

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 87240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
June 19, 2008

HOBBS OGD

OIL CONSERVATION DIVISION

MAY 18 2012
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	7. Lease Name or Unit Agreement Name: Black Bear 36 State
2. Name of Operator EOG Resources, Inc.	8. Well Number 1H
3. Address of Operator P.O. Box 2267 Midland, TX 79702	9. OGRID Number 7377
4. Well Location Unit Letter O : 300 feet from the South line and 2190 feet from the East line Section 36 Township 25S Range 33E NMPM County Lea	10. Pool name or Wildcat WC Red Hills; BS Upper Shale
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3321' GR	

12. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

EOG Resources requests an amendment to our permit to drill for this well to reflect a change in BHL & TD

New BHL is 330' FNL & 2240' FEL, U/L B, Sec 36, T25S, R33E.

New TD is 14258' MD.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Stan Wagner TITLE Regulatory Analyst DATE 5/17/2012

Type or print name Stan Wagner E-mail address: _____ PHONE 432-686-3689

For State Use Only

APPROVED BY [Signature] TITLE PETROLEUM ENGINEER DATE MAY 21 2012

Conditions of Approval (if any):

MAY 21 2012

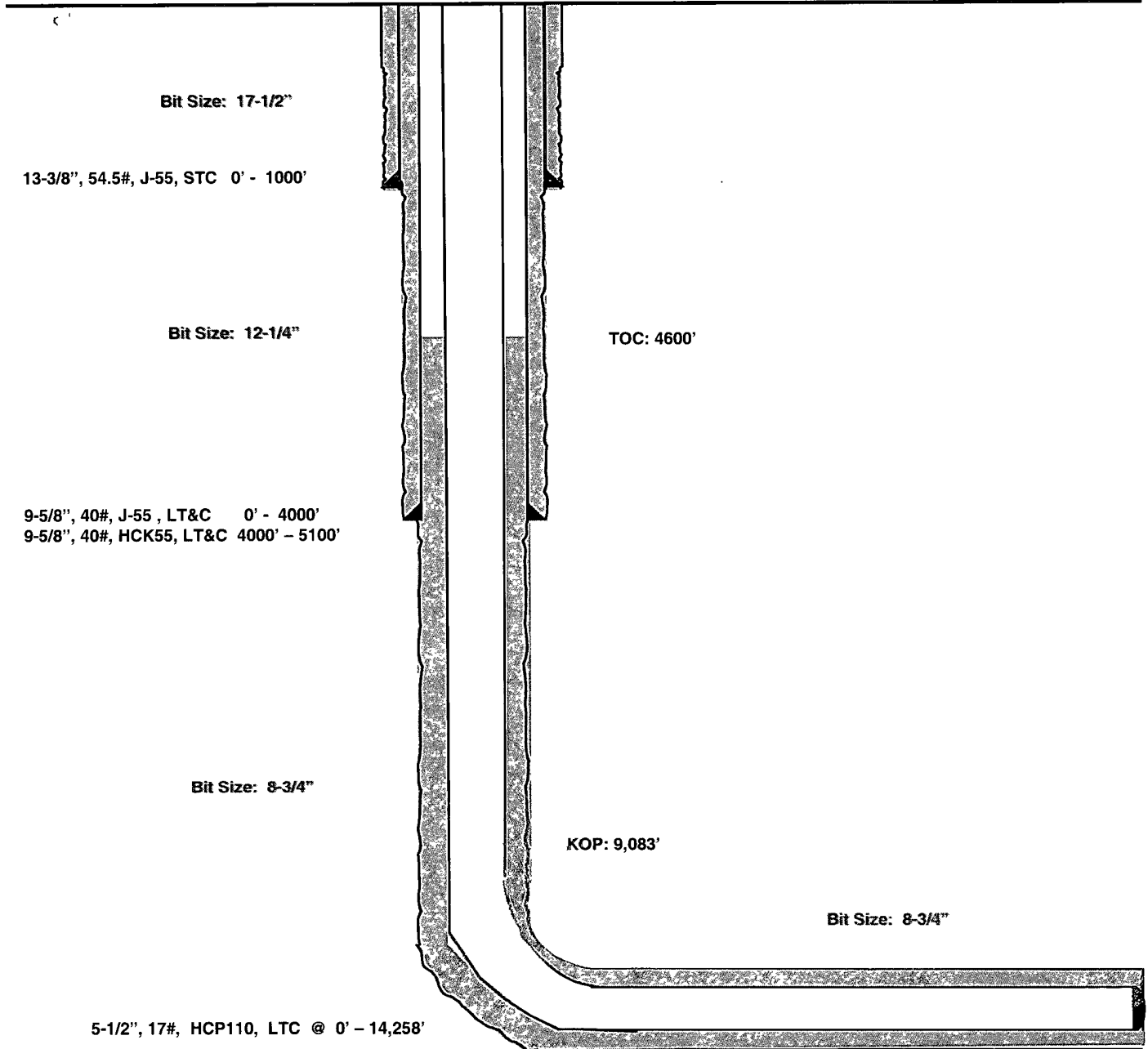
Black Bear 36 State #1H
Red Hills
Lea County, New Mexico

300' FSL
2190' FEL
Section 36
T-25-S, R-33-E

Proposed Wellbore

API: 30-025-

KB: 3,346.7'
GL: 3,321.7'



Lateral: 14,258' MD, 9,550' TVD

BH Location: 330' FNL & 2240' FEL
Section 36
T-25-S, R-33-E

Permit Information:

Well Name: Black Bear 36 State No. 1H

Location:

SL: 300' FSL & 2190' FEL, Section 36, T-25-S, R-33-E, Lea Co., N.M.

BHL: 330' FNL & 2240' FEL, Section 36, T-25-S, R-33-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 1000'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4000' – 5100'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-14,258'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Slurry Description
1000'	575	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	250	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,100'	1325	12.7	2.22	Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
14,258'	250	10.8	3.67	60:40:0 Class C + 15.0 pps BA-90 + 4% MPA-5 + 3.0% SMS + 5.0% A-10 + 1.0% BA-10A + 0.80% ASA-301 + 2.55% R-21 + 8.0 pps LCM-1
	550	11.8	2.38	50:50:10 Class H + 0.80% FL-52 + 0.30% ASA-301 + 0.40% SMS + 2.0% Salt + 0.30% R-21 + 3.0 pps LCM-1 + 0.25 pps Celloflake
	1200	14.2	1.28	50:50:2 Class H + 0.65% FL-52 + 0.45% CD-32 + 0.10% SMS + 2.0% Salt

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1000'	Fresh - Gel	8.6-8.8	28-34	N/c
1000' – 5,100'	Brine	10.0-10.2	28-34	N/c
5,100' – 9,083'	Cut Brine	8.4-9.0	28-34	N/c
KOP – 14,258' Lateral	Cut Brine	9.0-9.5	40-42	8-10



Project: Lea County
Site: Black Bear "36" State
Well: #1H
Wellbore: OH
Plan: Plan #3 (#1H/OH)

PROJECT DETAILS: Lea County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

PATHFINDER
A Schlumberger Company



Azimuths to Grid North
True North: -0.43°
Magnetic North: 7.06°

Magnetic Field
Strength: 48527.9snT
Dip Angle: 60.07°
Date: 11/30/2011
Model: IGRF200510

WELL DETAILS #1H

Ground Elevation 3321.7
RKB Elevation KB = 25 @ 3346.7usft (Cactus 139)
Rig Name Cactus 139

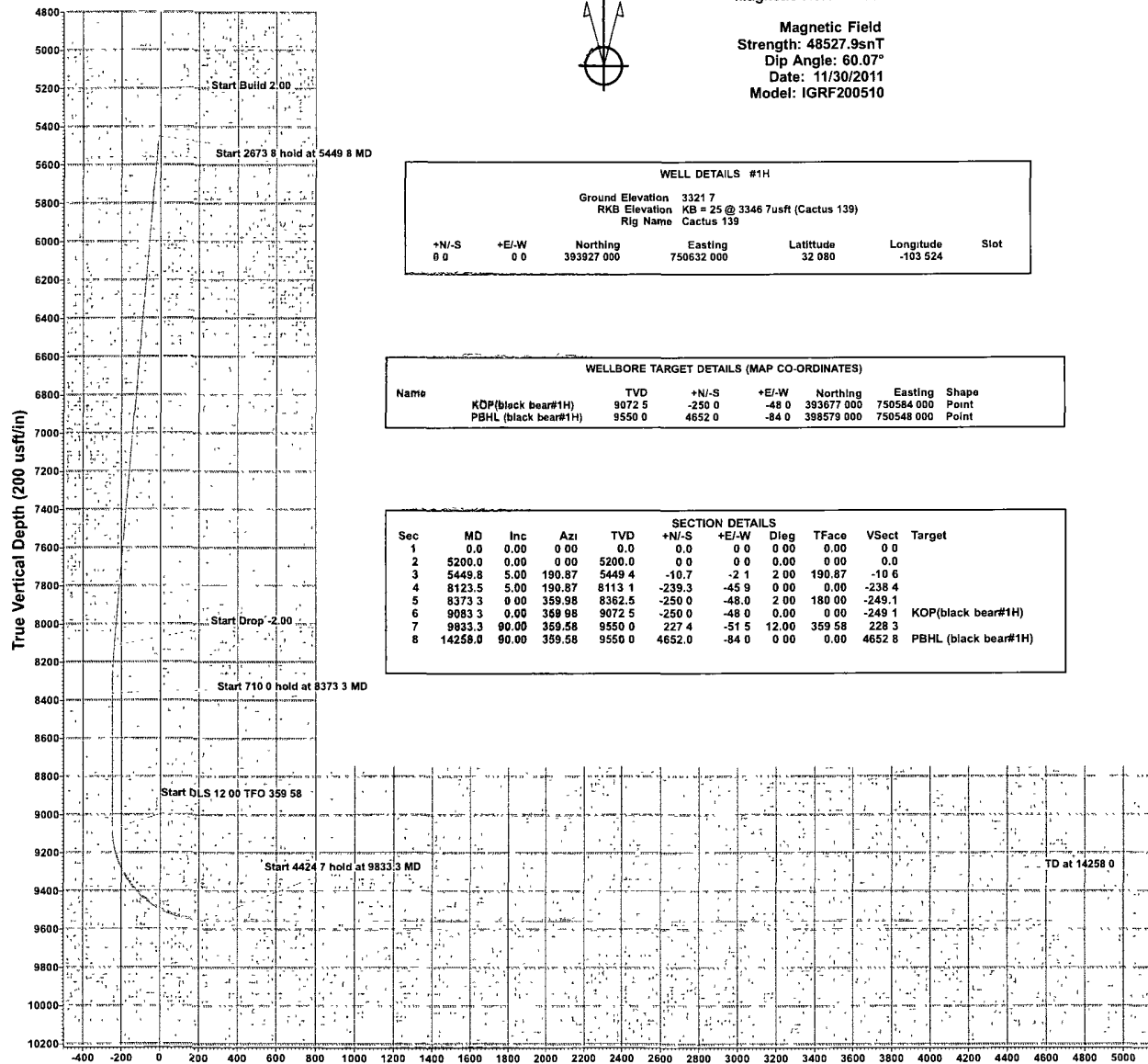
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	393927.000	750632.000	32.080	-103.524	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

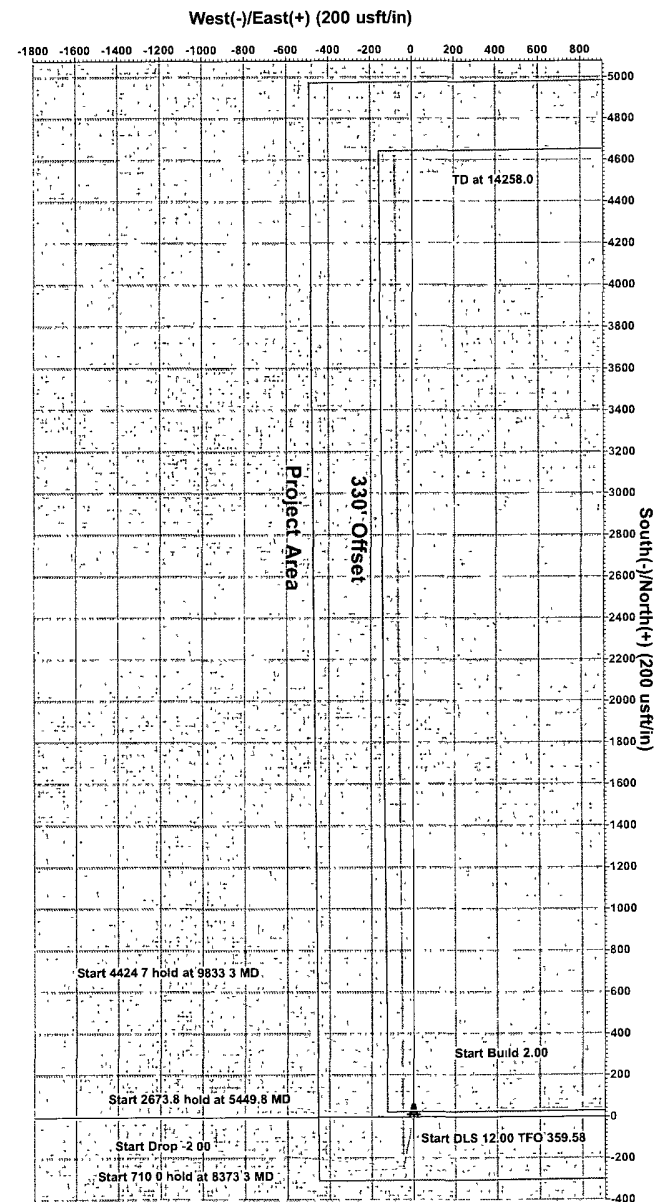
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
KOP(black bear#1H)	9072.5	-250.0	-48.0	393677.000	750584.000	Point
PBHL(black bear#1H)	9550.0	4652.0	-84.0	398579.000	750548.000	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5200.0	0.00	0.00	5200.0	0.0	0.0	0.00	0.00	0.0	
3	5449.8	5.00	190.87	5449.4	-10.7	-2.1	2.00	190.87	-10.6	
4	8123.5	5.00	190.87	8113.1	-239.3	-45.9	0.00	0.00	-238.4	
5	8373.3	0.00	359.98	8362.5	-250.0	-48.0	2.00	180.00	-249.1	KOP(black bear#1H)
6	9083.3	0.00	359.98	9072.5	-250.0	-48.0	0.00	0.00	-249.1	
7	9833.3	90.00	359.58	9550.0	227.4	-51.5	12.00	359.58	228.3	
8	14258.0	90.00	359.58	9550.0	4652.0	-84.0	0.00	0.00	4652.8	PBHL(black bear#1H)



Vertical Section at 358.97° (200 usft/in)



Plan: Plan #3 (#1H/OH)

Created By: Sam Bittle Date: 13 34, May 15 2012

Checked: _____ Date: _____

Geog Resources, Inc.
10000 N. M. 10000
Suite 1000
Dallas, TX 75243
Phone: 972.980.1000
Fax: 972.980.1001



EOG Resources, Inc.

Lea County

Black Bear "36" State

#1H

OH

Plan: Plan #3

PathfinderX & Y Report

15 May, 2012

The logo for Pathfinder, with the word "PATHFINDER" in a bold, blocky, sans-serif font. A stylized line representing a path or road curves under the letters "FINDER".

PATHFINDER®

A Schlumberger Company

Company:	EOG Resources, Inc	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Site:	Black Bear "36" State	MD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	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		Black Bear "36" State					
Site Position:		Northing:		393,927 000 usft	Latitude:	32 080	
From:	Map	Easting:		750,632 000 usft	Longitude:	-103.524	
Position Uncertainty:		0.0 usft	Slot Radius:		13-3/16 "	Grid Convergence:	0.43 °

Well	#1H					
Well Position	+N/-S	0.0 usft	Northing:	393,927.000 usft	Latitude:	32 080
	+E/-W	0.0 usft	Easting:	750,632.000 usft	Longitude:	-103 524
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,321.7 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/30/2011	7.49	60.07	48,528

Design					Plan #3				
Audit Notes:									
Version:		Phase:		PLAN		Tie On Depth:		0.0	
Vertical Section:		Depth From (TVD)		+N/-S		+E/-W		Direction	
		(usft)		(usft)		(usft)		(°)	
		0.0		0.0		0.0		358.97	

Survey Tool Program		Date	5/15/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,258.0	Plan #3 (OH)	MWD	MWD - Standard	

Company: EOG Resources, Inc.
Project: Lea County
Site: Black Bear "36" State
Well: #1H
Wellbore: OH
Design: Plan #3

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

Well #1H
KB = 25 @ 3346.7usft (Cactus 139)
KB = 25 @ 3346.7usft (Cactus 139)
Grid
Minimum Curvature
EDM 5000 1 Single User Db

Planned 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 0	0 00	0.00	0 0	-3,346.7	0.0	0.0	0.0	0 00	393,927 00	750,632 00
100.0	0.00	0.00	100.0	-3,246.7	0.0	0.0	0.0	0.00	393,927.00	750,632 00
200 0	0 00	0.00	200.0	-3,146.7	0.0	0.0	0 0	0 00	393,927.00	750,632.00
300 0	0 00	0 00	300.0	-3,046.7	0.0	0.0	0 0	0 00	393,927.00	750,632.00
400.0	0.00	0.00	400.0	-2,946 7	0 0	0 0	0 0	0.00	393,927 00	750,632 00
500 0	0 00	0 00	500.0	-2,846 7	0 0	0 0	0.0	0.00	393,927.00	750,632.00
600.0	0.00	0 00	600 0	-2,746.7	0.0	0.0	0.0	0.00	393,927 00	750,632.00
700 0	0 00	0.00	700.0	-2,646.7	0.0	0 0	0 0	0 00	393,927.00	750,632.00
800.0	0 00	0.00	800 0	-2,546.7	0.0	0.0	0.0	0.00	393,927 00	750,632.00
900 0	0.00	0.00	900 0	-2,446 7	0.0	0.0	0 0	0.00	393,927.00	750,632 00
1,000 0	0 00	0.00	1,000 0	-2,346 7	0 0	0 0	0.0	0.00	393,927.00	750,632 00
1,100 0	0 00	0.00	1,100.0	-2,246 7	0 0	0 0	0.0	0.00	393,927.00	750,632.00
1,200 0	0.00	0.00	1,200 0	-2,146.7	0.0	0 0	0.0	0.00	393,927.00	750,632 00
1,300 0	0.00	0 00	1,300.0	-2,046.7	0 0	0 0	0.0	0.00	393,927 00	750,632.00
1,400.0	0.00	0.00	1,400 0	-1,946 7	0 0	0.0	0.0	0 00	393,927.00	750,632.00
1,500.0	0.00	0 00	1,500.0	-1,846.7	0.0	0.0	0 0	0 00	393,927.00	750,632.00
1,600.0	0.00	0.00	1,600 0	-1,746 7	0 0	0.0	0 0	0 00	393,927.00	750,632 00
1,700.0	0.00	0.00	1,700 0	-1,646 7	0.0	0 0	0.0	0.00	393,927.00	750,632.00
1,800.0	0.00	0 00	1,800 0	-1,546 7	0.0	0.0	0.0	0 00	393,927.00	750,632.00
1,900.0	0.00	0 00	1,900 0	-1,446 7	0.0	0 0	0.0	0.00	393,927.00	750,632.00
2,000 0	0.00	0 00	2,000.0	-1,346.7	0 0	0 0	0 0	0 00	393,927 00	750,632 00
2,100 0	0 00	0 00	2,100.0	-1,246.7	0 0	0 0	0.0	0 00	393,927.00	750,632.00
2,200.0	0 00	0.00	2,200.0	-1,146.7	0 0	0 0	0.0	0 00	393,927 00	750,632 00
2,300 0	0 00	0 00	2,300.0	-1,046.7	0 0	0 0	0.0	0 00	393,927.00	750,632.00
2,400 0	0 00	0.00	2,400.0	-946.7	0 0	0.0	0 0	0.00	393,927.00	750,632.00
2,500 0	0.00	0.00	2,500.0	-846.7	0.0	0 0	0.0	0.00	393,927.00	750,632 00
2,600.0	0 00	0.00	2,600.0	-746.7	0 0	0.0	0 0	0 00	393,927.00	750,632.00

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 25 @ 3346 7usft (Cactus 139)
Site:	Black Bear "36" State	MD Reference:	KB = 25 @ 3346 7usft (Cactus 139)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000 1 Single User Db

Planned 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)
2,700.0	0.00	0.00	2,700.0	-646.7	0.0	0.0	0.0	0.00	393,927.00	750,632.00
2,800.0	0.00	0.00	2,800.0	-546.7	0.0	0.0	0.0	0.00	393,927.00	750,632.00
2,900.0	0.00	0.00	2,900.0	-446.7	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,000.0	0.00	0.00	3,000.0	-346.7	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,100.0	0.00	0.00	3,100.0	-246.7	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,200.0	0.00	0.00	3,200.0	-146.7	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,300.0	0.00	0.00	3,300.0	-46.7	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,400.0	0.00	0.00	3,400.0	53.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,500.0	0.00	0.00	3,500.0	153.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,600.0	0.00	0.00	3,600.0	253.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,700.0	0.00	0.00	3,700.0	353.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,800.0	0.00	0.00	3,800.0	453.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
3,900.0	0.00	0.00	3,900.0	553.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,000.0	0.00	0.00	4,000.0	653.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,100.0	0.00	0.00	4,100.0	753.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,200.0	0.00	0.00	4,200.0	853.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,300.0	0.00	0.00	4,300.0	953.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,400.0	0.00	0.00	4,400.0	1,053.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,500.0	0.00	0.00	4,500.0	1,153.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,600.0	0.00	0.00	4,600.0	1,253.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,700.0	0.00	0.00	4,700.0	1,353.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,800.0	0.00	0.00	4,800.0	1,453.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
4,900.0	0.00	0.00	4,900.0	1,553.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
5,000.0	0.00	0.00	5,000.0	1,653.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
5,100.0	0.00	0.00	5,100.0	1,753.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
5,200.0	0.00	0.00	5,200.0	1,853.3	0.0	0.0	0.0	0.00	393,927.00	750,632.00
5,300.0	2.00	190.87	5,300.0	1,953.3	-1.7	-0.3	-1.7	2.00	393,925.29	750,631.67

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Site:	Black Bear "36" State	MD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000 1 Single User Db

Planned 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)	
5,400.0	4.00	190.87	5,399.8	2,053.1	-6.9	-1.3	-6.8	2.00	393,920.15	750,630.68	
5,449.8	5.00	190.87	5,449.4	2,102.7	-10.7	-2.1	-10.6	2.00	393,916.32	750,629.95	
5,500.0	5.00	190.87	5,499.5	2,152.8	-15.0	-2.9	-14.9	0.00	393,912.02	750,629.12	
5,600.0	5.00	190.87	5,599.1	2,252.4	-23.5	-4.5	-23.4	0.00	393,903.47	750,627.48	
5,700.0	5.00	190.87	5,698.7	2,352.0	-32.1	-6.2	-32.0	0.00	393,894.92	750,625.84	
5,800.0	5.00	190.87	5,798.4	2,451.7	-40.6	-7.8	-40.5	0.00	393,886.37	750,624.20	
5,900.0	5.00	190.87	5,898.0	2,551.3	-49.2	-9.4	-49.0	0.00	393,877.82	750,622.56	
6,000.0	5.00	190.87	5,997.6	2,650.9	-57.7	-11.1	-57.5	0.00	393,869.26	750,620.91	
6,100.0	5.00	190.87	6,097.2	2,750.5	-66.3	-12.7	-66.0	0.00	393,860.71	750,619.27	
6,200.0	5.00	190.87	6,196.8	2,850.1	-74.8	-14.4	-74.6	0.00	393,852.16	750,617.63	
6,300.0	5.00	190.87	6,296.5	2,949.8	-83.4	-16.0	-83.1	0.00	393,843.61	750,615.99	
6,400.0	5.00	190.87	6,396.1	3,049.4	-91.9	-17.7	-91.6	0.00	393,835.06	750,614.35	
6,500.0	5.00	190.87	6,495.7	3,149.0	-100.5	-19.3	-100.1	0.00	393,826.51	750,612.71	
6,600.0	5.00	190.87	6,595.3	3,248.6	-109.0	-20.9	-108.6	0.00	393,817.96	750,611.06	
6,700.0	5.00	190.87	6,694.9	3,348.2	-117.6	-22.6	-117.2	0.00	393,809.41	750,609.42	
6,800.0	5.00	190.87	6,794.6	3,447.9	-126.1	-24.2	-125.7	0.00	393,800.86	750,607.78	
6,900.0	5.00	190.87	6,894.2	3,547.5	-134.7	-25.9	-134.2	0.00	393,792.31	750,606.14	
7,000.0	5.00	190.87	6,993.8	3,647.1	-143.2	-27.5	-142.7	0.00	393,783.76	750,604.50	
7,100.0	5.00	190.87	7,093.4	3,746.7	-151.8	-29.1	-151.2	0.00	393,775.21	750,602.86	
7,200.0	5.00	190.87	7,193.0	3,846.3	-160.3	-30.8	-159.8	0.00	393,766.65	750,601.21	
7,300.0	5.00	190.87	7,292.7	3,946.0	-168.9	-32.4	-168.3	0.00	393,758.10	750,599.57	
7,400.0	5.00	190.87	7,392.3	4,045.6	-177.4	-34.1	-176.8	0.00	393,749.55	750,597.93	
7,500.0	5.00	190.87	7,491.9	4,145.2	-186.0	-35.7	-185.3	0.00	393,741.00	750,596.29	
7,600.0	5.00	190.87	7,591.5	4,244.8	-194.5	-37.4	-193.8	0.00	393,732.45	750,594.65	
7,700.0	5.00	190.87	7,691.1	4,344.4	-203.1	-39.0	-202.4	0.00	393,723.90	750,593.00	
7,800.0	5.00	190.87	7,790.8	4,444.1	-211.7	-40.6	-210.9	0.00	393,715.35	750,591.36	
7,900.0	5.00	190.87	7,890.4	4,543.7	-220.2	-42.3	-219.4	0.00	393,706.80	750,589.72	

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Site:	Black Bear "36" State	MD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000 1 Single User Db

Planned 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)	
8,000.0	5.00	190.87	7,990.0	4,643.3	-228.8	-43.9	-227.9	0.00	393,698.25	750,588.08	
8,100.0	5.00	190.87	8,089.6	4,742.9	-237.3	-45.6	-236.4	0.00	393,689.70	750,586.44	
8,123.5	5.00	190.87	8,113.1	4,766.4	-239.3	-45.9	-238.4	0.00	393,687.68	750,586.05	
8,200.0	3.47	190.87	8,189.3	4,842.6	-244.9	-47.0	-244.0	2.00	393,682.15	750,584.99	
8,300.0	1.47	190.87	8,289.2	4,942.5	-249.1	-47.8	-248.2	2.00	393,677.92	750,584.18	
8,373.3	0.00	359.98	8,362.5	5,015.8	-250.0	-48.0	-249.1	2.00	393,677.00	750,584.00	
8,400.0	0.00	359.98	8,389.2	5,042.5	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
8,500.0	0.00	359.98	8,489.2	5,142.5	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
8,600.0	0.00	359.98	8,589.2	5,242.5	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
8,700.0	0.00	359.98	8,689.2	5,342.5	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
8,800.0	0.00	359.98	8,789.2	5,442.5	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
8,900.0	0.00	359.98	8,889.2	5,542.5	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
9,000.0	0.00	359.98	8,989.2	5,642.5	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
9,083.3	0.00	359.98	9,072.5	5,725.8	-250.0	-48.0	-249.1	0.00	393,677.00	750,584.00	
9,100.0	2.01	359.58	9,089.2	5,742.5	-249.7	-48.0	-248.8	12.00	393,677.29	750,584.00	
9,125.0	5.01	359.58	9,114.2	5,767.5	-248.2	-48.0	-247.3	12.00	393,678.82	750,583.99	
9,150.0	8.01	359.58	9,139.0	5,792.3	-245.3	-48.0	-244.4	12.00	393,681.65	750,583.97	
9,175.0	11.01	359.58	9,163.6	5,816.9	-241.2	-48.1	-240.3	12.00	393,685.78	750,583.94	
9,200.0	14.01	359.58	9,188.1	5,841.4	-235.8	-48.1	-234.9	12.00	393,691.19	750,583.90	
9,225.0	17.01	359.58	9,212.1	5,865.4	-229.1	-48.2	-228.2	12.00	393,697.88	750,583.85	
9,250.0	20.01	359.58	9,235.8	5,889.1	-221.2	-48.2	-220.3	12.00	393,705.81	750,583.79	
9,275.0	23.01	359.58	9,259.1	5,912.4	-212.0	-48.3	-211.1	12.00	393,714.97	750,583.72	
9,300.0	26.01	359.58	9,281.8	5,935.1	-201.7	-48.4	-200.8	12.00	393,725.34	750,583.64	
9,325.0	29.01	359.58	9,304.0	5,957.3	-190.1	-48.4	-189.2	12.00	393,736.89	750,583.56	
9,350.0	32.01	359.58	9,325.6	5,978.9	-177.4	-48.5	-176.5	12.00	393,749.57	750,583.47	
9,375.0	35.01	359.58	9,346.4	5,999.7	-163.6	-48.6	-162.7	12.00	393,763.37	750,583.37	
9,400.0	38.01	359.58	9,366.5	6,019.8	-148.8	-48.7	-147.9	12.00	393,778.24	750,583.26	



Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company: EOG Resources, Inc.
Project: Lea County
Site: Black Bear "36" State
Well: #1H
Wellbore: OH
Design: Plan #3

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

Well #1H
KB = 25 @ 3346.7usft (Cactus 139)
KB = 25 @ 3346.7usft (Cactus 139)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned 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)
9,425.0	41.01	359.58	9,385.8	6,039.1	-132.9	-48.9	-132.0	12.00	393,794.14	750,583.14
9,450.0	44.01	359.58	9,404.2	6,057.5	-116.0	-49.0	-115.1	12.00	393,811.03	750,583.02
9,475.0	47.01	359.58	9,421.7	6,075.0	-98.1	-49.1	-97.2	12.00	393,828.86	750,582.88
9,500.0	50.01	359.58	9,438.3	6,091.6	-79.4	-49.3	-78.5	12.00	393,847.59	750,582.75
9,525.0	53.01	359.58	9,453.8	6,107.1	-59.8	-49.4	-58.9	12.00	393,867.15	750,582.60
9,550.0	56.01	359.58	9,468.4	6,121.7	-39.5	-49.5	-38.6	12.00	393,887.50	750,582.45
9,575.0	59.01	359.58	9,481.8	6,135.1	-18.4	-49.7	-17.5	12.00	393,908.59	750,582.30
9,600.0	62.01	359.58	9,494.1	6,147.4	3.3	-49.9	4.2	12.00	393,930.34	750,582.14
9,625.0	65.01	359.58	9,505.2	6,158.5	25.7	-50.0	26.6	12.00	393,952.71	750,581.98
9,650.0	68.01	359.58	9,515.2	6,168.5	48.6	-50.2	49.5	12.00	393,975.64	750,581.81
9,675.0	71.01	359.58	9,524.0	6,177.3	72.1	-50.4	72.9	12.00	393,999.05	750,581.63
9,700.0	74.01	359.58	9,531.5	6,184.8	95.9	-50.5	96.8	12.00	394,022.89	750,581.46
9,725.0	77.01	359.58	9,537.7	6,191.0	120.1	-50.7	121.0	12.00	394,047.09	750,581.28
9,750.0	80.01	359.58	9,542.7	6,196.0	144.6	-50.9	145.5	12.00	394,071.59	750,581.10
9,775.0	83.01	359.58	9,546.4	6,199.7	169.3	-51.1	170.2	12.00	394,096.31	750,580.92
9,800.0	86.01	359.58	9,548.8	6,202.1	194.2	-51.3	195.1	12.00	394,121.19	750,580.74
9,825.0	89.01	359.58	9,549.9	6,203.2	219.2	-51.4	220.1	12.00	394,146.17	750,580.55
9,833.3	90.00	359.58	9,550.0	6,203.3	227.4	-51.5	228.3	12.00	394,154.45	750,580.49
9,900.0	90.00	359.58	9,550.0	6,203.3	294.2	-52.0	295.1	0.00	394,221.16	750,580.00
10,000.0	90.00	359.58	9,550.0	6,203.3	394.2	-52.7	395.0	0.00	394,321.16	750,579.27
10,100.0	90.00	359.58	9,550.0	6,203.3	494.2	-53.5	495.0	0.00	394,421.16	750,578.53
10,200.0	90.00	359.58	9,550.0	6,203.3	594.2	-54.2	595.0	0.00	394,521.15	750,577.80
10,300.0	90.00	359.58	9,550.0	6,203.3	694.2	-54.9	695.0	0.00	394,621.15	750,577.07
10,400.0	90.00	359.58	9,550.0	6,203.3	794.1	-55.7	795.0	0.00	394,721.15	750,576.33
10,500.0	90.00	359.58	9,550.0	6,203.3	894.1	-56.4	895.0	0.00	394,821.15	750,575.60
10,600.0	90.00	359.58	9,550.0	6,203.3	994.1	-57.1	995.0	0.00	394,921.14	750,574.86
10,700.0	90.00	359.58	9,550.0	6,203.3	1,094.1	-57.9	1,095.0	0.00	395,021.14	750,574.13

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Site:	Black Bear "36" State	MD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000 1 Single User Db

Planned 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)	
10,800.0	90.00	359.58	9,550.0	6,203.3	1,194.1	-58.6	1,195.0	0.00	395,121.14	750,573.39	
10,900.0	90.00	359.58	9,550.0	6,203.3	1,294.1	-59.3	1,295.0	0.00	395,221.14	750,572.66	
11,000.0	90.00	359.58	9,550.0	6,203.3	1,394.1	-60.1	1,395.0	0.00	395,321.13	750,571.93	
11,100.0	90.00	359.58	9,550.0	6,203.3	1,494.1	-60.8	1,495.0	0.00	395,421.13	750,571.19	
11,200.0	90.00	359.58	9,550.0	6,203.3	1,594.1	-61.5	1,595.0	0.00	395,521.13	750,570.46	
11,300.0	90.00	359.58	9,550.0	6,203.3	1,694.1	-62.3	1,695.0	0.00	395,621.13	750,569.72	
11,400.0	90.00	359.58	9,550.0	6,203.3	1,794.1	-63.0	1,795.0	0.00	395,721.12	750,568.99	
11,500.0	90.00	359.58	9,550.0	6,203.3	1,894.1	-63.7	1,895.0	0.00	395,821.12	750,568.25	
11,600.0	90.00	359.58	9,550.0	6,203.3	1,994.1	-64.5	1,995.0	0.00	395,921.12	750,567.52	
11,700.0	90.00	359.58	9,550.0	6,203.3	2,094.1	-65.2	2,095.0	0.00	396,021.11	750,566.78	
11,800.0	90.00	359.58	9,550.0	6,203.3	2,194.1	-65.9	2,194.9	0.00	396,121.11	750,566.05	
11,900.0	90.00	359.58	9,550.0	6,203.3	2,294.1	-66.7	2,294.9	0.00	396,221.11	750,565.32	
12,000.0	90.00	359.58	9,550.0	6,203.3	2,394.1	-67.4	2,394.9	0.00	396,321.11	750,564.58	
12,100.0	90.00	359.58	9,550.0	6,203.3	2,494.1	-68.2	2,494.9	0.00	396,421.10	750,563.85	
12,200.0	90.00	359.58	9,550.0	6,203.3	2,594.1	-68.9	2,594.9	0.00	396,521.10	750,563.11	
12,300.0	90.00	359.58	9,550.0	6,203.3	2,694.1	-69.6	2,694.9	0.00	396,621.10	750,562.38	
12,400.0	90.00	359.58	9,550.0	6,203.3	2,794.1	-70.4	2,794.9	0.00	396,721.10	750,561.64	
12,500.0	90.00	359.58	9,550.0	6,203.3	2,894.1	-71.1	2,894.9	0.00	396,821.09	750,560.91	
12,600.0	90.00	359.58	9,550.0	6,203.3	2,994.1	-71.8	2,994.9	0.00	396,921.09	750,560.18	
12,700.0	90.00	359.58	9,550.0	6,203.3	3,094.1	-72.6	3,094.9	0.00	397,021.09	750,559.44	
12,800.0	90.00	359.58	9,550.0	6,203.3	3,194.1	-73.3	3,194.9	0.00	397,121.08	750,558.71	
12,900.0	90.00	359.58	9,550.0	6,203.3	3,294.1	-74.0	3,294.9	0.00	397,221.08	750,557.97	
13,000.0	90.00	359.58	9,550.0	6,203.3	3,394.1	-74.8	3,394.9	0.00	397,321.08	750,557.24	
13,100.0	90.00	359.58	9,550.0	6,203.3	3,494.1	-75.5	3,494.9	0.00	397,421.08	750,556.50	
13,200.0	90.00	359.58	9,550.0	6,203.3	3,594.1	-76.2	3,594.9	0.00	397,521.07	750,555.77	
13,300.0	90.00	359.58	9,550.0	6,203.3	3,694.1	-77.0	3,694.9	0.00	397,621.07	750,555.03	
13,400.0	90.00	359.58	9,550.0	6,203.3	3,794.1	-77.7	3,794.9	0.00	397,721.07	750,554.30	

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Site:	Black Bear "36" State	MD Reference:	KB = 25 @ 3346.7usft (Cactus 139)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000.1 Single User Db

Planned 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)	
13,500.0	90.00	359.58	9,550.0	6,203.3	3,894.1	-78.4	3,894.8	0.00	397,821.07	750,553.57	
13,600.0	90.00	359.58	9,550.0	6,203.3	3,994.1	-79.2	3,994.8	0.00	397,921.06	750,552.83	
13,700.0	90.00	359.58	9,550.0	6,203.3	4,094.1	-79.9	4,094.8	0.00	398,021.06	750,552.10	
13,800.0	90.00	359.58	9,550.0	6,203.3	4,194.1	-80.6	4,194.8	0.00	398,121.06	750,551.36	
13,900.0	90.00	359.58	9,550.0	6,203.3	4,294.1	-81.4	4,294.8	0.00	398,221.06	750,550.63	
14,000.0	90.00	359.58	9,550.0	6,203.3	4,394.1	-82.1	4,394.8	0.00	398,321.05	750,549.89	
14,100.0	90.00	359.58	9,550.0	6,203.3	4,494.0	-82.8	4,494.8	0.00	398,421.05	750,549.16	
14,200.0	90.00	359.58	9,550.0	6,203.3	4,594.0	-83.6	4,594.8	0.00	398,521.05	750,548.43	
14,258.0	90.00	359.58	9,550.0	6,203.3	4,652.0	-84.0	4,652.8	0.00	398,579.00	750,548.00	

Checked By: _____	Approved By: _____	Date: _____
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