

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTHOBBS OCD
OCD HobbsATS-11-580
FORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

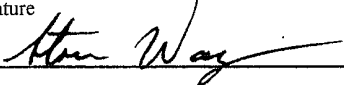
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. NMI4497 (SHL) NMI08500 (BHL)	
1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator BOG Resources Inc.		7. Unit or CA Agreement Name and No	
3a. Address P.O. Box 2267 Midland, Texas 79702		8. Lease Name and Well No. Diamond 8 Fed Com 4H	
3b. Phone No. (include area code) 432-686-3689		9. API Well No. 30-025-AD189	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 330' FNL & 430' FWL, U/L D At proposed prod zone 330' FSL & 430' FWL, U/L M		10. Field and Pool, or Exploratory Red Hills; Bone Spring	
14. Distance in miles and direction from nearest town or post office* Approximately +/- 21 miles West from Jal NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec 8, T25S, R34E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 330'		12. County or Parish Lea	
16. No. of Acres in lease 998		13 State NM	
17. Spacing Unit dedicated to this well 160			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Within 80' of 709 & 811 1920' to 3H		20 BLM/BIA Bond No. on file NM 2308	
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3398' GL		22. Approximate date work will start* 7/1/2011	
		23. Estimated duration 25 days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM |

25 Signature 	Name (Printed/Typed) Stan Wagner	Date 3/25/2011
Title Regulatory Analyst		
Approved by (Signature) 	Name (Printed/Typed) James A. Amos	Date JUL 11 2011
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

EOG RESOURCES, INC.
DIAMOND 8 FED COM NO. 4H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,110'
Top of Salt	1,430'
Base of Salt	5,040'
Lamar	5,250'
Bell Canyon	5,278'
Cherry Canyon	6,250'
Brushy Canyon	7,850'
Bone Spring Lime	9,230'
TD	9,490'

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

Upper Permian Sands	0- 400'	Fresh Water
Bell Canyon	5,278'	Oil
Cherry Canyon	6,250'	Oil
Brushy Canyon	7,850'	Oil
Bone Spring Lime	9,230'	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 11.750" casing at 1,040' and circulating cement back to surface.

4. CASING PROGRAM - NEW

See Col A

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
14.75"	0 - 1040' ^{1220'}	11.750"	42#	H40	STC	1.125	1.25	1.60
11.00"	0 - 4000'	8.625"	32#	J55	LTC	1.125	1.25	1.60
11.00"	4000'-5280'	8.625"	32#	HCK55	LTC	1.125	1.25	1.60
7.875"	0'-13,901'	5.5"	20#	P110 or HCP110	NSCC	1.125	1.25	1.60

EOG RESOURCES, INC.
DIAMOND 8 FED COM NO. 4H

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1,040'	250	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂ + 0.25 lb/sk Cello-Flake
	200	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
5,280'	1100	12.7	2.01	Lead: Class 'C' + 1.25% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate
	200	14.8	1.34	Tail: Class 'C' + 0.50% FL-62 + 0.10% SMS + 1.00% CaCl ₂ + 0.50% R-3 + 0.005 lb/sk Static Free
13,901'	100	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 @ 4700')
	275	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
	850	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:

(SEE EXHIBIT #1)

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.
DIAMOND 8 FED COM NO. 4H

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 – 1,040' <i>1220</i>	Fresh - Gel	8.6-8.8	28-34	N/C
1,040' – 5,280'	Brine	10.0-10.2	28-34	N/C
5,280' – 9,012'	Fresh Water	8.4-8.6	28-34	N/C
9,012' – 13,901' Lateral	Cut Brine - XCD	9.0-9.5	40-42	8-10

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 1,040' to TD.
- (D) H₂S monitoring and detection equipment will be utilized from 1,040' to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

See COA
Open-hole logging is anticipated in the 7-7/8" hole section. The logging suites for this hole section are listed below:

FMI

Possible in pilot hole and/or lateral.

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

The estimated bottom hole temperature (BHT) at TD is 160 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4200 psig. No major loss circulation zones have been reported in offsetting wells.

EOG RESOURCES, INC.
DIAMOND 8 FED COM NO. 4H

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately two months. If the well is productive, an additional 30-60 days will be required for completion and testing before a decision is made to install permanent facilities.

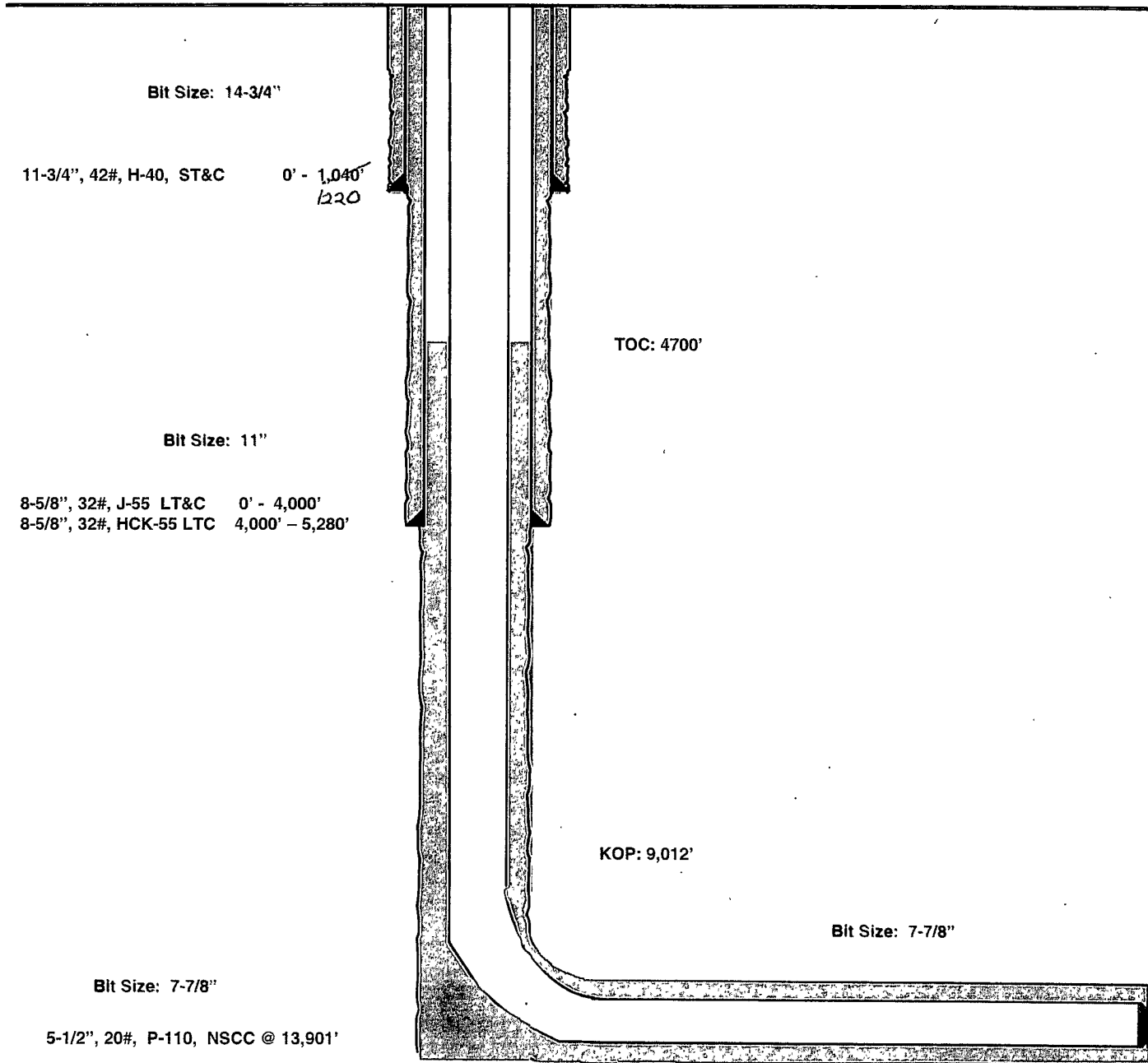
Diamond 8 Fed Com #4H
Red Hills
Lea County, New Mexico

330' FNL
430' FWL
Section 8
T-25-S, R-34-E

Proposed Wellbore

API: 30-025-

KB: 3,428.8'
GL: 3,398.8'



Bone Spring Lateral: 13,901' MD, 9,490' TVD

BH Location: 330' FSL & 430' FWL
Section 8
T-25-S, R-34-E



EOG Resources, Inc.

Lea County

Diamond "8" Fed Com

#4H

OH

Plan: Design #1

Pathfinder X & Y Planning Report

17 March, 2011



PATHFINDER

A Schlumberger Company

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Site:	Diamond "8" Fed Com	MD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #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:		Diamond "8" Fed Com			
Site Position:		Northing:		415,538.700 usft	
From:		Easting:		762,548.900 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
Map		Latitude:		32° 8' 22.525 N	
0.00 usft		Longitude:		103° 29' 6.406 W	
		Grid Convergence:		0.45 °	

Well		#4H				
Well Position	+N/-S	0.00 usft	Northing:	419,755.700 usft	Latitude:	32° 9' 4.580 N
	+E/-W	0.00 usft	Easting:	758,329 500 usft	Longitude:	103° 29' 55.096 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,398 80 usft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	03/17/11	7.57	60.16	48,641

Design:	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.56

Survey Tool Program		Date 03/17/11		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,901.26	Design #1 (OH)	MWD	MWD - Standard



Pathfinder
Pathfinder X & Y Planning Report

PATHFINDER
A Schlumberger Company

Company: EOG Resources, Inc.
Project: Lea County
Site: Diamond "8" Fed Com
Well: #4H
Wellbore: OH
Design: Design #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well #4H
WELL @ 3428.80usft (30' KB Cactus #123)
WELL @ 3428.80usft (30' KB Cactus #123)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	3,428.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
100.00	0.00	0.00	100.00	3,328.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
200.00	0.00	0.00	200.00	3,228.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
300.00	0.00	0.00	300.00	3,128.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
400.00	0.00	0.00	400.00	3,028.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
500.00	0.00	0.00	500.00	2,928.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
600.00	0.00	0.00	600.00	2,828.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
700.00	0.00	0.00	700.00	2,728.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
800.00	0.00	0.00	800.00	2,628.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
900.00	0.00	0.00	900.00	2,528.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,000.00	0.00	0.00	1,000.00	2,428.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,100.00	0.00	0.00	1,100.00	2,328.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,200.00	0.00	0.00	1,200.00	2,228.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,300.00	0.00	0.00	1,300.00	2,128.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,400.00	0.00	0.00	1,400.00	2,028.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,500.00	0.00	0.00	1,500.00	1,928.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,600.00	0.00	0.00	1,600.00	1,828.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,700.00	0.00	0.00	1,700.00	1,728.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,800.00	0.00	0.00	1,800.00	1,628.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
1,900.00	0.00	0.00	1,900.00	1,528.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,000.00	0.00	0.00	2,000.00	1,428.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,100.00	0.00	0.00	2,100.00	1,328.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,200.00	0.00	0.00	2,200.00	1,228.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,300.00	0.00	0.00	2,300.00	1,128.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,400.00	0.00	0.00	2,400.00	1,028.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,500.00	0.00	0.00	2,500.00	928.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,600.00	0.00	0.00	2,600.00	828.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	



Pathfinder
Pathfinder X & Y Planning Report

PATHFINDER
A Schlumberger Company

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Site:	Diamond "8" Fed Com	MD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D Leg (°/100usft)	Northing (usft)	Easting (usft)	
2,700.00	0.00	0.00	2,700.00	728.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,800.00	0.00	0.00	2,800.00	628.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
2,900.00	0.00	0.00	2,900.00	528.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,000.00	0.00	0.00	3,000.00	428.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,100.00	0.00	0.00	3,100.00	328.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,200.00	0.00	0.00	3,200.00	228.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,300.00	0.00	0.00	3,300.00	128.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,400.00	0.00	0.00	3,400.00	28.80	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,500.00	0.00	0.00	3,500.00	-71.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,600.00	0.00	0.00	3,600.00	-171.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,700.00	0.00	0.00	3,700.00	-271.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,800.00	0.00	0.00	3,800.00	-371.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
3,900.00	0.00	0.00	3,900.00	-471.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,000.00	0.00	0.00	4,000.00	-571.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,100.00	0.00	0.00	4,100.00	-671.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,200.00	0.00	0.00	4,200.00	-771.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,300.00	0.00	0.00	4,300.00	-871.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,400.00	0.00	0.00	4,400.00	-971.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,500.00	0.00	0.00	4,500.00	-1,071.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,600.00	0.00	0.00	4,600.00	-1,171.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,700.00	0.00	0.00	4,700.00	-1,271.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,800.00	0.00	0.00	4,800.00	-1,371.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
4,900.00	0.00	0.00	4,900.00	-1,471.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
5,000.00	0.00	0.00	5,000.00	-1,571.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
5,100.00	0.00	0.00	5,100.00	-1,671.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
5,200.00	0.00	0.00	5,200.00	-1,771.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
5,300.00	0.00	0.00	5,300.00	-1,871.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	



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Pathfinder X & Y Planning Report

PATHFINDER
A Schlumberger Company

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5,400.00	0.00	0 00	5,400.00	-1,971.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
5,500.00	0.00	0 00	5,500.00	-2,071.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
5,600.00	0 00	0 00	5,600.00	-2,171.20	0 00	0.00	0 00	0 00	419,755.70	758,329.50	
5,700.00	0.00	0 00	5,700.00	-2,271.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
5,800.00	0.00	0 00	5,800.00	-2,371.20	0 00	0.00	0.00	0 00	419,755.70	758,329.50	
5,900.00	0.00	0 00	5,900.00	-2,471.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
6,000.00	0.00	0 00	6,000.00	-2,571.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
6,100.00	0.00	0 00	6,100.00	-2,671.20	0 00	0 00	0.00	0.00	419,755.70	758,329.50	
6,200.00	0.00	0 00	6,200.00	-2,771.20	0 00	0 00	0.00	0.00	419,755.70	758,329.50	
6,300.00	0.00	0 00	6,300.00	-2,871.20	0 00	0 00	0.00	0.00	419,755.70	758,329.50	
6,400.00	0.00	0 00	6,400.00	-2,971.20	0 00	0.00	0.00	0 00	419,755.70	758,329.50	
6,500.00	0.00	0 00	6,500.00	-3,071.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
6,600.00	0.00	0 00	6,600.00	-3,171.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
6,700.00	0 00	0 00	6,700.00	-3,271.20	0 00	0 00	0.00	0.00	419,755.70	758,329.50	
6,800.00	0.00	0 00	6,800.00	-3,371.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
6,900.00	0.00	0 00	6,900.00	-3,471.20	0 00	0 00	0.00	0.00	419,755.70	758,329.50	
7,000.00	0.00	0 00	7,000.00	-3,571.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
7,100.00	0.00	0 00	7,100.00	-3,671.20	0 00	0.00	0 00	0.00	419,755.70	758,329.50	
7,200.00	0.00	0 00	7,200.00	-3,771.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
7,300.00	0.00	0 00	7,300.00	-3,871.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
7,400.00	0.00	0 00	7,400.00	-3,971.20	0 00	0.00	0.00	0.00	419,755.70	758,329.50	
7,500.00	0.00	0 00	7,500.00	-4,071.20	0 00	0.00	0 00	0 00	419,755.70	758,329.50	
7,600.00	0 00	0 00	7,600.00	-4,171.20	0 00	0.00	0.00	0 00	419,755.70	758,329.50	
7,700.00	0.00	0 00	7,700.00	-4,271.20	0 00	0 00	0.00	0.00	419,755.70	758,329.50	
7,800.00	0.00	0 00	7,800.00	-4,371.20	0 00	0 00	0.00	0 00	419,755.70	758,329.50	
7,900.00	0 00	0 00	7,900.00	-4,471.20	0 00	0.00	0.00	0 00	419,755.70	758,329.50	
8,000.00	0.00	0 00	8,000.00	-4,571.20	0 00	0.00	0.00	0 00	419,755.70	758,329.50	

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Site:	Diamond "8" Fed Com	MD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature.
Design:	Design #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,100.00	0.00	0.00	8,100.00	-4,671.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,200.00	0.00	0.00	8,200.00	-4,771.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,300.00	0.00	0.00	8,300.00	-4,871.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,400.00	0.00	0.00	8,400.00	-4,971.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,500.00	0.00	0.00	8,500.00	-5,071.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,600.00	0.00	0.00	8,600.00	-5,171.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,700.00	0.00	0.00	8,700.00	-5,271.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,800.00	0.00	0.00	8,800.00	-5,371.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
8,900.00	0.00	0.00	8,900.00	-5,471.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
9,000.00	0.00	0.00	9,000.00	-5,571.20	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
9,012.50	0.00	0.00	9,012.50	-5,583.70	0.00	0.00	0.00	0.00	419,755.70	758,329.50	
KOP-9012.50°MD,0.00°INC,0.00°AZI,9012.50°TVD											
9,025.00	1.50	179.56	9,025.00	-5,596.20	-0.16	0.00	0.16	12.00	419,755.54	758,329.50	
9,050.00	4.50	179.56	9,049.96	-5,621.16	-1.47	0.01	1.47	12.00	419,754.23	758,329.51	
9,075.00	7.50	179.56	9,074.82	-5,646.02	-4.08	0.03	4.08	12.00	419,751.62	758,329.53	
9,100.00	10.50	179.56	9,099.51	-5,670.71	-7.99	0.06	7.99	12.00	419,747.71	758,329.56	
9,125.00	13.50	179.56	9,123.96	-5,695.16	-13.19	0.10	13.19	12.00	419,742.51	758,329.60	
9,150.00	16.50	179.56	9,148.11	-5,719.31	-19.66	0.15	19.66	12.00	419,736.04	758,329.65	
9,175.00	19.50	179.56	9,171.88	-5,743.08	-27.38	0.21	27.38	12.00	419,728.32	758,329.71	
9,200.00	22.50	179.56	9,195.22	-5,766.42	-36.34	0.28	36.34	12.00	419,719.36	758,329.78	
9,225.00	25.50	179.56	9,218.05	-5,789.25	-46.51	0.36	46.51	12.00	419,709.19	758,329.86	
9,250.00	28.50	179.56	9,240.33	-5,811.53	-57.85	0.44	57.86	12.00	419,697.85	758,329.94	
9,275.00	31.50	179.56	9,261.98	-5,833.18	-70.35	0.54	70.35	12.00	419,685.35	758,330.04	
9,300.00	34.50	179.56	9,282.94	-5,854.14	-83.97	0.64	83.97	12.00	419,671.73	758,330.14	
9,325.00	37.50	179.56	9,303.17	-5,874.37	-98.66	0.76	98.66	12.00	419,657.04	758,330.26	
9,350.00	40.50	179.56	9,322.59	-5,893.79	-114.39	0.88	114.39	12.00	419,641.31	758,330.38	
9,375.00	43.50	179.56	9,341.17	-5,912.37	-131.11	1.01	131.12	12.00	419,624.59	758,330.51	



Pathfinder
Pathfinder X & Y Planning Report

PATHFINDER
A Schlumberger Company

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Site:	Diamond "8" Fed Com	MD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
9,400.00	46.50	179.56	9,358.85	-5,930.05	-148.79	1.14	148.79	12.00	419,606.91	758,330.64	
9,425.00	49.50	179.56	9,375.57	-5,946.77	-167.36	1.29	167.37	12.00	419,588.34	758,330.79	
9,450.00	52.50	179.56	9,391.31	-5,962.51	-186.79	1.43	186.79	12.00	419,568.91	758,330.93	
9,475.00	55.50	179.56	9,406.00	-5,977.20	-207.01	1.59	207.01	12.00	419,548.69	758,331.09	
9,500.00	58.50	179.56	9,419.62	-5,990.82	-227.97	1.75	227.98	12.00	419,527.73	758,331.25	
9,525.00	61.50	179.56	9,432.12	-6,003.32	-249.62	1.92	249.62	12.00	419,506.08	758,331.42	
9,550.00	64.50	179.56	9,443.47	-6,014.67	-271.89	2.09	271.90	12.00	419,483.81	758,331.59	
9,575.00	67.50	179.56	9,453.64	-6,024.84	-294.72	2.26	294.73	12.00	419,460.98	758,331.76	
9,600.00	70.49	179.56	9,462.60	-6,033.80	-318.06	2.44	318.07	12.00	419,437.64	758,331.94	
9,625.00	73.49	179.56	9,470.32	-6,041.52	-341.83	2.63	341.84	12.00	419,413.87	758,332.13	
9,650.00	76.49	179.56	9,476.80	-6,048.00	-365.97	2.81	365.98	12.00	419,389.73	758,332.31	
9,675.00	79.49	179.56	9,482.00	-6,053.20	-390.42	3.00	390.43	12.00	419,365.28	758,332.50	
9,700.00	82.49	179.56	9,485.91	-6,057.11	-415.11	3.19	415.12	12.00	419,340.59	758,332.69	
9,725.00	85.49	179.56	9,488.52	-6,059.72	-439.97	3.38	439.98	12.00	419,315.73	758,332.88	
9,750.00	88.49	179.56	9,489.83	-6,061.03	-464.93	3.57	464.95	12.00	419,290.77	758,333.07	
9,762.56	90.00	179.56	9,490.00	-6,061.20	-477.49	3.67	477.50	12.00	419,278.21	758,333.17	
EOC-9762.56°MD,90.00°INC,179.56°AZI,9490.00°TVD											
9,800.00	90.00	179.56	9,490.00	-6,061.20	-514.93	3.95	514.94	0.00	419,240.77	758,333.45	
9,900.00	90.00	179.56	9,490.00	-6,061.20	-614.93	4.72	614.94	0.00	419,140.77	758,334.22	
10,000.00	90.00	179.56	9,490.00	-6,061.20	-714.92	5.49	714.94	0.00	419,040.78	758,334.99	
10,100.00	90.00	179.56	9,490.00	-6,061.20	-814.92	6.26	814.94	0.00	418,940.78	758,335.76	
10,200.00	90.00	179.56	9,490.00	-6,061.20	-914.92	7.03	914.94	0.00	418,840.78	758,336.53	
10,300.00	90.00	179.56	9,490.00	-6,061.20	-1,014.91	7.79	1,014.94	0.00	418,740.79	758,337.29	
10,400.00	90.00	179.56	9,490.00	-6,061.20	-1,114.91	8.56	1,114.94	0.00	418,640.79	758,338.06	
10,500.00	90.00	179.56	9,490.00	-6,061.20	-1,214.91	9.33	1,214.94	0.00	418,540.79	758,338.83	
10,600.00	90.00	179.56	9,490.00	-6,061.20	-1,314.91	10.10	1,314.94	0.00	418,440.79	758,339.60	
10,700.00	90.00	179.56	9,490.00	-6,061.20	-1,414.90	10.87	1,414.94	0.00	418,340.80	758,340.37	



Pathfinder
Pathfinder X & Y Planning Report



Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Site:	Diamond "8" Fed Com	MD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 5000.1 Single User Db

Planned Survey:											
MD (usft)	Inc. (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
10,800.00	90.00	179.56	9,490.00	-6,061.20	-1,514.90	11.63	1,514.94	0.00	418,240.80	758,341.13	
10,900.00	90.00	179.56	9,490.00	-6,061.20	-1,614.90	12.40	1,614.94	0.00	418,140.80	758,341.90	
11,000.00	90.00	179.56	9,490.00	-6,061.20	-1,714.89	13.17	1,714.94	0.00	418,040.81	758,342.67	
11,100.00	90.00	179.56	9,490.00	-6,061.20	-1,814.89	13.94	1,814.94	0.00	417,940.81	758,343.44	
11,200.00	90.00	179.56	9,490.00	-6,061.20	-1,914.89	14.71	1,914.94	0.00	417,840.81	758,344.21	
11,300.00	90.00	179.56	9,490.00	-6,061.20	-2,014.89	15.47	2,014.94	0.00	417,740.81	758,344.97	
11,400.00	90.00	179.56	9,490.00	-6,061.20	-2,114.88	16.24	2,114.94	0.00	417,640.82	758,345.74	
11,500.00	90.00	179.56	9,490.00	-6,061.20	-2,214.88	17.01	2,214.94	0.00	417,540.82	758,346.51	
11,600.00	90.00	179.56	9,490.00	-6,061.20	-2,314.88	17.78	2,314.94	0.00	417,440.82	758,347.28	
11,700.00	90.00	179.56	9,490.00	-6,061.20	-2,414.87	18.55	2,414.94	0.00	417,340.83	758,348.05	
11,800.00	90.00	179.56	9,490.00	-6,061.20	-2,514.87	19.31	2,514.94	0.00	417,240.83	758,348.81	
11,900.00	90.00	179.56	9,490.00	-6,061.20	-2,614.87	20.08	2,614.94	0.00	417,140.83	758,349.58	
12,000.00	90.00	179.56	9,490.00	-6,061.20	-2,714.86	20.85	2,714.94	0.00	417,040.84	758,350.35	
12,100.00	90.00	179.56	9,490.00	-6,061.20	-2,814.86	21.62	2,814.94	0.00	416,940.84	758,351.12	
12,200.00	90.00	179.56	9,490.00	-6,061.20	-2,914.86	22.38	2,914.94	0.00	416,840.84	758,351.88	
12,300.00	90.00	179.56	9,490.00	-6,061.20	-3,014.86	23.15	3,014.94	0.00	416,740.84	758,352.65	
12,400.00	90.00	179.56	9,490.00	-6,061.20	-3,114.85	23.92	3,114.94	0.00	416,640.85	758,353.42	
12,500.00	90.00	179.56	9,490.00	-6,061.20	-3,214.85	24.69	3,214.94	0.00	416,540.85	758,354.19	
12,600.00	90.00	179.56	9,490.00	-6,061.20	-3,314.85	25.46	3,314.94	0.00	416,440.85	758,354.96	
12,700.00	90.00	179.56	9,490.00	-6,061.20	-3,414.84	26.22	3,414.94	0.00	416,340.86	758,355.72	
12,800.00	90.00	179.56	9,490.00	-6,061.20	-3,514.84	26.99	3,514.94	0.00	416,240.86	758,356.49	
12,900.00	90.00	179.56	9,490.00	-6,061.20	-3,614.84	27.76	3,614.94	0.00	416,140.86	758,357.26	
13,000.00	90.00	179.56	9,490.00	-6,061.20	-3,714.84	28.53	3,714.94	0.00	416,040.86	758,358.03	
13,100.00	90.00	179.56	9,490.00	-6,061.20	-3,814.83	29.30	3,814.94	0.00	415,940.87	758,358.80	
13,200.00	90.00	179.56	9,490.00	-6,061.20	-3,914.83	30.06	3,914.94	0.00	415,840.87	758,359.56	
13,300.00	90.00	179.56	9,490.00	-6,061.20	-4,014.83	30.83	4,014.94	0.00	415,740.87	758,360.33	
13,400.00	90.00	179.56	9,490.00	-6,061.20	-4,114.82	31.60	4,114.94	0.00	415,640.88	758,361.10	

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County	TVD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Site:	Diamond "8" Fed Com	MD Reference:	WELL @ 3428.80usft (30' KB Cactus #123)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	Northing (usft)	Easting (usft)	
13,500.00	90.00	179.56	9,490.00	-6,061.20	-4,214.82	32.37	4,214.94	0.00	415,540.88	758,361.87	
13,600.00	90.00	179.56	9,490.00	-6,061.20	-4,314.82	33.14	4,314.94	0.00	415,440.88	758,362.64	
13,700.00	90.00	179.56	9,490.00	-6,061.20	-4,414.81	33.90	4,414.94	0.00	415,340.89	758,363.40	
13,800.00	90.00	179.56	9,490.00	-6,061.20	-4,514.81	34.67	4,514.94	0.00	415,240.89	758,364.17	
13,901.26	90.00	179.56	9,490.00	-6,061.20	-4,616.07	35.45	4,616.21	0.00	415,139.63	758,364.95	
TD at 13901.26											

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
9,012.50	9,012.50	0.00	0.00	KOP-9012.50°MD,0.00°INC,0.00°AZI,9012.50°TVD	
9,762.56	9,490.00	-477.49	3.67	EOC-9762.56°MD,90.00°INC,179.56°AZI,9490.00°TVD	
13,901.26	9,490.00	-4,616.07	35.45	TD at 13901.26	

Checked By: _____	Approved By: _____	Date: _____
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Project: Lea County
Site: Diamond "8" Fed Com
Well: #4H
Wellbore: OH
Plan: Design #1 (#4H/OH)



Azimuths to Grid North
True North: -0.44°
Magnetic North: 7.12°
Magnetic Field
Strength: 48640.7nT
Dip Angle: 60.16°
Date: 03/17/2011
Model: IGRF200510

PATHFINDER
A Schlumberger Company

WELL DETAILS #4H

Ground Elevation 3398.80
RKB Elevation WELL @ 3428.80usft (30' KB Cactus #123)
Rig Name 30' KB Cactus #123

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	419755.700	758329.500	32° 9' 4.580 N	103° 29' 55.096 W	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9012.50	0.00	0.00	9012.50	0.00	0.00	0.00	0.00	0.00	
9762.56	90.00	179.56	9490.00	-477.49	3.67	12.00	179.56	477.50	
13901.26	90.00	179.56	9490.00	-4616.07	35.45	0.00	0.00	4616.21	PBHL(Diamond 8 #4H)

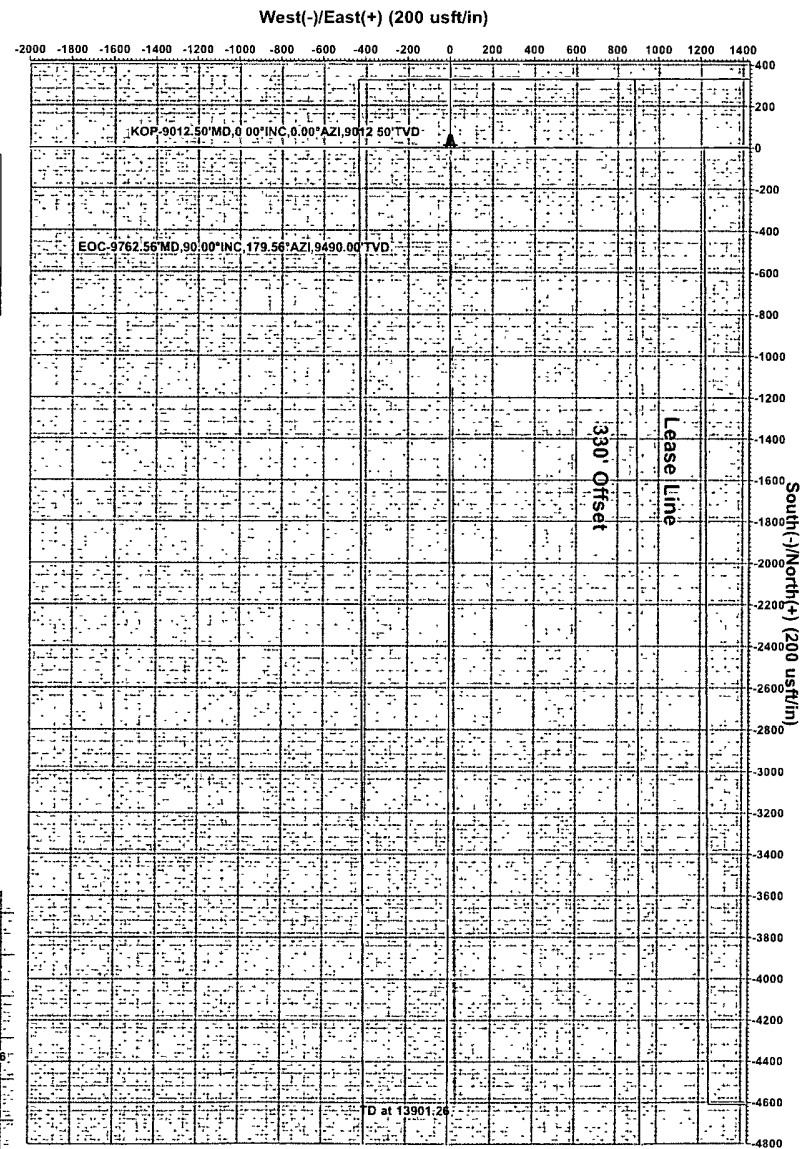
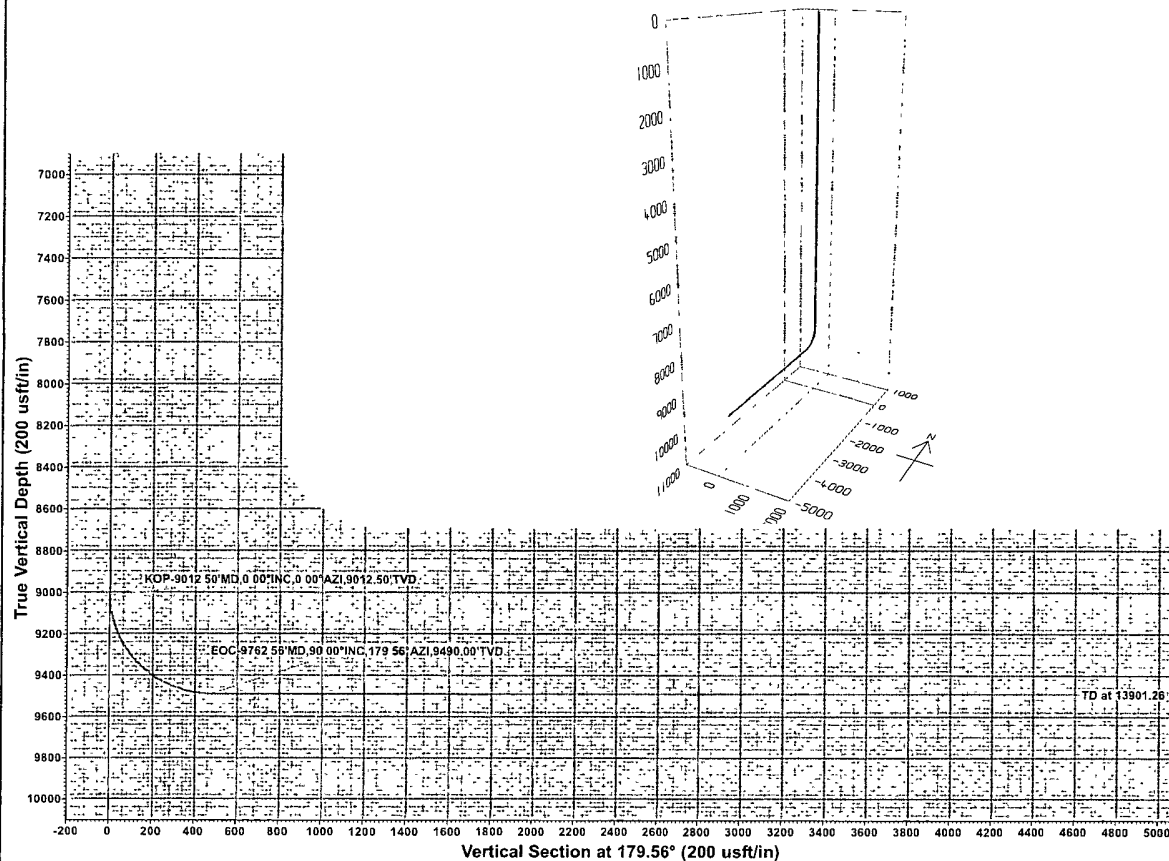
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(Diamond 8 #4H)	9490.00	-4616.00	35.50	415139.100	758365.000	Point

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

LEGEND

• Design #1



Plan Design #1 (#4H/OH)

Created By Nate Bingham Date 8:56, March 17 2011

Checked _____ Date _____

EXHIBIT 1

EOG Resources
Diamond 8 Fed Com No. 4H

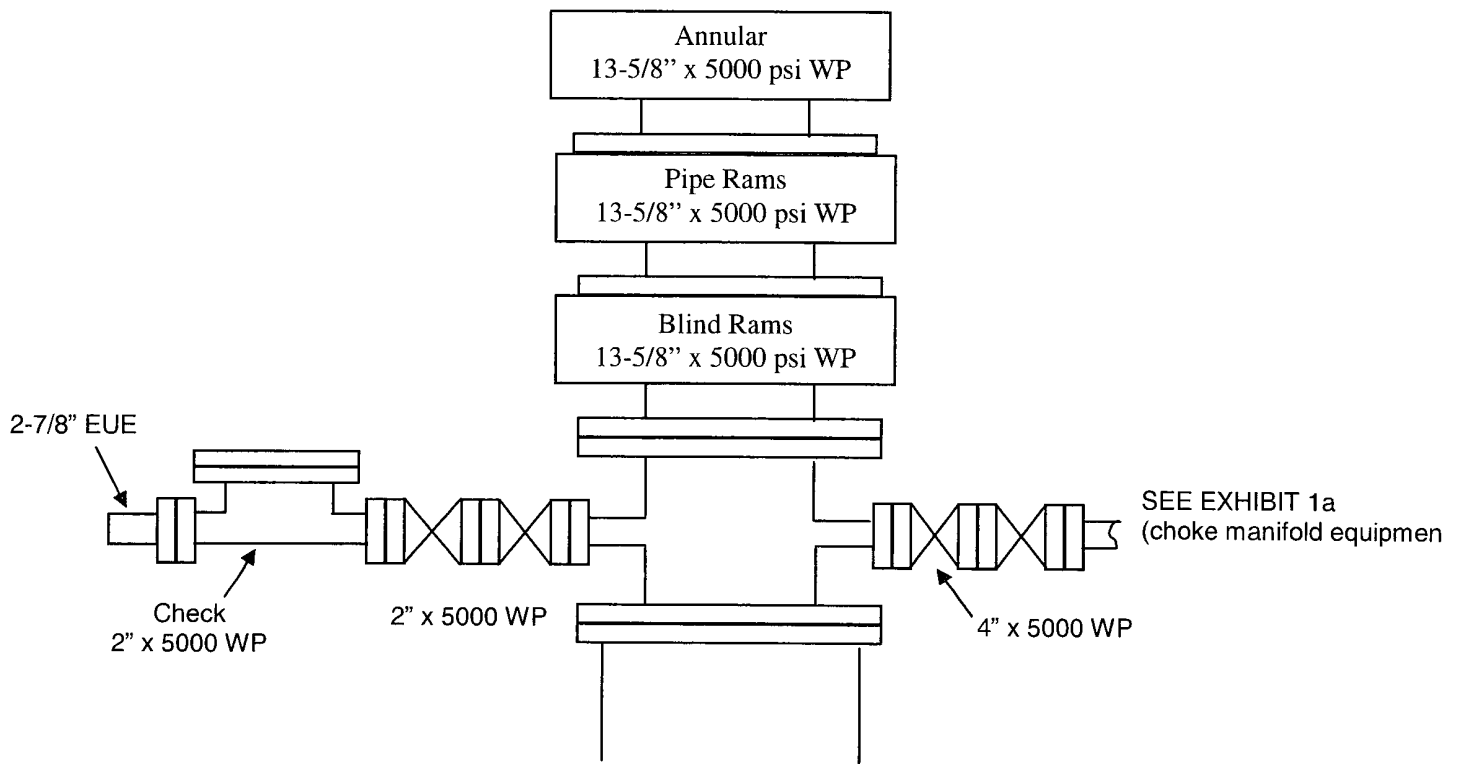
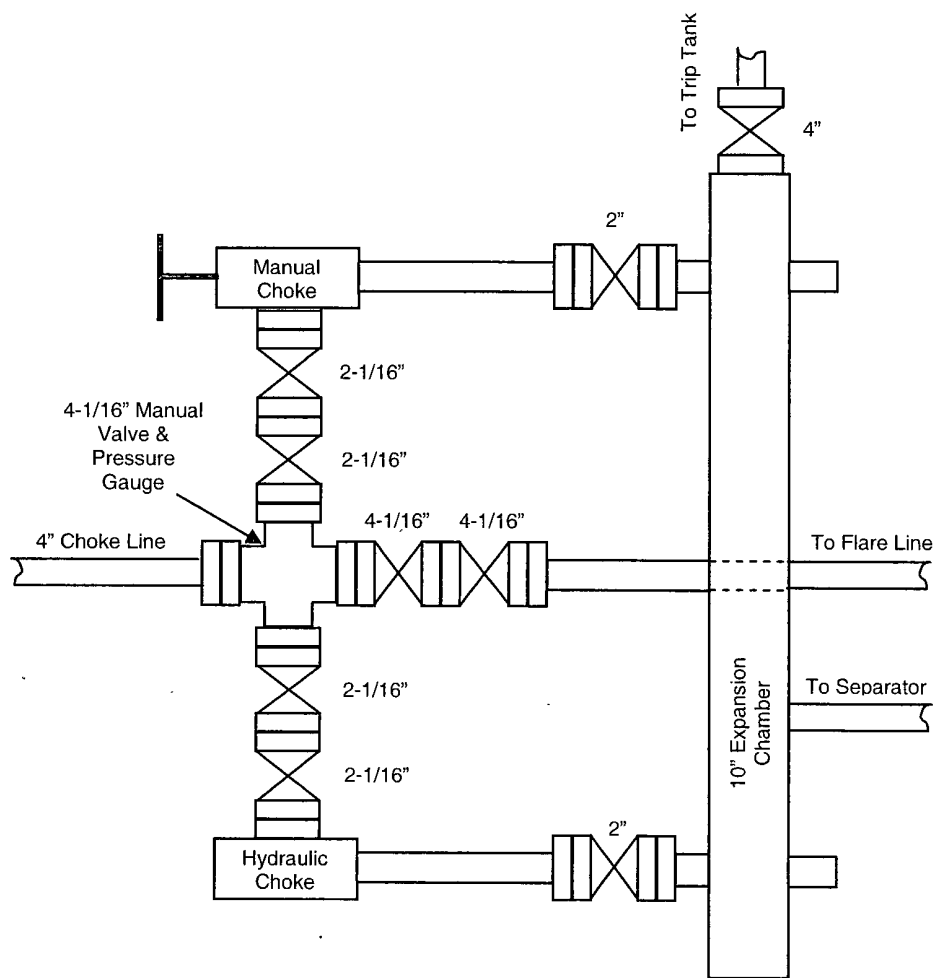


EXHIBIT 1a
EOG Resources, Inc.
5M Choke Manifold Equipment

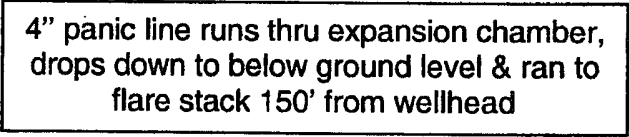


EOG RESOURCES, INC.
DIAMOND 8 FED COM 4H

ATTACHMENT TO EXHIBIT #1

1. Wear ring to be properly installed in head.
2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum. Exhibit #1.
3. All fittings to be flanged
4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.
5. All choke and fill lines to be securely anchored especially ends of choke lines.
6. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
7. Kelly cock on kelly.
8. Extension wrenches and hand wheels to be properly installed.
9. Blow out preventer control to be located as close to driller's position as feasible.
10. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

**Aerial View of the Piping from the Choke
Manifold to the Mud Gas Separator**



~~262msd~~ Inset like bird

Profile View of Piping from Choke Manifold
to the Mud Gas Separator

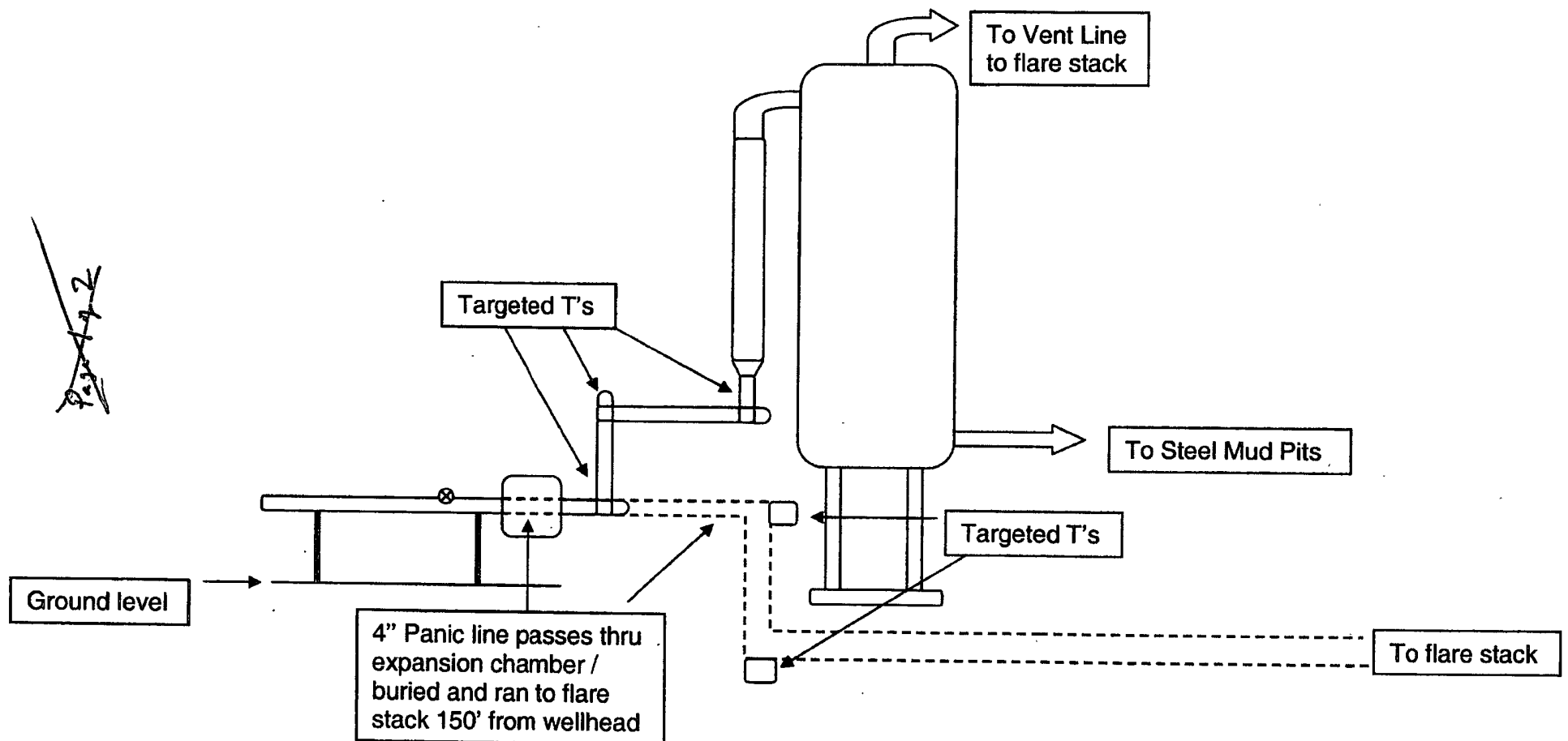


EXHIBIT 4
Diamond 8 Fed Com 4H

