

Results of Directional Survey

API number:	30-025-40053		
OGRID:		Operator:	EOG RESOURCES INC
		Property:	CABALLO 23 FEDERAL # 4H

surface	ULSTR:	A	23	T	25S	R	33E
				50	FNL	440	FEL

BH Loc	ULSTR:	P	23	T	25S	R	33E
14080	MD	9449.3	TVD	4925	FNL	421	FEL
				355	FSL		

Top Perf/OH	ULSTR:	A	23	T	25S	R	33E
9804	MD	9452.1	TVD	654	FNL	433	FEL

Bot Perf/OH	ULSTR:	P	23	T	25S	R	33E
13992	MD	9451.3	TVD	4837	FNL	426	FEL
				443	FSL		

	MD	N/S	E/W	VD
	9793	-592.83	6.95	9451.95
TOP PERFS/OH	9804	-603.82	6.55	9452.08
	9856	-655.78	4.68	9452.72
	13959	-4754.34	12.72	9452.11
BOT PERFS/OH	13992	-4787.30	14.26	9451.32
	14027	-4822.25	15.89	9450.49

NEXT TO LAST	14027	-4822.25	15.89	9450.49
LAST READING	14080	-4875.17	18.55	9449.30
TD	14080	-4875.17	18.55	9449.30

Surface Location	50	FN	440	FE
Projected BHL	4925	FN	421	FE
Location of				
Top Perfs/OH	654	FN	433	FE
Bottom Perfs/OH	4837	FN	426	FE

SUMMARY of Subsurface Locations

Surface Location	A-23-25S-33E	50	FN	440	FE	Vert. Depth
Top Perfs/OH	A-23-25S-33E	654	FN	433	FE	9452.08
Bottom Perfs/OH	P-23-25S-33E	4837	FN	426	FE	9451.32
Projected TD	P-23-25S-33E	4925	FN	421	FE	9449.30



HOBBS OCD

NOV 30 2011

RECEIVED

EOG Resources, Inc.

Lea County

Caballo 23 Federal

#4H

OH

Survey: MWD #1

Pathfinder X & Y Survey Report

28 March, 2011

SUR: A-23-25s-33e, 50/N & 440/E
BHL: P-23-25s-33e, 4925/N & 421/E
API # 30-025-40053

PATHFINDER

A Schlumberger Company

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3375.60usft (30' KB Cactus #123)
Site:	Caballo 23 Federal	MD Reference:	WELL @ 3375.60usft (30' KB Cactus #123)
Well:	#4H	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 Caballo 23 Federal					
Site Position:		Northing:	409,363.500 usft	Latitude:	32° 7' 22.915 N
From:	Map	Easting:	742,578.600 usft	Longitude:	103° 32' 59.175 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	#4H					
Well Position	+N-S	0.00 usft	Northing:	409,393.100 usft	Latitude:	32° 7' 22.888 N
	+E-W	0.00 usft	Easting:	746,980.300 usft	Longitude:	103° 32' 7.992 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	3,345.60 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	03/07/11	7.58	60.13	48,623

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	179.56

Survey Program		Date	03/28/11		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
1,207.00	14,080.00	MWD #1 (OH)	MWD	MWD - Standard	

Company: EOG Resources, Inc.
Project: Lea County
Site: Caballo 23 Federal
Well: #4H
Wellbore: OH
Design: OH

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

Well #4H:
WELL @ 3375.60usft (30' KB Cactus #123)
WELL @ 3375.60usft (30' KB Cactus #123)
Gnd
Minimum Curvature
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)
1,075.00	0.90	110.57	1,074.88	2,300.72	-13.21	-1.03	13.20	0.00	409,379.89	746,979.27
1,207.00	0.53	155.62	1,206.87	2,168.73	-14.13	0.19	14.13	0.49	409,378.97	746,980.49
1,300.00	0.88	163.97	1,299.86	2,075.74	-15.21	0.57	15.21	0.39	409,377.89	746,980.87
1,392.00	0.88	160.80	1,391.85	1,983.75	-16.55	0.99	16.56	0.05	409,376.55	746,981.29
1,484.00	0.88	161.51	1,483.84	1,891.76	-17.89	1.45	17.90	0.01	409,375.21	746,981.75
1,576.00	0.70	156.06	1,575.83	1,799.77	-19.08	1.90	19.09	0.21	409,374.02	746,982.20
1,668.00	0.70	166.78	1,667.83	1,707.77	-20.14	2.26	20.15	0.14	409,372.96	746,982.56
1,760.00	0.88	174.40	1,759.82	1,615.78	-21.39	2.46	21.40	0.23	409,371.71	746,982.76
1,855.00	1.14	182.60	1,854.80	1,520.80	-23.06	2.49	23.07	0.31	409,370.04	746,982.79
1,949.00	1.23	189.19	1,948.78	1,426.82	-24.99	2.28	25.00	0.17	409,368.11	746,982.58
2,043.00	1.58	181.28	2,042.75	1,332.85	-27.28	2.09	27.29	0.42	409,365.82	746,982.39
2,137.00	1.76	180.14	2,136.71	1,238.89	-30.02	2.06	30.03	0.19	409,363.08	746,982.36
2,231.00	1.41	183.04	2,230.68	1,144.92	-32.62	1.99	32.63	0.38	409,360.48	746,982.29
2,325.00	0.79	231.55	2,324.66	1,050.94	-34.17	1.43	34.18	1.13	409,358.93	746,981.73
2,420.00	0.88	238.50	2,419.65	955.95	-34.96	0.29	34.96	0.14	409,358.14	746,980.59
2,515.00	0.88	234.37	2,514.64	860.96	-35.77	-0.92	35.76	0.07	409,357.33	746,979.38
2,609.00	0.88	229.71	2,608.63	766.97	-36.66	-2.06	36.64	0.08	409,356.44	746,978.24
2,703.00	0.79	221.10	2,702.62	672.98	-37.61	-3.04	37.59	0.16	409,355.49	746,977.26
2,798.00	0.79	212.31	2,797.61	577.99	-38.66	-3.82	38.63	0.13	409,354.44	746,976.48
2,893.00	0.62	191.48	2,892.60	483.00	-39.71	-4.27	39.68	0.32	409,353.39	746,976.03
2,988.00	0.62	164.93	2,987.60	388.00	-40.71	-4.24	40.68	0.30	409,352.39	746,976.06
3,083.00	0.88	119.76	3,082.59	293.01	-41.57	-3.47	41.55	0.66	409,351.53	746,976.83
3,177.00	1.14	99.54	3,176.58	199.02	-42.09	-1.92	42.07	0.47	409,351.01	746,978.38
3,272.00	2.29	89.70	3,271.53	104.07	-42.23	0.91	42.24	1.25	409,350.87	746,981.21
3,366.00	2.37	81.79	3,365.45	10.15	-41.95	4.71	41.98	0.35	409,351.15	746,985.01
3,461.00	1.49	72.74	3,460.40	-84.80	-41.30	7.83	41.36	0.98	409,351.80	746,988.13
3,556.00	0.62	47.25	3,555.38	-179.78	-40.58	9.39	40.65	1.02	409,352.52	746,989.69

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3375.60usft (30' KB Cactus #123)
Site:	Caballo 23 Federal	MD Reference:	WELL @ 3375.60usft (30' KB Cactus #123)
Well:	#4H	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)	
3,650.00	0.70	23.96	3,649.38	-273.78	-39.71	10.00	39.79	0.30	409,353.39	746,990.30	
3,746.00	1.32	43.91	3,745.36	-369.76	-38.38	11.00	38.46	0.73	409,354.72	746,991.30	
3,840.00	0.88	76.87	3,839.35	-463.75	-37.44	12.45	37.53	0.80	409,355.66	746,992.75	
3,935.00	0.88	90.49	3,934.33	-558.73	-37.28	13.89	37.38	0.22	409,355.82	746,994.19	
4,030.00	1.23	94.88	4,029.32	-653.72	-37.37	15.64	37.49	0.38	409,355.73	746,995.94	
4,124.00	1.41	65.44	4,123.29	-747.69	-36.98	17.70	37.11	0.74	409,356.12	746,998.00	
4,219.00	1.14	36.70	4,218.27	-842.67	-35.73	19.32	35.88	0.72	409,357.37	746,999.62	
4,313.00	1.67	50.41	4,312.24	-936.64	-34.11	20.94	34.27	0.66	409,358.99	747,001.24	
4,407.00	1.76	82.23	4,406.20	-1,030.60	-33.04	23.42	33.22	1.00	409,360.06	747,003.72	
4,502.00	0.26	112.38	4,501.19	-1,125.59	-32.93	25.07	33.12	1.62	409,360.17	747,005.37	
4,597.00	0.88	90.75	4,596.18	-1,220.58	-33.02	26.00	33.22	0.68	409,360.08	747,006.30	
4,691.00	2.46	89.35	4,690.14	-1,314.54	-33.00	28.74	33.22	1.68	409,360.10	747,009.04	
4,785.00	2.20	91.37	4,784.06	-1,408.46	-33.02	32.56	33.27	0.29	409,360.08	747,012.86	
4,880.00	2.55	94.71	4,878.98	-1,503.38	-33.24	36.49	33.52	0.40	409,359.86	747,016.79	
4,938.00	1.49	102.44	4,936.94	-1,561.34	-33.51	38.51	33.80	1.88	409,359.59	747,018.81	
5,007.00	0.44	97.87	5,005.93	-1,630.33	-33.74	39.65	34.04	1.52	409,359.36	747,019.95	
5,196.00	0.18	192.71	5,194.93	-1,819.33	-34.13	40.30	34.44	0.26	409,358.97	747,020.60	
5,384.00	0.09	149.11	5,382.93	-2,007.33	-34.54	40.31	34.85	0.07	409,358.56	747,020.61	
5,573.00	0.62	99.54	5,571.92	-2,196.32	-34.84	41.40	35.16	0.30	409,358.26	747,021.70	
5,763.00	0.88	91.19	5,761.91	-2,386.31	-35.04	43.87	35.38	0.15	409,358.06	747,024.17	
5,952.00	1.23	88.73	5,950.88	-2,575.28	-35.03	47.35	35.39	0.19	409,358.07	747,027.65	
6,141.00	1.58	18.51	6,139.83	-2,764.23	-32.51	50.20	32.89	0.87	409,360.59	747,030.50	
6,331.00	0.62	15.17	6,329.79	-2,954.19	-29.03	51.30	29.43	0.51	409,364.07	747,031.60	
6,519.00	0.70	22.11	6,517.78	-3,142.18	-26.99	52.00	27.39	0.06	409,366.11	747,032.30	
6,709.00	0.79	32.04	6,707.77	-3,332.17	-24.80	53.14	25.21	0.08	409,368.30	747,033.44	
6,897.00	1.49	339.75	6,895.73	-3,520.13	-21.41	52.98	21.82	0.63	409,371.69	747,033.28	
7,087.00	1.76	279.02	7,085.67	-3,710.07	-18.64	49.24	19.01	0.87	409,374.46	747,029.54	

Company: EOG Resources, Inc.
Project: Lea County
Site: Caballo 23 Federal
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3375.60usft (30' KB Cactus #123)
MD Reference: WELL @ 3375.60usft (30' KB Cactus #123)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)	
7,278.00	1.93	280.25	7,276.57	-3,900.97	-17.60	43.18	17.93	0.09	409,375.50	747,023.48	
7,469.00	1.58	281.65	7,467.48	-4,091.88	-16.50	37.43	16.79	0.18	409,376.60	747,017.73	
7,661.00	1.58	277.17	7,659.41	-4,283.81	-15.63	32.22	15.88	0.06	409,377.47	747,012.52	
7,851.00	1.23	259.07	7,849.35	-4,473.75	-15.69	27.61	15.91	0.30	409,377.41	747,007.91	
8,042.00	1.41	245.35	8,040.30	-4,664.70	-17.06	23.47	17.24	0.19	409,376.04	747,003.77	
8,231.00	0.79	203.25	8,229.27	-4,853.67	-19.23	20.84	19.39	0.52	409,373.87	747,001.14	
8,421.00	0.79	191.57	8,419.25	-5,043.65	-21.72	20.06	21.87	0.08	409,371.38	747,000.36	
8,610.00	0.97	177.41	8,608.23	-5,232.63	-24.59	19.87	24.74	0.15	409,368.51	747,000.17	
8,808.00	0.88	152.19	8,806.20	-5,430.60	-27.61	20.65	27.77	0.21	409,365.49	747,000.95	
8,903.00	1.06	150.57	8,901.19	-5,525.59	-29.02	21.43	29.18	0.19	409,364.08	747,001.73	
8,966.00	2.29	172.51	8,964.16	-5,588.56	-30.78	21.88	30.94	2.17	409,362.32	747,002.18	
8,998.00	5.54	179.02	8,996.08	-5,620.48	-32.96	21.99	33.12	10.23	409,360.14	747,002.29	
9,030.00	9.23	180.80	9,027.81	-5,652.21	-37.07	21.98	37.24	11.55	409,356.03	747,002.28	
9,061.00	12.84	181.11	9,058.23	-5,682.63	-43.00	21.88	43.17	11.65	409,350.10	747,002.18	
9,093.00	16.71	180.21	9,089.17	-5,713.57	-51.16	21.79	51.32	12.11	409,341.94	747,002.09	
9,124.00	20.22	179.94	9,118.57	-5,742.97	-60.97	21.78	61.14	11.33	409,332.13	747,002.08	
9,156.00	24.01	180.58	9,148.21	-5,772.61	-73.02	21.72	73.18	11.87	409,320.08	747,002.02	
9,188.00	27.96	181.31	9,176.97	-5,801.37	-87.03	21.48	87.20	12.38	409,306.07	747,001.78	
9,220.00	32.54	181.69	9,204.60	-5,829.00	-103.15	21.06	103.30	14.32	409,289.95	747,001.36	
9,251.00	37.11	182.28	9,230.04	-5,854.44	-120.83	20.44	120.99	14.78	409,272.27	747,000.74	
9,283.00	40.63	181.63	9,254.95	-5,879.35	-140.90	19.76	141.05	11.07	409,252.20	747,000.06	
9,315.00	44.23	181.57	9,278.57	-5,902.97	-162.48	19.15	162.62	11.25	409,230.62	746,999.45	
9,346.00	47.40	181.27	9,300.17	-5,924.57	-184.70	18.61	184.84	10.25	409,208.40	746,998.91	
9,378.00	50.56	181.46	9,321.17	-5,945.57	-208.83	18.03	208.96	9.89	409,184.27	746,998.33	
9,409.00	53.20	181.14	9,340.31	-5,964.71	-233.21	17.48	233.34	8.55	409,159.89	746,997.78	
9,441.00	55.66	181.02	9,358.92	-5,983.32	-259.23	16.99	259.36	7.69	409,133.87	746,997.29	
9,473.00	58.92	181.85	9,376.21	-6,000.61	-286.15	16.31	286.26	10.42	409,106.95	746,996.61	

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Design:	OH	Database:	EDM 5000.1 Single User Db

Survey											
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9,504.00	62.52	182.69	9,391.37	-6,015.77	-313.16	15.23	313.27	11.85	409,079.94	746,995.53	
9,536.00	66.83	182.46	9,405.06	-6,029.46	-342.05	13.94	342.15	13.48	409,051.05	746,994.24	
9,567.00	71.23	181.70	9,416.15	-6,040.55	-370.97	12.89	371.06	14.38	409,022.13	746,993.19	
9,598.00	73.60	180.76	9,425.51	-6,049.91	-400.51	12.26	400.59	8.17	408,992.59	746,992.56	
9,630.00	75.45	181.08	9,434.05	-6,058.45	-431.35	11.76	431.42	5.86	408,961.75	746,992.06	
9,662.00	78.44	181.29	9,441.28	-6,065.68	-462.51	11.12	462.58	9.37	408,930.59	746,991.42	
9,693.00	83.27	181.99	9,446.20	-6,070.60	-493.09	10.24	493.16	15.74	408,900.01	746,990.54	
9,724.00	85.91	182.24	9,449.13	-6,073.53	-523.93	9.10	523.98	8.55	408,869.17	746,989.40	
9,762.00	88.02	181.69	9,451.14	-6,075.54	-561.85	7.80	561.90	5.74	408,831.25	746,988.10	
9,793.00	88.99	181.44	9,451.95	-6,076.35	-592.83	6.95	592.87	3.23	408,800.27	746,987.25	
9,856.00	89.60	182.70	9,452.72	-6,077.12	-655.78	4.68	655.80	2.22	408,737.32	746,984.98	
9,951.00	89.96	181.48	9,453.09	-6,077.49	-750.72	1.21	750.70	1.34	408,642.38	746,981.51	
10,046.00	89.34	180.63	9,453.67	-6,078.07	-845.70	-0.54	845.67	1.11	408,547.40	746,979.76	
10,141.00	89.69	179.67	9,454.47	-6,078.87	-940.69	-0.78	940.66	1.08	408,452.41	746,979.52	
10,235.00	90.04	178.30	9,454.69	-6,079.09	-1,034.68	0.88	1,034.65	1.50	408,358.42	746,981.18	
10,330.00	89.25	177.16	9,455.28	-6,079.68	-1,129.60	4.64	1,129.60	1.46	408,263.50	746,984.94	
10,424.00	89.96	178.36	9,455.93	-6,080.33	-1,223.52	8.32	1,223.55	1.48	408,169.58	746,988.62	
10,518.00	88.11	177.59	9,457.51	-6,081.91	-1,317.44	11.64	1,317.49	2.13	408,075.66	746,991.94	
10,613.00	85.47	177.94	9,462.83	-6,087.23	-1,412.21	15.34	1,412.29	2.80	407,980.89	746,995.64	
10,708.00	85.91	178.90	9,469.97	-6,094.37	-1,506.91	17.95	1,507.00	1.11	407,886.19	746,998.25	
10,804.00	86.70	178.72	9,476.16	-6,100.56	-1,602.69	19.94	1,602.79	0.84	407,790.41	747,000.24	
10,899.00	88.72	178.62	9,479.95	-6,104.35	-1,697.58	22.14	1,697.70	2.13	407,695.52	747,002.44	
10,995.00	88.55	178.25	9,482.24	-6,106.64	-1,793.52	24.76	1,793.65	0.42	407,599.58	747,005.06	
11,090.00	90.84	180.23	9,482.75	-6,107.15	-1,888.50	26.02	1,888.64	3.19	407,504.60	747,006.32	
11,186.00	92.15	181.22	9,480.24	-6,104.64	-1,984.45	24.81	1,984.58	1.71	407,408.65	747,005.11	
11,281.00	91.80	181.36	9,476.97	-6,101.37	-2,079.37	22.67	2,079.48	0.40	407,313.73	747,002.97	
11,377.00	91.98	183.04	9,473.80	-6,098.20	-2,175.25	18.99	2,175.33	1.76	407,217.85	746,999.29	

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3375.60usft (30' KB Cactus #123)
Site:	Caballo 23 Federal	MD Reference:	WELL @ 3375.60usft (30' KB Cactus #123)
Well:	#4H	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)
11,473.00	92.15	182.44	9,470.34	-6,094.74	-2,271.07	14.40	2,271.12	0.65	407,122.03	746,994.70
11,568.00	92.77	180.89	9,466.26	-6,090.66	-2,365.94	11.64	2,365.96	1.76	407,027.16	746,991.94
11,642.00	92.33	180.38	9,462.97	-6,087.37	-2,439.86	10.82	2,439.87	0.91	406,953.24	746,991.12
11,664.00	92.86	180.54	9,461.98	-6,086.38	-2,461.84	10.65	2,461.85	2.52	406,931.26	746,990.95
11,760.00	93.03	179.96	9,457.04	-6,081.44	-2,557.71	10.23	2,557.72	0.63	406,835.39	746,990.53
11,856.00	92.42	179.36	9,452.48	-6,076.88	-2,653.60	10.80	2,653.61	0.89	406,739.50	746,991.10
11,951.00	89.52	176.19	9,450.87	-6,075.27	-2,748.49	14.49	2,748.52	4.52	406,644.61	746,994.79
12,047.00	89.43	177.62	9,451.75	-6,076.15	-2,844.35	19.67	2,844.41	1.49	406,548.75	746,999.97
12,143.00	89.25	178.53	9,452.86	-6,077.26	-2,940.29	22.89	2,940.37	0.97	406,452.81	747,003.19
12,239.00	91.45	178.96	9,452.27	-6,076.67	-3,036.25	25.00	3,036.36	2.34	406,356.85	747,005.30
12,334.00	90.40	179.33	9,450.74	-6,075.14	-3,131.23	26.41	3,131.34	1.17	406,261.87	747,006.71
12,430.00	88.64	179.82	9,451.54	-6,075.94	-3,227.22	27.13	3,227.33	1.90	406,165.88	747,007.43
12,526.00	90.22	182.24	9,452.50	-6,076.90	-3,323.19	25.40	3,323.29	3.01	406,069.91	747,005.70
12,621.00	89.96	185.95	9,452.35	-6,076.75	-3,417.93	18.62	3,417.97	3.91	405,975.17	746,998.92
12,717.00	91.19	186.36	9,451.38	-6,075.78	-3,513.37	8.33	3,513.33	1.35	405,879.73	746,988.63
12,813.00	89.87	183.65	9,450.49	-6,074.89	-3,608.99	-0.05	3,608.88	3.14	405,784.11	746,980.25
12,909.00	90.75	183.33	9,449.98	-6,074.38	-3,704.81	-5.89	3,704.65	0.98	405,688.29	746,974.41
13,004.00	89.43	179.21	9,449.83	-6,074.23	-3,799.76	-8.00	3,799.59	4.55	405,593.34	746,972.30
13,100.00	89.78	178.05	9,450.49	-6,074.89	-3,895.73	-5.70	3,895.57	1.26	405,497.37	746,974.60
13,196.00	90.48	178.80	9,450.27	-6,074.67	-3,991.69	-3.06	3,991.55	1.07	405,401.41	746,977.24
13,290.00	91.36	178.25	9,448.76	-6,073.16	-4,085.65	-0.64	4,085.52	1.10	405,307.45	746,979.66
13,386.00	90.75	180.25	9,446.99	-6,071.39	-4,181.62	0.61	4,181.50	2.18	405,211.48	746,980.91
13,482.00	89.87	177.66	9,446.47	-6,070.87	-4,277.59	2.36	4,277.48	2.85	405,115.51	746,982.66
13,578.00	89.52	178.45	9,446.98	-6,071.38	-4,373.53	5.62	4,373.45	0.90	405,019.57	746,985.92
13,673.00	88.02	178.22	9,449.02	-6,073.42	-4,468.47	8.38	4,468.40	1.60	404,924.63	746,988.68
13,769.00	89.34	181.17	9,451.24	-6,075.64	-4,564.43	8.89	4,564.36	3.37	404,828.67	746,989.19
13,864.00	89.08	178.34	9,452.55	-6,076.95	-4,659.41	9.30	4,659.34	2.99	404,733.69	746,989.60

Company: EOG Resources, Inc.
Project: Lea County
Site: Caballo 23 Federal
Well: #4H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #4H
TVD Reference: WELL @ 3375.60usft (30' KB Cactus #123)
MD Reference: WELL @ 3375.60usft (30' KB Cactus #123)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
13,959.00	91.45	177.53	9,452.11	-6,076.51	-4,754.34	12.72	4,754.30	2.64	404,638.76	746,993.02
14,027.00	91.28	177.12	9,450.49	-6,074.89	-4,822.25	15.89	4,822.23	0.65	404,570.85	746,996.19
14,080.00	91.28	177.12	9,449.30	-6,073.70	-4,875.17	18.55	4,875.17	0.00	404,517.93	746,998.85

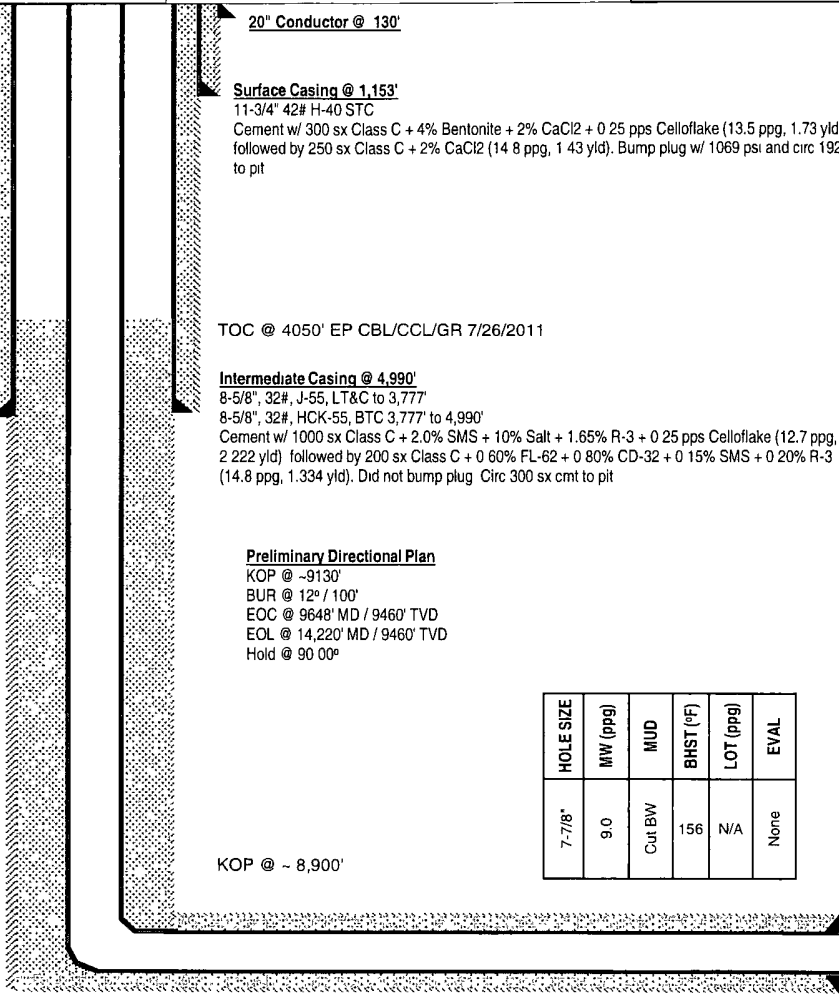
BHL-14080.00' MD, 91.28° INC, 177.12° AZI, 9449.30' TVD, 4875.17' VS, -4875.17' N, 18.55' E - PBHL (Caballo #4)

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
14,080.00	9,449.30	-4,875.17	18.55	BHL-14080.00' MD, 91.28° INC, 177.12° AZI, 9449.30' TVD, 4875.17' VS, -4875.17'

Checked By: _____ Approved By: _____ Date: _____



DEPTH (ft)		MARKERS (KB)	LITHOLOGY	Caballo 23 Federal #4H Red Hills Field Lea County, New Mexico	SURF: 50' FNL & 440' FEL LOC: Sec. 23 SURVEY: T-25-S, R-33-E GL: 3345.6' KB: 3375.6' ZERO: 30 0' AGL			
1,000'	Rustler - 1090'			20" Conductor @ 130'	Perfs 13,989 11,264 13,915 11,205 13,852 11,146 13,780 11,087 13,742 11,028 13,683 10,969 13,624 10,910 13,565 10,851 13,506 10,792 13,447 10,733 13,388 10,674 13,329 10,615 13,279 10,556 13,211 10,497 13,152 10,438 13,088 10,379 13,034 10,320 12,982 10,246 12,916 10,172 12,857 10,098 12,798 10,024 12,739 9,950 12,680 9,875 12,621 9,800 12,562 12,503 12,444 12,385 12,326 12,267 12,208 12,149 12,093 12,030 11,972 11,903 11,854 11,796 11,734 11,677 11,618 11,559 11,500 11,441 11,382 11,323			
3,000'				Surface Casing @ 1,153' 11-3/4" 42# H-40 STC Cement w/ 300 sx Class C + 4% Bentonite + 2% CaCl2 + 0 25 pps Celloflake (13.5 ppg, 1.73 yld), followed by 250 sx Class C + 2% CaCl2 (14 8 ppg, 1 43 yld). Bump plug w/ 1069 psi and circ 192 sx to pit	14-3/4" 8.4 9.0 10.0	FW 86 Brine	N/A	
5,000'		Base Salt - 4870'			TOC @ 4050' EP CBL/CCL/GR 7/26/2011	10 2		
6,000'		Delaware - 5110'			Intermediate Casing @ 4,990' 8-5/8", 32#, J-55, LT&C to 3,777' 8-5/8", 32#, HCK-55, BTC 3,777' to 4,990' Cement w/ 1000 sx Class C + 2.0% SMS + 10% Salt + 1.65% R-3 + 0 25 pps Celloflake (12.7 ppg, 2 222 yld) followed by 200 sx Class C + 0 60% FL-62 + 0 80% CD-32 + 0 15% SMS + 0 20% R-3 (14.8 ppg, 1.334 yld). Did not bump plug Circ 300 sx cmt to pit	8.4		N/A
7,000'	Cherry Canyon - 6130'		Preliminary Directional Plan KOP @ ~9130' BUR @ 12° / 100' EOC @ 9648' MD / 9460' TVD EOL @ 14,220' MD / 9460' TVD Hold @ 90 00°	8.6	Fresh Water			
8,000'	Brushy Canyon - 9090'							
9,000'		KOP @ ~ 8,900'						
10,000'	Bone Spring Lime - 9,260'							
11,000'		Production Liner @ 14,075' MD, 9,452' TVD 5-1/2" 20# HCP-110 NSCC Cement w/ 135 sx 60.40-0 Class C + 15.0 pps BA-90 + 4 0% MPA-5 + 3 0% SMS + 5.0% A-10 + 1 0% BA-10A + 0 8% ASA-301 + 2 5% R-21 + 8 pps LCM-1 (10 8 ppg, 3 675 yld) Followed by 400 sx 50'-50 10 Class H + 0 8% FL-52A + 0.5% ASA-301 + 0 5% SMS + 2.0% Salt + 0 25% R-21 + 3 0 pps LCM-1 + 0 25 pps Celloflake (11 8 ppg, 2 36 yld) followed by 900 sx 50.50.2 Class H + 0.65% FL-52 + 0 45% CD-32 + 0 10% SMS + 2 0% Salt (14.2 ppg, 1 277 yld) Did not bump plug floats held		9 3	Cut BW	156		
					Drg Eng:	SLM		
					Date:	3/29/2011		