OCD Hobbs

Form 3160-3
(March 2012)

HOBBS OCD
DEC 27 2016
RECEIVED

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

5. Lease Serial No.: NMNM120908

6. If Indian, Allotee or Tribe Name:

1a. Type of Work: [✓] DRILL [ ] REENTER

7. If Unit or CA Agreement, Name and No.:

1b. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other [✓] Single Zone [ ] Multiple Zone

8. Lease Name and Well No. (40143): Windward Federal #8H

2. Name of Operator: COG Production LLC. (217955)

9. API Well No.: 30-025-43517

3a. Address: 2208 West Main Street, Artesia, NM 88210

3b. Phone No. (include area code): 575-748-6940

10. Field and Pool, or Exploratory (97899): WC-025 G-06 S253206M; Bone Spring

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface: 210' FNL & 1900' FWL Unit Letter C (NENW) SHL Sec. 30 - T24S - R32E
At proposed prod. Zone: 50' FSL & 2400' FWL Unit Letter N (SESW) BHL Sec. 31 - T24S - R32E

11. Sec., T.R.M. or Blk and Survey or Area: Sec. 30 - T24S - R32E

14. Distance in miles and direction from nearest town or post office*: Approximately 20 miles East from Malaga

12. County or Parish: Lea County

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any): 50'

16. No. of acres in lease: 1891.72

17. Spacing Unit dedicated to this well: 320

18. Distance from location* to nearest well, drilling, completed, applied for, on this lease, ft.: SHL: 50' (Prop. Windward #7H) BHL: 5099'

19. Proposed Depth: TVD: 9,195' MD: 19,329'

20. BLM/BIA Bond No. on file: NMB000845 & NMB000860

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3538.9' GL

22. Approximate date work will start*: 8/1/2016

23. Estimated duration: 30 days

24. Attachments

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

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

25. Signature: Mayte Reyes — Name (Printed/Typed): Mayte Reyes — Date: 5-5-16

Title: Regulatory Analyst

Approved by (Signature): /s/Cody Layton — Name (Printed/Typed): Cody R. Layton — Date: 12-16-16

Title: ACTING FIELD MANAGER L&M — Office: BLM-CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legan or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations theron.

APPROVAL FOR TWO YEARS

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.

KG 12/27/16

(Continued on page 2)

*(Instructions on page 2)

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Witness Surface & Intermediate Casing

Carlsbad Controlled Water Basin

KG

COG Production LLC – Windward Federal 8H

1. Geologic Formations

TVD of target	9,195' (EOC)	Pilot hole depth	No
MD at TD:	19,329'	Deepest expected fresh water:	550

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	746	Water	
Top of Salt	1110	Salt	
Base of Salt - Fletcher	4342	Salt	
Delaware - Lamar	4566	Salt Water	
Bell Canyon	4591	Salt Water	Seepage/Loss Cir
Cherry Canyon	5508	Oil/Gas	Seepage/Loss Cir
Brushy Canyon	6901	Oil/Gas	Seepage/Loss Cir
Bone Spring Lime	8520	Barren	
Upper Avalon Shale	8562	Oil/Gas	
Lower Avalon Shale	9021	Oil/Gas – Target Zone	
1st Bone Spring Sand	9597	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	800	13.375"	54.5	J55	STC	1.835	1.082	11.789
12.25"	0	4550	9.625"	40	J55	LTC	1.077	1.059	2.889
8.75"	0	19,329'	5.5"	17	P110	LTC	1.69	2.28	3.1
				BLM Minimum Safety Factor			1.125	1	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
Intermediate and Production Burst based on Pore Pressure (9.1 ppge) at Lateral TVD minus Gas Gradient (0.1 psi/ft).
Intermediate casing will always be kept 1/3 full while running as additional collapse protection.

	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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	

COG Production LLC – Windward Federal 8H

Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	400	13.5	1.75	9.2	12	Lead: Class C + 4% Gel + 2% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Intermediate	1225	12.8	1.9	10	18	Lead: Class C + 4% Gel + 2% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl
Production	500	10.3	3.62	21.9	72	Lead: Halliburton Tune Lite + adds
	2475	14.4	1.24	5.6	8	Tail: Versacem H + 2% Gel + 1% Salt

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review. Casing String	TOC	% Excess
Surface	0'	85%
1st Intermediate	0'	100%
Production	4050' (500' Tie-in to Int Casing)	Lead: 45% OH in KOP to ICP. 0% in 5.5" x 9.625" Intermediate Casing x Casing Annulus Tail: 15% OH from KOP to EOL

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	✓	Tested to:
12-1/4"	13-5/8"	2M	Annular	x	2000 psi
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram	x	3M
			Pipe Ram	x	
			Double Ram		
			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.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe (800')	FW Gel	8.6-8.8	28-34	N/C
Surf csg (800')	9-5/8" Int shoe (4550')	Saturated Brine	10.0-10.2	28-34	N/C
9-5/8" Int Shoe (4550')	19,329' MD Lateral TD (19,329)	Cut Brine	8.6 – 9.4	28-34	N/C

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.
N	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	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4353 psi at 9195' TVD (EOC)
Abnormal Temperature	NO (149 deg F.)

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

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

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

N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

Directional Drilling and Anticollision Considerations

The directional plan and anti-collision plan(s) for this well is attached.

This will be a walking operation to drill the proposed Windward Federal **8H** and the future Windward Federal **7H** (to be proposed). The future Windward Federal **7H** surface location is 50' West of the proposed Windward Federal **8H**. Additionally, the Windward Federal 2H (existing) lies 150' West of the future Windward Federal **7H** and the King Tut Federal 2H (existing) lies 250' West of the future Windward Federal **7H**. The anticollision assessment reports for these wells (future Windward Federal **7H**, existing Windward 2H, existing King Tut Federal 2H) are included in the directional plan.

In the proximity of the lateral path of the proposed Windward Federal **8H** is the Turquoise Federal 30 SWD #1. This well was drilled to 8754' TVD is approximately 1720' South of the proposed Windward Federal **8H**. This well poses no reasonable anticollision issues in the vertical nor lateral section of the Windward Federal **8H**.

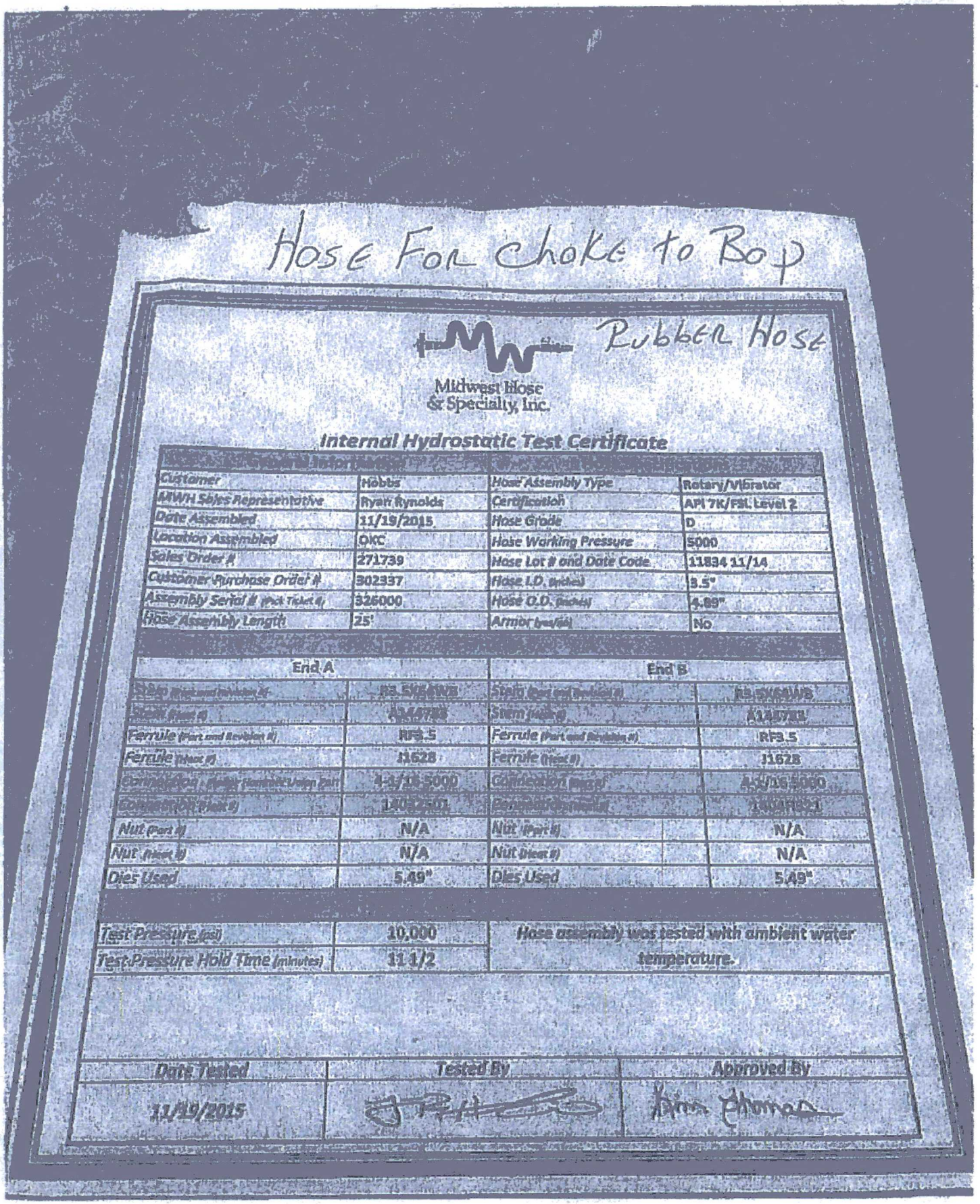
Is this a walking operation? YES – Described in Directional Drilling and Anticollision Considerations above.
Will be pre-setting casing? NO If yes, describe.

Attachments

- Directional Plan + AC Report
- BOP & Choke Schematics
- C102 and supporting maps
- Rig plat
- H2S schematic
- H2S contingency plan
- Interim reclamation plat
- Pressure Chart and Certs for Flex Hose Variance

WINDWARD FEDERAL #8H

FID	Shape *	OPERATOR	WELL_NAME	LATITUDE	LONGITUDE	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	TVD_DEPTH	COMPL_STAT
0	Point	MARBOB ENERGY CORP	BET-NET FEDERAL 001	32.193745	-103.733627	3001527006	25	24.0S	31E	660	N	1980	W	0	Plugged
1	Point	YATES PETROLEUM CORPORATION	HARACZ AMO FEDERAL 006	32.20464	-103.72942	3001527972	24	24.0S	31E	1980	N	1980	E	8540	Plugged
2	Point	LEGACY RESERVES OPERATING, LP	BTBN 25 FEDERAL 002	32.189235	-103.724073	3001529551	25	24.0S	31E	2300	N	330	E	10000	Active
3	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 116H	32.167397	-103.724254	3001537926	36	24.0S	31E	330	S	430	E	8284	New (Not drilled or compl)
4	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 165H	32.180915	-103.728682	3001540824	36	24.0S	31E	25	N	1780	E	0	New (Not drilled or compl)
5	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 166H	32.181053	-103.728683	3001541228	25	24.0S	31E	25	S	1780	E	0	New (Not drilled or compl)
6	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 167H	32.18732	-103.73287	3001541385	25	24.0S	31E	2310	S	2200	W	8218	New (Not drilled or compl)
7	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT SWD 181	32.17668	-103.726749	3001541649	36	24.0S	31E	1568	N	1189	E	18226	New (Not drilled or compl)
8	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 210H	32.167066	-103.727078	3001541868	36	24.0S	31E	200	S	1300	E	0	New (Not drilled or compl)
9	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 209H	32.167067	-103.727241	3001541893	36	24.0S	31E	200	S	1350	E	0	New (Not drilled or compl)
10	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 099	32.180071	-103.7304	3001542770	36	24.0S	31E	330	N	2310	E	0	New (Not drilled or compl)
11	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 182H	32.187688	-103.729516	3001542849	25	24.0S	31E	2440	S	2030	E	0	New (Not drilled or compl)
12	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 292H	32.180443	-103.725952	3001543261	36	24.0S	31E	200	N	940	E	0	New (Not drilled or compl)
13	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW UNIT 290H	32.180444	-103.72579	3001543265	36	24.0S	31E	200	N	890	E	0	New (Not drilled or compl)
14	Point	STANOLIND OIL & GAS CO	PAYNE 001	32.190181	-103.703114	3002512715	29	24.0S	32E	1980	N	660	W	4811	Plugged
15	Point	FORTE ENERGY CORP	PADUCA FEDERAL 001	32.190153	-103.711689	3002526234	30	24.0S	32E	1980	N	1980	E	15531	Plugged
16	Point	YATES PETROLEUM CORPORATION	HARACZ AMO FEDERAL 007	32.205569	-103.715482	3002533345	19	24.0S	32E	1650	N	2310	W	9900	Active
17	Point	COG PRODUCTION, LLC	TURQUOISE 30 FEDERAL SWD 001	32.190274	-103.716568	3002533455	30	24.0S	32E	1930	N	1980	W	8754	Plugged
18	Point	DEVON ENERGY PRODUCTION COMPANY, LP	TRIONYX 6 FEDERAL 004H	32.15253	-103.715312	3002540044	6	25.0S	32E	200	S	2370	W	8201	New (Not drilled or compl)
19	Point	DEVON ENERGY PRODUCTION COMPANY, LP	TRIONYX 6 FEDERAL 005H	32.152536	-103.713312	3002540045	6	25.0S	32E	200	S	2310	E	10488	New (Not drilled or compl)
20	Point	DEVON ENERGY PRODUCTION COMPANY, LP	TRIONYX 6 FEDERAL 006H	32.152536	-103.713149	3002540046	6	25.0S	32E	200	S	2260	E	8210	New (Not drilled or compl)
21	Point	COG PRODUCTION, LLC	REDHEAD 31 FEDERAL 001H	32.180106	-103.719683	3002540390	31	24.0S	32E	330	N	990	W	10467	New (Not drilled or compl)
22	Point	YATES PETROLEUM CORPORATION	CALCUTTA BRZ STATE 001H	32.180179	-103.703088	3002540453	32	24.0S	32E	330	N	660	W	60	Plugged
23	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW 32 STATE FEDERAL COM 002H	32.172901	-103.698585	3002541170	32	24.0S	32E	2310	S	2030	W	0	New (Not drilled or compl)
24	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW 32 STATE FEDERAL COM 003H	32.172901	-103.698748	3002541171	32	24.0S	32E	2310	S	1980	W	8302	New (Not drilled or compl)
25	Point	DEVON ENERGY PRODUCTION COMPANY, LP	COTTON DRAW 32 STATE FEDERAL COM 004H	32.172894	-103.700859	3002541172	32	24.0S	32E	2310	S	1330	W	8289	New (Not drilled or compl)
26	Point	COG PRODUCTION, LLC	WINDWARD FEDERAL 002H	32.195078	-103.717262	3002541408	30	24.0S	32E	190	N	1750	W	0	New (Not drilled or compl)
27	Point	COG PRODUCTION, LLC	WINDWARD FEDERAL 004H	32.19511	-103.706489	3002541412	30	24.0S	32E	190	N	430	E	10516	New (Not drilled or compl)
28	Point	COG PRODUCTION, LLC	WINDWARD FEDERAL 003H	32.195094	-103.711914	3002541413	30	24.0S	32E	190	N	2100	E	10579	New (Not drilled or compl)
29	Point	COG PRODUCTION, LLC	WINDWARD FEDERAL 001H	32.195065	-103.721549	3002541414	30	24.0S	32E	190	N	430	W	10507	New (Not drilled or compl)
30	Point	COG PRODUCTION, LLC	AZORES FEDERAL 004H	32.181609	-103.703089	3002541535	29	24.0S	32E	190	S	660	W	10552	New (Not drilled or compl)
31	Point	COG PRODUCTION, LLC	KING TUT FEDERAL 001H	32.195064	-103.721874	3002541542	30	24.0S	32E	190	N	330	W	8383	New (Not drilled or compl)
32	Point	COG PRODUCTION, LLC	KING TUT FEDERAL 002H	32.195077	-103.717587	3002541558	30	24.0S	32E	190	N	1650	W	8415	New (Not drilled or compl)
33	Point	COG PRODUCTION, LLC	KING TUT FEDERAL 003H	32.195093	-103.712239	3002541559	30	24.0S	32E	190	N	2200	E	0	New (Not drilled or compl)
34	Point	COG PRODUCTION, LLC	KING TUT FEDERAL 004H	32.195111	-103.706164	3002541560	30	24.0S	32E	190	N	330	E	8475	New (Not drilled or compl)
35	Point	COG PRODUCTION, LLC	CORVO FEDERAL 003H	32.181658	-103.699125	3002541911	29	24.0S	32E	190	S	1880	W	8446	New (Not drilled or compl)
36	Point	COG PRODUCTION, LLC	CORVO FEDERAL 004H	32.181605	-103.703414	3002541912	29	24.0S	32E	190	S	560	W	8439	New (Not drilled or compl)
37	Point	DEVON ENERGY PRODUCTION COMPANY, LP	CHINCOTEAGUE 32 STATE COM 001H	32.167089	-103.702439	3002542215	32	24.0S	32E	200	S	830	W	0	New (Not drilled or compl)
38	Point	DEVON ENERGY PRODUCTION COMPANY, LP	CHINCOTEAGUE 32 STATE COM 002H	32.167089	-103.702277	3002542263	32	24.0S	32E	200	S	880	W	0	New (Not drilled or compl)
39	Point	DEVON ENERGY PRODUCTION COMPANY, LP	TRIONYX 6 FEDERAL 009H	32.15252	-103.718786	3002542475	6	25.0S	32E	200	S	1300	W	10441	New (Not drilled or compl)
40	Point	DEVON ENERGY PRODUCTION COMPANY, LP	TRIONYX 6 FEDERAL 010H	32.152521	-103.718624	3002542476	6	25.0S	32E	200	S	1350	W	10467	New (Not drilled or compl)



Hose For Choke to Bop

Rubber Hose

Midwest Hose & Specialty, Inc.

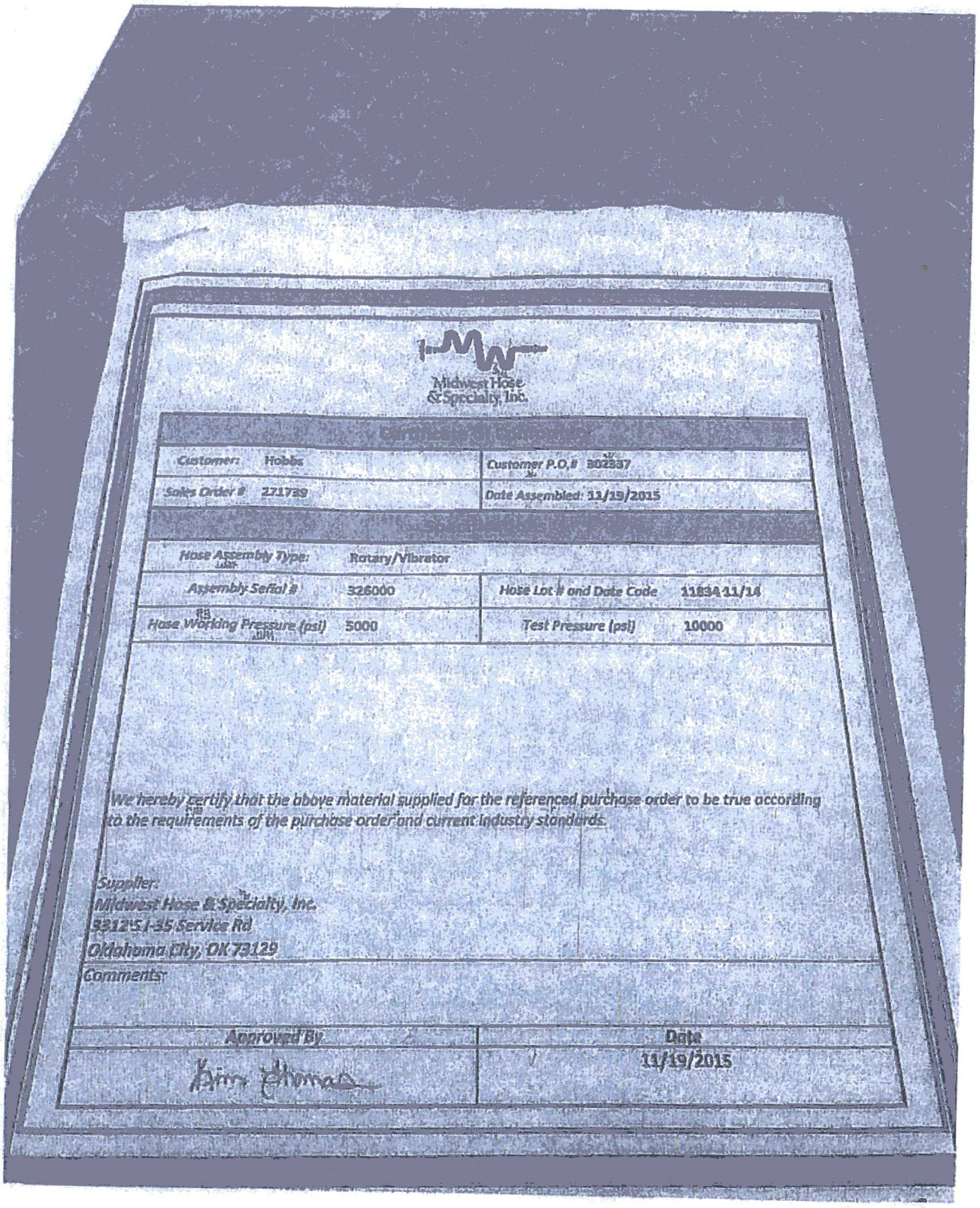
Internal Hydrostatic Test Certificate

Customer	Hobbs	Hose Assembly Type	Rotary/Vibrator
MWH Sales Representative	Ryan Rynolds	Certification	API 7K/PSL 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 # (Part Ticket #)	326000	Hose O.D. (inches)	4.89"
Hose Assembly Length	25'	Armor (yes/no)	No

End A		End B	
Stem (Part and Revision #)	[illegible]	Stem (Part and Revision #)	[illegible]
Stem (Heat #)	[illegible]	Stem (Heat #)	[illegible]
Ferrule (Part and Revision #)	RF3.5	Ferrule (Part and Revision #)	RF3.5
Ferrule (Heat #)	J1628	Ferrule (Heat #)	J1628
Connection (Part and Revision #)	4-1/16 5000	Connection (Part #)	4-1/16 5000
Connection (Heat #)	[illegible]	Connection (Heat #)	[illegible]
Nut (Part #)	N/A	Nut (Part #)	N/A
Nut (Heat #)	N/A	Nut (Heat #)	N/A
Dies Used	5.49"	Dies Used	5.49"

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	[signature]	[signature]



Midwest Hose & Specialty, Inc.

Customer: Hobbs	Customer P.O.# 302337
Sales Order # 271739	Date Assembled: 11/19/2015
Hose Assembly Type: Rotary/Vibrator	
Assembly Serial # 326000	Hose Lot # and Date Code 11834 11/14
Hose Working Pressure (psi) 5000	Test Pressure (psi) 10000

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:
Midwest Hose & Specialty, Inc.
3212 I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	Date
Kim Thomas	11/19/2015

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

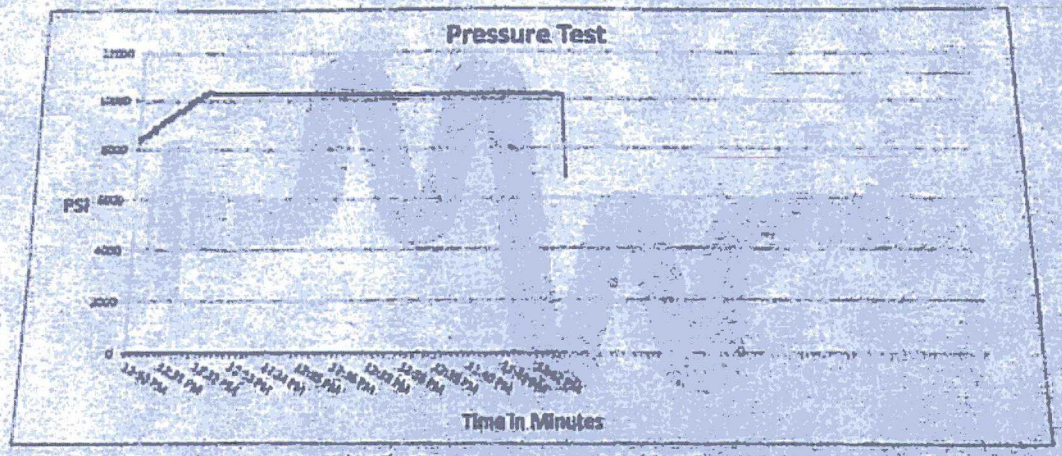
November 19, 2015

Customer: Hobbs

Pick Ticket #: 326000

Hose Specifications

Hose Type	Length	Type of Fitting	Coupling Method
C	25'	4 1/16"sc	Swage
I.D.	O.D.	Die Size	Final I.D.
3.5"	4.89"	5.49"	3.58"
Working Pressure	Burst Pressure	Hose Serial #	Hose Assembly Serial #...
5000 PSI	Standard Safety Multiplier Applies	11834	326000



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
10000 PSI	11 2/4 Minutes		10473 PSI

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

Tested By: James Bledsoe

Approved By: Jim Thomas

X _____

Midwest Hose & Specialty, Inc.

Hose Assembly & Test Report

General Information		Hose Specifications	
Customer	Hobbs	Hose Assembly Type	choke + kill
Date Assembled	6-26-14	Certification	API 7K
Location Assembled	OKC	Hose Grade	D
Sales Order #	216797	Hose Working Pressure	5,000
Customer Purchase Order #	237512	Hose Lot #	83097
Hose Assembly Serial #	260212	Hose Date Code	04/12
Pick Ticket 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)	yes

Fittings

End A		End B	
Stem (Part and Revision #)	R3.5X64WB	Stem (Part and Revision #)	R3.5X64WB
Stem (Heat #)	13114050225	Stem (Heat #)	13114050225
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 5K	Connection (Part #)	4 1/16 5K
Connection (Heat #)	V3360	Connection (Heat #)	V3360
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)	5.64	Final Swage O.D. (inches)	5.48
Compression % (See Crimp Calculator)	24%	Compression % (See Crimp Calculator)	22%
Swaged By	Charles Hill		

Hydrostatic Test Requirements

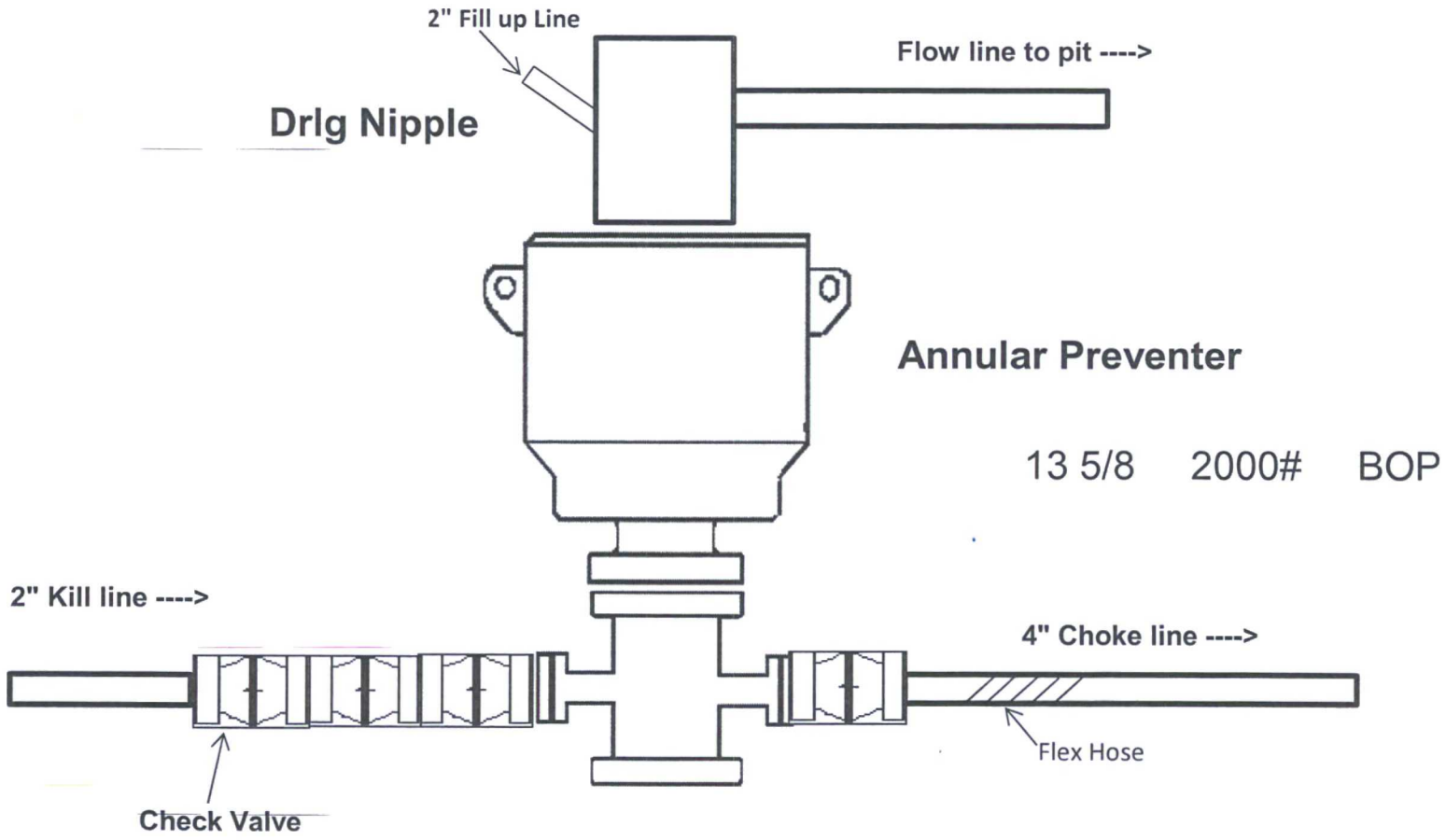
Test Pressure (psi)	10,000	Hold Time (minutes)	13 1/4
Tested By	Charles Hill	Date Tested	6-26-14

This is to certify that the above Hose Assembly has been satisfactorily tested in accordance with MHSI procedure 8.2.4.2

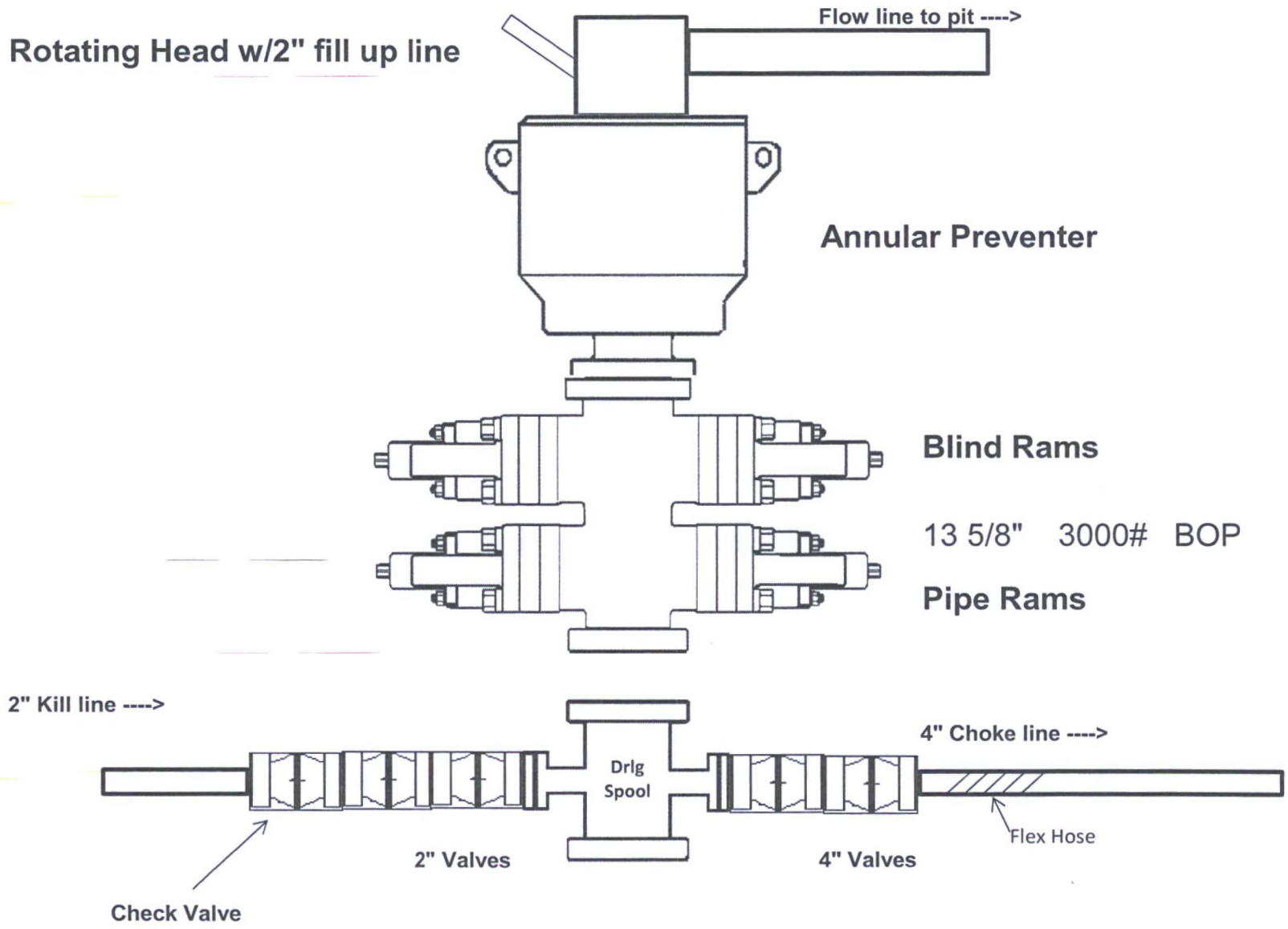
Final Verification

[illegible]	Yes (No)	Hammer Unions	Yes (No)
[illegible]	Yes (No)	Safety Clamps	Yes (No)
[illegible] Third Party Witness (No)	Customer or Third Party Witnessed By:		

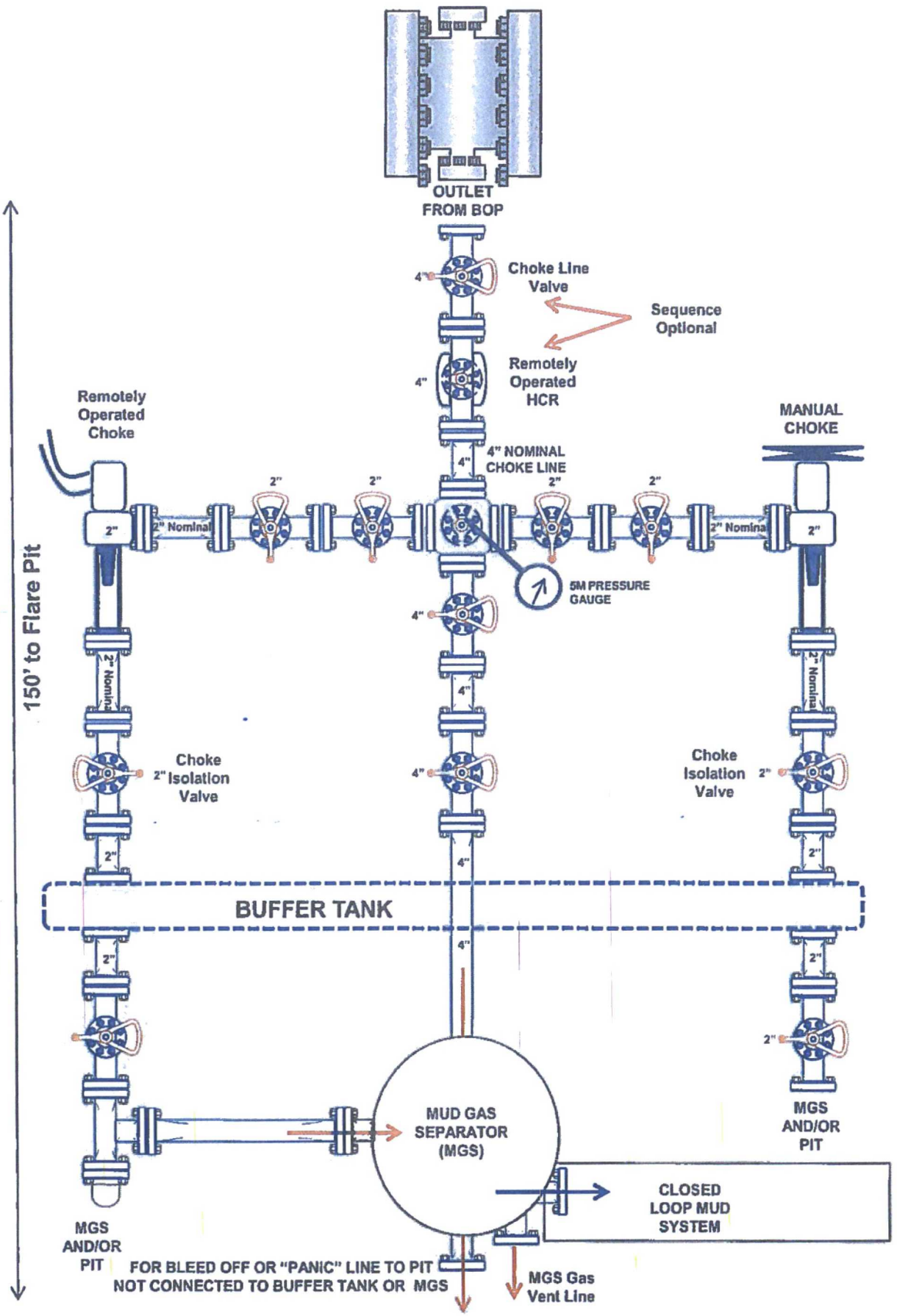
2,000 psi BOP Schematic



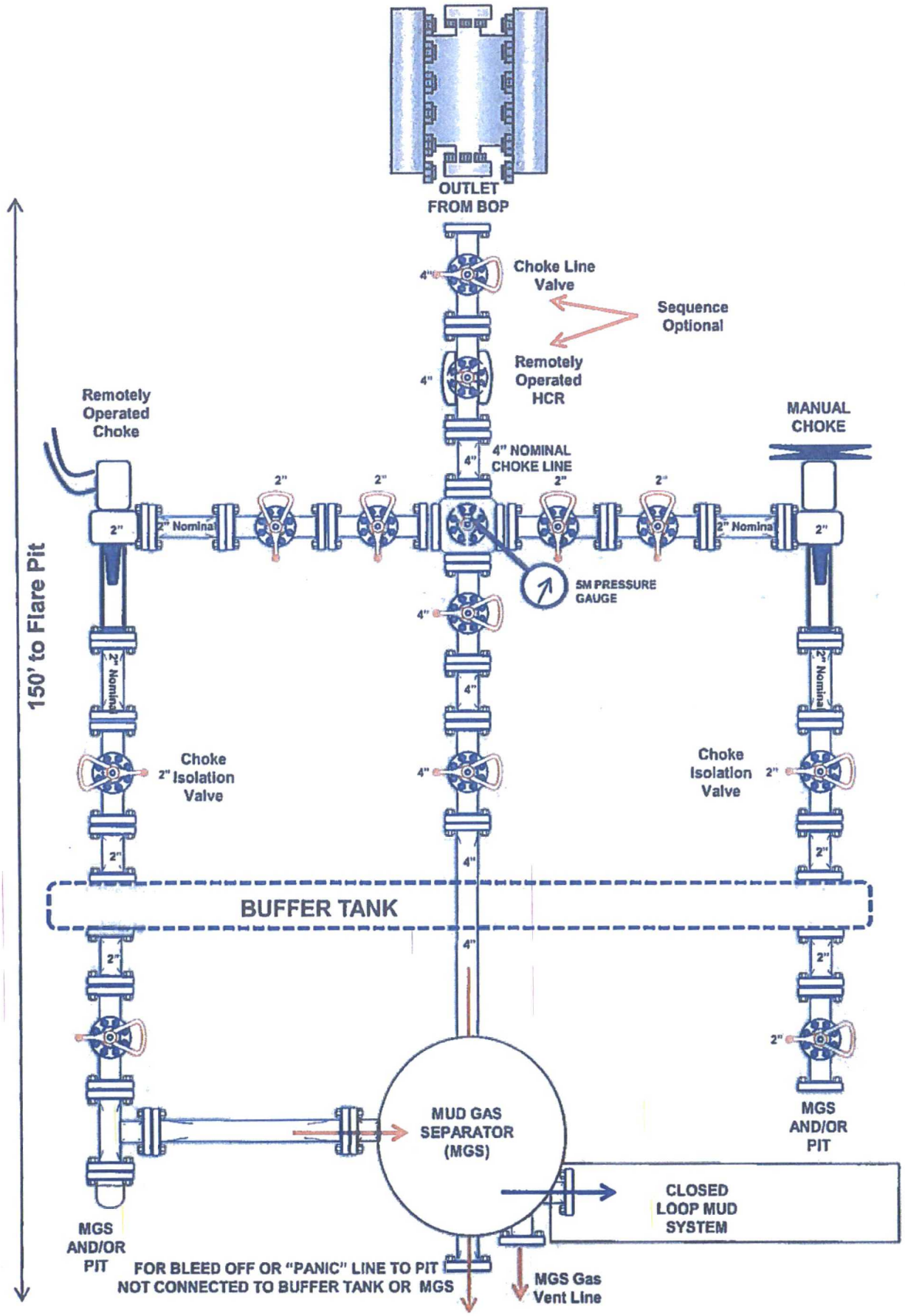
3,000 psi BOP Schematic



2M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)

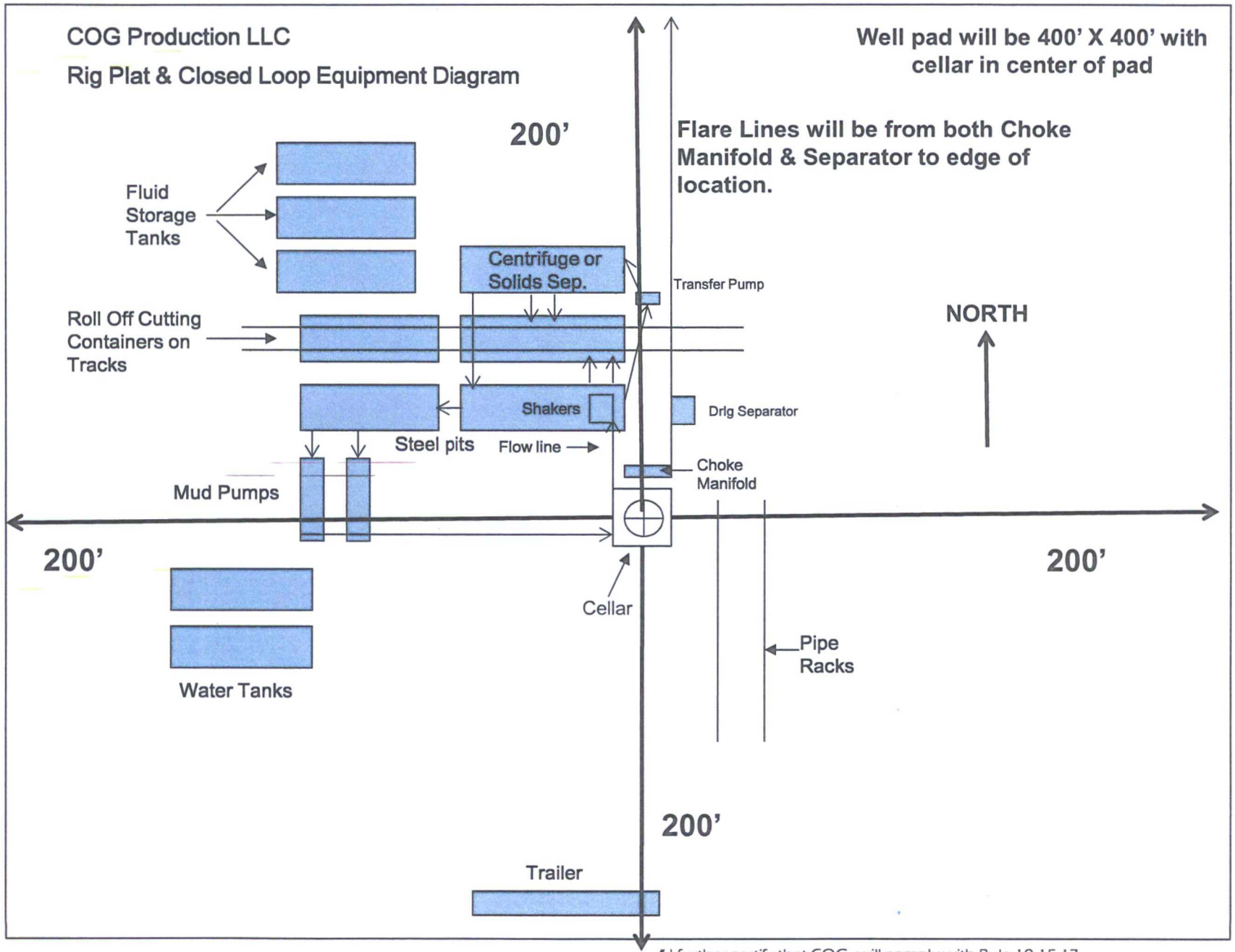


3M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)



COG Production LLC

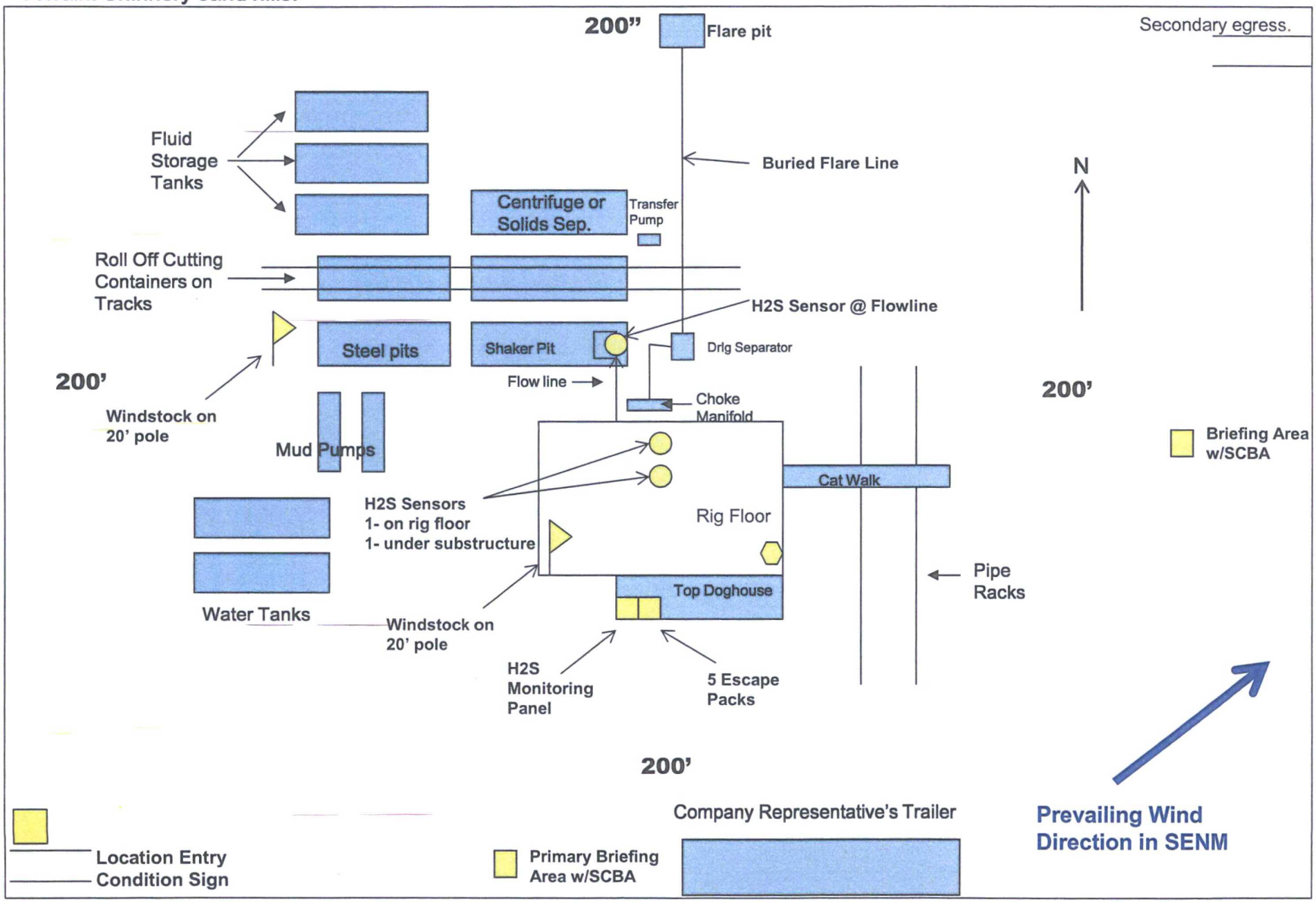
Rig Plat & Closed Loop Equipment Diagram



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

COG Production LLC
H_2S Equipment Schematic
Terrain: Shinnery sand hills.

**Well pad will be 400' X 400'
with cellar in center of pad**



CONCHO

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CASE RECORDATION
(MASS) Serial Register Page

Run Time: 09:12 AM

Run Date: 05/02/2016

01 12-22-1987;101STAT1330;30USC181 ET SE

Case Type 312021: O&G LSE COMP PD -1987
Commodity 459: OIL & GAS
Case Disposition: AUTHORIZED

Total Acres	Serial Number
1,891.720	NMNM-- - 120908

Serial Number: NMNM-- - 120908

Name & Address		Int Rel	% Interest
COG PRODUCTION LLC	600 W ILLINOIS AVE, ONE CONCHO CEI MIDLAND TX 79701	LESSEE	100.000000000

Serial Number: NMNM-- - 120908

Mer Twp Rng Sec	STyp	SNr Suff	Subdivision	District/Field Office	County	Mgmt Agency
23 0240S 0320E 029	ALIQ		NE,W2,W2SE;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0240S 0320E 030	ALIQ		E2,E2W2;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0240S 0320E 030	LOTS		1-4;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0240S 0320E 031	ALIQ		E2,E2W2;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0240S 0320E 031	LOTS		1-4;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT

Serial Number: NMNM-- - 120908

Act Date	Code	Action	Action Remark	Pending Office
05/30/2008	387	CASE ESTABLISHED	200807026;	
06/30/2008	299	PROTEST FILED	SUSAN H BELL;	
07/01/2008	299	PROTEST FILED	WESTERN ENVR LAW CTR;	
07/01/2008	299	PROTEST FILED	WILD EARTH GUARDIANS;	
07/16/2008	191	SALE HELD		
07/16/2008	267	BID RECEIVED	$3027200.00;	
09/08/2008	298	PROTEST DISMISSED	SUSAN H BELL;	
10/24/2008	298	PROTEST DISMISSED	WILD EARTH GUARDIANS;	
10/31/2008	237	LEASE ISSUED		
10/31/2008	298	PROTEST DISMISSED	WESTERN ENVR LAW CTR;	
10/31/2008	974	AUTOMATED RECORD VERIF	BTM	
11/01/2008	496	FUND CODE	05;145003	
11/01/2008	530	RLTY RATE - 12 1/2%		
11/01/2008	868	EFFECTIVE DATE		
09/19/2011	899	TRF OF ORR FILED	1	
11/18/2011	940	NAME CHANGE RECOGNIZED	OGX RES LLC/COG PROD	
04/04/2013	643	PRODUCTION DETERMINATION	/1/	
04/04/2013	650	HELD BY PROD - ACTUAL	/1/	
06/14/2013	658	MEMO OF 1ST PROD-ACTUAL	/1/3H AZORES FED;	
07/23/2014	643	PRODUCTION DETERMINATION	/2/	
07/23/2014	658	MEMO OF 1ST PROD-ACTUAL	/2/1H;	

Serial Number: NMNM-- - 120908

Line Nr	Remarks
02	STIPULATIONS ATTACHED TO LEASE:
03	NM-11-LN SPECIAL CULTURAL RESOURCE
04	SENM-S-15 WILDLIFE HABITAT PROJECTS
05	SENM-S-19 PLAYAS AND ALKALI LAKES
06	SENM-S-22 PRAIRIE CHICKENS

CORPORATE ADDRESS
ONE CONCHO CENTER
P 432.683.7443 | F 432.683.7441

ARTESIA WEST OFFICE
NEW MEXICO 88210
P 575.748.6940 | F 575.746.2096

NO WARRANTY IS MADE BY BLM FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01932	C		ED	3	1		12	24S	32E	628633	3567188*	492		
C 02350			ED	4	3		10	24S	32E	625826	3566333*	60		
C 03527 POD1	C		LE	1	2	3	03	24S	32E	625770	3568487	500		
C 03528 POD1	C		LE	1	1	2	15	24S	32E	626040	3566129	541		
C 03530 POD1	C		LE	3	4	3	07	24S	32E	620886	3566156	550		
C 03555 POD1	C		LE	2	2	1	05	24S	32E	622709	3569231	600	380	220

Average Depth to Water: **380 feet**

Minimum Depth: **380 feet**

Maximum Depth: **380 feet**

Record Count: 6

PLSS Search:

Township: 24S **Range:** 32E

***UTM location was derived from PLSS - see Help**

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 30 **Township:** 24S **Range:** 32E

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New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 31 **Township:** 24S **Range:** 32E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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 Production 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 5th day of May, 2016.

Signed: Melanie J Wilson

Printed Name: Melanie J. Wilson
Position: Regulatory Coordinator
Address: 2208 W. Main Street, Artesia, NM 88210
Telephone: (575) 748-6940
Field Representative (if not above signatory): Rand French
E-mail: mwilson@concho.com