



Lea County, NM (NAD 27 NME)

Osprey 10 #602H

H&P 659

Plan #4

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: #602H

Ground Level: 3334.0
KB = 25 @ 3359.8usft (H&P 659)
Northing 415420.00 Easting 769622.00 Latitude 32° 8' 20.792 N Longitude 103° 27' 44.161 W

Azimuths to Grid North
True North: -0.46°
Magnetic North: 6.44°
Magnetic Field
Strength: 47909.2nT
Dip Angle: 80.00°
Date: 5/15/2017
Model: IGRF2015



To convert a Magnetic Direction to a Grid Direction, Add 6.44°
To convert a Magnetic Direction to a True Direction, Add 6.91° East
To convert a True Direction to a Grid Direction, Subtract 0.46°

SECTION DETAILS

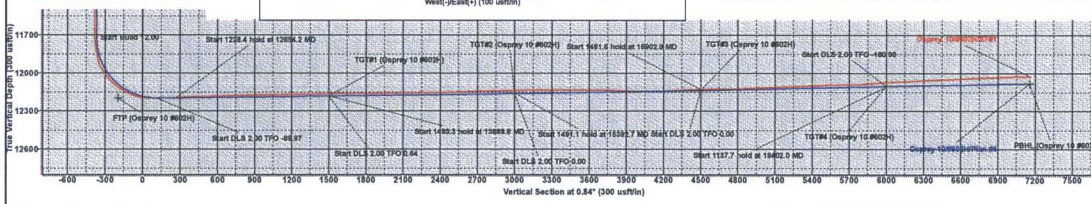
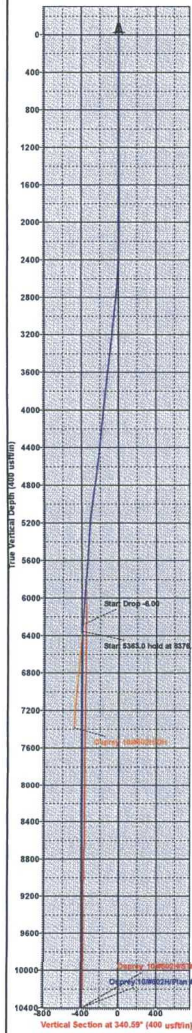
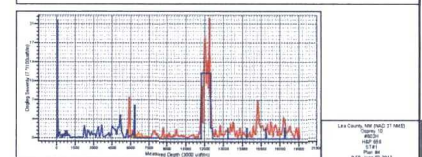
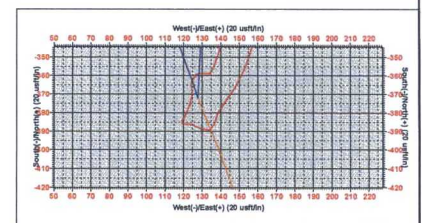
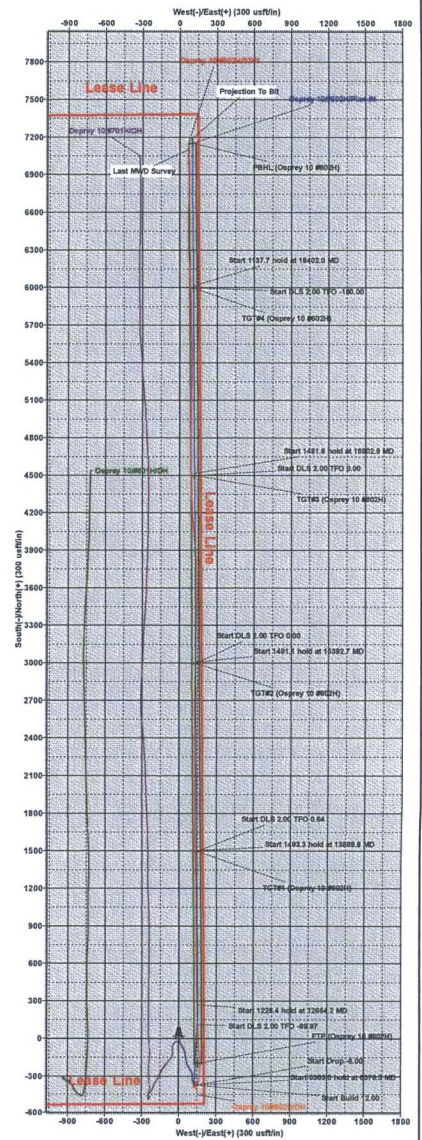
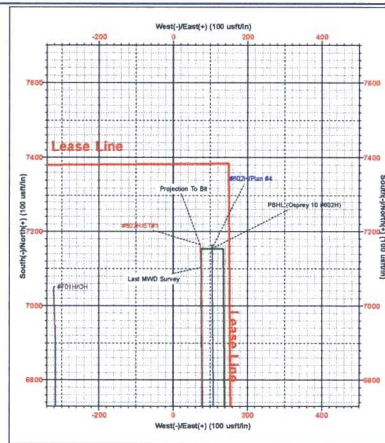
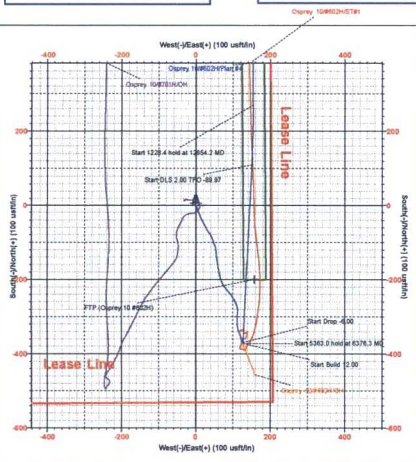
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	6308.0	4.10	163.60	6286.3	-369.7	127.3	0.00	0.00	-367.8	
2	6376.3	0.00	0.00	6354.6	-372.0	128.0	6.00	180.00	-370.1	
3	11739.3	0.00	0.00	11717.6	-372.0	128.0	0.00	0.00	-370.1	
4	12494.5	90.62	2.78	12195.0	110.0	151.4	12.00	2.78	112.2	
5	12654.2	90.62	359.59	12193.3	269.7	154.7	2.00	-89.97	271.9	
6	13882.6	90.62	359.59	12180.0	1498.0	145.8	0.00	0.00	1500.0	TGT#1 (Osprey 10 #602H)
7	13889.8	90.76	359.59	12179.9	1505.2	145.7	2.00	0.64	1507.1	TGT#2 (Osprey 10 #602H)
8	15363.1	90.76	359.59	12160.0	2998.3	135.0	0.00	0.00	3000.0	TGT#3 (Osprey 10 #602H)
9	15392.7	90.96	359.59	12159.9	3007.9	134.9	2.00	0.00	3009.5	TGT#4 (Osprey 10 #602H)
10	16883.8	90.96	359.59	12135.0	4498.7	124.1	0.00	0.00	4500.0	
11	16902.9	91.34	359.59	12134.6	4517.9	124.0	2.00	0.00	4519.2	
12	18384.5	91.34	359.59	12100.0	5999.0	113.3	0.00	0.00	6000.0	
13	18402.0	90.99	359.59	12099.6	6016.5	113.2	2.00	-180.00	6017.5	
14	19539.7	90.99	359.59	12080.0	7154.0	105.0	0.00	0.00	7154.8	PBHL (Osprey 10 #602H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (Osprey 10 #602H)	12080.0	7154.0	105.0	422574.00	769727.00
TGT#4 (Osprey 10 #602H)	12100.0	5999.0	113.3	421419.00	769735.33
TGT#3 (Osprey 10 #602H)	12135.0	4498.7	124.1	418918.70	769746.14
TGT#2 (Osprey 10 #602H)	12160.0	2998.3	135.0	418418.30	769756.95
TGT#1 (Osprey 10 #602H)	12180.0	1498.0	145.8	416919.00	769767.77
FTP (Osprey 10 #602H)	12195.0	-199.0	158.0	415221.00	769780.00





EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Osprey 10

#602H

ST#1

Design: ST#1

PVA

02 June, 2017

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EOG Resources, Inc.

PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Osprey 10
 Well: #602H
 Wellbore: ST#1
 Design: ST#1

Local Co-ordinate Reference: Well #602H
 TVD Reference: KB = 25 @ 3359.0usft (H&P 659)
 MD Reference: KB = 25 @ 3359.0usft (H&P 659)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 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: Osprey 10

Site Position: Northing: 415,103.00 usft Latitude: 32° 8' 17.729 N
 From: Map Easting: 768,701.00 usft Longitude: 103° 27' 54.902 W
 Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.46 °

Well: #602H

Well Position +N/-S 0.0 usft Northing: 415,420.00 usft Latitude: 32° 8' 20.792 N
 +E/-W 0.0 usft Easting: 769,622.00 usft Longitude: 103° 27' 44.161 W
 Position Uncertainty 0.0 usft Wellhead Elevation: 0.0 usft Ground Level: 3,334.0 usft

Wellbore: ST#1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/15/2017	6.91	60.00	47,909.15073620

Design: ST#1

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 5,841.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.84



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Survey Program		Date 6/2/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
103.0	969.0	Invictvs MWD #1 (OH)	MWD	MWD - Standard
1,072.0	5,841.0	Intrepid MWD #1 (OH)	MWD	MWD - Standard
5,918.0	19,586.0	Intrepid MWD #2 (ST#1)	MWD	MWD - Standard

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
103.0	0.60	199.84	103.0	-0.5	-0.2	0.58	0.58	0.00	0.0	0.0
110.0	1.00	342.84	110.0	-0.5	-0.2	21.75	5.71	2,042.86	0.0	0.0
137.0	1.00	287.84	137.0	-0.2	-0.5	3.42	0.00	-203.70	0.0	0.0
166.0	1.00	284.84	166.0	0.0	-1.0	0.18	0.00	-10.34	0.0	0.0
194.0	0.80	273.84	194.0	0.0	-1.4	0.94	-0.71	-39.29	0.0	0.0
224.0	0.90	286.84	224.0	0.1	-1.9	0.72	0.33	43.33	0.0	0.0
253.0	0.60	294.84	253.0	0.2	-2.2	1.09	-1.03	27.59	0.0	0.0
281.0	0.70	272.84	281.0	0.3	-2.5	0.95	0.36	-78.57	0.0	0.0
311.0	0.40	253.84	311.0	0.3	-2.8	1.16	-1.00	-63.33	0.0	0.0
342.0	0.30	273.84	342.0	0.3	-3.0	0.50	-0.32	64.52	0.0	0.0
374.0	0.30	239.84	374.0	0.2	-3.1	0.55	0.00	-106.25	0.0	0.0
405.0	0.30	235.84	405.0	0.1	-3.3	0.07	0.00	-12.90	0.0	0.0
437.0	0.40	249.84	437.0	0.1	-3.5	0.41	0.31	43.75	0.0	0.0
469.0	0.30	219.84	469.0	0.0	-3.6	0.64	-0.31	-93.75	0.0	0.0
530.0	0.40	226.84	530.0	-0.3	-3.9	0.18	0.16	11.48	0.0	0.0
561.0	0.30	260.84	561.0	-0.4	-4.0	0.73	-0.32	109.68	0.0	0.0
592.0	0.40	272.84	592.0	-0.4	-4.2	0.40	0.32	38.71	0.0	0.0
623.0	0.40	244.84	623.0	-0.4	-4.4	0.62	0.00	-90.32	0.0	0.0
654.0	0.40	277.84	654.0	-0.5	-4.6	0.73	0.00	106.45	0.0	0.0



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 Design: ST#1

Local Co-ordinate Reference: Well #602H
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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 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)	
686.0	0.60	297.84	686.0	-0.4	-4.9	0.82	0.62	62.50	0.0	0.0	
717.0	0.50	297.84	717.0	-0.2	-5.2	0.32	-0.32	0.00	0.0	0.0	
749.0	0.20	358.84	749.0	-0.1	-5.3	1.37	-0.94	190.62	0.0	0.0	
780.0	0.20	292.84	780.0	0.0	-5.3	0.70	0.00	-212.90	0.0	0.0	
811.0	0.40	326.84	811.0	0.1	-5.4	0.84	0.65	109.68	0.0	0.0	
843.0	0.50	338.84	843.0	0.3	-5.5	0.43	0.31	37.50	0.0	0.0	
874.0	0.10	331.84	874.0	0.4	-5.6	1.29	-1.29	-22.58	0.0	0.0	
969.0	0.50	357.84	969.0	0.9	-5.7	0.43	0.42	27.37	0.0	0.0	
1,072.0	0.40	72.20	1,072.0	1.5	-5.3	0.53	-0.10	72.19	0.0	0.0	
1,165.0	0.40	81.90	1,165.0	1.6	-4.7	0.07	0.00	10.43	0.0	0.0	
1,258.0	0.40	97.20	1,258.0	1.6	-4.1	0.11	0.00	16.45	0.0	0.0	
1,351.0	0.30	94.40	1,351.0	1.6	-3.5	0.11	-0.11	-3.01	0.0	0.0	
1,444.0	0.10	58.40	1,444.0	1.6	-3.2	0.24	-0.22	-38.71	0.0	0.0	
1,538.0	0.20	53.10	1,538.0	1.7	-3.0	0.11	0.11	-5.64	0.0	0.0	
1,631.0	0.30	48.40	1,631.0	2.0	-2.7	0.11	0.11	-5.05	0.0	0.0	
1,725.0	0.30	56.90	1,725.0	2.3	-2.3	0.05	0.00	9.04	0.0	0.0	
1,818.0	0.20	102.40	1,818.0	2.4	-1.9	0.23	-0.11	48.92	0.0	0.0	
1,911.0	0.10	37.20	1,911.0	2.4	-1.7	0.20	-0.11	-70.11	0.0	0.0	
2,005.0	0.30	37.00	2,005.0	2.7	-1.5	0.21	0.21	-0.21	0.0	0.0	
2,098.0	0.30	52.60	2,097.9	3.0	-1.2	0.09	0.00	16.77	0.0	0.0	
2,192.0	0.40	42.30	2,191.9	3.4	-0.8	0.13	0.11	-10.96	0.0	0.0	
2,285.0	1.90	158.90	2,284.9	2.2	0.0	2.27	1.61	125.38	0.0	0.0	
2,378.0	2.40	159.00	2,377.9	-1.0	1.3	0.54	0.54	0.11	0.0	0.0	
2,472.0	2.30	158.00	2,471.8	-4.6	2.7	0.11	-0.11	-1.06	0.0	0.0	
2,566.0	3.70	162.30	2,565.7	-9.3	4.3	1.51	1.49	4.57	0.0	0.0	
2,660.0	4.70	159.60	2,659.4	-15.8	6.6	1.08	1.06	-2.87	0.0	0.0	
2,753.0	5.00	156.90	2,752.1	-23.1	9.5	0.41	0.32	-2.90	0.0	0.0	



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 Design: ST#1

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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)
2,846.0	6.10	157.80	2,844.6	-31.4	12.9	1.19	1.18	0.97	0.0	0.0
2,940.0	6.40	153.40	2,938.1	-40.7	17.2	0.60	0.32	-4.68	0.0	0.0
3,034.0	6.60	147.30	3,031.5	-49.9	22.4	0.76	0.21	-6.49	0.0	0.0
3,128.0	6.60	153.60	3,124.8	-59.3	27.8	0.77	0.00	6.70	0.0	0.0
3,221.0	6.50	152.30	3,217.2	-68.7	32.6	0.19	-0.11	-1.40	0.0	0.0
3,315.0	6.10	141.60	3,310.7	-77.4	38.2	1.32	-0.43	-11.38	0.0	0.0
3,407.0	6.70	158.00	3,402.1	-86.2	43.2	2.08	0.65	17.83	0.0	0.0
3,502.0	6.60	159.00	3,496.5	-96.4	47.2	0.16	-0.11	1.05	0.0	0.0
3,596.0	6.00	154.50	3,589.9	-105.9	51.3	0.83	-0.64	-4.79	0.0	0.0
3,689.0	6.70	173.60	3,682.3	-115.7	54.0	2.38	0.75	20.54	0.0	0.0
3,784.0	7.00	174.50	3,776.7	-126.9	55.2	0.34	0.32	0.95	0.0	0.0
3,876.0	6.80	173.20	3,868.0	-137.9	56.3	0.28	-0.22	-1.41	0.0	0.0
3,969.0	6.50	172.70	3,960.4	-148.6	57.7	0.33	-0.32	-0.54	0.0	0.0
4,063.0	6.20	169.80	4,053.8	-158.9	59.2	0.47	-0.32	-3.09	0.0	0.0
4,157.0	5.60	168.50	4,147.3	-168.4	61.1	0.65	-0.64	-1.38	0.0	0.0
4,251.0	6.50	165.60	4,240.8	-178.0	63.3	1.01	0.96	-3.09	0.0	0.0
4,345.0	6.20	165.90	4,334.2	-188.1	65.9	0.32	-0.32	0.32	0.0	0.0
4,439.0	5.50	167.90	4,427.7	-197.4	68.0	0.78	-0.74	2.13	0.0	0.0
4,533.0	7.20	156.10	4,521.1	-207.2	71.4	2.27	1.81	-12.55	0.0	0.0
4,626.0	8.40	146.20	4,613.3	-218.2	77.5	1.93	1.29	-10.65	0.0	0.0
4,720.0	9.10	137.10	4,706.2	-229.3	86.4	1.65	0.74	-9.68	0.0	0.0
4,813.0	8.20	144.60	4,798.1	-240.1	95.2	1.55	-0.97	8.06	0.0	0.0
4,906.0	7.60	145.10	4,890.2	-250.6	102.6	0.65	-0.65	0.54	0.0	0.0
5,000.0	8.40	157.60	4,983.3	-262.0	108.8	2.03	0.85	13.30	0.0	0.0
5,093.0	8.60	169.90	5,075.3	-275.2	112.6	1.96	0.22	13.23	0.0	0.0
5,187.0	4.90	184.20	5,168.7	-286.1	113.5	4.29	-3.94	15.21	0.0	0.0
5,280.0	3.80	189.40	5,261.4	-293.1	112.7	1.26	-1.18	5.59	0.0	0.0



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Design: ST#1

Local Co-ordinate Reference: Well #602H
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MD Reference: KB = 25 @ 3359.0usft (H&P 659)
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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)
5,373.0	4.40	180.60	5,354.2	-299.7	112.2	0.93	0.65	-9.46	0.0	0.0
5,467.0	4.50	179.40	5,447.9	-307.0	112.2	0.15	0.11	-1.28	0.0	0.0
5,560.0	4.40	179.90	5,540.6	-314.2	112.2	0.12	-0.11	0.54	0.0	0.0
5,654.0	4.10	179.60	5,634.3	-321.2	112.3	0.32	-0.32	-0.32	0.0	0.0
5,747.0	4.90	164.20	5,727.0	-328.3	113.4	1.55	0.86	-16.56	0.0	0.0
5,841.0	4.90	162.00	5,820.7	-336.0	115.7	0.20	0.00	-2.34	0.0	0.0
5,918.0	2.60	66.80	5,897.6	-338.4	118.3	7.47	-2.99	-123.64	-2.1	3.1
6,011.0	2.60	62.90	5,990.5	-336.6	122.1	0.19	0.00	-4.19	-7.8	10.0
6,106.0	2.60	66.90	6,085.4	-334.8	126.0	0.19	0.00	4.21	-11.6	17.6
6,199.0	1.30	77.00	6,178.3	-333.8	129.0	1.44	-1.40	10.86	-10.5	26.3
6,293.0	1.10	77.50	6,272.3	-333.3	130.9	0.21	-0.21	0.53	-11.5	33.6
6,386.0	0.30	157.90	6,365.3	-333.3	131.9	1.17	-0.86	86.45	34.4	18.2
6,480.0	0.50	204.30	6,459.3	-334.0	131.8	0.39	0.21	49.36	36.3	-12.2
6,573.0	0.50	193.20	6,552.3	-334.7	131.6	0.10	0.00	-11.94	37.2	-5.0
6,667.0	0.40	200.90	6,646.3	-335.4	131.3	0.12	-0.11	8.19	35.4	-9.9
6,761.0	0.50	195.10	6,740.3	-336.1	131.1	0.12	0.11	-6.17	35.5	-6.3
6,854.0	0.40	213.60	6,833.3	-336.8	130.8	0.19	-0.11	19.89	31.0	-17.1
6,948.0	0.40	213.20	6,927.3	-337.3	130.5	0.00	0.00	-0.43	30.4	-16.9
7,041.0	0.40	185.40	7,020.3	-337.9	130.3	0.21	0.00	-29.89	34.2	-0.9
7,135.0	0.40	192.50	7,114.3	-338.6	130.2	0.05	0.00	7.55	33.2	-5.1
7,230.0	0.40	182.00	7,209.3	-339.2	130.1	0.08	0.00	-11.05	32.9	1.0
7,323.0	0.40	169.00	7,302.3	-339.9	130.1	0.10	0.00	-13.98	31.2	8.3
7,418.0	0.60	176.50	7,397.3	-340.7	130.2	0.22	0.21	7.89	31.1	4.2
7,511.0	0.70	170.20	7,490.3	-341.7	130.3	0.13	0.11	-6.77	29.5	7.5
7,604.0	0.70	164.60	7,583.3	-342.8	130.6	0.07	0.00	-6.02	27.4	10.3
7,697.0	0.60	151.10	7,676.3	-343.8	131.0	0.20	-0.11	-14.52	23.2	16.3
7,790.0	0.80	86.20	7,769.3	-344.2	131.9	0.83	0.22	-69.78	-5.7	27.5



EOG Resources, Inc.

PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Osprey 10
Well: #602H
Wellbore: ST#1
Design: ST#1

Local Co-ordinate Reference: Well #602H
TVD Reference: KB = 25 @ 3359.0usft (H&P 659)
MD Reference: KB = 25 @ 3359.0usft (H&P 659)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 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)
7,884.0	1.90	71.30	7,863.2	-343.7	134.0	1.22	1.17	-15.85	-14.8	24.9
7,977.0	0.60	64.50	7,956.2	-343.0	135.9	1.40	-1.40	-7.31	-19.7	22.8
8,070.0	0.90	24.80	8,049.2	-342.1	136.6	0.63	0.32	-42.69	-30.8	4.7
8,164.0	0.80	80.00	8,143.2	-341.3	137.6	0.84	-0.11	58.72	-14.8	28.6
8,258.0	0.70	98.50	8,237.2	-341.3	138.8	0.28	-0.11	19.68	-6.2	32.0
8,353.0	0.30	111.90	8,332.2	-341.5	139.6	0.44	-0.42	14.11	0.6	32.7
8,446.0	0.30	132.90	8,425.2	-341.7	140.0	0.12	0.00	22.58	11.8	30.4
8,539.0	0.30	175.70	8,518.2	-342.1	140.2	0.24	0.00	46.02	28.9	14.5
8,634.0	0.80	185.00	8,613.2	-343.0	140.2	0.53	0.53	9.79	30.0	9.7
8,727.0	2.60	196.00	8,706.1	-345.7	139.5	1.96	1.94	11.83	28.5	3.9
8,821.0	2.30	197.30	8,800.0	-349.6	138.4	0.32	-0.32	1.38	24.6	3.3
8,915.0	2.20	202.10	8,894.0	-353.0	137.1	0.23	-0.11	5.11	21.1	1.4
9,009.0	1.40	207.20	8,987.9	-355.7	135.9	0.87	-0.85	5.43	18.2	-0.4
9,102.0	1.20	203.00	9,080.9	-357.6	135.0	0.24	-0.22	-4.52	16.0	0.9
9,196.0	0.40	259.30	9,174.9	-358.6	134.3	1.10	-0.85	59.89	8.8	-12.0
9,290.0	0.70	243.80	9,268.9	-358.9	133.5	0.35	0.32	-16.49	10.8	-9.3
9,383.0	0.50	285.80	9,361.9	-359.0	132.6	0.50	-0.22	45.16	0.9	-13.8
9,476.0	0.70	291.80	9,454.9	-358.7	131.7	0.23	0.22	6.45	-1.5	-13.8
9,569.0	1.20	258.80	9,547.9	-358.7	130.2	0.78	0.54	-35.48	4.8	-12.6
9,662.0	1.50	270.60	9,640.8	-358.9	128.0	0.44	0.32	12.69	-0.1	-13.2
9,756.0	0.80	184.60	9,734.8	-359.5	126.7	1.76	-0.74	-91.49	12.4	-2.2
9,849.0	0.80	227.00	9,827.8	-360.6	126.2	0.62	0.00	45.59	6.5	-9.5
9,942.0	0.20	224.00	9,920.8	-361.2	125.6	0.65	-0.65	-3.23	6.2	-9.2
10,036.0	0.60	210.90	10,014.8	-361.7	125.3	0.43	0.43	-13.94	7.5	-7.6
10,130.0	1.10	204.80	10,108.8	-363.0	124.6	0.54	0.53	-6.49	6.9	-6.8
10,224.0	1.30	176.10	10,202.8	-364.8	124.3	0.67	0.21	-30.53	7.4	-3.1
10,318.0	1.60	170.10	10,296.7	-367.2	124.6	0.36	0.32	-6.38	5.4	-2.4



EOG Resources, Inc.

PVA

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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)
10,413.0	1.90	185.60	10,391.7	-370.1	124.7	0.59	0.32	16.32	1.7	-3.4
10,507.0	1.90	193.40	10,485.7	-373.1	124.2	0.27	0.00	8.30	-1.9	-3.4
10,600.0	1.90	198.60	10,578.6	-376.1	123.3	0.19	0.00	5.59	-5.3	-3.1
10,694.0	1.70	201.70	10,672.6	-378.9	122.3	0.24	-0.21	3.30	-8.4	-2.7
10,787.0	1.70	213.40	10,765.5	-381.3	121.1	0.37	0.00	12.58	-11.5	-0.7
10,881.0	1.30	207.50	10,859.5	-383.4	119.8	0.46	-0.43	-6.28	-13.8	-2.0
10,974.0	0.70	195.90	10,952.5	-384.9	119.2	0.68	-0.65	-12.47	-14.8	-4.9
11,068.0	0.30	148.70	11,046.5	-385.7	119.1	0.58	-0.43	-50.21	-7.0	-14.6
11,162.0	0.90	90.50	11,140.5	-385.9	120.0	0.83	0.64	-61.91	7.8	-13.9
11,256.0	1.00	87.10	11,234.4	-385.8	121.5	0.12	0.11	-3.62	7.1	-13.5
11,350.0	1.30	100.50	11,328.4	-386.0	123.4	0.43	0.32	14.26	1.9	-14.5
11,443.0	1.60	115.20	11,421.4	-386.7	125.6	0.51	0.32	15.81	-4.1	-14.3
11,480.0	1.60	116.10	11,458.4	-387.2	126.6	0.07	0.00	2.43	-5.4	-14.2
11,562.0	2.50	109.40	11,540.3	-388.3	129.3	1.13	1.10	-8.17	-6.6	-14.9
11,656.0	3.30	100.30	11,634.2	-389.4	133.9	0.98	0.85	-9.68	-8.9	-16.1
11,749.0	4.90	4.20	11,727.1	-386.0	136.8	6.66	1.72	-103.33	13.3	-9.9
11,797.0	8.60	23.90	11,774.7	-380.6	138.4	8.99	7.71	41.04	6.8	-14.2
11,832.0	11.10	37.20	11,809.2	-375.5	141.5	9.61	7.14	38.00	2.0	-17.8
11,887.0	12.20	31.20	11,863.1	-366.4	147.7	2.97	2.00	-10.91	4.5	-24.4
11,934.0	17.80	23.80	11,908.5	-355.5	153.2	12.57	11.91	-15.74	10.9	-29.8
11,982.0	25.60	15.20	11,953.0	-338.8	158.9	17.51	16.25	-17.92	17.9	-33.3
12,028.0	33.90	10.60	11,992.9	-316.5	163.9	18.70	18.04	-10.00	21.1	-35.8
12,075.0	41.70	8.50	12,030.0	-288.1	168.6	16.82	16.60	-4.47	20.8	-38.2
12,122.0	47.70	5.50	12,063.4	-255.4	172.6	13.53	12.77	-6.38	19.5	-39.6
12,169.0	51.30	1.40	12,094.0	-219.7	174.7	10.13	7.66	-8.72	19.1	-39.0
12,215.0	56.20	356.50	12,121.2	-182.6	173.9	13.68	10.65	-10.65	19.5	-35.6
12,263.0	62.40	353.00	12,145.7	-141.6	170.1	14.36	12.92	-7.29	18.4	-29.5



EOG Resources, Inc.

PVA

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 Design: ST#1

Local Co-ordinate Reference: Well #602H
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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 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)
12,309.0	66.60	351.90	12,165.5	-100.4	164.7	9.38	9.13	-2.39	16.8	-22.2
12,357.0	74.20	355.40	12,181.6	-55.5	159.7	17.26	15.83	7.29	13.9	-15.8
12,403.0	83.40	359.70	12,190.5	-10.5	157.8	22.00	20.00	9.35	9.3	-12.2
12,435.0	85.80	358.50	12,193.5	21.4	157.3	8.38	7.50	-3.75	5.7	-10.2
12,507.0	90.00	357.30	12,196.1	93.2	154.7	6.07	5.83	-1.67	1.2	-4.1
12,601.0	91.60	358.10	12,194.8	187.2	150.9	1.90	1.70	0.85	0.6	3.2
12,695.0	92.60	358.50	12,191.4	281.0	148.1	1.15	1.06	0.43	-1.8	6.5
12,789.0	92.90	358.20	12,186.9	374.9	145.4	0.45	0.32	-0.32	-5.3	8.5
12,883.0	92.40	359.70	12,182.5	468.8	143.7	1.68	-0.53	1.60	-8.6	9.5
12,976.0	91.80	359.30	12,179.1	561.7	142.9	0.78	-0.65	-0.43	-11.0	9.7
13,069.0	91.60	359.00	12,176.4	654.7	141.5	0.39	-0.22	-0.32	-12.8	10.4
13,162.0	91.30	358.50	12,174.0	747.6	139.5	0.63	-0.32	-0.54	-14.1	11.7
13,256.0	90.50	0.70	12,172.5	841.6	138.8	2.49	-0.85	2.34	-14.6	11.7
13,349.0	91.10	0.60	12,171.2	934.6	139.9	0.65	0.65	-0.11	-14.9	10.0
13,443.0	91.40	359.80	12,169.2	1,028.5	140.2	0.91	0.32	-0.85	-15.9	9.0
13,536.0	90.90	359.50	12,167.3	1,121.5	139.6	0.63	-0.54	-0.32	-16.8	8.9
13,630.0	90.30	359.00	12,166.3	1,215.5	138.4	0.83	-0.64	-0.53	-16.7	9.4
13,724.0	91.80	358.90	12,164.6	1,309.5	136.7	1.60	1.60	-0.11	-17.4	10.5
13,818.0	91.00	357.80	12,162.3	1,403.4	134.0	1.45	-0.85	-1.17	-18.7	12.5
13,911.0	91.20	359.00	12,160.5	1,496.4	131.4	1.31	0.22	1.29	-19.5	14.4
14,004.0	90.50	358.30	12,159.2	1,589.3	129.2	1.06	-0.75	-0.75	-19.6	15.9
14,097.0	88.50	359.80	12,160.0	1,682.3	127.6	2.69	-2.15	1.61	-17.6	16.8
14,191.0	89.70	0.00	12,161.4	1,776.3	127.5	1.29	1.28	0.21	-14.9	16.3
14,284.0	92.20	1.40	12,159.9	1,869.3	128.6	3.08	2.69	1.51	-15.2	14.5
14,378.0	91.40	0.10	12,156.9	1,963.2	129.8	1.62	-0.85	-1.38	-16.9	12.6
14,471.0	91.20	359.70	12,154.8	2,056.2	129.7	0.48	-0.22	-0.43	-17.7	12.1
14,565.0	90.10	358.80	12,153.8	2,150.2	128.5	1.51	-1.17	-0.96	-17.5	12.6



EOG Resources, Inc.

PVA

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 Design: ST#1

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14,658.0	90.10	359.00	12,153.6	2,243.1	126.7	0.22	0.00	0.22	-16.5	13.7
14,752.0	90.70	359.40	12,152.9	2,337.1	125.4	0.77	0.64	0.43	-15.9	14.4
14,846.0	92.10	0.70	12,150.7	2,431.1	125.4	2.03	1.49	1.38	-16.9	13.6
14,938.0	92.00	0.50	12,147.4	2,523.0	126.4	0.24	-0.11	-0.22	-19.0	12.0
15,032.0	91.30	0.00	12,144.7	2,617.0	126.8	0.92	-0.74	-0.53	-20.4	10.9
15,126.0	92.00	0.90	12,141.9	2,710.9	127.5	1.21	0.74	0.96	-21.9	9.5
15,220.0	91.30	1.00	12,139.2	2,804.9	129.1	0.75	-0.74	0.11	-23.3	7.2
15,314.0	91.70	0.80	12,136.8	2,898.8	130.6	0.48	0.43	-0.21	-24.5	5.1
15,408.0	91.50	0.80	12,134.2	2,992.8	131.9	0.21	-0.21	0.00	-25.9	3.1
15,502.0	91.00	0.90	12,132.1	3,086.8	133.3	0.54	-0.53	0.11	-26.4	1.0
15,596.0	89.80	1.10	12,131.5	3,180.8	134.9	1.29	-1.28	0.21	-25.5	-1.3
15,690.0	89.60	1.50	12,131.9	3,274.7	137.1	0.48	-0.21	0.43	-23.5	-4.1
15,784.0	89.60	1.80	12,132.6	3,368.7	139.8	0.32	0.00	0.32	-21.2	-7.5
15,878.0	90.30	359.70	12,132.7	3,462.7	141.0	2.35	0.74	-2.23	-19.6	-9.4
15,971.0	89.90	358.80	12,132.5	3,555.7	139.8	1.06	-0.43	-0.97	-18.2	-8.8
16,063.0	89.20	358.70	12,133.2	3,647.6	137.8	0.77	-0.76	-0.11	-15.9	-7.5
16,156.0	91.40	1.10	12,132.8	3,740.6	137.6	3.50	2.37	2.58	-14.9	-8.0
16,250.0	86.40	356.90	12,134.6	3,834.5	136.0	6.95	-5.32	-4.47	-11.5	-7.1
16,301.0	86.20	354.50	12,137.9	3,885.3	132.2	4.71	-0.39	-4.71	-7.4	-3.6
16,344.0	87.40	354.30	12,140.3	3,928.0	128.0	2.83	2.79	-0.47	-4.3	0.3
16,437.0	89.20	355.30	12,143.0	4,020.6	119.5	2.21	1.94	1.08	0.0	8.0
16,531.0	91.10	354.80	12,142.8	4,114.2	111.4	2.09	2.02	-0.53	1.4	15.5
16,624.0	93.00	356.10	12,139.4	4,206.9	104.1	2.47	2.04	1.40	-0.4	22.2
16,718.0	93.50	357.50	12,134.1	4,300.6	98.8	1.58	0.53	1.49	-4.1	26.8
16,812.0	93.10	359.10	12,128.7	4,394.4	96.0	1.75	-0.43	1.70	-8.0	28.9
16,906.0	91.90	359.10	12,124.6	4,488.3	94.6	1.28	-1.28	0.00	-10.6	29.7
17,001.0	89.40	359.10	12,123.5	4,583.2	93.1	2.63	-2.63	0.00	-9.6	30.5



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17,094.0	90.50	359.60	12,123.6	4,676.2	92.0	1.30	1.18	0.54	-7.3	30.8
17,189.0	90.70	0.30	12,122.6	4,771.2	91.9	0.77	0.21	0.74	-6.1	30.2
17,282.0	93.60	0.60	12,119.1	4,864.1	92.7	3.13	3.12	0.32	-7.4	28.8
17,376.0	92.00	0.50	12,114.5	4,958.0	93.6	1.71	-1.70	-0.11	-9.8	27.3
17,469.0	91.60	0.50	12,111.6	5,051.0	94.4	0.43	-0.43	0.00	-10.6	25.8
17,562.0	93.10	1.80	12,107.8	5,143.9	96.2	2.13	1.61	1.40	-12.2	23.2
17,655.0	91.30	0.20	12,104.2	5,236.8	97.9	2.59	-1.94	-1.72	-13.6	21.0
17,749.0	92.90	1.10	12,100.8	5,330.7	98.9	1.95	1.70	0.96	-14.9	19.2
17,843.0	93.10	0.60	12,095.9	5,424.6	100.3	0.57	0.21	-0.53	-17.6	17.1
17,937.0	91.80	359.40	12,091.8	5,518.5	100.3	1.88	-1.38	-1.28	-19.4	16.5
18,031.0	91.40	358.60	12,089.2	5,612.4	98.7	0.95	-0.43	-0.85	-19.8	17.4
18,125.0	90.70	358.60	12,087.5	5,706.4	96.4	0.74	-0.74	0.00	-19.3	19.1
18,218.0	92.40	357.80	12,085.0	5,799.3	93.5	2.02	1.83	-0.86	-19.7	21.3
18,312.0	95.50	359.80	12,078.5	5,893.0	91.5	3.92	3.30	2.13	-23.9	22.6
18,406.0	93.50	357.70	12,071.1	5,986.7	89.4	3.08	-2.13	-2.23	-29.1	24.0
18,499.0	92.60	357.30	12,066.2	6,079.5	85.4	1.06	-0.97	-0.43	-32.2	27.4
18,592.0	91.90	356.60	12,062.5	6,172.3	80.5	1.06	-0.75	-0.75	-34.1	31.6
18,686.0	93.20	357.30	12,058.3	6,266.1	75.5	1.57	1.38	0.74	-36.5	36.0
18,780.0	92.80	359.50	12,053.4	6,359.9	72.8	2.38	-0.43	2.34	-39.7	37.9
18,873.0	93.20	0.70	12,048.6	6,452.8	73.0	1.36	0.43	1.29	-42.8	37.0
18,967.0	92.20	0.30	12,044.1	6,546.7	73.8	1.15	-1.06	-0.43	-45.5	35.5
19,061.0	92.10	1.10	12,040.6	6,640.6	75.0	0.86	-0.11	0.85	-47.2	33.7
19,155.0	92.20	0.90	12,037.1	6,734.5	76.6	0.24	0.11	-0.21	-49.0	31.4
19,249.0	93.10	0.20	12,032.7	6,828.4	77.5	1.21	0.96	-0.74	-51.5	29.8
19,343.0	91.30	359.40	12,029.1	6,922.3	77.2	2.10	-1.91	-0.85	-53.4	29.5
19,436.0	91.10	359.50	12,027.2	7,015.3	76.3	0.24	-0.22	0.11	-53.5	29.7



EOG Resources, Inc.

PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #602H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25 @ 3359.0usft (H&P 659)
Site:	Osprey 10	MD Reference:	KB = 25 @ 3359.0usft (H&P 659)
Well:	#602H	North Reference:	Grid
Wellbore:	ST#1	Survey Calculation Method:	Minimum Curvature
Design:	ST#1	Database:	EDM 5000.14 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)	
19,524.0	90.00	358.30	12,026.3	7,103.3	74.6	1.85	-1.25	-1.36	-69.4	38.3	
Last MWD Survey											
19,586.0	90.00	358.30	12,026.3	7,165.2	72.8	0.00	0.00	0.00	-111.9	61.8	
Projection To Bit											

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
19,524.0	12,026.3	7,103.3	74.6	Last MWD Survey	
19,586.0	12,026.3	7,165.2	72.8	Projection To Bit	

Checked By: _____ Approved By: _____ Date: _____