Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

HOBBS OCD

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

AUG 21 2019

SUBMIT IN TRIPLICATE - Other instructions on page 2

RECEIVED

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. NMNM26394
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA/Agreement, Name and/or No.
	8. Well Name and No. GREEN DRAKE 16 FED COM 759H
2. Name of Operator EOG RESOURCES INCORPORATED Contact: EMILY FOLLIS E-Mail: emily_follis@eogresources.com	9. API Well No. 30-025-45936-00-X1
3a. Address PO BOX 2267 MIDLAND, TX 79702 3b. Phone No. (include area code) Ph: 432-636-3600	10. Field and Pool or Exploratory Area RED HILLS WC025G09S253309A-UPR WOLFCAM
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Sec 16 T25S R33E NWSE 2390FSL 2349FEL 32.129890 N Lat, 103.576370 W Lon	11. County or Parish, State LEA COUNTY, NM

12. CHECK THE 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	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must 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 respectfully requests an amendment to our approved APD for this well to reflect the following changes:

Well number change from 709H to 759H
Target depth change from 12,386? to 13,160?
BHL change from Sec. 21 T-25-S R-33-E 100? FSL 2298? FEL to Sec. 21 T-25-S R-33-E 100? FSL 1947? FWL, moving wellbore into western adjacent HSU (480 acres)
Changes in casing and cement programs to reflect updated design.

Carlsbad Field Office
OCD Hobbs

See attachments

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

All Previous COAs Still Apply, Except For the Following!

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

Electronic Submission #472285 verified by the BLM Well Information System
For EOG RESOURCES INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 07/08/2019 (19PP2436SE)

Name *(Printed/Typed)* BEN HOCHER — Title ENGINEERING ASSOCIATE

Signature (Electronic Submission) — Date 07/03/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JEROMY PORTER — Title PETROLEUM ENGINEER — Date 07/11/2019

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 Hobbs

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Revisions to Operator-Submitted EC Data for Sundry Notice #472285

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM26394	NMNM26394
Agreement:		
Operator:	EOG RESOURCES INC PO BOX 2267 MIDLAND, TX 79702 Ph: 432-636-3600	EOG RESOURCES INCORPORATED PO BOX 2267 MIDLAND, TX 79702 Ph: 432.686.3689
Admin Contact:	EMILY FOLLIS SR REGULATORY ADMINISTRATOR E-Mail: emily_follis@eogresources.com Ph: 432-636-3600	EMILY FOLLIS SR REGULATORY ADMINISTRATOR E-Mail: emily_follis@eogresources.com Ph: 432-636-3600
Tech Contact:	BEN HOCHER REGULATORY ASSOC. E-Mail: Ben_Hocher@eogresources.com Ph: 432-636-3600	BEN HOCHER ENGINEERING ASSOCIATE E-Mail: ben_hocher@eogresources.com Ph: 432-686-3623
Location: State: County:	 NM LEA COUNTY	 NM LEA
Field/Pool:	[98180]WC-025 G-09 S253	RED HILLS WC025G09S253309A-UPR WOLFCAMP
Well/Facility:	GREEN DRAKE 16 FED COM 709H Sec 16 T25S R33E 2390FSL 2349FWL	GREEN DRAKE 16 FED COM 759H Sec 16 T25S R33E NWSE 2390FSL 2349FEL 32.129890 N Lat, 103.576370 W Lon

Revised Permit Information 6/25/19:

Well Name: Green Drake 16 Fed Com #759H

Location:
SHL: 2390' FSL & 2349' FEL, Section 16, T-25-S, R-33-E, Lea Co., N.M.
BHL: 100' FSL & 1947' FWL, Section 21, T-25-S, R-33-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0' – 1,040'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' – 12,600'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 12,100'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	12,100'–12,600'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	12,600' – 20,841'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60

Variance is requested to waive 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.

Variance is also requested to waive 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.

Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422'' between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422'' is acceptable for the curve and lateral portions of the production open hole section.

EOG Resources also requests approval to implement previously permitted 4 string designs, to be referred to as Design B in reporting. Design B is detailed in pages 5 and 6, in which EOG Resources requests to amend the casing program to include a variance from the 0.422" annular clearance in the production string.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/sk	Slurry Description
1,040' 9-5/8"	890	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	80	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 840')
12,600' 7-5/8"	630	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 7,500')
	1,000	12.7	2.30	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
20,841' 5-1/2"	710	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 12,100')

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

EOG requests to pump a two stage cement job on the 7-5/8'' intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. The final cement top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

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.

Mud Program:

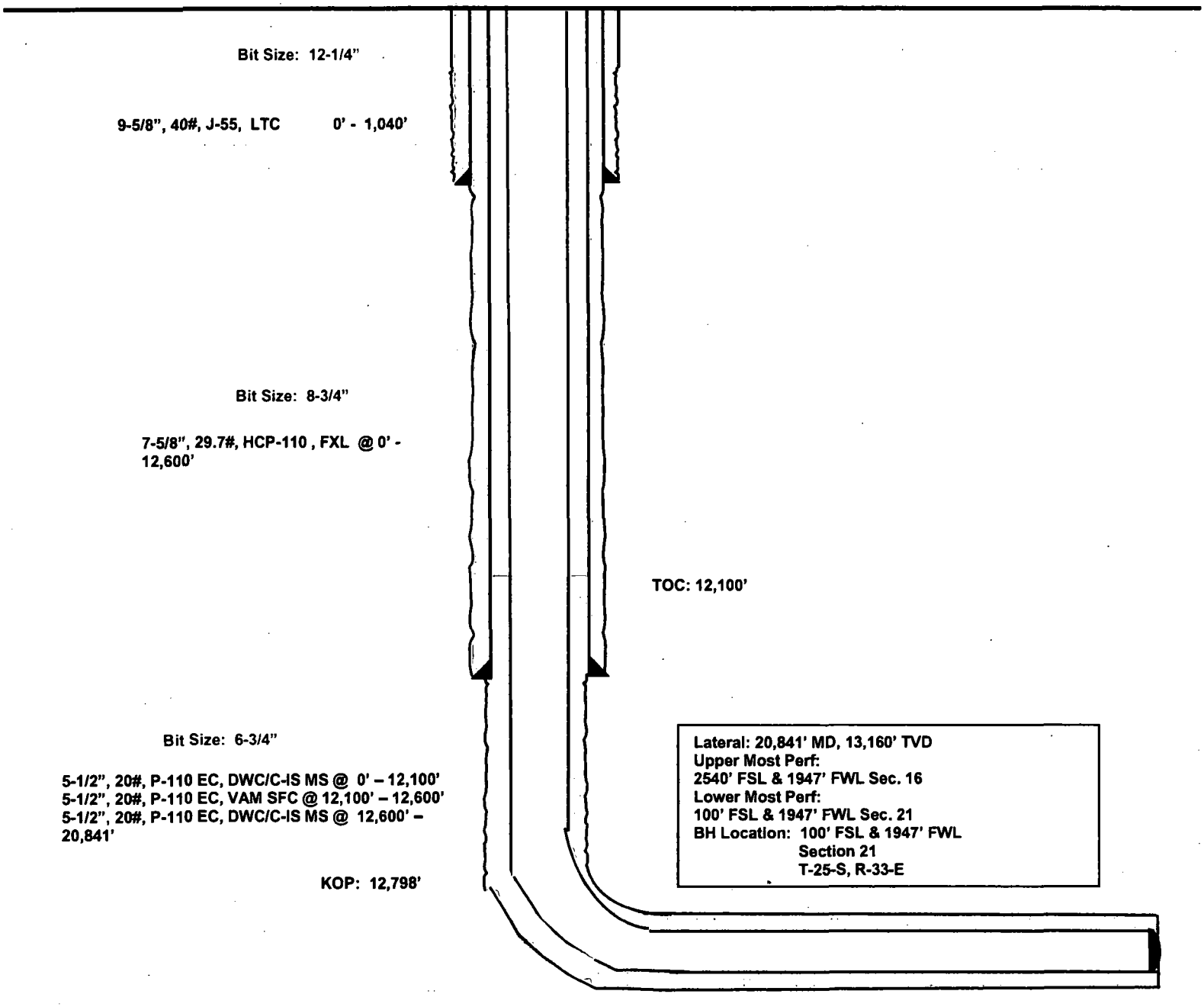
Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,040'	Fresh - Gel	8.6-8.8	28-34	N/c
1,040' – 12,600'	Brine	10.0-10.2	28-34	N/c
12,600' – 12,798'	Oil Base	8.7-9.4	58-68	N/c - 6
12,798' – 20,841' Lateral	Oil Base	10.0-14.0	58-68	3 - 6

2390' FSL
2349' FEL
Section 16
T-25-S, R-33-E

Proposed Wellbore
Design A

API: 30-025-45936

KB: 3,423'
GL: 3,398'

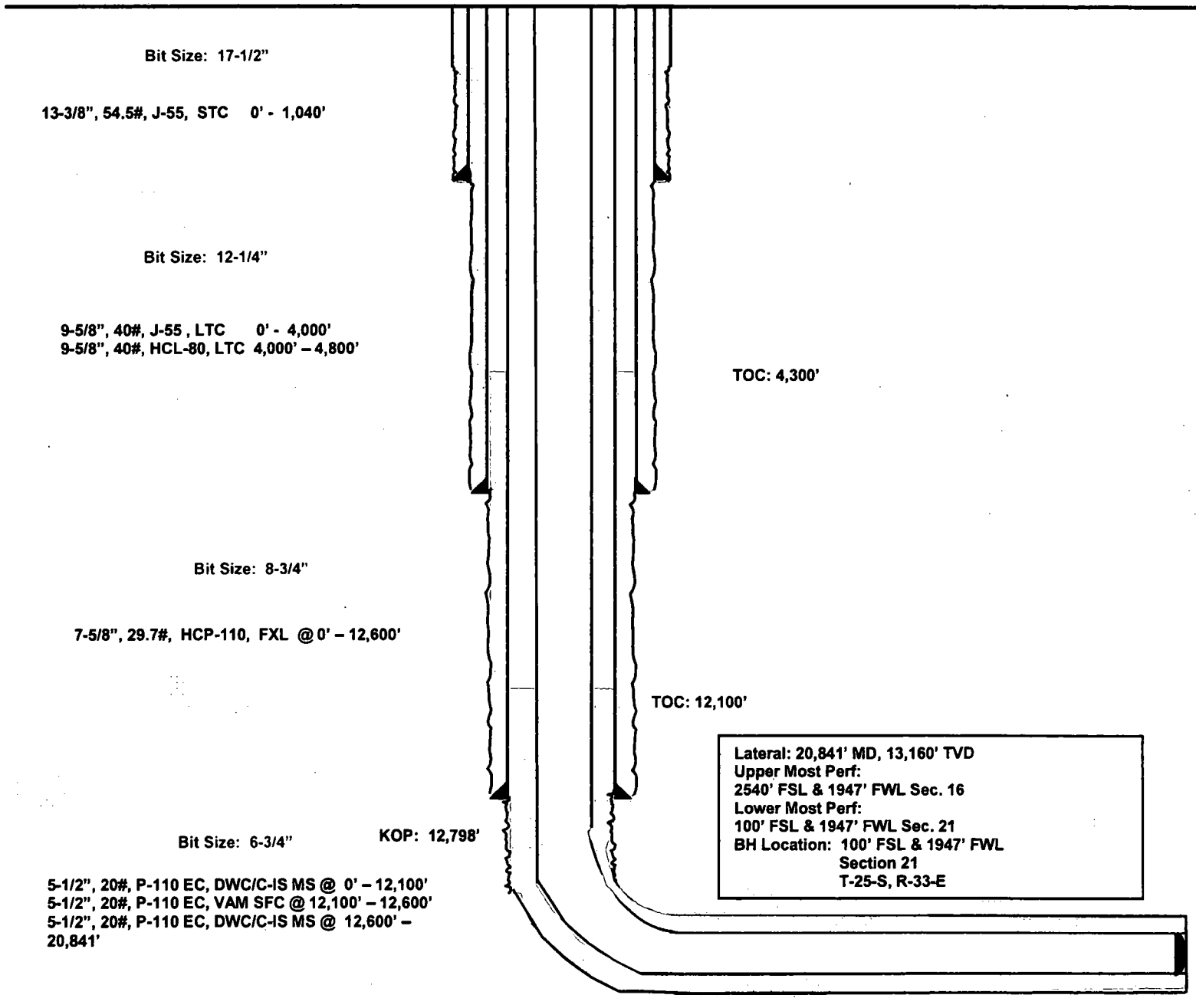


2390' FSL
2349' FEL
Section 16
T-25-S, R-33-E

Proposed Wellbore
Design B

API: 30-025-45936

KB: 3,423'
GL: 3,398'



Design B

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 1,040'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0 – 4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,800'	9.625"	40#	HCL-80	LTC	1.125	1.25	1.60
8.75"	0 – 12,600'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 12,100'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	12,100'–12,600'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	12,600' – 20,841'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/sk	Slurry Description
1,040' 13-3/8"	610	13.5	1.74	Lead: Class C + 4.0% Bentonite Gel + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.35	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 840')
4,800' 9-5/8"	760	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	300	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 3,840')
12,600' 7-5/8"	250	10.8	3.67	Lead: Class C + 3% CaCl2 + 3% Microbond (TOC @ 4,300')
	100	14.8	2.38	Tail: Class H + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 11,100')
20,841' 5-1/2"	710	14.8	1.31	Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 12,100')

As a contingency, EOG requests to pump a two stage cement job on the 7-5/8'' intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed.

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,040'	Fresh - Gel	8.6-8.8	28-34	N/c
1,040' – 4,800'	Brine	10.0-10.2	28-34	N/c
4,800'– 12,600'	Oil Base	8.7-9.4	58-68	N/c - 6
12,600'– 20,841' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Green Drake 16 Fed Com
#759H

OH

Plan: Plan #0.1

Standard Planning Report

03 July, 2019

Planning Report

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #759H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3423.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3423.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#759H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Green Drake 16 Fed Com				
Site Position:		**Northing:**	411,802.00 usft	**Latitude:**	32° 7' 47.652 N
From:	Map	**Easting:**	773,380.00 usft	**Longitude:**	103° 35' 1.431 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.40 °

Well	#759H					
Well Position	**+N/-S**	11.0 usft	**Northing:**	411,813.00 usft	**Latitude:**	32° 7' 47.603 N
	+E/-W	2,278.0 usft	**Easting:**	775,658.00 usft	**Longitude:**	103° 34' 34.940 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,398.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	7/23/2018	6.83	59.96	47,769.02374663

Design	Plan #0.1				
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	186.84	

Plan Survey Tool Program **Date** 7/3/2019

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,841.4	Plan #0.1 (OH)	MWD	
				OWSG MWD - Standard	

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,714.6	14.29	281.49	3,707.2	17.7	-86.9	2.00	2.00	0.00	281.49	
6,960.7	14.29	281.49	6,852.8	177.3	-872.1	0.00	0.00	0.00	0.00	
7,675.2	0.00	0.00	7,560.0	195.0	-959.0	2.00	-2.00	0.00	180.00	
12,797.7	0.00	0.00	12,682.5	195.0	-959.0	0.00	0.00	0.00	0.00	KOP(GD 16 FC #709I
13,547.7	90.00	179.63	13,160.0	-282.5	-955.9	12.00	12.00	23.95	179.63	
20,841.4	90.00	179.63	13,160.0	-7,576.0	-909.0	0.00	0.00	0.00	0.00	PBHL(GD 16 FC #70

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #759H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3423.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3423.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#759H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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	2.00	281.49	3,100.0	0.3	-1.7	-0.1	2.00	2.00	0.00
3,200.0	4.00	281.49	3,199.8	1.4	-6.8	-0.6	2.00	2.00	0.00
3,300.0	6.00	281.49	3,299.5	3.1	-15.4	-1.3	2.00	2.00	0.00
3,400.0	8.00	281.49	3,398.7	5.6	-27.3	-2.3	2.00	2.00	0.00
3,500.0	10.00	281.49	3,497.5	8.7	-42.6	-3.5	2.00	2.00	0.00
3,600.0	12.00	281.49	3,595.6	12.5	-61.3	-5.1	2.00	2.00	0.00
3,700.0	14.00	281.49	3,693.1	17.0	-83.4	-6.9	2.00	2.00	0.00
3,714.6	14.29	281.49	3,707.2	17.7	-86.9	-7.2	2.00	2.00	0.00
3,800.0	14.29	281.49	3,790.0	21.9	-107.5	-8.9	0.00	0.00	0.00
3,900.0	14.29	281.49	3,886.9	26.8	-131.7	-10.9	0.00	0.00	0.00
4,000.0	14.29	281.49	3,983.8	31.7	-155.9	-12.9	0.00	0.00	0.00
4,100.0	14.29	281.49	4,080.7	36.6	-180.1	-14.9	0.00	0.00	0.00
4,200.0	14.29	281.49	4,177.6	41.5	-204.3	-16.9	0.00	0.00	0.00
4,300.0	14.29	281.49	4,274.5	46.5	-228.5	-18.9	0.00	0.00	0.00
4,400.0	14.29	281.49	4,371.4	51.4	-252.7	-20.9	0.00	0.00	0.00
4,500.0	14.29	281.49	4,468.3	56.3	-276.9	-22.9	0.00	0.00	0.00
4,600.0	14.29	281.49	4,565.2	61.2	-301.1	-24.9	0.00	0.00	0.00
4,700.0	14.29	281.49	4,662.1	66.1	-325.3	-26.9	0.00	0.00	0.00
4,800.0	14.29	281.49	4,759.0	71.1	-349.4	-28.9	0.00	0.00	0.00
4,900.0	14.29	281.49	4,855.9	76.0	-373.6	-30.9	0.00	0.00	0.00
5,000.0	14.29	281.49	4,952.8	80.9	-397.8	-32.9	0.00	0.00	0.00
5,100.0	14.29	281.49	5,049.7	85.8	-422.0	-34.9	0.00	0.00	0.00
5,200.0	14.29	281.49	5,146.6	90.7	-446.2	-36.9	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #759H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3423.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3423.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#759H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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	14.29	281.49	5,243.5	95.6	-470.4	-38.9	0.00	0.00	0.00
5,400.0	14.29	281.49	5,340.5	100.6	-494.6	-40.9	0.00	0.00	0.00
5,500.0	14.29	281.49	5,437.4	105.5	-518.8	-42.9	0.00	0.00	0.00
5,600.0	14.29	281.49	5,534.3	110.4	-543.0	-44.9	0.00	0.00	0.00
5,700.0	14.29	281.49	5,631.2	115.3	-567.2	-46.9	0.00	0.00	0.00
5,800.0	14.29	281.49	5,728.1	120.2	-591.4	-48.9	0.00	0.00	0.00
5,900.0	14.29	281.49	5,825.0	125.2	-615.5	-50.9	0.00	0.00	0.00
6,000.0	14.29	281.49	5,921.9	130.1	-639.7	-52.9	0.00	0.00	0.00
6,100.0	14.29	281.49	6,018.8	135.0	-663.9	-54.9	0.00	0.00	0.00
6,200.0	14.29	281.49	6,115.7	139.9	-688.1	-56.9	0.00	0.00	0.00
6,300.0	14.29	281.49	6,212.6	144.8	-712.3	-58.9	0.00	0.00	0.00
6,400.0	14.29	281.49	6,309.5	149.8	-736.5	-61.0	0.00	0.00	0.00
6,500.0	14.29	281.49	6,406.4	154.7	-760.7	-63.0	0.00	0.00	0.00
6,600.0	14.29	281.49	6,503.3	159.6	-784.9	-65.0	0.00	0.00	0.00
6,700.0	14.29	281.49	6,600.2	164.5	-809.1	-67.0	0.00	0.00	0.00
6,800.0	14.29	281.49	6,697.1	169.4	-833.3	-69.0	0.00	0.00	0.00
6,900.0	14.29	281.49	6,794.0	174.4	-857.4	-71.0	0.00	0.00	0.00
6,960.7	14.29	281.49	6,852.8	177.3	-872.1	-72.2	0.00	0.00	0.00
7,000.0	13.50	281.49	6,891.0	179.2	-881.4	-72.9	2.00	-2.00	0.00
7,100.0	11.50	281.49	6,988.6	183.5	-902.6	-74.7	2.00	-2.00	0.00
7,200.0	9.50	281.49	7,086.9	187.2	-920.5	-76.2	2.00	-2.00	0.00
7,300.0	7.50	281.49	7,185.8	190.1	-935.0	-77.4	2.00	-2.00	0.00
7,400.0	5.50	281.49	7,285.2	192.4	-946.1	-78.3	2.00	-2.00	0.00
7,500.0	3.50	281.49	7,384.9	193.9	-953.7	-78.9	2.00	-2.00	0.00
7,600.0	1.50	281.49	7,484.8	194.8	-958.0	-79.3	2.00	-2.00	0.00
7,675.2	0.00	0.00	7,560.0	195.0	-959.0	-79.4	2.00	-2.00	0.00
7,700.0	0.00	0.00	7,584.8	195.0	-959.0	-79.4	0.00	0.00	0.00
7,800.0	0.00	0.00	7,684.8	195.0	-959.0	-79.4	0.00	0.00	0.00
7,900.0	0.00	0.00	7,784.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,884.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,100.0	0.00	0.00	7,984.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,200.0	0.00	0.00	8,084.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,300.0	0.00	0.00	8,184.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,400.0	0.00	0.00	8,284.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,500.0	0.00	0.00	8,384.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,600.0	0.00	0.00	8,484.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,700.0	0.00	0.00	8,584.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,800.0	0.00	0.00	8,684.8	195.0	-959.0	-79.4	0.00	0.00	0.00
8,900.0	0.00	0.00	8,784.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,000.0	0.00	0.00	8,884.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,100.0	0.00	0.00	8,984.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,200.0	0.00	0.00	9,084.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,300.0	0.00	0.00	9,184.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,400.0	0.00	0.00	9,284.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,500.0	0.00	0.00	9,384.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,600.0	0.00	0.00	9,484.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,700.0	0.00	0.00	9,584.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,800.0	0.00	0.00	9,684.8	195.0	-959.0	-79.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,784.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,000.0	0.00	0.00	9,884.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,100.0	0.00	0.00	9,984.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,200.0	0.00	0.00	10,084.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,300.0	0.00	0.00	10,184.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,400.0	0.00	0.00	10,284.8	195.0	-959.0	-79.4	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #759H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3423.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3423.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#759H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
10,500.0	0.00	0.00	10,384.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,600.0	0.00	0.00	10,484.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,700.0	0.00	0.00	10,584.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,800.0	0.00	0.00	10,684.8	195.0	-959.0	-79.4	0.00	0.00	0.00
10,900.0	0.00	0.00	10,784.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,000.0	0.00	0.00	10,884.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,100.0	0.00	0.00	10,984.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,200.0	0.00	0.00	11,084.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,300.0	0.00	0.00	11,184.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,400.0	0.00	0.00	11,284.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,500.0	0.00	0.00	11,384.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,600.0	0.00	0.00	11,484.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,700.0	0.00	0.00	11,584.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,800.0	0.00	0.00	11,684.8	195.0	-959.0	-79.4	0.00	0.00	0.00
11,900.0	0.00	0.00	11,784.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,000.0	0.00	0.00	11,884.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,100.0	0.00	0.00	11,984.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,200.0	0.00	0.00	12,084.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,300.0	0.00	0.00	12,184.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,400.0	0.00	0.00	12,284.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,500.0	0.00	0.00	12,384.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,600.0	0.00	0.00	12,484.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,700.0	0.00	0.00	12,584.8	195.0	-959.0	-79.4	0.00	0.00	0.00
12,797.7	0.00	0.00	12,682.5	195.0	-959.0	-79.4	0.00	0.00	0.00
KOP(GD 16 FC #709H)									
12,800.0	0.27	179.63	12,684.8	195.0	-959.0	-79.4	12.00	12.00	0.00
12,825.0	3.27	179.63	12,709.8	194.2	-959.0	-78.6	12.00	12.00	0.00
12,850.0	6.27	179.63	12,734.7	192.1	-959.0	-76.5	12.00	12.00	0.00
12,875.0	9.27	179.63	12,759.4	188.8	-959.0	-73.2	12.00	12.00	0.00
12,900.0	12.27	179.63	12,784.0	184.1	-958.9	-68.5	12.00	12.00	0.00
12,925.0	15.27	179.63	12,808.3	178.1	-958.9	-62.6	12.00	12.00	0.00
12,950.0	18.27	179.63	12,832.2	170.9	-958.8	-55.5	12.00	12.00	0.00
12,975.0	21.27	179.63	12,855.7	162.5	-958.8	-47.1	12.00	12.00	0.00
13,000.0	24.27	179.63	12,878.8	152.8	-958.7	-37.5	12.00	12.00	0.00
13,025.0	27.27	179.63	12,901.3	141.9	-958.7	-26.7	12.00	12.00	0.00
13,050.0	30.27	179.63	12,923.2	129.9	-958.6	-14.8	12.00	12.00	0.00
13,075.0	33.27	179.63	12,944.4	116.7	-958.5	-1.7	12.00	12.00	0.00
13,100.0	36.27	179.63	12,965.0	102.5	-958.4	12.4	12.00	12.00	0.00
13,125.0	39.27	179.63	12,984.7	87.2	-958.3	27.6	12.00	12.00	0.00
13,150.0	42.27	179.63	13,003.7	70.8	-958.2	43.8	12.00	12.00	0.00
13,175.0	45.27	179.63	13,021.7	53.5	-958.1	61.0	12.00	12.00	0.00
13,200.0	48.27	179.63	13,038.8	35.3	-958.0	79.0	12.00	12.00	0.00
FTP(GD 16 FC #709H)									
13,225.0	51.27	179.63	13,055.0	16.3	-957.8	98.0	12.00	12.00	0.00
13,250.0	54.27	179.63	13,070.1	-3.7	-957.7	117.7	12.00	12.00	0.00
13,275.0	57.27	179.63	13,084.2	-24.3	-957.6	138.2	12.00	12.00	0.00
13,300.0	60.27	179.63	13,097.1	-45.7	-957.5	159.4	12.00	12.00	0.00
13,325.0	63.27	179.63	13,108.9	-67.7	-957.3	181.3	12.00	12.00	0.00
13,350.0	66.27	179.63	13,119.6	-90.3	-957.2	203.7	12.00	12.00	0.00
13,375.0	69.27	179.63	13,129.1	-113.5	-957.0	226.7	12.00	12.00	0.00
13,400.0	72.27	179.63	13,137.3	-137.1	-956.9	250.1	12.00	12.00	0.00
13,425.0	75.27	179.63	13,144.3	-161.1	-956.7	273.9	12.00	12.00	0.00
13,450.0	78.27	179.63	13,150.0	-185.4	-956.6	298.0	12.00	12.00	0.00
13,475.0	81.27	179.63	13,154.4	-210.0	-956.4	322.4	12.00	12.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #759H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3423.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3423.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#759H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
13,500.0	84.27	179.63	13,157.6	-234.8	-956.2	347.0	12.00	12.00	0.00
13,525.0	87.27	179.63	13,159.4	-259.7	-956.1	371.8	12.00	12.00	0.00
13,547.7	90.00	179.63	13,160.0	-282.5	-955.9	394.3	12.00	12.00	0.00
13,600.0	90.00	179.63	13,160.0	-334.7	-955.6	446.2	0.00	0.00	0.00
13,700.0	90.00	179.63	13,160.0	-434.7	-954.9	545.4	0.00	0.00	0.00
13,800.0	90.00	179.63	13,160.0	-534.7	-954.3	644.6	0.00	0.00	0.00
13,900.0	90.00	179.63	13,160.0	-634.7	-953.7	743.8	0.00	0.00	0.00
14,000.0	90.00	179.63	13,160.0	-734.7	-953.0	843.0	0.00	0.00	0.00
14,100.0	90.00	179.63	13,160.0	-834.7	-952.4	942.2	0.00	0.00	0.00
14,200.0	90.00	179.63	13,160.0	-934.7	-951.7	1,041.4	0.00	0.00	0.00
14,300.0	90.00	179.63	13,160.0	-1,034.7	-951.1	1,140.6	0.00	0.00	0.00
14,400.0	90.00	179.63	13,160.0	-1,134.7	-950.4	1,239.9	0.00	0.00	0.00
14,500.0	90.00	179.63	13,160.0	-1,234.7	-949.8	1,339.1	0.00	0.00	0.00
14,600.0	90.00	179.63	13,160.0	-1,334.7	-949.2	1,438.3	0.00	0.00	0.00
14,700.0	90.00	179.63	13,160.0	-1,434.7	-948.5	1,537.5	0.00	0.00	0.00
14,800.0	90.00	179.63	13,160.0	-1,534.7	-947.9	1,636.7	0.00	0.00	0.00
14,900.0	90.00	179.63	13,160.0	-1,634.7	-947.2	1,735.9	0.00	0.00	0.00
15,000.0	90.00	179.63	13,160.0	-1,734.7	-946.6	1,835.1	0.00	0.00	0.00
15,100.0	90.00	179.63	13,160.0	-1,834.7	-945.9	1,934.3	0.00	0.00	0.00
15,200.0	90.00	179.63	13,160.0	-1,934.7	-945.3	2,033.5	0.00	0.00	0.00
15,300.0	90.00	179.63	13,160.0	-2,034.7	-944.7	2,132.7	0.00	0.00	0.00
15,400.0	90.00	179.63	13,160.0	-2,134.7	-944.0	2,231.9	0.00	0.00	0.00
15,500.0	90.00	179.63	13,160.0	-2,234.7	-943.4	2,331.2	0.00	0.00	0.00
15,600.0	90.00	179.63	13,160.0	-2,334.7	-942.7	2,430.4	0.00	0.00	0.00
15,700.0	90.00	179.63	13,160.0	-2,434.7	-942.1	2,529.6	0.00	0.00	0.00
15,800.0	90.00	179.63	13,160.0	-2,534.7	-941.4	2,628.8	0.00	0.00	0.00
15,900.0	90.00	179.63	13,160.0	-2,634.7	-940.8	2,728.0	0.00	0.00	0.00
16,000.0	90.00	179.63	13,160.0	-2,734.7	-940.1	2,827.2	0.00	0.00	0.00
16,100.0	90.00	179.63	13,160.0	-2,834.7	-939.5	2,926.4	0.00	0.00	0.00
16,200.0	90.00	179.63	13,160.0	-2,934.7	-938.9	3,025.6	0.00	0.00	0.00
16,300.0	90.00	179.63	13,160.0	-3,034.7	-938.2	3,124.8	0.00	0.00	0.00
16,400.0	90.00	179.63	13,160.0	-3,134.7	-937.6	3,224.0	0.00	0.00	0.00
16,500.0	90.00	179.63	13,160.0	-3,234.7	-936.9	3,323.2	0.00	0.00	0.00
16,600.0	90.00	179.63	13,160.0	-3,334.7	-936.3	3,422.5	0.00	0.00	0.00
16,700.0	90.00	179.63	13,160.0	-3,434.7	-935.6	3,521.7	0.00	0.00	0.00
16,800.0	90.00	179.63	13,160.0	-3,534.7	-935.0	3,620.9	0.00	0.00	0.00
16,900.0	90.00	179.63	13,160.0	-3,634.7	-934.4	3,720.1	0.00	0.00	0.00
17,000.0	90.00	179.63	13,160.0	-3,734.7	-933.7	3,819.3	0.00	0.00	0.00
17,100.0	90.00	179.63	13,160.0	-3,834.7	-933.1	3,918.5	0.00	0.00	0.00
17,200.0	90.00	179.63	13,160.0	-3,934.6	-932.4	4,017.7	0.00	0.00	0.00
17,300.0	90.00	179.63	13,160.0	-4,034.6	-931.8	4,116.9	0.00	0.00	0.00
17,400.0	90.00	179.63	13,160.0	-4,134.6	-931.1	4,216.1	0.00	0.00	0.00
17,500.0	90.00	179.63	13,160.0	-4,234.6	-930.5	4,315.3	0.00	0.00	0.00
17,600.0	90.00	179.63	13,160.0	-4,334.6	-929.9	4,414.5	0.00	0.00	0.00
17,700.0	90.00	179.63	13,160.0	-4,434.6	-929.2	4,513.8	0.00	0.00	0.00
17,800.0	90.00	179.63	13,160.0	-4,534.6	-928.6	4,613.0	0.00	0.00	0.00
17,900.0	90.00	179.63	13,160.0	-4,634.6	-927.9	4,712.2	0.00	0.00	0.00
18,000.0	90.00	179.63	13,160.0	-4,734.6	-927.3	4,811.4	0.00	0.00	0.00
18,100.0	90.00	179.63	13,160.0	-4,834.6	-926.6	4,910.6	0.00	0.00	0.00
18,200.0	90.00	179.63	13,160.0	-4,934.6	-926.0	5,009.8	0.00	0.00	0.00
18,300.0	90.00	179.63	13,160.0	-5,034.6	-925.4	5,109.0	0.00	0.00	0.00
18,400.0	90.00	179.63	13,160.0	-5,134.6	-924.7	5,208.2	0.00	0.00	0.00
18,500.0	90.00	179.63	13,160.0	-5,234.6	-924.1	5,307.4	0.00	0.00	0.00
18,600.0	90.00	179.63	13,160.0	-5,334.6	-923.4	5,406.6	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #759H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3423.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3423.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#759H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
18,700.0	90.00	179.63	13,160.0	-5,434.6	-922.8	5,505.8	0.00	0.00	0.00
18,800.0	90.00	179.63	13,160.0	-5,534.6	-922.1	5,605.1	0.00	0.00	0.00
18,900.0	90.00	179.63	13,160.0	-5,634.6	-921.5	5,704.3	0.00	0.00	0.00
19,000.0	90.00	179.63	13,160.0	-5,734.6	-920.8	5,803.5	0.00	0.00	0.00
19,100.0	90.00	179.63	13,160.0	-5,834.6	-920.2	5,902.7	0.00	0.00	0.00
19,200.0	90.00	179.63	13,160.0	-5,934.6	-919.6	6,001.9	0.00	0.00	0.00
19,300.0	90.00	179.63	13,160.0	-6,034.6	-918.9	6,101.1	0.00	0.00	0.00
19,400.0	90.00	179.63	13,160.0	-6,134.6	-918.3	6,200.3	0.00	0.00	0.00
19,500.0	90.00	179.63	13,160.0	-6,234.6	-917.6	6,299.5	0.00	0.00	0.00
19,600.0	90.00	179.63	13,160.0	-6,334.6	-917.0	6,398.7	0.00	0.00	0.00
19,700.0	90.00	179.63	13,160.0	-6,434.6	-916.3	6,497.9	0.00	0.00	0.00
19,800.0	90.00	179.63	13,160.0	-6,534.6	-915.7	6,597.1	0.00	0.00	0.00
19,900.0	90.00	179.63	13,160.0	-6,634.6	-915.1	6,696.4	0.00	0.00	0.00
20,000.0	90.00	179.63	13,160.0	-6,734.6	-914.4	6,795.6	0.00	0.00	0.00
20,100.0	90.00	179.63	13,160.0	-6,834.6	-913.8	6,894.8	0.00	0.00	0.00
20,200.0	90.00	179.63	13,160.0	-6,934.6	-913.1	6,994.0	0.00	0.00	0.00
20,300.0	90.00	179.63	13,160.0	-7,034.6	-912.5	7,093.2	0.00	0.00	0.00
20,400.0	90.00	179.63	13,160.0	-7,134.6	-911.8	7,192.4	0.00	0.00	0.00
20,500.0	90.00	179.63	13,160.0	-7,234.6	-911.2	7,291.6	0.00	0.00	0.00
20,600.0	90.00	179.63	13,160.0	-7,334.6	-910.6	7,390.8	0.00	0.00	0.00
20,700.0	90.00	179.63	13,160.0	-7,434.6	-909.9	7,490.0	0.00	0.00	0.00
20,800.0	90.00	179.63	13,160.0	-7,534.6	-909.3	7,589.2	0.00	0.00	0.00
20,841.4	90.00	179.63	13,160.0	-7,576.0	-909.0	7,630.3	0.00	0.00	0.00
PBHL(GD 16 FC #709H)									

Design Targets

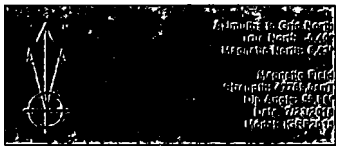
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(GD 16 FC #709H) - plan hits target center - Point	0.00	0.00	12,682.5	195.0	-959.0	412,008.00	774,699.00	32° 7' 49.599 N	103° 34' 46.076 W
FTP(GD 16 FC #709H) - plan misses target center by 163.4usft at 13200.0usft MD (13038.8 TVD, 35.3 N, -958.0 E) - Point	0.00	0.00	13,160.0	145.0	-959.0	411,958.00	774,699.00	32° 7' 49.104 N	103° 34' 46.080 W
PBHL(GD 16 FC #709H) - plan hits target center - Point	0.00	0.00	13,160.0	-7,576.0	-909.0	404,237.00	774,749.00	32° 6' 32.699 N	103° 34' 46.127 W

eog resources

Lea County, NM (NAD 83 NME)

Green Drake 16 Fed Com #759H

Plan #0.1



To convert a Magnetic Direction to a Grid Direction, Add 6.43°
To convert a Magnetic Direction to a True Direction, Add 6.83° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

PROJECT DETAILS: Lea County, NM (NAD 83 NME)	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level

WELL DETAILS: #759H

3398.0
KB = 25 @ 3423.0usft

Northing	Easting	Latitude	Longitude
411813.00	775658.00	32° 7' 47.803 N	103° 34' 34.940 W

SECTION DETAILS

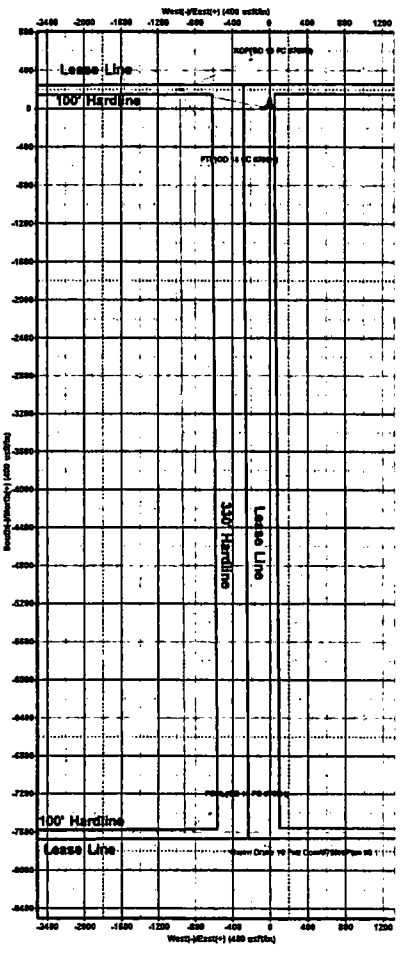
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3714.6	14.29	281.49	3707.2	17.7	-86.9	2.00	281.49	-7.2	
4	6960.7	14.29	281.49	6852.8	177.3	-872.1	0.00	0.00	-72.2	
5	7675.2	0.00	0.00	7560.0	195.0	-959.0	2.00	180.00	-79.4	
6	12797.7	0.00	0.00	12682.5	195.0	-959.0	0.00	0.00	-79.4	KOP(GD 16 FC #709H)
7	13547.7	90.00	179.63	13160.0	-282.5	-955.9	12.00	179.63	394.3	
8	20841.4	90.00	179.63	13160.0	-7576.0	-909.0	0.00	0.00	7630.3	PBHL(GD 16 FC #709H)

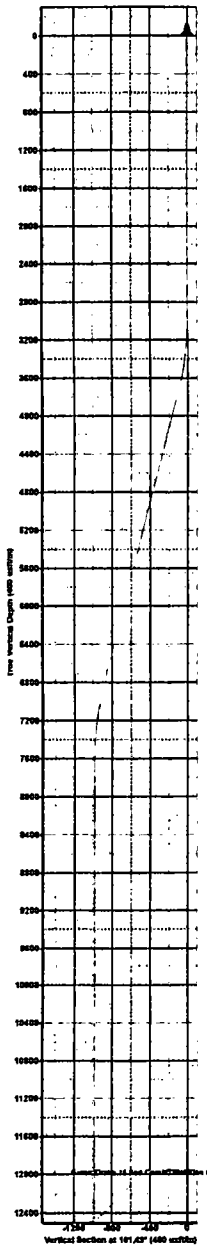
CASING DETAILS

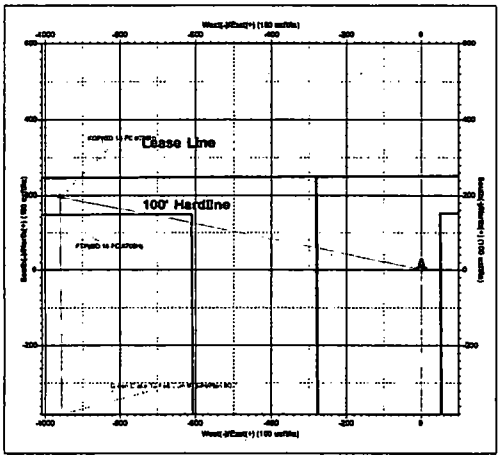
No casing data is available

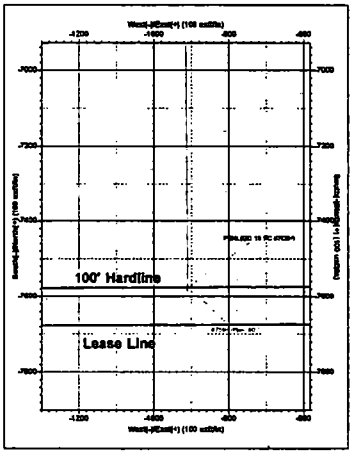
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

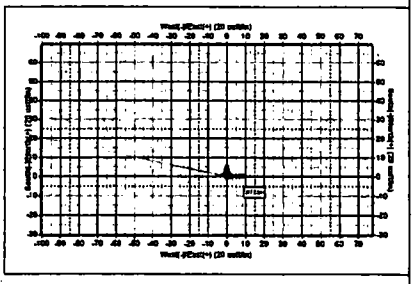
Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(GD 16 FC #709H)	12682.5	195.0	-959.0	412008.00	774699.00
FTP(GD 16 FC #709H)	13160.0	148.0	-959.0	411953.00	774699.00
PBHL(GD 16 FC #709H)	13160.0	-7576.0	-909.0	404237.00	774749.00

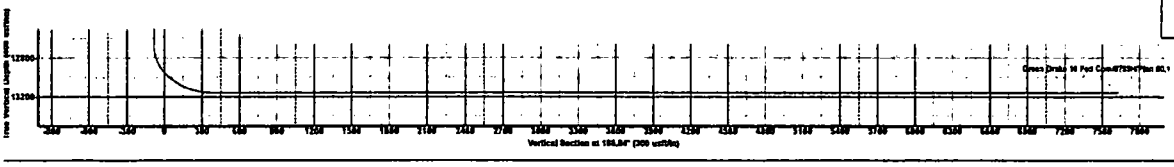


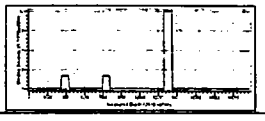












PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**EOG RESOURCES INCORPORATED**
LEASE NO.:	**NMNM026394**
WELL NAME & NO.:	**GREEN DRAKE 16 FED COM 759H**
SURFACE HOLE FOOTAGE:	**2390'/S & 2349'/E**
BOTTOM HOLE FOOTAGE	**100'/S & 1947'/E**
LOCATION:	**SECTION 16, T25S, R33E, NMPM**
COUNTY:	**LEA**

All Previous COAs Still Apply, Except for the Following:

Primary Casing Design

A. CASING

1. The **9 5/8"** surface casing shall be set at approximately **1040 feet** (a minimum of 25' into the Rustler Anhydrite and above the salt) and cemented to surface.

   a. **If cement does not circulate to 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 **6 hours** after pumping cement, ideally between 8-10 hours after completing the cement job.

   b. WOC time for a primary cement job will be a minimum of **8 hours** or **500 psi** compressive strength, whichever is greater. This is to include the lead cement.

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

   d. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.

Intermediate casing must be kept at least 1/3 fluid filled to meet BLM Collapse Requirement.

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

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage.

First Stage

- Operator will cement with intent to reach the top of Brushy Canyon.

Second Stage

- Operator will perform bradenhead squeeze. Cement to surface. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must run Echo-meter to verify fluid top and the volume of displacement fluid above the cement slurry in the annulus.

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

    - Cement should tie-back at least **200 feet** into previous string. Operator shall provide method of verification.

Alternate Casing Design

4. The **13 3/8"** surface casing shall be set at approximately **1040 feet** (a minimum of 25' into the Rustler Anhydrite and above the salt) and cemented to surface.
    a. **If cement does not circulate to 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 **6 hours** after pumping cement, ideally between 8-10 hours after completing the cement job.
    b. WOC time for a primary cement job will be a minimum of **8 hours** or **500 psi** compressive strength, whichever is greater. This is to include the lead cement.
    c. If cement falls back, remedial cementing will be done prior to drilling out that string.
    d. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
5. The minimum required fill of cement behind the **9 5/8"** first intermediate casing is:

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

6. The minimum required fill of cement behind the **7 5/8"** second intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage.

First Stage

- Operator will cement with intent to reach the top of Brushy Canyon.

Second Stage

- Operator will perform bradenhead squeeze. Cement should tie-back at least **200 feet** into previous string. Operator shall provide method of verification.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must run Echo-meter to verify fluid top and the volume of displacement fluid above the cement slurry in the annulus.

7. The minimum required fill of cement behind the **5-1/2"** production casing is:

    - Cement should tie-back at least **200 feet** into previous string. Operator shall provide method of verification.

B. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only 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 **10,000 (10M)** psi. **Variance approved to use a 5M annular. The annular must be tested to full working pressure (5,000 psi).**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. 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.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. 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.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed

JJP07112019

GENERAL REQUIREMENTS

1. 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)

   ☒ Chaves and Roosevelt Counties
   Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
   During office hours call (575) 627-0272.
   After office hours call (575)

   ☒ Eddy County
   Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

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

1. 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.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. 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 are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log (one log per well pad is acceptable) 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.

A. CASING

1. 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.

2. 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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: 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 at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. 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.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. 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.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. 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 RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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.

3. 5M or higher 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.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
   a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   b. 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.
   c. Manufacturer representative shall install the test plug for the initial BOP test.
   d. 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.
   e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

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

   a. In a water basin, 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.

The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. 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, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

d. 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.

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. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.