OCD Hobbs

ATS-15-192

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD
JAN 28 2016
RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM16139
	6. If Indian, Allotee or Tribe Name
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. Holyfield 9 Fed 1H (315963)
2. Name of Operator EOG Resources, Inc (7377)	9. API Well No. 30-025- 43055
3a. Address P.O. Box 2267 Midland, TX 79702	3b. Phone No. *(include area code)* 432-686-3689
	10. Field and Pool, or Exploratory Red Hills; Upper Bone Spring Shale (97900)
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface 2130' FSL & 600' FWL, NWSW (L), Sec 9, 25S, 34E At proposed prod. zone 230' FNL & 380' FWL, NWNW (D), Sec 4 UNORTHODOX LOCATION	11. Sec., T. R. M. or Blk. and Survey or Area Section 9, T25S, R34E
14. Distance in miles and direction from nearest town or post office* Approximately +/- 17 miles Southwest from Jal, New Mexico	12. County or Parish Lea / 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 509' SL, 330' PP	16. No. of acres in lease 1639.79 / 17. Spacing Unit dedicated to this well 240 ac.
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 660' frm 2H	19. Proposed Depth 17052' MD, 9350' TVD / 20. BLM/BIA Bond No. on file NM 2308
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3350' GL	22. Approximate date work will start* 05/01/2015 / 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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Stan Wagner	Name *(Printed/Typed)* Stan Wagner	Date 11/18/14
Title Regulatory Specialist		
Approved by *(Signature)* Steve Caffey	Name *(Printed/Typed)*	Date JAN 25 2016
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

KZ
01/29/16

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

FEB 02 2016

EOG RESOURCES, INC.
HOLYFIELD 9 FED NO. 1H

1. GEOLOGIC NAME OF SURFACE FORMATION:
Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,005'
Top of Salt	1,400'
Base of Salt / Top Anhydrite	5,055'
Base Anhydrite	5,325'
Lamar	5,325'
Bell Canyon	5,360'
Cherry Canyon	6,330'
Brushy Canyon	7,925'
Bone Spring Lime	9,270'
TD	9,350'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,330'	Oil
Brushy Canyon	7,925'	Oil
Bone Spring Lime	9,270'	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 1,030' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 1,030'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' – 5,200'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0'-17,052'	5.500"	17#	P110 or HCP110	LTC	1.125	1.25	1.60

EOG RESOURCES, INC.
HOLYFIELD 9 FED NO. 1H

Cementing Program: See COA

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
13-3/8" 1,030'	325	13.5	1.73	9.13	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ surface)
	300	14.8	1.34	6.34	Tail: Class C + 0.005 pps Static Free + 2% $CaCl_2$ + 0.25 pps CelloFlake + 0.005 gps FP-6L
9-5/8" 5,200'	800	12.7	2.22	12.38	Lead: Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free (TOC @ surface)
	200	14.8	1.32	6.33	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
5-1/2" 17,052'	225	10.8	3.67	21.7	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')
	200	11.8	2.38	13.25	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
	1750	14.2	1.28	5.75	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

Low Cement

See COA

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.

See COA

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

See COA

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 (10,000 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.

See COA

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 2000/ 250 psig and the annular preventer to 2000/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

See COA

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 3000/ 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:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,030'	Fresh Water Gel	8.6-8.8	28-34	N/c
1,030' – 5,200'	Saturated Brine	10.0-10.2	28-34	N/c
5,200' – 8,828'	Fresh Water	8.4-8.6	28-34	N/c
8,828'– 17,052' Lateral	Cut Brine Water	9.0-9.5	28-34	N/c

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

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) H_2S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

See COA

Open-hole logs are not planned for this well.

GR–CCL Will be run in cased hole during completions phase of operations.

See COA

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

See COA

The estimated bottom-hole temperature (BHT) at TD is 153 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4048 psig. ~~No~~ Yes hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

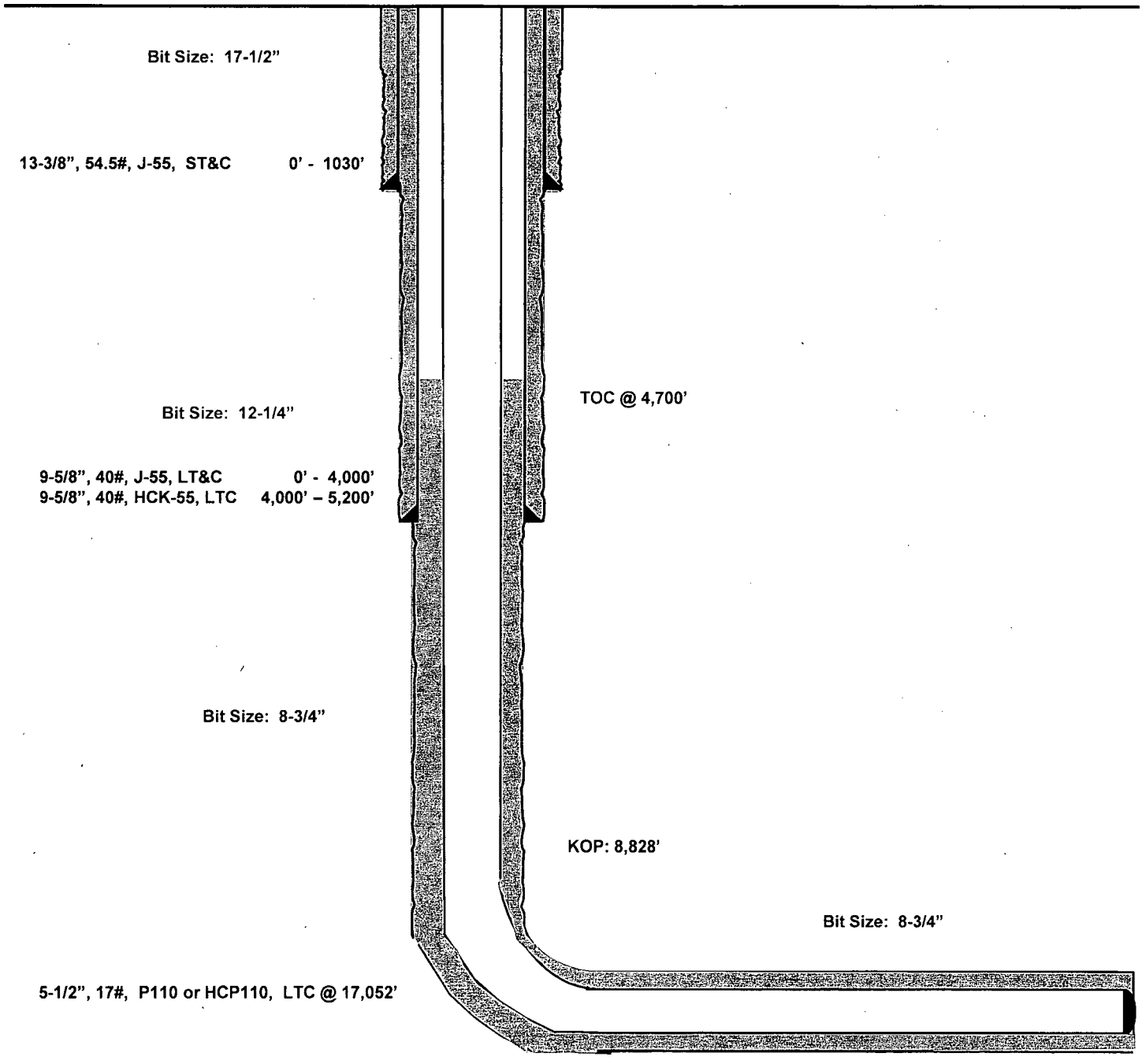
The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

Holyfield 9 Fed #1H
Lea County, New Mexico
Proposed Wellbore

2130' FSL
600' FWL
Section 9
T-25-S, R-34-E

API: 30-025-*****

KB: 3,380'
GL: 3,350'



Lateral:
17,052' MD, 9,350' TVD
Upper Most Perf:
2309' FNL & 370' FWL, Sec. 9
Lower Most Perf:
330' FNL & 380' FWL, Sec. 4
BH Location: 230' FNL & 380' FWL
Section 4
T-25-S, R-34-E

eog resources

Lea County, NM (NAD 27 NME)

Holyfield 9 Fed #1H

H&P 260

Plan #1

Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.66°

Magnetic Field
Strength: 48236.6snT
Dip Angle: 60.04°
Date: 11/12/2014
Model: IGRF201014

To convert a Magnetic Direction to a Grid Direction, Add 6.66°
To convert a Magnetic Direction to a True Direction, Add 7.12° East
To convert a True Direction to a Grid Direction, Subtract 0.45°

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

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

WELL DETAILS: #1H

Ground Level: 3350.0
KB = 25 @ 3375.0usft (H&P 260)

Northing	Easting	Latitude	Longitude
416866.00	763797.00	32° 8' 38.551 N	103° 28' 51.760 W

SECTION DETAILS

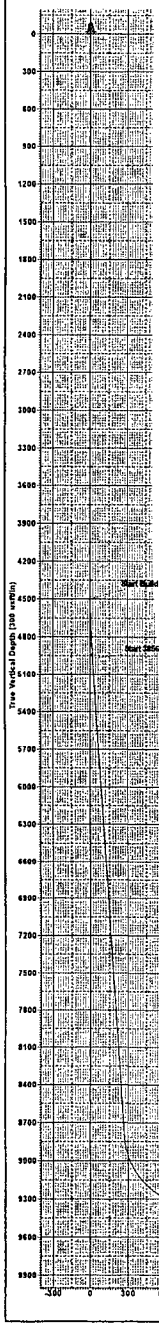
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4500.0	0.00	0.00	4500.0	0.0	0.0	0.00	0.00	0.0		
3	4972.3	4.72	321.95	4971.8	15.3	-12.0	1.00	321.95	15.7		
4	8828.6	4.72	321.95	8815.0	266.4	-207.7	0.00	0.00	271.9		
5	9691.3	90.00	359.78	9350.0	837.0	-237.0	10.00	37.93	844.2	FTP(HF 9 Fed #1H)	
6	17052.4	90.00	359.78	9350.0	8198.0	-265.0	0.00	0.00	8202.3	PBHL(HF 9 Fed #1H)	

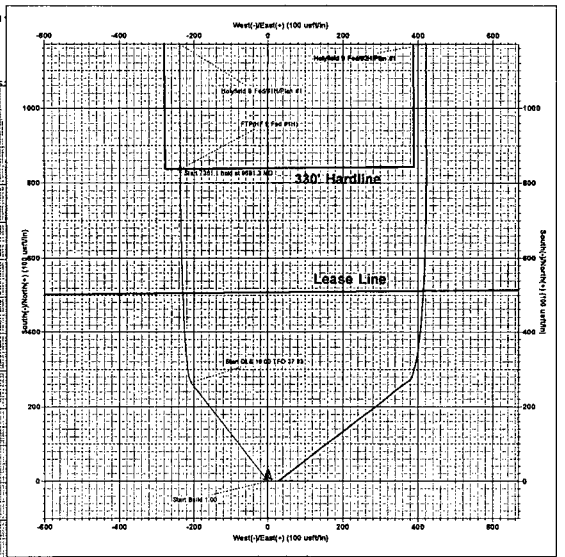
CASING DETAILS

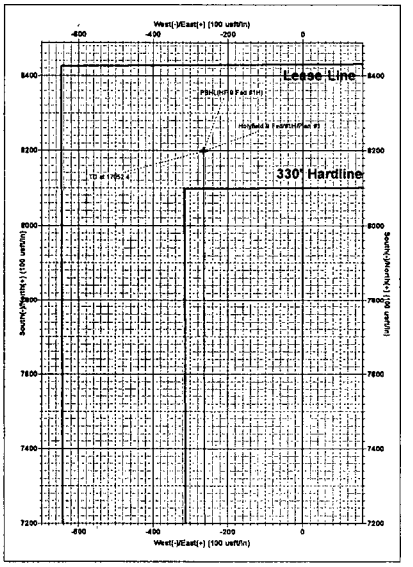
No casing data is available

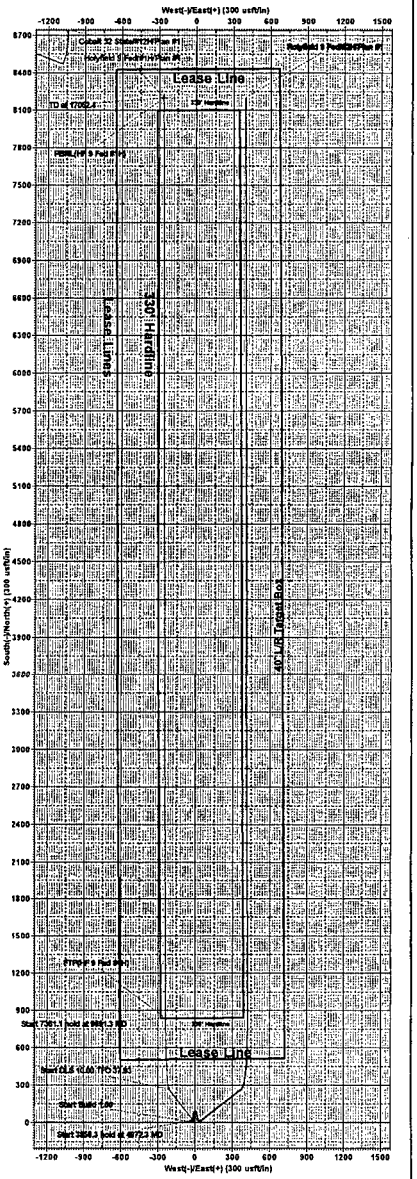
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

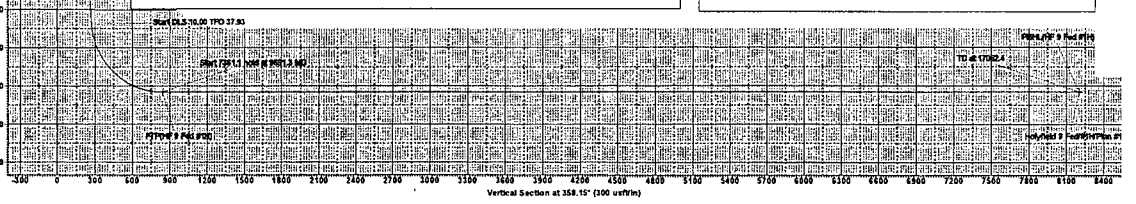
Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP(HF 9 Fed #1H)	9350.0	837.0	-237.0	417803.00	763560.00
PBHL(HF 9 Fed #1H)	9350.0	8198.0	-265.0	425164.00	763532.00











eog resources

EOG Resources - Midland

Lea County, NM (NAD 27 NME)
Holyfield 9 Fed
#1H

OH

Plan: Plan #1

Standard Planning Report

13 November, 2014

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Site:	Holyfield 9 Fed	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project Lea County, NM (NAD 27 NME)

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

Site Holyfield 9 Fed

Site Position:		**Northing:**	416,966.00 usft	**Latitude:**	32° 8' 36.551 N
From:	Map	**Easting:**	763,797.00 usft	**Longitude:**	103° 28' 51.760 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.45 °

Well #1H

Well Position	**+N/-S**	0.0 usft	**Northing:**	416,966.00 usft	**Latitude:**	32° 8' 36.551 N
	+E/-W	0.0 usft	**Easting:**	763,797.00 usft	**Longitude:**	103° 28' 51.760 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,350.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF201014	11/12/2014	7.12	60.04	48,237

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	358.15

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,972.3	4.72	321.95	4,971.8	15.3	-12.0	1.00	1.00	0.00	321.95	
8,828.6	4.72	321.95	8,815.0	265.4	-207.7	0.00	0.00	0.00	0.00	
9,691.3	90.00	359.78	9,350.0	837.0	-237.0	10.00	9.88	4.39	37.93	FTP(HF 9 Fed #1H)
17,052.4	90.00	359.78	9,350.0	8,198.0	-265.0	0.00	0.00	0.00	0.00	PBHL(HF 9 Fed #1H)

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Site:	Holyfield 9 Fed	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	1.00	321.95	4,600.0	0.7	-0.5	0.7	1.00	1.00	0.00
4,700.0	2.00	321.95	4,700.0	2.7	-2.2	2.8	1.00	1.00	0.00
4,800.0	3.00	321.95	4,799.9	6.2	-4.8	6.3	1.00	1.00	0.00
4,900.0	4.00	321.95	4,899.7	11.0	-8.6	11.3	1.00	1.00	0.00
4,972.3	4.72	321.95	4,971.8	15.3	-12.0	15.7	1.00	1.00	0.00
5,000.0	4.72	321.95	4,999.4	17.1	-13.4	17.5	0.00	0.00	0.00
5,100.0	4.72	321.95	5,099.0	23.6	-18.5	24.2	0.00	0.00	0.00
5,200.0	4.72	321.95	5,198.7	30.1	-23.5	30.8	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Site:	Holyfield 9 Fed	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	4.72	321.95	5,298.4	36.6	-28.6	37.5	0.00	0.00	0.00
5,400.0	4.72	321.95	5,398.0	43.1	-33.7	44.1	0.00	0.00	0.00
5,500.0	4.72	321.95	5,497.7	49.5	-38.8	50.8	0.00	0.00	0.00
5,600.0	4.72	321.95	5,597.3	56.0	-43.8	57.4	0.00	0.00	0.00
5,700.0	4.72	321.95	5,697.0	62.5	-48.9	64.1	0.00	0.00	0.00
5,800.0	4.72	321.95	5,796.7	69.0	-54.0	70.7	0.00	0.00	0.00
5,900.0	4.72	321.95	5,896.3	75.5	-59.1	77.3	0.00	0.00	0.00
6,000.0	4.72	321.95	5,996.0	82.0	-64.2	84.0	0.00	0.00	0.00
6,100.0	4.72	321.95	6,095.6	88.4	-69.2	90.6	0.00	0.00	0.00
6,200.0	4.72	321.95	6,195.3	94.9	-74.3	97.3	0.00	0.00	0.00
6,300.0	4.72	321.95	6,295.0	101.4	-79.4	103.9	0.00	0.00	0.00
6,400.0	4.72	321.95	6,394.6	107.9	-84.5	110.6	0.00	0.00	0.00
6,500.0	4.72	321.95	6,494.3	114.4	-89.5	117.2	0.00	0.00	0.00
6,600.0	4.72	321.95	6,593.9	120.9	-94.6	123.9	0.00	0.00	0.00
6,700.0	4.72	321.95	6,693.6	127.3	-99.7	130.5	0.00	0.00	0.00
6,800.0	4.72	321.95	6,793.3	133.8	-104.8	137.1	0.00	0.00	0.00
6,900.0	4.72	321.95	6,892.9	140.3	-109.8	143.8	0.00	0.00	0.00
7,000.0	4.72	321.95	6,992.6	146.8	-114.9	150.4	0.00	0.00	0.00
7,100.0	4.72	321.95	7,092.2	153.3	-120.0	157.1	0.00	0.00	0.00
7,200.0	4.72	321.95	7,191.9	159.8	-125.1	163.7	0.00	0.00	0.00
7,300.0	4.72	321.95	7,291.6	166.2	-130.1	170.4	0.00	0.00	0.00
7,400.0	4.72	321.95	7,391.2	172.7	-135.2	177.0	0.00	0.00	0.00
7,500.0	4.72	321.95	7,490.9	179.2	-140.3	183.7	0.00	0.00	0.00
7,600.0	4.72	321.95	7,590.5	185.7	-145.4	190.3	0.00	0.00	0.00
7,700.0	4.72	321.95	7,690.2	192.2	-150.4	196.9	0.00	0.00	0.00
7,800.0	4.72	321.95	7,789.9	198.7	-155.5	203.6	0.00	0.00	0.00
7,900.0	4.72	321.95	7,889.5	205.2	-160.6	210.2	0.00	0.00	0.00
8,000.0	4.72	321.95	7,989.2	211.6	-165.7	216.9	0.00	0.00	0.00
8,100.0	4.72	321.95	8,088.8	218.1	-170.7	223.5	0.00	0.00	0.00
8,200.0	4.72	321.95	8,188.5	224.6	-175.8	230.2	0.00	0.00	0.00
8,300.0	4.72	321.95	8,288.2	231.1	-180.9	236.8	0.00	0.00	0.00
8,400.0	4.72	321.95	8,387.8	237.6	-186.0	243.5	0.00	0.00	0.00
8,500.0	4.72	321.95	8,487.5	244.1	-191.0	250.1	0.00	0.00	0.00
8,600.0	4.72	321.95	8,587.1	250.5	-196.1	256.7	0.00	0.00	0.00
8,700.0	4.72	321.95	8,686.8	257.0	-201.2	263.4	0.00	0.00	0.00
8,800.0	4.72	321.95	8,786.5	263.5	-206.3	270.0	0.00	0.00	0.00
8,828.6	4.72	321.95	8,815.0	265.4	-207.7	271.9	0.00	0.00	0.00
8,850.0	6.54	333.56	8,836.3	267.1	-208.8	273.8	10.00	8.51	54.30
8,900.0	11.24	345.01	8,885.7	274.4	-211.3	281.1	10.00	9.40	22.91
8,950.0	16.12	349.69	8,934.2	286.0	-213.8	292.7	10.00	9.76	9.35
9,000.0	21.06	352.22	8,981.6	301.7	-216.3	308.5	10.00	9.87	5.07
9,050.0	26.02	353.82	9,027.4	321.5	-218.7	328.4	10.00	9.92	3.21
9,100.0	30.99	354.94	9,071.4	345.3	-221.0	352.2	10.00	9.94	2.24
9,150.0	35.97	355.78	9,113.0	372.7	-223.2	379.8	10.00	9.96	1.67
9,200.0	40.95	356.43	9,152.2	403.8	-225.3	410.8	10.00	9.97	1.31
9,250.0	45.94	356.97	9,188.5	438.1	-227.3	445.2	10.00	9.97	1.07
9,300.0	50.93	357.42	9,221.6	475.4	-229.1	482.6	10.00	9.98	0.91
9,350.0	55.92	357.82	9,251.4	515.5	-230.8	522.7	10.00	9.98	0.79
9,400.0	60.91	358.17	9,277.6	558.1	-232.3	565.3	10.00	9.98	0.70
9,450.0	65.90	358.48	9,300.0	602.8	-233.6	610.0	10.00	9.98	0.63
9,500.0	70.89	358.78	9,318.4	649.2	-234.7	656.5	10.00	9.99	0.59
9,550.0	75.89	359.05	9,332.7	697.1	-235.6	704.3	10.00	9.99	0.55
9,600.0	80.88	359.32	9,342.7	746.1	-236.3	753.3	10.00	9.99	0.53
9,650.0	85.87	359.57	9,348.5	795.7	-236.8	802.9	10.00	9.99	0.51

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Site:	Holyfield 9 Fed	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,691.3	90.00	359.78	9,350.0	837.0	-237.0	844.2	10.00	9.99	0.51
FTP(HF 9 Fed #1H)									
9,700.0	90.00	359.78	9,350.0	845.7	-237.0	852.9	0.00	0.00	0.00
9,800.0	90.00	359.78	9,350.0	945.7	-237.4	952.8	0.00	0.00	0.00
9,900.0	90.00	359.78	9,350.0	1,045.7	-237.8	1,052.8	0.00	0.00	0.00
10,000.0	90.00	359.78	9,350.0	1,145.7	-238.2	1,152.8	0.00	0.00	0.00
10,100.0	90.00	359.78	9,350.0	1,245.7	-238.6	1,252.7	0.00	0.00	0.00
10,200.0	90.00	359.78	9,350.0	1,345.7	-238.9	1,352.7	0.00	0.00	0.00
10,300.0	90.00	359.78	9,350.0	1,445.7	-239.3	1,452.6	0.00	0.00	0.00
10,400.0	90.00	359.78	9,350.0	1,545.7	-239.7	1,552.6	0.00	0.00	0.00
10,500.0	90.00	359.78	9,350.0	1,645.7	-240.1	1,652.6	0.00	0.00	0.00
10,600.0	90.00	359.78	9,350.0	1,745.7	-240.5	1,752.5	0.00	0.00	0.00
10,700.0	90.00	359.78	9,350.0	1,845.7	-240.8	1,852.5	0.00	0.00	0.00
10,800.0	90.00	359.78	9,350.0	1,945.7	-241.2	1,952.4	0.00	0.00	0.00
10,900.0	90.00	359.78	9,350.0	2,045.7	-241.6	2,052.4	0.00	0.00	0.00
11,000.0	90.00	359.78	9,350.0	2,145.7	-242.0	2,152.4	0.00	0.00	0.00
11,100.0	90.00	359.78	9,350.0	2,245.7	-242.4	2,252.3	0.00	0.00	0.00
11,200.0	90.00	359.78	9,350.0	2,345.7	-242.7	2,352.3	0.00	0.00	0.00
11,300.0	90.00	359.78	9,350.0	2,445.7	-243.1	2,452.2	0.00	0.00	0.00
11,400.0	90.00	359.78	9,350.0	2,545.7	-243.5	2,552.2	0.00	0.00	0.00
11,500.0	90.00	359.78	9,350.0	2,645.7	-243.9	2,652.2	0.00	0.00	0.00
11,600.0	90.00	359.78	9,350.0	2,745.7	-244.3	2,752.1	0.00	0.00	0.00
11,700.0	90.00	359.78	9,350.0	2,845.7	-244.6	2,852.1	0.00	0.00	0.00
11,800.0	90.00	359.78	9,350.0	2,945.7	-245.0	2,952.0	0.00	0.00	0.00
11,900.0	90.00	359.78	9,350.0	3,045.7	-245.4	3,052.0	0.00	0.00	0.00
12,000.0	90.00	359.78	9,350.0	3,145.7	-245.8	3,151.9	0.00	0.00	0.00
12,100.0	90.00	359.78	9,350.0	3,245.7	-246.2	3,251.9	0.00	0.00	0.00
12,200.0	90.00	359.78	9,350.0	3,345.6	-246.5	3,351.9	0.00	0.00	0.00
12,300.0	90.00	359.78	9,350.0	3,445.6	-246.9	3,451.8	0.00	0.00	0.00
12,400.0	90.00	359.78	9,350.0	3,545.6	-247.3	3,551.8	0.00	0.00	0.00
12,500.0	90.00	359.78	9,350.0	3,645.6	-247.7	3,651.7	0.00	0.00	0.00
12,600.0	90.00	359.78	9,350.0	3,745.6	-248.1	3,751.7	0.00	0.00	0.00
12,700.0	90.00	359.78	9,350.0	3,845.6	-248.4	3,851.7	0.00	0.00	0.00
12,800.0	90.00	359.78	9,350.0	3,945.6	-248.8	3,951.6	0.00	0.00	0.00
12,900.0	90.00	359.78	9,350.0	4,045.6	-249.2	4,051.6	0.00	0.00	0.00
13,000.0	90.00	359.78	9,350.0	4,145.6	-249.6	4,151.5	0.00	0.00	0.00
13,100.0	90.00	359.78	9,350.0	4,245.6	-250.0	4,251.5	0.00	0.00	0.00
13,200.0	90.00	359.78	9,350.0	4,345.6	-250.3	4,351.5	0.00	0.00	0.00
13,300.0	90.00	359.78	9,350.0	4,445.6	-250.7	4,451.4	0.00	0.00	0.00
13,400.0	90.00	359.78	9,350.0	4,545.6	-251.1	4,551.4	0.00	0.00	0.00
13,500.0	90.00	359.78	9,350.0	4,645.6	-251.5	4,651.3	0.00	0.00	0.00
13,600.0	90.00	359.78	9,350.0	4,745.6	-251.9	4,751.3	0.00	0.00	0.00
13,700.0	90.00	359.78	9,350.0	4,845.6	-252.2	4,851.3	0.00	0.00	0.00
13,800.0	90.00	359.78	9,350.0	4,945.6	-252.6	4,951.2	0.00	0.00	0.00
13,900.0	90.00	359.78	9,350.0	5,045.6	-253.0	5,051.2	0.00	0.00	0.00
14,000.0	90.00	359.78	9,350.0	5,145.6	-253.4	5,151.1	0.00	0.00	0.00
14,100.0	90.00	359.78	9,350.0	5,245.6	-253.8	5,251.1	0.00	0.00	0.00
14,200.0	90.00	359.78	9,350.0	5,345.6	-254.2	5,351.1	0.00	0.00	0.00
14,300.0	90.00	359.78	9,350.0	5,445.6	-254.5	5,451.0	0.00	0.00	0.00
14,400.0	90.00	359.78	9,350.0	5,545.6	-254.9	5,551.0	0.00	0.00	0.00
14,500.0	90.00	359.78	9,350.0	5,645.6	-255.3	5,650.9	0.00	0.00	0.00
14,600.0	90.00	359.78	9,350.0	5,745.6	-255.7	5,750.9	0.00	0.00	0.00
14,700.0	90.00	359.78	9,350.0	5,845.6	-256.1	5,850.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #1H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3375.0usft (H&P 260)
Site:	Holyfield 9 Fed	**North Reference:**	Grid
Well:	#1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,800.0	90.00	359.78	9,350.0	5,945.6	-256.4	5,950.8	0.00	0.00	0.00
14,900.0	90.00	359.78	9,350.0	6,045.6	-256.8	6,050.8	0.00	0.00	0.00
15,000.0	90.00	359.78	9,350.0	6,145.6	-257.2	6,150.7	0.00	0.00	0.00
15,100.0	90.00	359.78	9,350.0	6,245.6	-257.6	6,250.7	0.00	0.00	0.00
15,200.0	90.00	359.78	9,350.0	6,345.6	-258.0	6,350.6	0.00	0.00	0.00
15,300.0	90.00	359.78	9,350.0	6,445.6	-258.3	6,450.6	0.00	0.00	0.00
15,400.0	90.00	359.78	9,350.0	6,545.6	-258.7	6,550.6	0.00	0.00	0.00
15,500.0	90.00	359.78	9,350.0	6,645.6	-259.1	6,650.5	0.00	0.00	0.00
15,600.0	90.00	359.78	9,350.0	6,745.6	-259.5	6,750.5	0.00	0.00	0.00
15,700.0	90.00	359.78	9,350.0	6,845.6	-259.9	6,850.4	0.00	0.00	0.00
15,800.0	90.00	359.78	9,350.0	6,945.6	-260.2	6,950.4	0.00	0.00	0.00
15,900.0	90.00	359.78	9,350.0	7,045.6	-260.6	7,050.4	0.00	0.00	0.00
16,000.0	90.00	359.78	9,350.0	7,145.6	-261.0	7,150.3	0.00	0.00	0.00
16,100.0	90.00	359.78	9,350.0	7,245.6	-261.4	7,250.3	0.00	0.00	0.00
16,200.0	90.00	359.78	9,350.0	7,345.6	-261.8	7,350.2	0.00	0.00	0.00
16,300.0	90.00	359.78	9,350.0	7,445.6	-262.1	7,450.2	0.00	0.00	0.00
16,400.0	90.00	359.78	9,350.0	7,545.6	-262.5	7,550.2	0.00	0.00	0.00
16,500.0	90.00	359.78	9,350.0	7,645.6	-262.9	7,650.1	0.00	0.00	0.00
16,600.0	90.00	359.78	9,350.0	7,745.6	-263.3	7,750.1	0.00	0.00	0.00
16,700.0	90.00	359.78	9,350.0	7,845.6	-263.7	7,850.0	0.00	0.00	0.00
16,800.0	90.00	359.78	9,350.0	7,945.6	-264.0	7,950.0	0.00	0.00	0.00
16,900.0	90.00	359.78	9,350.0	8,045.6	-264.4	8,050.0	0.00	0.00	0.00
17,000.0	90.00	359.78	9,350.0	8,145.6	-264.8	8,149.9	0.00	0.00	0.00
17,052.4	90.00	359.78	9,350.0	8,198.0	-265.0	8,202.3	0.00	0.00	0.00
PBHL(HF 9 Fed #1H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL(HF 9 Fed #1H) - plan hits target center - Point	0.00	0.00	9,350.0	8,198.0	-265.0	425,164.00	763,532.00	32° 9' 57.695 N	103° 28' 54.088 W
FTP(HF 9 Fed #1H) - plan hits target center - Point	0.00	0.00	9,350.0	837.0	-237.0	417,803.00	763,560.00	32° 8' 44.852 N	103° 28' 54.440 W

Exhibit 1
EOG Resources
5M BOPE

Rig Floor

1. 13 5/8" Rotating Head
2. NOV 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. 6" OD x 3" ID 10,000 PSI WP Steel Armoured 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" Cameron Type "U" 10,000 PSI WP Pipe Rams
16. Flow Line
17. 2" Fill Line

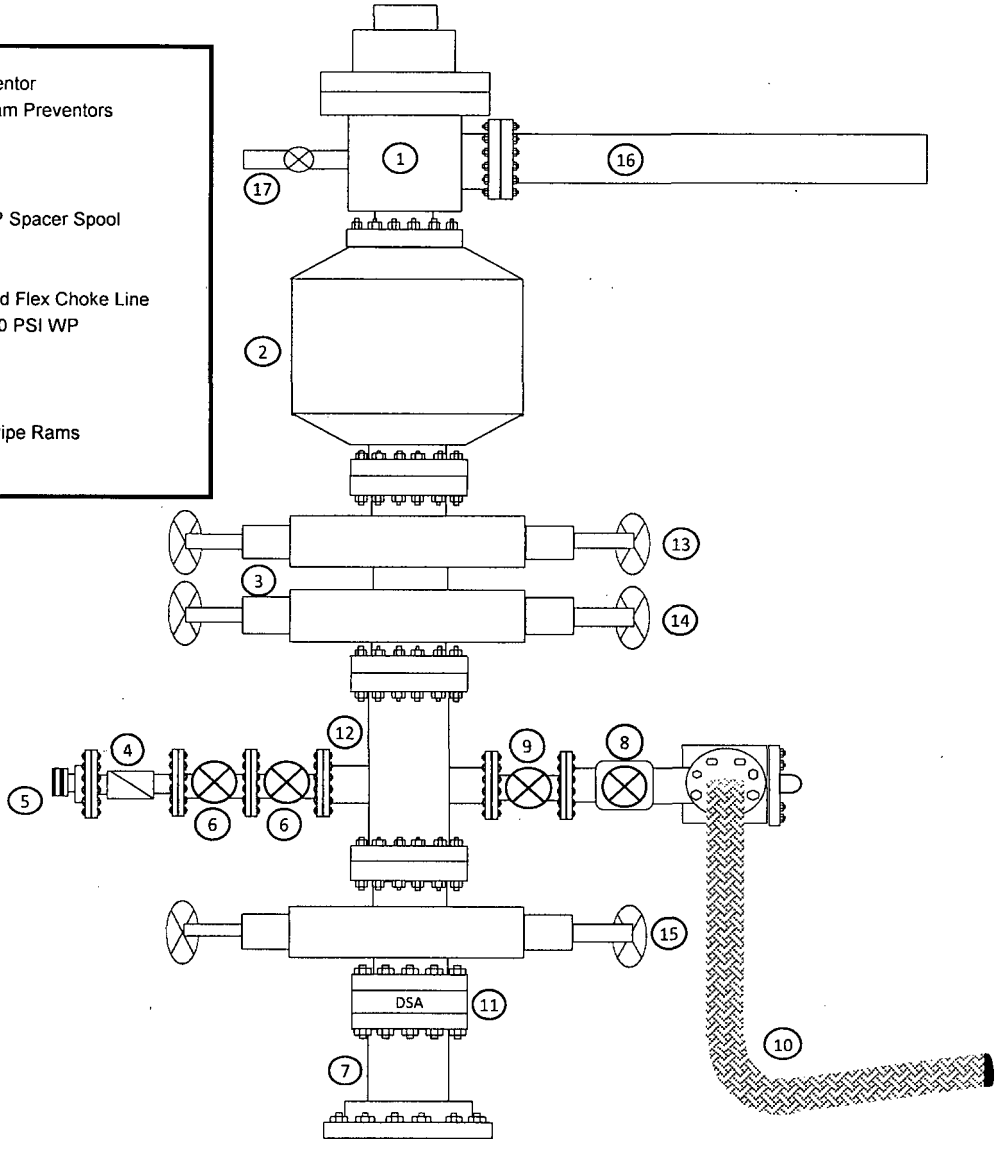
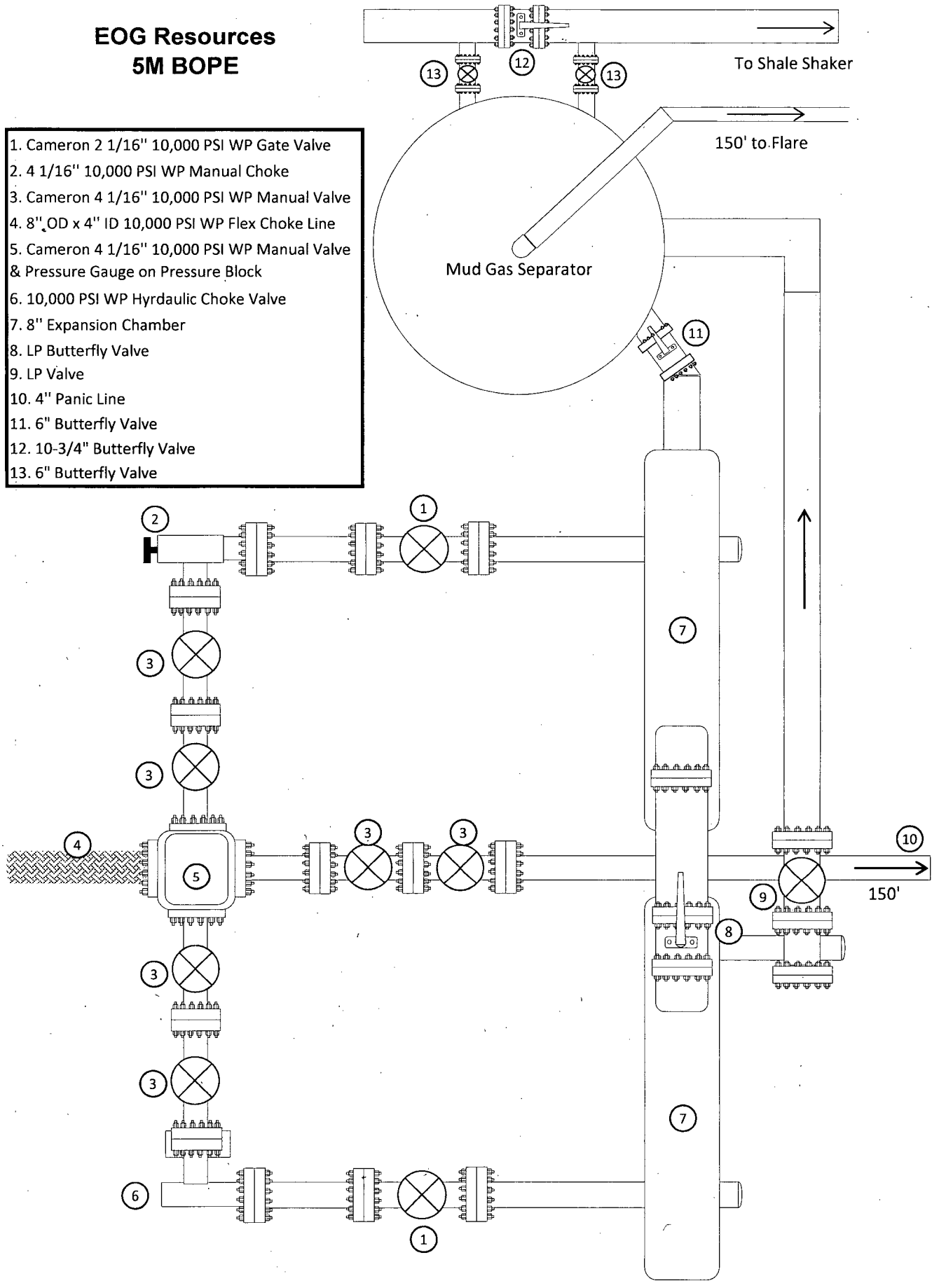


Exhibit 1a

EOG Resources
5M BOPE

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 Hyrdaulic Choke Valve
7. 8" Expansion Chamber
8. LP Butterfly Valve
9. LP Valve
10. 4" Panic Line
11. 6" Butterfly Valve
12. 10-3/4" Butterfly Valve
13. 6" Butterfly Valve



EOG 5M Choke Manifold Diagram (rev. 3/21/14)

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 manfacturer: No

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS		**P.O. Number:** RIG #123
		Asset # M10761
HOSE SPECIFICATIONS		
Type: CHOKE LINE		**Length:** 35'
I.D. 4" *INCHES*		**O.D.** 8" *INCHES*
WORKING PRESSURE	**TEST PRESSURE**	**BURST PRESSURE**
10,000 *PSI*	15,000 *PSI*	*PSI*
COUPLINGS		
Type of End Fitting 4 1/16 10K FLANGE		
Type of Coupling: SWEDGED	**MANUFACTURED BY** MIDWEST HOSE & SPECIALTY	
PROCEDURE		
Hose assembly pressure tested with water at ambient temperature.		
TIME HELD AT TEST PRESSURE	**ACTUAL BURST PRESSURE:**	
1 *MIN.*	0 *PSI*	
COMMENTS: SN#90067 M10761 Hose is covered with stainless steel armour cover and wraped 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

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: CACTUS

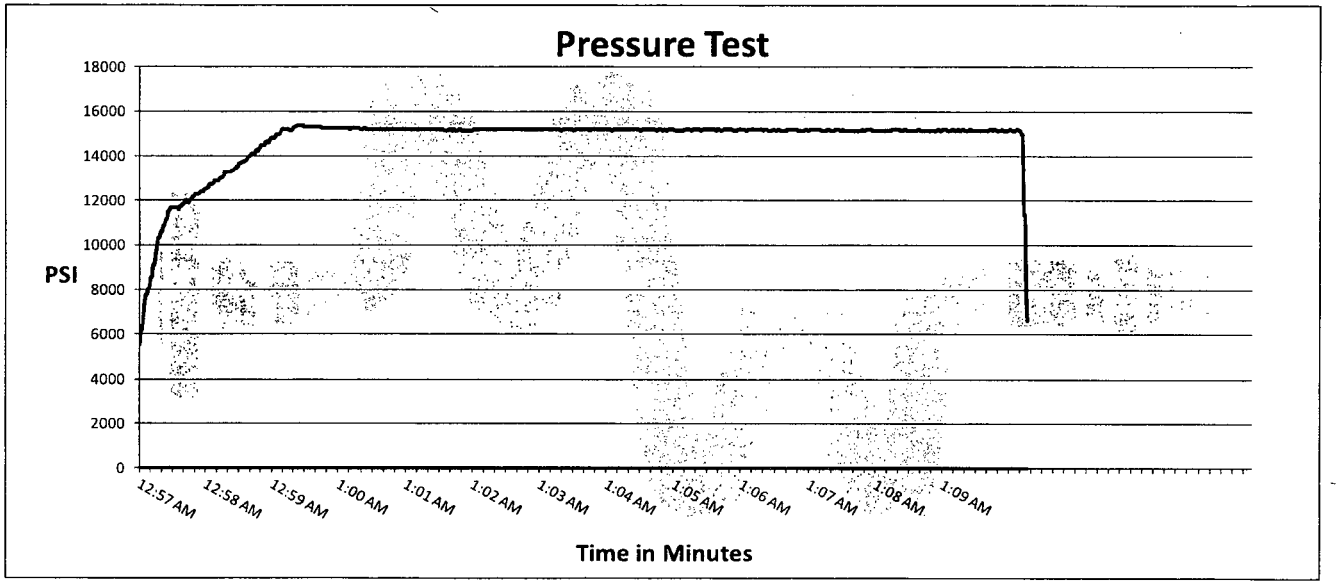
SALES ORDER# 90067

Hose Specifications

Hose Type	Length
C & K	35'
I.D.	**O.D.**
4"	8"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	**Final O.D.**
6.62"	6.68"
Hose Serial #	**Hose Assembly Serial #**
	90067



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	11 1/4 Minutes		15439 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Bobby Fink*

Approved By: *Mendi Jackson*

Mendi Jackson