

**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 Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

Form C-101  
August 1, 2011

Permit 297377

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1. Operator Name and Address EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702		2. OGRID Number 7377
		3. API Number 30-025-49158
4. Property Code 331180	5. Property Name GRACE 16 STATE COM	6. Well No. 501H

**7. Surface Location**

UL - Lot P	Section 16	Township 18S	Range 33E	Lot Idn P	Feet From 870	N/S Line S	Feet From 325	E/W Line E	County Lea
---------------	---------------	-----------------	--------------	--------------	------------------	---------------	------------------	---------------	---------------

**8. Proposed Bottom Hole Location**

UL - Lot A	Section 16	Township 18S	Range 33E	Lot Idn A	Feet From 100	N/S Line N	Feet From 330	E/W Line E	County Lea
---------------	---------------	-----------------	--------------	--------------	------------------	---------------	------------------	---------------	---------------

**9. Pool Information**

MESCALERO ESCARPE;BONE SPRING	45793
-------------------------------	-------

**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3868
16. Multiple N	17. Proposed Depth 14453	18. Formation Bone Spring	19. Contractor	20. Spud Date 7/15/2021
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	13.5	10.75	40.5	1771	590	0
Int1	9.875	8.75	38.5	10719	830	0
Prod	7.875	5.5	17	14453	2120	8695

**Casing/Cement Program: Additional Comments**

10,719'-14,469 Pilot Plug
---------------------------

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.	<b>OIL CONSERVATION DIVISION</b>	
Signature:		
Printed Name: Electronically filed by Kay Maddox	Approved By: Paul F Kautz	
Title: Regulatory Agent	Title: Geologist	
Email Address: kay_maddox@eogresources.com	Approved Date: 7/8/2021	Expiration Date: 7/8/2023
Date: 6/16/2021	Phone: 432-686-3658	Conditions of Approval Attached

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 Rd., Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa 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.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-49158</b>	Pool Code <b>13160</b>	Pool Name <b>CORBIN;BONE SPRING, SOUTH</b>
Property Code <b>331180</b>	Property Name <b>GRACE 16 STATE COM</b>	Well Number <b>501H</b>
OGRID No. <b>7377</b>	Operator Name <b>EOG RESOURCES, INC.</b>	Elevation <b>3868'</b>

## 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	16	18 S	33 E		870	SOUTH	325	EAST	LEA

## Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	16	18 S	33 E		100	NORTH	330	EAST	LEA
Dedicated Acres <b>320.00</b>	Joint or Infill	Consolidated Code	Order No.						

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.

<p>LOWER MOST PERF./ BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1983 X = 748162' Y = 638897' LAT. = N 32.754558° LONG. = W 103.660571° NAD 1927 X = 706983' Y = 638833' LAT. = N 32.754437° LONG. = W 103.660070°</p> <p>SURFACE LOCATION NEW MEXICO EAST NAD 1983 X = 748199' Y = 634587' LAT. = N 32.742712° LONG. = W 103.660539° NAD 1927 X = 707020' Y = 634523° LAT. = N 32.742590° LONG. = W 103.660039°</p> <p>UPPER MOST PERF. NEW MEXICO EAST NAD 1983 X = 748199' Y = 633817' LAT. = N 32.740594° LONG. = W 103.660554° NAD 1927 X = 707020' Y = 633753° LAT. = N 32.740472° LONG. = W 103.660054°</p> <p>HZ SPACING UNIT</p> <p>AZ = 179.97° 770.5'</p> <p>AZ = 359.58° 5080.7'</p> <p>X = 745853' Y = 638973'</p> <p>X = 748491' Y = 639001'</p> <p>X = 748510' Y = 636361'</p> <p>X = 745892' Y = 633694'</p> <p>X = 748530' Y = 633720'</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Star L Harrell</i> 6/16/2021 Signature Date</p> <p>Star L Harrell Print Name</p> <p>star_harrell@eogresources.com E-mail Address</p> <p><b>SURVEYORS CERTIFICATION</b></p> <p>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 and correct to the best of my belief.</p> <p>APRIL 22, 2021 Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p><i>Ralph B. Chustz, Jr.</i> RALPH B. CHUSTZ, JR. NEW MEXICO PROFESSIONAL SURVEYOR 26264 05/13/2021</p> <p>Job No.: EOG B210018 RALPH B. CHUSTZ, JR., N.M.P.L.S. Certificate Number 26264</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**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 Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

## GAS CAPTURE PLAN

Date: 7/8/2021

☒ Original

Operator & OGRID No.: [7377] EOG RESOURCES INC

☐ Amended - Reason for  
Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### **Well(s)/Production Facility – Name of facility**

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
GRACE 16 STATE COM #501H	30-025-49158	P-16-18S-33E	0870S 0325E	30	None	CTB already connected to EOG low pressure gathering system. MMCF/D is +/- Gather: EOG Resources to Valor Compressor Station

### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to EOG RESOURCES INC and will be connected to EOG RESOURCES INC Low Pressure gathering system located in Lea County, New Mexico. It will require 0' of pipeline to connect the facility to Low Pressure gathering system. EOG RESOURCES INC provides (periodically) to EOG RESOURCES INC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, EOG RESOURCES INC and EOG RESOURCES INC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at EOG RESOURCES INC Processing Plant located in Sec. 13, Twn. 24S, Rng. 33E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### **Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on EOG RESOURCES INC system at that time. Based on current information, it is EOG RESOURCES INC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

**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 Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Conditions

Permit 297377

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: EOG RESOURCES INC [7377] P.O. Box 2267 Midland, TX 79702	API Number: 30-025-49158
	Well: GRACE 16 STATE COM #501H

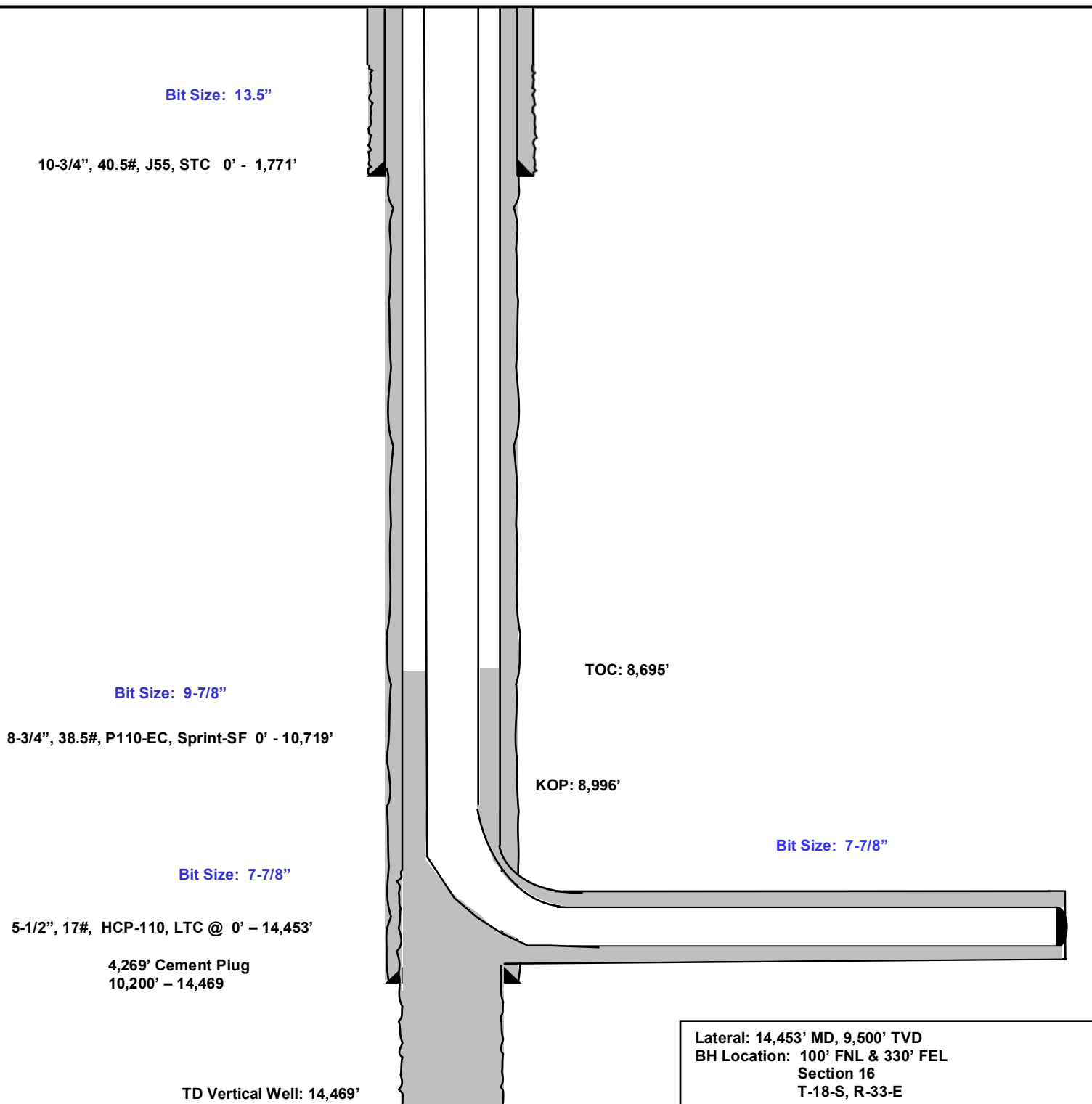
OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.
pkautz	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.

Grace 16 State Com #501H  
Lea County, New Mexico

## Proposed Wellbore

870' FSL  
325' FEL  
Section 16  
T-18-S, R-33-E

API: 30-025-\*\*\*\*\*

KB: 3,893'  
GL: 3,868'

**EOG RESOURCES, INC.**  
**Grace 16 State Com #501H**

**Permit Information:**

Well Name: Grace 16 State Com #501H

**Location:**

SHL: 870' FSL & 325' FEL, Section 16, T-18-S, R-33-E, Lea Co., N.M.

BHL: 100' FNL & 330' FEL, Section 16, T-18-S, R-33-E, Lea Co., N.M.

**Casing Program:**

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
13.5"	0' – 1,771'	10.75"	40.5#	J-55	STC	1.125	1.25	1.60
9.875"	0' – 10,719'	8.75"	38.5#	P-110EC	TLW	1.125	1.25	1.60
7.875"	0' – 14,453'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

**Cement Program:**

Depth	No. Sacks	Wt. ppg	Yld Ft <sup>3</sup> /ft	Slurry Description
1,771'	500	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	90	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
10,719'	580	12.7	2.22	1st Stage (Tail): Class C + 5% Salt
	250	14.4	1.20	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
10,719' – 14,469' Pilot	1120	14.5	1.20	4250' Pilot Plug – Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40%
14,453'	1000	14.4	1.20	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 8,695')

**Mud Program:**

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' – 1,771'	Fresh - Gel	8.6-8.8	28-34	N/c
1,771' – 10,719'	Brine	8.6-8.8	28-34	N/c
10,719' – 14,469' Pilot Hole	Oil Base	10.0-13	58-68	3 - 6
9,896 – 14,453' Lateral	Oil Base	8.8-10.0	40-42	8-10

**EOG RESOURCES, INC.**  
**Grace 16 State Com #501H**  
**Hydrogen Sulfide Plan Summary**

- A. All personnel shall receive proper H<sub>2</sub>S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

- Well control equipment
  - a. Flare line 150' from wellhead to be ignited by flare gun.
  - b. Choke manifold with a remotely operated choke.
  - c. Mud/gas separator
- Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

- H<sub>2</sub>S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.

(Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
  - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
  - c. Two wind socks will be placed in strategic locations, visible from all angles.

- Mud program:

**EOG RESOURCES, INC.**  
**Grace 16 State Com #501H**

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H<sub>2</sub>S bearing zones.

- Metallurgy:  
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.
- Communication:  
Communication will be via cell phones and land lines where available.



**EOG RESOURCES, INC.**  
**Grace 16 State Com #501H**  
**Emergency Assistance Telephone List**

**PUBLIC SAFETY:** **911 or**

Lea County Sheriff's Department	(575) 396-3611
Rod Coffman	
Fire Department:	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals:	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
New Mexico Oil Conservation	(575) 476-3440
U.S. Dept. of Labor	(575) 887-1174

**EOG Resources, Inc.**

EOG / Midland	Office (432) 686-3600
---------------	-----------------------

**Company Drilling Consultants:**

David Dominique	Cell (985) 518-5839
Mike Vann	Cell (817) 980-5507

**Drilling Engineer**

Daniel Moose	Office (432) 686-3609
	Cell (432) 894-1256

**Drilling Manager**

Aj Dach	Office (432) 686-3751
	Cell (817) 480-1167

**Drilling Superintendent**

Jason Townsend	Office (432) 848-9209
	Cell (210) 776-5131

**H&P Drilling**

H&P Drilling	Office (432) 563-5757
H&P 651 Drilling Rig	Rig (903) 509-7131

**Tool Pusher:**

Johnathan Craig	Cell (817) 760-6374
Brad Garrett	

**Safety**

Brian Chandler (HSE Manager)	Office (432) 686-3695
	Cell (817) 239-0251



## **Midland**

**Lea County, NM (NAD 83 NME)  
Grace 16 State Com  
#501H**

**OH**

**Plan: Plan #0.1**

## **Standard Planning Report**

**03 June, 2021**



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #501H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	KB = 25' @ 3893.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3893.0usft
<b>Site:</b>	Grace 16 State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#501H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1		

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

Site	Grace 16 State Com				
Site Position:		Northing:	634,587.00 usft	Latitude:	32.7427113°N
From:	Map	Easting:	748,199.00 usft	Longitude:	103.6605391°W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	#501H					
Well Position	+N/-S	0.0 usft	Northing:	634,587.00 usft	Latitude:	32.7427113°N
	+E/-W	0.0 usft	Easting:	748,199.00 usft	Longitude:	103.6605391°W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,868.0 usft
Grid Convergence:		0.36 °				

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	6/3/2021	6.63	60.36	47,791.99115004

<b>Design</b>	Plan #0.1				
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	359.51	

<b>Plan Survey Tool Program</b>	<b>Date</b>	6/3/2021			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.0	14,473.7 Plan #0.1 (OH)	EOG MWD+IFR1		
			MWD + IFR1		

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,244.9	6.90	180.00	2,244.1	-20.7	0.0	2.00	2.00	0.00	180.00	
8,726.1	6.90	180.00	8,678.4	-799.3	0.0	0.00	0.00	0.00	0.00	
9,071.1	0.00	0.00	9,022.5	-820.0	0.0	2.00	-2.00	0.00	180.00	KOP(Grace 16 State )
9,291.5	26.46	0.00	9,235.2	-770.0	0.0	12.00	12.00	0.00	0.00	FTP(Grace 16 State )
9,821.1	90.00	359.57	9,499.9	-342.5	-2.2	12.00	12.00	-0.08	-0.48	
14,473.7	90.00	359.57	9,500.0	4,310.0	-37.0	0.00	0.00	0.00	0.00	PBHL(Grace 16 State )



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #501H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	KB = 25' @ 3893.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3893.0usft
<b>Site:</b>	Grace 16 State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#501H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	2.00	180.00	2,000.0	-1.7	0.0	-1.7	2.00	2.00	0.00
2,100.0	4.00	180.00	2,099.8	-7.0	0.0	-7.0	2.00	2.00	0.00
2,200.0	6.00	180.00	2,199.5	-15.7	0.0	-15.7	2.00	2.00	0.00
2,244.9	6.90	180.00	2,244.1	-20.7	0.0	-20.7	2.00	2.00	0.00
2,300.0	6.90	180.00	2,298.8	-27.4	0.0	-27.4	0.00	0.00	0.00
2,400.0	6.90	180.00	2,398.0	-39.4	0.0	-39.4	0.00	0.00	0.00
2,500.0	6.90	180.00	2,497.3	-51.4	0.0	-51.4	0.00	0.00	0.00
2,600.0	6.90	180.00	2,596.6	-63.4	0.0	-63.4	0.00	0.00	0.00
2,700.0	6.90	180.00	2,695.9	-75.4	0.0	-75.4	0.00	0.00	0.00
2,800.0	6.90	180.00	2,795.1	-87.4	0.0	-87.4	0.00	0.00	0.00
2,900.0	6.90	180.00	2,894.4	-99.4	0.0	-99.4	0.00	0.00	0.00
3,000.0	6.90	180.00	2,993.7	-111.4	0.0	-111.4	0.00	0.00	0.00
3,100.0	6.90	180.00	3,093.0	-123.5	0.0	-123.4	0.00	0.00	0.00
3,200.0	6.90	180.00	3,192.3	-135.5	0.0	-135.5	0.00	0.00	0.00
3,300.0	6.90	180.00	3,291.5	-147.5	0.0	-147.5	0.00	0.00	0.00
3,400.0	6.90	180.00	3,390.8	-159.5	0.0	-159.5	0.00	0.00	0.00
3,500.0	6.90	180.00	3,490.1	-171.5	0.0	-171.5	0.00	0.00	0.00
3,600.0	6.90	180.00	3,589.4	-183.5	0.0	-183.5	0.00	0.00	0.00
3,700.0	6.90	180.00	3,688.6	-195.5	0.0	-195.5	0.00	0.00	0.00
3,800.0	6.90	180.00	3,787.9	-207.5	0.0	-207.5	0.00	0.00	0.00
3,900.0	6.90	180.00	3,887.2	-219.5	0.0	-219.5	0.00	0.00	0.00
4,000.0	6.90	180.00	3,986.5	-231.6	0.0	-231.5	0.00	0.00	0.00
4,100.0	6.90	180.00	4,085.7	-243.6	0.0	-243.6	0.00	0.00	0.00
4,200.0	6.90	180.00	4,185.0	-255.6	0.0	-255.6	0.00	0.00	0.00
4,300.0	6.90	180.00	4,284.3	-267.6	0.0	-267.6	0.00	0.00	0.00
4,400.0	6.90	180.00	4,383.6	-279.6	0.0	-279.6	0.00	0.00	0.00
4,500.0	6.90	180.00	4,482.8	-291.6	0.0	-291.6	0.00	0.00	0.00
4,600.0	6.90	180.00	4,582.1	-303.6	0.0	-303.6	0.00	0.00	0.00
4,700.0	6.90	180.00	4,681.4	-315.6	0.0	-315.6	0.00	0.00	0.00
4,800.0	6.90	180.00	4,780.7	-327.7	0.0	-327.6	0.00	0.00	0.00
4,900.0	6.90	180.00	4,879.9	-339.7	0.0	-339.7	0.00	0.00	0.00
5,000.0	6.90	180.00	4,979.2	-351.7	0.0	-351.7	0.00	0.00	0.00
5,100.0	6.90	180.00	5,078.5	-363.7	0.0	-363.7	0.00	0.00	0.00
5,200.0	6.90	180.00	5,177.8	-375.7	0.0	-375.7	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #501H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	KB = 25' @ 3893.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3893.0usft
<b>Site:</b>	Grace 16 State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#501H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	6.90	180.00	5,277.0	-387.7	0.0	-387.7	0.00	0.00	0.00	
5,400.0	6.90	180.00	5,376.3	-399.7	0.0	-399.7	0.00	0.00	0.00	
5,500.0	6.90	180.00	5,475.6	-411.7	0.0	-411.7	0.00	0.00	0.00	
5,600.0	6.90	180.00	5,574.9	-423.7	0.0	-423.7	0.00	0.00	0.00	
5,700.0	6.90	180.00	5,674.2	-435.8	0.0	-435.7	0.00	0.00	0.00	
5,800.0	6.90	180.00	5,773.4	-447.8	0.0	-447.8	0.00	0.00	0.00	
5,900.0	6.90	180.00	5,872.7	-459.8	0.0	-459.8	0.00	0.00	0.00	
6,000.0	6.90	180.00	5,972.0	-471.8	0.0	-471.8	0.00	0.00	0.00	
6,100.0	6.90	180.00	6,071.3	-483.8	0.0	-483.8	0.00	0.00	0.00	
6,200.0	6.90	180.00	6,170.5	-495.8	0.0	-495.8	0.00	0.00	0.00	
6,300.0	6.90	180.00	6,269.8	-507.8	0.0	-507.8	0.00	0.00	0.00	
6,400.0	6.90	180.00	6,369.1	-519.8	0.0	-519.8	0.00	0.00	0.00	
6,500.0	6.90	180.00	6,468.4	-531.9	0.0	-531.8	0.00	0.00	0.00	
6,600.0	6.90	180.00	6,567.6	-543.9	0.0	-543.8	0.00	0.00	0.00	
6,700.0	6.90	180.00	6,666.9	-555.9	0.0	-555.9	0.00	0.00	0.00	
6,800.0	6.90	180.00	6,766.2	-567.9	0.0	-567.9	0.00	0.00	0.00	
6,900.0	6.90	180.00	6,865.5	-579.9	0.0	-579.9	0.00	0.00	0.00	
7,000.0	6.90	180.00	6,964.7	-591.9	0.0	-591.9	0.00	0.00	0.00	
7,100.0	6.90	180.00	7,064.0	-603.9	0.0	-603.9	0.00	0.00	0.00	
7,200.0	6.90	180.00	7,163.3	-615.9	0.0	-615.9	0.00	0.00	0.00	
7,300.0	6.90	180.00	7,262.6	-628.0	0.0	-627.9	0.00	0.00	0.00	
7,400.0	6.90	180.00	7,361.8	-640.0	0.0	-639.9	0.00	0.00	0.00	
7,500.0	6.90	180.00	7,461.1	-652.0	0.0	-652.0	0.00	0.00	0.00	
7,600.0	6.90	180.00	7,560.4	-664.0	0.0	-664.0	0.00	0.00	0.00	
7,700.0	6.90	180.00	7,659.7	-676.0	0.0	-676.0	0.00	0.00	0.00	
7,800.0	6.90	180.00	7,758.9	-688.0	0.0	-688.0	0.00	0.00	0.00	
7,900.0	6.90	180.00	7,858.2	-700.0	0.0	-700.0	0.00	0.00	0.00	
8,000.0	6.90	180.00	7,957.5	-712.0	0.0	-712.0	0.00	0.00	0.00	
8,100.0	6.90	180.00	8,056.8	-724.0	0.0	-724.0	0.00	0.00	0.00	
8,200.0	6.90	180.00	8,156.0	-736.1	0.0	-736.0	0.00	0.00	0.00	
8,300.0	6.90	180.00	8,255.3	-748.1	0.0	-748.0	0.00	0.00	0.00	
8,400.0	6.90	180.00	8,354.6	-760.1	0.0	-760.1	0.00	0.00	0.00	
8,500.0	6.90	180.00	8,453.9	-772.1	0.0	-772.1	0.00	0.00	0.00	
8,600.0	6.90	180.00	8,553.2	-784.1	0.0	-784.1	0.00	0.00	0.00	
8,700.0	6.90	180.00	8,652.4	-796.1	0.0	-796.1	0.00	0.00	0.00	
8,726.1	6.90	180.00	8,678.4	-799.3	0.0	-799.2	0.00	0.00	0.00	
8,800.0	5.42	180.00	8,751.8	-807.2	0.0	-807.2	2.00	-2.00	0.00	
8,900.0	3.42	180.00	8,851.5	-814.9	0.0	-814.9	2.00	-2.00	0.00	
9,000.0	1.42	180.00	8,951.4	-819.1	0.0	-819.1	2.00	-2.00	0.00	
9,071.1	0.00	0.00	9,022.5	-820.0	0.0	-820.0	2.00	-2.00	0.00	
9,075.0	0.47	0.00	9,026.4	-820.0	0.0	-820.0	12.00	12.00	0.00	
9,100.0	3.47	0.00	9,051.4	-819.1	0.0	-819.1	12.00	12.00	0.00	
9,125.0	6.47	0.00	9,076.3	-817.0	0.0	-816.9	12.00	12.00	0.00	
9,150.0	9.47	0.00	9,101.0	-813.5	0.0	-813.5	12.00	12.00	0.00	
9,175.0	12.47	0.00	9,125.6	-808.7	0.0	-808.7	12.00	12.00	0.00	
9,200.0	15.47	0.00	9,149.8	-802.7	0.0	-802.7	12.00	12.00	0.00	
9,225.0	18.47	0.00	9,173.8	-795.4	0.0	-795.4	12.00	12.00	0.00	
9,250.0	21.47	0.00	9,197.2	-786.9	0.0	-786.8	12.00	12.00	0.00	
9,275.0	24.47	0.00	9,220.3	-777.1	0.0	-777.1	12.00	12.00	0.00	
9,291.5	26.46	0.00	9,235.2	-770.0	0.0	-770.0	12.00	12.00	0.00	
9,300.0	27.47	359.98	9,242.7	-766.2	0.0	-766.1	12.00	12.00	-0.22	
9,325.0	30.47	359.93	9,264.6	-754.1	0.0	-754.0	12.00	12.00	-0.19	
9,350.0	33.47	359.89	9,285.8	-740.8	0.0	-740.8	12.00	12.00	-0.16	
9,375.0	36.47	359.86	9,306.3	-726.5	-0.1	-726.5	12.00	12.00	-0.14	



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #501H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	KB = 25' @ 3893.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3893.0usft
<b>Site:</b>	Grace 16 State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#501H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)	
9,400.0	39.47	359.83	9,326.0	-711.1	-0.1	-711.1	12.00	12.00	-0.12	
9,425.0	42.47	359.80	9,344.9	-694.7	-0.2	-694.7	12.00	12.00	-0.10	
9,450.0	45.47	359.78	9,362.9	-677.4	-0.2	-677.3	12.00	12.00	-0.09	
9,475.0	48.47	359.76	9,379.9	-659.1	-0.3	-659.1	12.00	12.00	-0.08	
9,500.0	51.47	359.74	9,396.0	-640.0	-0.4	-639.9	12.00	12.00	-0.08	
9,525.0	54.47	359.72	9,411.1	-620.0	-0.5	-620.0	12.00	12.00	-0.07	
9,550.0	57.47	359.71	9,425.0	-599.3	-0.6	-599.3	12.00	12.00	-0.07	
9,575.0	60.47	359.69	9,437.9	-577.9	-0.7	-577.8	12.00	12.00	-0.06	
9,600.0	63.47	359.68	9,449.7	-555.8	-0.8	-555.8	12.00	12.00	-0.06	
9,625.0	66.47	359.66	9,460.2	-533.1	-0.9	-533.1	12.00	12.00	-0.05	
9,650.0	69.47	359.65	9,469.6	-510.0	-1.1	-509.9	12.00	12.00	-0.05	
9,675.0	72.47	359.64	9,477.8	-486.3	-1.2	-486.3	12.00	12.00	-0.05	
9,700.0	75.47	359.63	9,484.7	-462.3	-1.4	-462.3	12.00	12.00	-0.05	
9,725.0	78.47	359.62	9,490.3	-438.0	-1.5	-437.9	12.00	12.00	-0.05	
9,750.0	81.47	359.60	9,494.7	-413.4	-1.7	-413.3	12.00	12.00	-0.05	
9,775.0	84.47	359.59	9,497.7	-388.5	-1.9	-388.5	12.00	12.00	-0.05	
9,800.0	87.47	359.58	9,499.5	-363.6	-2.1	-363.6	12.00	12.00	-0.04	
9,821.1	90.00	359.57	9,499.9	-342.5	-2.2	-342.5	12.00	12.00	-0.04	
9,900.0	90.00	359.57	9,499.9	-263.6	-2.8	-263.6	0.00	0.00	0.00	
10,000.0	90.00	359.57	9,499.9	-163.6	-3.5	-163.6	0.00	0.00	0.00	
10,100.0	90.00	359.57	9,499.9	-63.6	-4.3	-63.6	0.00	0.00	0.00	
10,200.0	90.00	359.57	9,500.0	36.4	-5.0	36.4	0.00	0.00	0.00	
10,300.0	90.00	359.57	9,500.0	136.4	-5.8	136.4	0.00	0.00	0.00	
10,400.0	90.00	359.57	9,500.0	236.4	-6.5	236.4	0.00	0.00	0.00	
10,500.0	90.00	359.57	9,500.0	336.4	-7.3	336.4	0.00	0.00	0.00	
10,600.0	90.00	359.57	9,500.0	436.4	-8.0	436.4	0.00	0.00	0.00	
10,700.0	90.00	359.57	9,500.0	536.4	-8.8	536.4	0.00	0.00	0.00	
10,800.0	90.00	359.57	9,500.0	636.4	-9.5	636.4	0.00	0.00	0.00	
10,900.0	90.00	359.57	9,500.0	736.4	-10.3	736.4	0.00	0.00	0.00	
11,000.0	90.00	359.57	9,500.0	836.3	-11.0	836.4	0.00	0.00	0.00	
11,100.0	90.00	359.57	9,500.0	936.3	-11.8	936.4	0.00	0.00	0.00	
11,200.0	90.00	359.57	9,500.0	1,036.3	-12.5	1,036.4	0.00	0.00	0.00	
11,300.0	90.00	359.57	9,500.0	1,136.3	-13.3	1,136.4	0.00	0.00	0.00	
11,400.0	90.00	359.57	9,500.0	1,236.3	-14.0	1,236.4	0.00	0.00	0.00	
11,500.0	90.00	359.57	9,500.0	1,336.3	-14.8	1,336.4	0.00	0.00	0.00	
11,600.0	90.00	359.57	9,500.0	1,436.3	-15.5	1,436.4	0.00	0.00	0.00	
11,700.0	90.00	359.57	9,500.0	1,536.3	-16.3	1,536.4	0.00	0.00	0.00	
11,800.0	90.00	359.57	9,500.0	1,636.3	-17.0	1,636.4	0.00	0.00	0.00	
11,900.0	90.00	359.57	9,500.0	1,736.3	-17.8	1,736.4	0.00	0.00	0.00	
12,000.0	90.00	359.57	9,500.0	1,836.3	-18.5	1,836.4	0.00	0.00	0.00	
12,100.0	90.00	359.57	9,500.0	1,936.3	-19.3	1,936.4	0.00	0.00	0.00	
12,200.0	90.00	359.57	9,500.0	2,036.3	-20.0	2,036.4	0.00	0.00	0.00	
12,300.0	90.00	359.57	9,500.0	2,136.3	-20.7	2,136.4	0.00	0.00	0.00	
12,400.0	90.00	359.57	9,500.0	2,236.3	-21.5	2,236.4	0.00	0.00	0.00	
12,500.0	90.00	359.57	9,500.0	2,336.3	-22.2	2,336.4	0.00	0.00	0.00	
12,600.0	90.00	359.57	9,500.0	2,436.3	-23.0	2,436.4	0.00	0.00	0.00	
12,700.0	90.00	359.57	9,500.0	2,536.3	-23.7	2,536.4	0.00	0.00	0.00	
12,800.0	90.00	359.57	9,500.0	2,636.3	-24.5	2,636.4	0.00	0.00	0.00	
12,900.0	90.00	359.57	9,500.0	2,736.3	-25.2	2,736.4	0.00	0.00	0.00	
13,000.0	90.00	359.57	9,500.0	2,836.3	-26.0	2,836.4	0.00	0.00	0.00	
13,100.0	90.00	359.57	9,500.0	2,936.3	-26.7	2,936.4	0.00	0.00	0.00	
13,200.0	90.00	359.57	9,500.0	3,036.3	-27.5	3,036.4	0.00	0.00	0.00	
13,300.0	90.00	359.57	9,500.0	3,136.3	-28.2	3,136.4	0.00	0.00	0.00	
13,400.0	90.00	359.57	9,500.0	3,236.3	-29.0	3,236.4	0.00	0.00	0.00	



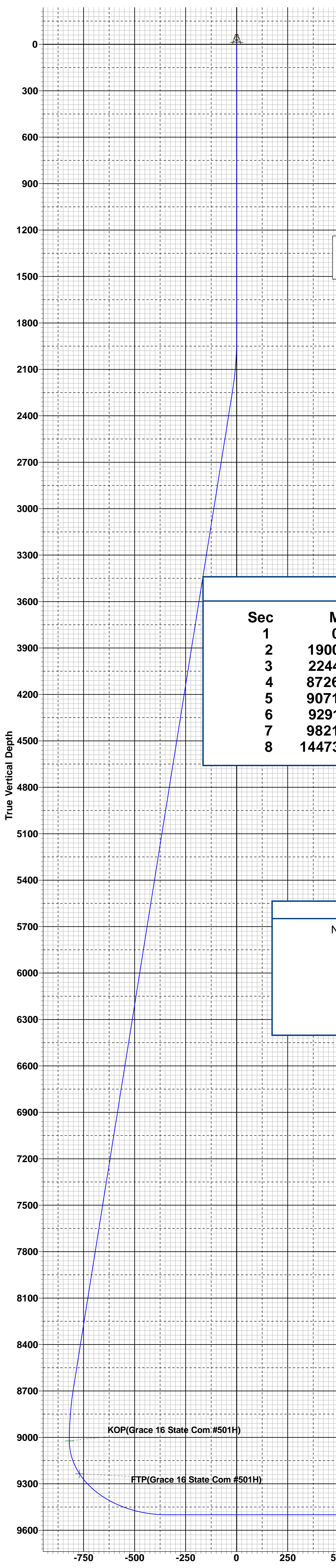
## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #501H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	KB = 25' @ 3893.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3893.0usft
<b>Site:</b>	Grace 16 State Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#501H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	90.00	359.57	9,500.0	3,336.3	-29.7	3,336.4	0.00	0.00	0.00	
13,600.0	90.00	359.57	9,500.0	3,436.3	-30.5	3,436.4	0.00	0.00	0.00	
13,700.0	90.00	359.57	9,500.0	3,536.3	-31.2	3,536.4	0.00	0.00	0.00	
13,800.0	90.00	359.57	9,500.0	3,636.3	-32.0	3,636.4	0.00	0.00	0.00	
13,900.0	90.00	359.57	9,500.0	3,736.3	-32.7	3,736.4	0.00	0.00	0.00	
14,000.0	90.00	359.57	9,500.0	3,836.3	-33.5	3,836.4	0.00	0.00	0.00	
14,100.0	90.00	359.57	9,500.0	3,936.3	-34.2	3,936.4	0.00	0.00	0.00	
14,200.0	90.00	359.57	9,500.0	4,036.3	-35.0	4,036.4	0.00	0.00	0.00	
14,300.0	90.00	359.57	9,500.0	4,136.3	-35.7	4,136.4	0.00	0.00	0.00	
14,400.0	90.00	359.57	9,500.0	4,236.3	-36.4	4,236.4	0.00	0.00	0.00	
14,473.7	90.00	359.57	9,500.0	4,310.0	-37.0	4,310.2	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
- hit/miss target										
- Shape										
KOP(Grace 16 State Co - plan hits target center - Point	0.00	0.00	9,022.5	-820.0	0.0	633,767.00	748,199.00	32.7404575°N		103.6605560°W
FTP(Grace 16 State Cor - plan hits target center - Point	0.00	0.00	9,235.2	-770.0	0.0	633,817.00	748,199.00	32.7405950°N		103.6605550°W
PBHL(Grace 16 State C - plan hits target center - Point	0.00	0.00	9,500.0	4,310.0	-37.0	638,897.00	748,162.00	32.7545579°N		103.6605704°W







Azimuths to Grid North  
True North: -0.36°  
Magnetic North: 6.27°

Magnetic Field  
Strength: 47792.0nT  
Dip Angle: 60.36°  
Date: 6/3/2021  
Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 6.27°  
To convert a Magnetic Direction to a True Direction, Add 6.63° East  
To convert a True Direction to a Grid Direction, Subtract 0.36°

WELL DETAILS: #501H			
KB = 25' @ 3893.0usft			
3868.0			
Northing	Easting	Latitude	Longitude
634587.00	748199.00	32.7427113°N	103.6605391°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	1900.0	0.00	0.00	1900.0	0.0	0.0	0.00	0.00	0.0	
3	2244.9	6.90	180.00	2244.1	-20.7	0.0	2.00	180.00	-20.7	
4	8726.1	6.90	180.00	8678.4	-799.3	0.0	0.00	0.00	-799.2	
5	9071.1	0.00	0.00	9022.5	-820.0	0.0	2.00	180.00	-820.0	KOP(Grace 16 State Com #501H)
6	9291.5	26.46	0.00	9235.2	-770.0	0.0	12.00	0.00	-770.0	FTP(Grace 16 State Com #501H)
7	9821.1	90.00	359.57	9499.9	-342.5	-2.2	12.00	-0.48	-342.5	
8	14473.7	90.00	359.57	9500.0	4310.0	-37.0	0.00	0.00	4310.2	PBHL(Grace 16 State Com #501H)

CASING DETAILS
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Grace 16 State Com #501H)	9022.5	-820.0	0.0	633767.00	748199.00
FTP(Grace 16 State Com #501H)	9235.2	-770.0	0.0	633817.00	748199.00
PBHL(Grace 16 State Com #501H)	9500.0	4310.0	-37.0	638897.00	748162.00

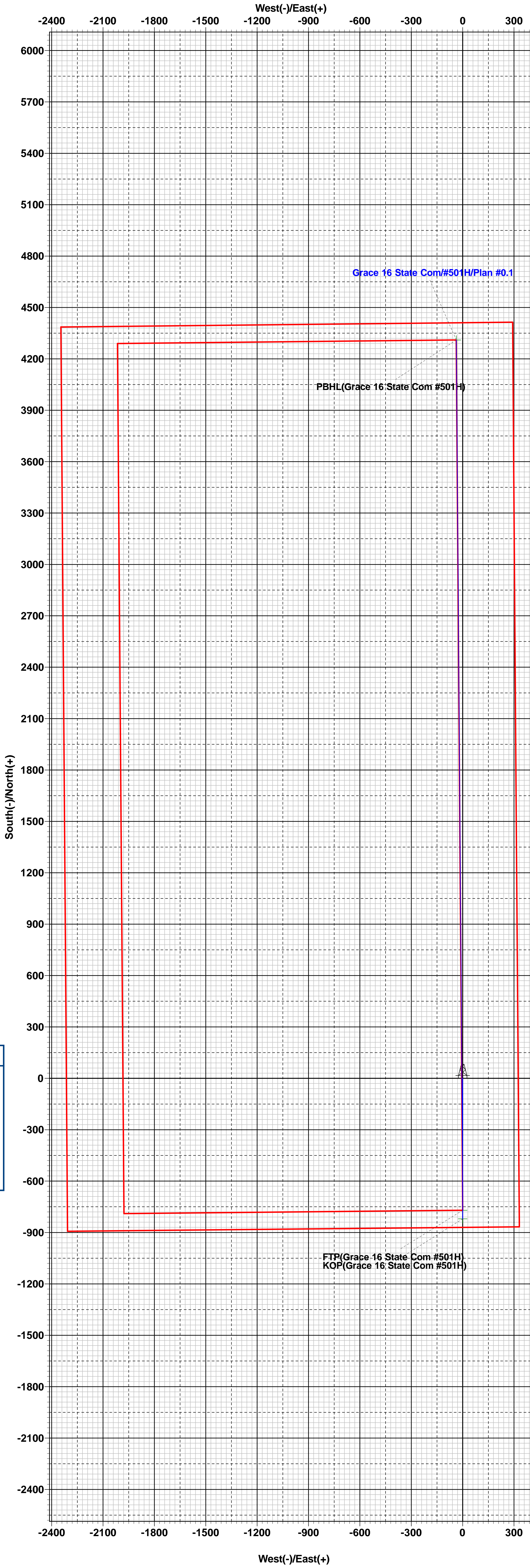
Lea County, NM (NAD 83 NME)

Grace 16 State Com #501H

Plan #0.1

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



Vertical Section at 359.51°



Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

## First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description

Effective May 25, 2021

**I. Operator:** EOG Resources, Inc. **OGRID:** 7377 **Date:** 06/ 16 /2021

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Grace 16 State Com 501H		P-16-18S-33E	870' FSL & 325' FEL	+/- 1000	+/- 3500	+/- 3000

**IV. Central Delivery Point Name:** Deep Elem 4 Fed Com CTB 700 [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Grace 16 State Com 501H		7/15/21	8/3/21	9/1/21	10/1/21	11/1/21

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

## **Section 2 – Enhanced Plan**

### **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☐ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

#### **IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

#### **X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### **Section 3 - Certifications**

**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### **Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: *Star L Harrell*

Printed Name: Star L Harrell

Title: Sr Regulatory Specialist

E-mail Address: Star\_Harrell@eogresources.com

Date: 6/16/2021

Phone: (432) 848-9161

**OIL CONSERVATION DIVISION**  
**(Only applicable when submitted as a standalone form)**

Approved By:

Title:

Approval Date:

Conditions of Approval:

## Natural Gas Management Plan Items VI-VIII

### **VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.**

- Separation equipment will be sized to provide adequate separation for anticipated rates.
- Adequate separation relates to retention time for Liquid – Liquid separation and velocity for Gas-Liquid separation.
- Collection systems are appropriately sized to handle facility production rates on all (3) phases.
- Ancillary equipment and metering is selected to be serviced without flow interruptions or the need to release gas from the well.

### **VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F 19.15.27.8 NMAC.**

#### Drilling Operations

- All flare stacks will be properly sized. The flare stacks will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared, unless there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety and the environment, at which point the gas will be vented.

#### Completions/Recompletions Operations

- New wells will not be flowed back until they are connected to a properly sized gathering system.
- The facility will be built/sized for maximum anticipated flowrates and pressures to minimize waste.
- For flowback operations, multiple stages of separation will be used as well as excess VRU and blowers to make sure waste is minimized off the storage tanks and facility.
- During initial flowback, the well stream will be routed to separation equipment.
- At an existing facility, when necessary, post separation natural gas will be flared until it meets pipeline specifications, at which point it will be turned into a collection system.
- At a new facility, post separation natural gas will be vented until storage tanks can safely function, at which point it will be flared until it meets pipeline spec.

#### Production Operations

- Weekly AVOs will be performed on all facilities.
- All flares will be equipped with auto-ignition systems and continuous pilot operations.
- After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- All plunger lift systems will be optimized to limit the amount of waste.
- All tanks will have automatic gauging equipment installed.
- Leaking thief hatches found during AVOs will be cleaned and properly re-sealed.

#### Performance Standards

- Production equipment will be designed to handle maximum anticipated rates and pressure.

- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Weekly AVOs will be performed on all wells and facilities that produce more than 60 Mcfd.

Measurement & Estimation

- All volume that is flared or vented that is not measured will be estimated.
- All measurement equipment for flared volumes will conform to API 14.10.
- No meter bypasses will be installed.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated.

**VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.**

- During downhole well maintenance, EOG will use best management practices to vent as minimally as possible.
- After downhole well maintenance, natural gas will be flared until it reaches pipeline specification.