

OCD Hobbs

HOBBS OCD  
APR 18 2018  
RECEIVED

MIN F  
SURF F

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM121958
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator COG OPERATING LLC (229137)		7. If Unit or CA Agreement, Name and No.
3a. Address 600 West Illinois Ave Midland TX 79701		8. Lease Name and Well No. (98725) DOMINATOR 25 FEDERAL 608H
3b. Phone No. (include area code) (432)683-7443		9. API Well No. 30-025-44705
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESW / 280 FSL / 1462 FWL / LAT 32.095023 / LONG -103.529875 At proposed prod. zone NWNW / 200 FNL / 1250 FWL / LAT 32.108216 / LONG -103.530563		10. Field and Pool, or Exploratory (98094) WILDCAT / WOLFCAMP
14. Distance in miles and direction from nearest town or post office* 19 miles		11. Sec., T, R, M, or Blk. and Survey or Area SEC 25 / T25S / R33E / NMP
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 360	12. County or Parish LEA
17. Spacing Unit dedicated to this well 160	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, 808 feet applied for, on this lease, ft.	19. Proposed Depth 12530 feet / 17240 feet	20. BLM/BIA Bond No. on file FED: NMB000215
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3339 feet	22. Approximate date work will start* 03/01/2018	23. Estimated duration 30 days
24. Attachments NSL-7658		

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see item 20 above).
- Operator certification
- 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 11/28/2017
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 04/09/2018
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)

Rec GCP 04/18/18

**APPROVED WITH CONDITIONS**  
Approval Date: 04/09/2018

Ka  
04/20/18

Double sided

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM 1:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

**Additional Operator Remarks**

**Location of Well**

- 1. SHL: SESW / 280 FSL / 1462 FWL / TWSP: 25S / RANGE: 33E / SECTION: 25 / LAT: 32.095023 / LONG: -103.529875 ( TVD: 0 feet, MD: 0 feet )
- PPP: SWSW / 330 FSL / 1250 FWL / TWSP: 25S / RANGE: 33E / SECTION: 25 / LAT: 32.09516 / LONG: -103.530559 ( TVD: 1000 feet, MD: 1000 feet )
- BHL: NWNW / 200 FNL / 1250 FWL / TWSP: 25S / RANGE: 33E / SECTION: 25 / LAT: 32.108216 / LONG: -103.530563 ( TVD: 12530 feet, MD: 17240 feet )

**BLM Point of Contact**

Name: Tenille Ortiz  
Title: Legal Instruments Examiner  
Phone: 5752342224  
Email: tortiz@blm.gov

**CONFIDENTIAL**

**Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

**CONFIDENTIAL**

Operator Name: COG OPERATING LLC

Well Name: DOMINATOR 25 FEDERAL

Well Number: 608H

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: MULTIPLE WELL

Multiple Well Pad Name: DOMINATOR 25 FEDERAL

Number: 107H, 307H, 407H, 608H, 712H AND 711H

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: 19 Miles

Distance to nearest well: 808 FT

Distance to lease line: 200 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: COG\_Dominator\_608H\_C102\_20171128082056.pdf

Well work start Date: 03/01/2018

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	280	FSL	146 2	FWL	25S	33E	25	Aliquot SESW 3	32.09502 3	- 103.5298 75	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 121958	333 9	0	0
KOP Leg #1	280	FSL	146 2	FWL	25S	33E	25	Aliquot SESW 3	32.09502 3	- 103.5298 75	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 121958	333 9	0	0
PPP Leg #1	330	FSL	125 0	FWL	25S	33E	25	Aliquot SWS W	32.09516	- 103.5305 59	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 121958	233 9	100 0	100 0



**APD ID:** 10400024978

**Submission Date:** 11/28/2017

Highlighted data reflects the most recent changes

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

[Show Final Text](#)

**Well Type:** OIL WELL

**Well Work Type:** Drill

**Section 1 - General**

**APD ID:** 10400024978

**Tie to previous NOS?**

**Submission Date:** 11/28/2017

**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:** NMNM121958

**Lease Acres:** 360

**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:**

**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:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Well API Number:**

**Field/Pool or Exploratory?** Field and Pool

**Field Name:** WILDCAT

**Pool Name:** WOLFCAMP

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



APD ID: 10400024978

Submission Date: 11/28/2017

Highlighted data reflects the most recent changes

Operator Name: COG OPERATING LLC

Well Name: DOMINATOR 25 FEDERAL

Well Number: 608H

[Show Final Text](#)

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
1	UNKNOWN	3339	0	0		NONE	No
2	RUSTLER	2269	1070	1070		NONE	No
3	TOP SALT	1829	1510	1510	SALT	NONE	No
4	BASE OF SALT	-1731	5070	5070	ANHYDRITE	NONE	No
5	LAMAR	-1849	5188	5188	LIMESTONE	NATURAL GAS,OIL	No
6	BELL CANYON	-1891	5230	5230		NONE	No
7	CHERRY CANYON	-2890	6229	6229		NATURAL GAS,OIL	No
8	BRUSHY CANYON	-4470	7809	7809		NATURAL GAS,OIL	No
9	BONE SPRING LIME	-5936	9275	9275	SANDSTONE	NATURAL GAS,OIL	No
10	UPPER AVALON SHALE	-6310	9649	9649	SHALE	NATURAL GAS,OIL	No
11	---	-6621	9960	9960		NATURAL GAS,OIL	No
12	BONE SPRING 1ST	-6968	10307	10307		NATURAL GAS,OIL	No
13	BONE SPRING 2ND	-7486	10825	10825		NATURAL GAS,OIL	No
14	BONE SPRING 3RD	-8555	11894	11894		NATURAL GAS,OIL	No
15	WOLFCAMP	-9016	12355	12355		NATURAL GAS,OIL	Yes
16	STRAWN	-10843	14182	14182		NATURAL GAS,OIL	No

**Section 2 - Blowout Prevention**

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Pressure Rating (PSI):** 10M

**Rating Depth:** 12530

**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\_Dominator\_608H\_10M\_Choke\_20171128084006.pdf

**BOP Diagram Attachment:**

COG\_Dominator\_608H\_10M\_BOP\_20171128084014.pdf

COG\_Dominator\_608H\_Flex\_Hose\_20171128095505.pdf

---

**Pressure Rating (PSI):** 5M

**Rating Depth:** 11794

**Equipment:** Annular, Blind Ram, Pipe Ram. 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\_Dominator\_608H\_5M\_Choke\_20171128083840.pdf

**BOP Diagram Attachment:**

COG\_Dominator\_608H\_5M\_BOP\_20171128083845.pdf

COG\_Dominator\_608H\_Flex\_Hose\_20171128095520.pdf

---

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**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	13.5	10.75	NEW	API	N	0	1095	0	1095	-8653	-9678	1095	N-80	45.5	OTHER - BTC	4.93	1.2	DRY	20.87	DRY	20.87
2	INTERMEDIATE	9.875	7.875	NEW	API	Y	0	11794	0	11794	-8653	-20153	11794	P-110	29.7	OTHER - BTC	1.29	1.05	DRY	3.1	DRY	3.1
3	PRODUCTION	6.75	5.0	NEW	API	N	0	17240	0	17240	-8653	-21064	17240	P-110	18	OTHER - BTC	1.86	1.93	DRY	3.23	DRY	3.23

**Casing Attachments**

**Casing ID:** 1      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

COG\_Dominator\_608H\_Casing\_Rpt\_20171128084254.pdf

Operator Name: COG OPERATING LLC

Well Name: DOMINATOR 25 FEDERAL

Well Number: 608H

### Casing Attachments

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

COG\_Dominator\_608H\_Casing\_Rpt\_20171128084532.pdf

Casing Design Assumptions and Worksheet(s):

COG\_Dominator\_608H\_Casing\_Rpt\_20171128084559.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

COG\_Dominator\_608H\_Casing\_Rpt\_20171128084705.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	1095	160	1.75	13.5	280	50	Lead: Class C	4% Gel + 1% CaCl <sub>2</sub>
SURFACE	Tail		0	1095	250	1.34	14.8	335	50	Tail: Class C	2% CaCl <sub>2</sub>
INTERMEDIATE	Lead		0	1179 4	970	3.6	10.3	3492	50	Tuned Light Blend	As needed
INTERMEDIATE	Tail		0	1179 4	250	1.08	16.4	270	50	Tail: Class H	As needed
PRODUCTION	Lead		0	1724 0	150	2.5	11.9	375	35	Lead: 50:50:10 H Blend	As needed

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		0	1724 0	640	1.24	14.4	793	35	Tail: 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
1179 4	1724 0	OIL-BASED MUD	10.5	12							OBM
0	1095	OTHER : FW Gel	8.6	8.8							FW Gel
1095 4	1179 4	OTHER : Brine Diesel Emulsion	8.4	9							Brine Diesel Emulsion

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

### 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:** 7820

**Anticipated Surface Pressure:** 5063.39

**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\_Dominator\_608H\_H2S\_Schem\_20171128085242.pdf

COG\_Dominator\_608H\_H2S\_SUP\_20171128085250.pdf

### Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

COG\_Dominator\_608H\_AC\_Rpt\_20171128085306.pdf

COG\_Dominator\_608H\_Direct\_Rpt\_20171128085313.pdf

**Other proposed operations facets description:**

Drilling Program Attached

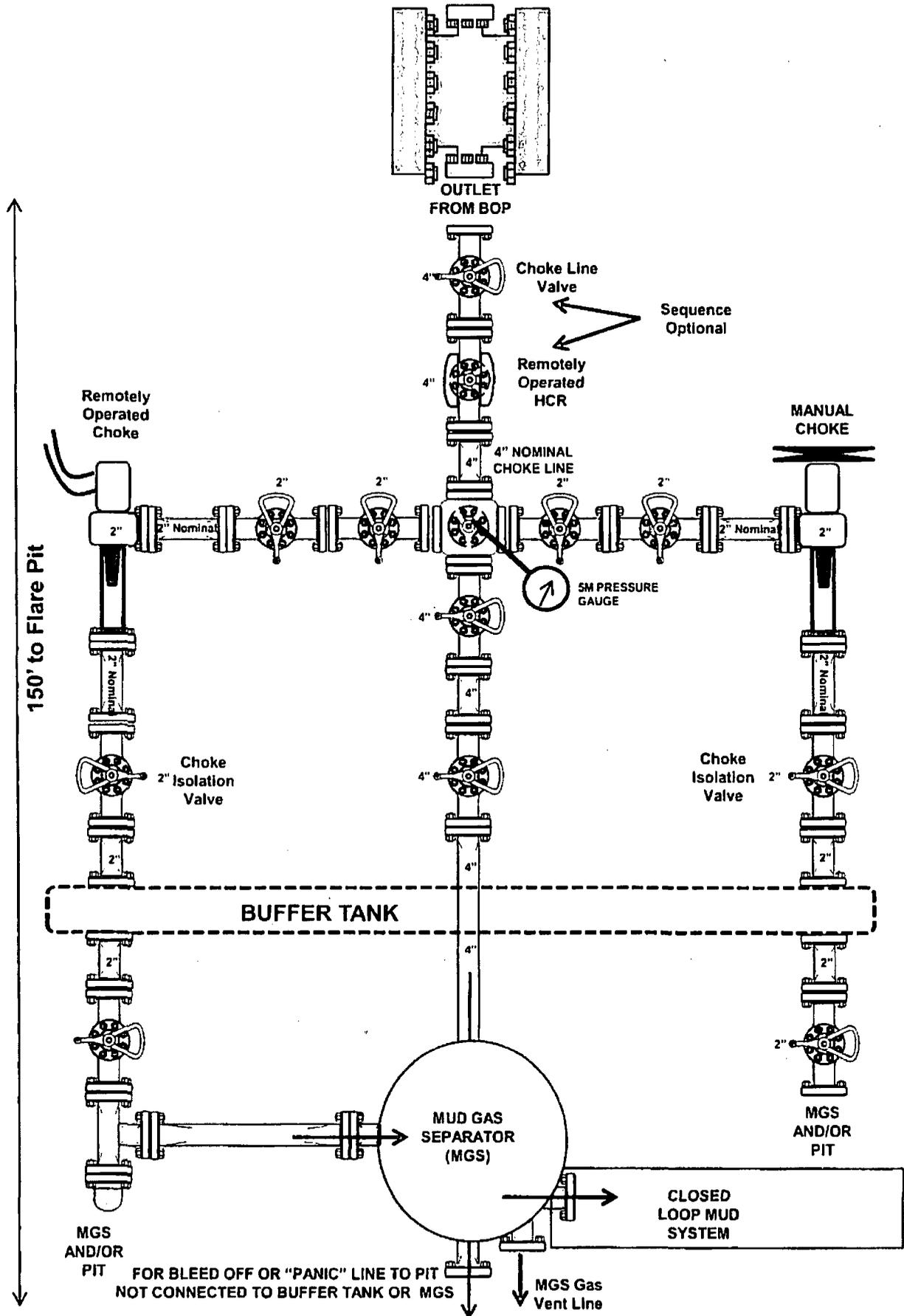
**Other proposed operations facets attachment:**

COG\_Dominator\_608H\_Drill\_Rpt\_20171128085322.pdf

**Other Variance attachment:**

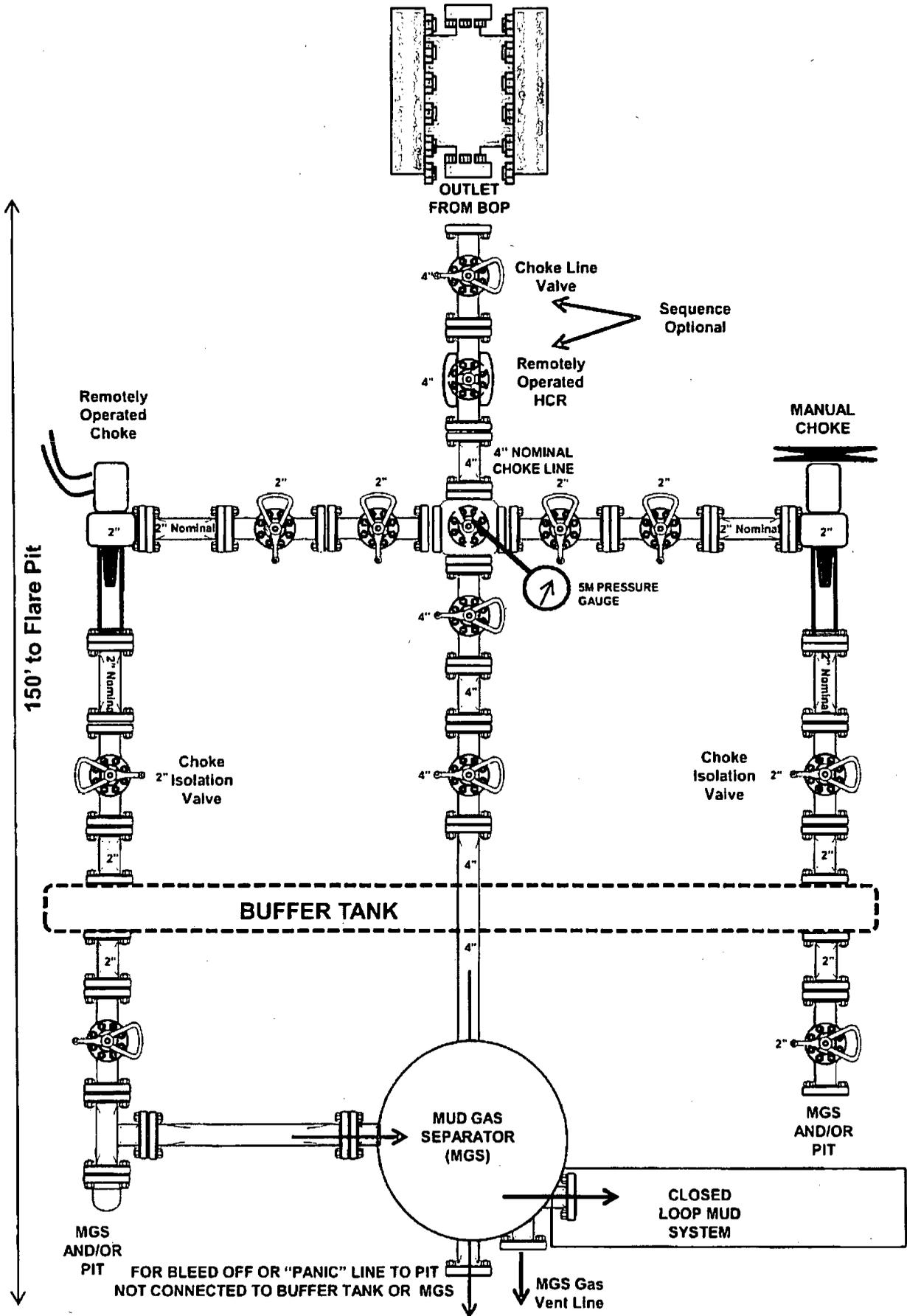
COG\_6.75\_5M\_Variance\_WCP\_20171128085443.pdf

# 3M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)



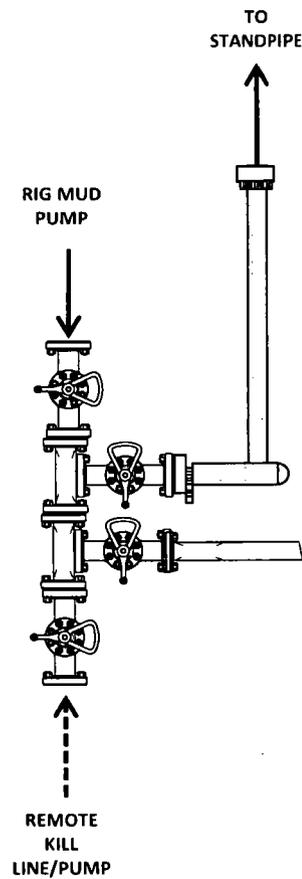


# 5M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)

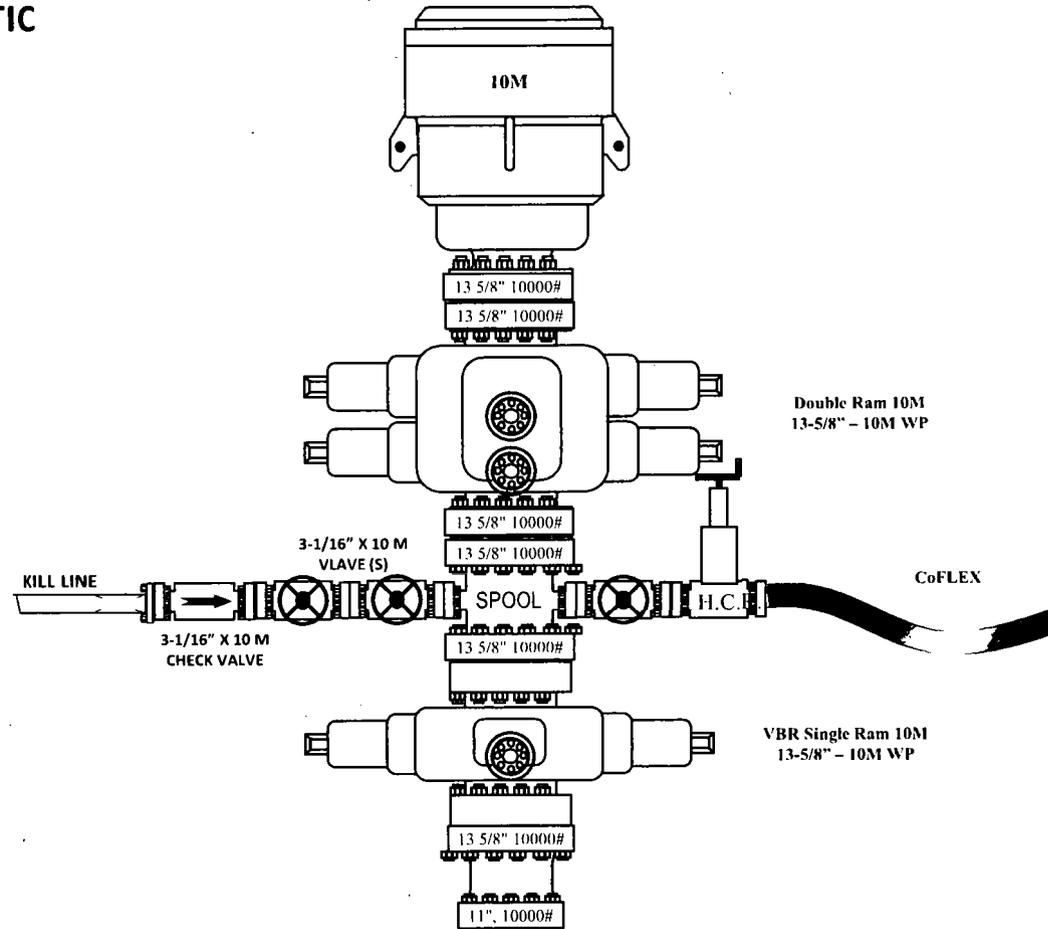


# 10M BOP Stack

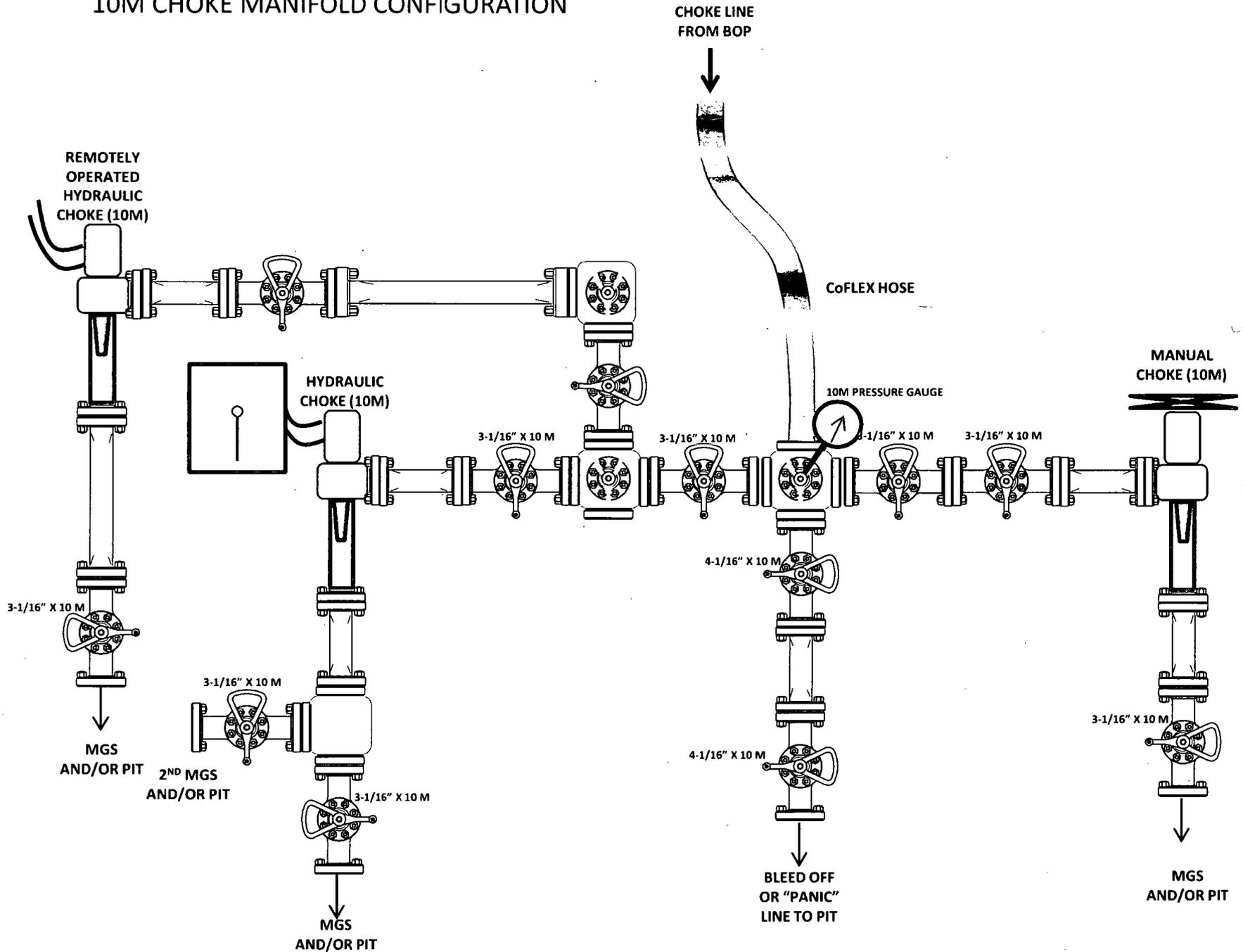
## 10M REMOTE KILL SCHEMATIC



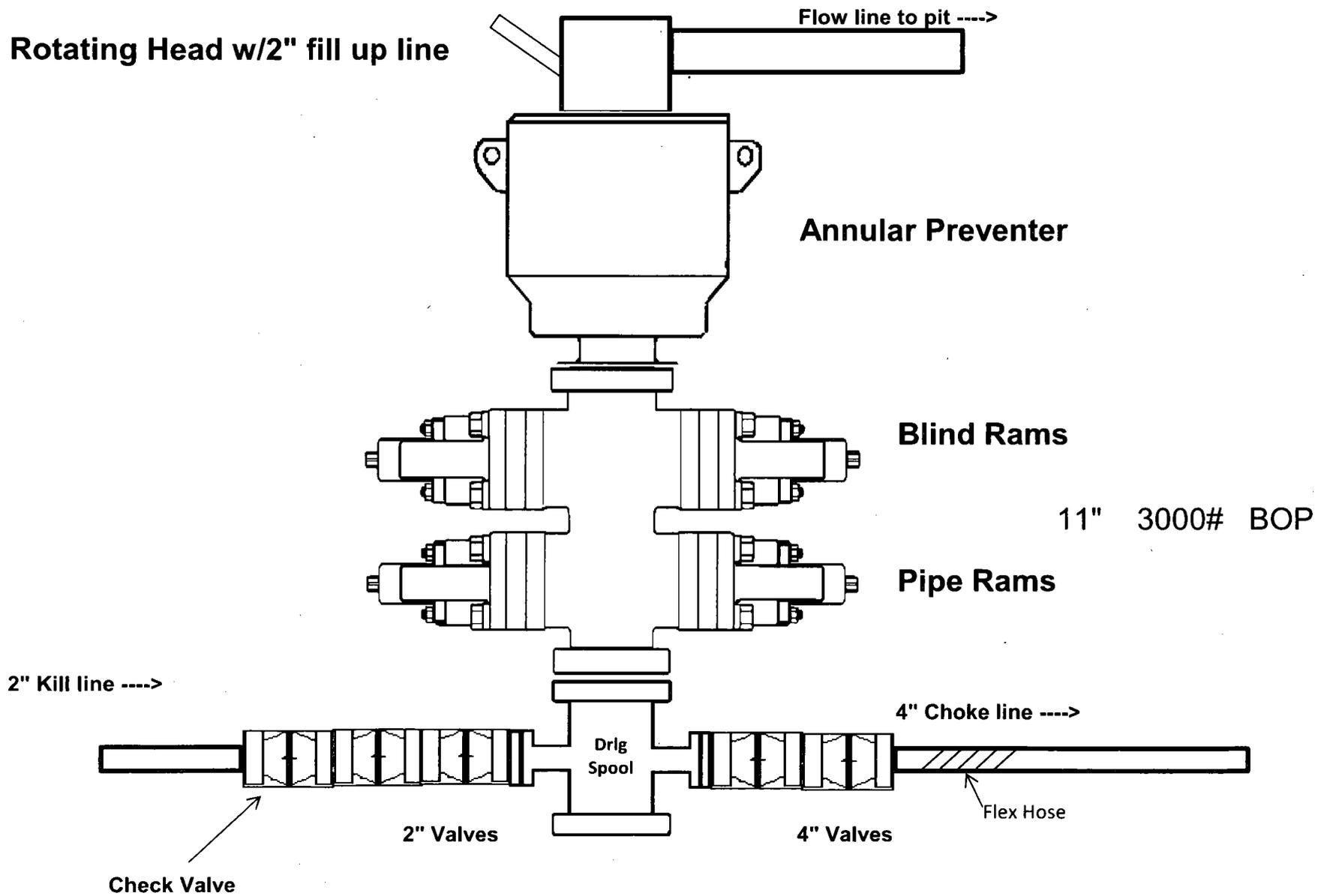
## 10M BOP Stack (10M Annular)



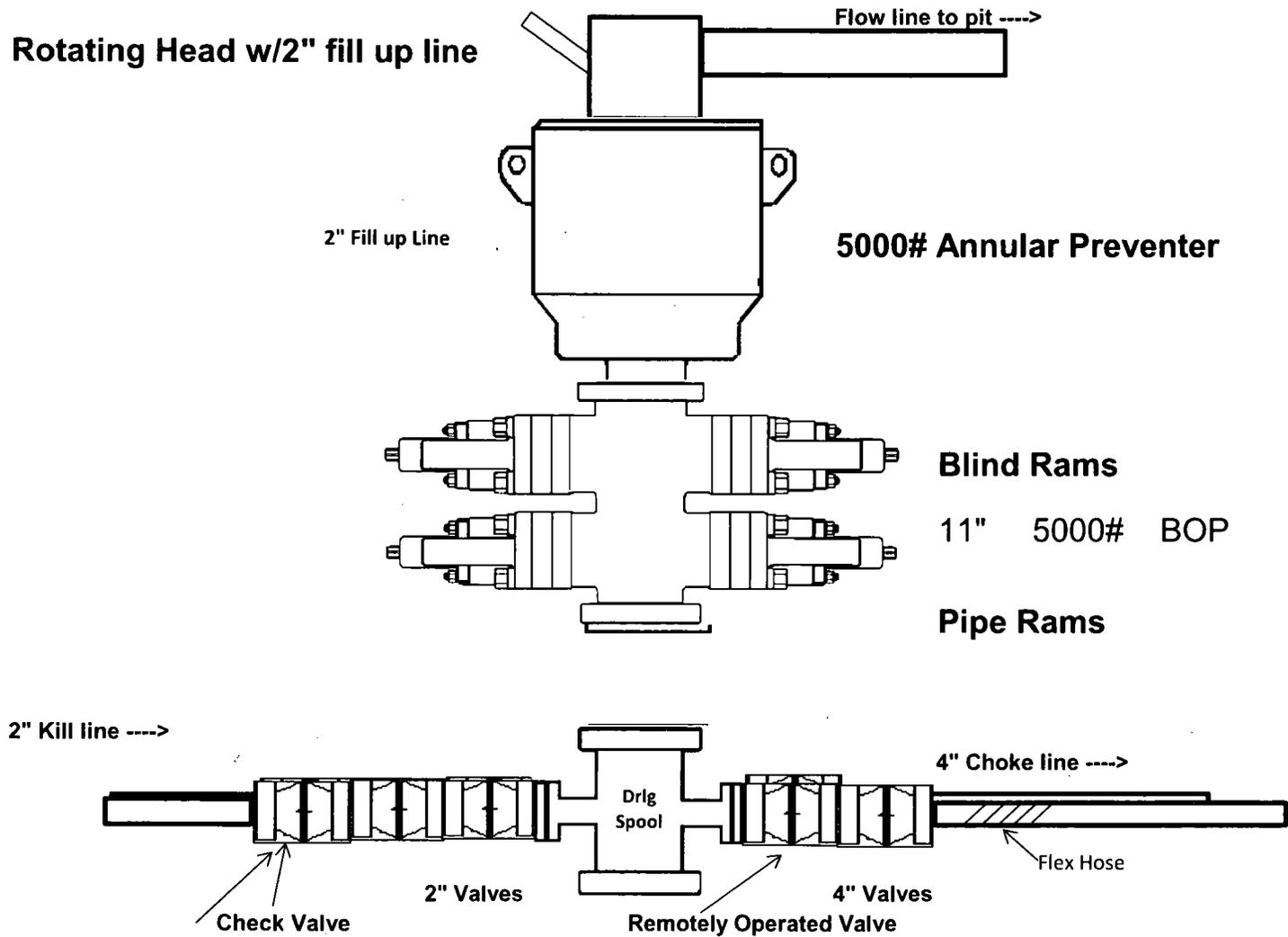
# 10M CHOKE MANIFOLD CONFIGURATION



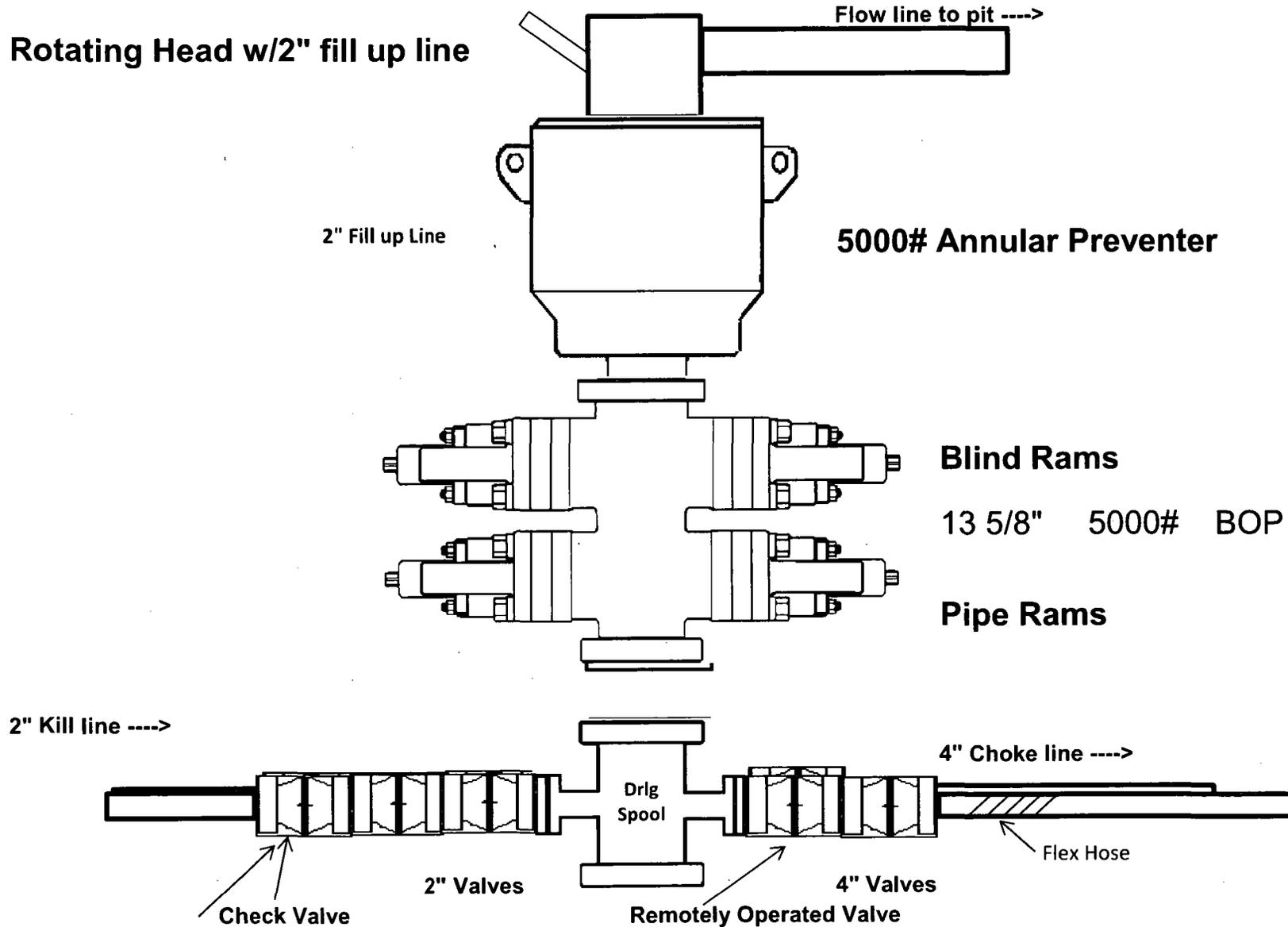
# 3,000 psi BOP Schematic



# 5,000 psi BOP Schematic

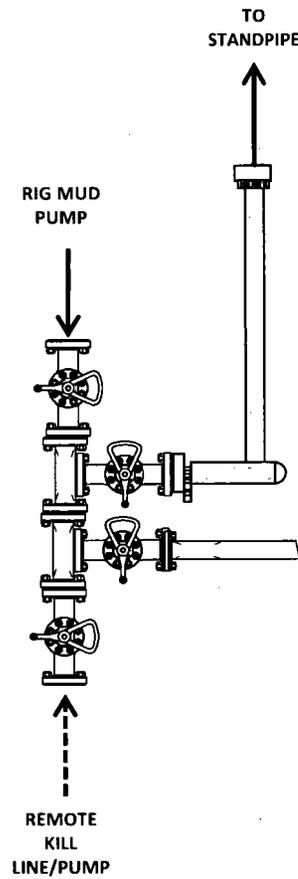


# 5,000 psi BOP Schematic

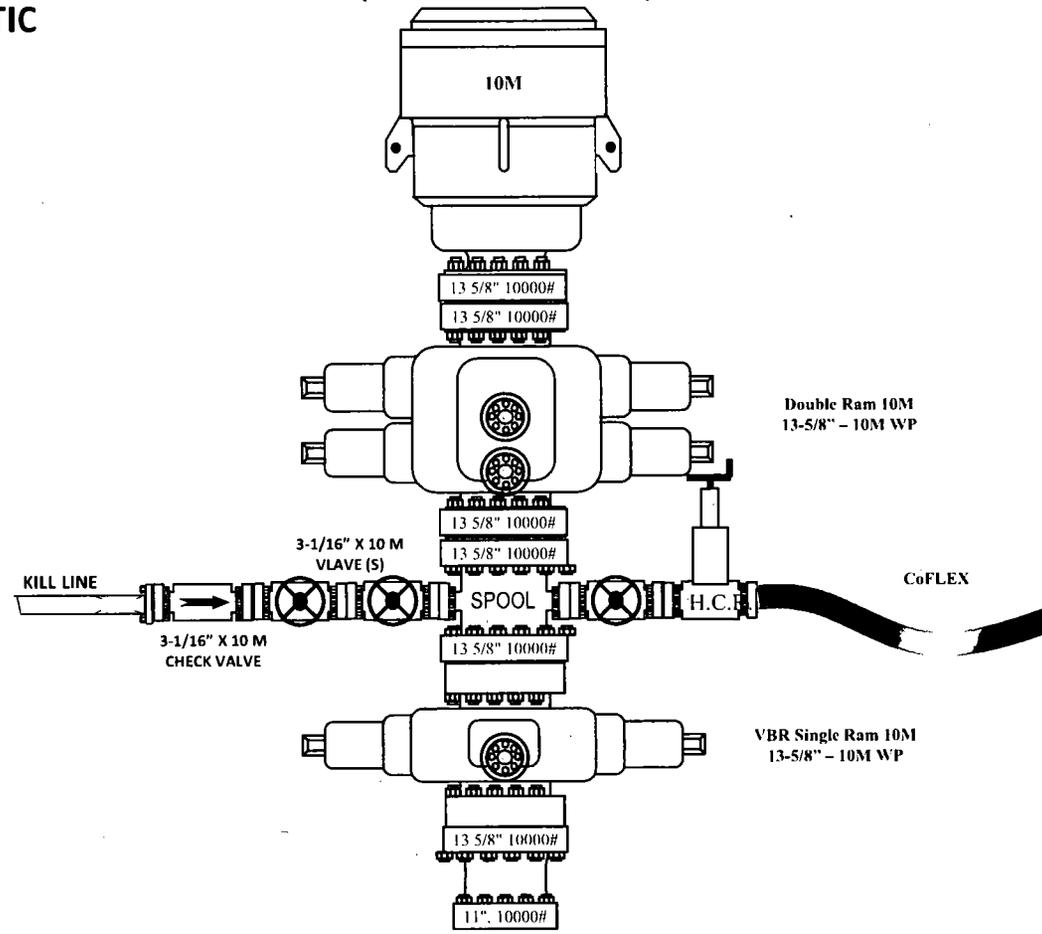


# 10M BOP Stack

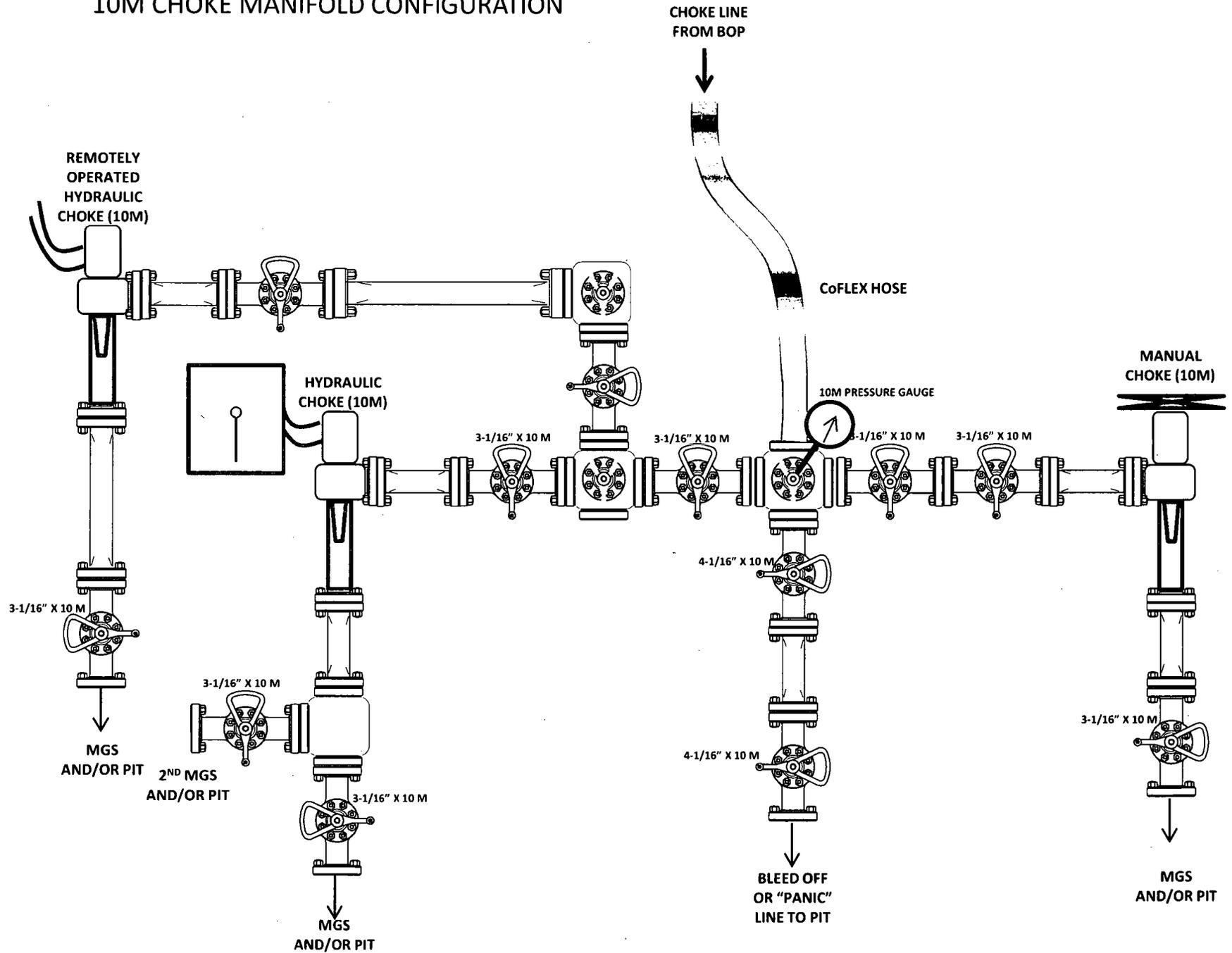
## 10M REMOTE KILL SCHEMATIC



## 10M BOP Stack (10M Annular)



# 10M CHOKE MANIFOLD CONFIGURATION



**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1095	10.75"	45.5	N80	BTC	4.93	1.20	20.87
9.875"	0	11794	7.875"	29.7	P110	BTC	1.29	1.05	3.10
6.75"	0	11294	5.5"	23	P110	BTC	1.86	1.93	3.23
6.75"	11294	17,240	5"	18	P110	BTC	1.86	1.93	3.23
BLM Minimum Safety Factor							1.125	1	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" casing will be run back 500' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

**COG Operating LLC, Columbus Federal Com 21H**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Col	SF Burst	SF Tension
	From	To							
13.5"	0'	1025'	10 3/4"	45.5	L80	STC	5.14	.86	14.7
9 7/8"	0'	11,500'	7 5/8"	29.7	HCP110	BTC	1.125	1.27	2.74
6 3/4"	0'	22,397'	5.5"	23	P110	Ultra SF	1.95	1.95	2.5
BLM Minimum Safety Factor							1.125	1.125	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

- Burst SF on Surf is 0.86 > 0.7.
- 5.5" Ultra SF connection OD = 5.65".

**COG Operating LLC, Columbus Federal Com 21H**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Col	SF Burst	SF Tension
	From	To							
13.5"	0'	1025'	10 3/4"	45.5	L80	STC	5.14	.86	14.7
9 7/8"	0'	11,500'	7 5/8"	29.7	HCP110	BTC	1.125	1.27	2.74
6 3/4"	0'	22,397'	5.5"	23	P110	Ultra SF	1.95	1.95	2.5
BLM Minimum Safety Factor							1.125	1.125	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

- Burst SF on Surf is 0.86 > 0.7.
- 5.5" Ultra SF connection OD = 5.65".

**COG Operating LLC, Columbus Federal Com 21H**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Col	SF Burst	SF Tension
	From	To							
13.5"	0'	1025'	10 3/4"	45.5	L80	STC	5.14	.86	14.7
9 7/8"	0'	11,500'	7 5/8"	29.7	HCP110	BTC	1.125	1.27	2.74
6 3/4"	0'	22,397'	5.5"	23	P110	Ultra SF	1.95	1.95	2.5
BLM Minimum Safety Factor							1.125	1.125	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

- Burst SF on Surf is 0.86 > 0.7.
- 5.5" Ultra SF connection OD = 5.65".

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1095	10.75"	45.5	N80	BTC	4.93	1.20	20.87
9.875"	0	11794	7.875"	29.7	P110	BTC	1.29	1.05	3.10
6.75"	0	11294	5.5"	23	P110	BTC	1.86	1.93	3.23
6.75"	11294	17,240	5"	18	P110	BTC	1.86	1.93	3.23
BLM Minimum Safety Factor							1.125	1	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" casing will be run back 500' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1095	10.75"	45.5	N80	BTC	4.93	1.20	20.87
9.875"	0	11794	7.875"	29.7	P110	BTC	1.29	1.05	3.10
6.75"	0	11294	5.5"	23	P110	BTC	1.86	1.93	3.23
6.75"	11294	17,240	5"	18	P110	BTC	1.86	1.93	3.23
BLM Minimum Safety Factor							1.125	1	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" casing will be run back 500' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

**Casing Program**

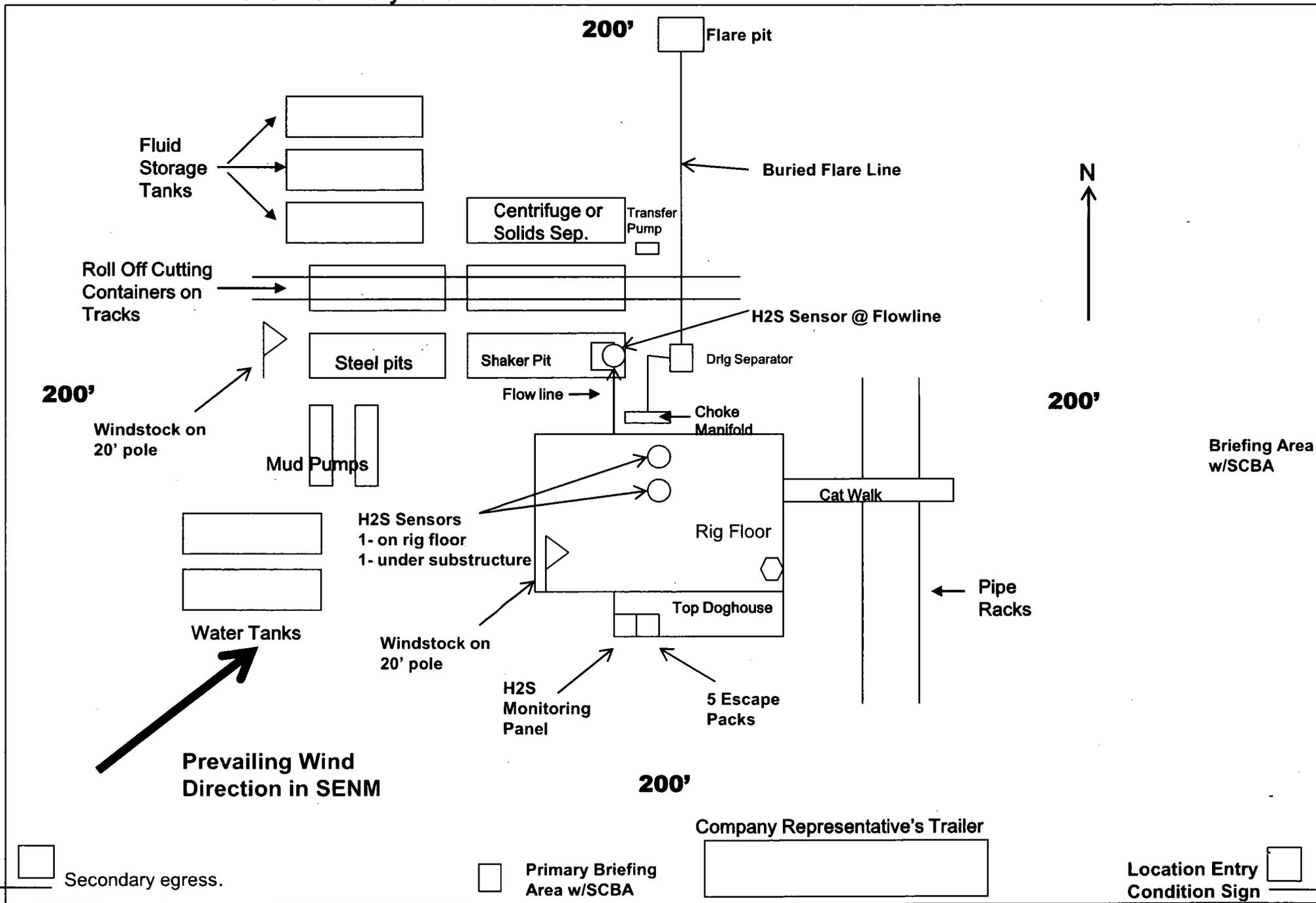
Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1095	10.75"	45.5	N80	BTC	4.93	1.20	20.87
9.875"	0	11794	7.875"	29.7	P110	BTC	1.29	1.05	3.10
6.75"	0	11294	5.5"	23	P110	BTC	1.86	1.93	3.23
6.75"	11294	17,240	5"	18	P110	BTC	1.86	1.93	3.23
BLM Minimum Safety Factor							1.125	1	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" casing will be run back 500' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

COG Operating LLC  
H<sub>2</sub>S Equipment Schematic  
Terrain: Shinnery sand hills.

Well pad will be 400' x 400'  
with cellar in center of pad



# COG Operating, LLC - Dominator 25 Federal #608H

## 1. Geologic Formations

TVD of target	12,530' EOL	Pilot hole depth	NA
MD at TD:	17,240'	Deepest expected fresh water:	142'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1070	Water	
Top of Salt	1510	Salt	
Base of Salt	5070	Salt	
Lamar	5188	Salt Water	
Bell Canyon	5230	Salt Water	
Cherry Canyon	6229	Oil/Gas	
Brushy Canyon	7809	Oil/Gas	
Bone Spring Lime	9275	Oil/Gas	
U. Avalon Shale	9649	Oil/Gas	
L. Avalon Shale	9960	Oil/Gas	
1st Bone Spring Sand	10307	Oil/Gas	
2nd Bone Spring Sand	10825	Oil/Gas	
3rd Bone Spring Sand	11894	Oil/Gas	
Wolfcamp	12355	Target Oil/Gas	
Strawn	14182	Not Penetrated	

## 2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1095	10.75"	45.5	N80	BTC	4.93	1.20	20.87
9.875"	0	11794	7.875"	29.7	P110	BTC	1.29	1.05	3.10
6.75"	0	11294	5.5"	23	P110	BTC	1.86	1.93	3.23
6.75"	11294	17,240	5"	18	P110	BTC	1.86	1.93	3.23
BLM Minimum Safety Factor							1.125	1	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" casing will be run back 500' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

**COG Operating, LLC - Dominator 25 Federal #608H**

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

**COG Operating, LLC - Dominator 25 Federal #608H**

**3. Cementing Program**

<b>Casing</b>	<b># Sks</b>	<b>Wt. lb/ gal</b>	<b>Yld ft<sup>3</sup>/ sack</b>	<b>H<sub>2</sub>O gal/sk</b>	<b>500# Comp. Strength (hours)</b>	<b>Slurry Description</b>
Surf.	160	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl <sub>2</sub>
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl <sub>2</sub>
Inter.	970	10.3	3.6	21.48	16	Tuned Light Blend
	250	16.4	1.08	4.32	8	Tail: Class H
Prod	150	11.9	2.5	19	72	Lead: 50:50:10 H Blend
	640	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend

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.

<b>Casing String</b>	<b>TOC</b>	<b>% Excess</b>
Surface	0'	50%
1 <sup>st</sup> Intermediate	0'	50%
Production	11,294'	35% OH in Lateral (KOP to EOL)

**COG Operating, LLC - Dominator 25 Federal #608H**

**4. Pressure Control Equipment**

N	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	Type	x	Tested to:
9-7/8"	13-5/8"	5M	Annular	x	2500 psi
			Blind Ram	x	5M
			Pipe Ram	x	
			Double Ram		
			Other*		
6-3/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram	x	10M
			Pipe Ram	x	
			Double Ram	x	
			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.

X	Formation integrity test will be performed per Onshore Order #2. 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?
N	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.

**COG Operating, LLC - Dominator 25 Federal #608H**

**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	10.5 - 12	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.	
Y	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.
Y	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Additional 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)
Y	Mud log	Intermediate shoe to TD
N	PEX	

**COG Operating, LLC - Dominator 25 Federal #608H**

**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7820 psi at 12530' 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 (H <sub>2</sub> S) monitors will be installed prior to drilling out the surface shoe. If H <sub>2</sub> S 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	H <sub>2</sub> S is present
Y	H <sub>2</sub> S Plan attached

**8. Other Facets of Operation**

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

x	H <sub>2</sub> S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

### 1. Component and Preventer Compatibility Table

The table below covers drilling and casing of the 10M MASP portion of the well and outlines the tubulars and the compatible preventers in use. Combined with the mud program, the below documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Component	OD	Preventer	RWP
Drill pipe	4.5"	Upper 4.5-7" VBR Lower 4.5-7" VBR	10M
HWDP	4.5"		
Jars	4.875" - 5"		
Drill collars and MWD tools	4.75" - 5"		
Mud Motor	4.75"-5.875"		
Production casing	5.5" & 5"		
ALL	0- 13.625"	Annular	5M
Open-hole	-	Blind Rams	10M

VBR = Variable Bore Ram with compatible range listed in chart.

### 2. Well Control and Shut-In Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are minimum tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The maximum pressure at which well control is transferred from the annular to another compatible ram is 2500 psi.

#### Drilling:

1. Sound the alarm (alert rig crew)
2. Space out the drill string
3. Shut down pumps and stop the rotary
4. Shut-in the well with the annular with HCR and choke in closed position
5. Confirm the well is shut-in
6. Notify contractor and company representatives
7. Read and record the following data
  - Time of shut-in
  - SIDPP and SICP
  - Pit gain
8. If pressure has increased to or is anticipated to increase to 2500 psi, confirm spacing and close the upper pipe rams.
9. Prepare for well kill operation.

#### Tripping:

1. Sound alarm (alert rig crew)
2. Stab full opening safety valve and close the valve
3. Space out the drill string
4. Shut-in the well with the annular with HCR and choke in closed position
5. Confirm shut-in
6. Notify contractor and company representatives
7. Read and record the following data:

- Time of shut-in
  - SIDPP and SICP
  - Pit gain
8. If pressure has increased to or is anticipated to increase to 2500 psi, confirm spacing and close the upper pipe rams.
  9. Prepare for well kill operation.

#### Running Casing

1. Sound alarm (alert rig crew)
2. Stab crossover and valve and close the valve
3. Shut-in the well with annular with HCR and choke in closed position
4. Confirm shut-in
5. Notify contractor and company representatives
6. Read and record the following data
  - Time of shut-in
  - SIDPP and SICP
  - Pit gain
7. If pressure has increased to or is anticipated to increase to 2500 psi, confirm spacing and close the upper pipe rams.
8. Prepare for well kill operation

#### No Pipe in Hole (Open Hole)

1. At any point when pipe or BHA are not in BOP stack, well will be shut in with blind rams, HCR will be open and choke will be closed. If pressure increase is observed:
2. Sound alarm (alert crew)
3. Confirm shut-in
4. Notify contractor and company representatives
5. Read and record the following data
  - Time of shut-in
  - Time of pressure increase
  - SICP
6. Prepare for well kill operation

#### Pulling BHA through BOP Stack

1. Prior to pulling last joint/stand of drillpipe through the stack, perform a flow check. If well is flowing:
  - a. Sound alarm (alert crew)
  - b. Stab full opening safety valve and close the valve
  - c. Space out drill string with tooljoint just beneath the upper pipe ram.
  - d. Shut-in the well with upper pipe ram with HCR and choke in closed position
  - e. Confirm shut-in
  - f. Notify contractor and company representatives
  - g. Read and record the following data
    - Time of shut-in
    - SIDPP and SICP
    - Pit gain
  - h. Prepare for well kill operation.

2. With BHA in the stack:
  - a. If possible to pick up high enough, pull BHA clear of the stack
    - i. Follow "Open Hole" procedure above
  - b. If impossible to pick up high enough to pull BHA clear of the stack:
    - i. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
    - ii. Space out drill string with tooljoint just beneath the upper pipe ram.
    - iii. Shut-in the well with upper pipe ram with HCR and choke in closed position
    - iv. Confirm shut-in
    - v. Notify contractor and company representatives
    - vi. Read and record the following:
      - Time of shut-in
      - SIDPP and SICP
      - Pit gain
    - vii. Prepare for well kill operation.

### 3. Well Control Drills

Well control drills are specific to the rig equipment, personnel and operation at the time a kick occurs. Each crew will execute one drill weekly relevant to ongoing operations, but will make a reasonable attempt to vary the type of drills. The drills will be recorded in the daily drilling log. Below are minimum tasks for respective well control drills.

#### Drilling/Pit:

Action	Responsible Party
Initiate Drill <ul style="list-style-type: none"> <li>• Lift Flow Sensor or Pit Float to indicate a kick</li> <li>• Immediately record start time</li> </ul>	Company Representative / Rig Manager
Recognition <ul style="list-style-type: none"> <li>• Driller and/or Crew recognizes indicator</li> <li>• Driller stop drilling, pick up off bottom and spaces out drill string, stop pumps and rotary</li> <li>• Conduct flow check</li> </ul>	Driller
Initiate Action <ul style="list-style-type: none"> <li>• Sound alarm, notify rig crew that the well is flowing</li> </ul>	Company Representative / Rig Manager
Reaction <ul style="list-style-type: none"> <li>• Driller moves BOP remote and stands by</li> <li>• Crew is at their assigned stations</li> <li>• Time is stopped</li> <li>• Record time and drill type in the Drilling Report</li> </ul>	Driller / Crew

Tripping Pit Drills (either in the hole or out of the hole)

Action	Responsible Party
<b>Initiate Drill</b> <ul style="list-style-type: none"> <li>• Lift Flow Sensor or Pit Float to indicate a kick</li> <li>• Immediately record start time</li> </ul>	Company Representative / Rig Manager
<b>Recognition</b> <ul style="list-style-type: none"> <li>• Driller recognizes indicator</li> <li>• Suspends tripping operations</li> <li>• Conduct Flow Check</li> </ul>	Driller
<b>Initiate Action</b> <ul style="list-style-type: none"> <li>• Sound alarm, notify rig crew that the well is flowing</li> </ul>	Company Representative / Rig Manager
<b>Reaction</b> <ul style="list-style-type: none"> <li>• Position tool joint above rotary and set slips</li> <li>• Stab FOSV and close valve</li> <li>• Driller moves to BOP remote and stands by</li> <li>• Crew is at their assigned stations</li> <li>• Time is stopped</li> <li>• Record time and drill type in the Drilling Report</li> </ul>	Driller / Crew

Choke

Action	Responsible Party
<ul style="list-style-type: none"> <li>• Have designated choke operator on station at the choke panel</li> <li>• Close annular preventer</li> <li>• Pressure annulus up 200-300 psi</li> <li>• Pump slowly to bump the float and obtain SIDPP</li> <li>• At choke operator instruction, slowly bring pumps online to slow pump rate while holding casing pressure constant at the SICP.</li> <li>• Allow time for the well to stabilize. Mark and record circulating drillpipe pressure.</li> <li>• Measure time lag on drillpipe gauge after choke adjustments.</li> <li>• Hold casing pressure constant as pumps are slowed down while choke is closed.</li> <li>• Record time and drill type in the Drilling Report</li> </ul>	Company Man / Rig Manager & Rig Crew



APD ID: 10400024978

Submission Date: 11/28/2017

Highlighted data reflects the most recent changes

Operator Name: COG OPERATING LLC

Well Name: DOMINATOR 25 FEDERAL

Well Number: 608H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

COG\_Dominator\_Existing\_Rd\_20171121094216.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

COG\_Dominator\_608H\_Roads\_20171128085505.pdf

New road type: TWO-TRACK

Length: 9029 Feet

Width (ft.): 30

Max slope (%): 33

Max grade (%): 1

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Caliche

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Blading

**Access other construction information:** No turnouts are planned. Re routing access road around proposed well location.

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** OTHER

**Drainage Control comments:** None necessary.

**Road Drainage Control Structures (DCS) description:** None needed.

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

COG\_Dominator\_608H\_1Mile\_Data\_20171128085516.pdf

**Existing Wells description:**

### Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** Production will be sent to the Dominator 25 Federal CTB 1 facility. A surface flow line of approximately 169.9' of 3.5" steel pipe carrying oil, gas and water under a maximum pressure of 125 psi will follow the road to the facility at the Dominator 25 Federal CTB 1 location. We plan to install a 4" surface polyethylene pipe transporting Gas Lift Gas from the Dominator 25 Federal CTB 1 to the multiple well pad that includes the Dominator 25 Federal #107H, #307H, #407H, #608H, #712H and the Dominator 25 Federal Com #711H wells. The surface Gas Lift Gas pipe of approximately 169.9' under a maximum pressure of 125 psi will be installed no farther than 10 feet from the edge of the road.

**Production Facilities map:**

COG\_Dominator\_CTB\_1\_20171127075227.pdf

COG\_Dominator\_608H\_Prod\_Facil\_20171128085529.pdf

COG\_Dominator\_608H\_Flowlines\_20171130152321.pdf

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Section 5 - Location and Types of Water Supply**

**Water Source Table**

**Water source use type:** INTERMEDIATE/PRODUCTION CASING

**Water source type:** OTHER

**Describe type:** Brine Water.

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT,PRIVATE CONTRACT

**Source land ownership:** COMMERCIAL

**Water source transport method:** TRUCKING,TRUCKING

**Source transportation land ownership:** COMMERCIAL

**Water source volume (barrels):** 15000

**Source volume (acre-feet):** 1.9333965

**Source volume (gal):** 630000

**Water source use type:** STIMULATION, SURFACE CASING

**Water source type:** OTHER

**Describe type:** Fresh Water.

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT,PRIVATE CONTRACT

**Source land ownership:** PRIVATE

**Water source transport method:** PIPELINE,PIPELINE

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 225000

**Source volume (acre-feet):** 29.000946

**Source volume (gal):** 9450000

**Water source and transportation map:**

COG\_Dominator\_Frac\_Pond\_20171127081721.pdf

COG\_Dominator\_608H\_FreshH2O\_20171128085559.pdf

COG\_Dominator\_608H\_BrineH2O\_20171128095245.pdf

**Water source comments:** Fresh water will be obtained from the C-01285 Dinwiddle Cattle Co Water Well located in Section 5, T26S, R36E. The water will be stored in the proposed Dominator 25 Federal Frac Pond located in section 25, T25S, R33E. Brine water will be obtained from the Malaga II Brine station located in Section 12, T23S, R28E.

**New water well?** NO

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

### Section 6 - Construction Materials

**Construction Materials description:** Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be purchased from approved BLM federal pit located in Section 23. T25S. R33E.

**Construction Materials source location attachment:**

### Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Drilling fluids and produced oil and water during drilling and completion operations

**Amount of waste:** 6000 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** All drilling waste will be stored safely and disposed of properly

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** Trucked to an approved disposal facility

**Waste type:** SEWAGE

**Waste content description:** Human waste and gray water

**Amount of waste:** 250 gallons

**Waste disposal frequency :** Weekly

**Safe containment description:** Waste will be properly contained and disposed of properly at a state approved disposal facility

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY    **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** Trucked to an approved disposal facility

**Waste type:** GARBAGE

**Waste content description:** Garbage and trash produced during drilling and completion operations

**Amount of waste:** 125 pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY    **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** Trucked to an approved disposal facility

**Reserve Pit**

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)**                      **Reserve pit width (ft.)**

**Reserve pit depth (ft.)**    **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

**Cuttings Area**

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** YES

**Description of cuttings location** Roll off cuttings containers on tracks

**Cuttings area length (ft.)**    **Cuttings area width (ft.)**

**Cuttings area depth (ft.)**    **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Cuttings area liner specifications and installation description**

**Section 8 - Ancillary Facilities**

**Are you requesting any Ancillary Facilities?:** YES

**Ancillary Facilities attachment:**

COG\_Dominator\_608H\_GCP\_20171128090656.pdf

**Comments:** GCP Attached

**Section 9 - Well Site Layout**

**Well Site Layout Diagram:**

COG\_Dominator\_CTB\_1\_20171127081134.pdf

COG\_Dominator\_608H\_Prod\_Facil\_20171128090748.pdf

COG\_Dominator\_608H\_Flowlines\_20171130152339.pdf

**Comments:** Production will be sent to the Dominator 25 Federal CTB 1 facility. A surface flow line of approximately 169.9' of 3.5" steel pipe carrying oil, gas and water under a maximum pressure of 125 psi will follow the road to the facility at the Dominator 25 Federal CTB 1 location. We plan to install a 4" surface polyethylene pipe transporting Gas Lift Gas from the Dominator 25 Federal CTB 1 to the multiple well pad that includes the Dominator 25 Federal #107H, #307H, #407H, #608H, #712H and the Dominator 25 Federal Com #711H wells. The surface Gas Lift Gas pipe of approximately 169.9' under a maximum pressure of 125 psi will be installed no farther than 10 feet from the edge of the road.

**Section 10 - Plans for Surface Reclamation**

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** DOMINATOR 25 FEDERAL

**Multiple Well Pad Number:** 107H, 307H, 407H, 608H, 712H AND 711H

**Recontouring attachment:**

**Drainage/Erosion control construction:** Due to the flat topography of this location and the stockpiling of the topsoil on the east side of the location, no erosion control is necessary.

**Drainage/Erosion control reclamation:** Reclaim the east side 80'.

<b>Well pad proposed disturbance (acres):</b> 3.67	<b>Well pad interim reclamation (acres):</b> 0.73	<b>Well pad long term disturbance (acres):</b> 2.94
<b>Road proposed disturbance (acres):</b> 2.9	<b>Road interim reclamation (acres):</b> 2.9	<b>Road long term disturbance (acres):</b> 2.9
<b>Powerline proposed disturbance (acres):</b> 0	<b>Powerline interim reclamation (acres):</b> 0	<b>Powerline long term disturbance (acres):</b> 0
<b>Pipeline proposed disturbance (acres):</b> 0.02	<b>Pipeline interim reclamation (acres):</b> 0.02	<b>Pipeline long term disturbance (acres):</b> 0.02
<b>Other proposed disturbance (acres):</b> 22.96	<b>Other interim reclamation (acres):</b> 0	<b>Other long term disturbance (acres):</b> 22.96
<b>Total proposed disturbance:</b> 29.55	<b>Total interim reclamation:</b> 3.65	<b>Total long term disturbance:</b> 28.82

**Reconstruction method:** New construction of pad.

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**Topsoil redistribution:** East.

**Soil treatment:** None

**Existing Vegetation at the well pad:** Shinnery Oak/Mesquite grassland

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** Shinnery Oak/Mesquite grassland

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** Shinnery Oak/Mesquite grassland

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** N/A

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

Seed Summary	
Seed Type	Pounds/Acre

**Total pounds/Acre:**

**Seed reclamation attachment:**

<b>Operator Contact/Responsible Official Contact Info</b>
---

**First Name:** Rand

**Last Name:** French

**Phone:** (432)254-5556

**Email:** rfrench@concho.com

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** N/A

**Weed treatment plan attachment:**

**Monitoring plan description:** N/A

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

COG\_Dominator\_608H\_Closed\_Loop\_20171128090829.pdf

<b>Section 11 - Surface Ownership</b>
---------------------------------------

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**Operator Name:** COG OPERATING LLC

**Well Name:** DOMINATOR 25 FEDERAL

**Well Number:** 608H

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

### Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

**ROW Applications**

**SUPO Additional Information:**

**Use a previously conducted onsite?** YES

**Previous Onsite information:** Onsite completed on 10/5/2017 by Rand French (COG); Gerald Herrera (COG) and Jeff Robertson (BLM).

**Other SUPO Attachment**

COG\_Dominator\_608H\_Certif\_20171128090939.pdf

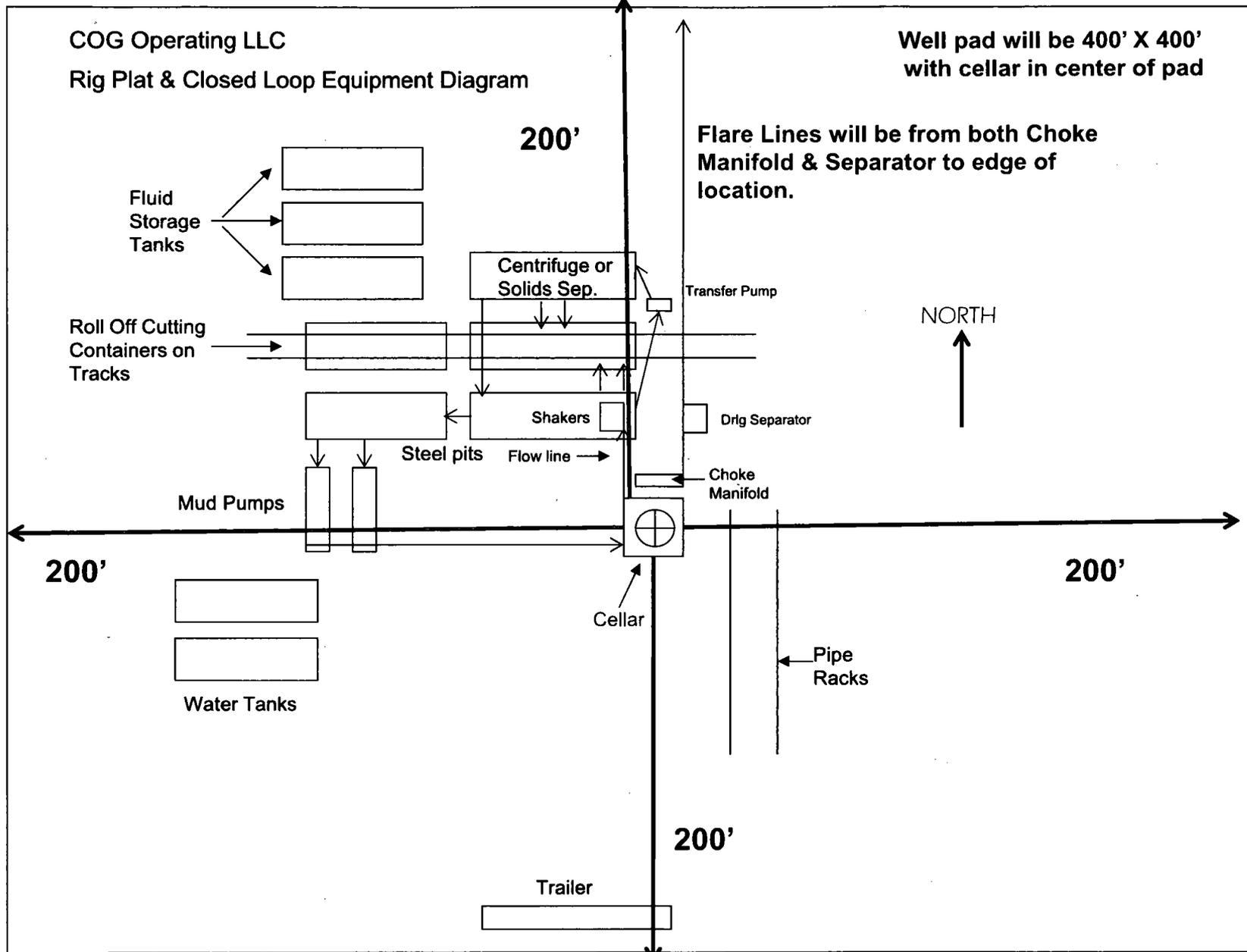


Exhibit 1

"I further certify that COG will comply with Rule 19.15.17 NMAC by using a Closed Loop System."

Surface Use Plan  
COG Operating LLC  
Dominator 25 Federal 608H  
SHL: 280' FSL & 1462' FWL    UL N  
Section 25, T25S, R33E  
BHL: 200' FNL & 1250' FWL    UL D  
Section 25, T25S, R33E  
Lea County, New Mexico

---

### OPERATOR CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently 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 COG Operating LLC, 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. Executed this 3<sup>rd</sup> day of NOVEMBER, 2017.

Signed: Mayte Reyes

Printed Name: Mayte Reyes

Position: Regulatory Analyst

Address: 2208 W. Main Street, Artesia, NM 88210

Telephone: (575) 748-6945

E-mail: [mreyes1@concho.com](mailto:mreyes1@concho.com)

Field Representative (if not above signatory): Rand French

Telephone: (575) 748-6940. E-mail: [rfrench@concho.com](mailto:rfrench@concho.com)



**Section 1 - General**

Would you like to address long-term produced water disposal? NO

**Section 2 - Lined Pits**

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

### Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

### **Section 5 - Surface Discharge**

**Would you like to utilize Surface Discharge PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

### **Section 6 - Other**

**Would you like to utilize Other PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



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

**Bond Information**

**Federal/Indian APD:** FED

**BLM Bond number:** NMB000215

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**

Operator Name: COG OPERATING LLC

Well Name: DOMINATOR 25 FEDERAL

Well Number: 608H

	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
EXIT Leg #1	330	FNL	125 0	FWL	25S	33E	25	Aliquot NWN W	32.10785 8	- 103.5305 63	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 121958	- 919 0	171 00	125 29
BHL Leg #1	200	FNL	125 0	FWL	25S	33E	25	Aliquot NWN W	32.10821 6	- 103.5305 63	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 121958	- 919 1	172 40	125 30



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

## Operator Certification Data Report

04/10/2018

### 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:** 11/28/2017

**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