

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
HOBBS, Minerals & Natural Resources
Department
CONSERVATION DIVISION
MAR 12 2014
1220 South St. Francis Dr.
Sante Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025- 41712	² Pool Code 84410	³ Pool Name Salado Draw; Wolfcamp (Gas)
⁴ Property Code 39814	⁵ Property Name OPHELIA 27	⁶ Well Number #701H
⁷ GRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3293'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	26-S	33-E	-	2420'	NORTH	947'	EAST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	22	26-S	33-E	-	2080'	SOUTH	710'	EAST	LEA

¹¹ Dedicated Acres 320	¹² Joint or Infill	¹³ Consolidation Code	¹⁴ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

22 27	BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=741686 Y=374526 LAT.: N 32.0272886 LONG.: W 103.5534660	660' 560' 660' 710' 710' 100.0' AZ = 359.57° 1980' AZ = 359.57° @ 3960.0' 2080' 660' 660' 2420' 1980' 660' 710' 947' 220' AZ = 27.88° 499.6' 660' 660' 220' S.H.L.	17 OPERATOR CERTIFICATION 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. <i>Stan Wagner</i> 3/7/14 Signature Date Stan Wagner Printed Name E-mail Address
	LOWER MOST PERF. NEW MEXICO EAST NAD 1927 X=741687 Y=374426 LAT.: N 32.0270137 LONG.: W 103.5534659		18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief. 11/20/2013 Date of Survey MICHAEL BROWN Signature and Title of Professional Surveyor NEW MEXICO 18329 PROFESSIONAL SURVEYOR Certificate Number
	UPPER MOST PERF. NEW MEXICO EAST NAD 1927 X=741717 Y=370466 LAT.: N 32.0161282 LONG.: W 103.5534624		
	SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=741483 Y=370025 LAT.: N 32.0149189 LONG.: W 103.5542264		

MAR 13 2014

Permit Information:

Well Name: Ophelia 27 No. 701H

Location:

SL: 2420' FNL & 947' FEL, Section 27, T-26-S, R-33-E, Lea Co., N.M.

BHL: 2080' FSL & 710' FEL, Section 22, T-26-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 – 900'	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'-16,726'	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
900'	300	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)
	200	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,100'	800	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
13,000'	100	18.0	0.90	210' Btm Hole Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
11,625' – 12,225'	300	18.0	0.90	600' Sidetrack Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
16,726'	375	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
	400	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
	1350	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 – 900'	Fresh - Gel	8.6-8.8	28-34	N/c
900' – 5,100'	Brine	10.0-10.2	28-34	N/c
5,100' – 13,000' Pilot Hole	Cut Brine	8.4-10.0	28-34	N/c
11,922' – 16,726' Lateral	Cut Brine	9.0-9.5	28-34	N/c

Ophelia 27 #701H

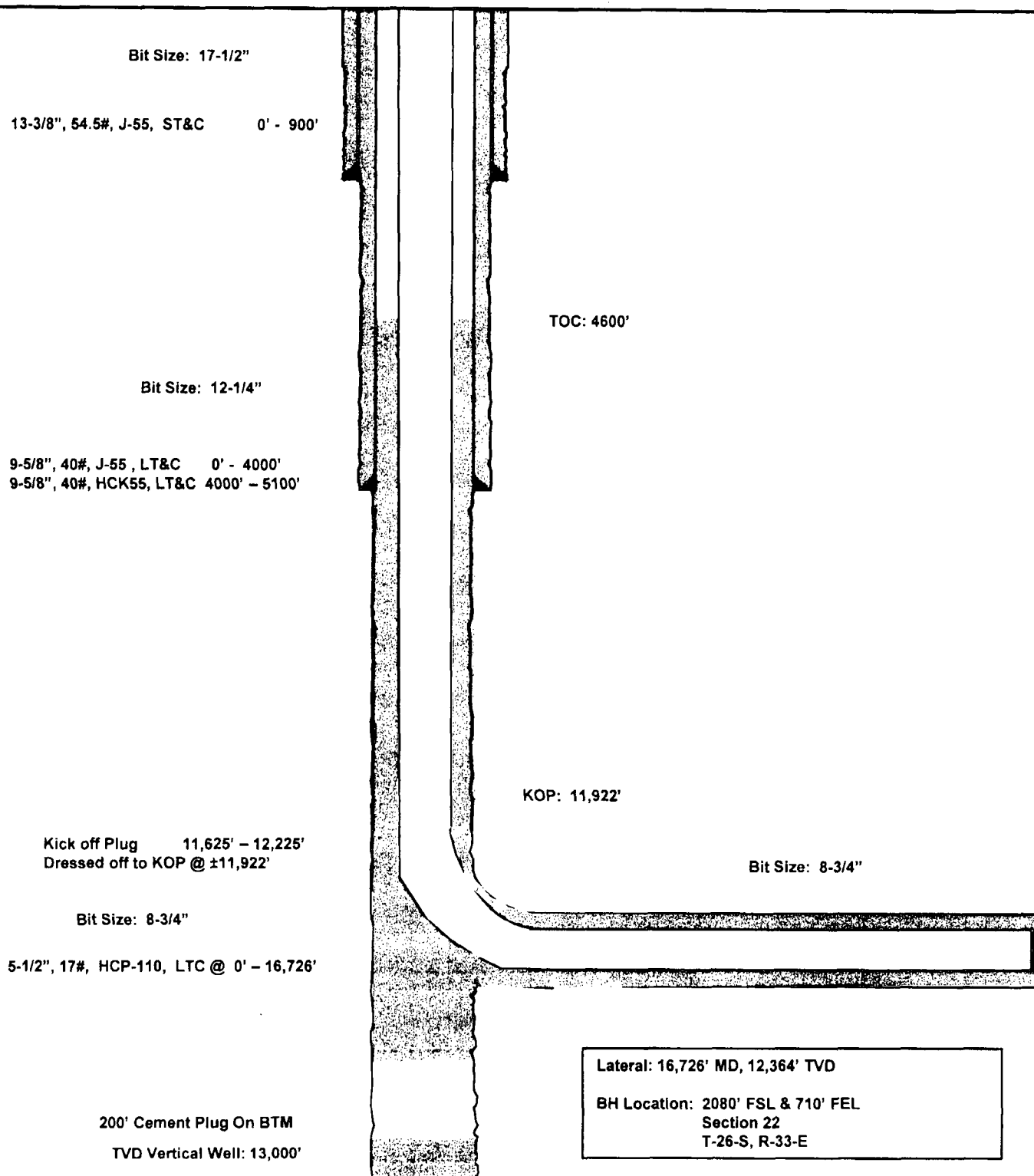
Lea County, New Mexico

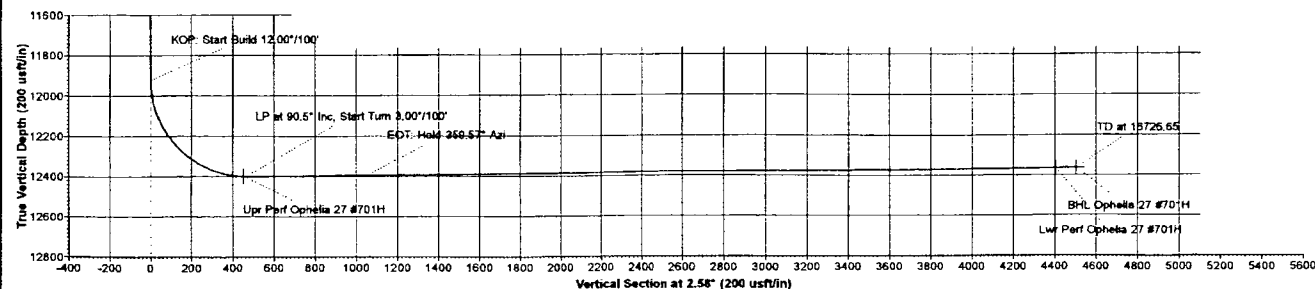
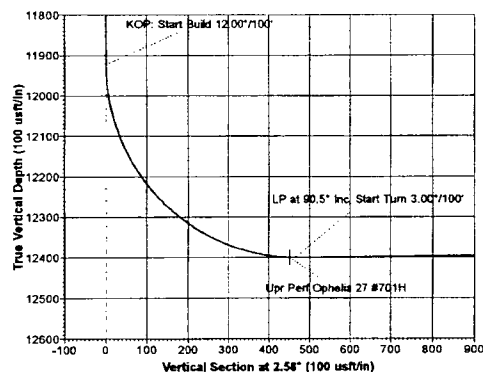
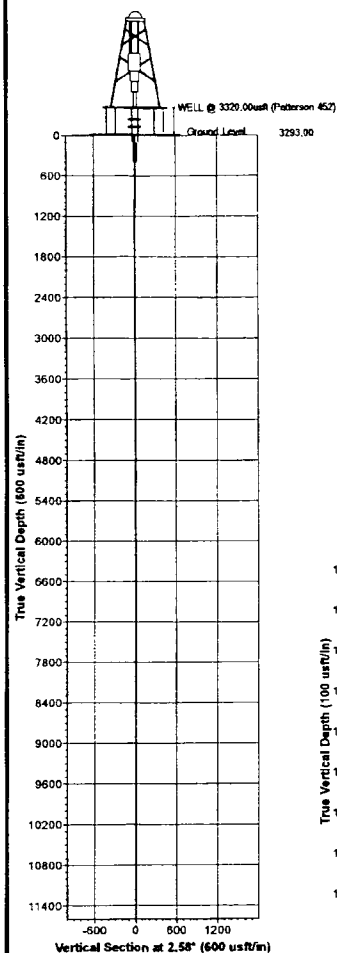
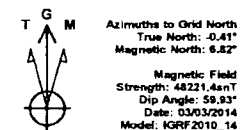
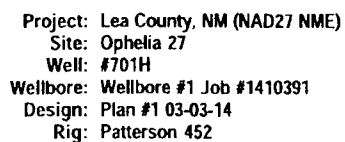
2420' FNL
947' FEL
Section 27
T-26-S, R-33-E

Proposed Wellbore

KB: 3,320'
GL: 3,293'

API: 30-025-





WELL DETAILS											
		+NA-S		+E+W		Northing		Ground Level		3293.00	
		0.00		0.00		370025.00		Easting		741483.00	
								Latitude		32° 0' 53.71140 N	
										Longitude	
										103° 33' 15.21704 W	
SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+NA-S	+E+W	Orig	TFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	11822.55	0.00	0.00	11822.55	0.00	0.00	0.00	0.00	0.00		KOP: Start Build 12.00"/100'
3	12876.72	90.50	17.25	12400.00	459.97	142.82	12.00	17.25	485.94		LP at 90.5" Inc. Start Turn 3.00"/10'
4	13285.86	90.50	359.57	12394.81	1040.44	228.87	3.00	-89.92	1049.69		EOT: Hold 359.57" Azi
5	16726.65	90.50	359.57	12364.50	4501.00	203.00	0.00	0.00	4505.58	BHL Ophelia 27 #701H	TD at 18728.85

DESIGN TARGET DETAILS											
		+NA-S		+E+W		Northing		Easting		Latitude	
		TVD		4501.00		203.00		370452.00		32° 1' 38.23794 N	
		12364.50		4401.00		204.00		374426.00		103° 33' 12.47890 W	
		12365.50		4401.00		204.00		374426.00		103° 33' 12.47890 W	
		12400.00		441.00		234.00		370466.00		32° 0' 58.05874 N	
										103° 33' 12.46243 W	
Name		TVD	+NA-S	+E+W	Northing	Easting				Latitude	Shape
BHL Ophelia 27 #701H		12364.50	4501.00	203.00	370452.00	741686.00		32° 1' 38.23794 N		103° 33' 12.48213 W	Point
Lwr Perf Ophelia 27 #701H		12365.50	4401.00	204.00	374426.00	741687.00		32° 1' 37.24819 N		103° 33' 12.47890 W	Point
Upr Perf Ophelia 27 #701H		12400.00	441.00	234.00	370466.00	741717.00		32° 0' 58.05874 N		103° 33' 12.46243 W	Point

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Map System      : US State Plane 1927 (Exact solution)
Datum           : NAD 1927 (NADCON CONUS)
Ellipsoid       : Clarke 1866
Zone Name       : New Mexico East 3001

Local Origin    : Well #0701H, Grid North

Latitude        : 32° 0' 53.71140 N
Longitude        : 103° 33' 15.21704 W

Grid East       : 741483.00
Grid North      : 370025.00
Scale Factor    : 1.000

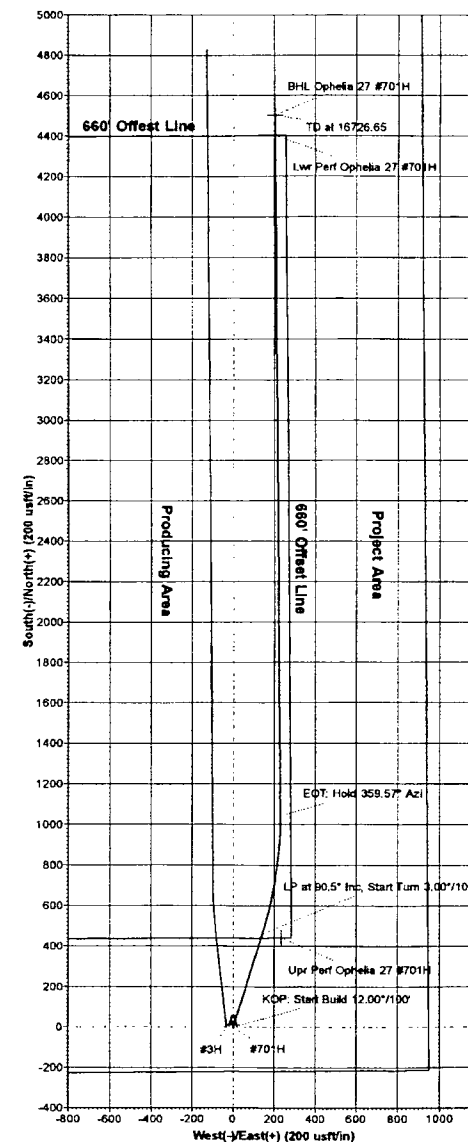
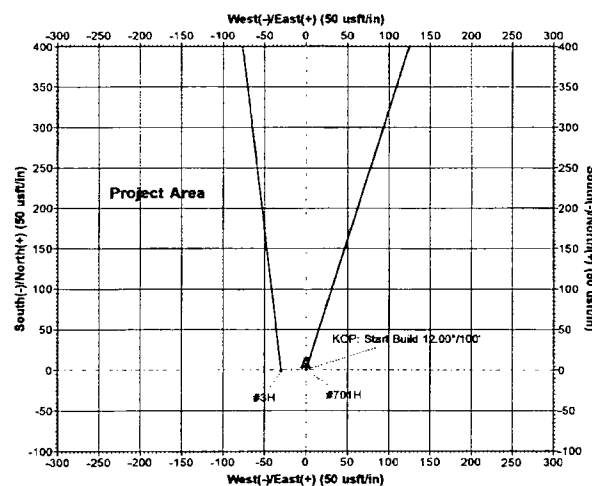
Magnetic Model  : IGRF2010_14
Sample Date     : 03-Mar-14
Magnetic Declination: 7.23°
    from Horizontal: 59.93°
    Field Strength: 48221

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To convert a Magnetic Direction to a Grid Direction, Add 6.82°
 To convert a Magnetic Direction to a True Direction, Add 7.23° East
 To convert a True Direction to a Grid Direction, Subtract 0.41°

LEGEND

_____ #3H, Wellbore #1 Job #1410184, Plan #1 01-28-14 VO
_____ Plan #1 03-03-14





EOG Resources

Lea County, NM (NAD27 NME)

Ophelia 27

#701H

Wellbore #1 Job #1410391

Plan: Plan #1 03-03-14

Planning Report

03 March, 2014





Phoenix Technology Services
Planning Report



Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Ophelia 27
Well: #701H
Wellbore: Wellbore #1 Job #1410391
Design: Plan #1 03-03-14

Local Co-ordinate Reference: Well #701H
TVD Reference: WELL @ 3320.00usft (Patterson 452)
MD Reference: WELL @ 3320.00usft (Patterson 452)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Project	Lea County, NM (NAD27 NME)		
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	Ophelia 27		
Site Position:		Northing:	370,025.00 usft
From: Map		Easting:	741,483.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 0' 53.71140 N
		Longitude:	103° 33' 15.21704 W
		Grid Convergence:	0.41 °

Well	#701H		
Well Position	+N/-S	0.00 usft	Northing: 370,025.00 usft
	+E/-W	0.00 usft	Easting: 741,483.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 0' 53.71140 N
		Longitude:	103° 33' 15.21704 W
		Ground Level:	3,293.00 usft

Wellbore	Wellbore #1 Job #1410391					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	IGRF2010_14	03/03/14	7.23	59.93	48,221	

Design	Plan #1 03-03-14				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	2.58	

Survey Tool Program	Date	03/03/14			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	16,726.65	Plan #1 03-03-14 (Wellbore #1 Job #1410)	MWD	MWD - Standard	



Phoenix Technology Services
Planning Report



Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Ophelia 27
Well: #701H
Wellbore: Wellbore #1 Job #1410391
Design: Plan #1 03-03-14

Local Co-ordinate Reference: Well #701H
TVD Reference: WELL @ 3320.00usft (Patterson 452)
MD Reference: WELL @ 3320.00usft (Patterson 452)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLog (*100usft)
0.00	0.00	0.00	-3,320.00	0.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
100.00	0.00	0.00	-3,220.00	100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
200.00	0.00	0.00	-3,120.00	200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
300.00	0.00	0.00	-3,020.00	300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
400.00	0.00	0.00	-2,920.00	400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
500.00	0.00	0.00	-2,820.00	500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
600.00	0.00	0.00	-2,720.00	600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
700.00	0.00	0.00	-2,620.00	700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
800.00	0.00	0.00	-2,520.00	800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
900.00	0.00	0.00	-2,420.00	900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,000.00	0.00	0.00	-2,320.00	1,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,100.00	0.00	0.00	-2,220.00	1,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,200.00	0.00	0.00	-2,120.00	1,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,300.00	0.00	0.00	-2,020.00	1,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,400.00	0.00	0.00	-1,920.00	1,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,500.00	0.00	0.00	-1,820.00	1,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,600.00	0.00	0.00	-1,720.00	1,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,700.00	0.00	0.00	-1,620.00	1,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,800.00	0.00	0.00	-1,520.00	1,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
1,900.00	0.00	0.00	-1,420.00	1,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,000.00	0.00	0.00	-1,320.00	2,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,100.00	0.00	0.00	-1,220.00	2,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,200.00	0.00	0.00	-1,120.00	2,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,300.00	0.00	0.00	-1,020.00	2,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,400.00	0.00	0.00	-920.00	2,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,500.00	0.00	0.00	-820.00	2,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,600.00	0.00	0.00	-720.00	2,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00



Phoenix Technology Services Planning Report



Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Ophelia 27
Well: #701H
Wellbore: Wellbore #1 Job #1410391
Design: Plan #1 03-03-14

Local Co-ordinate Reference: Well #701H
TVD Reference: WELL @ 3320.00usft (Patterson 452)
MD Reference: WELL @ 3320.00usft (Patterson 452)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLog (°/100usft)
2,700.00	0.00	0.00	-620.00	2,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,800.00	0.00	0.00	-520.00	2,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
2,900.00	0.00	0.00	-420.00	2,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,000.00	0.00	0.00	-320.00	3,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,100.00	0.00	0.00	-220.00	3,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,200.00	0.00	0.00	-120.00	3,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,300.00	0.00	0.00	-20.00	3,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,400.00	0.00	0.00	80.00	3,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,500.00	0.00	0.00	180.00	3,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,600.00	0.00	0.00	280.00	3,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,700.00	0.00	0.00	380.00	3,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,800.00	0.00	0.00	480.00	3,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
3,900.00	0.00	0.00	580.00	3,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,000.00	0.00	0.00	680.00	4,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,100.00	0.00	0.00	780.00	4,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,200.00	0.00	0.00	880.00	4,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,300.00	0.00	0.00	980.00	4,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,400.00	0.00	0.00	1,080.00	4,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,500.00	0.00	0.00	1,180.00	4,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,600.00	0.00	0.00	1,280.00	4,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,700.00	0.00	0.00	1,380.00	4,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,800.00	0.00	0.00	1,480.00	4,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
4,900.00	0.00	0.00	1,580.00	4,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,000.00	0.00	0.00	1,680.00	5,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,100.00	0.00	0.00	1,780.00	5,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,200.00	0.00	0.00	1,880.00	5,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,300.00	0.00	0.00	1,980.00	5,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00



Phoenix Technology Services
Planning Report



Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Ophelia 27
Well: #701H
Wellbore: Wellbore #1 Job #1410391
Design: Plan #1 03-03-14

Local Co-ordinate Reference: Well #701H
TVD Reference: WELL @ 3320.00usft (Patterson 452)
MD Reference: WELL @ 3320.00usft (Patterson 452)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLog (°/100usft)
5,400.00	0.00	0.00	2,080.00	5,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,500.00	0.00	0.00	2,180.00	5,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,600.00	0.00	0.00	2,280.00	5,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,700.00	0.00	0.00	2,380.00	5,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,800.00	0.00	0.00	2,480.00	5,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
5,900.00	0.00	0.00	2,580.00	5,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,000.00	0.00	0.00	2,680.00	6,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,100.00	0.00	0.00	2,780.00	6,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,200.00	0.00	0.00	2,880.00	6,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,300.00	0.00	0.00	2,980.00	6,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,400.00	0.00	0.00	3,080.00	6,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,500.00	0.00	0.00	3,180.00	6,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,600.00	0.00	0.00	3,280.00	6,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,700.00	0.00	0.00	3,380.00	6,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,800.00	0.00	0.00	3,480.00	6,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
6,900.00	0.00	0.00	3,580.00	6,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,000.00	0.00	0.00	3,680.00	7,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,100.00	0.00	0.00	3,780.00	7,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,200.00	0.00	0.00	3,880.00	7,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,300.00	0.00	0.00	3,980.00	7,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,400.00	0.00	0.00	4,080.00	7,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,500.00	0.00	0.00	4,180.00	7,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,600.00	0.00	0.00	4,280.00	7,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,700.00	0.00	0.00	4,380.00	7,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,800.00	0.00	0.00	4,480.00	7,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
7,900.00	0.00	0.00	4,580.00	7,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,000.00	0.00	0.00	4,680.00	8,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00



Phoenix Technology Services
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8,100.00	0.00	0.00	4,780.00	8,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,200.00	0.00	0.00	4,880.00	8,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,300.00	0.00	0.00	4,980.00	8,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,400.00	0.00	0.00	5,080.00	8,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,500.00	0.00	0.00	5,180.00	8,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,600.00	0.00	0.00	5,280.00	8,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,700.00	0.00	0.00	5,380.00	8,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,800.00	0.00	0.00	5,480.00	8,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
8,900.00	0.00	0.00	5,580.00	8,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,000.00	0.00	0.00	5,680.00	9,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,100.00	0.00	0.00	5,780.00	9,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,200.00	0.00	0.00	5,880.00	9,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,300.00	0.00	0.00	5,980.00	9,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,400.00	0.00	0.00	6,080.00	9,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,500.00	0.00	0.00	6,180.00	9,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,600.00	0.00	0.00	6,280.00	9,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,700.00	0.00	0.00	6,380.00	9,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,800.00	0.00	0.00	6,480.00	9,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
9,900.00	0.00	0.00	6,580.00	9,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,000.00	0.00	0.00	6,680.00	10,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,100.00	0.00	0.00	6,780.00	10,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,200.00	0.00	0.00	6,880.00	10,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,300.00	0.00	0.00	6,980.00	10,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,400.00	0.00	0.00	7,080.00	10,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,500.00	0.00	0.00	7,180.00	10,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,600.00	0.00	0.00	7,280.00	10,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,700.00	0.00	0.00	7,380.00	10,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00



Phoenix Technology Services
Planning Report



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MD (usft)	Inc (")	Azi (azimuth) (")	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg ("/100usft)
10,800.00	0.00	0.00	7,480.00	10,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
10,900.00	0.00	0.00	7,580.00	10,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,000.00	0.00	0.00	7,680.00	11,000.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,100.00	0.00	0.00	7,780.00	11,100.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,200.00	0.00	0.00	7,880.00	11,200.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,300.00	0.00	0.00	7,980.00	11,300.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,400.00	0.00	0.00	8,080.00	11,400.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,500.00	0.00	0.00	8,180.00	11,500.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,600.00	0.00	0.00	8,280.00	11,600.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,700.00	0.00	0.00	8,380.00	11,700.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,800.00	0.00	0.00	8,480.00	11,800.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,900.00	0.00	0.00	8,580.00	11,900.00	0.00	0.00	370,025.00	741,483.00	0.00	0.00
11,922.55	0.00	0.00	8,602.55	11,922.55	0.00	0.00	370,025.00	741,483.00	0.00	0.00
KOP: Start Build 12.00"/100'										
11,925.00	0.29	17.25	8,605.00	11,925.00	0.01	0.00	370,025.01	741,483.00	0.01	12.00
11,950.00	3.29	17.25	8,629.98	11,949.98	0.75	0.23	370,025.75	741,483.23	0.76	12.00
11,975.00	6.29	17.25	8,654.89	11,974.89	2.75	0.85	370,027.75	741,483.85	2.78	12.00
12,000.00	9.29	17.25	8,679.66	11,999.66	5.99	1.86	370,030.99	741,484.86	6.06	12.00
12,025.00	12.29	17.25	8,704.22	12,024.22	10.46	3.25	370,035.46	741,486.25	10.59	12.00
12,050.00	15.29	17.25	8,728.49	12,048.49	16.15	5.01	370,041.15	741,488.01	16.36	12.00
12,075.00	18.29	17.25	8,752.42	12,072.42	23.05	7.16	370,048.05	741,490.16	23.35	12.00
12,100.00	21.29	17.25	8,775.94	12,095.94	31.13	9.67	370,056.13	741,492.67	31.53	12.00
12,125.00	24.29	17.25	8,798.99	12,118.99	40.38	12.54	370,065.38	741,495.54	40.90	12.00
12,150.00	27.29	17.25	8,821.49	12,141.49	50.77	15.76	370,075.77	741,498.76	51.43	12.00
12,175.00	30.29	17.25	8,843.40	12,163.40	62.27	19.33	370,087.27	741,502.33	63.07	12.00
12,200.00	33.29	17.25	8,864.65	12,184.65	74.84	23.24	370,099.84	741,506.24	75.81	12.00
12,225.00	36.29	17.25	8,885.18	12,205.18	88.47	27.47	370,113.47	741,510.47	89.61	12.00



Phoenix Technology Services
Planning Report



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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
12,250.00	39.29	17.25	8,904.93	12,224.93	103.10	32.01	370,128.10	741,515.01	104.43	12.00
12,275.00	42.29	17.25	8,923.85	12,243.85	118.69	36.86	370,143.69	741,519.86	120.23	12.00
12,300.00	45.29	17.25	8,941.90	12,261.90	135.21	41.99	370,160.21	741,524.99	136.97	12.00
12,325.00	48.29	17.25	8,959.01	12,279.01	152.62	47.39	370,177.62	741,530.39	154.60	12.00
12,350.00	51.29	17.25	8,975.15	12,295.15	170.85	53.05	370,195.85	741,536.05	173.06	12.00
12,375.00	54.29	17.25	8,990.26	12,310.26	189.86	58.95	370,214.86	741,541.95	192.32	12.00
12,400.00	57.29	17.25	9,004.31	12,324.31	209.60	65.08	370,234.60	741,548.08	212.32	12.00
12,425.00	60.29	17.25	9,017.27	12,337.27	230.02	71.42	370,255.02	741,554.42	233.01	12.00
12,450.00	63.29	17.25	9,029.08	12,349.08	251.06	77.96	370,276.06	741,560.96	254.32	12.00
12,475.00	66.29	17.25	9,039.73	12,359.73	272.66	84.66	370,297.66	741,567.66	276.20	12.00
12,500.00	69.29	17.25	9,049.17	12,369.17	294.76	91.53	370,319.76	741,574.53	298.59	12.00
12,525.00	72.29	17.25	9,057.40	12,377.40	317.31	98.53	370,342.31	741,581.53	321.42	12.00
12,550.00	75.29	17.25	9,064.37	12,384.37	340.23	105.64	370,365.23	741,588.64	344.65	12.00
12,575.00	78.29	17.25	9,070.08	12,390.08	363.47	112.86	370,388.47	741,595.86	368.19	12.00
12,600.00	81.29	17.25	9,074.51	12,394.51	386.97	120.16	370,411.97	741,603.16	391.99	12.00
12,625.00	84.29	17.25	9,077.65	12,397.65	410.65	127.51	370,435.65	741,610.51	415.98	12.00
12,650.00	87.29	17.25	9,079.48	12,399.48	434.46	134.90	370,459.46	741,617.90	440.10	12.00
12,676.72	90.50	17.25	9,080.00	12,400.00	459.97	142.82	370,484.97	741,625.82	465.94	12.00
LP at 90.5° Inc, Start Turn 3.00°/100'										
12,700.00	90.50	16.55	9,079.79	12,399.79	482.24	149.59	370,507.24	741,632.59	488.49	3.00
12,800.00	90.50	13.55	9,078.92	12,398.92	578.80	175.56	370,603.80	741,658.56	586.12	3.00
12,900.00	90.51	10.55	9,078.03	12,398.03	676.58	196.43	370,701.58	741,679.43	684.74	3.00
13,000.00	90.51	7.55	9,077.15	12,397.15	775.32	212.16	370,800.32	741,695.16	784.09	3.00
13,100.00	90.51	4.55	9,076.26	12,396.26	874.75	222.70	370,899.75	741,705.70	883.89	3.00
13,200.00	90.50	1.55	9,075.38	12,395.38	974.59	228.02	370,999.59	741,711.02	983.87	3.00
13,265.86	90.50	359.58	9,074.81	12,394.81	1,040.44	228.67	371,065.44	741,711.67	1,049.69	3.00

EOT: Hold 359.57° Azi



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13,300.00	90.50	359.57	9,074.51	12,394.51	1,074.58	228.42	371,099.58	741,711.42	1,083.78	0.00
13,400.00	90.50	359.57	9,073.63	12,393.63	1,174.57	227.68	371,199.57	741,710.68	1,183.64	0.00
13,500.00	90.50	359.57	9,072.76	12,392.76	1,274.57	226.93	371,299.57	741,709.93	1,283.50	0.00
13,600.00	90.50	359.57	9,071.88	12,391.88	1,374.56	226.19	371,399.56	741,709.19	1,383.35	0.00
13,700.00	90.50	359.57	9,071.00	12,391.00	1,474.55	225.45	371,499.55	741,708.45	1,483.21	0.00
13,800.00	90.50	359.57	9,070.13	12,390.13	1,574.55	224.71	371,599.55	741,707.71	1,583.07	0.00
13,900.00	90.50	359.57	9,069.25	12,389.25	1,674.54	223.97	371,699.54	741,706.97	1,682.93	0.00
14,000.00	90.50	359.57	9,068.38	12,388.38	1,774.53	223.22	371,799.53	741,706.22	1,782.79	0.00
14,100.00	90.50	359.57	9,067.50	12,387.50	1,874.53	222.48	371,899.53	741,705.48	1,882.65	0.00
14,200.00	90.50	359.57	9,066.63	12,386.63	1,974.52	221.74	371,999.52	741,704.74	1,982.51	0.00
14,300.00	90.50	359.57	9,065.75	12,385.75	2,074.51	221.00	372,099.51	741,704.00	2,082.36	0.00
14,400.00	90.50	359.57	9,064.87	12,384.87	2,174.51	220.26	372,199.51	741,703.26	2,182.22	0.00
14,500.00	90.50	359.57	9,064.00	12,384.00	2,274.50	219.52	372,299.50	741,702.52	2,282.08	0.00
14,600.00	90.50	359.57	9,063.12	12,383.12	2,374.49	218.77	372,399.49	741,701.77	2,381.94	0.00
14,700.00	90.50	359.57	9,062.25	12,382.25	2,474.49	218.03	372,499.49	741,701.03	2,481.80	0.00
14,800.00	90.50	359.57	9,061.37	12,381.37	2,574.48	217.29	372,599.48	741,700.29	2,581.66	0.00
14,900.00	90.50	359.57	9,060.50	12,380.50	2,674.47	216.55	372,699.47	741,699.55	2,681.51	0.00
15,000.00	90.50	359.57	9,059.62	12,379.62	2,774.47	215.81	372,799.47	741,698.81	2,781.37	0.00
15,100.00	90.50	359.57	9,058.74	12,378.74	2,874.46	215.07	372,899.46	741,698.07	2,881.23	0.00
15,200.00	90.50	359.57	9,057.87	12,377.87	2,974.45	214.32	372,999.45	741,697.32	2,981.09	0.00
15,300.00	90.50	359.57	9,056.99	12,376.99	3,074.45	213.58	373,099.45	741,696.58	3,080.95	0.00
15,400.00	90.50	359.57	9,056.12	12,376.12	3,174.44	212.84	373,199.44	741,695.84	3,180.81	0.00
15,500.00	90.50	359.57	9,055.24	12,375.24	3,274.43	212.10	373,299.43	741,695.10	3,280.67	0.00
15,600.00	90.50	359.57	9,054.37	12,374.37	3,374.43	211.36	373,399.43	741,694.36	3,380.52	0.00
15,700.00	90.50	359.57	9,053.49	12,373.49	3,474.42	210.62	373,499.42	741,693.62	3,480.38	0.00
15,800.00	90.50	359.57	9,052.61	12,372.61	3,574.41	209.87	373,599.41	741,692.87	3,580.24	0.00
15,900.00	90.50	359.57	9,051.74	12,371.74	3,674.41	209.13	373,699.41	741,692.13	3,680.10	0.00



Phoenix Technology Services
Planning Report



Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Ophelia 27
Well: #701H
Wellbore: Wellbore #1 Job #1410391
Design: Plan #1 03-03-14

Local Co-ordinate Reference: Well #701H
TVD Reference: WELL @ 3320.00usft (Patterson 452)
MD Reference: WELL @ 3320.00usft (Patterson 452)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR DB

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	V. Sec (usft)	DLeg (°/100usft)
16,000.00	90.50	359.57	9,050.86	12,370.86	3,774.40	208.39	373,799.40	741,691.39	3,779.96	0.00
16,100.00	90.50	359.57	9,049.99	12,369.99	3,874.39	207.65	373,899.39	741,690.65	3,879.82	0.00
16,200.00	90.50	359.57	9,049.11	12,369.11	3,974.39	206.91	373,999.39	741,689.91	3,979.67	0.00
16,300.00	90.50	359.57	9,048.24	12,368.24	4,074.38	206.16	374,099.38	741,689.16	4,079.53	0.00
16,400.00	90.50	359.57	9,047.36	12,367.36	4,174.37	205.42	374,199.37	741,688.42	4,179.39	0.00
16,500.00	90.50	359.57	9,046.48	12,366.48	4,274.37	204.68	374,299.37	741,687.68	4,279.25	0.00
16,600.00	90.50	359.57	9,045.61	12,365.61	4,374.36	203.94	374,399.36	741,686.94	4,379.11	0.00
16,700.00	90.50	359.57	9,044.73	12,364.73	4,474.36	203.20	374,499.36	741,686.20	4,478.97	0.00
16,726.65	90.50	359.57	9,044.50	12,364.50	4,501.00	203.00	374,526.00	741,686.00	4,505.58	0.00
TD at 16726.65										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,922.55	11,922.55	0.00	0.00	KOP: Start Build 12.00°/100'
12,676.72	12,400.00	459.97	142.82	LP at 90.5° Inc, Start Turn 3.00°/100'
13,265.86	12,394.81	1,040.44	228.67	EOT: Hold 359.57° Azi
16,726.65	12,364.50	4,501.00	203.00	TD at 16726.65

EOG RESOURCES, INC.
OPHELIA 27 #701H

Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

- Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator

- Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

- H₂S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.

(Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
OPHELIA 27 #701H

- **Mud program:**
The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.
- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- **Communication:**
Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
OPHELIA 27 #701H

Emergency Assistance Telephone List

PUBLIC SAFETY: **911 or**

Lea County Sheriff's Department (575) 396-3611

Rod Coffman

Fire Department:

Carlsbad (575) 885-3125

Artesia (575) 746-5050

Hospitals:

Carlsbad (575) 887-4121

Artesia (575) 748-3333

Hobbs (575) 392-1979

Dept. of Public Safety/Carlsbad (575) 748-9718

Highway Department (575) 885-3281

New Mexico Oil Conservation (575) 476-3440

U.S. Dept. of Labor (575) 887-1174

EOG Resources, Inc.

EOG / Midland Office (432) 686-3600

Company Drilling Consultants:

Lonnie Byrd Cell (432) 894-2389

Rickie Poindexter

Drilling Engineer

Robert Brosig Office (432) 686-3737

Cell (432) 770-0705

Drilling Manager

Steve Munsell Office (432) 686-3609

Cell (432) 894-1256

Drilling Superintendent

Ron Welch Office (432) 686-3695

Cell (432) 386-0592

Cactus Drilling

Patterson Drilling Office (432) 682-9401

Patterson 452 Drilling Rig Rig (432) 894-2389

Tool Pusher:

Robert Merchant Cell (903) 477-3751

Patrick Ford Cell (903) 539-7889

Safety

Reggie Phillips (HSE Manager) Office (432) 686-3747

Cell (432) 250-7507