Form 3160-5

# UNITED STATES

FORM	APPROVED
OMB N	lo. 1004-0137
Expires: C	October 31, 20

June 2019) DE	EPARTMENT OF THE INTERIOR		Expires: October 31, 2021
	REAU OF LAND MANAGEMENT	5. Lease Serial	<sup>l No.</sup> NMLC0068848
Do not use this	NOTICES AND REPORTS ON Was form for proposals to drill or to . Use Form 3160-3 (APD) for suc	re-enter an	llottee or Tribe Name
SUBMIT II	NTRIPLICATE - Other instructions on page	7. If Unit of Ca	A/Agreement, Name and/or No.
. Type of Well		8. Well Name a	and No.
	s Well Other	9. API Well No	and No. MEAT LOVER FEDERAL COM/605
2. Name of Operator COG OPERA			
a. Address 600 West Illinois Ave,	Midland, TX 79701 3b. Phone No. (432) 683-744	′	Pool or Exploratory Area i-09 S243310P; Upper Wolfcamp
Location of Well (Footage, Sec., T. SEC 18/T23S/R33E/NMP	.R.,M., or Survey Description)	11. Country or LEA/NM	Parish, State
12. CH	HECK THE APPROPRIATE BOX(ES) TO INI	DICATE NATURE OF NOTICE, REPORT O	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
✓ Notice of Intent	Acidize Deep Alter Casing Hydra	en Production (Start/Re	esume) Water Shut-Off Well Integrity
Subsequent Report	Casing Repair New	Construction Recomplete	<b>✓</b> Other
		and Abandon Temporarily Abando	on
Final Abandonment Notice	Convert to Injection Plug	Back Water Disposal	
completed. Final Abandonment N is ready for final inspection.)  COG Operating requests a r		, including reclamation, have been complete	Form 3160-4 must be filed once testing has been ed and the operator has detennined that the site ttached.
STAN WAGNER / Ph: (432) 253-	, , , , , , , , , , , , , , , , , , , ,	Regulatory Advisor Title	
Signature		Date 0	06/02/2022
	THE SPACE FOR FEDI	ERAL OR STATE OFICE USE	
approved by			
CHRISTOPHER WALLS / Ph: (5	75) 234-2234 / Approved	Petroleum Engineer Title	08/08/2022 Date
	ached. Approval of this notice does not warrant or equitable title to those rights in the subject les onduct operations thereon.		
:41- 10 II C C C+: 1001   T:41-	42 II C C Cti 1212	ry margan Irmayyingly, and svillfully, 41 4-	any department or against of the II-it-1 Ct-t

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)

#### **Additional Information**

#### **Location of Well**

0. SHL: NENW / 270 FNL / 1370 FWL / TWSP: 23S / RANGE: 33E / SECTION: 18 / LAT: 32.311295 / LONG: -103.615336 ( TVD: 0 feet, MD: 0 feet ) PPP: NENW / 1 FNL / 2310 FWL / TWSP: 23S / RANGE: 33E / SECTION: 19 / LAT: 32.2977519 / LONG: -103.612288 ( TVD: 12490 feet, MD: 17600 feet ) PPP: NENW / 100 FNL / 2310 FWL / TWSP: 23S / RANGE: 33E / SECTION: 18 / LAT: 32.311759 / LONG: -103.612293 ( TVD: 12305 feet, MD: 12400 feet ) BHL: SESW / 50 FSL / 2310 FWL / TWSP: 23S / RANGE: 33E / SECTION: 30 / LAT: 32.268625 / LONG: -103.612276 ( TVD: 12545 feet, MD: 27978 feet )

### 1. Geologic Formations

TVD of target	12,645' EOL	Pilot hole depth	NA
MD at TD:	27,978'	Deepest expected fresh water:	345'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1284	Water	
Top of Salt	1772	Salt	
Base of Salt	4761	Salt	
Lamar	5050	Salt Water	
Bell Canyon	5115	Salt Water	
Cherry Canyon	5919	Oil/Gas	
Brushy Canyon	7325	Oil/Gas	
Bone Spring Lime	8875	Oil/Gas	
1st Bone Spring Sand	10124	Oil/Gas	
2nd Bone Spring Sand	10766	Oil/Gas	
3rd Bone Spring Sand	11991	Oil/Gas	
Wolfcamp A	12536	Target	
Wolfcamp B	0	Not Penetrated	
Wolfcamp D	0	Not Penetrated	

#### 2. Casing Program

Hole Size	Casing	ınterval	Csg. Size	Weight	Grade	Conn.	SF	SF Burst	SF	SF
TIOIC SIZE	From	То	Osg. Oize	(lbs)	Orace	COIIII.	Collapse	or Burst	Body	Joint
14.75"	0	1350	10.75"	45.5	J55	BTC	3.38	1.14	11.64	12.96
9.875"	0	8500	7.625"	29.7	HCL80	BTC	1.56	1.05	2.88	2.90
8.750"	8500	11800	7.625"	29.7	P110 RY	W 513	1.33	1.40	2.68	1.61
6.75"	0	11300	5.5"	23	P110	BTC	1.98	2.34	2.80	2.79
6.75"	11300	27,978	5.5"	23	P110	W441	1.77	2.09	2.51	2.28
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse. Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

The 5 1/2" W441 casing will be run back at least 200' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Υ
Does casing meet API specifications? If no, attach casing specification sheet.	Υ
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Υ
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Υ
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Υ
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

#### 3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H₂0 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	644	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
Suii.	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Inter.	840	10.3	3.3	22	24	Halliburton tunded light
Stage 1	250	14.8	1.35	6.6	8	Tail: Class H
Prod	524	12.7	2	10.7	72	Lead: 50:50:10 H Blend
FIUU	1573	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend

If losses are encountered in the intermediate section a DV/ECP tool will be run ~50' above the Lamar Lime top, cement will be adjusted accordingly if this contingency is necessary.

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	50%
1 <sup>st</sup> Intermediate	0'	50%
Production	11,300'	35% OH in Lateral (KOP to EOL)

#### **4. Pressure Control Equipment**

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туре		x	Tested to:
			Ann	ular	Х	2500psi
			Blind Ram		Х	
9-7/8"	13-5/8"	5M	Pipe	Ram	Χ	5000psi
			Double	e Ram	Х	5000psi
			Other*			
			5M Aı	nnular	Х	5000psi
			Blind	Ram	Χ	
6-3/4"	13-5/8"	10M	Pipe	Ram	Χ	10000psi
			Double	e Ram	Х	Toooopsi
			Other*			

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2.				
Y	On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.				
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.				
	N Are anchors required by manufacturer?				
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.				

## 5. Mud Program

Depth		Туре	Weight	Viscosity	Water Loss
From	То	туре	(ppg)	Viscosity	Water Loss
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 12.5	35-45	<20

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

## 6. Logging and Testing Procedures

Logging, Coring and Testing.	
Υ	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Υ	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Add	ditional logs planned	Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
Y	CBL	Production casing (If cement not circulated to surface)
Υ	Mud log	Intermediate shoe to TD
N	PEX	

#### 7. Drilling Conditions

Condition	Specify what type and where?	
BH Pressure at deepest TVD	8220 psi at 12645' TVD	
Abnormal Temperature	NO 180 Deg. F.	

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H2S is present
Y	H2S Plan attached

#### 8. Other Facets of Operation

Y	Is it a walking operation?
Y	Is casing pre-set?

х	H2S Plan.
х	BOP & Choke Schematics.
х	Directional Plan

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

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** 

CONDITIONS

Action 138892

#### **CONDITIONS**

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	138892
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

#### CONDITIONS

Created By	Condition	Condition Date
pkautz	previous COA's apply	8/30/2022