



I Eric McMahon certify that I am employed by Vaughn Energy Services. That I did on the day(s) of 04/30/12 through 04/30/12 conduct or supervise the taking of a Rate Gyro survey from a depth of 0 feet to a depth of 725 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the at the request of EOG Resources for the University 43 Well # 1009H API # 42-235-34996 in Irion County, Texas ; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn Energy Services

A handwritten signature in black ink that reads "Eric McMahon". The signature is written in a cursive style and is underlined with a horizontal line.

Eric McMahon
Service Technician
Vaughn Energy Services



Company: E.O.G Resources, Inc.
 Lease/Well: University 43/1009H
 Location: 2.7 Miles West from Barnhart
 Rig Name: Production
 State/County: Texas/Irion
 Latitude: 31.12
 GRID North is 0.46 Degrees West of True North
 VS-Azi: 0.00 Degrees



Depth Reference : ELEV = 2700 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: university 43 #1009h_ed.ut

Minimum Curvature Method

Report Date/Time: 5/8/2012 / 12:28

Vaughn Energy Services

Midland, Texas

432-563-5444

Surveyor: Eric McMahon

University 43 1009H / API 42-235-34996

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N-S FT	+E-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.38	331.02	100.00	0.29	-0.16	0.29	0.33	331.02	0.38
200.00	0.45	355.57	200.00	0.96	-0.35	0.96	1.02	340.12	0.19
300.00	0.36	8.94	299.99	1.66	-0.33	1.66	1.70	348.82	0.13
400.00	0.29	23.63	399.99	2.21	-0.18	2.21	2.21	355.38	0.11
500.00	0.78	29.55	499.99	3.03	0.26	3.03	3.04	4.85	0.49
600.00	0.90	31.74	599.98	4.29	1.01	4.29	4.40	13.21	0.13
700.00	0.70	39.22	699.97	5.43	1.80	5.43	5.72	18.39	0.23
725.00	0.66	27.89	724.97	5.67	1.97	5.67	6.01	19.13	0.55

Geog resources, inc.

LINE ITEM & HOLE NO
UNIVERSITY 43 #1009H
 TOPSOIL & VEGETATION
NATURAL MESQUITE PASTURE
 3.1 MILES WEST OF BARNHART, TEXAS
 SECTION 10, BLOCK 43, UNIVERSITY LAND
 IRION COUNTY, TEXAS



This section has been carefully checked on the ground according to the most official survey records, maps, and other data available to us. We are not responsible for any errors or omissions in this report or for any consequences that may result from its use.

CERTIFICATION:



William A. Hartley
 Texas Reg. No. 5047

Geog Resources, Inc. is a Registered Professional Land Surveyor and Topographic Surveyor in the State of Texas. We are not responsible for any errors or omissions in this report or for any consequences that may result from its use.

TOPOGRAPHIC

Surveying & Mapping • GIS • GPS
 2400 N. 9th Street • Dallas, Texas 75208
 Telephone: (469) 967-1453 • Fax: (469) 967-1453

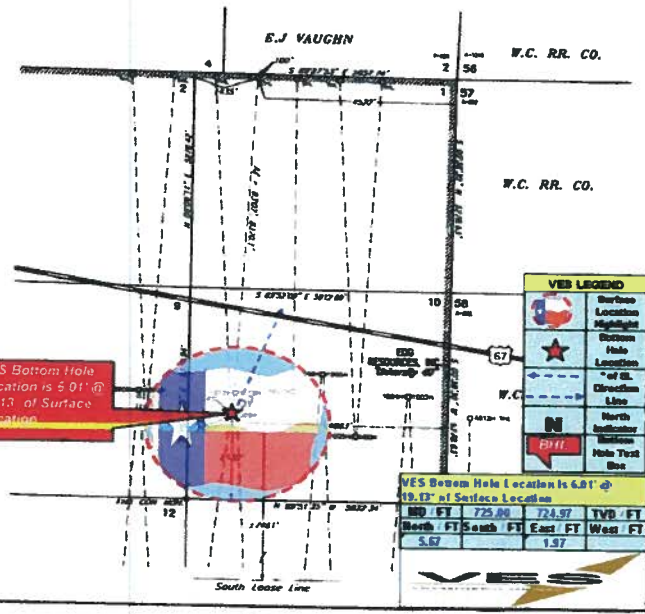
LEGEND

- Fence
- - - - - Powerline
- - - - - Water Line
- - - - - Pipeline
- == == == Lease Road

Surface Hole Location:
 2137' FSL @ 1425' PBL (HOLE 1)
 SA Ground Elevation: 2820'
 E = 1726377 Y = 538296
 LAT N 31 1234810 LONG W 101 22 28256
 MAG BE TX-C 7198
 E = 2018064 Y = 1037324
 LAT N 31 1236413 LONG W 101 22 62176

Terminus Hole Location:
 1807' PBL @ 1425' PBL (HOLE 1)
 E = 1726377 Y = 538296
 LAT N 31 1484708 LONG W 101 22 60882
 MAG BE TX-C 7208
 E = 2017028 Y = 1036180
 LAT N 31 1486300 LONG W 101 22 60812

ORIGIN: CDC SUR 833144
 SCALE: 1" = 2000'
 DATE: MARCH 14, 2012
 CDGO: 804 2000 0000 30 0000 00
 LO: UNIVERSITY_1009H_A1.T
 DRAWS: 89919
 DRAWN BY: A.C.P.



VES LEGEND

	Surface Location
	Wellbore Location
	North Arrow
	VES Bottom Hole

VES Bottom Hole Location is 5.01' @ 19.13' of Surface Location

MD FT	725.89	724.97	TVD FT
North FT	South FT	East FT	West FT
5.67		1.97	





EOG Resources

Irion County, TX (NAD27 TC)

University 43 #1009H / As-Drilled

University 43 #1009H

OH - Job #32D0512589

Survey: MWD

SDI Standard Survey Report

08 July, 2012





Scientific Drilling International, Inc.

2034 Trade Drive • Midland, Texas 79706

P. O. Box 9699 • Midland, Texas 79708

Tel: 432-689-5600 • Fax: 432-697-0324

State of Texas
County of Midland

I, Justin Bounds, certify that; I am employed by Scientific Drilling International; that I did on the day(s) of 5/23/12 through 5/30/12 conduct or supervise the taking of a MWD survey from a depth of 883 feet to a depth of 14926 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Scientific Drilling International; that I am authorized and qualified to make this report; that this survey was conducted at the request of EOG Resources for the University 43 #1009H Well, API# 42-235-34996 in IRION County, Texas; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Scientific Drilling International.



Field Technician

Company:	EOG Resources	Local Co-ordinate Reference:	Well University 43 #1009H
Project:	Irion County, TX (NAD27 TC)	TVD Reference:	RF @ 2682.00usft (Patterson #452)
Site:	University 43 #1009H / As-Drilled	MD Reference:	RF @ 2682.00usft (Patterson #452)
Well:	University 43 #1009H	North Reference:	Grid
Wellbore:	OH - Job #32D0512589	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Project	Irion County, TX (NAD27 TC)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University 43 #1009H / As-Drilled				
Site Position:		Northing:	530,946.00 usft	Latitude:	31° 7' 24.531 N
From:	Map	Easting:	1,720,117.00 usft	Longitude:	101° 13' 40.172 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	-0.46 °

Well	University 43 #1009H					
Well Position	+N/-S	0.00 usft	Northing:	530,946.00 usft	Latitude:	31° 7' 24.531 N
	+E/-W	0.00 usft	Easting:	1,720,117.00 usft	Longitude:	101° 13' 40.172 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,655.00 usft

Wellbore	OH - Job #32D0512589				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	05/24/12	6.28	59.52	48,095

Design	Actual				
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	269.82

Survey Program	Date	05/30/12			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
127.00	752.00	VES Gyro (OH - Job #32D0512589)	UNKNOWN	Unknown survey	
883.00	14,975.00	MWD (OH - Job #32D0512589)	MWD	MWD - Standard ISCWSA	

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
752.00	0.66	27.89	751.97	5.76	1.92	18.45	6.08	
Gyro Tie-In								
883.00	0.09	308.13	882.96	6.50	2.19	18.67	6.86	
1,068.00	0.26	135.95	1,067.96	6.28	2.37	20.69	6.72	
1,258.00	0.09	1.56	1,257.96	6.12	2.68	23.61	6.68	
1,449.00	0.09	355.85	1,448.96	6.42	2.67	22.57	6.95	
1,640.00	0.18	196.51	1,639.96	6.28	2.57	22.27	6.79	
1,831.00	0.09	161.70	1,830.96	5.85	2.54	23.42	6.38	
2,022.00	0.18	196.86	2,021.96	5.42	2.50	24.70	5.97	
2,213.00	0.09	198.70	2,212.96	5.00	2.36	25.29	5.52	
2,404.00	0.35	155.20	2,403.96	4.32	2.56	30.60	5.02	

Company:	EOG Resources	Local Co-ordinate Reference:	Well University 43 #1009H
Project:	Inion County, TX (NAD27 TC)	TVD Reference:	RF @ 2682.00usft (Patterson #452)
Site:	University 43 #1009H / As-Drilled	MD Reference:	RF @ 2682.00usft (Patterson #452)
Well:	University 43 #1009H	North Reference:	Grid
Wellbore:	OH - Job #32D0512589	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
2,595.00	0.62	268.84	2,594.95	3.77	1.77	25.11	4.17	
2,786.00	0.79	260.75	2,785.94	3.54	-0.56	350.94	3.59	
2,977.00	0.62	281.85	2,976.93	3.54	-2.88	320.92	4.56	
3,167.00	0.26	290.02	3,166.92	3.90	-4.29	312.30	5.80	
3,358.00	1.85	245.11	3,357.88	2.75	-7.49	290.16	7.98	
3,549.00	1.49	252.76	3,548.80	0.72	-12.66	273.24	12.68	
3,740.00	1.06	260.31	3,739.75	-0.32	-16.77	268.92	16.78	
3,931.00	0.88	246.69	3,930.73	-1.19	-19.86	266.56	19.90	
4,121.00	0.09	342.23	4,120.72	-1.63	-21.25	265.61	21.31	
4,312.00	0.44	69.50	4,311.72	-1.23	-20.60	266.58	20.64	
4,503.00	0.18	22.57	4,502.71	-0.70	-19.80	267.99	19.82	
4,694.00	0.26	34.17	4,693.71	-0.06	-19.44	269.82	19.44	
4,885.00	0.26	60.10	4,884.71	0.51	-18.83	271.56	18.83	
5,076.00	0.44	181.74	5,075.71	0.00	-18.47	269.99	18.47	
5,266.00	0.35	206.61	5,265.70	-1.25	-18.75	266.18	18.80	
5,457.00	0.35	185.96	5,456.70	-2.35	-19.08	262.97	19.22	
5,648.00	0.26	122.06	5,647.70	-3.16	-18.77	260.43	19.03	
5,839.00	0.26	103.78	5,838.70	-3.50	-17.98	259.00	18.32	
6,030.00	0.18	63.97	6,029.70	-3.47	-17.29	258.66	17.63	
6,115.00	0.18	41.38	6,114.69	-3.31	-17.08	259.04	17.40	
6,182.00	3.17	15.01	6,181.66	-1.44	-16.53	265.02	16.60	
6,214.00	7.74	15.63	6,213.51	1.49	-15.72	275.42	15.79	
6,245.00	12.05	16.42	6,244.04	6.61	-14.24	294.89	15.70	
6,277.00	16.09	19.58	6,275.07	13.99	-11.81	319.83	18.31	
6,309.00	19.17	22.39	6,305.57	23.03	-8.33	340.13	24.49	
6,341.00	22.42	26.44	6,335.48	33.36	-3.61	353.83	33.55	
6,373.00	25.68	30.48	6,364.70	44.80	2.63	3.36	44.88	
6,405.00	29.02	32.15	6,393.12	57.35	10.28	10.16	58.26	
6,436.00	32.18	31.89	6,419.80	70.73	18.64	14.77	73.15	
6,468.00	35.35	31.80	6,446.40	85.84	28.03	18.08	90.30	
6,500.00	38.43	31.97	6,471.99	102.14	38.17	20.49	109.04	
6,532.00	41.50	32.24	6,496.51	119.55	49.10	22.33	129.24	
6,564.00	44.32	33.03	6,519.94	137.89	60.85	23.81	150.72	
6,596.00	47.66	33.38	6,542.17	157.15	73.45	25.05	173.47	
6,627.00	51.35	32.68	6,562.30	176.91	86.30	26.00	196.84	
6,659.00	54.96	31.97	6,581.49	198.55	99.98	26.73	222.30	
6,691.00	58.74	31.54	6,598.98	221.33	114.08	27.27	249.00	
6,723.00	62.70	31.45	6,614.63	245.12	128.66	27.69	276.84	
6,755.00	66.48	32.06	6,628.36	269.69	143.87	28.08	305.67	
6,787.00	70.43	32.41	6,640.11	294.86	159.74	28.45	335.36	
6,818.00	74.74	33.21	6,649.38	319.72	175.77	28.80	364.85	
6,850.00	78.17	34.17	6,656.88	345.60	193.02	29.18	395.85	
6,882.00	80.81	34.35	6,662.71	371.60	210.74	29.56	427.19	
6,914.00	83.36	33.56	6,667.12	397.89	228.44	29.86	458.80	
6,947.00	86.35	32.15	6,670.08	425.49	246.26	30.06	491.62	

Company:	EOG Resources	Local Co-ordinate Reference:	Well University 43 #1009H
Project:	Irion County, TX (NAD27 TC)	TVD Reference:	RF @ 2682.00usft (Patterson #452)
Site:	University 43 #1009H / As-Drilled	MD Reference:	RF @ 2682.00usft (Patterson #452)
Well:	University 43 #1009H	North Reference:	Grid
Wellbore:	OH - Job #32D0512589	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
7,042.00	91.28	30.48	6,672.04	506.61	295.61	30.26	586.55
7,138.00	90.04	25.38	6,670.94	591.39	340.56	29.94	682.44
7,233.00	89.78	22.04	6,671.09	678.36	378.75	29.18	776.93
7,329.00	89.43	22.48	6,671.75	767.20	415.12	28.42	872.31
7,424.00	88.99	23.36	6,673.06	854.69	452.11	27.88	966.91
7,520.00	88.55	19.67	6,675.12	943.97	487.30	27.30	1,062.33
7,615.00	89.69	21.52	6,676.58	1,032.88	520.71	26.75	1,156.71
7,710.00	90.92	19.76	6,676.07	1,121.78	554.20	26.29	1,251.21
7,806.00	88.81	14.57	6,676.30	1,213.47	582.52	25.64	1,346.04
7,902.00	86.79	7.45	6,679.99	1,307.56	600.83	24.68	1,439.00
7,997.00	87.41	4.46	6,684.80	1,401.92	610.67	23.54	1,529.15
8,093.00	87.23	1.04	6,689.29	1,497.69	615.27	22.33	1,619.15
8,188.00	85.74	355.94	6,695.12	1,592.44	612.78	21.05	1,706.27
8,283.00	87.85	354.80	6,700.43	1,686.98	605.12	19.73	1,792.22
8,379.00	89.78	354.01	6,702.41	1,782.49	595.77	18.48	1,879.42
8,474.00	89.43	350.84	6,703.07	1,876.65	583.24	17.26	1,965.19
8,570.00	91.01	353.30	6,702.70	1,971.72	570.00	16.12	2,052.46
8,665.00	91.89	354.71	6,700.29	2,066.17	560.08	15.17	2,140.73
8,760.00	91.71	355.41	6,697.31	2,160.77	551.91	14.33	2,230.14
8,856.00	91.80	354.89	6,694.37	2,256.38	543.79	13.55	2,320.98
8,951.00	92.86	355.50	6,690.51	2,350.97	535.84	12.84	2,411.26
9,043.00	90.40	355.94	6,687.89	2,442.66	528.98	12.22	2,499.29
9,135.00	89.96	355.41	6,687.60	2,534.40	522.04	11.64	2,587.61
9,227.00	92.95	355.41	6,685.27	2,626.07	514.68	11.09	2,676.03
9,320.00	93.12	354.53	6,680.34	2,718.58	506.54	10.55	2,765.37
9,412.00	92.33	356.47	6,675.97	2,810.18	499.33	10.08	2,854.20
9,504.00	91.01	356.55	6,673.29	2,901.97	493.73	9.66	2,943.67
9,596.00	89.52	358.31	6,672.86	2,993.87	489.61	9.29	3,033.64
9,688.00	90.31	0.42	6,673.00	3,085.86	488.59	9.00	3,124.30
9,780.00	90.31	359.63	6,672.50	3,177.86	488.63	8.74	3,215.21
9,873.00	88.20	359.02	6,673.71	3,270.84	487.53	8.48	3,306.97
9,965.00	87.93	359.10	6,676.82	3,362.77	486.03	8.22	3,397.72
10,060.00	87.93	359.10	6,680.25	3,457.70	484.53	7.98	3,491.49
10,156.00	88.29	357.96	6,683.41	3,553.62	482.07	7.73	3,586.16
10,251.00	89.34	0.95	6,685.38	3,648.58	481.17	7.51	3,680.17
10,347.00	91.28	3.59	6,684.86	3,744.49	484.97	7.38	3,775.76
10,442.00	89.34	358.93	6,684.34	3,839.43	487.06	7.23	3,870.20
10,538.00	89.73	358.13	6,685.12	3,935.40	484.60	7.02	3,965.12
10,633.00	89.87	359.54	6,685.46	4,030.38	482.67	6.83	4,059.17
10,729.00	89.69	359.10	6,685.82	4,126.37	481.53	6.66	4,154.37
10,824.00	88.64	357.26	6,687.21	4,221.30	478.51	6.47	4,248.34
10,919.00	88.72	358.49	6,689.40	4,316.21	474.99	6.28	4,342.27
11,015.00	89.43	358.05	6,690.95	4,412.15	472.09	6.11	4,437.34
11,110.00	90.13	356.47	6,691.31	4,507.04	467.55	5.92	4,531.23

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Well:	University 43 #1009H	North Reference:	Grid
Wellbore:	OH - Job #32D0512589	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
11,206.00	90.66	357.87	6,690.65	4,602.92	462.81	5.74	4,626.13	
11,301.00	90.66	356.29	6,689.56	4,697.79	457.97	5.57	4,720.06	
11,397.00	90.31	357.26	6,688.74	4,793.63	452.57	5.39	4,814.95	
11,492.00	90.66	356.20	6,687.94	4,888.47	447.15	5.23	4,908.88	
11,587.00	89.60	359.37	6,687.72	4,983.39	443.48	5.09	5,003.08	
11,683.00	88.99	1.74	6,688.90	5,079.37	444.41	5.00	5,098.77	
11,778.00	90.04	0.51	6,689.71	5,174.34	446.27	4.93	5,193.55	
11,874.00	87.76	2.79	6,691.55	5,270.27	449.04	4.87	5,289.37	
11,969.00	87.67	2.44	6,695.34	5,365.10	453.37	4.83	5,384.22	
12,064.00	88.20	0.86	6,698.76	5,459.99	456.10	4.78	5,479.01	
12,160.00	89.16	1.83	6,700.97	5,555.94	458.35	4.72	5,574.81	
12,255.00	88.81	359.89	6,702.66	5,650.91	459.78	4.65	5,669.58	
12,351.00	89.43	359.72	6,704.13	5,746.90	459.45	4.57	5,765.23	
12,446.00	89.78	359.37	6,704.79	5,841.89	458.70	4.49	5,859.87	
12,541.00	91.89	2.71	6,703.40	5,936.85	460.42	4.43	5,954.67	
12,637.00	90.22	3.06	6,701.63	6,032.70	465.25	4.41	6,050.62	
12,732.00	90.48	3.50	6,701.05	6,127.55	470.69	4.39	6,145.60	
12,827.00	88.46	0.69	6,701.93	6,222.46	474.16	4.36	6,240.50	
12,923.00	88.81	1.48	6,704.22	6,318.42	475.98	4.31	6,336.32	
13,018.00	89.08	2.62	6,705.97	6,413.34	479.38	4.27	6,431.23	
13,114.00	90.22	3.67	6,706.56	6,509.19	484.64	4.26	6,527.21	
13,209.00	88.29	1.04	6,707.79	6,604.09	488.55	4.23	6,622.14	
13,305.00	88.46	1.56	6,710.51	6,700.03	490.72	4.19	6,717.97	
13,401.00	89.16	358.31	6,712.51	6,795.99	490.61	4.13	6,813.68	
13,496.00	89.25	358.05	6,713.83	6,890.94	487.60	4.05	6,908.16	
13,591.00	89.08	357.70	6,715.21	6,985.86	484.07	3.96	7,002.61	
13,687.00	90.92	0.25	6,715.21	7,081.83	482.36	3.90	7,098.24	
13,782.00	91.54	1.30	6,713.17	7,176.80	483.64	3.86	7,193.08	
13,878.00	91.63	0.86	6,710.52	7,272.75	485.45	3.82	7,288.93	
13,973.00	89.52	1.52	6,709.56	7,367.72	487.42	3.78	7,383.82	
14,069.00	90.04	2.71	6,709.93	7,463.65	490.97	3.76	7,479.78	
14,164.00	89.08	358.66	6,710.66	7,558.62	492.10	3.72	7,574.62	
14,259.00	87.93	355.76	6,713.14	7,653.46	487.48	3.64	7,668.97	
14,355.00	89.69	357.70	6,715.13	7,749.27	482.01	3.56	7,764.25	
14,450.00	89.96	358.23	6,715.42	7,844.21	478.63	3.49	7,858.80	
14,543.00	90.84	358.93	6,714.77	7,937.18	476.33	3.43	7,951.46	
14,641.00	90.92	358.93	6,713.27	8,035.15	474.50	3.38	8,049.15	
14,736.00	92.07	358.49	6,710.79	8,130.09	472.36	3.33	8,143.81	
14,832.00	90.57	359.37	6,708.58	8,226.05	470.57	3.27	8,239.50	
14,926.00	91.80	359.98	6,706.64	8,320.02	470.04	3.23	8,333.29	
Last MWD Survey								
14,962.91	91.80	359.98	6,705.48	8,356.92	470.02	3.22	8,370.13	
PBHL-Univ 43 #1009H								

Company:	EOG Resources	Local Co-ordinate Reference:	Well University 43 #1009H
Project:	Irion County, TX (NAD27 TC)	TVD Reference:	RF @ 2682.00usft (Patterson #452)
Site:	University 43 #1009H / As-Drilled	MD Reference:	RF @ 2682.00usft (Patterson #452)
Well:	University 43 #1009H	North Reference:	Grid
Wellbore:	OH - Job #32D0512589	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM-Regulatory

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
14,975.00	91.80	359.98	6,705.10	8,369.00	470.02	3.21	8,382.19
Projection to Bit							

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
752.00	751.97	5.76	1.92	Gyro Tie-in
14,926.00	6,706.64	8,320.02	470.04	Last MWD Survey
14,975.00	6,705.10	8,369.00	470.02	Projection to Bit



University 43 #1009H
 Iron County, TX (NAD27 TC)
 Northing (Y) 530946.00
 Easting (X) 1720117.00
 Plan #2 vs Actual - 8-3/4" Hole



Azimuth to Grid North
 True North: 0.48°
 Magnetic North: 6.74°
 Magnetic Field
 Strength: 48094.7anT
 Dip Angle: 59.52°
 Date: 05/24/2012
 Mode: IGRF2010
 To convert Magnetic North to Grid, Add 6.74°
 To convert True North to Grid, Add 0.48°

WELL DETAILS: University 43 #1009H

	+N-S	+E-W	Northing	Ground Level Easting	2655.00	Latitude	Longitude	Slot
	0.00	0.00	530946.00	1720117.00		31° 7' 24.531 N	101° 13' 40.172 W	

PROJECT DETAILS: Iron County, TX (NAD27 TC)
 Geoidic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Texas Central 4203
 System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSec	Target
1	8115.00	0.16	41.38	8114.89	-3.31	-17.05	0.00	0.00	-4.23	
2	8195.00	0.18	41.38	8194.89	-3.12	-15.92	0.00	0.00	-4.63	
3	6838.32	89.50	32.00	6870.00	397.57	233.75	12.02	-9.38	409.87	
4	7895.14	88.50	359.77	8676.25	1271.57	482.46	3.50	-90.14	1265.86	
5	14945.90	89.50	359.77	6740.00	8358.00	454.00	0.00	0.00	8370.32	PBHL-Univ 43 #1009H

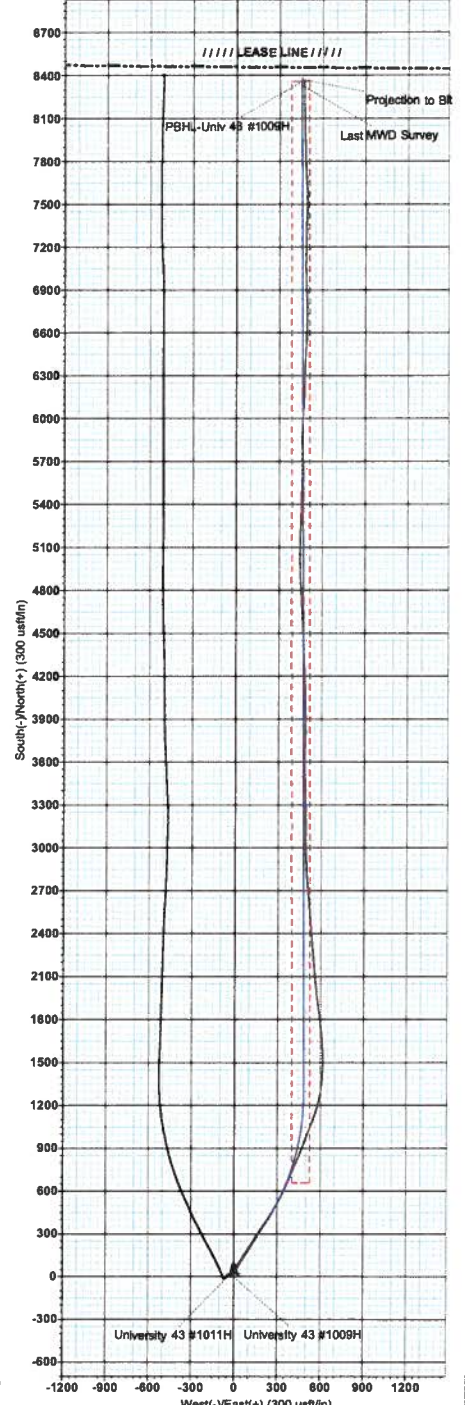
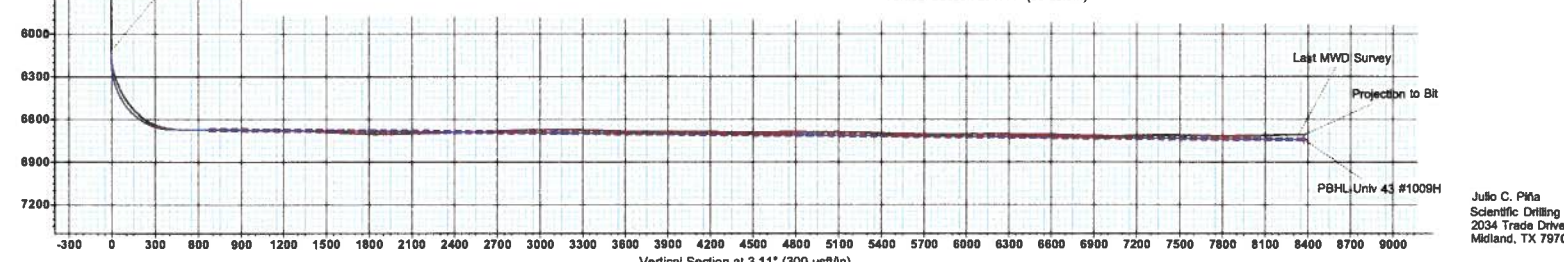
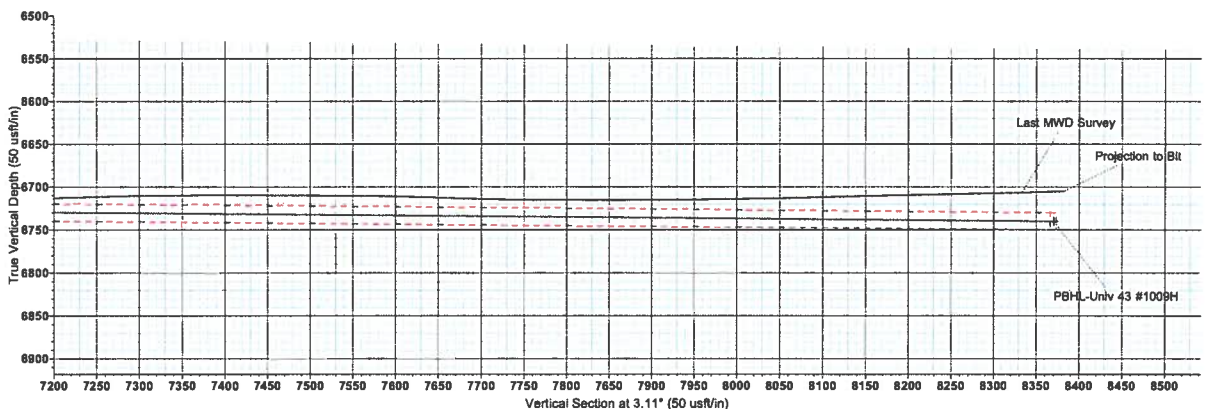
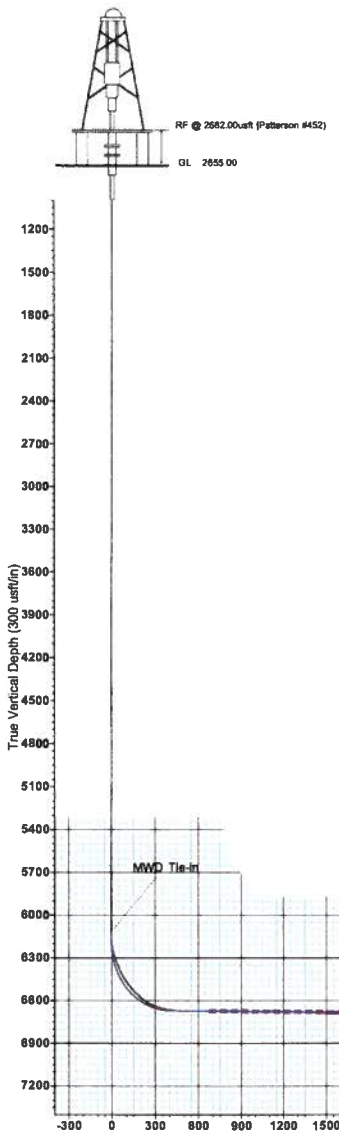
SITE DETAILS: University 43 #1009H
 Site Centre Northing: 530946.00
 Easting: 1720117.00
 Positional Uncertainty: 0.00
 Convergence: -0.46
 Local North: Grid

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-Univ 43 #1009H - plan hits target center	6740.00	8358.00	454.00	530946.00	1720571.00	31° 8' 47.256 N	101° 13' 35.721 W	Rectangle (Sides: L20.00 W125.00)

Map System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone Name: Texas Central 4203
 Local Origin: Well University 43 #1009H, Grid North
 Latitude: 31° 7' 24.531 N
 Longitude: 101° 13' 40.172 W
 Grid East: 1720117.00
 Grid North: 530946.00
 Scale Factor: 1.000
 Geomagnetic Model: IGRF2010
 Sample Date: 24-May-12
 Magnetic Declination: 6.28°
 Dip Angle from Horizontal: 59.52°
 Magnetic Field Strength: 48095
 To convert Magnetic North to Grid, Add 6.74°
 To convert Magnetic North to True North, Add 6.28° East
 To convert True North to Grid, Add 0.48°

- LEGEND**
- University 43 #1011H, OH - Job #3200512532, Actual VD
 - University 43 #1009H, OH - Job #3200512589, MWD
 - University 43 #1009H, OH - Job #3200512589, VES Gym
 - Plan #2 - 8-3/4" Hole



Julio C. Peña
 Scientific Drilling
 2034 Trade Drive
 Midland, TX 79703

