



EOG Resources, Inc.

Lea County
Diamond "8" Fed Com
#2H
OH

Survey: MWD #1

Pathfinder X & Y Survey Report

01 March, 2011

HOBBS OCD

JUN 02 2011

RECEIVED

PATHFINDER
A Schlumberger Company

30-025-395-78

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #2H
Project:	Lea County	TVD Reference:	RKB-30' @ 3373.70usft (Cactus #123)
Site:	Diamond "8" Fed Com	MD Reference:	RKB-30' @ 3373.70usft (Cactus #123)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project				Lea County			
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		Diamond "8" Fed Com			
Site Position:		Northing:		415,538.700 usft	
From:	Map	Easting:		762,548.900 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
				Latitude: 32° 8' 22.525 N	
				Longitude: 103° 29' 6.406 W	
				Grid Convergence: 0.45 °	

Well	#2H					
Well Position	+N/-S	0.00 usft	Northing:	415,159.100 usft	Latitude:	32° 8' 18.751 N
	+E/-W	0.00 usft	Easting:	762,782.000 usft	Longitude:	103° 29' 3.730 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	3,343.70 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/15/09	7.73	60.18	48,772

Design	OH			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	356.67

Survey Program		Date	03/01/11	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
165.00	13,900.00	MWD #1 (OH)	MWD	MWD - Standard

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Site:	Diamond "8" Fed Com	MD Reference:	RKB-30' @ 3373.70usft (Cactus #123)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	3,373.70	0.00	0.00	0.00	0.00	415,159.10	762,782.00	
165.00	0.40	358.73	165.00	3,208.70	0.58	-0.01	0.58	0.24	415,159.68	762,781.99	
365.00	0.50	278.13	364.99	3,008.71	1.40	-0.89	1.45	0.29	415,160.50	762,781.11	
549.00	0.50	182.43	548.99	2,824.71	0.71	-1.72	0.81	0.40	415,159.81	762,780.28	
733.00	0.60	193.43	732.98	2,640.72	-1.03	-1.98	-0.91	0.08	415,158.07	762,780.02	
919.00	0.40	211.41	918.97	2,454.73	-2.53	-2.54	-2.38	0.14	415,156.57	762,779.46	
990.00	0.50	201.43	989.97	2,383.73	-3.03	-2.79	-2.86	0.18	415,156.07	762,779.21	
1,149.00	0.53	129.74	1,148.97	2,224.73	-4.15	-2.47	-4.00	0.38	415,154.95	762,779.53	
1,334.00	0.79	127.45	1,333.95	2,039.75	-5.47	-0.80	-5.41	0.14	415,153.63	762,781.20	
1,426.00	0.70	120.60	1,425.95	1,947.75	-6.14	0.18	-6.14	0.14	415,152.96	762,782.18	
1,518.00	0.79	112.07	1,517.94	1,855.76	-6.67	1.26	-6.73	0.15	415,152.43	762,783.26	
1,610.00	0.97	104.86	1,609.93	1,763.77	-7.10	2.60	-7.24	0.23	415,152.00	762,784.60	
1,702.00	1.14	93.70	1,701.91	1,671.79	-7.36	4.26	-7.60	0.29	415,151.74	762,786.26	
1,794.00	1.14	96.78	1,793.89	1,579.81	-7.53	6.08	-7.87	0.07	415,151.57	762,788.08	
1,983.00	1.49	105.22	1,982.84	1,390.86	-8.40	10.32	-8.98	0.21	415,150.70	762,792.32	
2,173.00	1.93	78.32	2,172.76	1,200.94	-8.40	15.84	-9.30	0.48	415,150.70	762,797.84	
2,363.00	0.97	325.56	2,362.72	1,010.98	-6.42	18.06	-7.46	1.30	415,152.68	762,800.06	
2,552.00	1.58	327.49	2,551.68	822.02	-2.91	15.76	-3.82	0.32	415,156.19	762,797.76	
2,741.00	0.09	125.69	2,740.65	633.05	-0.80	14.48	-1.64	0.88	415,158.30	762,796.48	
2,931.00	1.14	87.02	2,930.64	443.06	-0.78	16.49	-1.74	0.56	415,158.32	762,798.49	
3,119.00	0.88	56.26	3,118.61	255.09	0.11	19.55	-1.02	0.31	415,159.21	762,801.55	
3,308.00	2.29	59.42	3,307.54	66.16	2.84	24.01	1.44	0.75	415,161.94	762,806.01	
3,497.00	0.44	11.70	3,496.48	-122.78	5.47	27.41	3.87	1.07	415,164.57	762,809.41	
3,686.00	1.06	53.45	3,685.46	-311.76	7.22	28.96	5.53	0.42	415,166.32	762,810.96	
3,875.00	0.70	209.28	3,874.45	-500.75	7.26	29.80	5.52	0.91	415,166.36	762,811.80	
4,065.00	1.14	41.93	4,064.44	-690.74	7.65	30.50	5.87	0.96	415,166.75	762,812.50	
4,253.00	0.70	319.85	4,252.42	-878.72	9.92	31.01	8.10	0.67	415,169.02	762,813.01	

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Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (")	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg ("/100usft)	Northing (usft)	Easting (usft)	
4,443.00	1.14	3.44	4,442.40	-1,068.70	12.70	30.37	10.91	0.42	415,171.80	762,812.37	
4,632.00	2.46	76.48	4,631.32	-1,257.62	15.52	34.43	13.50	1.26	415,174.62	762,816.43	
4,820.00	1.23	76.39	4,819.22	-1,445.52	16.94	40.31	14.57	0.65	415,176.04	762,822.31	
5,010.00	0.88	209.81	5,009.21	-1,635.51	16.15	41.57	13.71	1.02	415,175.25	762,823.57	
5,168.00	1.58	172.19	5,167.17	-1,793.47	12.94	41.26	10.52	0.65	415,172.04	762,823.26	
5,297.00	1.41	174.91	5,296.13	-1,922.43	9.60	41.65	7.16	0.14	415,168.70	762,823.65	
5,487.00	0.35	308.24	5,486.11	-2,112.41	7.63	41.40	5.21	0.88	415,166.73	762,823.40	
5,676.00	0.53	301.65	5,675.11	-2,301.41	8.45	40.20	6.10	0.10	415,167.55	762,822.20	
5,865.00	0.44	303.58	5,864.10	-2,490.40	9.31	38.85	7.03	0.05	415,168.41	762,820.85	
6,054.00	0.70	306.13	6,053.09	-2,679.39	10.39	37.31	8.20	0.14	415,169.49	762,819.31	
6,243.00	0.62	328.19	6,242.08	-2,868.38	11.94	35.84	9.84	0.14	415,171.04	762,817.84	
6,432.00	0.35	320.99	6,431.07	-3,057.37	13.26	34.94	11.20	0.15	415,172.36	762,816.94	
6,621.00	0.53	346.48	6,620.06	-3,246.36	14.55	34.37	12.53	0.14	415,173.65	762,816.37	
6,811.00	0.44	337.51	6,810.06	-3,436.36	16.08	33.89	14.09	0.06	415,175.18	762,815.89	
7,000.00	0.35	320.90	6,999.05	-3,625.35	17.20	33.25	15.24	0.08	415,176.30	762,815.25	
7,191.00	0.26	2.82	7,190.05	-3,816.35	18.09	32.90	16.15	0.12	415,177.19	762,814.90	
7,381.00	0.00	159.97	7,380.05	-4,006.35	18.52	32.92	16.57	0.14	415,177.62	762,814.92	
7,571.00	0.35	175.79	7,570.05	-4,196.35	17.94	32.96	15.99	0.18	415,177.04	762,814.96	
7,760.00	0.53	198.47	7,759.04	-4,385.34	16.53	32.73	14.60	0.13	415,175.63	762,814.73	
7,949.00	0.53	237.49	7,948.04	-4,574.34	15.23	31.71	13.37	0.19	415,174.33	762,813.71	
8,138.00	0.35	199.70	8,137.03	-4,763.33	14.22	30.78	12.41	0.18	415,173.32	762,812.78	
8,327.00	0.62	196.53	8,326.02	-4,952.32	12.70	30.30	10.92	0.14	415,171.80	762,812.30	
8,517.00	0.62	208.58	8,516.01	-5,142.31	10.81	29.51	9.08	0.07	415,169.91	762,811.51	
8,706.00	0.44	191.44	8,705.00	-5,331.30	9.20	28.88	7.51	0.13	415,168.30	762,810.88	
8,894.00	0.35	206.20	8,893.00	-5,519.30	7.98	28.48	6.31	0.07	415,167.08	762,810.48	
8,971.00	0.35	223.16	8,970.00	-5,596.30	7.59	28.22	5.94	0.13	415,166.69	762,810.22	
9,002.00	0.53	242.15	9,001.00	-5,627.30	7.46	28.03	5.82	0.74	415,166.56	762,810.03	

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Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
9,033.00	1.76	333.73	9,031.99	-5,658.29	7.82	27.69	6.20	5.97	415,166.92	762,809.69	
9,064.00	4.92	346.65	9,062.94	-5,689.24	9.54	27.17	7.95	10.41	415,168.64	762,809.17	
9,096.00	8.62	351.49	9,094.71	-5,721.01	13.25	26.50	11.69	11.69	415,172.35	762,808.50	
9,127.00	12.84	353.24	9,125.16	-5,751.46	18.97	25.75	17.44	13.65	415,178.07	762,807.75	
9,159.00	16.88	354.21	9,156.08	-5,782.38	27.12	24.86	25.63	12.65	415,186.22	762,806.86	
9,191.00	20.40	353.95	9,186.40	-5,812.70	37.30	23.81	35.85	11.00	415,196.40	762,805.81	
9,228.00	24.45	354.39	9,220.59	-5,846.89	51.34	22.38	49.95	10.96	415,210.44	762,804.38	
9,259.00	26.73	354.91	9,248.55	-5,874.85	64.67	21.13	63.33	7.39	415,223.77	762,803.13	
9,291.00	29.19	355.97	9,276.81	-5,903.11	79.62	19.94	78.33	7.84	415,238.72	762,801.94	
9,322.00	31.74	356.49	9,303.53	-5,929.83	95.30	18.91	94.04	8.27	415,254.40	762,800.91	
9,354.00	34.73	356.76	9,330.29	-5,956.59	112.81	17.88	111.58	9.36	415,271.91	762,799.88	
9,386.00	38.08	356.17	9,356.05	-5,982.35	131.76	16.71	130.57	10.53	415,290.86	762,798.71	
9,417.00	41.68	356.48	9,379.83	-6,006.13	151.59	15.44	150.44	11.63	415,310.69	762,797.44	
9,449.00	44.85	357.00	9,403.13	-6,029.43	173.49	14.19	172.37	9.97	415,332.59	762,796.19	
9,481.00	48.10	356.87	9,425.16	-6,051.46	196.65	12.95	195.57	10.16	415,355.75	762,794.95	
9,512.00	51.53	357.10	9,445.16	-6,071.46	220.30	11.71	219.25	11.08	415,379.40	762,793.71	
9,543.00	55.05	358.03	9,463.69	-6,089.99	245.13	10.66	244.09	11.61	415,404.23	762,792.66	
9,575.00	58.12	358.32	9,481.31	-6,107.61	271.82	9.81	270.79	9.62	415,430.92	762,791.81	
9,607.00	62.08	358.38	9,497.26	-6,123.56	299.54	9.01	298.51	12.38	415,458.64	762,791.01	
9,638.00	65.95	358.00	9,510.84	-6,137.14	327.39	8.13	326.36	12.53	415,486.49	762,790.13	
9,669.00	70.08	357.77	9,522.44	-6,148.74	356.11	7.07	355.10	13.34	415,515.21	762,789.07	
9,701.00	73.95	357.73	9,532.32	-6,158.62	386.52	5.87	385.52	12.09	415,545.62	762,787.87	
9,732.00	78.08	358.00	9,539.81	-6,166.11	416.57	4.75	415.59	13.35	415,575.67	762,786.75	
9,764.00	82.04	358.07	9,545.34	-6,171.64	448.07	3.67	447.10	12.38	415,607.17	762,785.67	
9,803.00	87.32	0.01	9,548.95	-6,175.25	486.88	3.02	485.88	14.42	415,645.98	762,785.02	
9,960.00	88.11	356.49	9,555.21	-6,181.51	643.65	-1.77	642.67	2.30	415,802.75	762,780.23	
10,149.00	90.48	355.18	9,557.54	-6,183.84	832.12	-15.49	831.62	1.43	415,991.22	762,766.51	

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
10,338.00	90.66	353.16	9,555.66	-6,181.96	1,020.12	-34.69	1,020.42	1.07	416,179.22	762,747.31
10,527.00	90.31	353.86	9,554.06	-6,180.36	1,207.91	-56.05	1,209.12	0.41	416,367.01	762,725.95
10,621.00	89.25	352.80	9,554.42	-6,180.72	1,301.27	-66.97	1,302.96	1.59	416,460.37	762,715.03
10,715.00	89.78	354.52	9,555.21	-6,181.51	1,394.68	-77.35	1,396.82	1.91	416,553.78	762,704.65
10,811.00	89.60	356.72	9,555.73	-6,182.03	1,490.40	-84.68	1,492.80	2.30	416,649.50	762,697.32
10,907.00	90.04	357.08	9,556.04	-6,182.34	1,586.25	-89.87	1,588.80	0.59	416,745.35	762,692.13
11,003.00	90.48	357.09	9,555.60	-6,181.90	1,682.13	-94.75	1,684.79	0.46	416,841.23	762,687.25
11,098.00	91.71	356.65	9,553.78	-6,180.08	1,776.97	-99.94	1,779.77	1.38	416,936.07	762,682.06
11,194.00	92.86	356.82	9,549.96	-6,176.26	1,872.73	-105.40	1,875.69	1.21	417,031.83	762,676.60
11,290.00	93.56	357.38	9,544.58	-6,170.88	1,968.46	-110.25	1,971.54	0.93	417,127.56	762,671.75
11,385.00	92.24	357.12	9,539.77	-6,166.07	2,063.23	-114.80	2,066.41	1.42	417,222.33	762,667.20
11,481.00	89.87	355.97	9,538.01	-6,164.31	2,159.03	-120.59	2,162.39	2.74	417,318.13	762,661.41
11,577.00	89.78	355.49	9,538.30	-6,164.60	2,254.76	-127.74	2,258.37	0.51	417,413.86	762,654.26
11,672.00	90.40	355.23	9,538.15	-6,164.45	2,349.45	-135.42	2,353.35	0.71	417,508.55	762,646.58
11,768.00	89.08	354.42	9,538.59	-6,164.89	2,445.05	-144.08	2,449.29	1.61	417,604.15	762,637.92
11,854.00	90.66	354.79	9,538.78	-6,165.08	2,530.67	-152.17	2,535.24	1.89	417,689.77	762,629.83
11,960.00	92.42	355.23	9,535.93	-6,162.23	2,636.22	-161.38	2,641.15	1.71	417,795.32	762,620.62
12,055.00	93.83	355.22	9,530.75	-6,157.05	2,730.75	-169.28	2,735.97	1.48	417,889.85	762,612.72
12,150.00	93.83	355.73	9,524.41	-6,150.71	2,825.24	-176.76	2,830.74	0.54	417,984.34	762,605.24
12,246.00	92.68	356.99	9,518.96	-6,145.26	2,920.89	-182.84	2,926.58	1.78	418,079.99	762,599.16
12,342.00	93.39	357.29	9,513.88	-6,140.18	3,016.64	-187.62	3,022.44	0.80	418,175.74	762,594.38
12,437.00	92.59	356.60	9,508.92	-6,135.22	3,111.37	-192.68	3,117.31	1.11	418,270.47	762,589.32
12,532.00	93.12	356.16	9,504.19	-6,130.49	3,206.06	-198.67	3,212.19	0.72	418,365.16	762,583.33
12,628.00	93.12	356.22	9,498.96	-6,125.26	3,301.71	-205.04	3,308.05	0.06	418,460.81	762,576.96
12,723.00	93.30	356.14	9,493.64	-6,119.94	3,396.35	-211.36	3,402.89	0.21	418,555.45	762,570.64
12,819.00	93.30	355.73	9,488.12	-6,114.42	3,491.95	-218.15	3,498.73	0.43	418,651.05	762,563.85
12,915.00	92.59	356.49	9,483.18	-6,109.48	3,587.60	-224.66	3,594.59	1.08	418,746.70	762,557.34

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Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
13,011.00	93.74	356.90	9,477.88	-6,104.18	3,683.29	-230.18	3,690.44	1.27	418,842.39	762,551.82
13,105.00	92.33	357.42	9,472.91	-6,099.21	3,777.04	-234.83	3,784.31	1.60	418,936.14	762,547.17
13,201.00	93.56	356.57	9,467.98	-6,094.28	3,872.78	-239.86	3,880.18	1.56	419,031.88	762,542.14
13,297.00	91.89	357.23	9,463.41	-6,089.71	3,968.53	-245.04	3,976.06	1.87	419,127.63	762,536.96
13,393.00	92.77	357.13	9,459.51	-6,085.81	4,064.33	-249.76	4,071.98	0.92	419,223.43	762,532.24
13,488.00	93.47	356.55	9,454.34	-6,080.64	4,159.05	-254.99	4,166.84	0.96	419,318.15	762,527.01
13,584.00	91.71	357.00	9,450.00	-6,076.30	4,254.79	-260.39	4,262.73	1.89	419,413.89	762,521.61
13,680.00	92.51	356.97	9,446.47	-6,072.77	4,350.59	-265.43	4,358.67	0.83	419,509.69	762,516.57
13,776.00	93.56	356.98	9,441.38	-6,067.68	4,446.32	-270.49	4,454.53	1.09	419,605.42	762,511.51
13,850.00	94.70	356.93	9,436.05	-6,062.35	4,520.03	-274.41	4,528.33	1.54	419,679.13	762,507.59
13,900.00	94.70	356.93	9,431.96	-6,058.26	4,569.79	-277.08	4,578.17	0.00	419,728.89	762,504.92

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
13,900.00	9,431.96	4,569.79	-277.08	BHL-13900.00°MD,94.70°INC,356.93°AZI, 9431.96°TVD, 4578.17°VS, 4569.79°

Checked By: _____ Approved By: _____ Date: _____