

HOBBS OCD

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AUG 21 2017

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

5. Lease Serial No. NMNM112942	
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No. WHITE FALCON 16 FEDERAL 21H <i>SOM</i>	
9. API Well No. <i>(319419)</i> 30-025-43931	
10. Field and Pool, or Exploratory DOGIE DRAW / WOLFCAMP <i>17980</i>	
11. Sec., T. R. M. or Blk. and Survey or Area SEC 16 / T25S / R35E / NMP	
12. County or Parish LEA	13. State NM
14. Distance in miles and direction from nearest town or post office* 9 miles	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any) 200 feet	16. No. of acres in lease 680
17. Spacing Unit dedicated to this well 320	
18. Distance from proposed location* to nearest well, drilling, completed, 990 feet applied for, on this lease, ft.	19. Proposed Depth 12632 feet / 22439 feet
20. BLM/BIA Bond No. on file FED: NMB000215	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3246 feet	22. Approximate date work will start* 06/01/2017
23. Estimated duration 30 days	
24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature (Electronic Submission)	Name (Printed/Typed) Mayte Reyes / Ph: (575)748-6945	Date 03/28/2017
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 08/14/2017
Title Supervisor Multiple Resources Office CARLSBAD		

Application approval 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.
Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

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08/21/17



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

08/15/2017

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Mayte Reyes

Signed on: 03/27/2017

Title: Regulatory Analyst

Street Address: 2208 W Main Street

City: Artesia

State: NM

Zip: 88210

Phone: (575)748-6945

Email address: Mreyes1@concho.com

Field Representative

Representative Name: Rand French

Street Address: 2208 West Main Street

City: Artesia

State: NM

Zip: 88210

Phone: (575)748-6940

Email address: rfrench@concho.com

APD ID: 10400012719**Submission Date:** 03/28/2017**Operator Name:** COG OPERATING LLC**Well Name:** WHITE FALCON 16 FEDERAL COM**Well Number:** 21H**Well Type:** OIL WELL**Well Work Type:** Drill

Section 1 - General

APD ID: 10400012719**Tie to previous NOS?****Submission Date:** 03/28/2017**BLM Office:** CARLSBAD**User:** Mayte Reyes**Title:** Regulatory Analyst**Federal/Indian APD:** FED**Is the first lease penetrated for production Federal or Indian?** FED**Lease number:** NMNM112942**Lease Acres:** 680**Surface access agreement in place?****Allotted?****Reservation:****Agreement in place?** NO**Federal or Indian agreement:****Agreement number:****Agreement name:****Keep application confidential?** YES**Permitting Agent?** NO**APD Operator:** COG OPERATING LLC**Operator letter of designation:****Keep application confidential?** YES

Operator Info

Operator Organization Name: COG OPERATING LLC**Operator Address:** 600 West Illinois Ave**Zip:** 79701**Operator PO Box:****Operator City:** Midland**State:** TX**Operator Phone:** (432)683-7443**Operator Internet Address:** RODOM@CONCHO.COM

Section 2 - Well Information

Well in Master Development Plan? NO**Mater Development Plan name:****Well in Master SUPO?** NO**Master SUPO name:****Well in Master Drilling Plan?** NO**Master Drilling Plan name:****Well Name:** WHITE FALCON 16 FEDERAL COM**Well Number:** 21H**Well API Number:****Field/Pool or Exploratory?** Field and Pool**Field Name:** DOGIE DRAW**Pool Name:** WOLFCAMP

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

Is the proposed well in an area containing other mineral resources? USEABLE WATER,OIL

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Type of Well Pad: SINGLE WELL

Multiple Well Pad Name:

Number:

Well Class: HORIZONTAL

Number of Legs:

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 9 Miles

Distance to nearest well: 990 FT

Distance to lease line: 200 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: COG_White_Falcon_21H_C102_03-27-2017.pdf

Well work start Date: 06/01/2017

Duration: 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	226	FNL	2020	FWL	25S	35E	16	Aliquot NENW	32.137015	-103.374497	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	3246	0	0
KOP Leg #1	226	FNL	2020	FWL	25S	35E	16	Aliquot NENW	32.137015	-103.374497	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	3246	0	0
PPP Leg #1	330	FNL	2310	FWL	25S	35E	16	Aliquot NENW	32.136729	-103.37356	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	-2754	6000	6000

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
PPP Leg #1	2640	FSL	2310	FWL	25S	35E	21	Aliquot NESW 8	32.115868	-103.373557	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 132952	-9353	19900	12599
EXIT Leg #1	330	FSL	2310	FWL	25S	35E	21	Aliquot SESW 3	32.109533	-103.373556	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 112942	-9384	22300	12630
BHL Leg #1	200	FSL	2310	FWL	25S	35E	21	Aliquot SESW 6	32.109176	-103.373556	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 112942	-9386	22439	12632

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APD ID: 10400012719

Submission Date: 03/28/2017

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
17318	UNKNOWN	3246	0	0		NONE	No
17348	RUSTLER	2380	866	866		NONE	No
17349	TOP OF SALT	2039	1207	1207	SALT	NONE	No
17350	BASE OF SALT	-1756	5002	5002	ANHYDRITE	NONE	No
17360	LAMAR LS	-2086	5332	5332	LIMESTONE	NATURAL GAS,OIL	No
17345	BELL CANYON	-2118	5364	5364		NONE	No
17339	CHERRY CANYON	-3057	6303	6303		NATURAL GAS,OIL	No
18596	BRUSHY CANYON	-4516	7762	7762		NATURAL GAS,OIL	No
17316	BONE SPRING	-5756	9002	9002	SANDSTONE	NATURAL GAS,OIL	No
18620	AVALON	-5791	9037	9037		NATURAL GAS,OIL	No
18620	AVALON	-5965	9211	9211		NATURAL GAS,OIL	No
17359	BONE SPRING 1ST	-7146	10392	10392		NATURAL GAS,OIL	No
17364	BONE SPRING 2ND	-7664	10910	10910		NATURAL GAS,OIL	No
17366	BONE SPRING 3RD	-8669	11915	11915		NATURAL GAS,OIL	No
17333	WOLFCAMP	-9104	12350	12350	SHALE	NATURAL GAS,OIL	Yes
17320	STRAWN	-10470	13716	13716		NONE	No

Section 2 - Blowout Prevention

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

Pressure Rating (PSI): 3M

Rating Depth: 11887

Equipment: Annular. Accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for specs and hydrostatic test chart.

Testing Procedure: 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.

Choke Diagram Attachment:

COG_White_Falcon_21H_3M_Choke_03-27-2017.pdf

BOP Diagram Attachment:

COG_White_Falcon_21H_3M_BOP_03-27-2017.pdf

COG_White_Falcon_21H_Flex_Hose_06-26-2017.pdf

Pressure Rating (PSI): 5M

Rating Depth: 12750

Equipment: Annular, Blind Ram, Pipe Ram. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for specs and hydrostatic test chart.

Testing Procedure: 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.

Choke Diagram Attachment:

COG_White_Falcon_21H_5M_Choke_03-27-2017.pdf

BOP Diagram Attachment:

COG_White_Falcon_21H_5M_BOP_06-26-2017.pdf

COG_White_Falcon_21H_Flex_Hose_06-26-2017.pdf

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	895	0	895	-9386	-10281	895	J-55	68	STC	4.76	0.79	DRY	11.09	DRY	11.09
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	11887	0	11887	-9386	-21273	11887	L-80	47	OTHER	1.28	1.15	DRY	1.94	DRY	1.94
3	PRODUCTION	8.5	5.5	NEW	API	N	0	22439	0	22439	-9386	-31825	22439	P-110	23	OTHER	2.01	2.12	DRY	2.51	DRY	2.51

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Taperd String Spec:

Casing Design Assumptions and Worksheet(s):

COG_White_Falcon_21H_Casing_Prog_03-27-2017.pdf

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

Casing Attachments

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Taperd String Spec:

Casing Design Assumptions and Worksheet(s):

COG_White_Falcon_21H_Casing_Prog_03-27-2017.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Taperd String Spec:

Casing Design Assumptions and Worksheet(s):

COG_White_Falcon_21H_Casing_Prog_03-27-2017.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	895	350	1.75	13.5	612	50	Class C	4% Gel + 1% CaCl2
SURFACE	Tail		0	895	250	1.34	14.8	335	50	Class C	2% CaCl2
INTERMEDIATE	Lead		0	1188 7	1490	3.5	10.3	5215		Tuned Light Blend	As needed
INTERMEDIATE	Tail		0	1188 7	250	1.34	14.8	335	50	Class C	2% CaCl

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	2243 9	150	2.5	11.9	375	30	50:50:10 H Blend	As needed
PRODUCTION	Tail		0	2243 9	2730	1.24	14.4	3385	30	50:50:2 Class H Blend	As needed

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1188 7	2243 9	OIL-BASED MUD	9.6	11							
0	895	OTHER : FW Gel	8.6	8.8							FW Gel
895	1188 7	OTHER : Diesel Brine Emulsion	8.4	9							Diesel Brine Emulsion

Operator Name: COG OPERATING LLC

Well Name: WHITE FALCON 16 FEDERAL COM

Well Number: 21H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

None planned

List of open and cased hole logs run in the well:

CNL,GR

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7230

Anticipated Surface Pressure: 4451.39

Anticipated Bottom Hole Temperature(F): 180

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

COG_White_Falcon_21H_H2S_Schem_03-27-2017.pdf

COG_White_Falcon_21H_H2S_SUP_03-27-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

COG_White_Falcon_21H_AC_Report_03-27-2017.pdf

COG_White_Falcon_21H_Directional_Plan_03-27-2017.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

COG_White_Falcon_21H_Drilling_Prog_03-27-2017.pdf

Other Variance attachment:

COG_White_Falcon_21H_Flex_Hose_03-27-2017.pdf