

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1 Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2 Name of Operator
COG Operating LLC3a Address
550 W. Texas Ave., Suite 1300 Midland, TX 797013b. Phone No (include area code)
432-685-4384

4 Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 1650 FSL & 330 FWL SEC. 5, T17S, R30E, UNIT L
BHL: 1650 FSL & 330 FEL SEC. 5, T17S, R30E, UNIT I

5 Lease Serial No

NMNM-83591

6 If Indian, Allottee or Tribe Name

N/A

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

N/A

8. Well Name and No.

Gissler Federal #13H

9 API Well No

30-015-38121

10 Field and Pool, or Exploratory Area

Loco Hills; Glorieta-Yeso

11 County or Parish, State

Eddy, NM

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

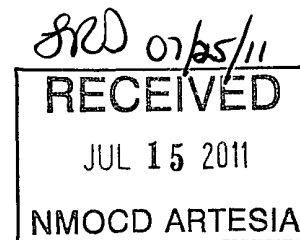
TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change TD
	☐ Change 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 recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

APD total depth 4750'

COG Operating LLC, respectfully requests permission to change to TVD: 5200' MD: 9617'.

A revised Directional Plan is attached for your review.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Kelly J. Holly

Title Permitting Tech

Signature

Date

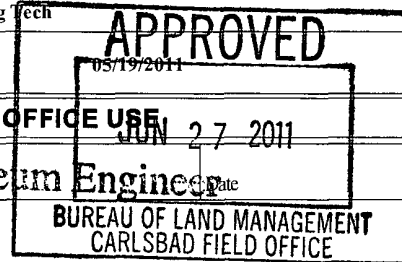
THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Petroleum Engineer

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



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)

16

Gissler Federal #13H
COG Operating LLC
30-015-38121
June 27, 2011
Conditions of Approval

Summary of Current Status:

- Gissler Federal was originally permitted in 2009 in the Yeso Group.
- Formation Tops, from the original APD Master Drilling Program are:

Quaternary	Surface
Top of Salt	500'
Base of Salt	1000'
Queen	2070'
Grayburg	2480' oil/gas
San Andres	2780' oil/gas
Glorietta	4220' oil/gas
Yeso Group	4300' oil/gas
- Original Planned Vertical well TVD Yeso Group with 5-1/2" Production Casing
- Aug 2010 Horizontal Revised TVD 4524' Yeso with 7" csg x 4-1/2" Production Liner
- May 2010 Revised TVD 5200' Yeso with no change in casing program

Conditions of Approval:

- a) Operator to comply with original Conditions of Approval, with the following revisions:
- b) Surface disturbance not to exceed originally approved pad without prior approval.
- c) Operator to verify completion drainhole at deeper TVD is in the Yeso Group, as approved.
- d) Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.
- e) 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 or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.
- f) All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.
Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

TMM 06/27/2011



COG Operating LLC

Eddy County, NM (NAN27 NME)

Gissler Federal #13H

Gissler Federal #13H

OH

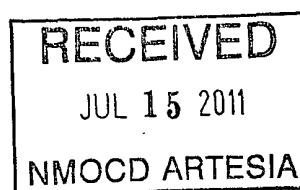
Plan: Plan #1 - 6-1/8" Hole

SHL = 1650' FSL & 330' FWL

BHL = 1650' FSL & 330' FEL

Standard Planning Report

16 May, 2011



Scientific Drilling
Directional Drilling Operations



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Gissler Federal #13H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3689 30usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3689 30usft
Site:	Gissler Federal #13H	North Reference:	Grid
Well:	Gissler Federal #13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 6-1/8" Hole		

Project:	Eddy County, NM (NAN27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Gissler Federal #13H		
Site Position:	From: Map	Northing:	677,007 70 usft
		Easting:	601,994 40 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 51' 38 652 N
		Longitude:	104° 0' 4 226 W
		Grid Convergence:	0 18 °

Well:	Gissler Federal #13H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0 00 usft	Easting:
Position Uncertainty	0 00 usft	Wellhead Elevation:	Ground Level:

Wellbore:	OH		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip/Angle (°)	Field Strength (nT)
	IGRF2010	2011/05/16	7 84	60 70	48,959

Design:	Plan #1 - 6-1/8" Hole		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0 00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0 00	0 00	0 00

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 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
4,722 54	0 00	0 00	4,722 54	0 00	0 00	0 00	0 00	0 00	0 00	
5,472 54	90 00	89 82	5,200 00	1 47	477 46	12 00	12 00	0 00	89 82	
9,616 59	90 00	89 82	5,200 00	14 20	4,621.50	0 00	0 00	0 00	0 00	PBHL-Gissler #13H



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Gissler Federal #13H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3689 30usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3689 30usft
Site:	Gissler Federal #13H	North Reference:	Grid
Well:	Gissler Federal #13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 6-1/8" Hole.		

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)
0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
425.00	0 00	0 00	425.00	0 00	0 00	0 00	0 00	0 00	0 00
13-3/8" Casing									
1,254.00	0 00	0 00	1,254.00	0 00	0 00	0 00	0 00	0 00	0 00
Yates									
1,400.00	0 00	0 00	1,400.00	0 00	0 00	0 00	0 00	0 00	0 00
9-5/8" Casing									
2,144.00	0 00	0 00	2,144.00	0 00	0 00	0 00	0 00	0 00	0 00
Queen									
2,883.00	0 00	0 00	2,883.00	0 00	0 00	0 00	0 00	0 00	0 00
San Andres									
4,309.00	0 00	0 00	4,309.00	0 00	0 00	0 00	0 00	0 00	0 00
Glorieta									
4,375.00	0 00	0 00	4,375.00	0 00	0 00	0 00	0 00	0 00	0 00
Paddock									
4,400.00	0 00	0 00	4,400.00	0 00	0 00	0 00	0 00	0 00	0 00
7" Casing 8-3/4" Hole									
4,722.54	0 00	0 00	4,722.54	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 12.00°/100'									
4,800.00	9.30	89.82	4,799.66	0.02	6.27	6.27	12.00	12.00	0.00
4,843.28	14.49	89.82	4,842.00	0.05	15.19	15.19	12.00	12.00	0.00
Blaineby									
4,900.00	21.30	89.82	4,895.94	0.10	32.60	32.60	12.00	12.00	0.00
5,000.00	33.30	89.82	4,984.64	0.24	78.38	78.38	12.00	12.00	0.00
5,100.00	45.30	89.82	5,061.89	0.44	141.59	141.59	12.00	12.00	0.00
5,200.00	57.30	89.82	5,124.31	0.67	219.49	219.49	12.00	12.00	0.00
5,300.00	69.30	89.82	5,169.16	0.95	308.66	308.66	12.00	12.00	0.00
5,400.00	81.30	89.82	5,194.50	1.25	405.21	405.21	12.00	12.00	0.00
5,472.54	90.00	89.82	5,200.00	1.47	477.47	477.47	12.00	12.00	0.00
EOC hold 90.00°									
5,500.00	90.00	89.82	5,200.00	1.55	504.93	504.93	0.00	0.00	0.00
5,600.00	90.00	89.82	5,200.00	1.86	604.93	604.93	0.00	0.00	0.00
5,700.00	90.00	89.82	5,200.00	2.17	704.93	704.93	0.00	0.00	0.00
5,800.00	90.00	89.82	5,200.00	2.47	804.93	804.93	0.00	0.00	0.00
5,900.00	90.00	89.82	5,200.00	2.78	904.93	904.93	0.00	0.00	0.00
6,000.00	90.00	89.82	5,200.00	3.09	1,004.92	1,004.93	0.00	0.00	0.00
6,100.00	90.00	89.82	5,200.00	3.39	1,104.92	1,104.93	0.00	0.00	0.00
6,200.00	90.00	89.82	5,200.00	3.70	1,204.92	1,204.93	0.00	0.00	0.00
6,300.00	90.00	89.82	5,200.00	4.01	1,304.92	1,304.93	0.00	0.00	0.00
6,400.00	90.00	89.82	5,200.00	4.32	1,404.92	1,404.93	0.00	0.00	0.00
6,500.00	90.00	89.82	5,200.00	4.62	1,504.92	1,504.93	0.00	0.00	0.00
6,600.00	90.00	89.82	5,200.00	4.93	1,604.92	1,604.93	0.00	0.00	0.00
6,700.00	90.00	89.82	5,200.00	5.24	1,704.92	1,704.93	0.00	0.00	0.00
6,800.00	90.00	89.82	5,200.00	5.55	1,804.92	1,804.93	0.00	0.00	0.00
6,900.00	90.00	89.82	5,200.00	5.85	1,904.92	1,904.93	0.00	0.00	0.00
7,000.00	90.00	89.82	5,200.00	6.16	2,004.92	2,004.93	0.00	0.00	0.00
7,100.00	90.00	89.82	5,200.00	6.47	2,104.92	2,104.93	0.00	0.00	0.00
7,200.00	90.00	89.82	5,200.00	6.77	2,204.92	2,204.93	0.00	0.00	0.00
7,300.00	90.00	89.82	5,200.00	7.08	2,304.92	2,304.93	0.00	0.00	0.00
7,400.00	90.00	89.82	5,200.00	7.39	2,404.92	2,404.93	0.00	0.00	0.00
7,500.00	90.00	89.82	5,200.00	7.70	2,504.92	2,504.93	0.00	0.00	0.00
7,600.00	90.00	89.82	5,200.00	8.00	2,604.92	2,604.93	0.00	0.00	0.00
7,700.00	90.00	89.82	5,200.00	8.31	2,704.92	2,704.93	0.00	0.00	0.00



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Gissler Federal #13H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3689 30usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3689 30usft
Site:	Gissler Federal #13H	North Reference:	Grid
Well:	Gissler Federal #13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 6-1/8" Hole		

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)
7,800.00	90.00	89.82	5,200.00	8.62	2,804.92	2,804.93	0.00	0.00	0.00
7,900.00	90.00	89.82	5,200.00	8.93	2,904.92	2,904.93	0.00	0.00	0.00
8,000.00	90.00	89.82	5,200.00	9.23	3,004.92	3,004.93	0.00	0.00	0.00
8,100.00	90.00	89.82	5,200.00	9.54	3,104.92	3,104.93	0.00	0.00	0.00
8,200.00	90.00	89.82	5,200.00	9.85	3,204.91	3,204.93	0.00	0.00	0.00
8,300.00	90.00	89.82	5,200.00	10.15	3,304.91	3,304.93	0.00	0.00	0.00
8,400.00	90.00	89.82	5,200.00	10.46	3,404.91	3,404.93	0.00	0.00	0.00
8,500.00	90.00	89.82	5,200.00	10.77	3,504.91	3,504.93	0.00	0.00	0.00
8,600.00	90.00	89.82	5,200.00	11.08	3,604.91	3,604.93	0.00	0.00	0.00
8,700.00	90.00	89.82	5,200.00	11.38	3,704.91	3,704.93	0.00	0.00	0.00
8,800.00	90.00	89.82	5,200.00	11.69	3,804.91	3,804.93	0.00	0.00	0.00
8,900.00	90.00	89.82	5,200.00	12.00	3,904.91	3,904.93	0.00	0.00	0.00
9,000.00	90.00	89.82	5,200.00	12.31	4,004.91	4,004.93	0.00	0.00	0.00
9,100.00	90.00	89.82	5,200.00	12.61	4,104.91	4,104.93	0.00	0.00	0.00
9,200.00	90.00	89.82	5,200.00	12.92	4,204.91	4,204.93	0.00	0.00	0.00
9,300.00	90.00	89.82	5,200.00	13.23	4,304.91	4,304.93	0.00	0.00	0.00
9,400.00	90.00	89.82	5,200.00	13.53	4,404.91	4,404.93	0.00	0.00	0.00
9,500.00	90.00	89.82	5,200.00	13.84	4,504.91	4,504.93	0.00	0.00	0.00
9,600.00	90.00	89.82	5,200.00	14.15	4,604.91	4,604.93	0.00	0.00	0.00
9,616.59	90.00	89.82	5,200.00	14.20	4,621.50	4,621.52	0.00	0.00	0.00
PBHL-Gissler #13H									

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									
PBHL-Gissler #13H	0.00	0.01	5,200.00	14.20	4,621.50	677,021.90	606,615.90	32° 51' 38.645 N	103° 59' 10.045 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
425.00	425.00	13-3/8" Casing	13-3/8	17-1/2	
1,400.00	1,400.00	9-5/8" Casing	9-5/8	12-1/4	
4,400.00	4,400.00	7" Casing 8-3/4" Hole	7	8-3/4	



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Gissler Federal #13H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3689 30usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3689 30usft
Site:	Gissler Federal #13H	North Reference:	Grid:
Well:	Gissler Federal #13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 6-1/8" Hole		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,254 00	1,254 00	Yates				
2,144 00	2,144 00	Queen				
2,883 00	2,883 00	San Andres				
4,309 00	4,309 00	Gloneta				
4,375 00	4,375 00	Paddock				
4,843 28	4,842 00	Blinbry				

Plan Annotations:					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)		
4,722.54	4,722.54	0.00	0.00	KOP Start Build 12 00°/100'	
5,472.54	5,200.00	1.47	477.47	EOC hold 90 00°	



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Gissler Federal #13H
Wellbore: OH
Design: Plan #1 - 6-1/8" Hole



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4722.54	0.00	0.00	4722.54	0.00	0.00	0.00	0.00	0.00	
3	5472.54	90.00	89.82	5200.00	1.47	477.46	12.00	89.82	477.46	
4	9616.59	90.00	89.82	5200.00	14.20	4621.50	0.00	0.00	4621.52	PBHL-Gissler #13H

Plan: Plan #1 - 6-1/8" Hole (Gissler Federal #13H/OH)

Created By: Julio Pina Date: 16-May-11

Checked: _____ Date: _____

Reviewed: _____ Date: _____

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-Gissler #13H	5200.00	14.20	4621.50	677021.90	606615.90	32° 51' 38.645 N	103° 59' 10.045 W	Point

PROJECT DETAILS: Eddy County, NM (NAN27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: Gissler Federal #13H

		Ground Level		3689.30		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	677007.70	601994.40	32° 51' 38.652 N	104° 0' 4.226 W	

AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 7.66°
To convert a True Direction to a Grid Direction, Subtract 0.18°

