

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCC
APR 19 2012

11-1020
FORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

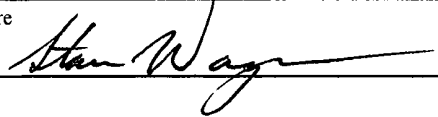
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. NM 93
1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator EOG Resources Inc.		7. Unit or CA Agreement Name and No
3a. Address P.O. Box 2267 Midland, Texas 79702	3b. Phone No. (include area code) 432-686-3689	8. Lease Name and Well No. Yucca 18 Federal 1H
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 610' FSL & 330' FWL, U/L M At proposed prod. zone 660' FSL & 330' FEL, U/L P		9. API Well No. 30-025-40527
14. Distance in miles and direction from nearest town or post office* Approximately +/- 12 miles South from Maljamar, NM		10. Field and Pool, or Exploratory Corbin; Bone Spring, South
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 330'	16. No. of Acres in lease 244.33	11. Sec., T., R., M., or Blk. and Survey or Area Sec 18, T18S, R33E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 650' to 18 FC #1 crosses path of West Corbin 13	19. Proposed Depth Pilot 8900 TVD 12908 MD - 8438 TVD	12. County or Parish Lea
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3828' GL	22. Approximate date work will start* 01/01/2012	13. State NM
20. BLM/BIA Bond No. on file NM 2308		17. Spacing Unit dedicated to this well 160
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 9/14/2011
Title Regulatory Analyst		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date APR 17 2012
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)

Capitan Controlled Water Basin

**Approval Subject to General Requirements
& Special Stipulations Attached**

Resubmitted due to new surface hole location

Kx 04/20/12

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

APR 24 2012

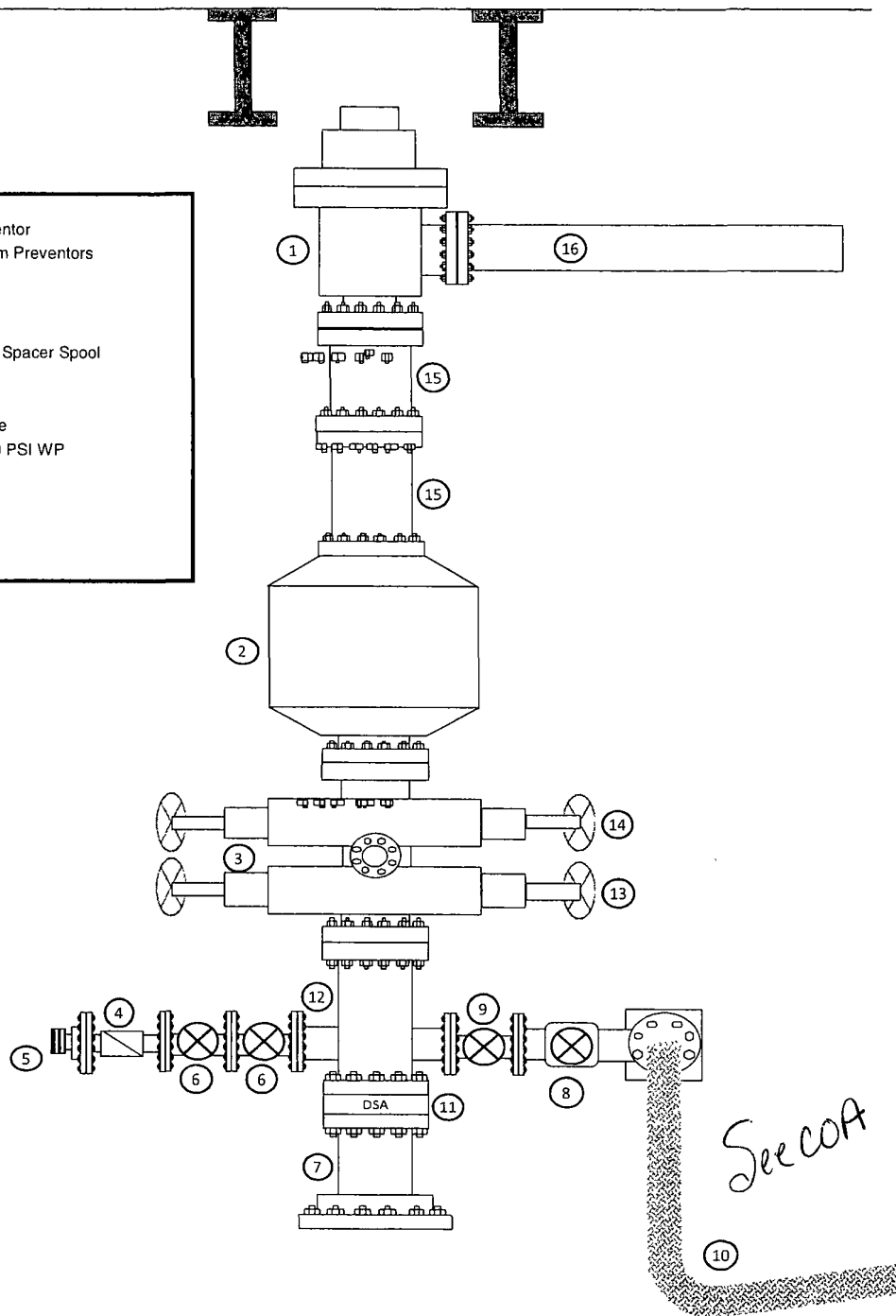
EOG Resources

Cactus #123

Exhibit #1

Rig Floor

1. 13 5/8" Rotating Head
2. Hydril 13 5/8" 5,000 PSI WP GK Annular Preventor
3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors
4. 2 1/16" - 10,000 PSI WP Check Valve
5. 10,000 PSI WP - 1502 Union to kill line
6. 2 1/16" - 10,000 PSI WP Manual Valves
7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool
8. 4 1/16" 10,000 PSI WP HCR Valve
9. 4 1/16" 10,000 PSI WP Manual Valve
10. 8" OD x 4" ID 10,000 PSI WP Flex Choke Line
11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP
12. Mud Cross - 13 5/8" 10,000 PSI WP
13. Blind Rams
14. Pipe Rams
15. 13 5/8" 5,000 PSI WP Spacer Spools
16. Flow Line



EOG RESOURCES, INC.
YUCCA 18 FEDERAL NO. 1H
REVISED 9/27/11

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,300'
Top of Salt	1,430'
Base of Salt	2,630'
Yates	2,910'
Queen	4,165'
San Andres	4,700'
Delaware	4,935'
Brushy Canyon	5,650'
Bone Spring 1 Carb	6,890'
Bone Spring Sand 1	8,390'
Bone Spring 2 Carb	8,700'
TD	8,900'

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

Upper Permian Sands	0- 300'	Fresh Water
Brushy Canyon	5,650'	Oil
Bone Spring Sand 1	8,390'	Oil
Bone Spring 2 Carb	8,700'	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 11.75" casing at 1350' and circulating cement back to surface.

4. CASING PROGRAM - NEW

See
CoA

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
14.75"	0 – 1350'	11.75"	42#	H40	STC	1.125	1.25	1.60
11"	0-3000'	8.625"	32#	J55	LTC	1.125	1.25	1.60
7.875"	0'-12,908'	5.500"	17#	P110 or HCP110	LTC	1.125	1.25	1.60

EOG RESOURCES, INC.
YUCCA 18 FEDERAL NO. 1H
REVISED 9/27/11

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1350'	200	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)
	250	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
3,000'	350	12.7	2.21	Lead: Class C + 2% SMS + 1.0% R-3 + 0.25 pps CelloFlake + 0.005 pps Static Free (TOC @ surface)
	200	14.8	1.32	Tail: Class C + 0.25 pps Celloflake + 0.005 pps Static Free + 0.005 gps FL-6L
BH Plug 8700' -8900'	100	18.0	0.90	Class H + 0.005 lbs/sx Static Free + 5% Salt + 1.2% CD31 + 0.005 gps FP-6L
KO Plug 600'	300	18.0	0.90	Class H + 0.005 lbs/sx Static Free + 5% Salt + 1.2% CD31 + 0.005 gps FP-6L
12,908'	600	11.8	2.31	Lead: 50:50:10 Class C + 1.25% FL-52A + 0.30% ASA-301 + 0.15% ASA-301 + 0.15% SMS + 0.25 pps Celloflake + 0.005 pps Static Free (TOC @ 2500')
	900	14.2	1.30	Tail: 50:50:2 Class 'H' + Class H + 0.65% FL-52A + 0.20% CD-32 + 0.20% SMS + 5% Salt + 0.15% R-3 + 0.005 pps 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:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

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. The surface casing will be tested to 1400 psi for 30 minutes.

EOG RESOURCES, INC.
YUCCA 18 FEDERAL NO. 1H
REVISED 9/27/11

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. The intermediate casing will be tested to 2000 psi for 30 minutes.

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 – 1350'	Fresh Water Gel	8.6-8.8	28-34	N/c
1350' – 3,000'	Saturated Brine	10.0-10.2	28-34	N/c
3,000' – 8,900'	Fresh Water	8.4-8.6	28-34	N/c
7,943' – 12,908' Lateral	Cut Brine	8.5-9.0	28-34	N/c

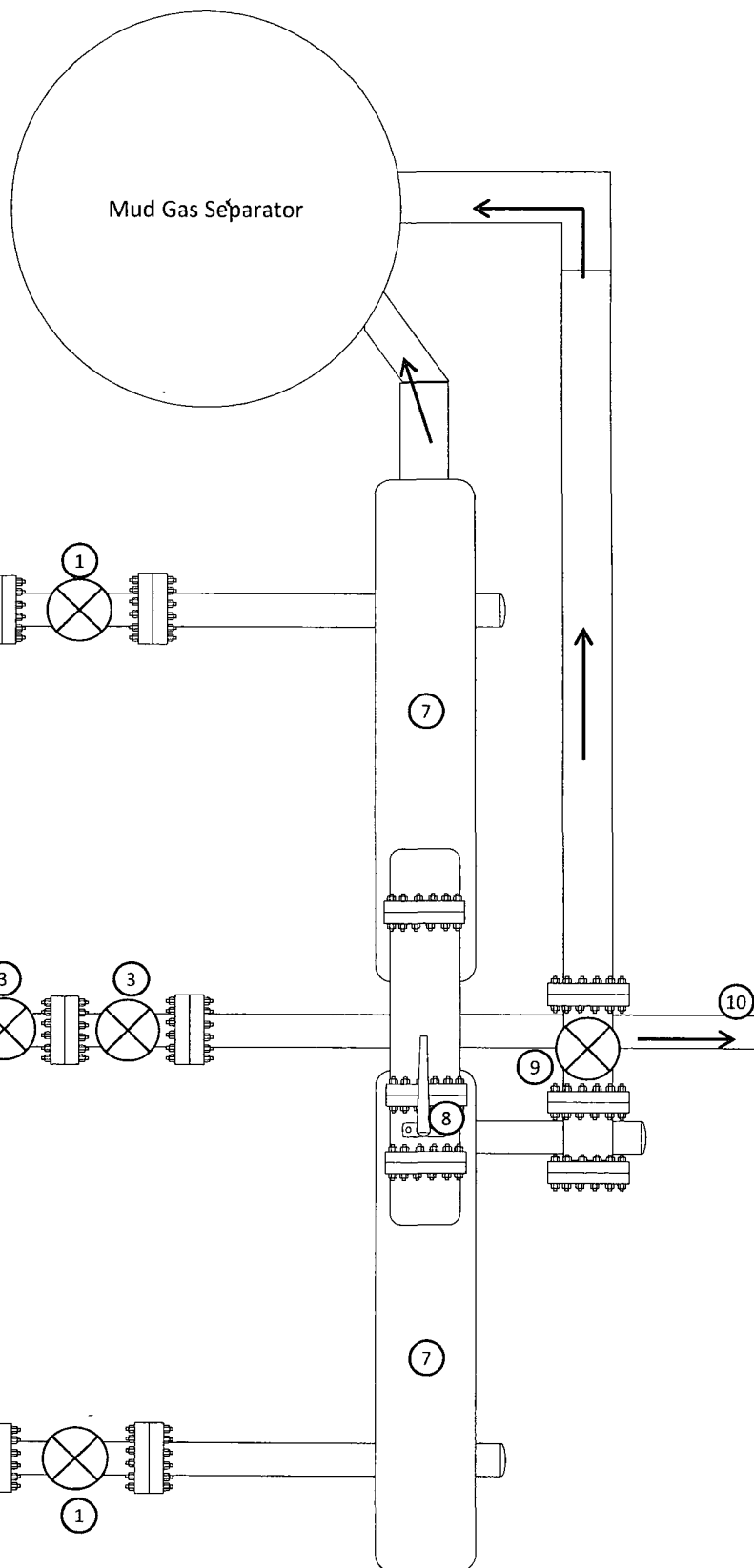
7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

*See
CON*

- (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.

EOG Resources
Cactus #123
Exhibit #1a

1. Cameron 2 1/16" 10,000 PSI WP Gate Valve
2. 4 1/16" 10,000 PSI WP Manual Choke
3. Cameron 4 1/16" 10,000 PSI WP Manual Valve
4. 8" OD x 4" ID 10,000 PSI WP Flex Choke Line
5. Cameron 4 1/16" 10,000 PSI WP Manual Valve & Pressure Gauge on Pressure Block
6. 10,000 PSI WP Hydraulic Choke Valve
7. 8" Expansion Chamber
8. LP Butterfly Valve
9. LP Valve
10. 4" Panic Line



See COA

M I D W E S T
HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT			
Customer: CACTUS		P.O. Number: RIG #123 Asset # M10761	
HOSE SPECIFICATIONS			
Type: CHOKER LINE		Length: 35'	
I.D. 4" INCHES		O.D. 8" INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI	BURST PRESSURE PSI	
COUPLINGS			
Type of End Fitting 4 1/16 10K FLANGE			
Type of Coupling: SWEDGED		MANUFACTURED BY MIDWEST HOSE & SPECIALTY	
PROCEDURE			
<i>Hose assembly pressure tested with water at ambient temperature.</i>			
TIME HELD AT TEST PRESSURE 1 MIN.		ACTUAL BURST PRESSURE: 0 PSI	
COMMENTS: SN#90087 M10761 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes			
Date: 6/6/2011	Tested By: BOBBY FINK	Approved: MENDI JACKSON	

Manufacturer: Midwest Hose & Specialty

Serial Number: SN#90067

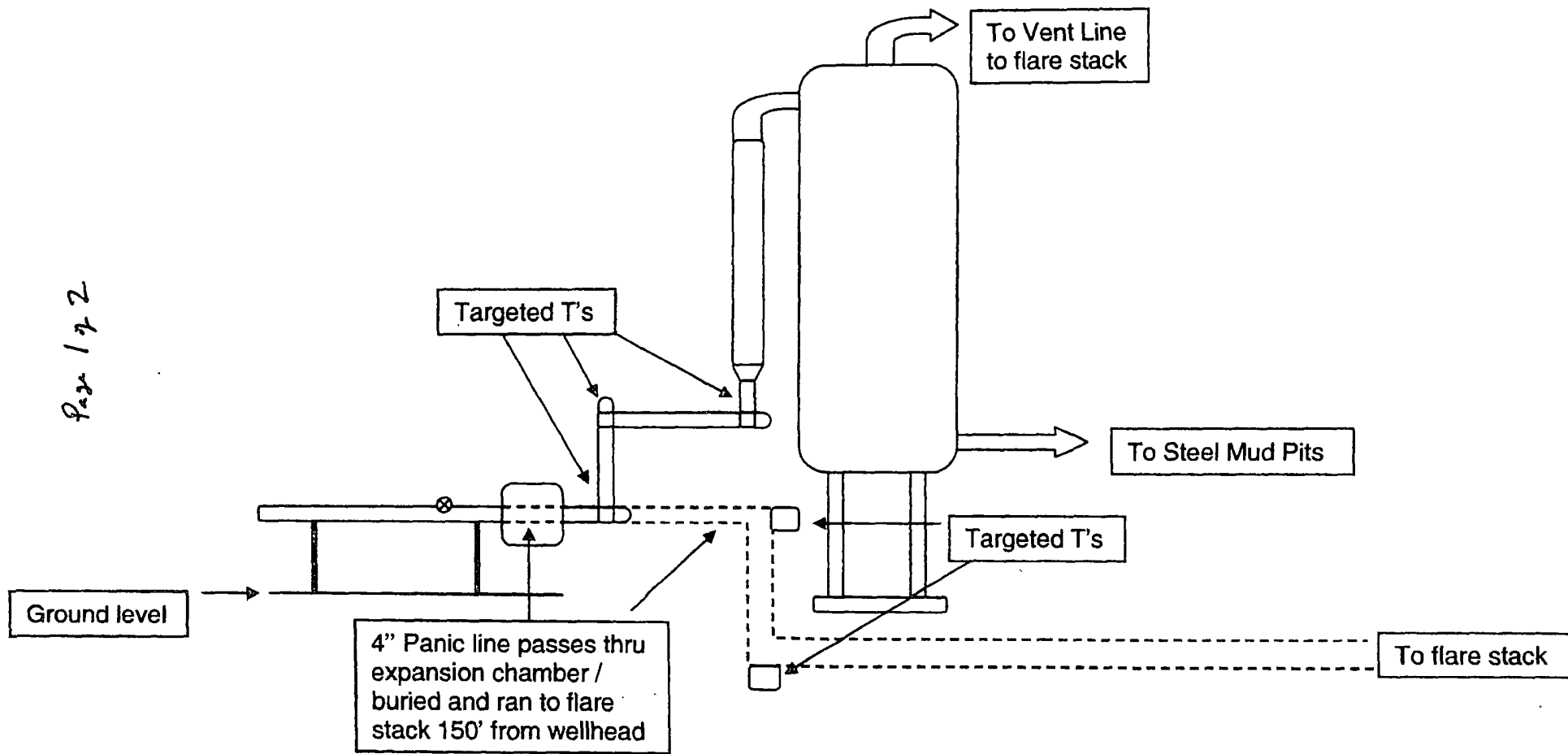
Length: 35'

Size: OD = 8" ID = 4"

Ends: Flanges Size: 4-1/16"

WP Rating: 10,000 psi Anchors required by manufacturer: No

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



Page 2 of 2

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

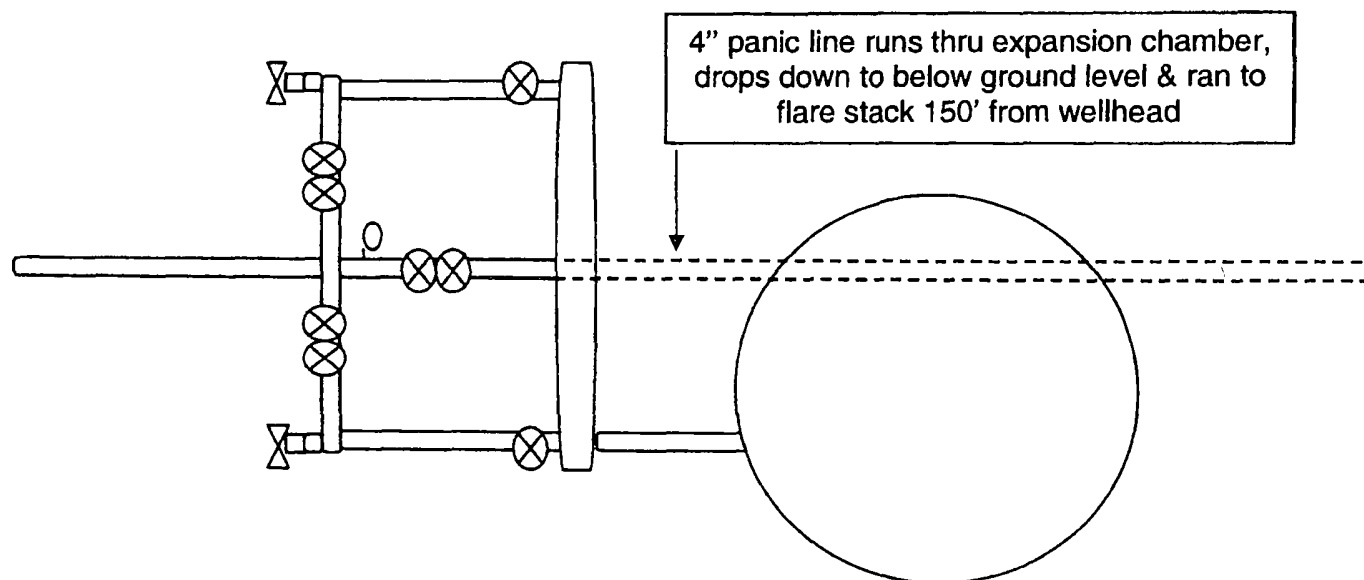
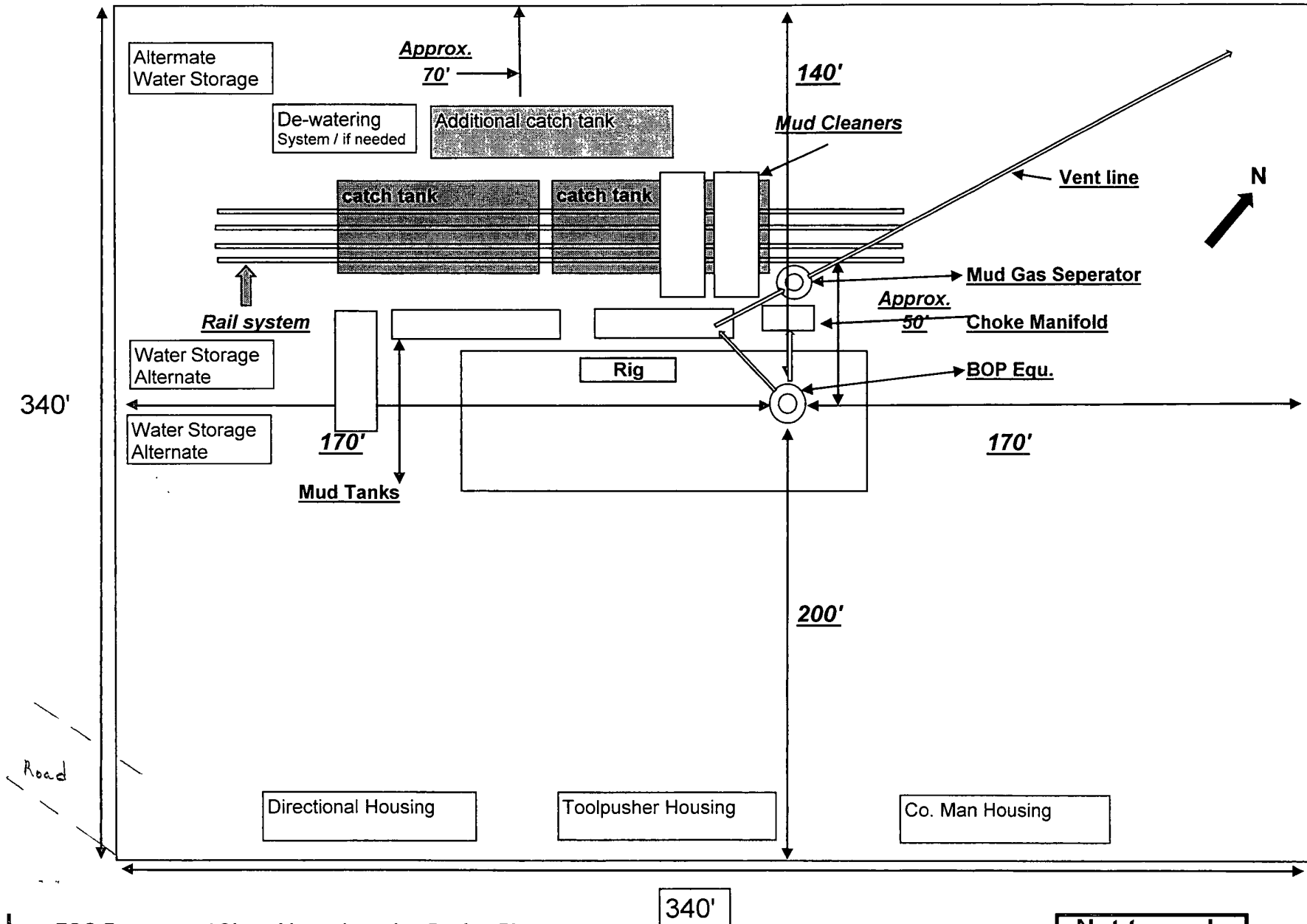


EXHIBIT 4
Yucca 18 Federal 1H



EOG Resources / Closed Loop Location Design Plan

340'

Not to scale

6/30/2008



Azimuths to Grid North
True North: -0.34°
Magnetic North: 7.36°

Magnetic Field
Strength: 48964.0snT
Dip Angle: 60.67°
Date: 4/7/2011
Model: IGRF200510

PATHFINDER®
A Schlumberger Company

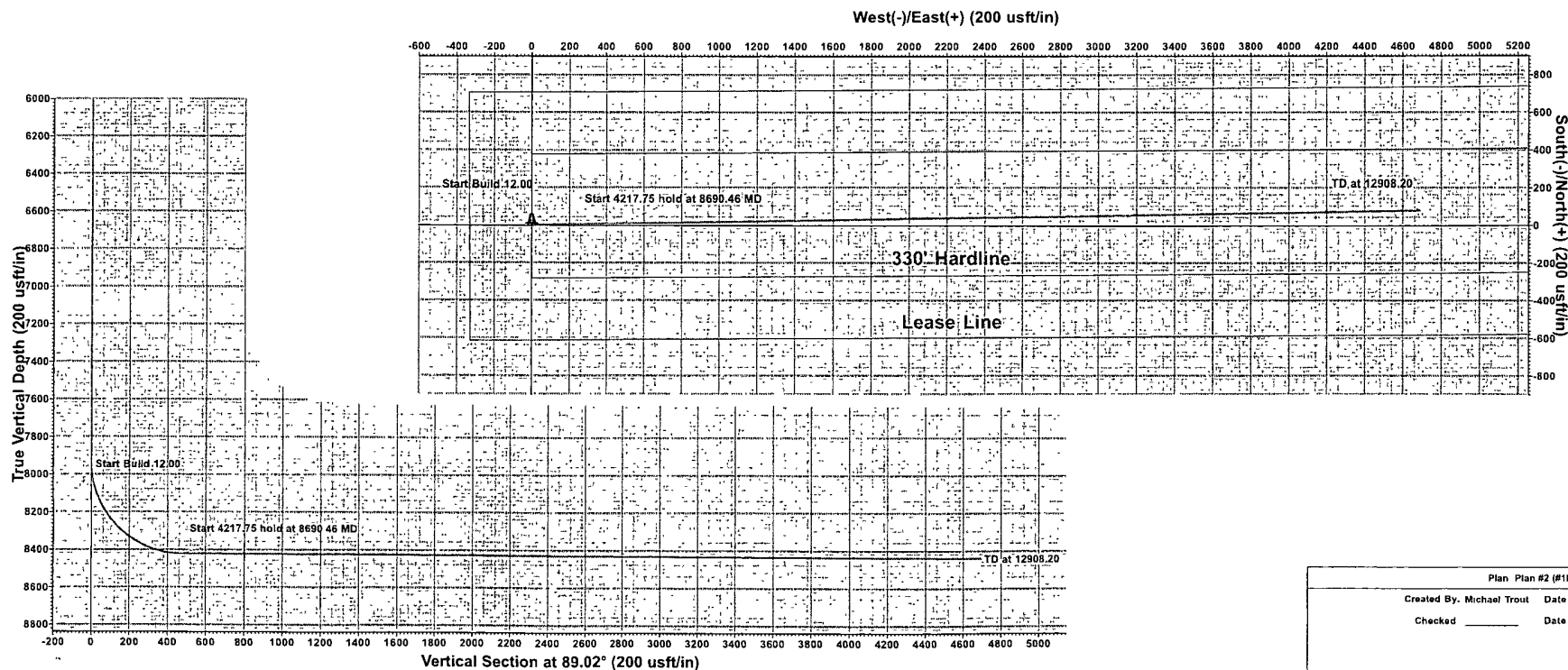
Project: Lea County
Site: Yucca 18 Federal
Well: #1H
Wellbore: OH
Plan: Plan #2 (#1H/OH)

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0 00	0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
7942.54	0 00	0 00	7942.54	0 00	0 00	0 00	0 00	0 00	0 00
8690.46	89.75	89.02	8420.00	8.13	475.31	12.00	89.02	475.38	
12908.20	89.75	89.02	8438.40	80.27	4692.40	0 00	0.00	4693.09	BHL (Yucca18Fed#1H)

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

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BHL (Yucca18Fed#1H)	8438.40	80.40	4692.40	634199.900	696450.400	Point

WELL DETAILS #1H						
Ground Elevation 3828.00						
RKB Elevation KB = 30' @ 3858.00usft (Cactus #123)						
Rig Name Cactus #123						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0 00	634119.500	691758.000	32° 44' 30.255 N	103° 42' 34.852 W	



Plan Plan #2 (#1H/OH)	
Created By: Michael Trout	Date: 14-26, August 30 2011
Checked: _____	Date: _____



EOG Resources, Inc.

Lea County

Yucca 18 Federal

#1H

OH

Plan: Plan #2

Pathfinder X&Y Report

30 August, 2011

PATHFINDER[®]
A Schlumberger Company

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Site:	Yucca 18 Federal	MD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Project:	Lea County	System Datum:	Mean Sea Level
Map System:	US State Plane 1927 (Exact solution)		
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Yucca 18 Federal				
Site Position:		Northing:	634,312.600 usft	Latitude:	32° 44' 31.864 N
From:	Map	Easting:	696,869.600 usft	Longitude:	103° 41' 34.994 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well:	#1H					
Well Position	+N/-S	0 00 usft	Northing:	634,119.500 usft	Latitude:	32° 44' 30.255 N
	+E/-W	0.00 usft	Easting:	691,758.000 usft	Longitude:	103° 42' 34.852 W
Position Uncertainty	0 00 usft		Wellhead Elevation:	usft	Ground Level:	3,828.00 usft

Wellbore:	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	4/7/2011	7.70	60.67	48,964

Design:	Plan #2				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:		Depth From (TVD)		+N/-S	
		(usft)		(usft)	
		0.00		0.00	
				+E/-W	
				(usft)	
				0.00	
				Direction	
				(°)	
				89.02	

Survey Tool/Program	Date	8/30/2011			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
0.00	12,908.20	Plan #2 (OH)	MWD	MWD - Standard	

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Site:	Yucca 18 Federal	MD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	-3,858.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
100.00	0.00	0.00	100.00	-3,758.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
200.00	0.00	0.00	200.00	-3,658.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
300.00	0.00	0.00	300.00	-3,558.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
400.00	0.00	0.00	400.00	-3,458.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
500.00	0.00	0.00	500.00	-3,358.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
600.00	0.00	0.00	600.00	-3,258.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
700.00	0.00	0.00	700.00	-3,158.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
800.00	0.00	0.00	800.00	-3,058.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
900.00	0.00	0.00	900.00	-2,958.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,000.00	0.00	0.00	1,000.00	-2,858.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,100.00	0.00	0.00	1,100.00	-2,758.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,200.00	0.00	0.00	1,200.00	-2,658.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,300.00	0.00	0.00	1,300.00	-2,558.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,400.00	0.00	0.00	1,400.00	-2,458.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,500.00	0.00	0.00	1,500.00	-2,358.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,600.00	0.00	0.00	1,600.00	-2,258.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,700.00	0.00	0.00	1,700.00	-2,158.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,800.00	0.00	0.00	1,800.00	-2,058.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
1,900.00	0.00	0.00	1,900.00	-1,958.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
2,000.00	0.00	0.00	2,000.00	-1,858.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
2,100.00	0.00	0.00	2,100.00	-1,758.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
2,200.00	0.00	0.00	2,200.00	-1,658.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
2,300.00	0.00	0.00	2,300.00	-1,558.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
2,400.00	0.00	0.00	2,400.00	-1,458.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
2,500.00	0.00	0.00	2,500.00	-1,358.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
2,600.00	0.00	0.00	2,600.00	-1,258.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	

Company: EOG Resources, Inc.
Project: Lea County
Site: Yucca 18 Federal
Well: #1H
Wellbore: OH
Design: Plan #2

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

Well #1H
KB = 30' @ 3858.00usft (Cactus #123)
KB = 30' @ 3858.00usft (Cactus #123)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,700.00	0.00	0.00	2,700.00	-1,158.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
2,800.00	0.00	0.00	2,800.00	-1,058.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
2,900.00	0.00	0.00	2,900.00	-958.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,000.00	0.00	0.00	3,000.00	-858.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,100.00	0.00	0.00	3,100.00	-758.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,200.00	0.00	0.00	3,200.00	-658.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,300.00	0.00	0.00	3,300.00	-558.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,400.00	0.00	0.00	3,400.00	-458.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,500.00	0.00	0.00	3,500.00	-358.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,600.00	0.00	0.00	3,600.00	-258.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,700.00	0.00	0.00	3,700.00	-158.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,800.00	0.00	0.00	3,800.00	-58.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
3,900.00	0.00	0.00	3,900.00	42.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,000.00	0.00	0.00	4,000.00	142.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,100.00	0.00	0.00	4,100.00	242.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,200.00	0.00	0.00	4,200.00	342.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,300.00	0.00	0.00	4,300.00	442.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,400.00	0.00	0.00	4,400.00	542.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,500.00	0.00	0.00	4,500.00	642.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,600.00	0.00	0.00	4,600.00	742.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,700.00	0.00	0.00	4,700.00	842.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,800.00	0.00	0.00	4,800.00	942.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
4,900.00	0.00	0.00	4,900.00	1,042.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
5,000.00	0.00	0.00	5,000.00	1,142.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
5,100.00	0.00	0.00	5,100.00	1,242.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
5,200.00	0.00	0.00	5,200.00	1,342.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00
5,300.00	0.00	0.00	5,300.00	1,442.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Site:	Yucca 18 Federal	MD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
5,400.00	0.00	0.00	5,400.00	1,542.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
5,500.00	0.00	0.00	5,500.00	1,642.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
5,600.00	0.00	0.00	5,600.00	1,742.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
5,700.00	0.00	0.00	5,700.00	1,842.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
5,800.00	0.00	0.00	5,800.00	1,942.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
5,900.00	0.00	0.00	5,900.00	2,042.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,000.00	0.00	0.00	6,000.00	2,142.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,100.00	0.00	0.00	6,100.00	2,242.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,200.00	0.00	0.00	6,200.00	2,342.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,300.00	0.00	0.00	6,300.00	2,442.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,400.00	0.00	0.00	6,400.00	2,542.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,500.00	0.00	0.00	6,500.00	2,642.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,600.00	0.00	0.00	6,600.00	2,742.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,700.00	0.00	0.00	6,700.00	2,842.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,800.00	0.00	0.00	6,800.00	2,942.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
6,900.00	0.00	0.00	6,900.00	3,042.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,000.00	0.00	0.00	7,000.00	3,142.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,100.00	0.00	0.00	7,100.00	3,242.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,200.00	0.00	0.00	7,200.00	3,342.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,300.00	0.00	0.00	7,300.00	3,442.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,400.00	0.00	0.00	7,400.00	3,542.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,500.00	0.00	0.00	7,500.00	3,642.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,600.00	0.00	0.00	7,600.00	3,742.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,700.00	0.00	0.00	7,700.00	3,842.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,800.00	0.00	0.00	7,800.00	3,942.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,900.00	0.00	0.00	7,900.00	4,042.00	0.00	0.00	0.00	0.00	634,119.50	691,758.00	
7,942.54	0.00	0.00	7,942.54	4,084.54	0.00	0.00	0.00	0.00	634,119.50	691,758.00	

Company:	EOG Resources, Inc	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Site:	Yucca 18 Federal	MD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	Northing (usft)	Easting (usft)
7,950.00	0.90	89.02	7,950.00	4,092.00	0.00	0.06	0.06	12.00	634,119.50	691,758.06
7,975.00	3.90	89.02	7,974.98	4,116.98	0.02	1.10	1.10	12.00	634,119.52	691,759.10
8,000.00	6.90	89.02	7,999.86	4,141.86	0.06	3.45	3.45	12.00	634,119.56	691,761.45
8,025.00	9.90	89.02	8,024.59	4,166.59	0.12	7.10	7.10	12.00	634,119.62	691,765.10
8,050.00	12.90	89.02	8,049.10	4,191.10	0.21	12.04	12.04	12.00	634,119.71	691,770.04
8,075.00	15.90	89.02	8,073.31	4,215.31	0.31	18.25	18.26	12.00	634,119.81	691,776.25
8,100.00	18.90	89.02	8,097.16	4,239.16	0.44	25.73	25.73	12.00	634,119.94	691,783.73
8,125.00	21.90	89.02	8,120.59	4,262.59	0.59	34.44	34.44	12.00	634,120.09	691,792.44
8,150.00	24.90	89.02	8,143.53	4,285.53	0.76	44.36	44.37	12.00	634,120.26	691,802.36
8,175.00	27.90	89.02	8,165.92	4,307.92	0.95	55.47	55.48	12.00	634,120.45	691,813.47
8,200.00	30.90	89.02	8,187.70	4,329.70	1.16	67.74	67.75	12.00	634,120.66	691,825.74
8,225.00	33.90	89.02	8,208.81	4,350.81	1.39	81.13	81.14	12.00	634,120.89	691,839.13
8,250.00	36.90	89.02	8,229.19	4,371.19	1.64	95.61	95.62	12.00	634,121.14	691,853.61
8,275.00	39.90	89.02	8,248.78	4,390.78	1.90	111.13	111.14	12.00	634,121.40	691,869.13
8,300.00	42.90	89.02	8,267.53	4,409.53	2.18	127.66	127.67	12.00	634,121.68	691,885.66
8,325.00	45.90	89.02	8,285.39	4,427.39	2.48	145.14	145.16	12.00	634,121.98	691,903.14
8,350.00	48.90	89.02	8,302.31	4,444.31	2.80	163.54	163.56	12.00	634,122.30	691,921.54
8,375.00	51.90	89.02	8,318.25	4,460.25	3.13	182.79	182.82	12.00	634,122.63	691,940.79
8,400.00	54.90	89.02	8,333.15	4,475.15	3.47	202.86	202.89	12.00	634,122.97	691,960.86
8,425.00	57.90	89.02	8,346.99	4,488.99	3.83	223.67	223.71	12.00	634,123.33	691,981.67
8,450.00	60.90	89.02	8,359.72	4,501.72	4.19	245.19	245.22	12.00	634,123.69	692,003.19
8,475.00	63.90	89.02	8,371.30	4,513.30	4.57	267.33	267.37	12.00	634,124.07	692,025.33
8,500.00	66.90	89.02	8,381.71	4,523.71	4.96	290.06	290.10	12.00	634,124.46	692,048.06
8,525.00	69.90	89.02	8,390.91	4,532.91	5.36	313.30	313.34	12.00	634,124.86	692,071.30
8,550.00	72.90	89.02	8,398.89	4,540.89	5.76	336.98	337.03	12.00	634,125.26	692,094.98
8,575.00	75.90	89.02	8,405.61	4,547.61	6.18	361.06	361.11	12.00	634,125.68	692,119.06
8,600.00	78.90	89.02	8,411.07	4,553.07	6.59	385.45	385.50	12.00	634,126.09	692,143.45

Company: EOG Resources, Inc.
Project: Lea County
Site: Yucca 18 Federal
Well: #1H
Wellbore: OH
Design: Plan #2

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

Well #1H.
KB = 30' @ 3858.00usft (Cactus #123)
KB = 30' @ 3858.00usft (Cactus #123)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	Northing (usft)	Easting (usft)
8,625.00	81.90	89.02	8,415.24	4,557.24	7.01	410.09	410.15	12.00	634,126.51	692,168.09
8,650.00	84.90	89.02	8,418.11	4,560.11	7.44	434.92	434.98	12.00	634,126.94	692,192.92
8,675.00	87.90	89.02	8,419.68	4,561.68	7.87	459.86	459.93	12.00	634,127.37	692,217.86
8,690.46	89.75	89.02	8,420.00	4,562.00	8.13	475.31	475.38	12.00	634,127.63	692,233.31
8,700.00	89.75	89.02	8,420.04	4,562.04	8.29	484.85	484.92	0.00	634,127.79	692,242.85
8,800.00	89.75	89.02	8,420.48	4,562.48	10.00	584.84	584.92	0.00	634,129.50	692,342.84
8,900.00	89.75	89.02	8,420.91	4,562.91	11.71	684.82	684.92	0.00	634,131.21	692,442.82
9,000.00	89.75	89.02	8,421.35	4,563.35	13.42	784.81	784.92	0.00	634,132.92	692,542.81
9,100.00	89.75	89.02	8,421.79	4,563.79	15.14	884.79	884.92	0.00	634,134.64	692,642.79
9,200.00	89.75	89.02	8,422.22	4,564.22	16.85	984.78	984.92	0.00	634,136.35	692,742.78
9,300.00	89.75	89.02	8,422.66	4,564.66	18.56	1,084.76	1,084.92	0.00	634,138.06	692,842.76
9,400.00	89.75	89.02	8,423.10	4,565.10	20.27	1,184.74	1,184.92	0.00	634,139.77	692,942.74
9,500.00	89.75	89.02	8,423.53	4,565.53	21.98	1,284.73	1,284.92	0.00	634,141.48	693,042.73
9,600.00	89.75	89.02	8,423.97	4,565.97	23.69	1,384.71	1,384.92	0.00	634,143.19	693,142.71
9,700.00	89.75	89.02	8,424.41	4,566.41	25.40	1,484.70	1,484.92	0.00	634,144.90	693,242.70
9,800.00	89.75	89.02	8,424.84	4,566.84	27.11	1,584.68	1,584.91	0.00	634,146.61	693,342.68
9,900.00	89.75	89.02	8,425.28	4,567.28	28.82	1,684.67	1,684.91	0.00	634,148.32	693,442.67
10,000.00	89.75	89.02	8,425.71	4,567.71	30.53	1,784.65	1,784.91	0.00	634,150.03	693,542.65
10,100.00	89.75	89.02	8,426.15	4,568.15	32.24	1,884.64	1,884.91	0.00	634,151.74	693,642.64
10,200.00	89.75	89.02	8,426.59	4,568.59	33.95	1,984.62	1,984.91	0.00	634,153.45	693,742.62
10,300.00	89.75	89.02	8,427.02	4,569.02	35.66	2,084.60	2,084.91	0.00	634,155.16	693,842.60
10,400.00	89.75	89.02	8,427.46	4,569.46	37.37	2,184.59	2,184.91	0.00	634,156.87	693,942.59
10,500.00	89.75	89.02	8,427.90	4,569.90	39.08	2,284.57	2,284.91	0.00	634,158.58	694,042.57
10,600.00	89.75	89.02	8,428.33	4,570.33	40.79	2,384.56	2,384.91	0.00	634,160.29	694,142.56
10,700.00	89.75	89.02	8,428.77	4,570.77	42.50	2,484.54	2,484.91	0.00	634,162.00	694,242.54
10,800.00	89.75	89.02	8,429.20	4,571.20	44.21	2,584.53	2,584.90	0.00	634,163.71	694,342.53
10,900.00	89.75	89.02	8,429.64	4,571.64	45.92	2,684.51	2,684.90	0.00	634,165.42	694,442.51

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Site:	Yucca 18 Federal	MD Reference:	KB = 30' @ 3858.00usft (Cactus #123)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
11,000.00	89.75	89.02	8,430.08	4,572.08	47.63	2,784.50	2,784.90	0.00	634,167.13	694,542.50	
11,100.00	89.75	89.02	8,430.51	4,572.51	49.34	2,884.48	2,884.90	0.00	634,168.84	694,642.48	
11,200.00	89.75	89.02	8,430.95	4,572.95	51.05	2,984.46	2,984.90	0.00	634,170.55	694,742.46	
11,300.00	89.75	89.02	8,431.39	4,573.39	52.76	3,084.45	3,084.90	0.00	634,172.26	694,842.45	
11,400.00	89.75	89.02	8,431.82	4,573.82	54.47	3,184.43	3,184.90	0.00	634,173.97	694,942.43	
11,500.00	89.75	89.02	8,432.26	4,574.26	56.18	3,284.42	3,284.90	0.00	634,175.68	695,042.42	
11,600.00	89.75	89.02	8,432.70	4,574.70	57.89	3,384.40	3,384.90	0.00	634,177.39	695,142.40	
11,700.00	89.75	89.02	8,433.13	4,575.13	59.60	3,484.39	3,484.90	0.00	634,179.10	695,242.39	
11,800.00	89.75	89.02	8,433.57	4,575.57	61.31	3,584.37	3,584.90	0.00	634,180.81	695,342.37	
11,900.00	89.75	89.02	8,434.00	4,576.00	63.02	3,684.36	3,684.89	0.00	634,182.52	695,442.36	
12,000.00	89.75	89.02	8,434.44	4,576.44	64.73	3,784.34	3,784.89	0.00	634,184.23	695,542.34	
12,100.00	89.75	89.02	8,434.88	4,576.88	66.44	3,884.32	3,884.89	0.00	634,185.94	695,642.32	
12,200.00	89.75	89.02	8,435.31	4,577.31	68.16	3,984.31	3,984.89	0.00	634,187.66	695,742.31	
12,300.00	89.75	89.02	8,435.75	4,577.75	69.87	4,084.29	4,084.89	0.00	634,189.37	695,842.29	
12,400.00	89.75	89.02	8,436.19	4,578.19	71.58	4,184.28	4,184.89	0.00	634,191.08	695,942.28	
12,500.00	89.75	89.02	8,436.62	4,578.62	73.29	4,284.26	4,284.89	0.00	634,192.79	696,042.26	
12,600.00	89.75	89.02	8,437.06	4,579.06	75.00	4,384.25	4,384.89	0.00	634,194.50	696,142.25	
12,700.00	89.75	89.02	8,437.50	4,579.50	76.71	4,484.23	4,484.89	0.00	634,196.21	696,242.23	
12,800.00	89.75	89.02	8,437.93	4,579.93	78.42	4,584.22	4,584.89	0.00	634,197.92	696,342.22	
12,908.20	89.75	89.02	8,438.40	4,580.40	80.27	4,692.40	4,693.09	0.00	634,199.77	696,450.40	
BHL (Yucca18Fed#1H)											

Checked By: _____	Approved By: _____	Date: _____
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