

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

HOBBS OCD
APR 03 2018
RECEIVED

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

5. Lease Serial No. NMNM120365		6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.		8. Lease Name and Well No. (321160) HENNIN FEDERAL 24H	
9. API Well No. 30-025-44641		10. Field and Pool, or Exploratory (98117) WILDCAT / WOLFCAMP	
11. Sec., T. R. M. or Blk. and Survey or Area SEC 3 / T26S / 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 640	
17. Spacing Unit dedicated to this well 160		18. Distance from proposed location* to nearest well, drilling, completed, 889 feet applied for, on this lease, ft.	
19. Proposed Depth 12757 feet / 17481 feet		20. BLM/BIA Bond No. on file FED: NMB000215	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3171 feet		22. Approximate date work will start* 10/01/2017	
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:

- 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 08/22/2017
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 03/22/2018
Title Supervisor Multiple Resources		

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)

GCP Rec 08/10/18

*(Instructions on page 2)

APPROVED WITH CONDITIONS
Approval Date: 03/22/2018

Ka
04/10/18

*
*
* 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: NWNE / 210 FNL / 2162 FEL / TWSP: 26S / RANGE: 35E / SECTION: 3 / LAT: 32.078871 / LONG: -103.353373 (TVD: 0 feet, MD: 0 feet)
- PPP: NWNE / 330 FNL / 2310 FEL / TWSP: 26S / RANGE: 35E / SECTION: 3 / LAT: 32.078541 / LONG: -103.35385 (TVD: 6500 feet, MD: 6500 feet)
- BHL: SWSE / 200 FSL / 2310 FEL / TWSP: 26S / RANGE: 35E / SECTION: 3 / LAT: 32.065447 / LONG: -103.35385 (TVD: 12757 feet, MD: 17481 feet)

BLM Point of Contact

Name: Priscilla Perez
Title: Legal Instruments Examiner
Phone: 5752345934
Email: pperez@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



APD ID: 10400016340	Submission Date: 08/22/2017	Highlighted data reflects the most recent changes Show Final Text
Operator Name: COG OPERATING LLC		
Well Name: HENNIN FEDERAL	Well Number: 24H	
Well Type: OIL WELL	Well Work Type: Drill	

Section 1 - General

APD ID: 10400016340	Tie to previous NOS?	Submission Date: 08/22/2017
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: NMNM120365	Lease Acres: 640	
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

Operator PO Box:

Operator City: Midland **State:** TX

Operator Phone: (432)683-7443

Operator Internet Address: RODOM@CONCHO.COM

Zip: 79701

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: HENNIN FEDERAL	Well Number: 24H	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		



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



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: 08/20/2017

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

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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:

Number: 12H & 24H

Well Class: HORIZONTAL

HENNIN FEDERAL COM

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: 889 FT

Distance to lease line: 200 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: COG_Hennin_24H_C102_08-22-2017.pdf

Well work start Date: 10/01/2017

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	210	FNL	216 2	FEL	26S	35E	3	Aliquot NWNE 1	32.07887	- 103.3533 73	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 120365	317 1	0	0
KOP Leg #1	210	FNL	216 2	FEL	26S	35E	3	Aliquot NWNE 1	32.07887	- 103.3533 73	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 120365	317 1	0	0
PPP Leg #1	330	FNL	231 0	FEL	26S	35E	3	Aliquot NWNE 1	32.07854	- 103.3538 5	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 120365	- 332 9	650 0	650 0

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

	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	FSL	231 0	FEL	26S	35E	3	Aliquot SWSE 4	32.06580 4	- 103.3538 5	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 120365	- 957 8	172 00	127 49
BHL Leg #1	200	FSL	231 0	FEL	26S	35E	3	Aliquot SWSE 7	32.06544 7	- 103.3538 5	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 120365	- 958 6	174 81	127 57

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

Pressure Rating (PSI): 10M

Rating Depth: 12757

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_Hennin_24H_10M_Choke_08-20-2017.pdf

BOP Diagram Attachment:

COG_Hennin_24H_10M_BOP_08-20-2017.pdf

COG_Hennin_24H_Flex_Hose_08-20-2017.pdf

Pressure Rating (PSI): 5M

Rating Depth: 11975

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:

Hennin_24H_5M_Choke_20180219134058.pdf

BOP Diagram Attachment:

Hennin_24H_5M_BOP_20180219134039.pdf

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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	975	0	975	-9586	-10586	975	N-80	45.5	OTHER - BTC	5.54	1.18	DRY	23.44	DRY	23.44
2	INTERMEDIATE	9.875	7.625	NEW	API	Y	0	11975	0	11975	-9586	-21486	11975	P-110	29.7	OTHER - BTC	1.27	1.08	DRY	3.05	DRY	3.05
3	PRODUCTION	6.75	5.0	NEW	API	N	0	17481	0	17481	-9586	-29382	17481	P-110	18	OTHER - BTC	1.9	1.99	DRY	3.17	DRY	3.17

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Hennin_Federal_24H_Casing_Prog_08-20-2017.pdf

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

Casing Attachments

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Hennin_Federal_24H_Casing_Prog_08-20-2017.pdf

Casing Design Assumptions and Worksheet(s):

Hennin_Federal_24H_Casing_Prog_08-20-2017.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Hennin_Federal_24H_Casing_Prog_08-20-2017.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	975	240	1.75	13.5	420	50	Class C	4% Gel + 1% CaCl2
SURFACE	Tail		0	975	200	1.34	14.8	268	50	Class C	2% CaCl2
INTERMEDIATE	Lead		0	1197 5	1000	3.6	10.3	3600	50	Tuned Light Blend	As needed
INTERMEDIATE	Tail		0	1197 5	250	1.08	16.4	270	50	Class H	As needed
PRODUCTION	Lead		0	1748 1	150	2.5	11.9	375	35	50:50:10 H Blend	As needed

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		0	1748 1	640	1.24	14.4	793	35	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
1197 5	1748 1	OIL-BASED MUD	9.6	11.5							
0	975	OTHER : FW Gel	8.6	8.8							FW Gel
975	1197 5	OTHER : Diesel Brine Emulsion	8.4	9							Diesel Brine Emulsion

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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: 7630

Anticipated Surface Pressure: 4823.46

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_Hennin_24H_H2S_SUP_08-20-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

COG_Hennin_24H_AC_Report_08-20-2017.pdf

COG_Hennin_24H_Directional_08-20-2017.pdf

Other proposed operations facets description:

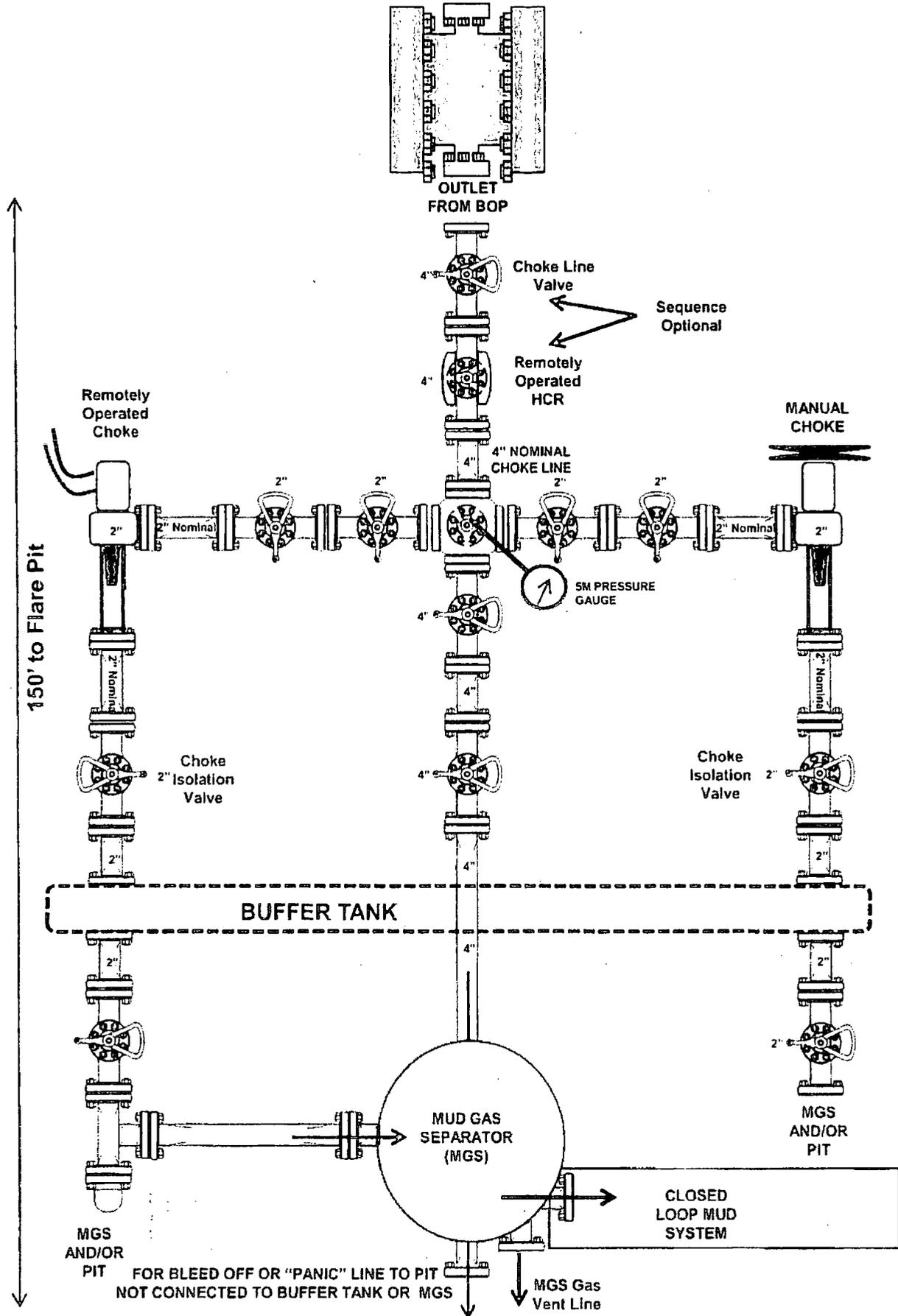
Other proposed operations facets attachment:

COG_Hennin_24H_Drilling_Prog_20180219134253.pdf

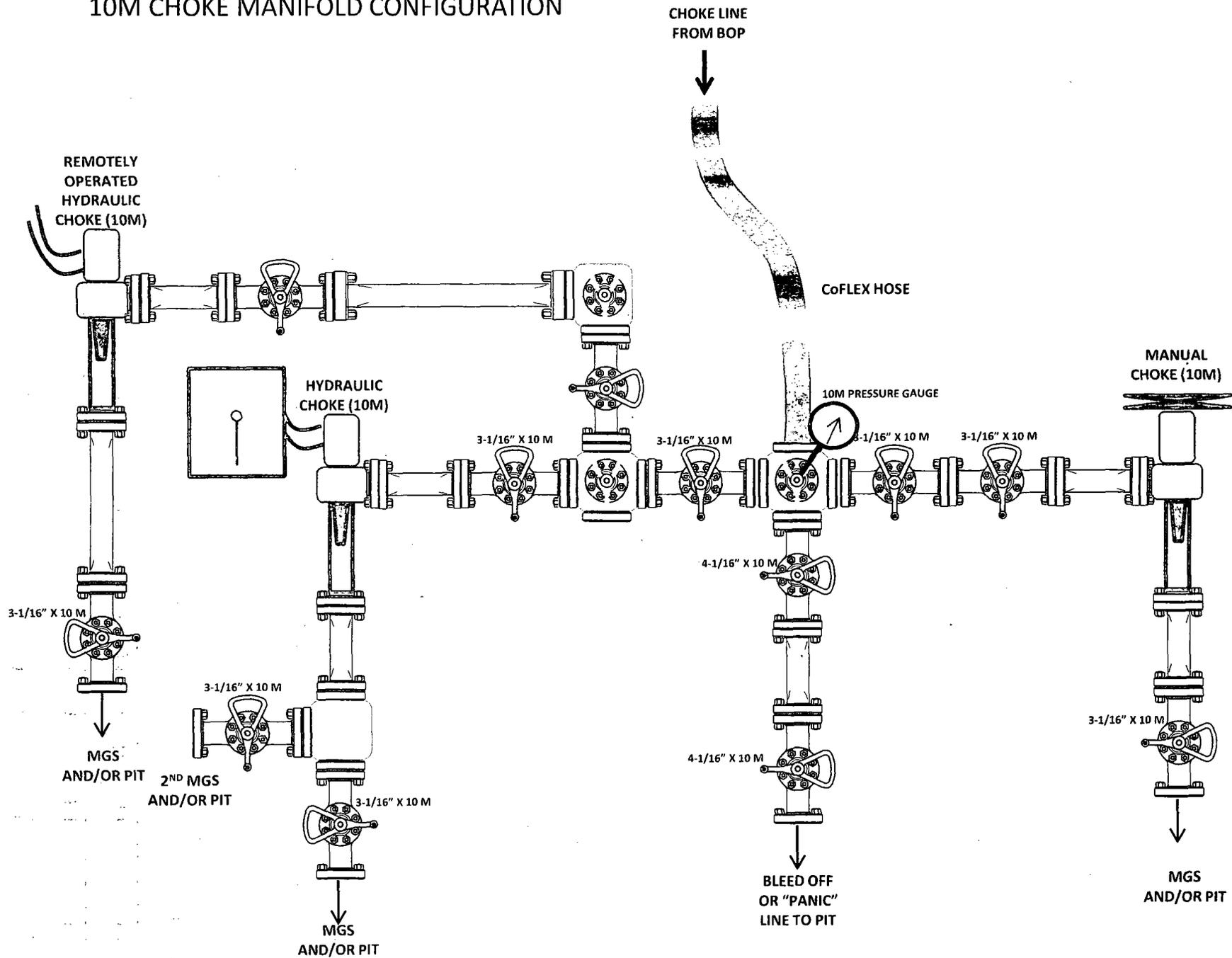
Other Variance attachment:

COG_Hennin24H_6.75_5M_Varian_WCP_20180219134304.pdf

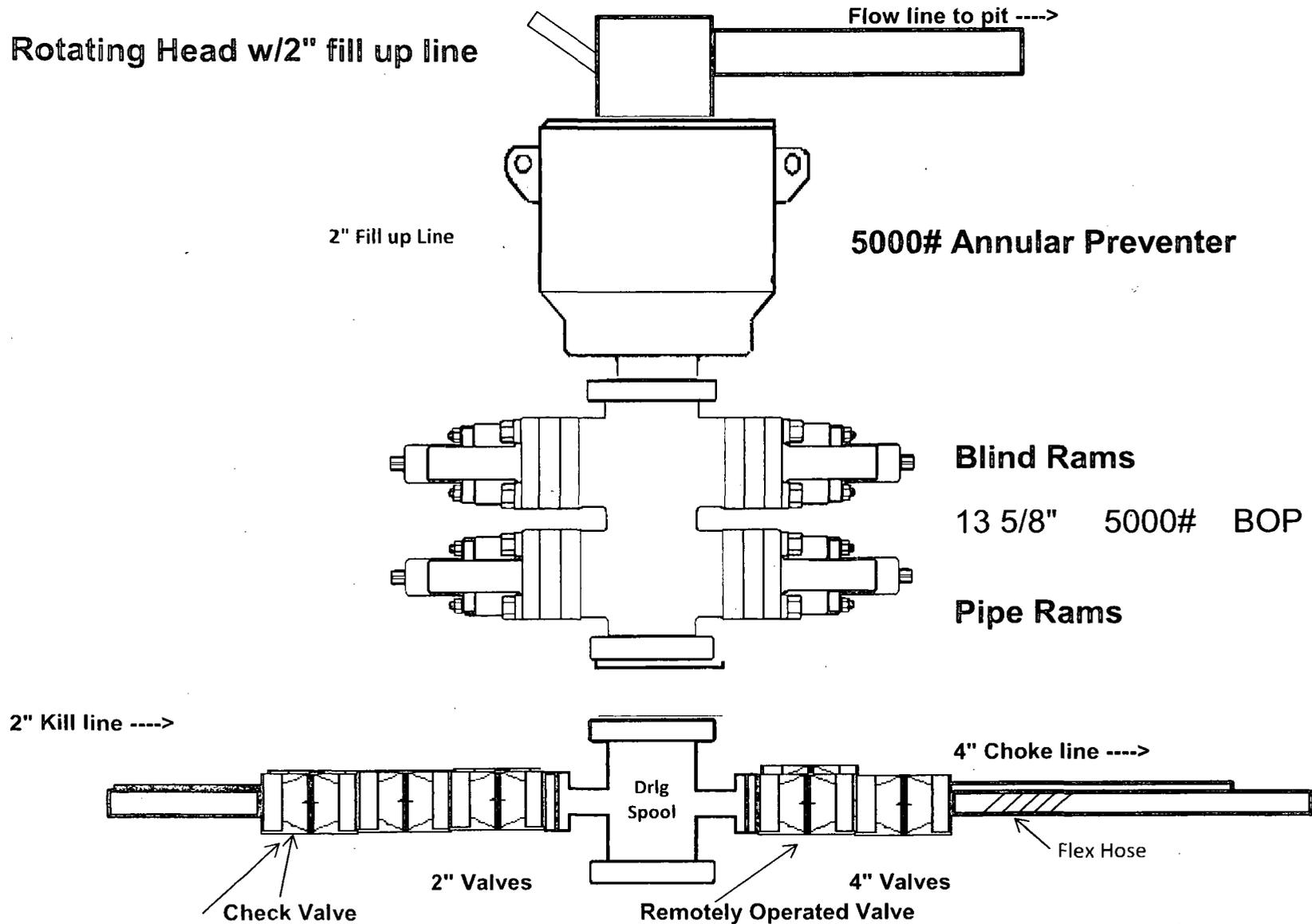
5M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)

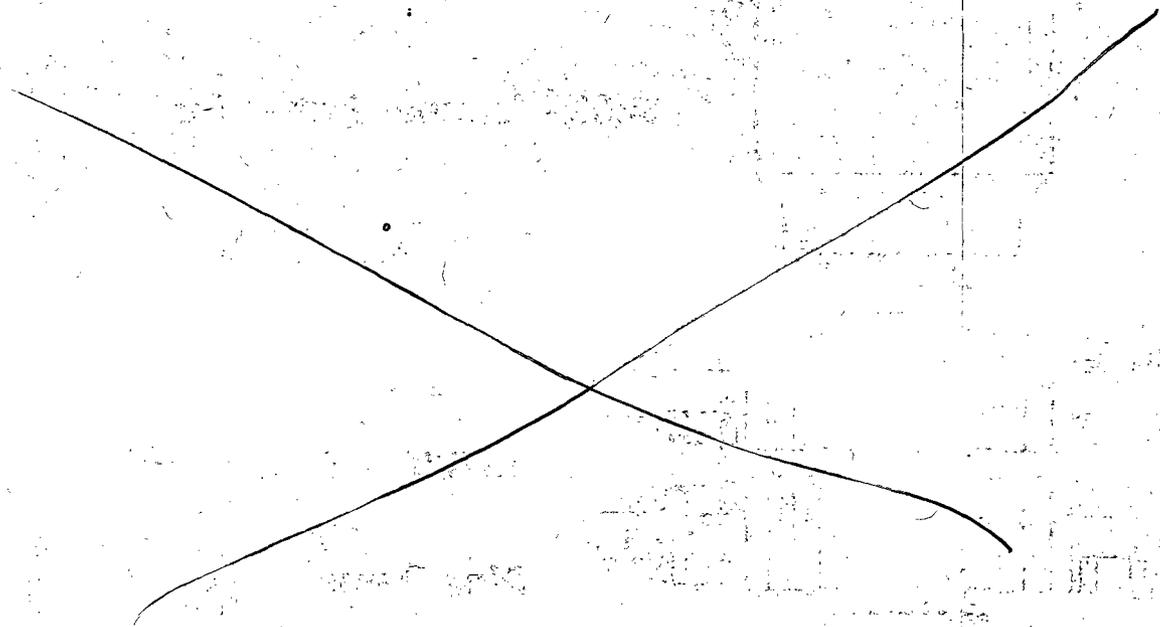


10M CHOKE MANIFOLD CONFIGURATION



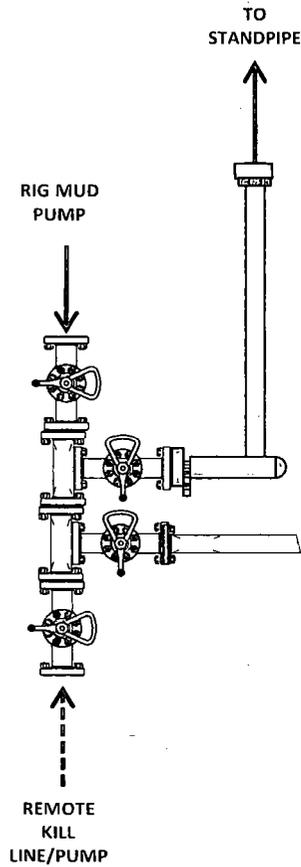
5,000 psi BOP Schematic



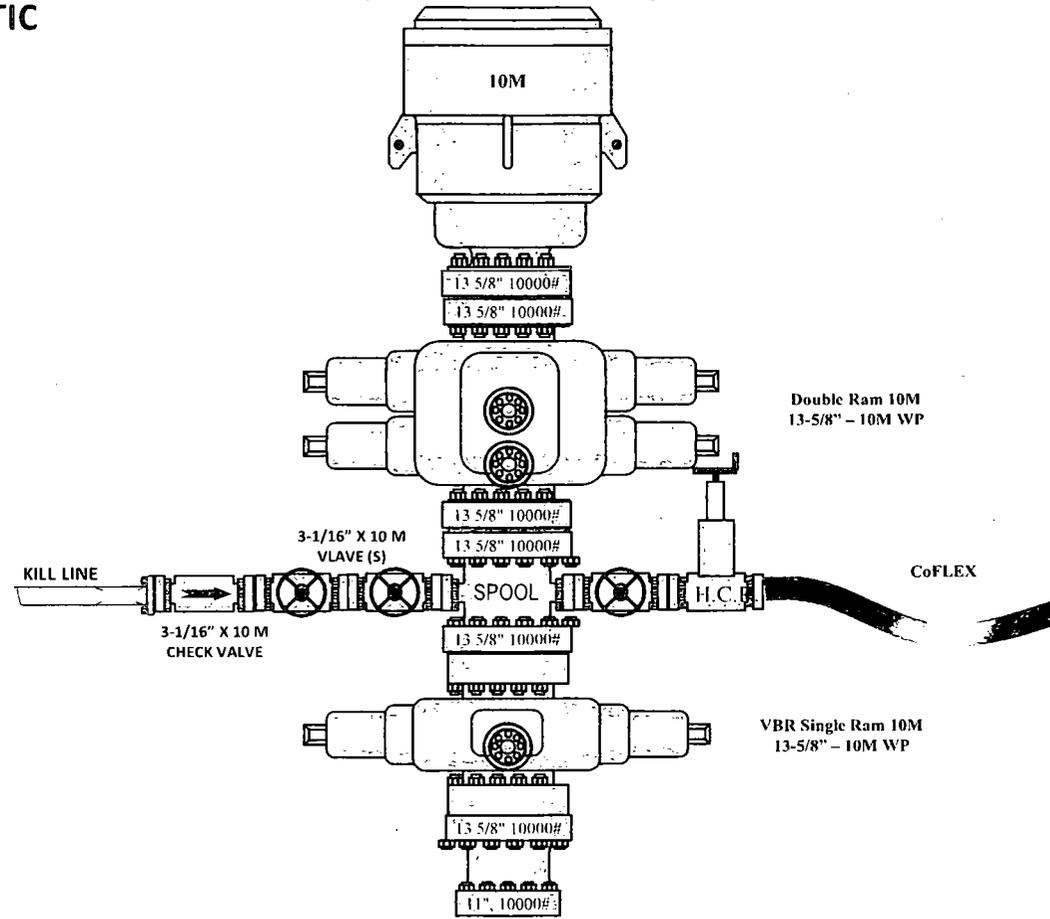


10M BOP Stack

10M REMOTE KILL SCHEMATIC



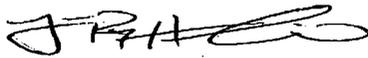
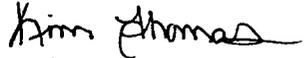
10M BOP Stack (10M Annular)





Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	Hobbs	Hose Assembly Type	Rotary/Vibrator
MWH Sales Representative	Ryan Rynolds	Certification	API 7K/FSL Level 2
Date Assembled	11/19/2015	Hose Grade	D
Location Assembled	OKC	Hose Working Pressure	5000
Sales Order #	271739	Hose Lot # and Date Code	11834 11/14
Customer Purchase Order #	302337	Hose I.D. (Inches)	3.5"
Assembly Serial # (Pick Ticket #)	326000	Hose O.D. (Inches)	4.89"
Hose Assembly Length	25'	Aarmor (yes/no)	No
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.5X64WB	Stem (Part and Revision #)	R3.5X64WB
Stem (Heat #)	A144783	Stem (Heat #)	A144783
Ferrule (Part and Revision #)	RF3.5	Ferrule (Part and Revision #)	RF3.5
Ferrule (Heat #)	J1628	Ferrule (Heat #)	J1628
Connection . Flange Hammer Union Part	4-1/16 5000	Connection (Part #)	4-1/16 5000
Connection (Heat #)	14032501	Connection (Heat #)	1404H321
Nut (Part #)	N/A	Nut (Part #)	N/A
Nut (Heat #)	N/A	Nut (Heat #)	N/A
Dies Used	5.49"	Dies Used	5.49"
Hydrostatic Test Requirements			
Test Pressure (psi)	10,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	11 1/2		
Date Tested		Tested By	Approved By
11/19/2015			



Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

November 19, 2015

Customer: Hobbs

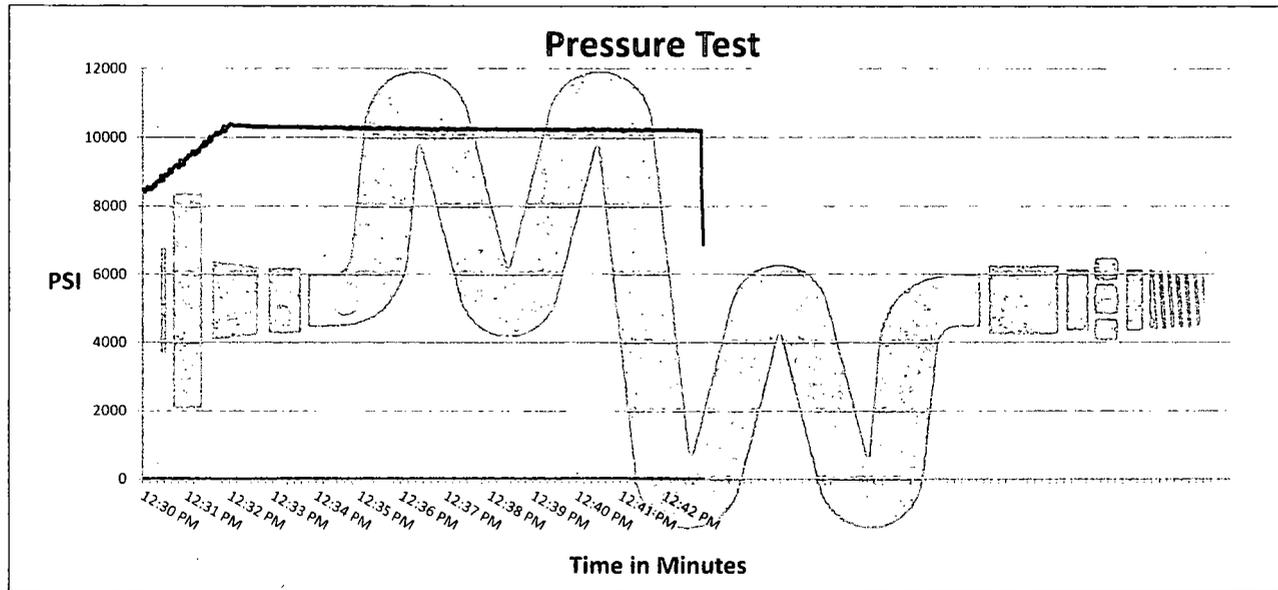
Pick Ticket #: 326000

Hose Specifications

<u>Hose Type</u>	<u>Length</u>
D	25'
<u>I.D.</u>	<u>O.D.</u>
3.5"	4.89"
<u>Working Pressure</u>	<u>Burst Pressure</u>
5000 PSI	Standard Safety Multiplier Applies

Verification

<u>Type of Fitting</u>	<u>Coupling Method</u>
4 1/16 5K	Swage
<u>Die Size</u>	<u>Final O.D.</u>
5.49"	5.50"
<u>Hose Serial #</u>	<u>Hose Assembly Serial #</u>
11834	326000



Test Pressure
10000 PSI

Time Held at Test Pressure
11 2/4 Minutes

Actual Burst Pressure

Peak Pressure
10473 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: James Hawkins

Approved By: Kim Thomas

x _____

x _____

Hose Assembly & Test Report

General Information		Hose Specifications		
Customer	Hobbs	Hose Assembly Type	choke & 2" / 1"	
Date Assembled	6-26-14	Certification	API 7K	
Location Assembled	OKC	Hose Grade	D	
Sales Order #	216297	Hose Working Pressure	5,000	
Customer Purchase Order #	237512	Hose Lot #	8309	
Hose Assembly Serial #	26022	Hose Date Code	04/12	
Pick Ticker Line Item	0010	Hose I.D. (Inches)	3.5 inches	
Hose Assembly Length (Feet and Inches)	50 feet	Hose O.D. (Inches)	5.49	
Contact Information Phone #		Armor (yes/no)	YCS	
Fittings				
End A		End B		
Stem (Part and Revision #)	R3.5x64WD	Stem (Part and Revision #)	R3.5x64WB	
Stem (Heat #)	13114030225	Stem (Heat #)	13114030225	
Stem (Rockwell Hardness HRB #)	—	Stem (Rockwell Hardness HRB #)	—	
Ferrule (Part and Revision #)	RF3.5	Ferrule (Part and Revision #)	RF3.5	
Ferrule (Heat #)	126151	Ferrule (Heat #)	372114	
Ferrule (Rockwell Hardness HRB #)	—	Ferrule (Rockwell Hardness HRB #)	—	
Connection (Part #)	4 1/16 SK	Connection (Part #)	4 1/16 SK	
Connection (Heat #)	03360	Connection (Heat #)	03360	
Connection (Brinell Hardness HB #)	—	Connection (Brinell Hardness HB #)	—	
Stress Relief #	17614	Stress Relief #	17614	
Welding #	MKR	Welding #	MKR	
X-ray #	—	X-ray #	—	
Assembly Information				
End A		End B		
Skive O.D. (Inches)	5.04	Skive O.D. (Inches)	4.92	
Swager Dies (1st pass)	5.62	Swager Dies (1st pass)	5.53	
Swager Dies (2nd pass)	—	Swager Dies (2nd pass)	—	
Final Swage O.D. (Inches)	5.14	Final Swage O.D. (Inches)	4.98	
Compression % (See Crimp Calculator)	94%	Compression % (See Crimp Calculator)	22%	
Swaged By	Charles Ash			
Hydrostatic Test Requirements				
Test Pressure (psi)	10,000	Hold Time (minutes)	13 1/4	
Tested By	Charles Ash		Date Tested	6-26-14
This is to certify that the above Hose Assembly has been satisfactorily tested in accordance with MHSI procedure 8.2.4.2				
Final Verification				
Leakage	<input checked="" type="checkbox"/> No	Hammer Unions	Yes <input checked="" type="checkbox"/> No	
	<input checked="" type="checkbox"/> No	Safety Clamps	Yes <input checked="" type="checkbox"/> No	
Third Party Witness	Customer or Third Party Witnessed By:			

Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	975	10.75	45.5	N80	BTC	5.54	1.18	23.44
9.875"	0	11975	7.625	29.7	P110	BTC	1.27	1.08	3.05
6.75"	0	11475	5.5	23	P110	BTC	1.90	1.99	3.17
6.75"	11475	17,481	5	18	P110	BTC	1.90	1.99	3.17
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
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	From	To					Collapse		Body
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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.

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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_Hennin_24H_1Mile_Map_08-22-2017.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: If the well is productive, contemplated facilities will be as follows: A tank battery and facilities will be constructed as shown on the Production Facility Layout. The tank battery and facilities including all flow lines and piping will be installed according to API specifications.

Production Facilities map:

COG_Hennin_24H_Prod_Facility_08-22-2017.pdf

COG_Hennin_Fed_12_24_CTB_08-22-2017.pdf

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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 will be obtained from the Salty Dog Brine station in Section 5. T19S. R36E.

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: COMMERCIAL

Water source transport method: 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 will be obtained from J-5 Water Well located in Section 13. T26S. R35E. The water will be purchased from Dinwiddie Cattle Co., LLC.

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: PRIVATE

Water source transport method: 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_Hennin_24H_Brine_H2O_08-22-2017.pdf

COG_Hennin_24H_Fresh_H2O_08-22-2017.pdf

Water source comments: Fresh water will be obtained from J-5 Water Well located in Section 13. T26S. R35E. The water will be purchased from Dinwiddie Cattle Co., LLC. Brine water will be obtained from the Salty Dog Brine station in Section 5. T19S. R36E.

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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 obtained from Dinwiddie Cattle Co., LLC caliche pit located in Section 18, T25S, R35E Phone 575-390-2076.

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: HENNIN FEDERAL

Well Number: 24H

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: HENNIN FEDERAL

Well Number: 24H

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

COG_Hennin_24H_Prod_Facility_08-22-2017.pdf

COG_Hennin_Fed_12_24_CTB_08-22-2017.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: HENNIN FEDERAL COM

Multiple Well Pad Number: 12H & 24H

Recontouring attachment:

Drainage/Erosion control construction: Due to the relatively level surface area, no waddles will be necessary for this location.

Drainage/Erosion control reclamation: Reclaim the east side.

Wellpad long term disturbance (acres): 2.94

Wellpad short term disturbance (acres): 3.67

Access road long term disturbance (acres): 0.06

Access road short term disturbance (acres): 0.06

Pipeline long term disturbance (acres): 0

Pipeline short term disturbance (acres): 0

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 3

Total short term disturbance: 3.73

Reconstruction method: New construction of pad.

Topsoil redistribution: East. Reclamation East 80'

Soil treatment: None

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

Existing Vegetation at the well pad attachment:

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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:

Seed Summary

Total pounds/Acre:

Seed Type

Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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_Hennin_24H_Closed_Loop_08-22-2017.pdf

Section 11 - Surface Ownership

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:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Operator Name: COG OPERATING LLC

Well Name: HENNIN FEDERAL

Well Number: 24H

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 8/10/2017 by Gerald Herrera (COG) and Jeff Robertson (BLM).

Other SUPO Attachment

COG_Hennin_24H_Certification_08-22-2017.pdf

Surface Use Plan
COG Operating LLC
Hennin Federal 24H
SHL: 210' FNL & 2162' FEL UL B
Section 3, T26S, R35E
Lea County
BHL: 200' FSL & 2310' FEL UL O
Section 3, T26S, R35E
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 22ND day of August, 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

Field Representative (if not above signatory): Rand French

Telephone: (575) 748-6940

E-mail: 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:

Assigned injection well API number?

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Injection well name:

Injection well API number:

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 Info Data Report

03/22/2018

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: