Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM108977

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
DELLA 29 FED 701H

2. Name of Operator
EOG RESOURCES, INC.

Contact: STAN WAGNER
E-Mail: stan_wagner@eogresources.com

9. API Well No.
30-025-43053

3a. Address
P.O. BOX 2267
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-686-3689

10. Field and Pool, or Exploratory
~~WILDCAT WOLFCAMP OIL~~ WC-025 G-08 S203429B; WC (98201)

HOBBS OCD

JUN 06 2016

RECEIVED

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 29 T20S R34E SESE 250FSL 1270FEL

11. County or Parish, and State
LEA COUNTY, NM

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

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

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

EOG Resources requests an amendment to our approved APD for this well to reflect changes in casing design, well number, TVD and our intention to use a multi-bowl wellhead system in the drilling of the well.

Name Change from Della 29 Fed 601H TO: Della 29 Fed 701H

TVD change from 11260' (16099' MD) TO: 11360' TVD, 16198' MD. (Wolfcamp)

Detailed information attached regarding the casing design and multi-bowl WH system.

SUBJECT TO LIKE APPROVAL BY STATE

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #338410 verified by the BLM Well Information System
For EOG RESOURCES, INC., sent to the Hobbs
Committed to AFMSS for processing by KENNETH RENNICK on 06/01/2016 ()

Name *(Printed/Typed)* STAN WAGNER — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 05/05/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By — Title Petroleum Engineer — Date 6/2/2016

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad Field Office

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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

KZ

KZ

Rennick, Kenneth <krennick@blm.gov>

NOI Sundry - Della 29 Fed 701H & 602H

Rennick, Kenneth <krennick@blm.gov> Wed, Jun 1, 2016 at 10:27 AM
To: Stan Wagner <Stan_Wagner@eogresources.com>
Cc: Edward Fernandez <efernand@blm.gov>

Hello Again Mr. Stan Wagner,

I am reviewing the Della 29 Fed 602H, and it seems that the directional survey slightly changes from the original APD. The sundry has the measured depth of the bottom hole being 16,093, which is different from the original 16,024 of the APD.

So if you may send in an updated directional survey for the 602H that will be greatly appreciated.

Also I assume that the 7-5/8th intermediate casing will be kept fluid filled for both the 701H and 602H since I am seeing the similar collapse situation as with the Hawk wells.

Thank You in Advance!!

Kenny Rennick
[Quoted text hidden]

–
Kenneth Rennick

Petroleum Engineer
Bureau of Land Management
Carlsbad Field Office
(575) 234-5964
krennick@blm.gov

Rennick, Kenneth <krennick@blm.gov>

NOI Sundry - Della 29 Fed 701H & 602H

Stan Wagner <Stan_Wagner@eogresources.com> Wed, Jun 1, 2016 at 12:17 PM
To: "Rennick, Kenneth" <krennick@blm.gov>

Yes on the casing.

From: Rennick, Kenneth [mailto:krennick@blm.gov]
Sent: Wednesday, June 01, 2016 11:28 AM
To: Stan Wagner
Cc: Edward Fernandez
Subject: Re: NOI Sundry - Della 29 Fed 701H & 602H

** External email. Use caution.**

[Quoted text hidden]

EOG RESOURCES, INC.
DELLA 29 FED COM NO. 701H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,600'
Top of Salt	1,984'
Base of Salt / Top Anhydrite	3,500'
Base Anhydrite	3,736'
Yates	3,736'
Capitan	4,060'
Cherry Canyon	5,550'
Brushy Canyon	7,100'
Bone Spring Lime	8,610'
1st Bone Spring Sand	9,809'
2nd Bone Spring Lime	10,033'
2nd Bone Spring Sand	10,239'
3rd Bone Spring Carb	10,699'
3rd Bone Spring Sand	10,982'
Wolfcamp	11,300'
TD	11,360'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	5,550'	Oil
Brushy Canyon	7,030'	Oil
Bone Spring Lime	8,610'	Oil
1st Bone Spring Sand	9,809'	Oil
2nd Bone Spring Lime	10,033'	Oil
2nd Bone Spring Sand	10,239'	Oil
3rd Bone Spring Carb	10,699'	Oil
3rd Bone Spring Sand	10,982'	Oil
Wolfcamp	11,300'	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 10.75" casing at 1,625' and circulating cement back to surface.

EOG RESOURCES, INC.
DELLA 29 FED COM NO. 701H

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 – 1,625'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0-8,000'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
8.75"	8,000' – 10,900'	7.625"	29.7#	HCP-110	Ultra FJ	1.125	1.25	1.60
6.75"	0'-16,198'	5.5"	23#	HCP-110	ULT SFII	1.125	1.25	1.60

See COA

See COA Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation. Centralizers will be placed in the 9-7/8" hole interval at least one every third joint.

See COA Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program: See COA

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
10-3/4" 1,625	700	13.5	1.73	9.13	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	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
7-5/8" 10,900'	780	9.0	2.86	11.14	D195 LiteFill (Beads) + 0.50% Retarder + D046 Antifoam
	525	13.5	1.55	7.47	50:50 Class H:Poz + 0.10% D065 + 0.20% D112 + 10% D154 + 2.0% D174 + 0.40% D800
5-1/2" 16,198'	575	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17

Extremely 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.

Production Casing Cement should tie-back to cover at least 50 feet above Capitan Reef, approximately 4,000 feet.

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 single ram, mud cross and 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.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 5000/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

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 5000/ 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 – 1,625'	Fresh - Gel	8.6-8.8	28-34	N/c
1,625' – 10,900'	Brine	8.8-10.0	28-34	N/c
10,837' – 16,198' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

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:

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:

The estimated bottom-hole temperature (BHT) at TD is 170 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 6793 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

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

See COA

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

EOG RESOURCES, INC.
DELLA 29 FED COM NO. 701H

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 5000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Prior to running the intermediate casing, the rams will be changed out to accommodate the 7-5/8" casing. The bonnet seals will be tested to 1500 psi. After installing the intermediate casing the casing rams will be removed and replaced with variable bore rams. The remaining BOPE will not be retested after installing the intermediate casing.

See COA

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

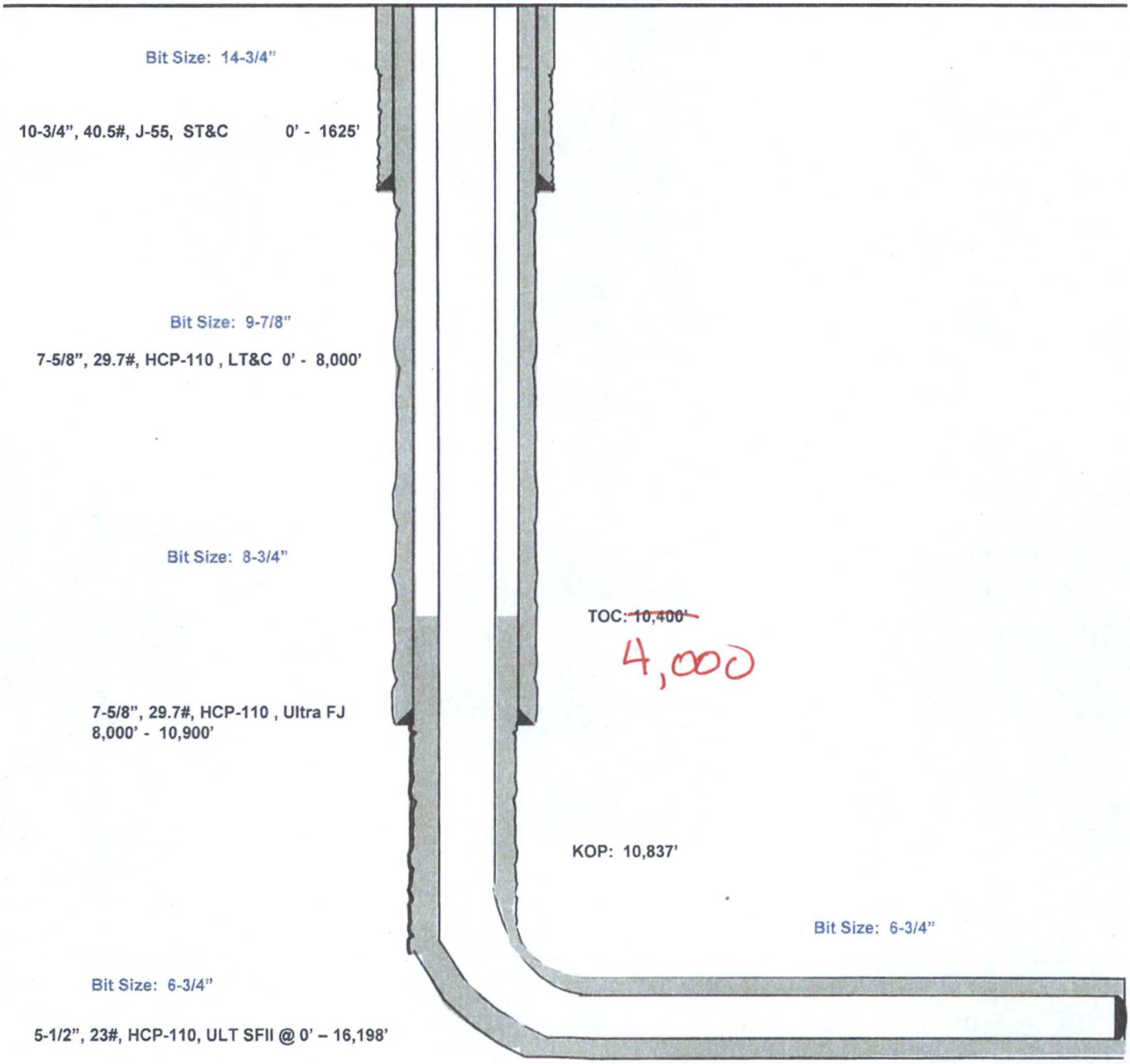
Wellhead drawing Attached.

Della 29 Fed #701H

250' FSL
1270' FEL
Section 29
T-20-S, R-34-E

Lea County, New Mexico
Proposed Wellbore
Revised 5/4/16
API: 30-025-43053

KB: 3,744'
GL: 3,714'



Lateral: 16,198' MD, 11,360' TVD
Upper Most Perf:
330' FSL & 1650' FEL Sec. 29
Lower Most Perf:
330' FNL & 1650' FEL Sec. 29
BH Location: 230' FNL & 1650' FEL
Section 29
T-20-S, R-34-E

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Sante Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Sante Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☒ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30-025-43053	98201	WC-025 G-08 S203429P; WOLFCAMP Wildcat Wolfcamp Oil

[4]Property Code	[5]Property Name	[6]Well Number
315962	DELLA 29 FED	#701H

[7]OGRID No.	[8]Operator Name	[9]Elevation
7377	EOG RESOURCES, INC.	3714'

[10]Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	29	20-S	34-E	-	250'	SOUTH	1270'	EAST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	29	20-S	34-E	-	230'	NORTH	330'	EAST	LEA

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
160.00			

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.

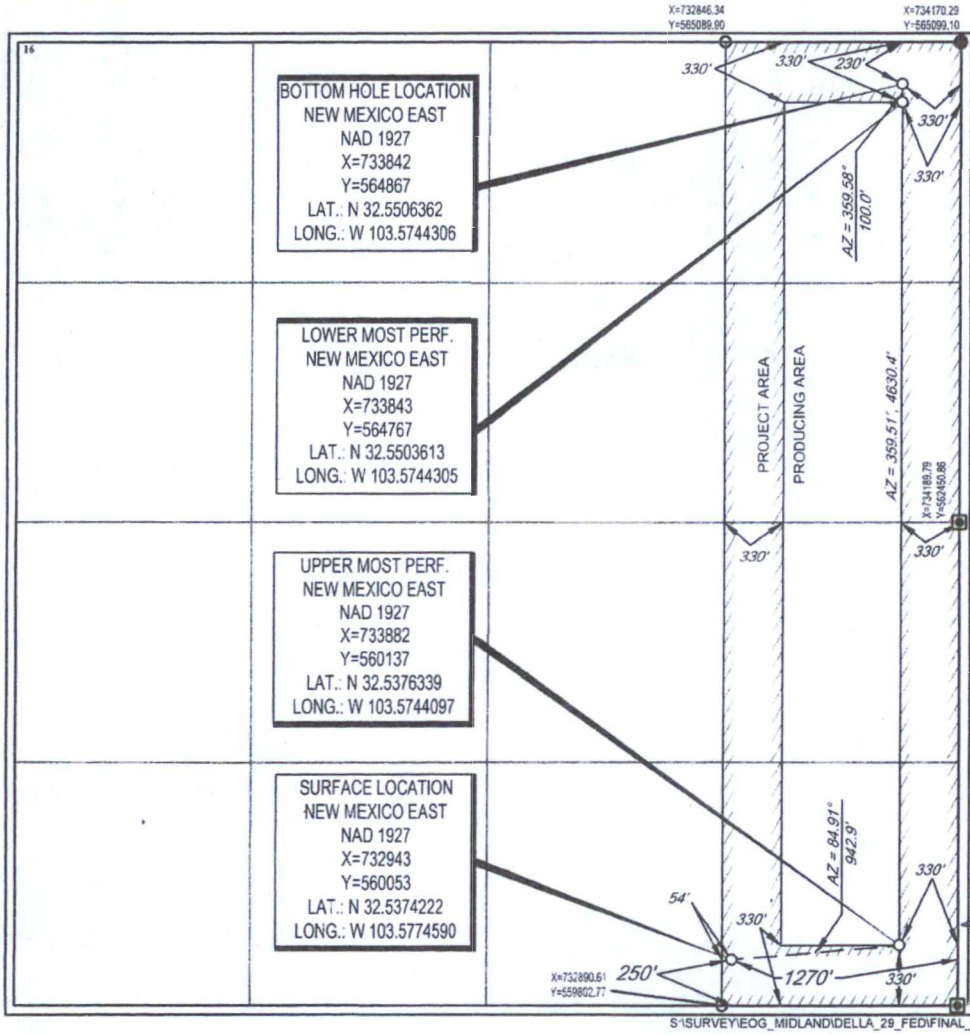
[16]

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
X=733842
Y=564867
LAT.: N 32.5506362
LONG.: W 103.5744306

LOWER MOST PERF.
NEW MEXICO EAST
NAD 1927
X=733843
Y=564767
LAT.: N 32.5503613
LONG.: W 103.5744305

UPPER MOST PERF.
NEW MEXICO EAST
NAD 1927
X=733882
Y=560137
LAT.: N 32.5376339
LONG.: W 103.5744097

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
X=732943
Y=560053
LAT.: N 32.5374222
LONG.: W 103.5774590



[17]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.

Stan Wagner 5/5/16
Signature Date

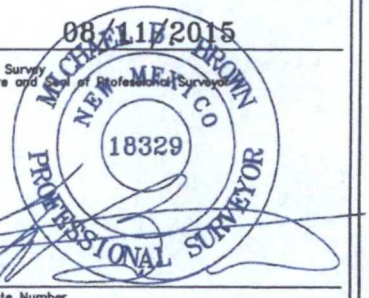
Stan Wagner
Printed Name

E-mail Address

[18]SURVEYOR CERTIFICATION

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

08/11/2015
Date of Survey
Signature and Seal of Professional Surveyor



Certificate Number

S:\SURVEY\EOG_MIDLAND\DELLA_29_FED\FINAL_PRODUCTS\LO_DELLA29FED_701H DWG 8/13/2015 2:52:00 PM ccaston

eog resources

Lea County, NM (NAD 27 NME)

Della 29 Fed #701H

Plan #0.4

Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.67°

Magnetic Field
Strength: 48216.4nT
Dip Angle: 60.36°
Date: 7/17/2016
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.67°
To convert a Magnetic Direction to a True Direction, Add 7.08° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

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: #701H

Ground Level: 3714.0
KB = 25 @ 3739.0usft

Northing	Easting	Latitude	Longitude
560053.00	732943.00	32° 32' 14.721 N	103° 34' 38.852 W

SECTION DETAILS

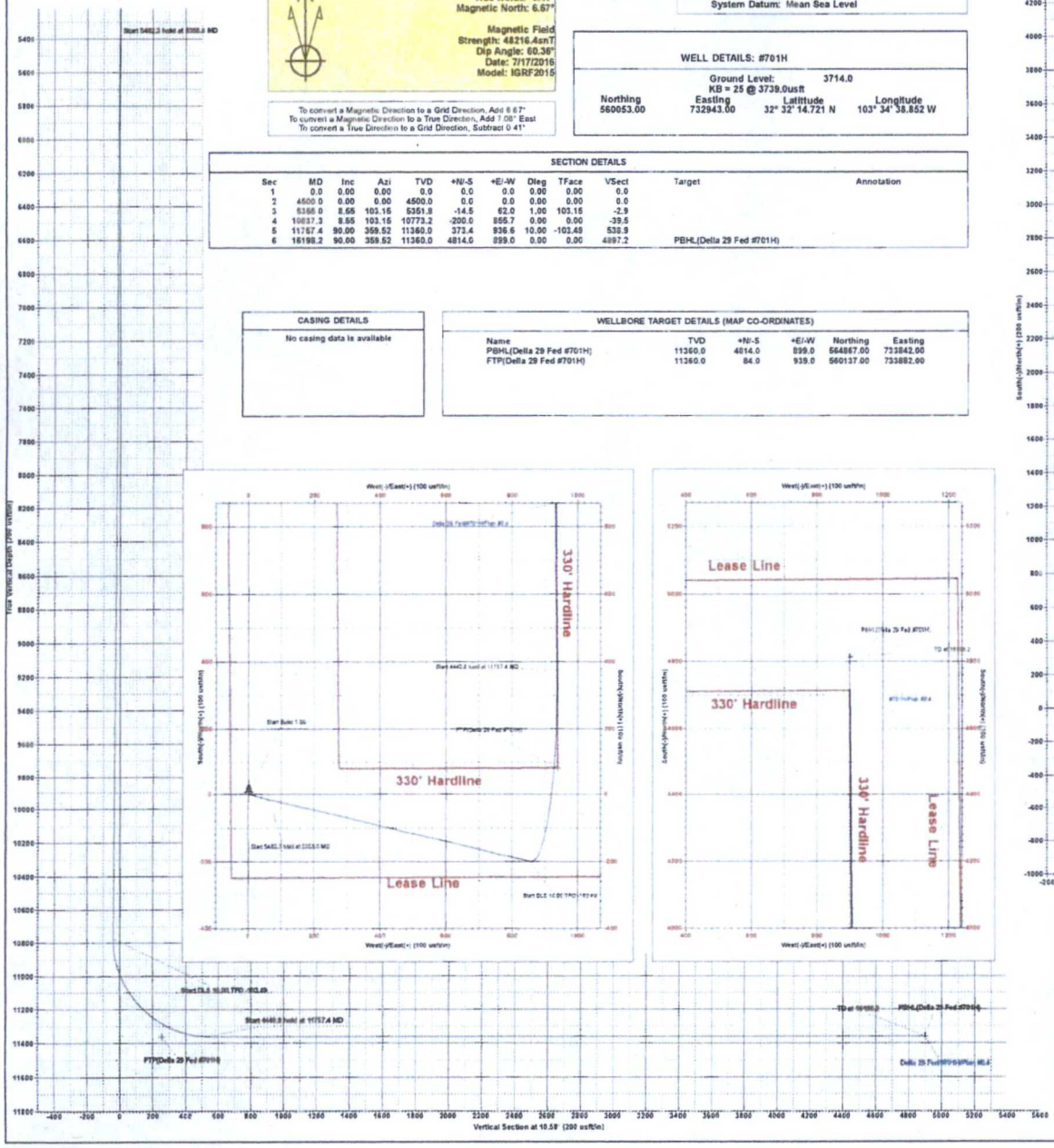
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4500.0	0.00	0.00	4500.0	0.0	0.0	0.00	0.00	0.0		
3	5368.0	8.68	103.16	5361.8	-14.5	62.0	1.00	103.16	-2.9		
4	10837.3	8.68	103.16	10773.2	-200.0	855.7	0.00	0.00	-39.5		
5	11757.4	90.00	359.52	11360.0	373.4	936.6	10.00	-103.48	538.9		
6	16198.2	90.00	359.52	11360.0	4814.0	899.0	0.00	0.00	4897.2	PBHL(Della 29 Fed #701H)	

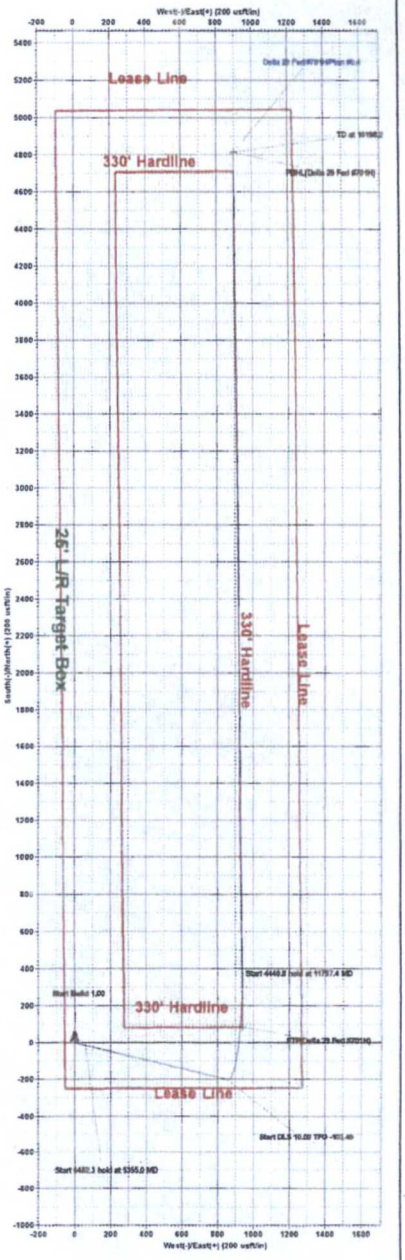
CASING DETAILS

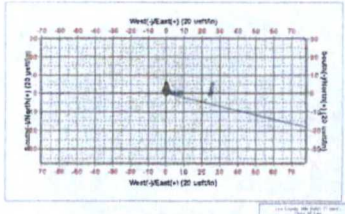
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL(Della 29 Fed #701H)	11360.0	4814.0	899.0	564867.00	733842.00
FTP(Della 29 Fed #701H)	11360.0	84.0	939.0	560137.00	733882.00







AMENDED PROPOSED ODS

EOG Resources - Midland

Lea County, NM (NAD 27 NME)
Della 29 Fed
#701H

OH

Plan: Plan #0.4

Standard Planning Report

04 May, 2016

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3739.0usft
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3739.0usft
Site:	Della 29 Fed	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.4		

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	Della 29 Fed				
Site Position:		**Northing:**	560,053.00 usft	**Latitude:**	32° 32' 14.721 N
From:	Map	**Easting:**	732,943.00 usft	**Longitude:**	103° 34' 38.852 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.41 °

Well	#701H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	560,053.00 usft	**Latitude:**	32° 32' 14.721 N
	+E/-W	0.0 usft	**Easting:**	732,943.00 usft	**Longitude:**	103° 34' 38.852 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,714.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	7/17/2016	7.08	60.36	48,216

Design	Plan #0.4				
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	10.58	

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	
5,355.0	8.55	103.15	5,351.8	-14.5	62.0	1.00	1.00	0.00	103.15	
10,837.3	8.55	103.15	10,773.2	-200.0	855.7	0.00	0.00	0.00	0.00	
11,757.4	90.00	359.52	11,360.0	373.4	936.6	10.00	8.85	-11.26	-103.49	
16,198.2	90.00	359.52	11,360.0	4,814.0	899.0	0.00	0.00	0.00	0.00	PBHL(Della 29 Fed #

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3739.0usft
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3739.0usft
Site:	Della 29 Fed	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.4		

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	103.15	4,600.0	-0.2	0.8	0.0	1.00	1.00	0.00
4,700.0	2.00	103.15	4,700.0	-0.8	3.4	-0.2	1.00	1.00	0.00
4,800.0	3.00	103.15	4,799.9	-1.8	7.6	-0.4	1.00	1.00	0.00
4,900.0	4.00	103.15	4,899.7	-3.2	13.6	-0.6	1.00	1.00	0.00
5,000.0	5.00	103.15	4,999.4	-5.0	21.2	-1.0	1.00	1.00	0.00
5,100.0	6.00	103.15	5,098.9	-7.1	30.6	-1.4	1.00	1.00	0.00
5,200.0	7.00	103.15	5,198.3	-9.7	41.6	-1.9	1.00	1.00	0.00
5,300.0	8.00	103.15	5,297.4	-12.7	54.3	-2.5	1.00	1.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3739.0usft
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3739.0usft
Site:	Della 29 Fed	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.4		

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)
5,355.0	8.55	103.15	5,351.8	-14.5	62.0	-2.9	1.00	1.00	0.00
5,400.0	8.55	103.15	5,396.3	-16.0	68.5	-3.2	0.00	0.00	0.00
5,500.0	8.55	103.15	5,495.2	-19.4	83.0	-3.8	0.00	0.00	0.00
5,600.0	8.55	103.15	5,594.1	-22.8	97.5	-4.5	0.00	0.00	0.00
5,700.0	8.55	103.15	5,693.0	-26.2	112.0	-5.2	0.00	0.00	0.00
5,800.0	8.55	103.15	5,791.9	-29.5	126.4	-5.8	0.00	0.00	0.00
5,900.0	8.55	103.15	5,890.8	-32.9	140.9	-6.5	0.00	0.00	0.00
6,000.0	8.55	103.15	5,989.7	-36.3	155.4	-7.2	0.00	0.00	0.00
6,100.0	8.55	103.15	6,088.6	-39.7	169.9	-7.8	0.00	0.00	0.00
6,200.0	8.55	103.15	6,187.4	-43.1	184.3	-8.5	0.00	0.00	0.00
6,300.0	8.55	103.15	6,286.3	-46.5	198.8	-9.2	0.00	0.00	0.00
6,400.0	8.55	103.15	6,385.2	-49.8	213.3	-9.8	0.00	0.00	0.00
6,500.0	8.55	103.15	6,484.1	-53.2	227.8	-10.5	0.00	0.00	0.00
6,600.0	8.55	103.15	6,583.0	-56.6	242.2	-11.2	0.00	0.00	0.00
6,700.0	8.55	103.15	6,681.9	-60.0	256.7	-11.8	0.00	0.00	0.00
6,800.0	8.55	103.15	6,780.8	-63.4	271.2	-12.5	0.00	0.00	0.00
6,900.0	8.55	103.15	6,879.7	-66.8	285.7	-13.2	0.00	0.00	0.00
7,000.0	8.55	103.15	6,978.5	-70.1	300.1	-13.8	0.00	0.00	0.00
7,100.0	8.55	103.15	7,077.4	-73.5	314.6	-14.5	0.00	0.00	0.00
7,200.0	8.55	103.15	7,176.3	-76.9	329.1	-15.2	0.00	0.00	0.00
7,300.0	8.55	103.15	7,275.2	-80.3	343.6	-15.9	0.00	0.00	0.00
7,400.0	8.55	103.15	7,374.1	-83.7	358.1	-16.5	0.00	0.00	0.00
7,500.0	8.55	103.15	7,473.0	-87.1	372.5	-17.2	0.00	0.00	0.00
7,600.0	8.55	103.15	7,571.9	-90.4	387.0	-17.9	0.00	0.00	0.00
7,700.0	8.55	103.15	7,670.8	-93.8	401.5	-18.5	0.00	0.00	0.00
7,800.0	8.55	103.15	7,769.7	-97.2	416.0	-19.2	0.00	0.00	0.00
7,900.0	8.55	103.15	7,868.5	-100.6	430.4	-19.9	0.00	0.00	0.00
8,000.0	8.55	103.15	7,967.4	-104.0	444.9	-20.5	0.00	0.00	0.00
8,100.0	8.55	103.15	8,066.3	-107.4	459.4	-21.2	0.00	0.00	0.00
8,200.0	8.55	103.15	8,165.2	-110.7	473.9	-21.9	0.00	0.00	0.00
8,300.0	8.55	103.15	8,264.1	-114.1	488.3	-22.5	0.00	0.00	0.00
8,400.0	8.55	103.15	8,363.0	-117.5	502.8	-23.2	0.00	0.00	0.00
8,500.0	8.55	103.15	8,461.9	-120.9	517.3	-23.9	0.00	0.00	0.00
8,600.0	8.55	103.15	8,560.8	-124.3	531.8	-24.5	0.00	0.00	0.00
8,700.0	8.55	103.15	8,659.7	-127.6	546.3	-25.2	0.00	0.00	0.00
8,800.0	8.55	103.15	8,758.5	-131.0	560.7	-25.9	0.00	0.00	0.00
8,900.0	8.55	103.15	8,857.4	-134.4	575.2	-26.5	0.00	0.00	0.00
9,000.0	8.55	103.15	8,956.3	-137.8	589.7	-27.2	0.00	0.00	0.00
9,100.0	8.55	103.15	9,055.2	-141.2	604.2	-27.9	0.00	0.00	0.00
9,200.0	8.55	103.15	9,154.1	-144.6	618.6	-28.5	0.00	0.00	0.00
9,300.0	8.55	103.15	9,253.0	-147.9	633.1	-29.2	0.00	0.00	0.00
9,400.0	8.55	103.15	9,351.9	-151.3	647.6	-29.9	0.00	0.00	0.00
9,500.0	8.55	103.15	9,450.8	-154.7	662.1	-30.5	0.00	0.00	0.00
9,600.0	8.55	103.15	9,549.7	-158.1	676.5	-31.2	0.00	0.00	0.00
9,700.0	8.55	103.15	9,648.5	-161.5	691.0	-31.9	0.00	0.00	0.00
9,800.0	8.55	103.15	9,747.4	-164.9	705.5	-32.5	0.00	0.00	0.00
9,900.0	8.55	103.15	9,846.3	-168.2	720.0	-33.2	0.00	0.00	0.00
10,000.0	8.55	103.15	9,945.2	-171.6	734.5	-33.9	0.00	0.00	0.00
10,100.0	8.55	103.15	10,044.1	-175.0	748.9	-34.6	0.00	0.00	0.00
10,200.0	8.55	103.15	10,143.0	-178.4	763.4	-35.2	0.00	0.00	0.00
10,300.0	8.55	103.15	10,241.9	-181.8	777.9	-35.9	0.00	0.00	0.00
10,400.0	8.55	103.15	10,340.8	-185.2	792.4	-36.6	0.00	0.00	0.00
10,500.0	8.55	103.15	10,439.7	-188.5	806.8	-37.2	0.00	0.00	0.00
10,600.0	8.55	103.15	10,538.5	-191.9	821.3	-37.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3739.0usft
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3739.0usft
Site:	Della 29 Fed	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.4		

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)
10,700.0	8.55	103.15	10,637.4	-195.3	835.8	-38.6	0.00	0.00	0.00
10,800.0	8.55	103.15	10,736.3	-198.7	850.3	-39.2	0.00	0.00	0.00
10,837.3	8.55	103.15	10,773.2	-200.0	855.7	-39.5	0.00	0.00	0.00
10,850.0	8.34	94.60	10,785.8	-200.2	857.5	-39.4	10.00	-1.61	-67.25
10,900.0	9.33	62.24	10,835.2	-198.6	864.7	-36.5	10.00	1.98	-64.72
10,950.0	12.42	41.07	10,884.3	-192.7	871.8	-29.4	10.00	6.17	-42.34
11,000.0	16.46	29.14	10,932.7	-182.4	878.8	-18.0	10.00	8.09	-23.85
11,050.0	20.92	21.99	10,980.1	-168.0	885.6	-2.5	10.00	8.90	-14.31
11,100.0	25.57	17.30	11,026.0	-149.4	892.2	16.9	10.00	9.30	-9.38
11,150.0	30.32	13.98	11,070.2	-126.8	898.4	40.3	10.00	9.51	-6.63
11,200.0	35.14	11.50	11,112.2	-100.5	904.4	67.3	10.00	9.63	-4.97
11,250.0	39.99	9.54	11,151.9	-70.5	909.9	97.7	10.00	9.71	-3.90
11,300.0	44.88	7.95	11,188.8	-37.2	915.0	131.4	10.00	9.77	-3.18
11,350.0	49.78	6.61	11,222.6	-0.7	919.6	168.1	10.00	9.80	-2.68
11,400.0	54.69	5.45	11,253.2	38.6	923.8	207.5	10.00	9.83	-2.32
11,450.0	59.62	4.43	11,280.4	80.4	927.4	249.3	10.00	9.85	-2.05
11,500.0	64.55	3.50	11,303.8	124.5	930.4	293.2	10.00	9.87	-1.85
11,550.0	69.49	2.65	11,323.3	170.4	932.9	338.8	10.00	9.88	-1.71
11,600.0	74.43	1.85	11,338.7	217.9	934.8	385.8	10.00	9.88	-1.60
11,650.0	79.38	1.09	11,350.1	266.6	936.0	433.9	10.00	9.89	-1.52
11,700.0	84.32	0.35	11,357.2	316.1	936.6	482.7	10.00	9.89	-1.48
11,750.0	89.27	359.62	11,360.0	366.0	936.6	531.7	10.00	9.89	-1.45
11,757.4	90.00	359.52	11,360.0	373.4	936.6	538.9	10.00	9.89	-1.45
11,800.0	90.00	359.52	11,360.0	416.0	936.2	580.8	0.00	0.00	0.00
11,900.0	90.00	359.52	11,360.0	516.0	935.3	678.9	0.00	0.00	0.00
12,000.0	90.00	359.52	11,360.0	616.0	934.5	777.1	0.00	0.00	0.00
12,100.0	90.00	359.52	11,360.0	716.0	933.7	875.2	0.00	0.00	0.00
12,200.0	90.00	359.52	11,360.0	816.0	932.8	973.3	0.00	0.00	0.00
12,300.0	90.00	359.52	11,360.0	916.0	932.0	1,071.5	0.00	0.00	0.00
12,400.0	90.00	359.52	11,360.0	1,016.0	931.1	1,169.6	0.00	0.00	0.00
12,500.0	90.00	359.52	11,360.0	1,116.0	930.3	1,267.8	0.00	0.00	0.00
12,600.0	90.00	359.52	11,360.0	1,216.0	929.4	1,365.9	0.00	0.00	0.00
12,700.0	90.00	359.52	11,360.0	1,316.0	928.6	1,464.1	0.00	0.00	0.00
12,800.0	90.00	359.52	11,360.0	1,416.0	927.7	1,562.2	0.00	0.00	0.00
12,900.0	90.00	359.52	11,360.0	1,515.9	926.9	1,660.3	0.00	0.00	0.00
13,000.0	90.00	359.52	11,360.0	1,615.9	926.0	1,758.5	0.00	0.00	0.00
13,100.0	90.00	359.52	11,360.0	1,715.9	925.2	1,856.6	0.00	0.00	0.00
13,200.0	90.00	359.52	11,360.0	1,815.9	924.4	1,954.8	0.00	0.00	0.00
13,300.0	90.00	359.52	11,360.0	1,915.9	923.5	2,052.9	0.00	0.00	0.00
13,400.0	90.00	359.52	11,360.0	2,015.9	922.7	2,151.0	0.00	0.00	0.00
13,500.0	90.00	359.52	11,360.0	2,115.9	921.8	2,249.2	0.00	0.00	0.00
13,600.0	90.00	359.52	11,360.0	2,215.9	921.0	2,347.3	0.00	0.00	0.00
13,700.0	90.00	359.52	11,360.0	2,315.9	920.1	2,445.5	0.00	0.00	0.00
13,800.0	90.00	359.52	11,360.0	2,415.9	919.3	2,543.6	0.00	0.00	0.00
13,900.0	90.00	359.52	11,360.0	2,515.9	918.4	2,641.8	0.00	0.00	0.00
14,000.0	90.00	359.52	11,360.0	2,615.9	917.6	2,739.9	0.00	0.00	0.00
14,100.0	90.00	359.52	11,360.0	2,715.9	916.7	2,838.0	0.00	0.00	0.00
14,200.0	90.00	359.52	11,360.0	2,815.9	915.9	2,936.2	0.00	0.00	0.00
14,300.0	90.00	359.52	11,360.0	2,915.9	915.1	3,034.3	0.00	0.00	0.00
14,400.0	90.00	359.52	11,360.0	3,015.9	914.2	3,132.5	0.00	0.00	0.00
14,500.0	90.00	359.52	11,360.0	3,115.9	913.4	3,230.6	0.00	0.00	0.00
14,600.0	90.00	359.52	11,360.0	3,215.9	912.5	3,328.8	0.00	0.00	0.00
14,700.0	90.00	359.52	11,360.0	3,315.9	911.7	3,426.9	0.00	0.00	0.00
14,800.0	90.00	359.52	11,360.0	3,415.9	910.8	3,525.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #701H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3739.0usft
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	KB = 25 @ 3739.0usft
Site:	Della 29 Fed	**North Reference:**	Grid
Well:	#701H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.4		

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)
14,900.0	90.00	359.52	11,360.0	3,515.9	910.0	3,623.2	0.00	0.00	0.00
15,000.0	90.00	359.52	11,360.0	3,615.9	909.1	3,721.3	0.00	0.00	0.00
15,100.0	90.00	359.52	11,360.0	3,715.9	908.3	3,819.5	0.00	0.00	0.00
15,200.0	90.00	359.52	11,360.0	3,815.9	907.4	3,917.6	0.00	0.00	0.00
15,300.0	90.00	359.52	11,360.0	3,915.9	906.6	4,015.7	0.00	0.00	0.00
15,400.0	90.00	359.52	11,360.0	4,015.9	905.7	4,113.9	0.00	0.00	0.00
15,500.0	90.00	359.52	11,360.0	4,115.9	904.9	4,212.0	0.00	0.00	0.00
15,600.0	90.00	359.52	11,360.0	4,215.9	904.1	4,310.2	0.00	0.00	0.00
15,700.0	90.00	359.52	11,360.0	4,315.8	903.2	4,408.3	0.00	0.00	0.00
15,800.0	90.00	359.52	11,360.0	4,415.8	902.4	4,506.5	0.00	0.00	0.00
15,900.0	90.00	359.52	11,360.0	4,515.8	901.5	4,604.6	0.00	0.00	0.00
16,000.0	90.00	359.52	11,360.0	4,615.8	900.7	4,702.7	0.00	0.00	0.00
16,100.0	90.00	359.52	11,360.0	4,715.8	899.8	4,800.9	0.00	0.00	0.00
16,198.2	90.00	359.52	11,360.0	4,814.0	899.0	4,897.2	0.00	0.00	0.00

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(Della 29 Fed #70 - plan hits target center - Point	0.00	0.01	11,360.0	4,814.0	899.0	564,867.00	733,842.00	32° 33' 2.292 N	103° 34' 27.950 W
FTP(Della 29 Fed #701H - plan misses target center by 69.0usft at 11491.1usft MD (11299.9 TVD, 116.5 N, 929.9 E) - Point	0.00	0.00	11,360.0	84.0	939.0	560,137.00	733,882.00	32° 32' 15.486 N	103° 34' 27.876 W

Della 29 Fed 701H
30-025-43053
EOG Resources, Inc
Surface Location: Sec. 29, T. 20S, R. 34E
Conditions of Approval

See below for the updated Conditions of Approval for the Drilling Section.

DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated at **2500** feet drilling depth. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Potash Areas:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Risks:
Possibility of Water Flows in the Capitan Reef, in the Salado and in the Artesia Group. Possibility of Lost Circulation in the Rustler, in the Capitan Reef, in the Red Beds, in the Delaware and in the Artesia Group.

1. The **10 3/4** inch surface casing shall be set at approximately **1625** feet **(a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 10 3/4 inch shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Special Capitan Reef requirements:

If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

a. Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

b. Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

The intermediate casing shall be kept fluid filled to avoid approaching the minimum collapse pressure rating of the casing.

2. The minimum required fill of cement behind the **7 5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 7 5/8 inch shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Variance is granted for centralizers in the production interval per the drilling program.

3. The minimum required fill of cement behind the **5 1/2** inch production casing is:

   ☒ **Cement should tie-back to cover casing 50 feet above Capitan Reef, which shall be approximately at a depth of 4000 feet. Operator shall provide method of verification. Proposed cement calculates to negative 33% to achieve this goal - Additional cement shall be required.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Operator has proposed a **multi-bowl wellhead assembly**. This assembly (BOPE/BOPE) will be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.
    c. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    d. Manufacturer representative shall install the test plug for the initial and all BOP testing.
    e. **Prior to running the intermediated casing, the rams will be changed out to accommodate the 7-5/8 inch casing. After installing the intermediate casing the casing rams will be removed and replaced with variable bore rams.**

4. Operator has broken a seal on the BOP stack therefore per Onshore Oil and Gas Order No. 2 **the entire BOP stack shall be tested prior to drilling out the intermediated casing**.

    a. A solid steel body pack-off will be utilized after running & cementing the intermediate casing. After installation of the pack-off and lower flange will be pressure tested to 5000 psi.
    b. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

d. The results of the test shall be reported to the appropriate BLM office.

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

KGR 05312016