

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submitted to Appropriate District Office
State Lease- 4 Copies
Fee Lease- 3 Copies

☐ AMENDED REPORT

API Number 30-025- 40368	Pool Code 51020 97900	Well Name Red Hills; Bone Spring	Upper Shale
Property Code 38965	Property Name BLACK BEAR "36" STATE	Well Number 1H	
OGRIID No 7377	Operator Name EOG RESOURCES, INC.	Elevation 3321.7'	

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the North/South line	Feet from the East/West line	County
0	36	25 SOUTH	33 EAST, N.M.P.M.		300'	2190'	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the North/South line	Feet from the East/West line	County
B	36	25 SOUTH	33 EAST, N.M.P.M.		330'	2190'	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

BOTTOM HOLE LOCATION
 NEW MEXICO EAST
 NAD 1927
 Y=398579.0
 X=750598.1
 LAT.: N 32.0932250'
 LONG.: W 103.5241304'

UPPER MOST PERF.
 NEW MEXICO EAST
 NAD 1927
 Y=394256.9
 X=750629.6
 LAT.: N 32.0813438'
 LONG.: W 103.5241335'

SURFACE LOCATION
 NEW MEXICO EAST
 NAD 1927
 Y=393926.9
 X=750632.0
 LAT.: N 32.0804367'
 LONG.: W 103.5241338'

2190'

330'

630'

330'

2190'

2190'

2H SHL

3H SHL

PRODUCING AREA

PROJECT AREA

GRID AZ = 359°05'

4652.4' IN ALL

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Stan Wagner Date 12/7/11
Printed Name Stan Wagner

I hereby certify that the well location shown on this plan was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

15079
OCTOBER 18, 2011
Date of Survey
Signature and Seal of Professional
Professional Land Surveyor
Jerry Paul 11/14/2011
Certificate Number 15079
WO# 111018WL-1 (KA)

WO 111018WL-1 (KA)

ECG 12-14-2011
DEC 15 2011

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 & 2190' 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'-13,997'	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
13,997'	150	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' – 9,072'	Cut Brine	8.4-9.0	28-34	N/c
KOP – 13,997' Lateral	Cut Brine	9.0-9.5	40-42	8-10

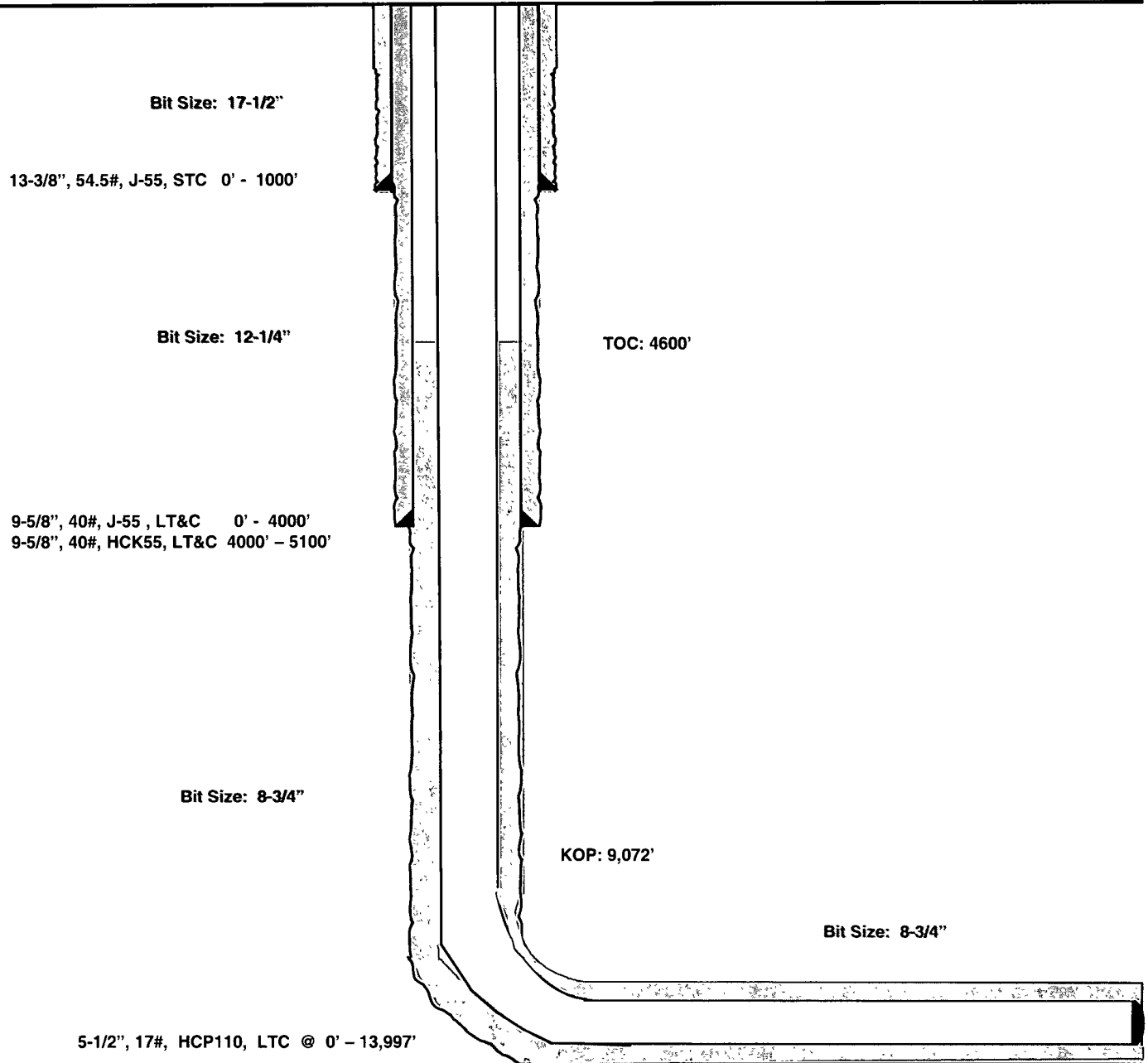
Black Bear 36 State #1H
Red Hills
Lea County, New Mexico

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: 13,997' MD, 9,550' TVD

BH Location: 330' FNL & 2190' FEL
Section 36
T-25-S, R-33-E



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

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

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

WELL DETAILS #1H

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

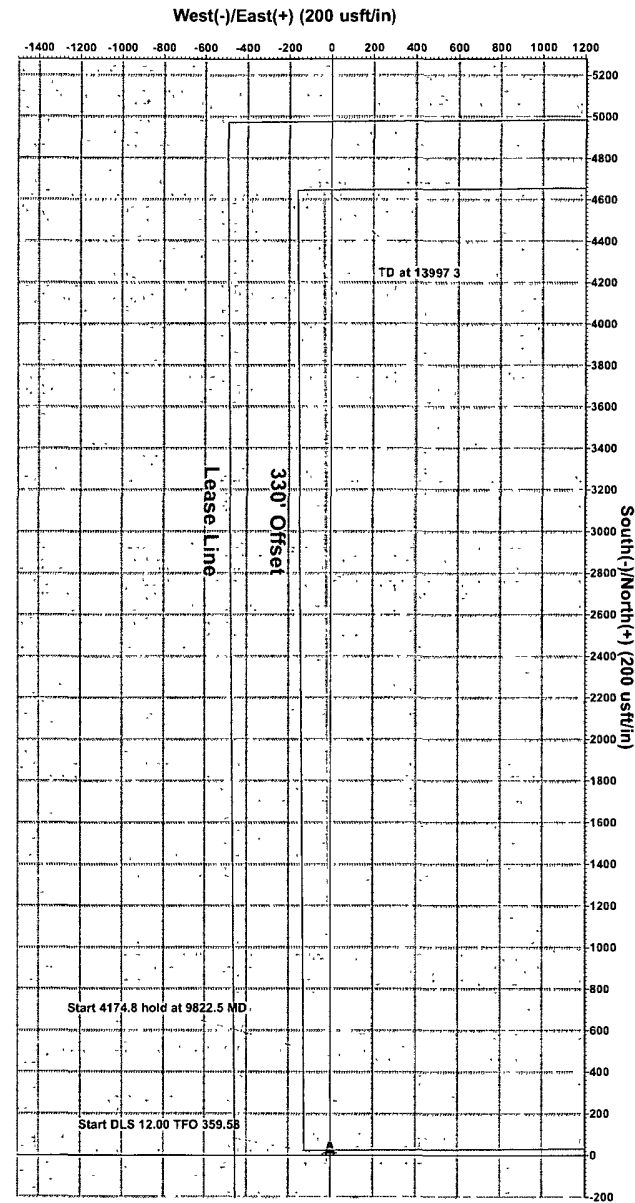
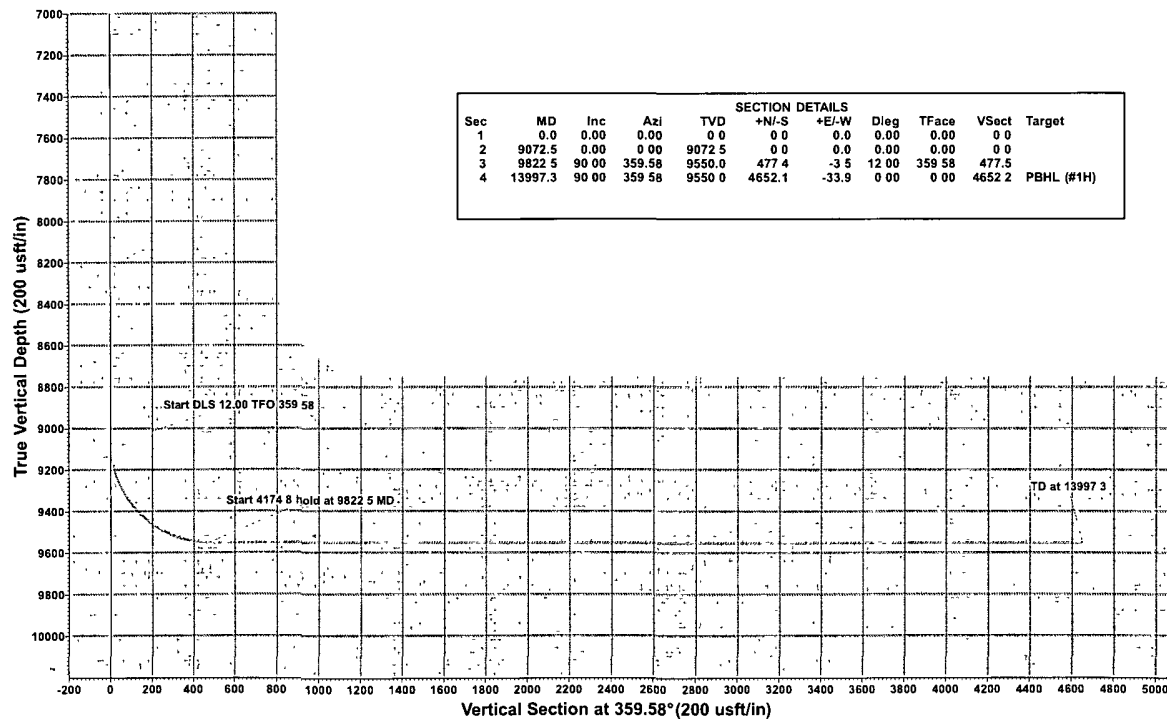
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 0	0 0	393926 900	750632 000	32° 4' 49 572 N	103° 31' 2 6 881 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (#1H)	9550 0	4652 1	-33 9	398579 000	750598 100	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0 0	0 0	0.0	0.00	0.00	0 0	
2	9872.5	0.00	0.00	9872.5	0 0	0.0	0.00	0.00	0 0	
3	9822.5	90.00	359.58	9550.0	477.4	-3.5	12.00	359.58	477.5	
4	13997.3	90.00	359.58	9550.0	4652.1	-33.9	0.00	0.00	4652.2	PBHL (#1H)



Plan Plan #1 (#1H/OH)

Created By: Sam Biffle Date: 17 29, November 30 2011

Checked: _____ Date: _____

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EOG Resources, Inc.

Lea County

Black Bear "36" State

#1H

OH

Plan: Plan #1

Pathfinder X & Y Report

30 November, 2011

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 #1	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:		393,926 900 usft	
From:	Map	Easting:		750,632.000 usft	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
0 0 usft		13-3/16 "		32° 4' 49.572 N	
				103° 31' 26.881 W	
				0.43 °	

Well	#1H					
Well Position	+N/-S	0.0 usft	Northing:	393,926.900 usft	Latitude:	32° 4' 49.572 N
	+E/-W	0.0 usft	Easting:	750,632.000 usft	Longitude:	103° 31' 26.881 W
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 #1		
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	359.58

Survey Tool Program		Date 11/30/2011		
From	To			
(usft)	(usft)	Survey (Wellbore)	Tool Name	Description
0 0	13,997.3	Plan #1 (OH)	MWD	MWD - Standard

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 #1	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)		
0.0	0.00	0.00	0.0	-3,346.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
100.0	0.00	0.00	100.0	-3,246.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
200.0	0.00	0.00	200.0	-3,146.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
300.0	0.00	0.00	300.0	-3,046.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
400.0	0.00	0.00	400.0	-2,946.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
500.0	0.00	0.00	500.0	-2,846.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
600.0	0.00	0.00	600.0	-2,746.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
700.0	0.00	0.00	700.0	-2,646.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
800.0	0.00	0.00	800.0	-2,546.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
900.0	0.00	0.00	900.0	-2,446.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,000.0	0.00	0.00	1,000.0	-2,346.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,100.0	0.00	0.00	1,100.0	-2,246.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,200.0	0.00	0.00	1,200.0	-2,146.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,300.0	0.00	0.00	1,300.0	-2,046.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,400.0	0.00	0.00	1,400.0	-1,946.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,500.0	0.00	0.00	1,500.0	-1,846.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,600.0	0.00	0.00	1,600.0	-1,746.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,700.0	0.00	0.00	1,700.0	-1,646.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,800.0	0.00	0.00	1,800.0	-1,546.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
1,900.0	0.00	0.00	1,900.0	-1,446.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
2,000.0	0.00	0.00	2,000.0	-1,346.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
2,100.0	0.00	0.00	2,100.0	-1,246.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
2,200.0	0.00	0.00	2,200.0	-1,146.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
2,300.0	0.00	0.00	2,300.0	-1,046.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
2,400.0	0.00	0.00	2,400.0	-946.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
2,500.0	0.00	0.00	2,500.0	-846.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
2,600.0	0.00	0.00	2,600.0	-746.7	0.0	0.0	0.0	0.00	393,926.90	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 #1	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	393,926.90	750,632.00	
2,800.0	0.00	0.00	2,800.0	-546.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
2,900.0	0.00	0.00	2,900.0	-446.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,000.0	0.00	0.00	3,000.0	-346.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,100.0	0.00	0.00	3,100.0	-246.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,200.0	0.00	0.00	3,200.0	-146.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,300.0	0.00	0.00	3,300.0	-46.7	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,400.0	0.00	0.00	3,400.0	53.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,500.0	0.00	0.00	3,500.0	153.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,600.0	0.00	0.00	3,600.0	253.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,700.0	0.00	0.00	3,700.0	353.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,800.0	0.00	0.00	3,800.0	453.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
3,900.0	0.00	0.00	3,900.0	553.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,000.0	0.00	0.00	4,000.0	653.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,100.0	0.00	0.00	4,100.0	753.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,200.0	0.00	0.00	4,200.0	853.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,300.0	0.00	0.00	4,300.0	953.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,400.0	0.00	0.00	4,400.0	1,053.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,500.0	0.00	0.00	4,500.0	1,153.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,600.0	0.00	0.00	4,600.0	1,253.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,700.0	0.00	0.00	4,700.0	1,353.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,800.0	0.00	0.00	4,800.0	1,453.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
4,900.0	0.00	0.00	4,900.0	1,553.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
5,000.0	0.00	0.00	5,000.0	1,653.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
5,100.0	0.00	0.00	5,100.0	1,753.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
5,200.0	0.00	0.00	5,200.0	1,853.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
5,300.0	0.00	0.00	5,300.0	1,953.3	0.0	0.0	0.0	0.00	393,926.90	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 #1	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	0.00	0.00	5,400.0	2,053.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
5,500.0	0.00	0.00	5,500.0	2,153.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
5,600.0	0.00	0.00	5,600.0	2,253.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
5,700.0	0.00	0.00	5,700.0	2,353.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
5,800.0	0.00	0.00	5,800.0	2,453.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
5,900.0	0.00	0.00	5,900.0	2,553.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,000.0	0.00	0.00	6,000.0	2,653.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,100.0	0.00	0.00	6,100.0	2,753.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,200.0	0.00	0.00	6,200.0	2,853.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,300.0	0.00	0.00	6,300.0	2,953.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,400.0	0.00	0.00	6,400.0	3,053.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,500.0	0.00	0.00	6,500.0	3,153.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,600.0	0.00	0.00	6,600.0	3,253.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,700.0	0.00	0.00	6,700.0	3,353.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,800.0	0.00	0.00	6,800.0	3,453.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
6,900.0	0.00	0.00	6,900.0	3,553.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,000.0	0.00	0.00	7,000.0	3,653.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,100.0	0.00	0.00	7,100.0	3,753.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,200.0	0.00	0.00	7,200.0	3,853.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,300.0	0.00	0.00	7,300.0	3,953.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,400.0	0.00	0.00	7,400.0	4,053.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,500.0	0.00	0.00	7,500.0	4,153.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,600.0	0.00	0.00	7,600.0	4,253.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,700.0	0.00	0.00	7,700.0	4,353.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,800.0	0.00	0.00	7,800.0	4,453.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
7,900.0	0.00	0.00	7,900.0	4,553.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00		
8,000.0	0.00	0.00	8,000.0	4,653.3	0.0	0.0	0.0	0.00	393,926.90	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 #1						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)	
8,100.0	0.00	0.00	8,100.0	4,753.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,200.0	0.00	0.00	8,200.0	4,853.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,300.0	0.00	0.00	8,300.0	4,953.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,400.0	0.00	0.00	8,400.0	5,053.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,500.0	0.00	0.00	8,500.0	5,153.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,600.0	0.00	0.00	8,600.0	5,253.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,700.0	0.00	0.00	8,700.0	5,353.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,800.0	0.00	0.00	8,800.0	5,453.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
8,900.0	0.00	0.00	8,900.0	5,553.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
9,000.0	0.00	0.00	9,000.0	5,653.3	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
9,072.5	0.00	0.00	9,072.5	5,725.8	0.0	0.0	0.0	0.00	393,926.90	750,632.00	
9,075.0	0.30	359.58	9,075.0	5,728.3	0.0	0.0	0.0	12.00	393,926.91	750,632.00	
9,100.0	3.30	359.58	9,100.0	5,753.3	0.8	0.0	0.8	12.00	393,927.69	750,631.99	
9,125.0	6.30	359.58	9,124.9	5,778.2	2.9	0.0	2.9	12.00	393,929.78	750,631.98	
9,150.0	9.30	359.58	9,149.7	5,803.0	6.3	0.0	6.3	12.00	393,933.18	750,631.95	
9,175.0	12.30	359.58	9,174.2	5,827.5	11.0	-0.1	11.0	12.00	393,937.86	750,631.92	
9,200.0	15.30	359.58	9,198.5	5,851.8	16.9	-0.1	16.9	12.00	393,943.82	750,631.88	
9,225.0	18.30	359.58	9,222.4	5,875.7	24.1	-0.2	24.1	12.00	393,951.05	750,631.82	
9,250.0	21.30	359.58	9,245.9	5,899.2	32.6	-0.2	32.6	12.00	393,959.51	750,631.76	
9,275.0	24.30	359.58	9,269.0	5,922.3	42.3	-0.3	42.3	12.00	393,969.20	750,631.69	
9,300.0	27.30	359.58	9,291.5	5,944.8	53.2	-0.4	53.2	12.00	393,980.08	750,631.61	
9,325.0	30.30	359.58	9,313.4	5,966.7	65.2	-0.5	65.2	12.00	393,992.12	750,631.52	
9,350.0	33.30	359.58	9,334.6	5,987.9	78.4	-0.6	78.4	12.00	394,005.29	750,631.43	
9,375.0	36.30	359.58	9,355.2	6,008.5	92.7	-0.7	92.7	12.00	394,019.56	750,631.32	
9,400.0	39.30	359.58	9,374.9	6,028.2	108.0	-0.8	108.0	12.00	394,034.88	750,631.21	
9,425.0	42.30	359.58	9,393.8	6,047.1	124.3	-0.9	124.3	12.00	394,051.21	750,631.09	
9,450.0	45.30	359.58	9,411.9	6,065.2	141.6	-1.0	141.6	12.00	394,068.51	750,630.97	

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 #1	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)	
9,475.0	48.30	359.58	9,429.0	6,082.3	159.8	-1.2	159.8	12.00	394,086.74	750,630.84	
9,500.0	51.30	359.58	9,445.1	6,098.4	178.9	-1.3	178.9	12.00	394,105.83	750,630.70	
9,525.0	54.30	359.58	9,460.2	6,113.5	198.8	-1.4	198.8	12.00	394,125.74	750,630.55	
9,550.0	57.30	359.58	9,474.3	6,127.6	219.5	-1.6	219.5	12.00	394,146.41	750,630.40	
9,575.0	60.30	359.58	9,487.2	6,140.5	240.9	-1.8	240.9	12.00	394,167.79	750,630.24	
9,600.0	63.30	359.58	9,499.1	6,152.4	262.9	-1.9	262.9	12.00	394,189.82	750,630.08	
9,625.0	66.30	359.58	9,509.7	6,163.0	285.5	-2.1	285.5	12.00	394,212.44	750,629.92	
9,650.0	69.30	359.58	9,519.1	6,172.4	308.7	-2.2	308.7	12.00	394,235.58	750,629.75	
9,675.0	72.30	359.58	9,527.4	6,180.7	332.3	-2.4	332.3	12.00	394,259.19	750,629.58	
9,700.0	75.30	359.58	9,534.3	6,187.6	356.3	-2.6	356.3	12.00	394,283.19	750,629.40	
9,725.0	78.30	359.58	9,540.0	6,193.3	380.6	-2.8	380.6	12.00	394,307.53	750,629.23	
9,750.0	81.30	359.58	9,544.5	6,197.8	405.2	-3.0	405.2	12.00	394,332.13	750,629.05	
9,775.0	84.30	359.58	9,547.6	6,200.9	430.0	-3.1	430.0	12.00	394,356.93	750,628.87	
9,800.0	87.30	359.58	9,549.4	6,202.7	455.0	-3.3	455.0	12.00	394,381.86	750,628.68	
9,822.5	90.00	359.58	9,550.0	6,203.3	477.4	-3.5	477.5	12.00	394,404.35	750,628.52	
9,900.0	90.00	359.58	9,550.0	6,203.3	555.0	-4.0	555.0	0.00	394,481.85	750,627.96	
10,000.0	90.00	359.58	9,550.0	6,203.3	654.9	-4.8	655.0	0.00	394,581.85	750,627.23	
10,100.0	90.00	359.58	9,550.0	6,203.3	754.9	-5.5	755.0	0.00	394,681.84	750,626.50	
10,200.0	90.00	359.58	9,550.0	6,203.3	854.9	-6.2	855.0	0.00	394,781.84	750,625.77	
10,300.0	90.00	359.58	9,550.0	6,203.3	954.9	-7.0	955.0	0.00	394,881.84	750,625.04	
10,400.0	90.00	359.58	9,550.0	6,203.3	1,054.9	-7.7	1,055.0	0.00	394,981.84	750,624.31	
10,500.0	90.00	359.58	9,550.0	6,203.3	1,154.9	-8.4	1,155.0	0.00	395,081.83	750,623.58	
10,600.0	90.00	359.58	9,550.0	6,203.3	1,254.9	-9.1	1,255.0	0.00	395,181.83	750,622.86	
10,700.0	90.00	359.58	9,550.0	6,203.3	1,354.9	-9.9	1,355.0	0.00	395,281.83	750,622.13	
10,800.0	90.00	359.58	9,550.0	6,203.3	1,454.9	-10.6	1,455.0	0.00	395,381.83	750,621.40	
10,900.0	90.00	359.58	9,550.0	6,203.3	1,554.9	-11.3	1,555.0	0.00	395,481.82	750,620.67	
11,000.0	90.00	359.58	9,550.0	6,203.3	1,654.9	-12.1	1,655.0	0.00	395,581.82	750,619.94	

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 #1	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)	
11,100.0	90.00	359.58	9,550.0	6,203.3	1,754.9	-12.8	1,755.0	0.00	395,681.82	750,619.21	
11,200.0	90.00	359.58	9,550.0	6,203.3	1,854.9	-13.5	1,855.0	0.00	395,781.82	750,618.48	
11,300.0	90.00	359.58	9,550.0	6,203.3	1,954.9	-14.2	1,955.0	0.00	395,881.81	750,617.75	
11,400.0	90.00	359.58	9,550.0	6,203.3	2,054.9	-15.0	2,055.0	0.00	395,981.81	750,617.03	
11,500.0	90.00	359.58	9,550.0	6,203.3	2,154.9	-15.7	2,155.0	0.00	396,081.81	750,616.30	
11,600.0	90.00	359.58	9,550.0	6,203.3	2,254.9	-16.4	2,255.0	0.00	396,181.80	750,615.57	
11,700.0	90.00	359.58	9,550.0	6,203.3	2,354.9	-17.2	2,355.0	0.00	396,281.80	750,614.84	
11,800.0	90.00	359.58	9,550.0	6,203.3	2,454.9	-17.9	2,455.0	0.00	396,381.80	750,614.11	
11,900.0	90.00	359.58	9,550.0	6,203.3	2,554.9	-18.6	2,555.0	0.00	396,481.80	750,613.38	
12,000.0	90.00	359.58	9,550.0	6,203.3	2,654.9	-19.3	2,655.0	0.00	396,581.79	750,612.65	
12,100.0	90.00	359.58	9,550.0	6,203.3	2,754.9	-20.1	2,755.0	0.00	396,681.79	750,611.93	
12,200.0	90.00	359.58	9,550.0	6,203.3	2,854.9	-20.8	2,855.0	0.00	396,781.79	750,611.20	
12,300.0	90.00	359.58	9,550.0	6,203.3	2,954.9	-21.5	2,955.0	0.00	396,881.79	750,610.47	
12,400.0	90.00	359.58	9,550.0	6,203.3	3,054.9	-22.3	3,055.0	0.00	396,981.78	750,609.74	
12,500.0	90.00	359.58	9,550.0	6,203.3	3,154.9	-23.0	3,155.0	0.00	397,081.78	750,609.01	
12,600.0	90.00	359.58	9,550.0	6,203.3	3,254.9	-23.7	3,255.0	0.00	397,181.78	750,608.28	
12,700.0	90.00	359.58	9,550.0	6,203.3	3,354.9	-24.4	3,355.0	0.00	397,281.78	750,607.55	
12,800.0	90.00	359.58	9,550.0	6,203.3	3,454.9	-25.2	3,455.0	0.00	397,381.77	750,606.82	
12,900.0	90.00	359.58	9,550.0	6,203.3	3,554.9	-25.9	3,555.0	0.00	397,481.77	750,606.10	
13,000.0	90.00	359.58	9,550.0	6,203.3	3,654.9	-26.6	3,655.0	0.00	397,581.77	750,605.37	
13,100.0	90.00	359.58	9,550.0	6,203.3	3,754.9	-27.4	3,755.0	0.00	397,681.77	750,604.64	
13,200.0	90.00	359.58	9,550.0	6,203.3	3,854.9	-28.1	3,855.0	0.00	397,781.76	750,603.91	
13,300.0	90.00	359.58	9,550.0	6,203.3	3,954.9	-28.8	3,955.0	0.00	397,881.76	750,603.18	
13,400.0	90.00	359.58	9,550.0	6,203.3	4,054.9	-29.5	4,055.0	0.00	397,981.76	750,602.45	
13,500.0	90.00	359.58	9,550.0	6,203.3	4,154.9	-30.3	4,155.0	0.00	398,081.75	750,601.72	
13,600.0	90.00	359.58	9,550.0	6,203.3	4,254.9	-31.0	4,255.0	0.00	398,181.75	750,600.99	
13,700.0	90.00	359.58	9,550.0	6,203.3	4,354.8	-31.7	4,355.0	0.00	398,281.75	750,600.27	

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 #1	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)	
13,800.0	90.00	359.58	9,550.0	6,203.3	4,454.8	-32.5	4,455.0	0.00	398,381.75	750,599.54	
13,900.0	90.00	359.58	9,550.0	6,203.3	4,554.8	-33.2	4,555.0	0.00	398,481.74	750,598.81	
13,997.3	90.00	359.58	9,550.0	6,203.3	4,652.1	-33.9	4,652.2	0.00	398,579.00	750,598.10	

Checked By: _____ Approved By: _____ Date: _____