

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM0438001
2. Name of Operator EOG Resources Inc.		6. If Indian, Allottee or Tribe Name
3a. Address P.O. Box 2267 Midland, Texas 79702	3b. Phone No. (include area code) 432-686-3689	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 330 FNL & 520 FWL, NWNW Sec 8, T26S, R31E		8. Well Name and No. Ross Draw 8 Fed 1H
		9. API Well No. 30-015-39248
		10. Field and Pool, or Exploratory Area Wildcat Bone Spring (97860) JENNINGS, Bone Spring, West
		11. County or Parish, State Eddy NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other _____
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

EOG Resources, Inc. requests an amemdment to our approved APD to reflect a change in BHL, TD, and production casing.

Accepted for record

BHL will change to 230' FSL & 412' FWL, SWSW, Section 8, T26S, R31E.

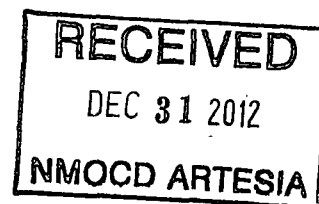
NMOCD

The new TD is 13211' TMD, 8270' TVD.

Production casing is changing from 5-1/2", 20#, P110 or HCP110 NSCC to 5-1/2", 17#, P110 or HCP110 LTC.

A new C-102, directional plan, and drill plan are attached.

original COA still sands



14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Stan Wagner		Title Regulatory Analyst	APPROVED DEC 27 2012 Date [Signature] BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE
Signature [Signature]		Date 432-686-3689	
THIS SPACE FOR FEDERAL OR STATE OFFICE USE			
Approved by		Title	
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office	

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
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa 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 30-015-39248	² Pool Code 96403 97860	³ Property Name JENNINGS; Bone Spring Wildcat; Bone Spring, West
⁴ Property Code 38727	⁵ Property Name ROSS DRAW 8 FED	
⁷ OGRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁶ Well Number #1H ⁹ Elevation 3281'

¹⁰Surface Location

UL or lot no. D	Section 8	Township 26-S	Range 31-E	Lot Idn -	Feet from the 330'	North/South line NORTH	Feet from the 520'	East/West line WEST	County EDDY
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UL or lot no. M	Section 8	Township 26-S	Range 31-E	Lot Idn -	Feet from the 230'	North/South line SOUTH	Feet from the 412'	East/West line WEST	County EDDY
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¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

	KICK OFF POINT NEW MEXICO EAST NAD 1927 X=662931 Y=387572 LAT.: N 32.0644595 LONG.: W 103.8073756	¹⁷OPERATOR 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 undivided 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: <i>Stan Wagner</i> Date: 12/10/12 Printed Name: Stan Wagner E-mail Address:	
	SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=663108 Y=387293 LAT.: N 32.0636904 LONG.: W 103.8068083		¹⁸SURVEYOR 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. Date of Survey: 11/8/2012 Signature and Seal of Professional Surveyor: <i>Michael Brown</i> Certificate Number: 18329
	UPPER MOST PERF. NEW MEXICO EAST NAD 1927 X=662936 Y=387292 LAT.: N 32.0636898 LONG.: W 103.8073647		
	LOWER MOST PERF. NEW MEXICO EAST NAD 1927 X=663014 Y=382624 LAT.: N 32.0508570 LONG.: W 103.8071839		
	BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=663016 Y=382524 LAT.: N 32.0505821 LONG.: W 103.8071800		

EOG RESOURCES, INC.
ROSS DRAW 8 FEDERAL NO. 1H
REVISED 12/6/12

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,365'
Top of Salt	1,750'
Base of Salt	3,780'
Lamar	3,990'
Bell Canyon	4,020'
Cherry Canyon	4,930'
Brushy Canyon	6,260'
Bone Spring Lime	7,950'
Bone Spring Sand 1	8,930'
Bone Spring 2 Carb	9,270'
TD	8,300'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400'	Fresh Water
Brushy Canyon	6,260'	Oil
Bone Spring Lime	7,950'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13.375" casing at 950' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 1100'	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
8.75"	0'-13,211'	5.500"	17#	P110 or HCP110	LTC	1.125	1.25	1.60

EOG RESOURCES, INC.
ROSS DRAW 8 FEDERAL NO. 1H
REVISED 12/6/12

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1100'	400	13.5	1.73	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ surface)
	300	14.8	1.34	Tail: Class C + 0.005 pps Static Free + 2% CaCl ₂ + 0.25 pps CelloFlake + 0.005 gps FP-6L
4,000'	700	12.7	2.22	Lead: Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free (TOC @ surface)
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
13,211'	150	10.8	3.67	Lead: 60:40:0 Class 'C' + 15.00 lb/sk BA-90 + 4.00% MPA-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sk Static Free (TOC @ 3500')
	300	11.8	2.38	Middle: 50:50:10 Class 'H' + 0.80% FL-52 + 0.45% ASA-301 + 0.40% SMS + 2.00% Salt + 3.00 lb/sx LCM-1 + 0.20% R-21 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	1325	14.2	1.28	Tail: 50:50:2 Class 'H' + 0.65% FL-52 + 0.20% CD-32 + 0.15% SMS + 2.00% Salt + 0.10% R-3 + 0.005 lb/sk Static Free

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a double ram-type (5,000 psi WP) preventer and an annular preventer (5000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

3000 psi BOPE is adequate for this application. Due to the 3000 psi BOPE requirement no FIT tests are planned.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig.

EOG RESOURCES, INC.
ROSS DRAW 8 FEDERAL NO. 1H
REVISED 12/6/12

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

The applicable depths and properties of the drilling fluid systems are as follows. Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1100'	Fresh Water Gel	8.6-8.8	28-34	N/c
1100' – 4,000'	Saturated Brine	10.0-10.2	28-34	N/c
4,000' – 7,889'	Fresh Water	8.4-8.6	28-34	N/c
7,889' – 13,211' Lateral	Cut Brine Water	9.0-9.5	28-34	N/c

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) A mud logging unit will be continuously monitoring drill penetration rate and hydrocarbon shows from intermediate casing point to TD.
- (D) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logging is anticipated in the 8-3/4" hole section. The logging suites scheduled for this hole section are listed below:

NGT–CNL–LDT w/ Pe	From TD to previous casing shoe. At casing pull GR – Neutron to surface.
HR Laterolog Array	From TD to previous casing shoe.

EOG RESOURCES, INC.
ROSS DRAW 8 FEDERAL NO. 1H
REVISED 12/6/12

**9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND
POTENTIAL HAZARDS:**

The estimated bottom-hole temperature (BHT) at TD is 150 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 3600 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

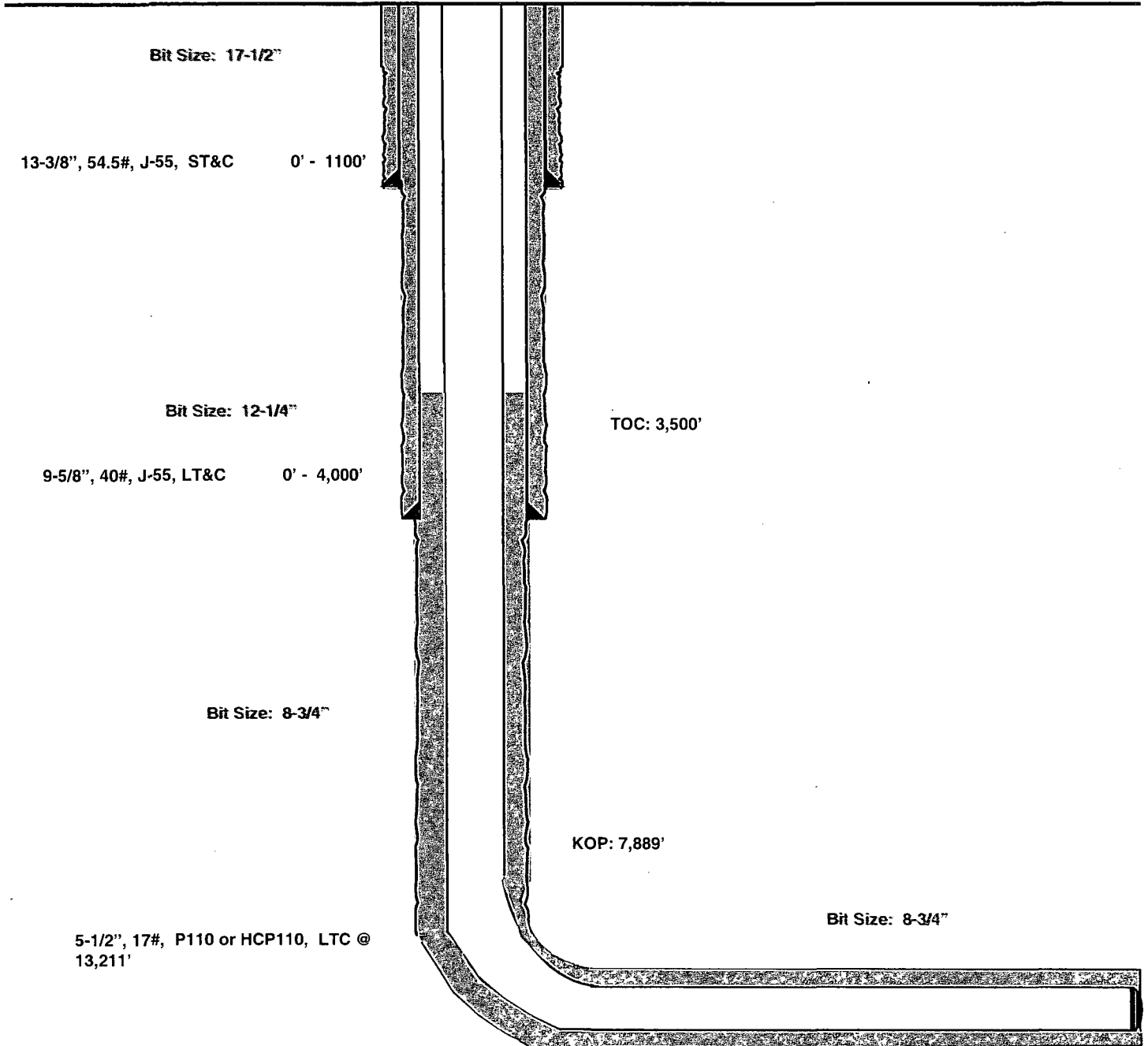
The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

Ross Draw 8 Federal #1H
Eddy County, New Mexico
Proposed Wellbore
Revised 12/6/12

330' FNL
520' FWL
Section 8
T-26-S, R-31-E

API: 30-015-39248

KB: 3,299.5'
GL: 3,280.5'



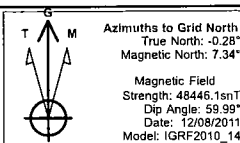
Lateral:
13,211' MD, 8,270' TVD

BH Location: 230' FSL & 412' FWL
Section 8
T-26-S, R-31-E

EOG Resources

Project: Eddy County, NM (Nad27)
Site: Ross Draw 8 Fed
Well: Ross Draw 8 Fed 1H
Wellbore: Wellbore #1
Plan: Plan #2 120612
Rig: Cactus Rig No. 123

PROJECT DETAILS: Eddy County, NM (Nad27)
 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
 Location North: Grid



WELL DETAILS: Ross Draw 8 Fed 1H

Ground Level: 3280.50
 Northing: 387293.00 Easting: 863108.00 32° 3' 49.2841 N 103° 48' 24.5104 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
KOP Ross Draw 8 Fed 1H	7872.61	279.00	-177.00	387572.00	662931.00	Point
BHL Ross Draw 8 Fed 1H	8270.35	-4769.00	-92.00	382524.00	663016.00	Point
Low Per Point Ross Draw 8 Fed 1H	8272.10	-4669.00	-94.00	382624.00	663014.00	Point
Up Per Point Ross Draw 8 Fed 1H	8307.35	-1.00	-172.00	387292.00	662936.00	Point

SECTION DETAILS

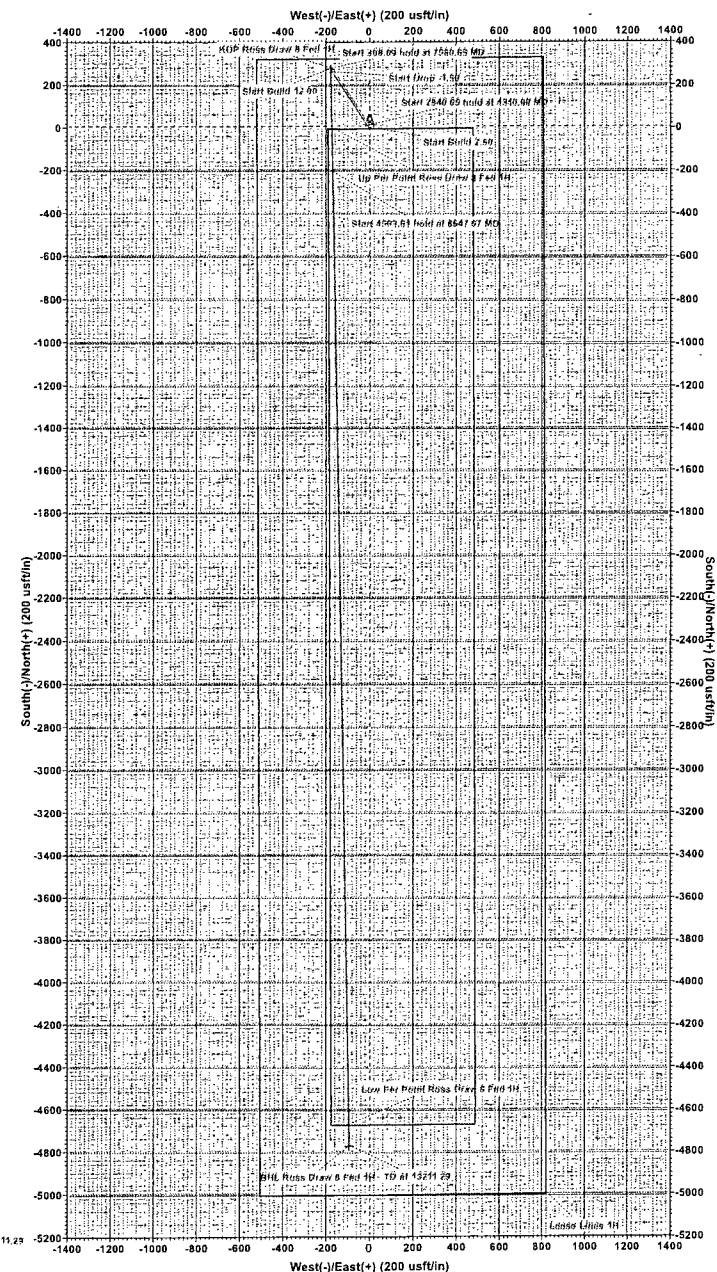
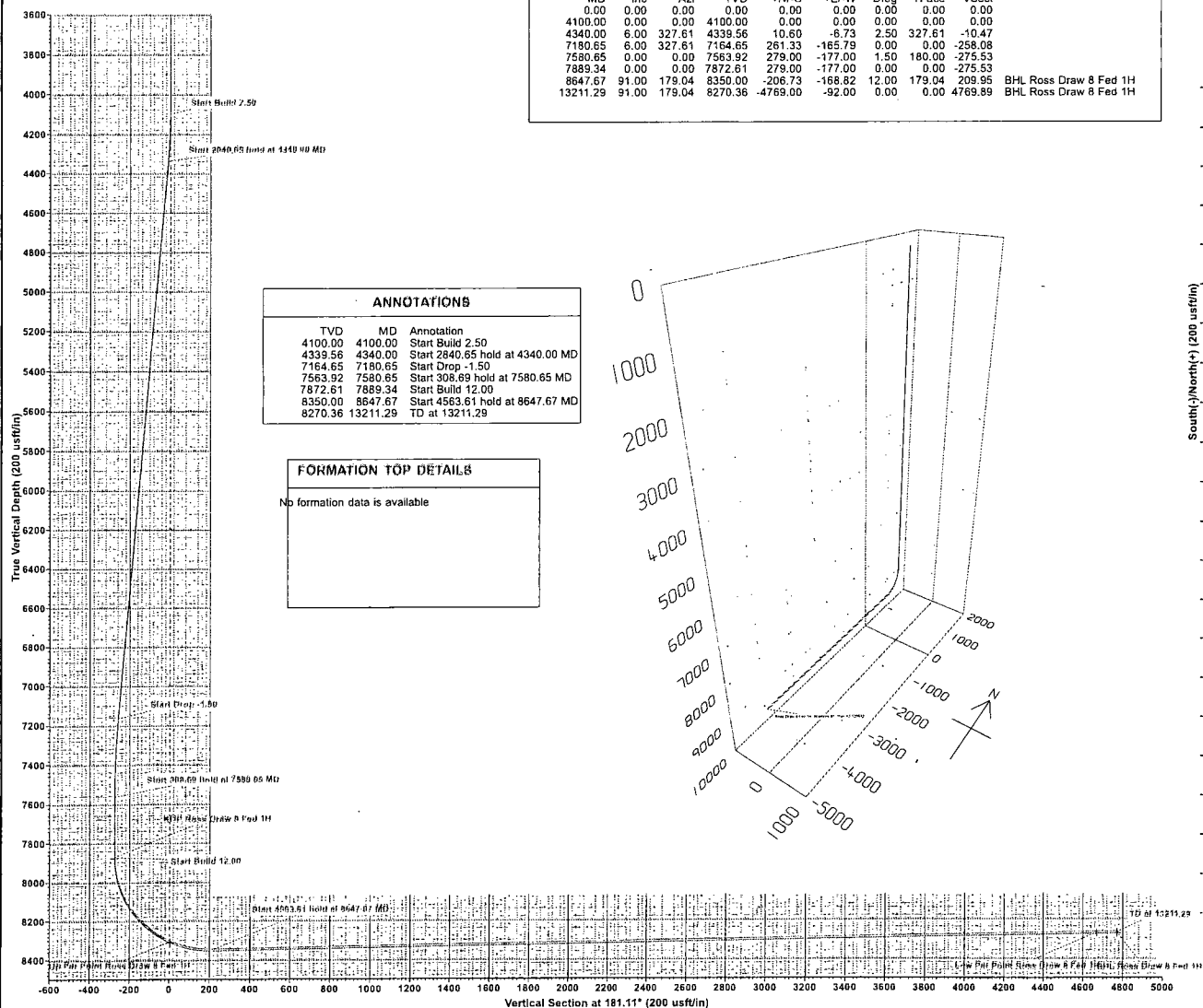
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSeal	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	0.00	
4340.00	6.00	327.61	4339.56	10.60	-8.73	2.50	327.61	-10.47	
7180.65	6.00	327.61	7164.65	261.33	-165.79	0.00	0.00	-258.08	
7580.65	0.00	0.00	7563.92	279.00	-177.00	1.50	180.00	-275.53	
7889.34	0.00	0.00	7872.61	279.00	-177.00	0.00	0.00	-275.53	
8647.67	91.00	179.04	8350.00	-206.73	-168.82	12.00	179.04	209.95	BHL Ross Draw 8 Fed 1H
13211.29	91.00	179.04	8270.36	-4769.00	-92.00	0.00	0.00	4769.89	BHL Ross Draw 8 Fed 1H

ANNOTATIONS

TVD	MD	Annotation
4100.00	4100.00	Start Build 2.50
4339.56	4340.00	Start 2840.65 hold at 4340.00 MD
7164.65	7180.65	Start Drop -1.50
7563.92	7580.65	Start 308.69 hold at 7580.65 MD
7872.61	7889.34	Start Build 12.00
8350.00	8647.67	Start 4563.61 hold at 8647.67 MD
8270.36	13211.29	TD at 13211.29

FORMATION TOP DETAILS

No formation data is available



EOG Resources

Eddy County, NM (Nad27)

Ross Draw 8 Fed

Ross Draw 8 Fed 1H

Wellbore #1

Plan: Plan #2 120612

EOG Resources

06 December, 2012



Phoenix Technology Services

EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well: Ross Draw 8 Fed 1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Site:	Ross Draw 8 Fed	MD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Well:	Ross Draw 8 Fed 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2 120612	Database:	GCR:DB-V5000

Project:	Eddy 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		Ross Draw 8 Fed							
Site Position:		Northing:		387,290.50	usft	Latitude:		32° 3' 49.2593 N	
From:	Map	Easting:		663,109.60	usft	Longitude:		103° 48' 24.4920 W	
Position Uncertainty:		0.00	usft	Slot Radius:		13-3/16	"	Grid Convergence:	0.28 °

Well		Ross Draw 8 Fed 1H				
Well Position	+N/-S	0.00 usft	Northing:	387,293.00 usft	Latitude:	32° 3' 49.2841 N
	+E/-W	0.00 usft	Easting:	663,108.00 usft	Longitude:	103° 48' 24.5104 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,280.50 usft

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	12/08/11	7.62	59.99	48,446

Design:		Plan #2 120612		
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	181.11

Survey Tool Program:		Date 12/06/12		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,211.28	Plan #2 120612 (Wellbore #1)	MWD	MWD - Standard

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Ross Draw 8 Fed 1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Site:	Ross Draw 8 Fed	MD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Well:	Ross Draw 8 Fed 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2 120612	Database:	GCR DB v5000

Planned 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)
0.00	0.00	0.00	-3,310.50	0.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
100.00	0.00	0.00	-3,210.50	100.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
200.00	0.00	0.00	-3,110.50	200.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
300.00	0.00	0.00	-3,010.50	300.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
400.00	0.00	0.00	-2,910.50	400.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
500.00	0.00	0.00	-2,810.50	500.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
600.00	0.00	0.00	-2,710.50	600.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
700.00	0.00	0.00	-2,610.50	700.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
800.00	0.00	0.00	-2,510.50	800.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
900.00	0.00	0.00	-2,410.50	900.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,000.00	0.00	0.00	-2,310.50	1,000.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,100.00	0.00	0.00	-2,210.50	1,100.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,200.00	0.00	0.00	-2,110.50	1,200.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,300.00	0.00	0.00	-2,010.50	1,300.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,400.00	0.00	0.00	-1,910.50	1,400.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,500.00	0.00	0.00	-1,810.50	1,500.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,600.00	0.00	0.00	-1,710.50	1,600.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,700.00	0.00	0.00	-1,610.50	1,700.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,800.00	0.00	0.00	-1,510.50	1,800.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
1,900.00	0.00	0.00	-1,410.50	1,900.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
2,000.00	0.00	0.00	-1,310.50	2,000.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
2,100.00	0.00	0.00	-1,210.50	2,100.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
2,200.00	0.00	0.00	-1,110.50	2,200.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
2,300.00	0.00	0.00	-1,010.50	2,300.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
2,400.00	0.00	0.00	-910.50	2,400.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
2,500.00	0.00	0.00	-810.50	2,500.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00
2,600.00	0.00	0.00	-710.50	2,600.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Ross Draw 8 Fed 1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Site:	Ross Draw 8 Fed	MD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Well:	Ross Draw 8 Fed 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2 120612	Database:	GCR.DB v5000

Planned 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)	
2,700.00	0.00	0.00	-610.50	2,700.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
2,800.00	0.00	0.00	-510.50	2,800.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
2,900.00	0.00	0.00	-410.50	2,900.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,000.00	0.00	0.00	-310.50	3,000.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,100.00	0.00	0.00	-210.50	3,100.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,200.00	0.00	0.00	-110.50	3,200.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,300.00	0.00	0.00	-10.50	3,300.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,400.00	0.00	0.00	89.50	3,400.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,500.00	0.00	0.00	189.50	3,500.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,600.00	0.00	0.00	289.50	3,600.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,700.00	0.00	0.00	389.50	3,700.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,800.00	0.00	0.00	489.50	3,800.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
3,900.00	0.00	0.00	589.50	3,900.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
4,000.00	0.00	0.00	689.50	4,000.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
4,100.00	0.00	0.00	789.50	4,100.00	0.00	0.00	0.00	0.00	387,293.00	663,108.00	
Start Build 2.50											
4,200.00	2.50	327.61	889.47	4,199.97	1.84	-1.17	-1.82	2.50	387,294.84	663,106.83	
4,300.00	5.00	327.61	989.25	4,299.75	7.36	-4.67	-7.27	2.50	387,300.36	663,103.33	
4,340.00	6.00	327.61	1,029.06	4,339.56	10.60	-6.73	-10.47	2.50	387,303.60	663,101.27	
Start 2840.65 hold at 4340.00 MD											
4,400.00	6.00	327.61	1,088.73	4,399.23	15.90	-10.09	-15.70	0.00	387,308.90	663,097.91	
4,500.00	6.00	327.61	1,188.19	4,498.69	24.72	-15.68	-24.42	0.00	387,317.72	663,092.32	
4,600.00	6.00	327.61	1,287.64	4,598.14	33.55	-21.28	-33.13	0.00	387,326.55	663,086.72	
4,700.00	6.00	327.61	1,387.09	4,697.59	42.38	-26.88	-41.85	0.00	387,335.38	663,081.12	
4,800.00	6.00	327.61	1,486.54	4,797.04	51.20	-32.48	-50.57	0.00	387,344.20	663,075.52	
4,900.00	6.00	327.61	1,585.99	4,896.49	60.03	-38.08	-59.28	0.00	387,353.03	663,069.92	
5,000.00	6.00	327.61	1,685.45	4,995.95	68.86	-43.68	-68.00	0.00	387,361.86	663,064.32	

Phoenix Technology Services
EOG Resources



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Site:	Ross Draw 8 Fed	MD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Well:	Ross Draw 8 Fed 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2 120612	Database:	GCR DB v5000

Planned 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)
5,100.00	6.00	327.61	1,784.90	5,095.40	77.68	-49.28	-76.72	0.00	387,370.68	663,058.72
5,200.00	6.00	327.61	1,884.35	5,194.85	86.51	-54.88	-85.43	0.00	387,379.51	663,053.12
5,300.00	6.00	327.61	1,983.80	5,294.30	95.34	-60.48	-94.15	0.00	387,388.34	663,047.52
5,400.00	6.00	327.61	2,083.25	5,393.75	104.16	-66.08	-102.87	0.00	387,397.16	663,041.92
5,500.00	6.00	327.61	2,182.71	5,493.21	112.99	-71.68	-111.58	0.00	387,405.99	663,036.32
5,600.00	6.00	327.61	2,282.16	5,592.66	121.81	-77.28	-120.30	0.00	387,414.81	663,030.72
5,700.00	6.00	327.61	2,381.61	5,692.11	130.64	-82.88	-129.02	0.00	387,423.64	663,025.12
5,800.00	6.00	327.61	2,481.06	5,791.56	139.47	-88.48	-137.74	0.00	387,432.47	663,019.52
5,900.00	6.00	327.61	2,580.52	5,891.02	148.29	-94.08	-146.45	0.00	387,441.29	663,013.92
6,000.00	6.00	327.61	2,679.97	5,990.47	157.12	-99.68	-155.17	0.00	387,450.12	663,008.32
6,100.00	6.00	327.61	2,779.42	6,089.92	165.95	-105.28	-163.89	0.00	387,458.95	663,002.72
6,200.00	6.00	327.61	2,878.87	6,189.37	174.77	-110.88	-172.60	0.00	387,467.77	662,997.12
6,300.00	6.00	327.61	2,978.32	6,288.82	183.60	-116.48	-181.32	0.00	387,476.60	662,991.52
6,400.00	6.00	327.61	3,077.78	6,388.28	192.43	-122.08	-190.04	0.00	387,485.43	662,985.92
6,500.00	6.00	327.61	3,177.23	6,487.73	201.25	-127.68	-198.75	0.00	387,494.25	662,980.32
6,600.00	6.00	327.61	3,276.68	6,587.18	210.08	-133.28	-207.47	0.00	387,503.08	662,974.72
6,700.00	6.00	327.61	3,376.13	6,686.63	218.91	-138.88	-216.19	0.00	387,511.91	662,969.12
6,800.00	6.00	327.61	3,475.59	6,786.09	227.73	-144.48	-224.90	0.00	387,520.73	662,963.52
6,900.00	6.00	327.61	3,575.04	6,885.54	236.56	-150.08	-233.62	0.00	387,529.56	662,957.92
7,000.00	6.00	327.61	3,674.49	6,984.99	245.39	-155.67	-242.34	0.00	387,538.39	662,952.33
7,100.00	6.00	327.61	3,773.94	7,084.44	254.21	-161.27	-251.05	0.00	387,547.21	662,946.73
7,180.65	6.00	327.61	3,854.15	7,164.65	261.33	-165.79	-258.08	0.00	387,554.33	662,942.21
Start Drop -1.50										
7,200.00	5.71	327.61	3,873.40	7,183.90	263.00	-166.85	-259.73	1.50	387,556.00	662,941.15
7,300.00	4.21	327.61	3,973.02	7,283.52	270.30	-171.48	-266.94	1.50	387,563.30	662,936.52
7,400.00	2.71	327.61	4,072.84	7,383.34	275.39	-174.71	-271.97	1.50	387,568.39	662,933.29
7,500.00	1.21	327.61	4,172.78	7,483.28	278.28	-176.54	-274.82	1.50	387,571.28	662,931.46

Phoenix Technology Services
EOG Resources



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Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Site:	Ross Draw 8 Fed	MDI Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Well:	Ross Draw 8 Fed 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2 120612	Database:	GCR DB v5000

Planned 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)	
7,580.65	0.00	0.00	4,253.42	7,563.92	279.00	-177.00	-275.53	1.50	387,572.00	662,931.00	
Start 308.69 hold at 7580.65 MD											
7,600.00	0.00	0.00	4,272.77	7,583.27	279.00	-177.00	-275.53	0.00	387,572.00	662,931.00	
7,700.00	0.00	0.00	4,372.77	7,683.27	279.00	-177.00	-275.53	0.00	387,572.00	662,931.00	
7,800.00	0.00	0.00	4,472.77	7,783.27	279.00	-177.00	-275.53	0.00	387,572.00	662,931.00	
7,889.34	0.00	0.00	4,562.11	7,872.61	279.00	-177.00	-275.53	0.00	387,572.00	662,931.00	
Start Build 12.00											
7,900.00	1.28	179.04	4,572.77	7,883.27	278.88	-177.00	-275.42	12.00	387,571.88	662,931.00	
8,000.00	13.28	179.04	4,671.78	7,982.28	266.24	-176.79	-262.78	12.00	387,559.24	662,931.21	
8,100.00	25.28	179.04	4,766.00	8,076.50	233.28	-176.23	-229.84	12.00	387,526.28	662,931.77	
8,200.00	37.28	179.04	4,851.31	8,161.81	181.46	-175.36	-178.05	12.00	387,474.46	662,932.64	
8,300.00	49.28	179.04	4,923.98	8,234.48	113.04	-174.21	-109.66	12.00	387,406.04	662,933.79	
8,400.00	61.28	179.04	4,980.83	8,291.33	31.01	-172.82	-27.67	12.00	387,324.01	662,935.18	
8,500.00	73.28	179.04	5,019.39	8,329.89	-61.05	-171.27	64.34	12.00	387,231.95	662,936.73	
8,600.00	85.28	179.04	5,037.96	8,348.46	-159.11	-169.62	162.35	12.00	387,133.89	662,938.38	
8,647.67	91.00	179.04	5,039.50	8,350.00	-206.73	-168.82	209.95	12.00	387,086.27	662,939.18	
Start 4563.61 hold at 8647.67 MD											
8,700.00	91.00	179.04	5,038.59	8,349.09	-259.04	-167.94	262.23	0.00	387,033.96	662,940.06	
8,800.00	91.00	179.04	5,036.84	8,347.34	-359.01	-166.26	362.15	0.00	386,933.99	662,941.74	
8,900.00	91.00	179.04	5,035.10	8,345.60	-458.98	-164.57	462.07	0.00	386,834.02	662,943.43	
9,000.00	91.00	179.04	5,033.35	8,343.85	-558.95	-162.89	561.99	0.00	386,734.05	662,945.11	
9,100.00	91.00	179.04	5,031.61	8,342.11	-658.92	-161.21	661.91	0.00	386,634.08	662,946.79	
9,200.00	91.00	179.04	5,029.86	8,340.36	-758.89	-159.52	761.83	0.00	386,534.11	662,948.48	
9,300.00	91.00	179.04	5,028.12	8,338.62	-858.86	-157.84	861.75	0.00	386,434.14	662,950.16	
9,400.00	91.00	179.04	5,026.37	8,336.87	-958.83	-156.16	961.67	0.00	386,334.17	662,951.84	
9,500.00	91.00	179.04	5,024.63	8,335.13	-1,058.80	-154.47	1,061.59	0.00	386,234.20	662,953.53	
9,600.00	91.00	179.04	5,022.88	8,333.38	-1,158.78	-152.79	1,161.51	0.00	386,134.22	662,955.21	

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Ross Draw 8 Fed 1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Site:	Ross Draw 8 Fed	MD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
Well:	Ross Draw 8 Fed 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2 120612	Database:	GCR DB v5000

Planned 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)
9,700.00	91.00	179.04	5,021.14	8,331.64	-1,258.75	-151.11	1,261.43	0.00	386,034.25	662,956.89
9,800.00	91.00	179.04	5,019.39	8,329.89	-1,358.72	-149.42	1,361.35	0.00	385,934.28	662,958.58
9,900.00	91.00	179.04	5,017.65	8,328.15	-1,458.69	-147.74	1,461.27	0.00	385,834.31	662,960.26
10,000.00	91.00	179.04	5,015.90	8,326.40	-1,558.66	-146.06	1,561.18	0.00	385,734.34	662,961.94
10,100.00	91.00	179.04	5,014.16	8,324.66	-1,658.63	-144.37	1,661.10	0.00	385,634.37	662,963.63
10,200.00	91.00	179.04	5,012.41	8,322.91	-1,758.60	-142.69	1,761.02	0.00	385,534.40	662,965.31
10,300.00	91.00	179.04	5,010.67	8,321.17	-1,858.57	-141.01	1,860.94	0.00	385,434.43	662,966.99
10,400.00	91.00	179.04	5,008.92	8,319.42	-1,958.54	-139.32	1,960.86	0.00	385,334.46	662,968.68
10,500.00	91.00	179.04	5,007.17	8,317.67	-2,058.51	-137.64	2,060.78	0.00	385,234.49	662,970.36
10,600.00	91.00	179.04	5,005.43	8,315.93	-2,158.48	-135.96	2,160.70	0.00	385,134.52	662,972.04
10,700.00	91.00	179.04	5,003.68	8,314.18	-2,258.45	-134.27	2,260.62	0.00	385,034.55	662,973.73
10,800.00	91.00	179.04	5,001.94	8,312.44	-2,358.42	-132.59	2,360.54	0.00	384,934.58	662,975.41
10,900.00	91.00	179.04	5,000.19	8,310.69	-2,458.39	-130.91	2,460.46	0.00	384,834.61	662,977.09
11,000.00	91.00	179.04	4,998.45	8,308.95	-2,558.36	-129.22	2,560.38	0.00	384,734.64	662,978.78
11,100.00	91.00	179.04	4,996.70	8,307.20	-2,658.33	-127.54	2,660.30	0.00	384,634.67	662,980.46
11,200.00	91.00	179.04	4,994.96	8,305.46	-2,758.30	-125.86	2,760.22	0.00	384,534.70	662,982.14
11,300.00	91.00	179.04	4,993.21	8,303.71	-2,858.28	-124.17	2,860.14	0.00	384,434.72	662,983.83
11,400.00	91.00	179.04	4,991.47	8,301.97	-2,958.25	-122.49	2,960.06	0.00	384,334.75	662,985.51
11,500.00	91.00	179.04	4,989.72	8,300.22	-3,058.22	-120.81	3,059.98	0.00	384,234.78	662,987.19
11,600.00	91.00	179.04	4,987.98	8,298.48	-3,158.19	-119.12	3,159.90	0.00	384,134.81	662,988.88
11,700.00	91.00	179.04	4,986.23	8,296.73	-3,258.16	-117.44	3,259.82	0.00	384,034.84	662,990.56
11,800.00	91.00	179.04	4,984.49	8,294.99	-3,358.13	-115.76	3,359.74	0.00	383,934.87	662,992.24
11,900.00	91.00	179.04	4,982.74	8,293.24	-3,458.10	-114.07	3,459.66	0.00	383,834.90	662,993.93
12,000.00	91.00	179.04	4,981.00	8,291.50	-3,558.07	-112.39	3,559.58	0.00	383,734.93	662,995.61
12,100.00	91.00	179.04	4,979.25	8,289.75	-3,658.04	-110.71	3,659.49	0.00	383,634.96	662,997.29
12,200.00	91.00	179.04	4,977.51	8,288.01	-3,758.01	-109.02	3,759.41	0.00	383,534.99	662,998.98
12,300.00	91.00	179.04	4,975.76	8,286.26	-3,857.98	-107.34	3,859.33	0.00	383,435.02	663,000.66

Phoenix Technology Services
EOG Resources



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Site:	Ross Draw 8 Fed	MD Reference:	WELL @ 3310.50usft (Original Well Elev + 30' KB)
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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2 120612	Database:	GCR DB v5000

Planned 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)	
12,400.00	91.00	179.04	4,974.01	8,284.51	-3,957.95	-105.66	3,959.25	0.00	383,335.05	663,002.34	
12,500.00	91.00	179.04	4,972.27	8,282.77	-4,057.92	-103.97	4,059.17	0.00	383,235.08	663,004.03	
12,600.00	91.00	179.04	4,970.52	8,281.02	-4,157.89	-102.29	4,159.09	0.00	383,135.11	663,005.71	
12,700.00	91.00	179.04	4,968.78	8,279.28	-4,257.86	-100.61	4,259.01	0.00	383,035.14	663,007.39	
12,800.00	91.00	179.04	4,967.03	8,277.53	-4,357.83	-98.92	4,358.93	0.00	382,935.17	663,009.08	
12,900.00	91.00	179.04	4,965.29	8,275.79	-4,457.80	-97.24	4,458.85	0.00	382,835.20	663,010.76	
13,000.00	91.00	179.04	4,963.54	8,274.04	-4,557.78	-95.56	4,558.77	0.00	382,735.22	663,012.44	
13,100.00	91.00	179.04	4,961.80	8,272.30	-4,657.75	-93.87	4,658.69	0.00	382,635.25	663,014.13	
13,200.00	91.00	179.04	4,960.05	8,270.55	-4,757.72	-92.19	4,758.61	0.00	382,535.28	663,015.81	
13,211.29	91.00	179.04	4,959.86	8,270.36	-4,769.00	-92.00	4,769.89	0.00	382,524.00	663,016.00	
TD at 13211.29											

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
4,100.00	4,100.00	0.00	0.00	Start Build 2.50	
4,340.00	4,339.56	10.60	-6.73	Start 2840.65 hold at 4340.00 MD	
7,180.65	7,164.65	261.33	-165.79	Start Drop -1.50	
7,580.65	7,563.92	279.00	-177.00	Start 308.69 hold at 7580.65 MD	
7,889.34	7,872.61	279.00	-177.00	Start Build 12.00	
8,647.67	8,350.00	-206.73	-168.82	Start 4563.61 hold at 8647.67 MD	
13,211.29	8,270.36	-4,769.00	-92.00	TD at 13211.29	

Checked By: _____	Approved By: _____	Date: _____
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