



A Schlumberger Company

EOG Resources, Inc.

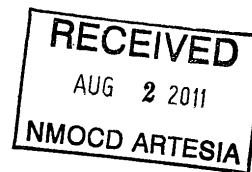
Eddy County
Elk Wallow 11 State
#4H
OH

Design: OH

Pathfinder X&Y Report

09 June, 2011

30-015-38291



A Schlumberger Company

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County	TVD Reference:	KB=30' @ 3162.60usft (Cactus 123)
Site:	Elk Wallow 11 State	MD Reference:	KB=30' @ 3162.60usft (Cactus 123)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project:	Eddy County
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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:	Elk Wallow 11 State
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Site Position:		Northing:	418,830.100 usft	Latitude:	32° 9' 3.367 N
From:	Map	Easting:	615,001.000 usft	Longitude:	103° 57' 42.290 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.20 °

Well:	#4H
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Well Position	+N/-S	0.00 usft	Northing:	414,322.700 usft	Latitude:	32° 8' 18.606 N
	+E/-W	0.00 usft	Easting:	619,439.600 usft	Longitude:	103° 56' 50.848 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,132.60 usft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/23/2011	7.76	60.04	48,531

Design:	OH
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	353.66

Survey Program	Date	6/9/2011
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From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
787.00	11,680.00	Survey #1- MWD (OH)	MWD	MWD - Standard

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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 (azimuth) (°)	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	-3,162.60	0.00	0.00	0.00	0.00	414,322.70	619,439.60
787.00	0.53	224.66	786.99	-2,375.61	-2.59	-2.56	-2.29	0.07	414,320.11	619,437.04
878.00	0.79	254.43	877.98	-2,284.62	-3.06	-3.46	-2.66	0.46	414,319.64	619,436.14
1,063.00	0.79	251.73	1,062.97	-2,099.63	-3.80	-5.90	-3.12	0.02	414,318.90	619,433.70
1,247.00	0.53	247.68	1,246.95	-1,915.65	-4.52	-7.89	-3.62	0.14	414,318.18	619,431.71
1,431.00	0.79	298.10	1,430.94	-1,731.66	-4.25	-9.80	-3.14	0.33	414,318.45	619,429.80
1,615.00	1.41	266.20	1,614.91	-1,547.69	-3.80	-13.17	-2.32	0.46	414,318.90	619,426.43
1,677.00	1.23	234.91	1,676.89	-1,485.71	-4.23	-14.48	-2.61	1.18	414,318.47	619,425.12
1,868.00	0.44	199.04	1,867.87	-1,294.73	-6.10	-16.40	-4.26	0.48	414,316.60	619,423.20
2,059.00	0.70	212.30	2,058.86	-1,103.74	-7.78	-17.26	-5.83	0.15	414,314.92	619,422.34
2,250.00	1.14	217.94	2,249.84	-912.76	-10.27	-19.05	-8.10	0.23	414,312.43	619,420.55
2,441.00	1.06	240.20	2,440.80	-721.80	-12.64	-21.75	-10.16	0.23	414,310.06	619,417.85
2,632.00	1.41	163.27	2,631.77	-530.83	-15.77	-22.61	-13.18	0.82	414,306.93	619,416.99
2,823.00	1.76	138.75	2,822.70	-339.90	-20.23	-20.00	-17.90	0.40	414,302.47	619,419.60
3,014.00	2.37	121.83	3,013.58	-149.02	-24.52	-14.71	-22.74	0.45	414,298.18	619,424.89
3,205.00	1.23	84.43	3,204.48	41.88	-26.40	-9.31	-25.21	0.83	414,296.30	619,430.29
3,396.00	1.41	52.12	3,395.44	232.84	-24.76	-5.42	-24.01	0.40	414,297.94	619,434.18
3,588.00	0.35	61.49	3,587.41	424.81	-23.03	-3.04	-22.55	0.56	414,299.67	619,436.56
3,779.00	0.44	38.54	3,778.41	615.81	-22.18	-2.07	-21.81	0.09	414,300.52	619,437.53
3,970.00	0.62	31.21	3,969.40	806.80	-20.72	-1.08	-20.47	0.10	414,301.98	619,438.52
4,162.00	0.53	13.60	4,161.39	998.79	-18.97	-0.33	-18.81	0.10	414,303.73	619,439.27
4,352.00	0.35	22.81	4,351.38	1,188.78	-17.58	0.10	-17.48	0.10	414,305.12	619,439.70
4,540.00	0.26	21.71	4,539.38	1,376.78	-16.65	0.48	-16.60	0.05	414,306.05	619,440.08
4,698.00	0.26	32.59	4,697.38	1,534.78	-16.02	0.81	-16.01	0.03	414,306.68	619,440.41
4,856.00	0.18	258.40	4,855.38	1,692.78	-15.76	0.76	-15.75	0.26	414,306.94	619,440.36
5,048.00	0.18	237.75	5,047.38	1,884.78	-15.99	0.21	-15.91	0.03	414,306.71	619,439.81
5,239.00	0.44	195.91	5,238.37	2,075.77	-16.85	-0.25	-16.72	0.17	414,305.85	619,439.35

Company: EOG Resources, Inc.
Project: Eddy County
Site: Elk Wallow 11 State
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #4H
KB=30' @ 3162.60usft (Cactus 123)
KB=30' @ 3162.60usft (Cactus 123)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
5,431.00	0.79	191.96	5,430.36	2,267.76	-18.86	-0.72	-18.66	0.18	414,303.84	619,438.88
5,623.00	0.88	153.55	5,622.34	2,459.74	-21.47	-0.34	-21.30	0.29	414,301.23	619,439.26
5,814.00	1.06	168.40	5,813.32	2,650.72	-24.51	0.67	-24.44	0.16	414,298.19	619,440.27
6,005.00	1.23	146.60	6,004.28	2,841.68	-27.96	2.15	-28.02	0.24	414,294.74	619,441.75
6,197.00	1.41	160.05	6,196.23	3,033.63	-31.90	4.09	-32.15	0.19	414,290.80	619,443.69
6,388.00	0.88	61.51	6,387.20	3,224.60	-33.41	6.18	-33.89	0.93	414,289.29	619,445.78
6,580.00	0.97	98.00	6,579.18	3,416.58	-32.93	9.09	-33.73	0.30	414,289.77	619,448.69
6,771.00	0.88	122.79	6,770.16	3,607.56	-33.95	11.92	-35.06	0.21	414,288.75	619,451.52
6,860.00	1.67	359.39	6,859.14	3,696.54	-33.02	12.48	-34.20	2.56	414,289.68	619,452.08
KOP - 6860.00' MD, 6859.05' TVD, -36.13° N, 7.88° E										
6,892.00	5.01	345.68	6,891.09	3,728.49	-31.20	12.13	-32.35	10.66	414,291.50	619,451.73
6,923.00	9.15	344.45	6,921.84	3,759.24	-27.51	11.14	-28.58	13.36	414,295.19	619,450.74
6,955.00	13.54	345.32	6,953.21	3,790.61	-21.44	9.50	-22.35	13.73	414,301.26	619,449.10
6,987.00	18.11	346.29	6,983.99	3,821.39	-12.98	7.38	-13.71	14.30	414,309.72	619,446.98
7,019.00	22.60	347.43	7,013.98	3,851.38	-2.14	4.86	-2.66	14.09	414,320.56	619,444.46
7,051.00	26.56	348.84	7,043.08	3,880.48	10.89	2.13	10.59	12.51	414,333.59	619,441.73
7,083.00	30.60	349.63	7,071.17	3,908.57	25.93	-0.72	25.85	12.68	414,348.63	619,438.88
7,115.00	33.77	350.33	7,098.25	3,935.65	42.71	-3.68	42.85	9.97	414,365.41	619,435.92
7,147.00	36.14	351.56	7,124.48	3,961.88	60.81	-6.56	61.17	7.73	414,383.51	619,433.04
7,179.00	39.13	353.58	7,149.82	3,987.22	80.19	-9.07	80.70	10.11	414,402.89	619,430.53
7,211.00	42.21	355.26	7,174.09	4,011.49	100.94	-11.09	101.55	10.21	414,423.64	619,428.51
7,242.00	44.67	356.49	7,196.59	4,033.99	122.20	-12.62	122.84	8.39	414,444.90	619,426.98
7,274.00	48.01	356.66	7,218.68	4,056.08	145.30	-14.00	145.96	10.44	414,466.00	619,425.60
7,306.00	51.35	356.66	7,239.39	4,076.79	169.66	-15.42	170.32	10.44	414,492.36	619,424.18
7,338.00	52.67	356.49	7,259.08	4,096.48	194.83	-16.93	195.51	4.15	414,517.53	619,422.67
7,370.00	55.57	355.17	7,277.84	4,115.24	220.68	-18.82	221.41	9.66	414,543.38	619,420.78
7,402.00	59.00	353.85	7,295.13	4,132.53	247.48	-21.40	248.33	11.27	414,570.18	619,418.20

Company: EOG Resources, Inc.
Project: Eddy County
Site: Elk Wallow 11 State
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
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North Reference:
Survey Calculation Method:
Database:

Well #4H
KB=30' @ 3162.60usft (Cactus 123)
KB=30' @ 3162.60usft (Cactus 123)
Grid
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Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLog (*/100usft)	Northing (usft)	Easting (usft)	
7,434.00	62.17	353.32	7,310.84	4,148.24	275.18	-24.52	276.20	10.01	414,597.88	619,415.08	
7,466.00	65.95	352.53	7,324.84	4,162.24	303.73	-28.06	304.97	12.02	414,626.43	619,411.54	
7,498.00	70.52	351.83	7,336.70	4,174.10	333.16	-32.11	334.67	14.42	414,655.86	619,407.49	
7,530.00	73.69	351.74	7,346.53	4,183.93	363.30	-36.46	365.10	9.91	414,686.00	619,403.14	
7,562.00	76.68	351.65	7,354.71	4,192.11	393.90	-40.93	396.02	9.35	414,716.60	619,398.67	
7,594.00	80.46	351.83	7,361.05	4,198.45	424.94	-45.43	427.36	11.83	414,747.64	619,394.17	
7,626.00	84.42	352.79	7,365.26	4,202.66	456.37	-49.68	459.06	12.73	414,779.07	619,389.92	
LP - 7626.00°MD, 7365.17°TVD, 453.26°N, 54.28°E											
7,664.00	86.88	353.67	7,368.14	4,205.54	493.99	-54.14	496.95	6.87	414,816.69	619,385.46	
7,855.00	89.34	353.41	7,374.44	4,211.84	683.66	-75.62	687.83	1.30	415,006.36	619,363.98	
8,046.00	87.32	353.67	7,380.01	4,217.41	873.36	-97.10	878.74	1.07	415,196.06	619,342.50	
8,236.00	87.32	353.76	7,388.89	4,226.29	1,062.01	-117.88	1,068.53	0.05	415,384.71	619,321.72	
8,427.00	87.58	350.86	7,397.39	4,234.79	1,251.08	-143.41	1,259.27	1.52	415,573.78	619,296.19	
8,618.00	88.64	350.42	7,403.69	4,241.09	1,439.44	-174.45	1,449.90	0.60	415,762.14	619,265.15	
8,810.00	89.60	350.77	7,406.64	4,244.04	1,628.83	-205.82	1,641.60	0.53	415,951.53	619,233.78	
9,001.00	91.19	353.41	7,405.32	4,242.72	1,817.99	-232.10	1,832.50	1.61	416,140.69	619,207.50	
9,192.00	91.63	355.78	7,400.62	4,238.02	2,008.06	-250.09	2,023.40	1.26	416,330.76	619,189.51	
9,383.00	89.69	356.49	7,398.42	4,235.82	2,198.61	-262.96	2,214.20	1.08	416,521.31	619,176.64	
9,574.00	88.11	357.45	7,402.09	4,239.49	2,389.30	-273.06	2,404.84	0.97	416,712.00	619,166.54	
9,765.00	87.49	358.86	7,409.42	4,246.82	2,580.05	-279.20	2,595.10	0.81	416,902.75	619,160.40	
9,956.00	90.04	358.24	7,413.54	4,250.94	2,770.93	-284.03	2,785.35	1.37	417,093.63	619,155.57	
10,147.00	89.25	354.29	7,414.72	4,252.12	2,961.48	-296.47	2,976.11	2.11	417,284.18	619,143.13	
10,339.00	89.60	350.25	7,416.65	4,254.05	3,151.69	-322.29	3,168.00	2.11	417,474.39	619,117.31	
10,530.00	90.13	349.54	7,417.10	4,254.50	3,339.72	-355.80	3,358.59	0.46	417,662.42	619,083.80	
10,721.00	91.98	352.53	7,413.58	4,250.98	3,528.33	-385.56	3,549.32	1.84	417,851.03	619,054.04	
10,911.00	91.19	352.27	7,408.33	4,245.73	3,716.58	-410.68	3,739.20	0.44	418,039.28	619,028.92	
11,102.00	92.07	352.62	7,402.89	4,240.29	3,905.85	-435.78	3,930.08	0.50	418,228.55	619,003.82	

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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11,294.00	92.24	354.29	7,395.67	4,233.07	4,096.45	-457.65	4,121.94	0.87	418,419.15	618,981.95
11,485.00	92.51	355.17	7,387.76	4,225.16	4,286.48	-475.18	4,312.74	0.48	418,609.18	618,964.42
11,628.00	93.03	354.38	7,380.85	4,218.25	4,428.72	-488.18	4,455.54	0.66	418,751.42	618,951.42
11,680.00	93.03	354.38	7,378.10	4,215.50	4,480.40	-493.27	4,507.46	0.00	418,803.10	618,946.33
BHL - 11680.00'MD, 7378.00'TVD', 4477.29'N, -497.87'E - PBHL(EW11#4)										

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,860.00	6,859.14	-33.02	12.48	KOP - 6860.00'MD, 6859.05'TVD', -36.13'N, 7.88'E
7,626.00	7,365.26	456.37	-49.68	LP - 7626.00'MD, 7365.17'TVD', 453.26'N, -54.28'E
11,680.00	7,378.10	4,480.40	-493.27	BHL - 11680.00'MD, 7378.00'TVD', 4477.29'N, -497.87'E

Checked By: _____	Approved By: _____	Date: _____
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