



**PHOENIX
TECHNOLOGY SERVICES**

January 17, 2013

HOBBS OCD

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

JAN 22 2013

RECEIVED

Dear District 1 - Hobbs

Re: EOG Resources
Diamond 31 Federal Com #2H ✓
Lea Co., NM
API #30-025-40484, ✓
Job No. 1310021

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Dustin St. Clair	2	1295	5,098	01-07-13	01-14-13	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 8295

1805 Brittmoore Rd. Houston, TX 77043 • Phone (713) 337-0600 • Fax (713) 337-0599
www.phxtech.com

MAR 18 2014

PHOENIX TECHNOLOGY SERVICES SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1310021

OPERATOR EOG RESOURCES

WELL NAME DIAMOND 31 FEDERAL COM#2H

COUNTY & STATE

LEA COUNTY

API WELL NUMBER	30-025-40484
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PROPOSED DIRECTION	0
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TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
1,200 ft	199.97 ft	0.19	186.79	2.04	6.02	GYRO

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
7-Jan-13	1,295 ft	0.1	59.3

SURVEY INSTRUMENT TYPE PHOENIX MWD
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LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
14-Jan-13	5,098 ft	0.8	185.6

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
14-Jan-13	5,145 ft	0.8	185.6

DUSTIN ST. CLAIR

PRINT YOUR NAME ABOVE

Dustin St. Clair

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.93
DECLINATION OR GRID	Grid

1/14/2013

TODAY'S DATE

MWD SUPERVISOR 1 DUSTIN ST. CLAIR

DIRECTIONAL DRILLER 1

BRINTON DONALDSON

MWD SUPERVISOR 2 0

DIRECTIONAL DRILLER 2

0

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)

EOG Resources

**Lea County, NM (Nad27)
Diamond 31 Fed Com
Diamond 31 Fed Com 2H
Wellbore #1**

HOBBS OCD

JAN 22 2013

RECEIVED

Survey: Phoenix MWD Surveys

Survey Report

14 January, 2013

Survey Report

Company:	EOG Resources	Local Co-ordinate Reference:	Well Diamond 31 Fed Com 2H
Project:	Lea County, NM (Nad27)	TVD Reference:	WELL @ 3530.60usft (Original Well Elev + 30' KB
Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3530.60usft (Original Well Elev + 30' KB
Well:	Diamond 31 Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1 Surveys	Database:	GCR DB v5000

Project	Lea County, NM (Nad27)		
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 31 Fed Com		
Site Position:		Northing:	430,543.30 usft
From:	Map	Easting:	752,984.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 51.7346 N
		Longitude:	103° 30' 56.3113 W
		Grid Convergence:	0.44 °

Well	Diamond 31 Fed Com 2H		
Well Position	+N/-S	0.00 usft	Northing: 430,543.30 usft
	+E/-W	0.00 usft	Easting: 752,984.40 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 10' 51.7346 N
		Longitude:	103° 30' 56.3113 W
		Ground Level:	3,500.60 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	01/03/13	(°) 7.37
			Dip Angle (°) 60.12
			Field Strength (nT) 48,440

Design	Wellbore #1 Surveys		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
		Direction	(°) 0.00

Survey Report

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Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3530.60usft (Original Well Elev + 30' KB
Well:	Diamond 31 Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1 Surveys	Database:	GCR DB v5000

Survey Program		Date 01/14/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	1,200.00	MS Gyro (Wellbore #1)	NS-GYRO-MS	North sensing gyrocompassing m/s
1,295.00	5,019.00	Phoenix MWD Surveys (Wellbore #1)	MWD	MWD - Standard

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
1,200.00	0.19	186.79	-2,330.63	1,199.97	-2.04	-6.02	-2.04	0.00	430,541.26	752,978.38
1,200.01	0.19	186.79	-2,330.62	1,199.98	-2.04	-6.02	-2.04	0.01	430,541.26	752,978.38
Tie In to Gyro, 1200'										
1,295.00	0.10	59.30	-2,235.63	1,294.97	-2.16	-5.97	-2.16	0.28	430,541.14	752,978.43
First Phoenix MWD Survey, 1295'										
1,389.00	0.20	332.80	-2,141.63	1,388.97	-1.97	-5.97	-1.97	0.23	430,541.33	752,978.43
1,485.00	0.30	336.00	-2,045.63	1,484.97	-1.59	-6.15	-1.59	0.11	430,541.71	752,978.25
1,580.00	0.30	340.80	-1,950.64	1,579.96	-1.13	-6.34	-1.13	0.03	430,542.17	752,978.06
1,673.00	0.50	355.30	-1,857.64	1,672.96	-0.49	-6.45	-0.49	0.24	430,542.81	752,977.95
1,768.00	0.60	6.50	-1,762.64	1,767.96	0.41	-6.43	0.41	0.15	430,543.71	752,977.97
1,863.00	0.50	3.60	-1,667.65	1,862.95	1.32	-6.34	1.32	0.11	430,544.62	752,978.06
1,957.00	0.30	194.80	-1,573.65	1,956.95	1.49	-6.38	1.49	0.85	430,544.79	752,978.02
2,052.00	0.30	220.90	-1,478.65	2,051.95	1.07	-6.61	1.07	0.14	430,544.37	752,977.79
2,147.00	0.30	260.00	-1,383.65	2,146.95	0.83	-7.02	0.83	0.21	430,544.13	752,977.38
2,242.00	0.50	292.40	-1,288.65	2,241.95	0.95	-7.64	0.95	0.31	430,544.25	752,976.76
2,336.00	0.40	306.90	-1,194.66	2,335.94	1.30	-8.29	1.30	0.16	430,544.60	752,976.11
2,431.00	0.40	319.40	-1,099.66	2,430.94	1.75	-8.77	1.75	0.09	430,545.05	752,975.63
2,525.00	0.40	309.90	-1,005.66	2,524.94	2.21	-9.23	2.21	0.07	430,545.51	752,975.17
2,619.00	0.40	321.70	-911.66	2,618.94	2.68	-9.69	2.68	0.09	430,545.98	752,974.71
2,714.00	0.70	327.50	-816.67	2,713.93	3.43	-10.20	3.43	0.32	430,546.73	752,974.20
2,808.00	0.90	317.00	-722.68	2,807.92	4.45	-11.02	4.45	0.26	430,547.75	752,973.38
2,903.00	0.10	59.60	-627.68	2,902.92	5.04	-11.45	5.04	0.98	430,548.34	752,972.95

Survey Report

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Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3530.60usft (Original Well Elev + 30' KB
Well:	Diamond 31 Fed Com 2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1 Surveys	Database:	GCR DB v5000

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,996.00	0.50	103.20	-534.68	2,995.92	4.99	-10.99	4.99	0.47	430,548.29	752,973.41
3,090.00	0.80	92.30	-440.69	3,089.91	4.87	-9.93	4.87	0.34	430,548.17	752,974.47
3,185.00	0.40	92.30	-345.69	3,184.91	4.83	-8.94	4.83	0.42	430,548.13	752,975.46
3,280.00	0.40	100.40	-250.69	3,279.91	4.76	-8.28	4.76	0.06	430,548.06	752,976.12
3,373.00	0.70	105.60	-157.70	3,372.90	4.55	-7.42	4.55	0.33	430,547.85	752,976.98
3,466.00	0.80	114.40	-64.71	3,465.89	4.13	-6.28	4.13	0.16	430,547.43	752,978.12
3,561.00	0.60	161.70	30.29	3,560.89	3.38	-5.52	3.38	0.62	430,546.68	752,978.88
3,656.00	0.40	250.00	125.28	3,655.88	2.79	-5.67	2.79	0.75	430,546.09	752,978.73
3,750.00	0.40	265.80	219.28	3,749.88	2.66	-6.31	2.66	0.12	430,545.96	752,978.09
3,845.00	0.60	260.90	314.28	3,844.88	2.55	-7.13	2.55	0.22	430,545.85	752,977.27
3,939.00	0.80	260.20	408.27	3,938.87	2.36	-8.26	2.36	0.21	430,545.66	752,976.14
4,033.00	0.40	257.70	502.27	4,032.87	2.18	-9.23	2.18	0.43	430,545.48	752,975.17
4,128.00	0.30	173.00	597.26	4,127.86	1.87	-9.52	1.87	0.50	430,545.17	752,974.88
4,222.00	0.30	168.50	691.26	4,221.86	1.38	-9.44	1.38	0.03	430,544.68	752,974.96
4,316.00	0.30	168.60	785.26	4,315.86	0.90	-9.35	0.90	0.00	430,544.20	752,975.05
4,411.00	0.10	103.10	880.26	4,410.86	0.64	-9.22	0.64	0.29	430,543.94	752,975.18
4,505.00	1.00	72.20	974.26	4,504.86	0.87	-8.36	0.87	0.97	430,544.17	752,976.04
4,599.00	1.00	112.90	1,068.24	4,598.84	0.80	-6.82	0.80	0.74	430,544.10	752,977.58
4,693.00	0.90	238.40	1,162.24	4,692.84	0.09	-6.69	0.09	1.80	430,543.39	752,977.71
4,782.00	0.50	43.90	1,251.23	4,781.83	0.01	-7.02	0.01	1.56	430,543.31	752,977.38
4,877.00	1.20	95.00	1,346.22	4,876.82	0.22	-5.74	0.22	1.02	430,543.52	752,978.66
4,972.00	1.00	140.70	1,441.21	4,971.81	-0.51	-4.22	-0.51	0.92	430,542.79	752,980.18
5,019.00	1.00	140.70	1,488.20	5,018.80	-1.14	-3.70	-1.14	0.00	430,542.16	752,980.70

Projection to TD, 5019'

Survey Report

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Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3530.60usft (Original Well Elev + 30' KB
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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1 Surveys	Database:	GCR DB v5000

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,200.01	1,199.98	-2.04	-6.02	Tie In to Gyro, 1200'	
1,295.00	1,294.97	-2.16	-5.97	First Phoenix MWD Survey, 1295'	
5,019.00	5,018.80	-1.14	-3.70	Projection to TD, 5019'	