	-422.5	12.00	12.00	-0.17
12,500.0	74.10	359.79	12,308.8	-400.9	114.8	-398.6	12.00	12.00	-0.16
12,525.0	77.10	359.75	12,315.0	-376.7	114.7	-374.4	12.00	12.00	-0.16
12,550.0	80.10	359.71	12,319.9	-352.2	114.6	-349.9	12.00	12.00	-0.15
12,575.0	83.10	359.68	12,323.6	-327.5	114.5	-325.2	12.00	12.00	-0.15
12,600.0	86.10	359.64	12,325.9	-302.6	114.3	-300.3	12.00	12.00	-0.15
12,625.0	89.10	359.60	12,327.0	-277.6	114.2	-275.4	12.00	12.00	-0.15
12,639.2	90.80	359.58	12,327.0	-263.4	114.1	-261.2	12.00	12.00	-0.15
12,700.0	90.80	359.58	12,326.1	-202.6	113.6	-200.4	0.00	0.00	0.00
12,800.0	90.80	359.58	12,324.7	-102.6	112.9	-100.5	0.00	0.00	0.00
12,900.0	90.80	359.58	12,323.3	-2.6	112.1	-0.5	0.00	0.00	0.00
13,000.0	90.80	359.58	12,322.0	97.3	111.4	99.5	0.00	0.00	0.00
13,100.0	90.80	359.58	12,320.6	197.3	110.7	199.4	0.00	0.00	0.00
13,200.0	90.80	359.58	12,319.2	297.3	109.9	299.4	0.00	0.00	0.00
13,300.0	90.80	359.58	12,317.8	397.3	109.2	399.3	0.00	0.00	0.00
13,400.0	90.80	359.58	12,316.4	497.3	108.5	499.3	0.00	0.00	0.00
13,500.0	90.80	359.58	12,315.0	597.3	107.7	599.2	0.00	0.00	0.00
13,600.0	90.80	359.58	12,313.6	697.3	107.0	699.2	0.00	0.00	0.00
13,700.0	90.80	359.58	12,312.2	797.3	106.3	799.1	0.00	0.00	0.00
13,800.0	90.80	359.58	12,310.8	897.2	105.5	899.1	0.00	0.00	0.00
13,900.0	90.80	359.58	12,309.4	997.2	104.8	999.1	0.00	0.00	0.00
14,000.0	90.80	359.58	12,308.0	1,097.2	104.1	1,099.0	0.00	0.00	0.00
14,100.0	90.80	359.58	12,306.6	1,197.2	103.3	1,199.0	0.00	0.00	0.00
14,200.0	90.80	359.58	12,305.2	1,297.2	102.6	1,298.9	0.00	0.00	0.00
14,300.0	90.80	359.58	12,303.8	1,397.2	101.9	1,398.9	0.00	0.00	0.00
14,400.0	90.80	359.58	12,302.4	1,497.2	101.2	1,498.8	0.00	0.00	0.00
14,500.0	90.80	359.58	12,301.0	1,597.2	100.4	1,598.8	0.00	0.00	0.00
14,600.0	90.80	359.58	12,299.6	1,697.2	99.7	1,698.7	0.00	0.00	0.00
14,700.0	90.80	359.58	12,298.2	1,797.1	99.0	1,798.7	0.00	0.00	0.00
14,800.0	90.80	359.58	12,296.8	1,897.1	98.2	1,898.7	0.00	0.00	0.00
14,900.0	90.80	359.58	12,295.4	1,997.1	97.5	1,998.6	0.00	0.00	0.00
15,000.0	90.80	359.58	12,294.0	2,097.1	96.8	2,098.6	0.00	0.00	0.00
15,100.0	90.80	359.58	12,292.6	2,197.1	96.0	2,198.5	0.00	0.00	0.00
15,200.0	90.80	359.58	12,291.2	2,297.1	95.3	2,298.5	0.00	0.00	0.00
15,300.0	90.80	359.58	12,289.8	2,397.1	94.6	2,398.4	0.00	0.00	0.00
15,400.0	90.80	359.58	12,288.4	2,497.1	93.8	2,498.4	0.00	0.00	0.00
15,500.0	90.80	359.58	12,287.0	2,597.0	93.1	2,598.3	0.00	0.00	0.00



Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Orrtanna 20 Fed
 Well: #708H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #708H
 TVD Reference: KB = 25' @ 3265.0usft
 MD Reference: KB = 25' @ 3265.0usft
 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)
15,600.0	90.80	359.58	12,285.6	2,697.0	92.4	2,698.3	0.00	0.00	0.00
15,700.0	90.80	359.58	12,284.3	2,797.0	91.6	2,798.3	0.00	0.00	0.00
15,800.0	90.80	359.58	12,282.9	2,897.0	90.9	2,898.2	0.00	0.00	0.00
15,900.0	90.80	359.58	12,281.5	2,997.0	90.2	2,998.2	0.00	0.00	0.00
16,000.0	90.80	359.58	12,280.1	3,097.0	89.4	3,098.1	0.00	0.00	0.00
16,100.0	90.80	359.58	12,278.7	3,197.0	88.7	3,198.1	0.00	0.00	0.00
16,200.0	90.80	359.58	12,277.3	3,297.0	88.0	3,298.0	0.00	0.00	0.00
16,300.0	90.80	359.58	12,275.9	3,396.9	87.2	3,398.0	0.00	0.00	0.00
16,400.0	90.80	359.58	12,274.5	3,496.9	86.5	3,497.9	0.00	0.00	0.00
16,500.0	90.80	359.58	12,273.1	3,596.9	85.8	3,597.9	0.00	0.00	0.00
16,600.0	90.80	359.58	12,271.7	3,696.9	85.0	3,697.9	0.00	0.00	0.00
16,700.0	90.80	359.58	12,270.3	3,796.9	84.3	3,797.8	0.00	0.00	0.00
16,800.0	90.80	359.58	12,268.9	3,896.9	83.6	3,897.8	0.00	0.00	0.00
16,900.0	90.80	359.58	12,267.5	3,996.9	82.8	3,997.7	0.00	0.00	0.00
17,000.0	90.80	359.58	12,266.1	4,096.9	82.1	4,097.7	0.00	0.00	0.00
17,100.0	90.80	359.58	12,264.7	4,196.8	81.4	4,197.6	0.00	0.00	0.00
17,149.2	90.80	359.58	12,264.0	4,246.0	81.0	4,246.8	0.00	0.00	0.00

PBHL (Orrtanna 20 Fed #708H)

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 - plan hits target center - Point	0.00	0.00	12,264.0	4,246.0	81.0	377,438.00	731,474.00	32° 2' 7.769 N	103° 35' 10.866 W
FTP (Orrtanna 20 Fed # - plan misses target center by 39.4usft at 12445.5usft MD (12290.9 TVD, -452.4 N, 115.0 E) - Point	0.00	0.00	12,327.0	-468.0	116.0	372,724.00	731,509.00	32° 1' 21.117 N	103° 35' 10.838 W

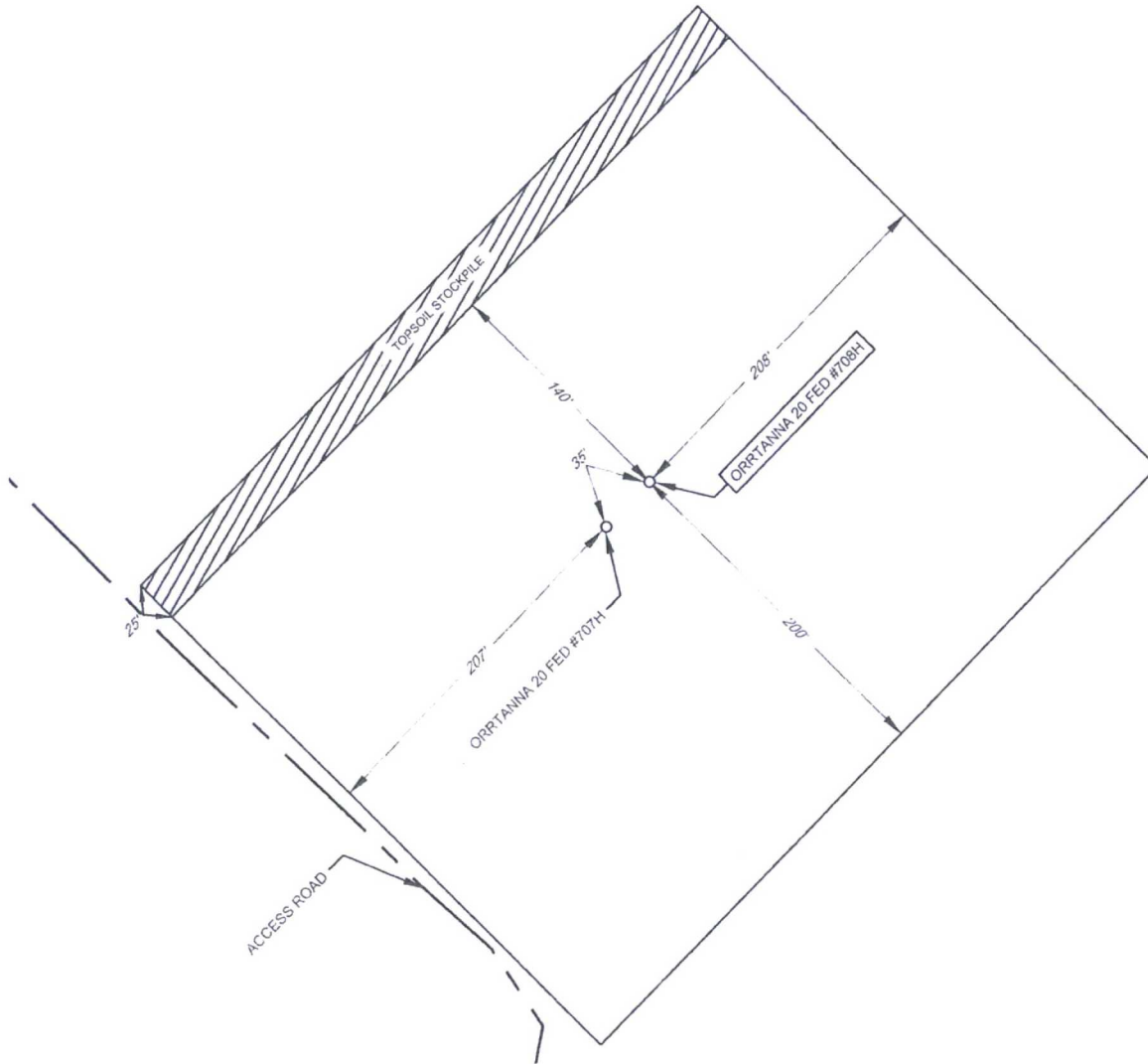
Checked By: _____ Approved By: _____ Date: _____



EXHIBIT 2B

SECTION 20, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: ORRTANNA 20 FED #708H
 #708H LATITUDE N 32.0238202 #708H LONGITUDE W 103.5867078

LEGEND

— SECTION LINE



SCALE 1" = 100'
0' 50' 100'

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET

THIS PROPOSED PAD SITE 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.



1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
 TELEPHONE (817) 744-7512 • FAX (817) 744-7546
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
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 WWW.TOPOGRAPHIC.COM

ORIGINAL DOCUMENT SIZE: 8.5" X 11"