

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

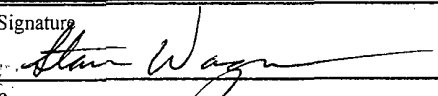
Split Estate

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. NM-16139 (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 EOG 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. July 16 State Com #111	
3b. Phone No. (include area code) 432-686-3689		9. API Well No. 30-025-39983	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 2470' FNL & 2210' FWL, U/L F, Sec 16, T25S, R34E At proposed prod. zone 2310' FSL & 2210' FWL, U/L K, Sec 9, T25S, R34E		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 SW from Jal, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec 16, T25S, R34E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 2210'		12. County or Parish Lea	
16. No. of Acres in lease 1639		13. State NM	
17. Spacing Unit dedicated to this well E/2 SW/4 Sec 9 E/2 NW/4 Sec 16		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1700'	
19. Proposed Depth 14075' MD - 9500' VD		20. BLM/BIA Bond No. on file NM2308	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3350' GL		22. Approximate date work will start* 10/15/10	
23. Estimated duration 30 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 8/24/10
Title Regulatory Analyst		
Approved by (Signature) /s/ James A. Amos	Name (Printed/Typed)	Date DEC 3 2010
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)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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Ker 11/13/10

CARLSBAD CONTROLLED WATER BASIN

Approval Subject to General Requirements
& Special Stipulations Attached

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

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DEC 08 2010

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025- 39983	Pool Code 51020 ✓	Pool Name Red Hills; Bone Spring
Property Code 3840A	Property Name JOLY 16 STATE COM	Well Number 1H
OGRID No. 7377	Operator Name EOG RESOURCES, INC.	Elevation 3350.8'

Surface Location

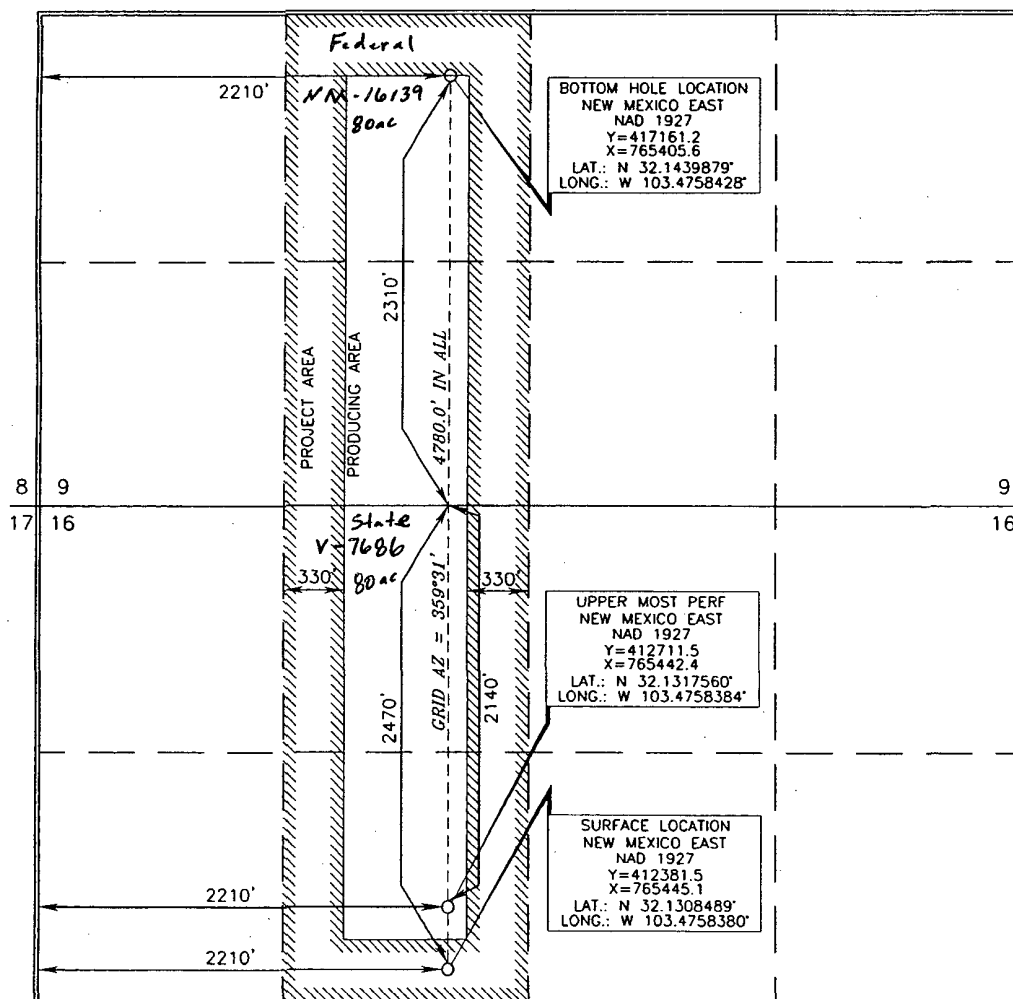
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	16	25 SOUTH	34 EAST, N.M.P.M.		2470'	NORTH	2210'	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	9	25 SOUTH	34 EAST, N.M.P.M.		2310'	SOUTH	2210'	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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.



OPERATOR CERTIFICATION

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

Signature Don M. Mott Date 8/20/2010

Donny G. Glanton
Printed Name

SURVEYOR CERTIFICATION

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

15079
AUGUST 6, 2010
Date of Survey

Signature and Seal of
Professional Surveyor

Terry G. Abel 8/13/2010
Certificate Number 15079

WO# 100806WL (KA)

EOG RESOURCES, INC.
JOLY 16 STATE COM NO. 1H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	885'
Base of Salt	5,065'
Lamar	5,325'
Bell Canyon	5,355'
Cherry Canyon	6,340'
Bone Spring Lime	9,345'
1 st Bone Spring Sand	10,375'
2 nd Bone Spring Sand	11,005'
Pilot hole TD	11,200'

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

Upper Permian Sands	0- 400'	Fresh Water
Lamar	5,325'	Oil
Bell Canyon	5,355'	Oil
Cherry Canyon	6,340'	Oil
Bone Spring Lime	9,345'	Oil
1 st Bone Spring Sand	10,375'	Oil
2 nd Bone Spring Sand	11,005'	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 ~~1,035'~~ 1015' 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
17.5"	0 - 1,035' 1015'	13.375"	54.5#	J55	STC	1.10	1.25	1.60
12.25"	0-4000'	9.625"	40#	J55	LTC	1.10	1.25	1.60
12.25"	4000'-5200'	9.625"	40#	HCK55	LTC	1.10	1.25	1.60
8.75"	0'-14,075'	5.5"	20#	HCP110	NSCC	1.10	1.25	1.60

EOG RESOURCES, INC.
JOLY 16 STATE COM NO. 1H

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1,035' - 1,015'	500	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂
	300	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)
5,200'	1100	12.7	2.01	Lead: Class 'C' + 2.00% SMS + 1.50% R-3 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
11,200'	100	18.0	0.90	210' Btm Hole Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
8,700' - 9,300'	300	18.0	0.90	600' Sidetrack Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
14,075'	200	10.8	3.67	Lead 1: 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 + 2.10% R-21 + 8.00 lb/sk LCM-1 + 0.01 gps FP-13L
	550	11.8	2.39	Lead 2: 50:50:10 Class H + 0.80% FL-52A + 0.30% ASA-301 + 0.30% SMS + 2.00% Salt (2.47 lb/sk) + 0.35% R-21 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	1200	14.2	1.28	Tail: 50:50:2 Class H + 0.65% FL-52A + 0.20% CD-32 + 0.15% SMS + 2.00% Salt (0.961 lb/sk) + 0.20% R-3 + 0.005 lb/sk Static Free

See
COA →

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

(SEE EXHIBIT #1)

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (5000 psi WP) preventer and an annular preventer (5000-psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2. Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 2500/ 250 psig.

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.

Hydraulically operated choke will not be installed prior to the setting and cementing of the intermediate casing string, but will be installed prior to drilling out of the intermediate casing shoe.

EOG RESOURCES, INC.
JOLY 16 STATE COM NO. 1H

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

The well will be drilled to TD with a combination of brine, cut brine, and polymer mud system. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,035' - 1015	Fresh - Gel	8.6-8.8	28-34	N/c
1,035' - 5,200'	Brine	10.0-10.2	28-34	N/c
5,200' - 8,500'	Fresh Water	8.4-8.6	28-34	N/c
8,500' - 11,200'	Cut Brine	8.6-9.0	28-34	N/c
Pilot hole				
9,023' - 14,075'	Cut Brine	9.0-9.5	28-34	N/c
Lateral				

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

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 1,035' to TD.
- (D) H₂S monitoring and detection equipment will be utilized from 1,035' to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

See COA

Open-hole logging is anticipated in the 8-3/4" hole section. The logging suites 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.
FMI	Possible in the production hole

EOG RESOURCES, INC.
JULY 16 STATE COM NO. 1H

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

The estimated bottom hole temperature (BHT) at TD is 165 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4800 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 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.

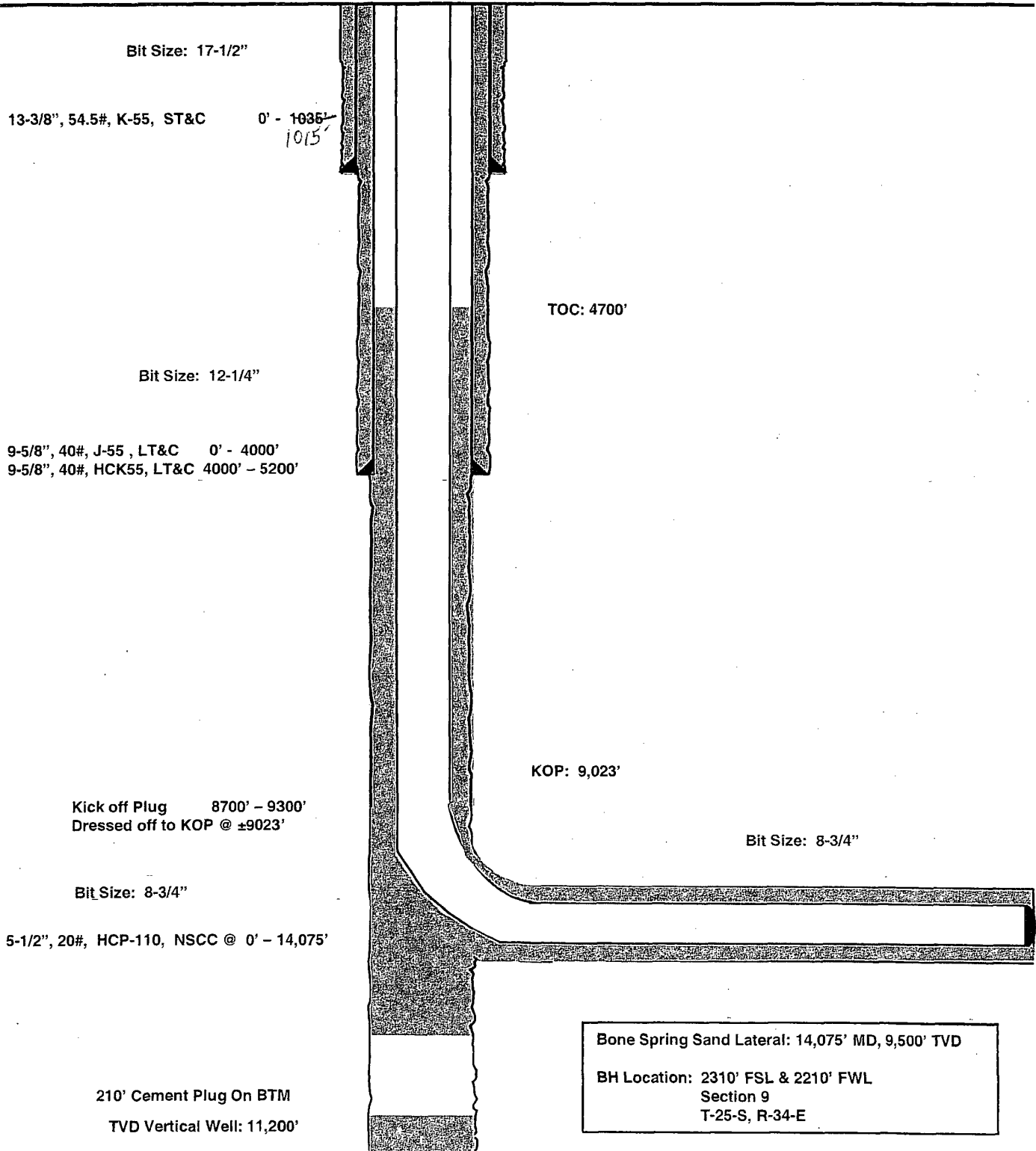
Joly 16 State Com #1H
Red Hills
Lea County, New Mexico

2470' FNL
2210' FWL
Section 16
T-25-S, R-34-E

Proposed Wellbore

KB: 3,380.8'
GL: 3,350.8'

API: 30-025-



Permit Information:

Well Name: Joly 16 State Com No. 1H

Location:

SL: 2470' FNL & 2210' FWL, Section 16, T-25-S, R-34-E, Lea Co., N.M.

BHL: 2310' FSL & 2210' FWL, Section 9, T-25-S, R-34-E, Lea Co., N.M.

Casing Program:

Casing	Setting Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Desired TOC
Surface	1,035'	17-1/2"	13-3/8"	54.5#	J-55	Surface
Intermediate	4,000'	12-1/4"	9-5/8"	40#	J-55	Surface
	5,200'	12-1/4"	9-5/8"	40#	HCK-55	
Production	14,075'	8-3/4"	5-1/2"	20#	HCP-110	4500'

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1,035'	500	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂
1015'	300	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)
5,200'	1100	12.7	2.01	Lead: Class 'C' + 2.00% SMS + 1.50% R-3 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
11,200'	100	18.0	0.90	210' Btm Hole Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
8,700' - 9,300'	300	18.0	0.90	600' Sidetrack Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
14,075'	200	10.8	3.67	Lead 1: 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 + 2.10% R-21 + 8.00 lb/sk LCM-1 + 0.01 gps FP-13L
	550	11.8	2.39	Lead 2: 50:50:10 Class H + 0.80% FL-52A + 0.30% ASA-301 + 0.30% SMS + 2.00% Salt (2.47 lb/sk) + 0.35% R-21 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	1200	14.2	1.28	Tail: 50:50:2 Class H + 0.65% FL-52A + 0.20% CD-32 + 0.15% SMS + 2.00% Salt (0.961 lb/sk) + 0.20% R-3 + 0.005 lb/sk Static Free

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,035' 1015'	Fresh - Gel	8.6-8.8	28-34	N/c
1,035' - 5,200'	Brine	10.0-10.2	28-34	N/c
5,200' - 8,500'	Fresh Water	8.4-8.6	28-34	N/c
8,500' - 11,200'	Cut Brine	8.6-9.0	28-34	N/c
Pilot hole				
9,023' - 14,075'	Cut Brine	9.0-9.5	28-34	N/c
Lateral				



EOG Resources, Inc.

Lea County
Joly 16 State Com
#1H
OH

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Plan: Plan #1

Pathfinder X & Y Planning Report

16 August, 2010

PATHFINDER



Pathfinder

Pathfinder X & Y Planning Report



Company: EOG Resources, Inc.
Project: Lea County
Site: Joly 16 State Com
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3380.80ft (Cactus #123)
MD Reference: WELL @ 3380.80ft (Cactus #123)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project: Lea County

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

System Datum: Mean Sea Level

Site: Joly 16 State Com

Site Position:	Map	Northing:	412,381.500 ft	Latitude:	32° 7' 51.056 N
From:		Easting:	765,445.100 ft	Longitude:	103° 28' 33.017 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well: #1H

Well Position	+N/-S	0.00 ft	Northing:	412,381.500 ft	Latitude:	32° 7' 51.056 N
	+E/-W	0.00 ft	Easting:	765,445.100 ft	Longitude:	103° 28' 33.017 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,350.80 ft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	08/16/2010	7.62	60.16	48,686

Design: Plan #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	359.53

Survey Tool Program Date 08/16/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	14,074.92	Plan #1 (OH)	MWD	MWD - Standard



Pathfinder

Pathfinder X & Y Planning Report



Company: EOG Resources, Inc.
 Project: Lea County
 Site: Joly 16 State Com
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Local Co-ordinate Reference: Well #1H
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 Survey Calculation Method: Minimum Curvature
 Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-3,380.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
100.00	0.00	0.00	100.00	-3,280.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
200.00	0.00	0.00	200.00	-3,180.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
300.00	0.00	0.00	300.00	-3,080.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
400.00	0.00	0.00	400.00	-2,980.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
500.00	0.00	0.00	500.00	-2,880.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
600.00	0.00	0.00	600.00	-2,780.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
700.00	0.00	0.00	700.00	-2,680.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
800.00	0.00	0.00	800.00	-2,580.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
900.00	0.00	0.00	900.00	-2,480.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,000.00	0.00	0.00	1,000.00	-2,380.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,100.00	0.00	0.00	1,100.00	-2,280.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,200.00	0.00	0.00	1,200.00	-2,180.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,300.00	0.00	0.00	1,300.00	-2,080.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,400.00	0.00	0.00	1,400.00	-1,980.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,500.00	0.00	0.00	1,500.00	-1,880.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,600.00	0.00	0.00	1,600.00	-1,780.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,700.00	0.00	0.00	1,700.00	-1,680.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,800.00	0.00	0.00	1,800.00	-1,580.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
1,900.00	0.00	0.00	1,900.00	-1,480.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,000.00	0.00	0.00	2,000.00	-1,380.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,100.00	0.00	0.00	2,100.00	-1,280.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,200.00	0.00	0.00	2,200.00	-1,180.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,300.00	0.00	0.00	2,300.00	-1,080.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,400.00	0.00	0.00	2,400.00	-980.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,500.00	0.00	0.00	2,500.00	-880.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,600.00	0.00	0.00	2,600.00	-780.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10



Pathfinder

Pathfinder X & Y Planning Report



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 Project: Lea County
 Site: Joly 16 State Com
 Well: #1H
 Wellbore: OH
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2,700.00	0.00	0.00	2,700.00	-680.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,800.00	0.00	0.00	2,800.00	-580.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
2,900.00	0.00	0.00	2,900.00	-480.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,000.00	0.00	0.00	3,000.00	-380.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,100.00	0.00	0.00	3,100.00	-280.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,200.00	0.00	0.00	3,200.00	-180.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,300.00	0.00	0.00	3,300.00	-80.80	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,400.00	0.00	0.00	3,400.00	19.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,500.00	0.00	0.00	3,500.00	119.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,600.00	0.00	0.00	3,600.00	219.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,700.00	0.00	0.00	3,700.00	319.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,800.00	0.00	0.00	3,800.00	419.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
3,900.00	0.00	0.00	3,900.00	519.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,000.00	0.00	0.00	4,000.00	619.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,100.00	0.00	0.00	4,100.00	719.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,200.00	0.00	0.00	4,200.00	819.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,300.00	0.00	0.00	4,300.00	919.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,400.00	0.00	0.00	4,400.00	1,019.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,500.00	0.00	0.00	4,500.00	1,119.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,600.00	0.00	0.00	4,600.00	1,219.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,700.00	0.00	0.00	4,700.00	1,319.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,800.00	0.00	0.00	4,800.00	1,419.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
4,900.00	0.00	0.00	4,900.00	1,519.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,000.00	0.00	0.00	5,000.00	1,619.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,100.00	0.00	0.00	5,100.00	1,719.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,200.00	0.00	0.00	5,200.00	1,819.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,300.00	0.00	0.00	5,300.00	1,919.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10



Pathfinder

Pathfinder X & Y Planning Report



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 Project: Lea County
 Site: Joly 16 State Com
 Well: #1H
 Wellbore: OH
 Design: Plan #1

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Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,400.00	0.00	0.00	5,400.00	2,019.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,500.00	0.00	0.00	5,500.00	2,119.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,600.00	0.00	0.00	5,600.00	2,219.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,700.00	0.00	0.00	5,700.00	2,319.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,800.00	0.00	0.00	5,800.00	2,419.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
5,900.00	0.00	0.00	5,900.00	2,519.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,000.00	0.00	0.00	6,000.00	2,619.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,100.00	0.00	0.00	6,100.00	2,719.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,200.00	0.00	0.00	6,200.00	2,819.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,300.00	0.00	0.00	6,300.00	2,919.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,400.00	0.00	0.00	6,400.00	3,019.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,500.00	0.00	0.00	6,500.00	3,119.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,600.00	0.00	0.00	6,600.00	3,219.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,700.00	0.00	0.00	6,700.00	3,319.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,800.00	0.00	0.00	6,800.00	3,419.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
6,900.00	0.00	0.00	6,900.00	3,519.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,000.00	0.00	0.00	7,000.00	3,619.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,100.00	0.00	0.00	7,100.00	3,719.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,200.00	0.00	0.00	7,200.00	3,819.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,300.00	0.00	0.00	7,300.00	3,919.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,400.00	0.00	0.00	7,400.00	4,019.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,500.00	0.00	0.00	7,500.00	4,119.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,600.00	0.00	0.00	7,600.00	4,219.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,700.00	0.00	0.00	7,700.00	4,319.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,800.00	0.00	0.00	7,800.00	4,419.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
7,900.00	0.00	0.00	7,900.00	4,519.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,000.00	0.00	0.00	8,000.00	4,619.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10



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MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,100.00	0.00	0.00	8,100.00	4,719.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,200.00	0.00	0.00	8,200.00	4,819.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,300.00	0.00	0.00	8,300.00	4,919.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,400.00	0.00	0.00	8,400.00	5,019.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,500.00	0.00	0.00	8,500.00	5,119.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,600.00	0.00	0.00	8,600.00	5,219.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,700.00	0.00	0.00	8,700.00	5,319.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,800.00	0.00	0.00	8,800.00	5,419.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
8,900.00	0.00	0.00	8,900.00	5,519.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
9,000.00	0.00	0.00	9,000.00	5,619.20	0.00	0.00	0.00	0.00	412,381.50	765,445.10
9,022.50	0.00	0.00	9,022.50	5,641.70	0.00	0.00	0.00	0.00	412,381.50	765,445.10
9,025.00	0.30	359.53	9,025.00	5,644.20	0.01	0.00	0.01	12.00	412,381.51	765,445.10
9,050.00	3.30	359.53	9,049.98	5,669.18	0.79	-0.01	0.79	12.00	412,382.29	765,445.09
9,075.00	6.30	359.53	9,074.89	5,694.09	2.88	-0.02	2.88	12.00	412,384.38	765,445.08
9,100.00	9.30	359.53	9,099.66	5,718.86	6.28	-0.05	6.28	12.00	412,387.78	765,445.05
9,125.00	12.30	359.53	9,124.21	5,743.41	10.96	-0.09	10.96	12.00	412,392.46	765,445.01
9,150.00	15.30	359.53	9,148.49	5,767.69	16.92	-0.14	16.92	12.00	412,398.42	765,444.96
9,175.00	18.30	359.53	9,172.42	5,791.62	24.14	-0.20	24.15	12.00	412,405.64	765,444.90
9,200.00	21.30	359.53	9,195.94	5,815.14	32.61	-0.27	32.61	12.00	412,414.11	765,444.83
9,225.00	24.30	359.53	9,218.98	5,838.18	42.30	-0.35	42.30	12.00	412,423.80	765,444.75
9,250.00	27.30	359.53	9,241.49	5,860.69	53.18	-0.44	53.18	12.00	412,434.68	765,444.66
9,275.00	30.30	359.53	9,263.40	5,882.60	65.22	-0.53	65.22	12.00	412,446.72	765,444.57
9,300.00	33.30	359.53	9,284.64	5,903.84	78.39	-0.64	78.39	12.00	412,459.89	765,444.46
9,325.00	36.30	359.53	9,305.17	5,924.37	92.65	-0.76	92.66	12.00	412,474.15	765,444.34
9,350.00	39.30	359.53	9,324.92	5,944.12	107.97	-0.89	107.98	12.00	412,489.47	765,444.21
9,375.00	42.30	359.53	9,343.84	5,963.04	124.30	-1.02	124.31	12.00	412,505.80	765,444.08
9,400.00	45.30	359.53	9,361.89	5,981.09	141.60	-1.16	141.61	12.00	412,523.10	765,443.94



Pathfinder

Pathfinder X & Y Planning Report



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Project: Lea County
Site: Joly 16 State Com
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
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Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,425.00	48.30	359.53	9,379.00	5,998.20	159.82	-1.31	159.83	12.00	412,541.32	765,443.79
9,450.00	51.30	359.53	9,395.14	6,014.34	178.92	-1.47	178.92	12.00	412,560.42	765,443.63
9,475.00	54.30	359.53	9,410.25	6,029.45	198.83	-1.63	198.83	12.00	412,580.33	765,443.47
9,500.00	57.30	359.53	9,424.30	6,043.50	219.50	-1.80	219.51	12.00	412,601.00	765,443.30
9,525.00	60.30	359.53	9,437.25	6,056.45	240.88	-1.98	240.89	12.00	412,622.38	765,443.12
9,550.00	63.30	359.53	9,449.07	6,068.27	262.91	-2.16	262.92	12.00	412,644.41	765,442.94
9,575.00	66.30	359.53	9,459.71	6,078.91	285.52	-2.34	285.53	12.00	412,667.02	765,442.76
9,600.00	69.29	359.53	9,469.16	6,088.36	308.67	-2.53	308.68	12.00	412,690.17	765,442.57
9,625.00	72.29	359.53	9,477.38	6,096.58	332.27	-2.73	332.28	12.00	412,713.77	765,442.37
9,650.00	75.29	359.53	9,484.36	6,103.56	356.27	-2.92	356.29	12.00	412,737.77	765,442.18
9,675.00	78.29	359.53	9,490.07	6,109.27	380.61	-3.12	380.62	12.00	412,762.11	765,441.98
9,700.00	81.29	359.53	9,494.50	6,113.70	405.21	-3.32	405.22	12.00	412,786.71	765,441.78
9,725.00	84.29	359.53	9,497.63	6,116.83	430.01	-3.53	430.02	12.00	412,811.51	765,441.57
9,750.00	87.29	359.53	9,499.47	6,118.67	454.94	-3.73	454.95	12.00	412,836.44	765,441.37
9,772.56	90.00	359.53	9,500.00	6,119.20	477.48	-3.92	477.50	12.00	412,858.98	765,441.18
9,800.00	90.00	359.53	9,500.00	6,119.20	504.93	-4.14	504.94	0.00	412,886.43	765,440.96
9,900.00	90.00	359.53	9,500.00	6,119.20	604.92	-4.96	604.94	0.00	412,986.42	765,440.14
10,000.00	90.00	359.53	9,500.00	6,119.20	704.92	-5.78	704.94	0.00	413,086.42	765,439.32
10,100.00	90.00	359.53	9,500.00	6,119.20	804.92	-6.60	804.94	0.00	413,186.42	765,438.50
10,200.00	90.00	359.53	9,500.00	6,119.20	904.91	-7.42	904.94	0.00	413,286.41	765,437.68
10,300.00	90.00	359.53	9,500.00	6,119.20	1,004.91	-8.24	1,004.94	0.00	413,386.41	765,436.86
10,400.00	90.00	359.53	9,500.00	6,119.20	1,104.91	-9.06	1,104.94	0.00	413,486.41	765,436.04
10,500.00	90.00	359.53	9,500.00	6,119.20	1,204.90	-9.88	1,204.94	0.00	413,586.40	765,435.22
10,600.00	90.00	359.53	9,500.00	6,119.20	1,304.90	-10.70	1,304.94	0.00	413,686.40	765,434.40
10,700.00	90.00	359.53	9,500.00	6,119.20	1,404.90	-11.52	1,404.94	0.00	413,786.40	765,433.58
10,800.00	90.00	359.53	9,500.00	6,119.20	1,504.89	-12.34	1,504.94	0.00	413,886.39	765,432.76
10,900.00	90.00	359.53	9,500.00	6,119.20	1,604.89	-13.17	1,604.94	0.00	413,986.39	765,431.93



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11,000.00	90.00	359.53	9,500.00	6,119.20	1,704.89	-13.99	1,704.94	0.00	414,086.39	765,431.11
11,100.00	90.00	359.53	9,500.00	6,119.20	1,804.88	-14.81	1,804.94	0.00	414,186.38	765,430.29
11,200.00	90.00	359.53	9,500.00	6,119.20	1,904.88	-15.63	1,904.94	0.00	414,286.38	765,429.47
11,300.00	90.00	359.53	9,500.00	6,119.20	2,004.88	-16.45	2,004.94	0.00	414,386.38	765,428.65
11,400.00	90.00	359.53	9,500.00	6,119.20	2,104.87	-17.27	2,104.94	0.00	414,486.37	765,427.83
11,500.00	90.00	359.53	9,500.00	6,119.20	2,204.87	-18.09	2,204.94	0.00	414,586.37	765,427.01
11,600.00	90.00	359.53	9,500.00	6,119.20	2,304.87	-18.91	2,304.94	0.00	414,686.37	765,426.19
11,700.00	90.00	359.53	9,500.00	6,119.20	2,404.86	-19.73	2,404.94	0.00	414,786.36	765,425.37
11,800.00	90.00	359.53	9,500.00	6,119.20	2,504.86	-20.55	2,504.94	0.00	414,886.36	765,424.55
11,900.00	90.00	359.53	9,500.00	6,119.20	2,604.86	-21.37	2,604.94	0.00	414,986.36	765,423.73
12,000.00	90.00	359.53	9,500.00	6,119.20	2,704.85	-22.19	2,704.94	0.00	415,086.35	765,422.91
12,100.00	90.00	359.53	9,500.00	6,119.20	2,804.85	-23.01	2,804.94	0.00	415,186.35	765,422.09
12,200.00	90.00	359.53	9,500.00	6,119.20	2,904.85	-23.83	2,904.94	0.00	415,286.35	765,421.27
12,300.00	90.00	359.53	9,500.00	6,119.20	3,004.84	-24.65	3,004.94	0.00	415,386.34	765,420.45
12,400.00	90.00	359.53	9,500.00	6,119.20	3,104.84	-25.47	3,104.94	0.00	415,486.34	765,419.63
12,500.00	90.00	359.53	9,500.00	6,119.20	3,204.84	-26.29	3,204.94	0.00	415,586.34	765,418.81
12,600.00	90.00	359.53	9,500.00	6,119.20	3,304.83	-27.11	3,304.94	0.00	415,686.33	765,417.99
12,700.00	90.00	359.53	9,500.00	6,119.20	3,404.83	-27.93	3,404.94	0.00	415,786.33	765,417.17
12,800.00	90.00	359.53	9,500.00	6,119.20	3,504.83	-28.75	3,504.94	0.00	415,886.33	765,416.35
12,900.00	90.00	359.53	9,500.00	6,119.20	3,604.82	-29.57	3,604.94	0.00	415,986.32	765,415.53
13,000.00	90.00	359.53	9,500.00	6,119.20	3,704.82	-30.39	3,704.94	0.00	416,086.32	765,414.71
13,100.00	90.00	359.53	9,500.00	6,119.20	3,804.82	-31.21	3,804.94	0.00	416,186.32	765,413.89
13,200.00	90.00	359.53	9,500.00	6,119.20	3,904.81	-32.03	3,904.94	0.00	416,286.31	765,413.07
13,300.00	90.00	359.53	9,500.00	6,119.20	4,004.81	-32.85	4,004.94	0.00	416,386.31	765,412.25
13,400.00	90.00	359.53	9,500.00	6,119.20	4,104.81	-33.67	4,104.94	0.00	416,486.31	765,411.43
13,500.00	90.00	359.53	9,500.00	6,119.20	4,204.80	-34.49	4,204.94	0.00	416,586.30	765,410.61
13,600.00	90.00	359.53	9,500.00	6,119.20	4,304.80	-35.31	4,304.94	0.00	416,686.30	765,409.79



Pathfinder
Pathfinder X & Y Planning Report



Company: EOG Resources, Inc.
Project: Lea County
Site: Joly 16 State Com
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3380.80ft (Cactus #123)
MD Reference: WELL @ 3380.80ft (Cactus #123)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
13,700.00	90.00	359.53	9,500.00	6,119.20	4,404.80	-36.13	4,404.94	0.00	416,786.30	765,408.97
13,800.00	90.00	359.53	9,500.00	6,119.20	4,504.79	-36.95	4,504.94	0.00	416,886.29	765,408.15
13,900.00	90.00	359.53	9,500.00	6,119.20	4,604.79	-37.77	4,604.94	0.00	416,986.29	765,407.33
14,000.00	90.00	359.53	9,500.00	6,119.20	4,704.79	-38.59	4,704.94	0.00	417,086.29	765,406.51
14,074.92	90.00	359.53	9,500.00	6,119.20	4,779.70	-39.21	4,779.86	0.00	417,161.20	765,405.89
PBHL(joly#1)										

Targets

Target Name	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
hit/miss target Shape									
PBHL(joly#1) - plan hits target center - Point	0.00	0.00	9,500.00	4,779.70	-39.50	417,161.200	765,405.600	32° 8' 38.357 N	103° 28' 33.034 W

Checked By: _____ Approved By: _____ Date: _____



Project: Lea County
 Site: Joly 16 State Com
 Well: #1H
 Wellbore: OH
 Plan: Plan #1 (#1H/OH)



Azimuths to Grid North
 True North: -0.46°
 Magnetic North: 7.17°

Magnetic Field
 Strength: 48686.3snT
 Dip Angle: 60.16°
 Date: 08/16/2010
 Model: IGRF200510

PATHFINDER

WELL DETAILS: #1H

Ground Elevation: 3350.80
 RKB Elevation: WELL @ 3380.80ft (Cactus #123)
 Rig Name: Cactus #123

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.00	0.00	412381.500	765445.100	32° 7' 51.056 N	103° 28' 33.017 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9022.50	0.00	0.00	9022.50	0.00	0.00	0.00	0.00	0.00	
3	9772.56	90.00	359.53	9500.00	477.48	-3.92	12.00	359.53	477.50	
4	14074.92	90.00	359.53	9500.00	4779.70	-39.21	0.00	0.00	4779.86	PBHL(poly#1)

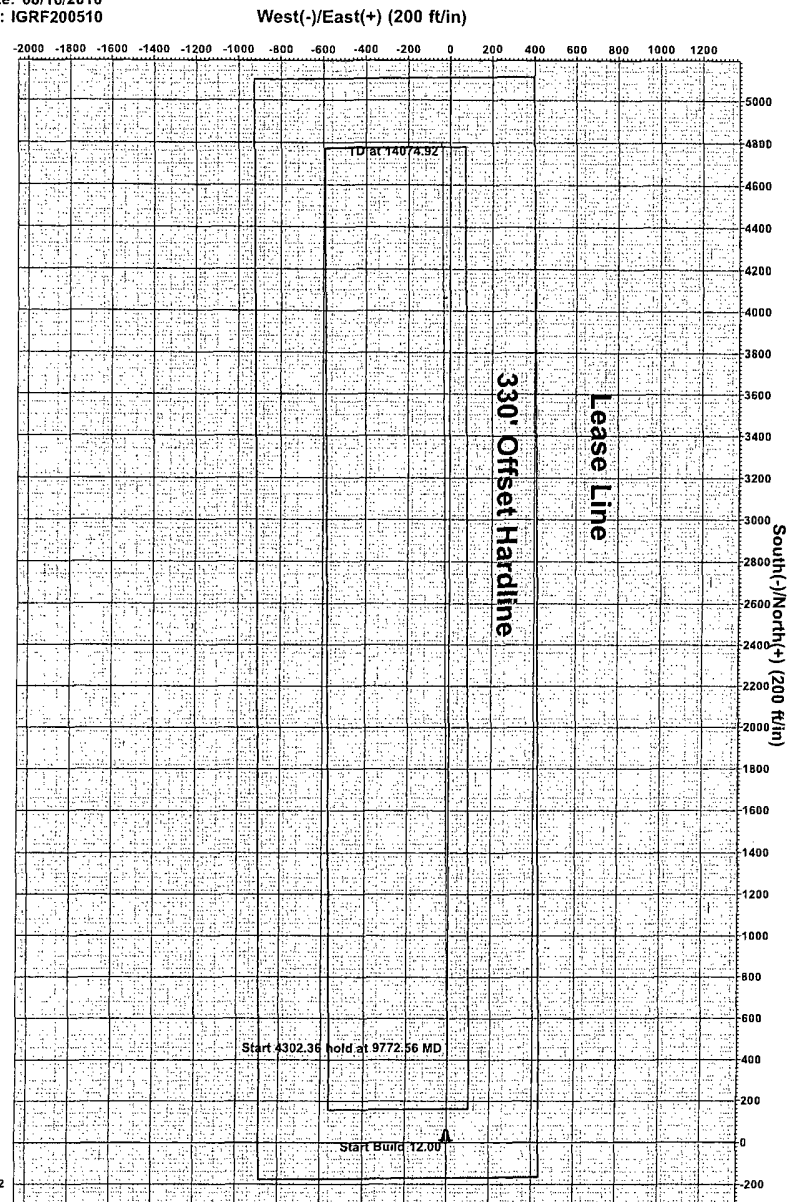
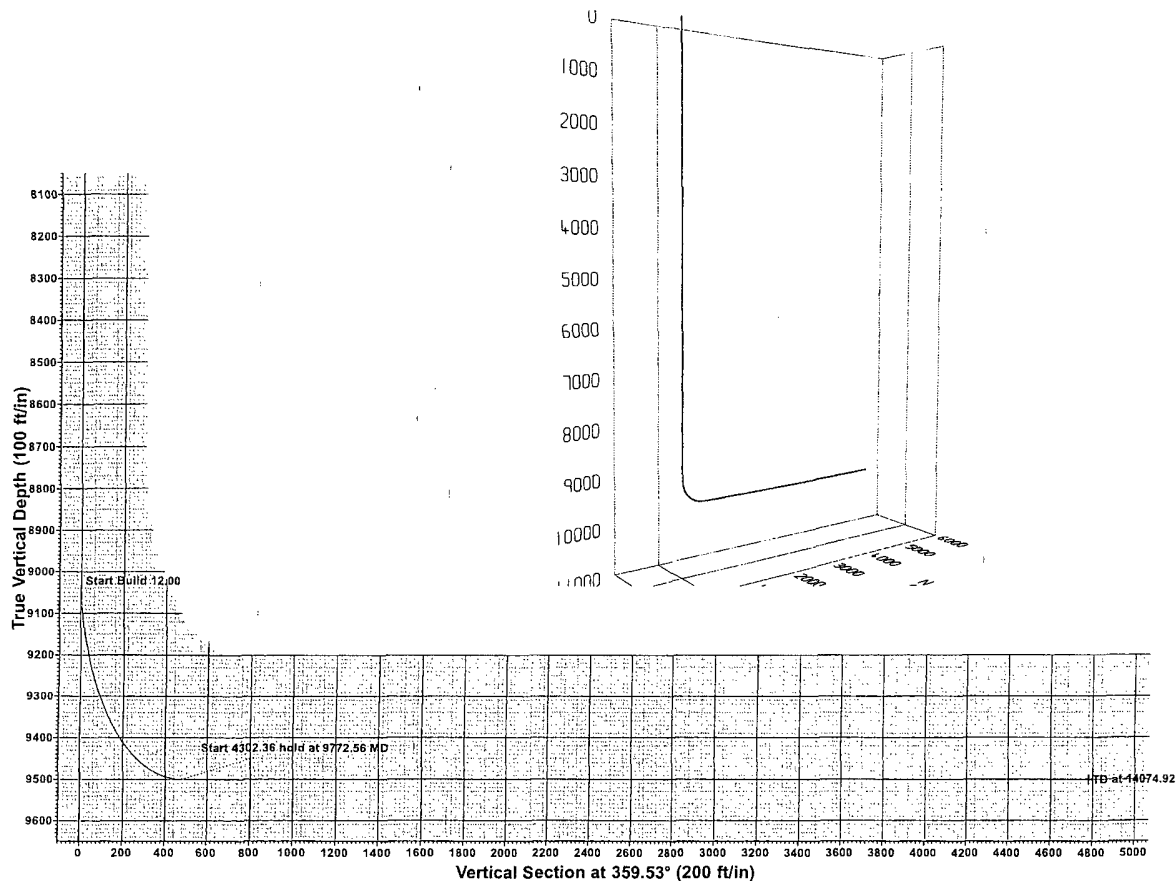
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(joly#1)	9500.00	4779.70	-39.50	417161.200	765405.600	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

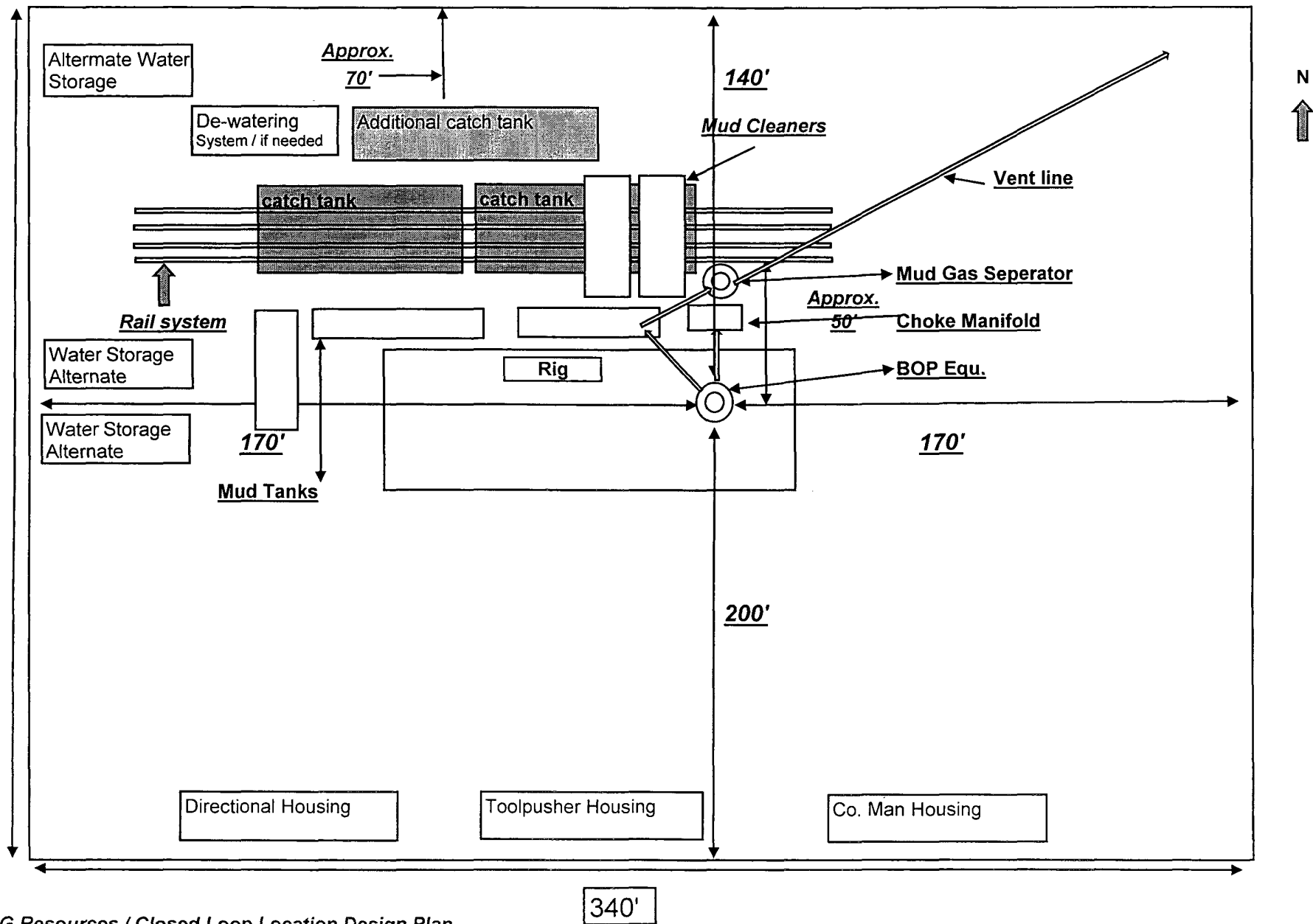
• Plan #1



Plan: Plan #1 (#1H/OH)

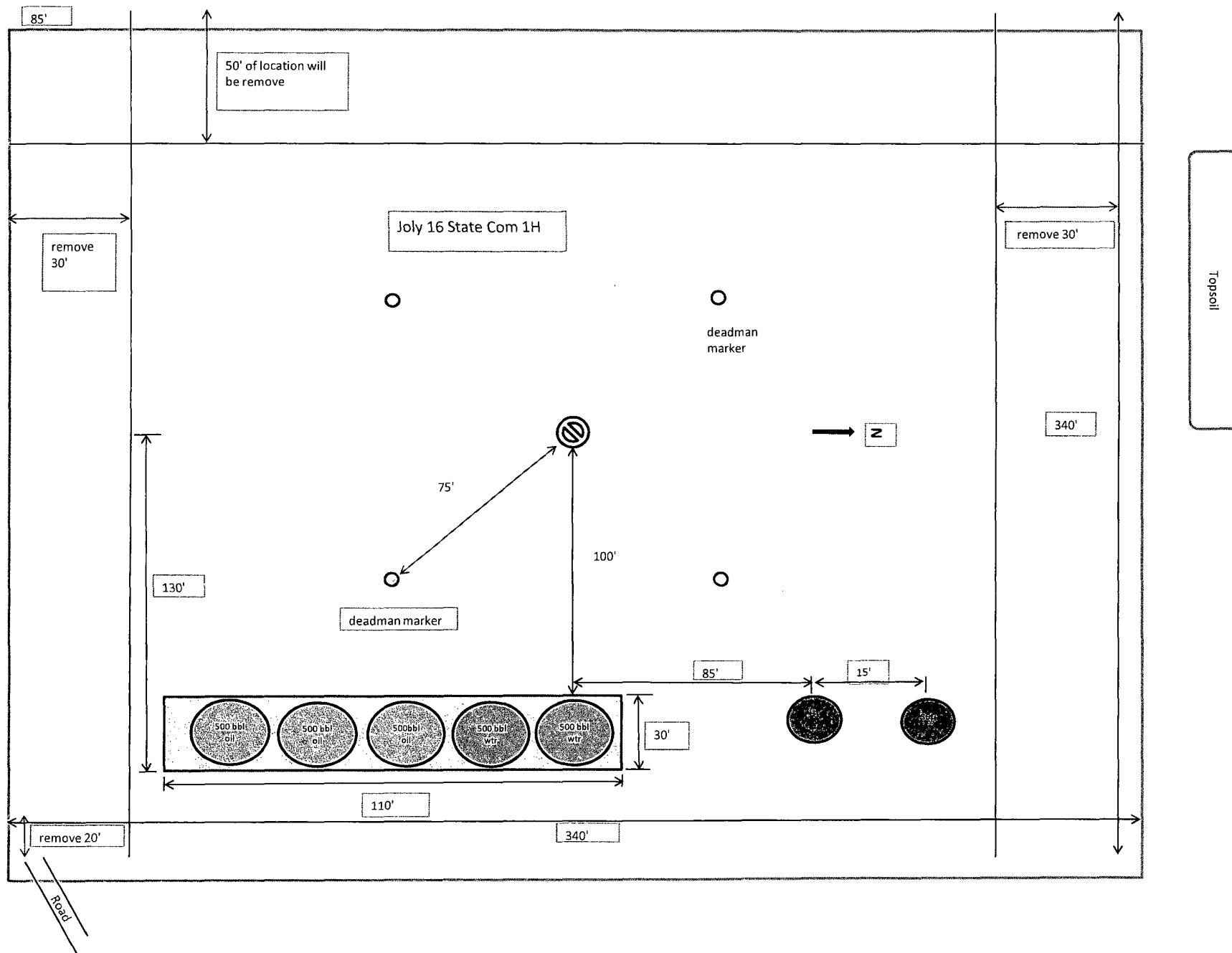
Created By: Nate Bingham Date: 15:51, August 16 2010

Checked: _____ Date: _____



EOG Resources / Closed Loop Location Design Plan

Not to scale



EOG RESOURCES, INC.
JULY 16 STATE COM 1H

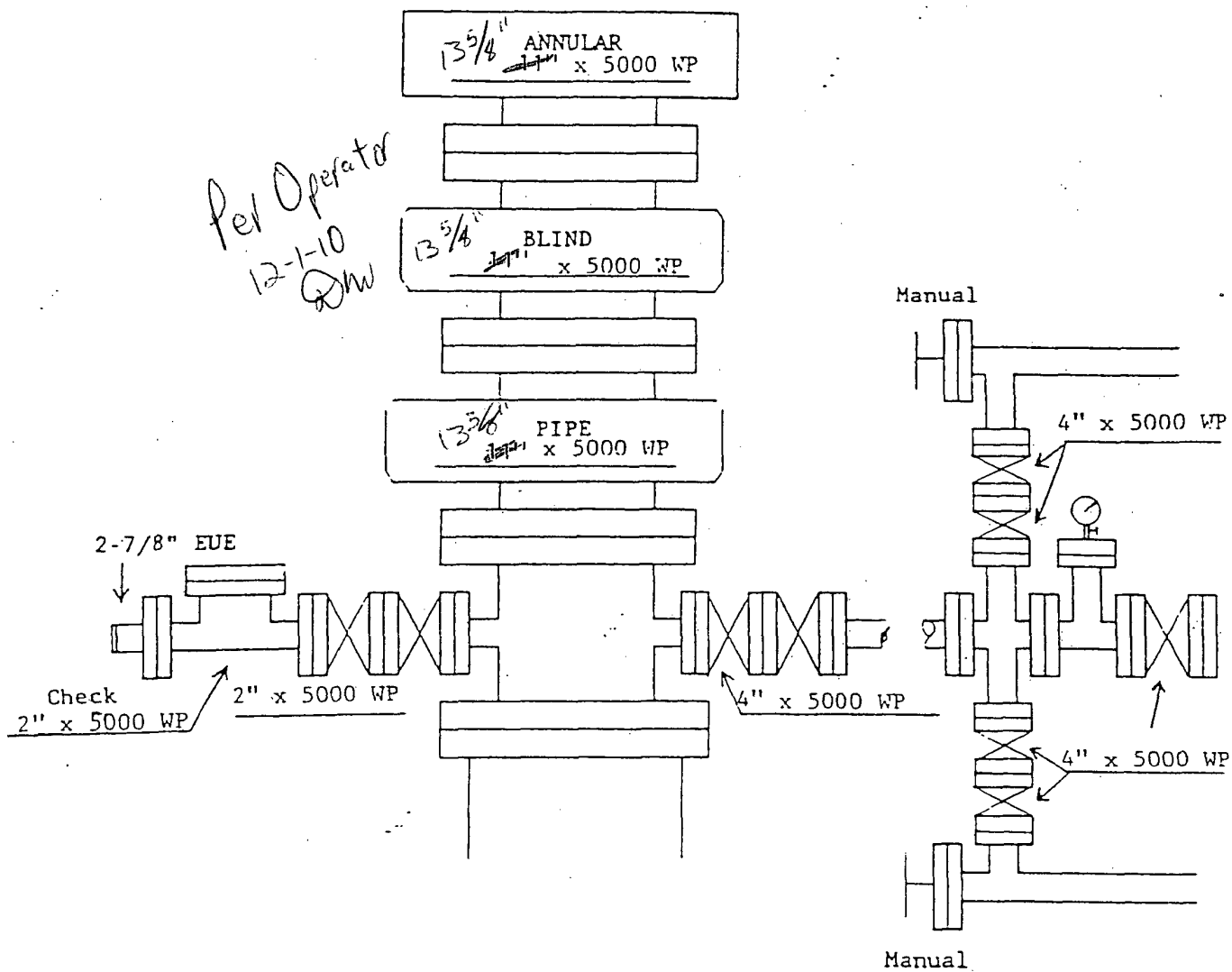
ATTACHMENT TO EXHIBIT #1

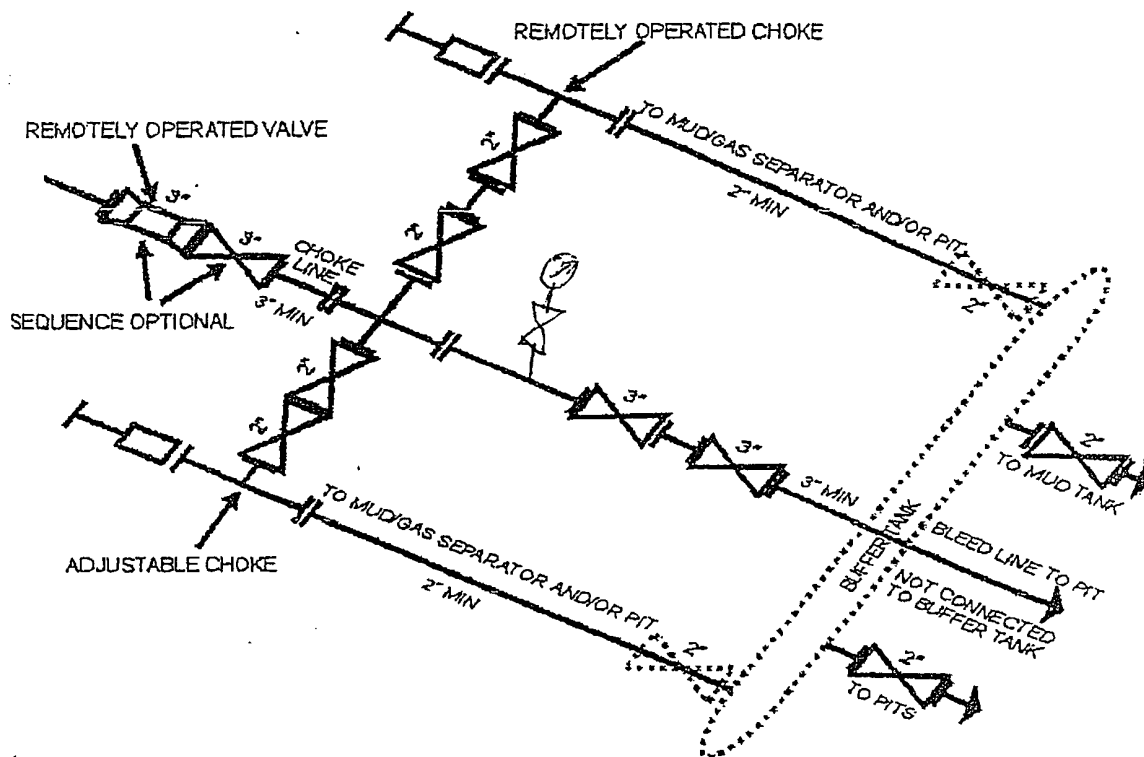
1. Wear ring to be properly installed in head.
2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum. Exhibit #1.
3. All fittings to be flanged
4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.
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.

Exhibit 1

EOG Resources, Inc.

Joly 16 State Com 1H



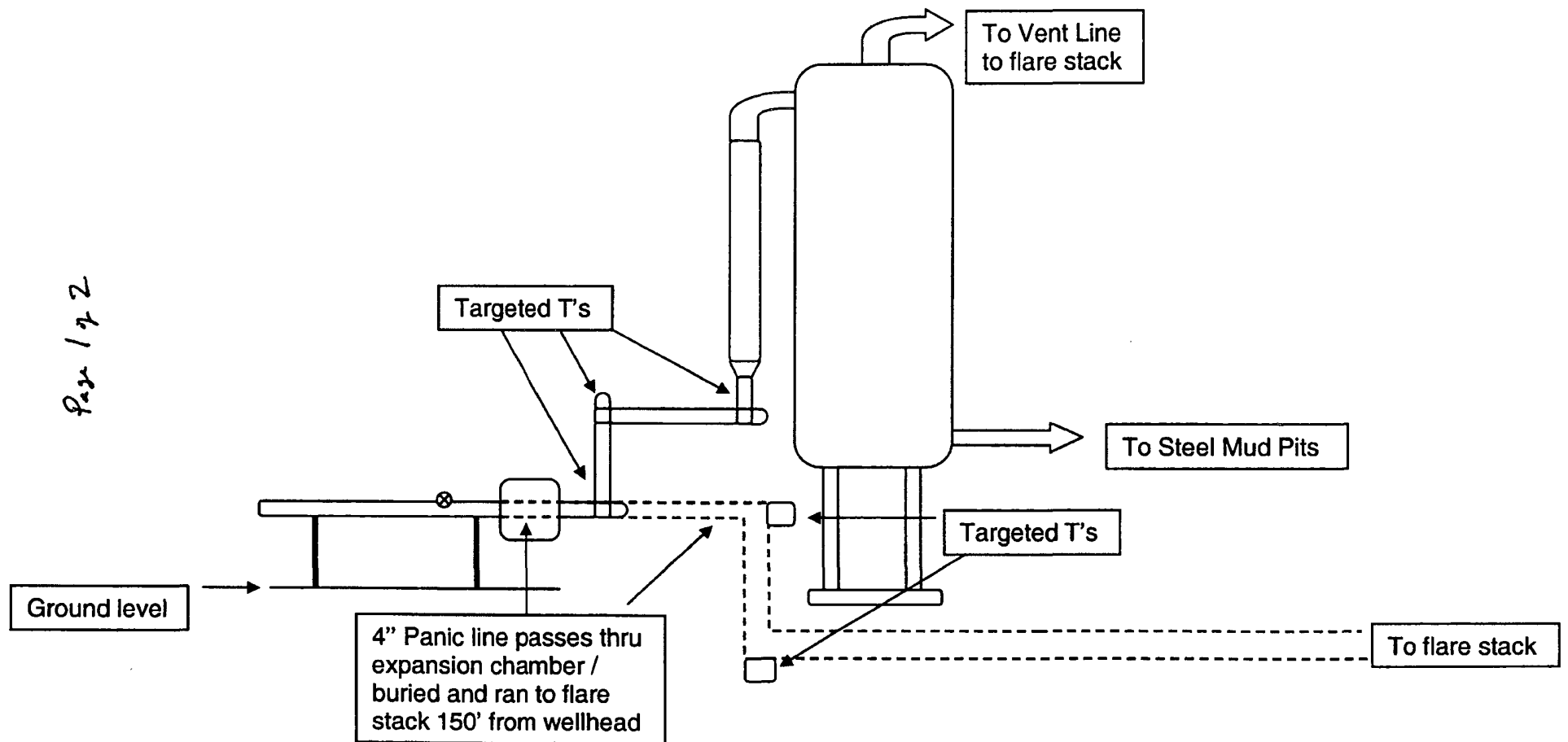


5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

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



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

