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Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM118722

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☑ Other INJ-DIS

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
MAELSTROM SWD 1 (322270)

2. Name of Operator
CHEVRON USA INCORPORATED (4323)

9. API Well No.
30-025-45127

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
6301 Deauville Blvd. Midland TX 79706	(432)687-7866	SWD;SILURIAN (98249)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NWSE / 2050 FSL / 1793 FEL / LAT 32.04123 / LONG -103.659963

At proposed prod. zone NWSE / 2050 FSL / 1793 FEL / LAT 32.04123 / LONG -103.659963

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 15 / T26S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
2050 feet	3080	40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. in file**
25 feet	17950 feet / 17950 feet	FED: CA0329
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3168 feet	07/01/2018	120 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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 must 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 requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Laura Becerra / Ph: (432)687-7665	11/22/2017
Title: Permitting Specialist		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Christopher Walls / Ph: (575)234-2234	08/07/2018
Title: Petroleum Engineer	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.

APPROVED WITH CONDITIONS

KG 08/21/18

Approval Date: 08/07/2018

(Continued on page 2)

*(Instructions on page 2)

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 I: 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 wen, 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 directionany 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.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

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 wen 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 win 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 conects this information to anow 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: NWSE / 2050 FSL / 1793 FEL / TWSP: 26S / RANGE: 32E / SECTION: 15 / LAT: 32.04123 / LONG: -103.659963 (TVD: 17950 feet, MD: 17950 feet)
   BHL: NWSE / 2050 FSL / 1793 FEL / TWSP: 26S / RANGE: 32E / SECTION: 15 / LAT: 32.04123 / LONG: -103.659963 (TVD: 17950 feet, MD: 17950 feet)

BLM Point of Contact

Name: Tenille Ortiz

Title: Legal Instruments Examiner

Phone: 5752342224

Email: tortiz@blm.gov

Approval Date: 08/07/2018

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.

AFMSS

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

Operator Certification Data Report

08/16/2018

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: Laura Becerra **Signed on:** 11/21/2017

Title: Permitting Specialist

Street Address: 6301 Deauville Blvd., S2211

City: Midland **State:** TX **Zip:** 79706

Phone: (432)687-7665

Email address: LBecerra@Chevron.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS

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

Application Data Report

08/16/2018

APD ID: 10400024820 **Submission Date:** 11/22/2017

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Well Type: INJECTION - DISPOSAL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400024820 **Tie to previous NOS?** **Submission Date:** 11/22/2017

BLM Office: CARLSBAD **User:** Laura Becerra **Title:** Permitting Specialist

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM 118722 **Lease Acres:** 3080

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO **APD Operator:** CHEVRON USA INCORPORATED

Operator letter of designation:

Operator Info

Operator Organization Name: CHEVRON USA INCORPORATED

Operator Address: 6301 Deauville Blvd.

Zip: 79706

Operator PO Box:

Operator City: Midland **State:** TX

Operator Phone: (432)687-7866

Operator Internet Address:

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: MAELSTROM SWD **Well Number:** 1 **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** SWD;SILURIAN **Pool Name:**

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

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Describe other minerals:

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

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: VERTICAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: INJECTION - DISPOSAL

Describe Well Type:

Well sub-Type: INJECTION - DISPOSAL

Describe sub-type:

Distance to town: 33 Miles **Distance to nearest well:** 25 FT **Distance to lease line:** 2050 FT

Reservoir well spacing assigned acres Measurement: 40 Acres

Well plat: Maelstrom_SWD_Well_Plat_20171121085226.pdf

MAELSTROM_SWD_1_C102_20171121085247.pdf

Well work start Date: 07/01/2018 **Duration:** 120 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NGVD29

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	2050	FSL	1793	FEL	26S	32E	15	Aliquot NWSE	32.04123	-103.659963	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 118723	3168	17950	17950
BHL Leg #1	2050	FSL	1793	FEL	26S	32E	15	Aliquot NWSE	32.04123	-103.659963	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 118723	-14782	17950	17950

APD ID: 10400024820 **Submission Date:** 11/22/2017

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Well Type: INJECTION - DISPOSAL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3168	580	580	ANHYDRITE	NONE	No
2	CASTILE	458	2710	2710	DOLOMITE	NONE	No
3	LAMAR	-1342	4510	4510	LIMESTONE	NONE	No
4	BELL CANYON	-1392	4560	4560	SANDSTONE	NONE	No
5	CHERRY CANYON	-2402	5570	5570	SANDSTONE	NONE	No
6	BRUSHY CANYON	-3962	7130	7130		NONE	No
7	BONE SPRING LIME	-5462	8630	8630	LIMESTONE	NONE	No
8	UPPER AVALON SHALE	-5532	8700	8700	SHALE	NONE	No
9	BONE SPRING 1ST	-6482	9650	9650	LIMESTONE	NONE	No
10	BONE SPRING 2ND	-7062	10230	10230	LIMESTONE	NONE	No
11	BONE SPRING 3RD	-7152	10320	10320	LIMESTONE	NONE	No
12	WOLFCAMP	-8732	11900	11900	SHALE	NONE	No
13	WOLFCAMP	-9432	12600	12600	SHALE	NONE	No
14	WOLFCAMP	-9932	13100	13100		NONE	No
15	WOLFCAMP	-10932	14100	14100	SHALE	NONE	No
16	STRAWN	-11432	14600	14600	SHALE	NONE	No
17	ATOKA	-11832	15000	15000	SHALE	NONE	No
18	MORROW	-12732	15900	15900	SHALE	NONE	No

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
19	BARNETT	-13532	16700	16700	SHALE	NONE	No
20	MISSISSIPPIAN	-14232	17400	17400	LIMESTONE	NONE	No
21	WOODFORD	-14622	17790	17790		NONE	No
22	DEVONIAN	-14782	17950	17950		USEABLE WATER	Yes
23	FUSSELMAN	-15647	18815	18815		NONE	No

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 19100

Equipment: A 10M 13 5/8 BOP WILL BE INSTALLED AND TESTED TO DRILL THE 12 1/4", 8 1/2", AND 5 7/8" HOLE SECTION (12000 - 19100). SEE SCHEMATIC. THE BOP WILL BE TESTED AS A 10M SYSTEM PER BLM ONSHORE ORDER 2 PRIOR TO DRILLING OUT THE CSG SHOE. MAX ANTICIPATED PRESSURE IN HOLE SECTION 9200PSI.
Requesting Variance? YES

Variance request: CHEVRON REQUESTS A VARIANCE TO USE A FLEXIBLE LINE WITH FLANGED ENDS BETWEEN THE BOP AND THE CHOKE MANIFOLD (CHOKE LINE)
Testing Procedure: BEFORE DRILLING OUT OF THE SURF CSG, THE RAM TYPE BOP AND ACCESSORY EQPT WILL BE TESTED TO 5000/250 PSIG AND THE ANNULAR PREVENTER TO 5000/250 PSIG. THE SURF CSG WILL BE TESTED TO 1500 PSI FOR 30 MINS. BEFORE DRILLING OUT OF THE INTER CSG, THE RAM TYPE BOP AND ACCESSORY EQPT WILL BE TESTED TO 5000/250 PSIG AND THE ANNULAR PREVENTER TO 5000/250 PSIG. THE INTER CSG WILL BE TESTED TO 2000 PSI FOR 30 MINS. PIPE RAMS WILL BE OPERATIONALLY CHECKED EACH 24 HR PERIOD. BLIND RAMS WILL BE OPERATIONALLY CHECKED ON EACH TRIP OUT OF THE HOLE. THESE CHECKS WILL BE NOTED ON THE DAILY TOUR SHEETS. A HYDRAULICALLY OPERATED CHOKE WILL BE INSTALLED PRIOR TO DRILLING OUT OF THE INTER CSG SHOE.

Choke Diagram Attachment:

10M_BOP_Choke_Schematics_BLM_new_20171121110122.pdf

Choke_hose_Spec_X30_20171121110136.pdf

BOP Diagram Attachment:

BOP_SCHEMATICS_20171121110152.pdf

Pressure Rating (PSI): 2M **Rating Depth:** 4540

Equipment: A 2M 21 1/4 BOP WILL BE INSTALLED AND TESTED TO DRILL THE 18 1/2" HOLE SECTION (800-4540) SEE SCHEMATIC. THE BOP WILL BE TESTED AS A 2M SYSTEM PER BLM ONSHORE ORDER 2 PRIOR TO DRILLING OUT THE CASING SHOE. MAX ANTICIPATED PRESSURE IN HOLE SECTION 2250 PSI.
Requesting Variance? NO

Variance request:

Testing Procedure: BEFORE DRILLING OUT OF THE SURF CSG, THE RAM TYPE BOP AND ACCESSORY EQPT WILL BE TESTED TO 5000/250 PSIG AND THE ANNULAR PREVENTER TO 5000/250 PSIG. THE SURF CSG WILL BE TESTED TO 1500 PSI FOR 30 MINS. BEFORE DRILLING OUT OF THE INTER CSG, THE RAM TYPE BOP AND

ACCESSORY EQPT WILL BE TESTED TOOO 5000/250 PSIG AND THE ANNULAR PREVENTER TO 5000/250 PSIG. THE INTER CSG WILL BE TESTED TO 2000 PSI FOR 30 MINS. PIPE RAMS WILL BE OPERATIONALLY CHECKED EACH 24 HR PERIOD. BLIND RAMS WILL BE OPERATIONALLY CHECKED ON EACH TRIP OUT OF THE HOLE. THESE CHECKS WILL BE NOTED ON THE DAILY TOUR SHEETS. A HYDRAULICALLY OPERATED CHOKE WILL BE INSTALLED PRIOR TO DRILLING OUT OF THE INTER CSG SHOE.

Choke Diagram Attachment:

10M_BOP_Choke_Schematics_BLM_new_20171121104837.pdf

BOP Diagram Attachment:

BOP_SCHEMATICS_20171121104906.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 12000

Equipment: A 5M 16 3/4 BOP WILL BE INSTALLED AND TESTED TO DRILL THE 14 3/4 HOLE SECTION (4540-12,000) SEE SCHEMATIC. THE BOP WILL BE TESTED AS A 5M SYSTEM PER BLM ONSHORE ORDER 2 PRIOR TO DRILLING OUT THE CSG SHOE. MAX ANTICIPATED PRESSURE IN HOLE SECTION 5920 PSI.
Requesting Variance? NO

Variance request:

Testing Procedure: BEFORE DRILLING OUT OF THE SURF CSG, THE RAM TYPE BOP AND ACCESSORY EQPT WILL BE TESTED TO 5000/250 PSIG AND THE ANNULAR PREVENTER TO 5000/250 PSIG. THE SURF CSG WILL BE TESTED TO 1500 PSI FOR 30 MINS. BEFORE DRILLING OUT OF THE INTER CSG, THE RAM TYPE BOP AND ACCESSORY EQPT WILL BE TESTED TO 5000/250 PSIG AND THE ANNULAR PREVENTER TO 5000/250 PSIG. THE INTER CSG WILL BE TESTED TO 2000 PSI FOR 30 MINS. PIPE RAMS WILL BE OPERATIONALLY CHECKED EACH 24 HR PERIOD. BLIND RAMS WILL BE OPERATIONALLY CHECKED ON EACH TRIP OUT OF THE HOLE. THESE CHECKS WILL BE NOTED ON THE DAILY TOUR SHEETS. A HYDRAULICALLY OPERATED CHOKE WILL BE INSTALLED PRIOR TO DRILLING OUT OF THE INTER CSG SHOE.

Choke Diagram Attachment:

10M_BOP_Choke_Schematics_BLM_new_20171121105423.pdf

BOP Diagram Attachment:

BOP_SCHEMATICS_20171121105459.pdf

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	24	20.0	NEW	API	N	0	800	0	-800			800	J-55	94	OTHER - BTC	1.13	1.4	DRY	4.68	DRY	1.56
2	INTERMEDIATE	18.5	16.0	NEW	API	N	0	4540	0	-4540			4540	L-80	97	OTHER - BTC	1.34	1.28	DRY	3.37	DRY	1.51

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

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
3	OTHER	12.25	9.625	NEW	API	N	0	11700	0	-11700			11700	OTHER	53.5	OTHER - BLUE	1.41	1.31	DRY	2.18	DRY	1.41
4	INTERMEDIATE	14.75	13.375	NEW	API	N	0	12000	0	-12000			12000	OTHER	72	OTHER - 513	1.05	1.21	DRY	1.63	DRY	1.35
5	LINER	12.25	9.625	NEW	API	N	11700	17410	11700	-17410			5710	OTHER	53.5	OTHER - BLUE	1.14	2.29	DRY	2.89	DRY	1.57
6	LINER	8.5	7.0	NEW	API	N	17110	17950	17110	-17950			840	L-80	26	OTHER - BLUE	2.63	1.31	DRY	2.39	DRY	1.44

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maelstrom_SWD_9_PT_PLAN_20171121110716.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maelstrom_SWD_9_PT_PLAN_20171121110947.pdf

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Casing Attachments

Casing ID: 3 **String Type:** OTHER - PROD TIEBACK

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maelstrom_SWD_9_PT_PLAN_20171121115454.pdf

Casing ID: 4 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maelstrom_SWD_9_PT_PLAN_20171121111155.pdf

13.375_Casing_Data_Sheet_20171121132241.pdf

Casing ID: 5 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maelstrom_SWD_9_PT_PLAN_20171121115546.pdf

9.625_Liner_Casing_Data_Sheet_20171121132333.pdf

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Casing Attachments

Casing ID: 6 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maelstrom_SWD_9_PT_PLAN_20171121115754.pdf

7.00_Liner_Casing_Data_Sheet_20171121132353.pdf

Maelstrom_SWD_30d_defficiency_Casing_slides_20180802100348.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	800	962	1.33	14.8	227	100	CLASS C	NONE
INTERMEDIATE	Lead		0	3540	1018	2.37	11.9	430	50	50:50 POZ:CLASS C	EXTENDER, ANTIFOAM, RETARADER, SALT
INTERMEDIATE	Tail		3540	4540	603	1.33	14.8	143	50	CLASS C	RETARDER
INTERMEDIATE	Lead		4240	11000	1567	2.36	11.9	279	10	50:50 POZ: CLASS C	EXTENDER, ANTIFOAM
INTERMEDIATE	Tail		11000	12000	299	1.23	15.6	53	10	CLASS H	RETARDER, EXTENDER, DISPERSANT
OTHER	Lead		0	11700	3832	1.2	15.6	683	0	CLASS H	ANTIFOAM, DISPERSANT, FLUID LOSS, RETARDER, EXTENDER

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
LINER	Lead		11700	16410	1617	1.2	15.6	288	10	CLASS H	EXTENDER, ANTIFOAM, DISPERSANT, GAS CONTROL, VISCOSIFIER, RETARDER
LINER	Tail		16410	17410	376	1.2	15.6	67	10	CLASS H	EXTENDER, ANTIFOAM, DISPERSANT, GAS CONTROL, VISCOSIFIER, RETARDER
LINER	Lead		17110	17950	150	15.6	12.5	27	50	TXI	ANTIFOAM, DISPERSANT, VISCOSIFIER, FLUID LOSS, RETARDER

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: IN COMPLIANCE WITH ONSHORE ORDER 2

Describe the mud monitoring system utilized: VISUAL MUD MONITORING EQPT, PVT, STROKE COUNTER, FLOW SENSOR IN COMPLIANCE WITH ONSHORE ORDER 2

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
0	800	SPUD MUD	8.3	9							

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

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
4540	12000	OIL-BASED MUD	8.7	10							
17410	17950	WATER-BASED MUD	8.8	9.6							
800	4540	OTHER : BRINE WATER	10	10.4							
17950	19100	OTHER : CUT BRINE	8.4	9							
12000	17410	OIL-BASED MUD	12.2	15.6							

Section 6 - Test, Logging, Coring

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

DRILL STEM TESTS ARE NOT PLANNED

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

CBL,MWD,OTH

Other log type(s):

QUAD COMBO

Coring operation description for the well:

CONVENTIONAL WHOLE CORE SAMPLES ARE NOT PLANNED

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 9200 **Anticipated Surface Pressure:** 5251

Anticipated Bottom Hole Temperature(F): 160

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Hydrogen sulfide drilling operations plan:

Maelstrom_SWD_H2S_20171121121549.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Maelstrom_SWD_Wellpath_20171121121639.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Other Variance attachment:

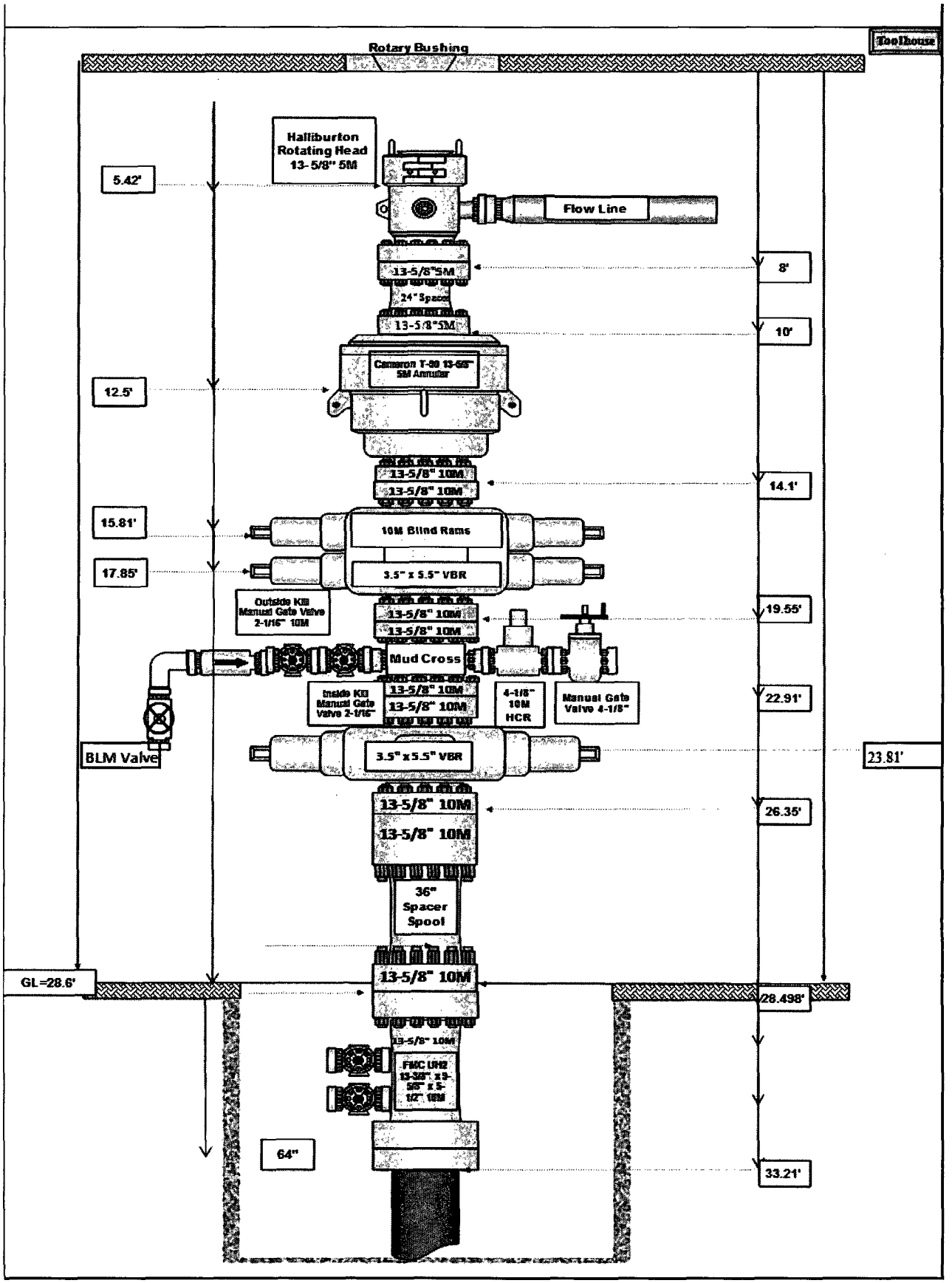

Rotary Bushing
Toolhouse
Halliburton Rotating Head 13-5/8" 5M
5.42'
Flow Line
13-5/8"5M
8'
24" Spacer
13-5/8"5M
10'
Cameron T-90 13-5/8" 5M Annular
12.5'
13-5/8" 10M
13-5/8" 10M
14.1'
15.81'
10M Blind Rams
17.85'
3.5" x 5.5" VBR
Outside Kill Manual Gate Valve 2-1/16" 10M
13-5/8" 10M
13-5/8" 10M
19.55'
Mud Cross
Inside Kill Manual Gate Valve 2-1/16"
13-5/8" 10M
13-5/8" 10M
4-1/8" 10M HCR
Manual Gate Valve 4-1/8"
22.91'
BLM Valve
3.5" x 5.5" VBR
23.81'
13-5/8" 10M
13-5/8" 10M
26.35'
36" Spacer Spool
GL=28.6'
13-5/8" 10M
28.498'
13-5/8" 10M
FMC UH2 13-3/8" x 9-5/8" x 5-1/2" 10M
64"
33.21'

Diagram A

CHOKE MANIFOLD SCHEMATIC

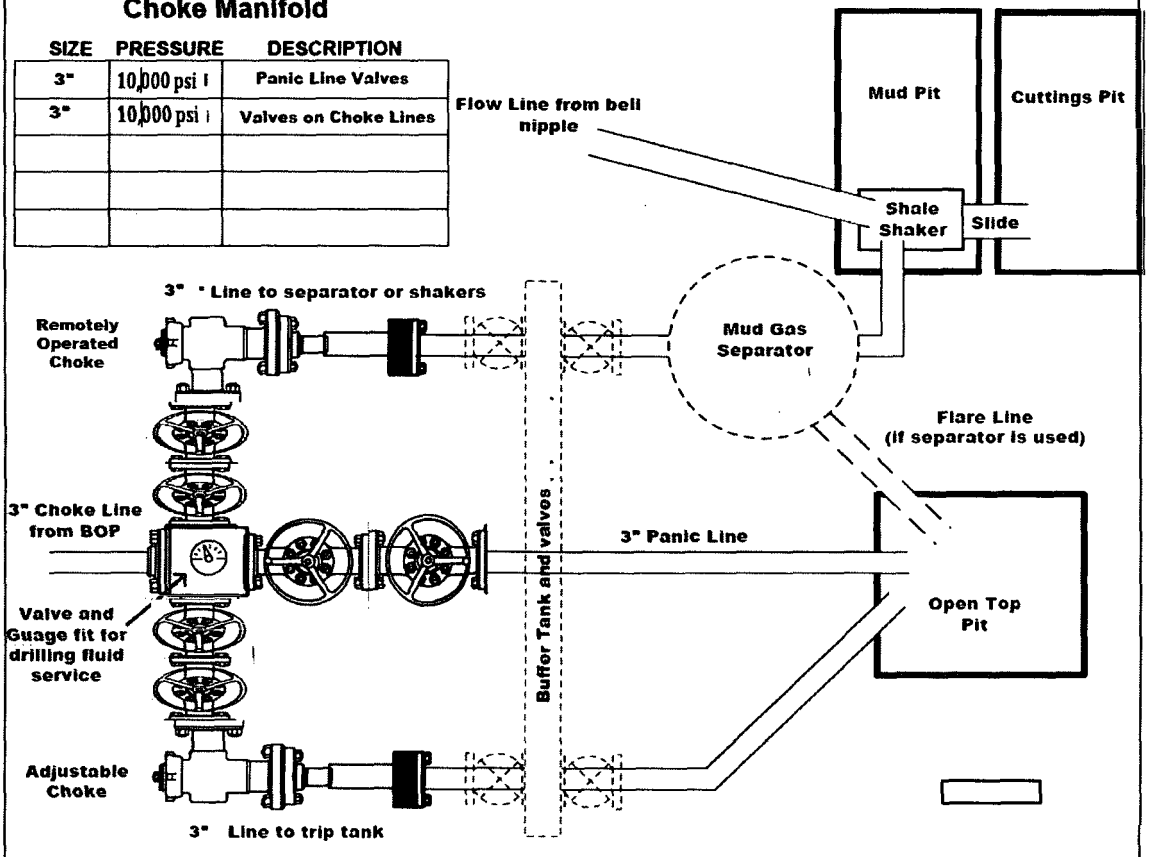
Minimum Requirements

OPERATION : Wolfcamp A wells

Minimum System Pressure Rating : 10,000 psi

Choke Manifold

SIZE	PRESSURE	DESCRIPTION
3"	10,000 psi	Panic Line Valves
3"	10,000 psi	Valves on Choke Lines



Installation Checklist

The following item must be verified and checked off prior to pressure testing of BOP equipment.

- ☐ **The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.**
- ☐ **Adjustable Chokes may be Remotely Operated but will have backup hand pump for hydraulic actuation in case of loss of rig air pressure or power.**
- ☐ **Flare and Panic lines will terminate a minimum of 150' from the wellhead. These lines will terminate at a location as per approved APD.**
- ☐ **The choke line, kill line, and choke manifold lines will be straight unless turns use tee blocks or are targeted with running tess, and will be anchored to prevent whip and reduce vibration. This excludes the line between mud gas separator and shale shaker.**
- ☐ **All valves (except chokes) on choke line, kill line, and choke manifold will be full opening and will allow straight through flow. This excludes any valves between mud gas separator and shale shakers.**
- ☐ **All manual valves will have hand wheels installed.**
- ☐ **If used, flare system will have effective method for ignition**
- ☐ **All connections will be flanged, welded, or clamped (no threaded connections like hammer unions)**
- ☐ **If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.**

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer

Wellname: _____

Representative: _____

Date: _____

Diagram B

10M BLOWOUT PREVENTER SCHEMATIC

Minimum Requirements

OPERATION: Wolfcamp Wells in Salado Draw

Minimum System Pressure Rating: 10,000 PSI

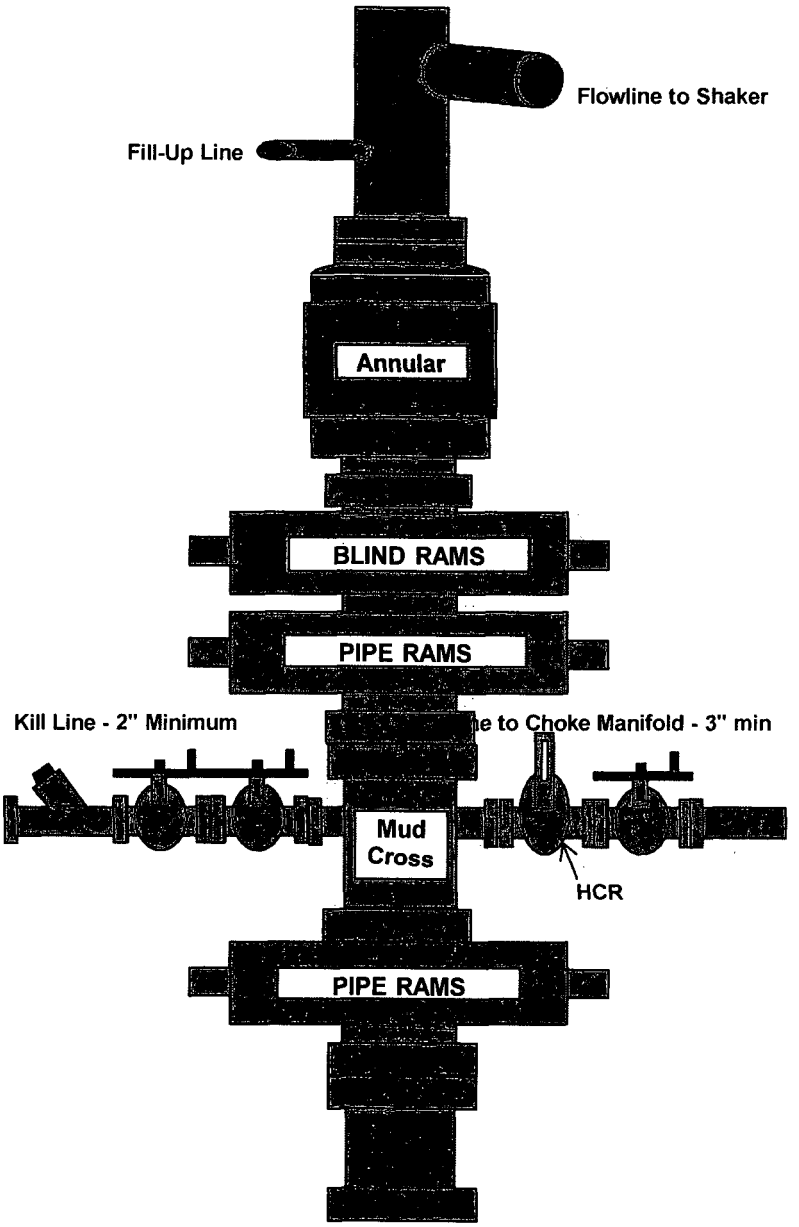


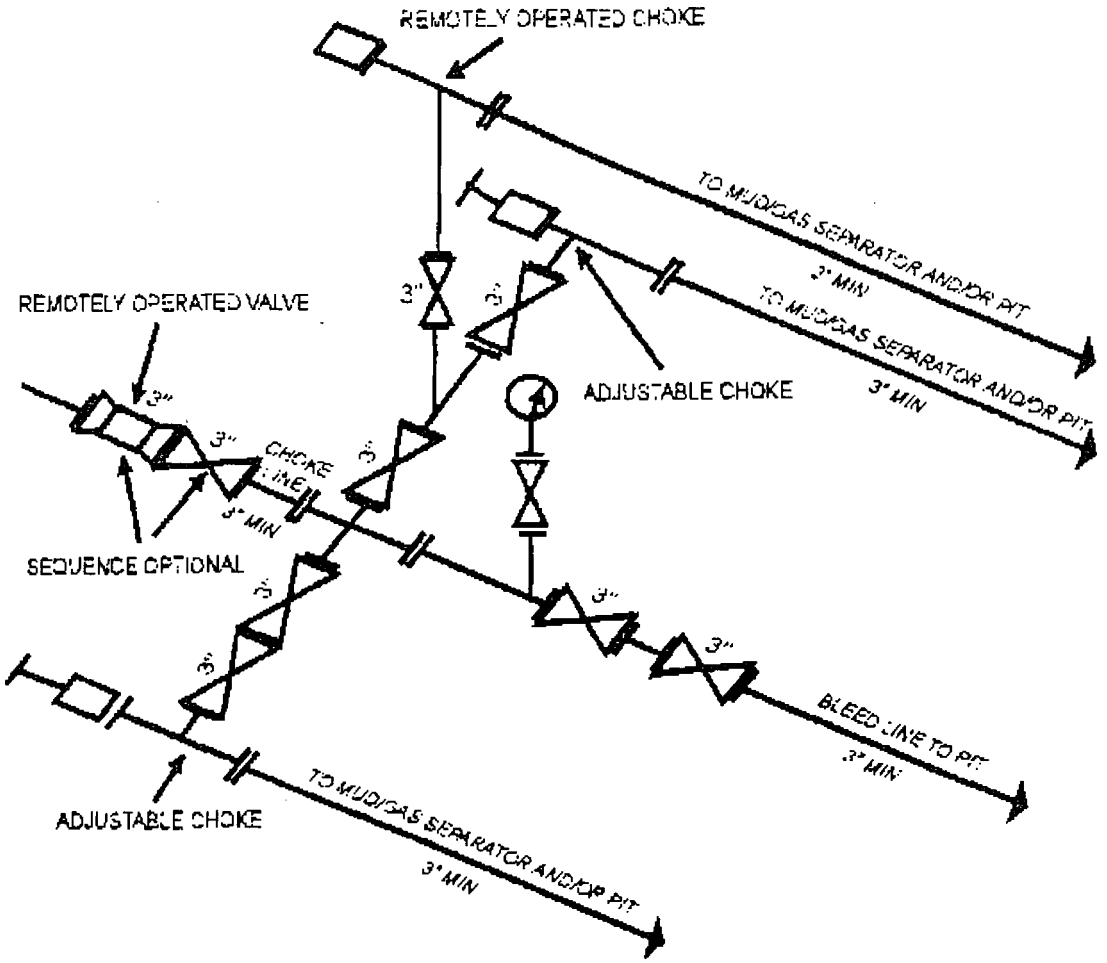
Diagram C

10M Choke Manifold SCHEMATIC

Minimum Requirements

OPERATION: Production and Open Hole Sections

Minimum System Pressure Rating: 10,000 PSI



10M AND 15M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[53 FR 49661, Dec. 9, 1988 and 54 FR 39528, Sept. 27, 1989]

Diagram D

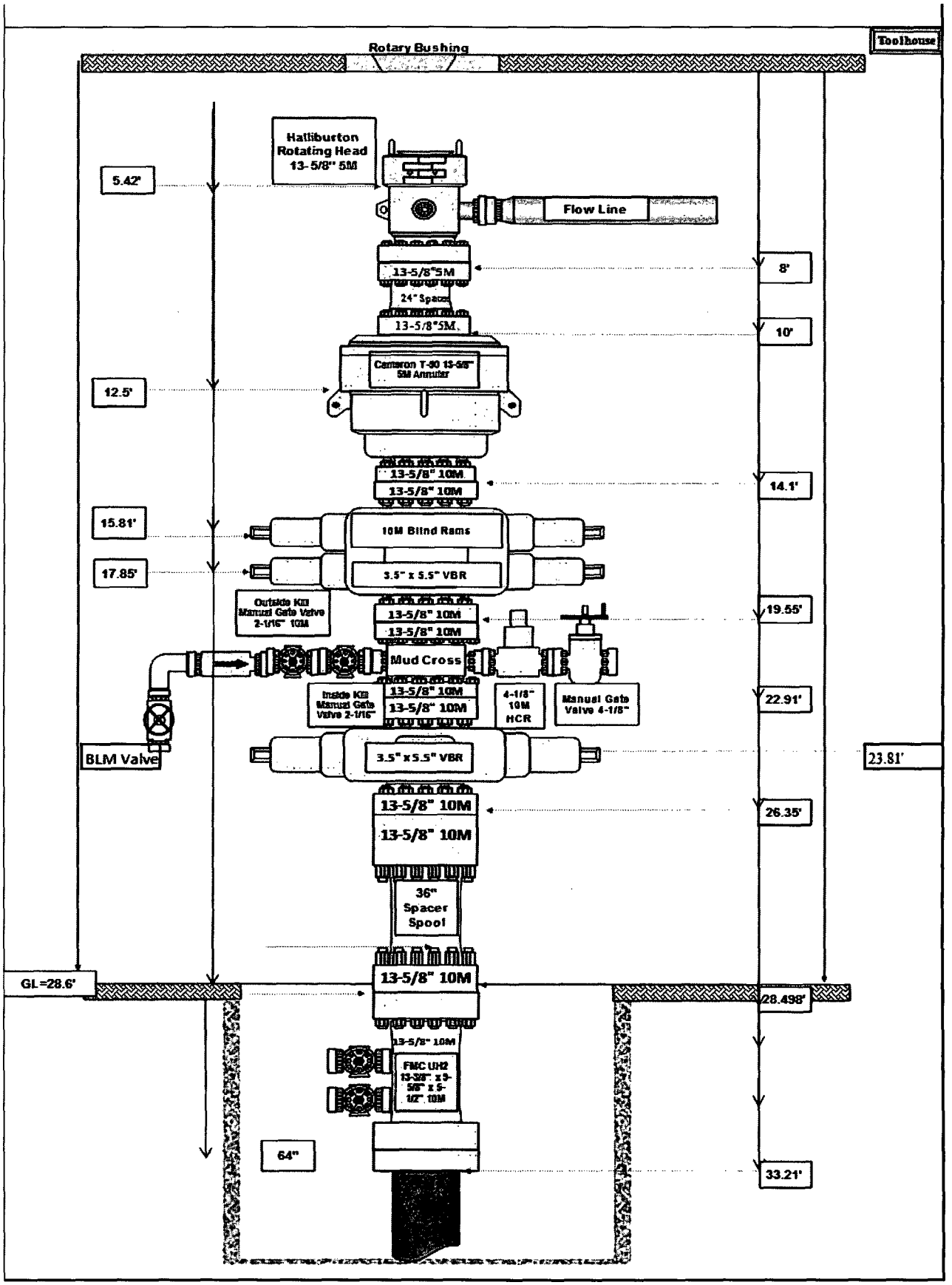

Toolhouse
Rotary Bushing
Halliburton Rotating Head 13-5/8" 5M
5.42'
Flow Line
13-5/8"5M
24" Spacer
13-5/8"5M
8'
10'
12.5'
Cameron T-80 13-5/8" 5M Annular
13-5/8" 10M
13-5/8" 10M
14.1'
15.81'
10M Blind Rams
17.85'
3.5" x 5.5" VBR
Outside Kill Manual Gate Valve 2-1/16" 10M
13-5/8" 10M
13-5/8" 10M
19.55'
Mud Cross
Inside Kill Manual Gate Valve 2-1/16"
13-5/8" 10M
13-5/8" 10M
4-1/8" 10M HCR
Manual Gate Valve 4-1/8"
22.91'
BLM Valve
3.5" x 5.5" VBR
23.81'
13-5/8" 10M
13-5/8" 10M
26.35'
36" Spacer Spool
13-5/8" 10M
GL=28.6'
28.498'
13-5/8" 10M
FMC UH2 13-5/8" x 9-5/8" x 5-1/2" 10M
64"
33.21'

Diagram A

CHOKE MANIFOLD SCHEMATIC

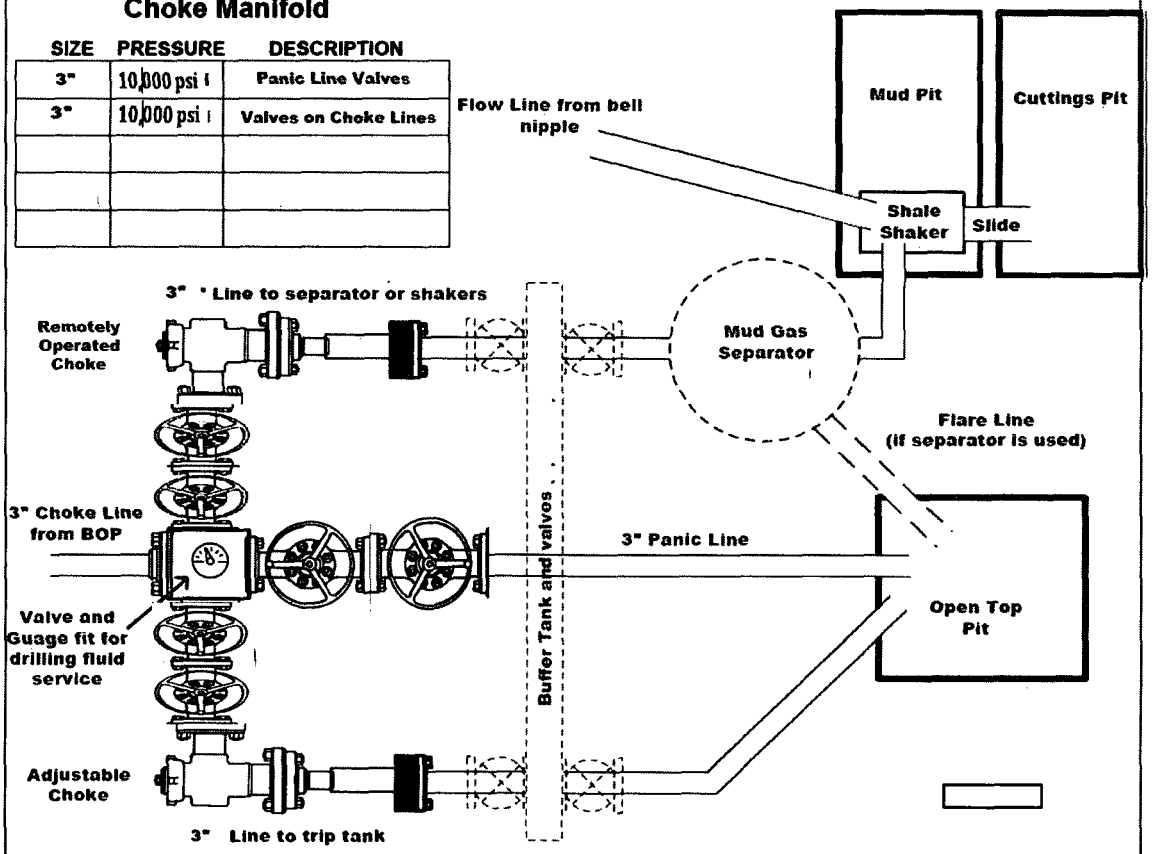
Minimum Requirements

OPERATION : Wolfcamp A wells

Minimum System Pressure Rating : 10,000 psi

Choke Manifold

SIZE	PRESSURE	DESCRIPTION
3"	10,000 psi	Panic Line Valves
3"	10,000 psi	Valves on Choke Lines



Installation Checklist

The following item must be verified and checked off prior to pressure testing of BOP equipment.

- ☐ **The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.**
- ☐ **Adjustable Chokes may be Remotely Operated but will have backup hand pump for hydraulic actuation in case of loss of rig air pressure or power.**
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- ☐ **The choke line, kill line, and choke manifold lines will be straight unless turns use tee blocks or are targeted with running tess, and will be anchored to prevent whip and reduce vibration. This excludes the line between mud gas separator and shale shaker.**
- ☐ **All valves (except chokes) on choke line, kill line, and choke manifold will be full opening and will allow straight through flow. This excludes any valves between mud gas separator and shale shakers.**
- ☐ **All manual valves will have hand wheels installed.**
- ☐ **If used, flare system will have effective method for ignition**
- ☐ **All connections will be flanged, welded, or clamped (no threaded connections like hammer unions)**
- ☐ **If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.**

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer

Wellname: _____

Representative: _____

Date: _____

Diagram B

10M BLOWOUT PREVENTER SCHEMATIC

Minimum Requirements

OPERATION: Wolfcamp Wells in Salado Draw

Minimum System Pressure Rating: 10,000 PSI

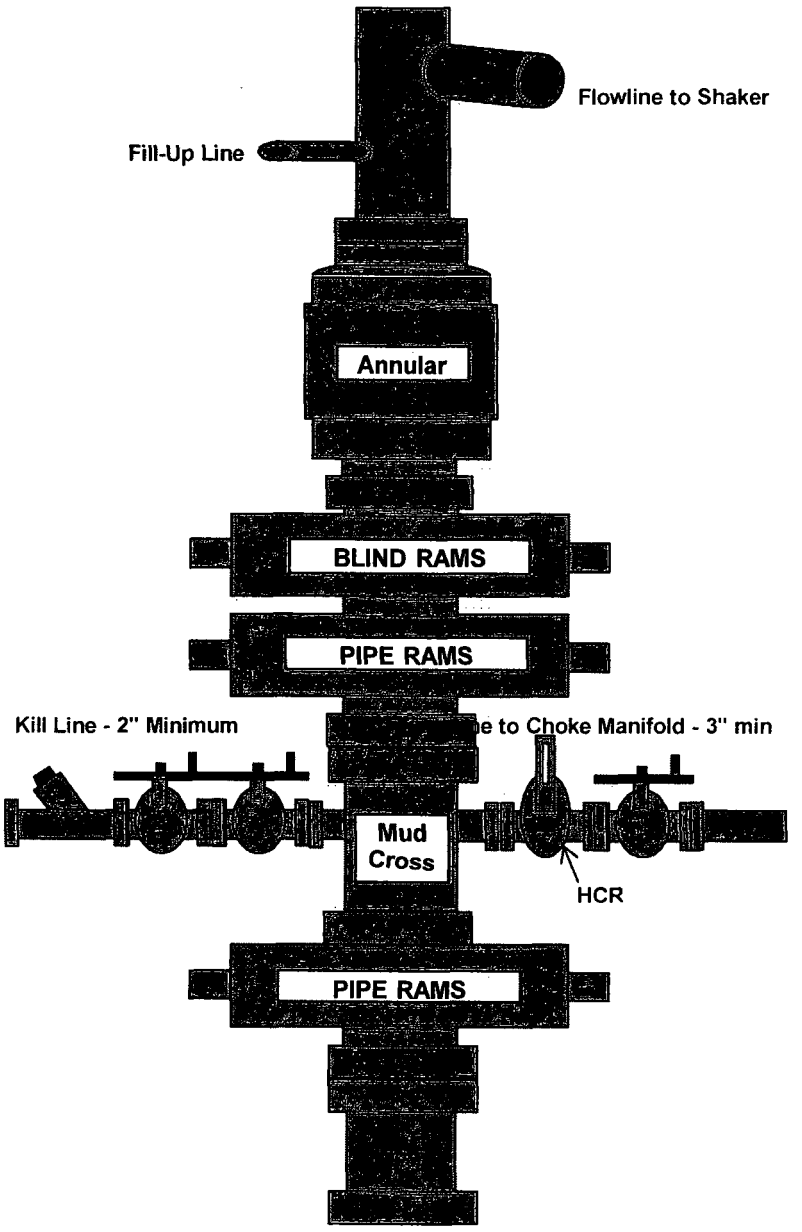


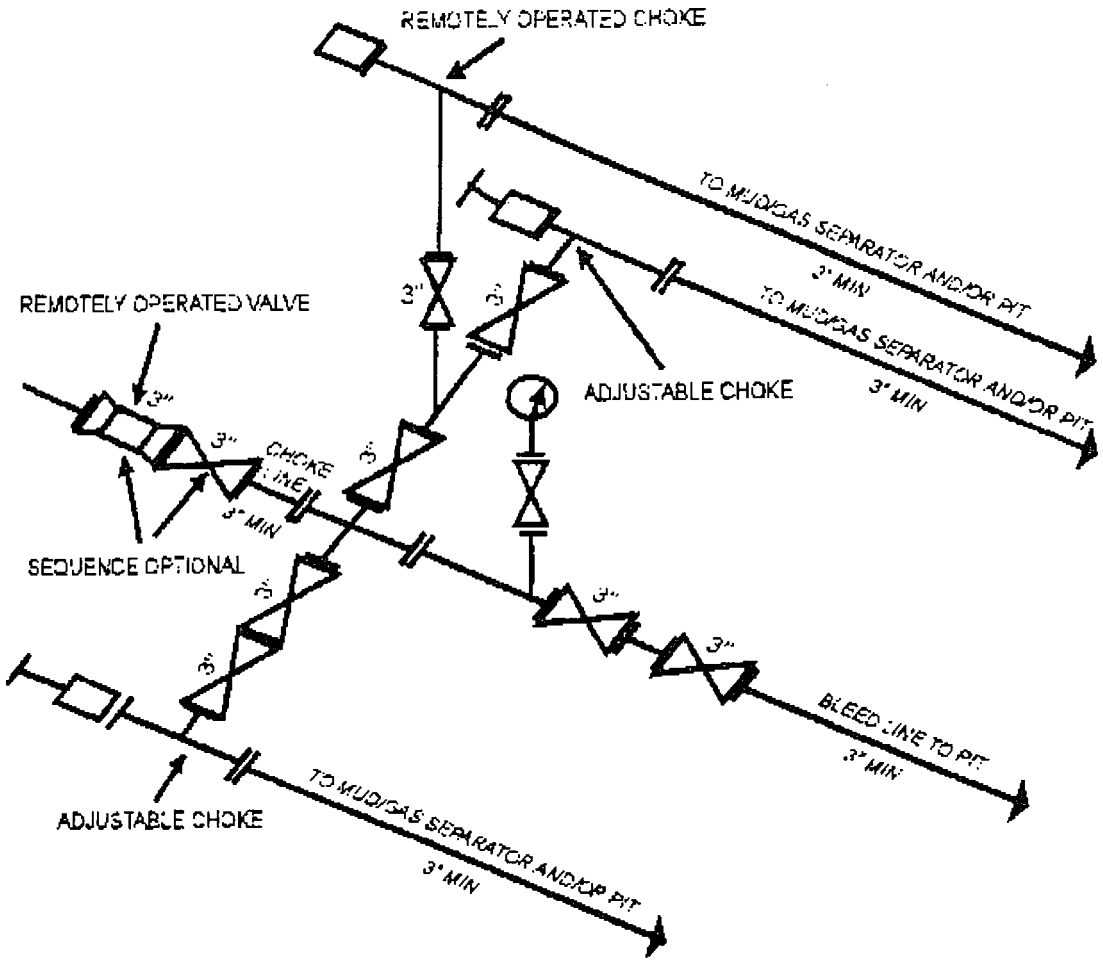
Diagram C

10M Choke Manifold SCHEMATIC

Minimum Requirements

OPERATION: Production and Open Hole Sections

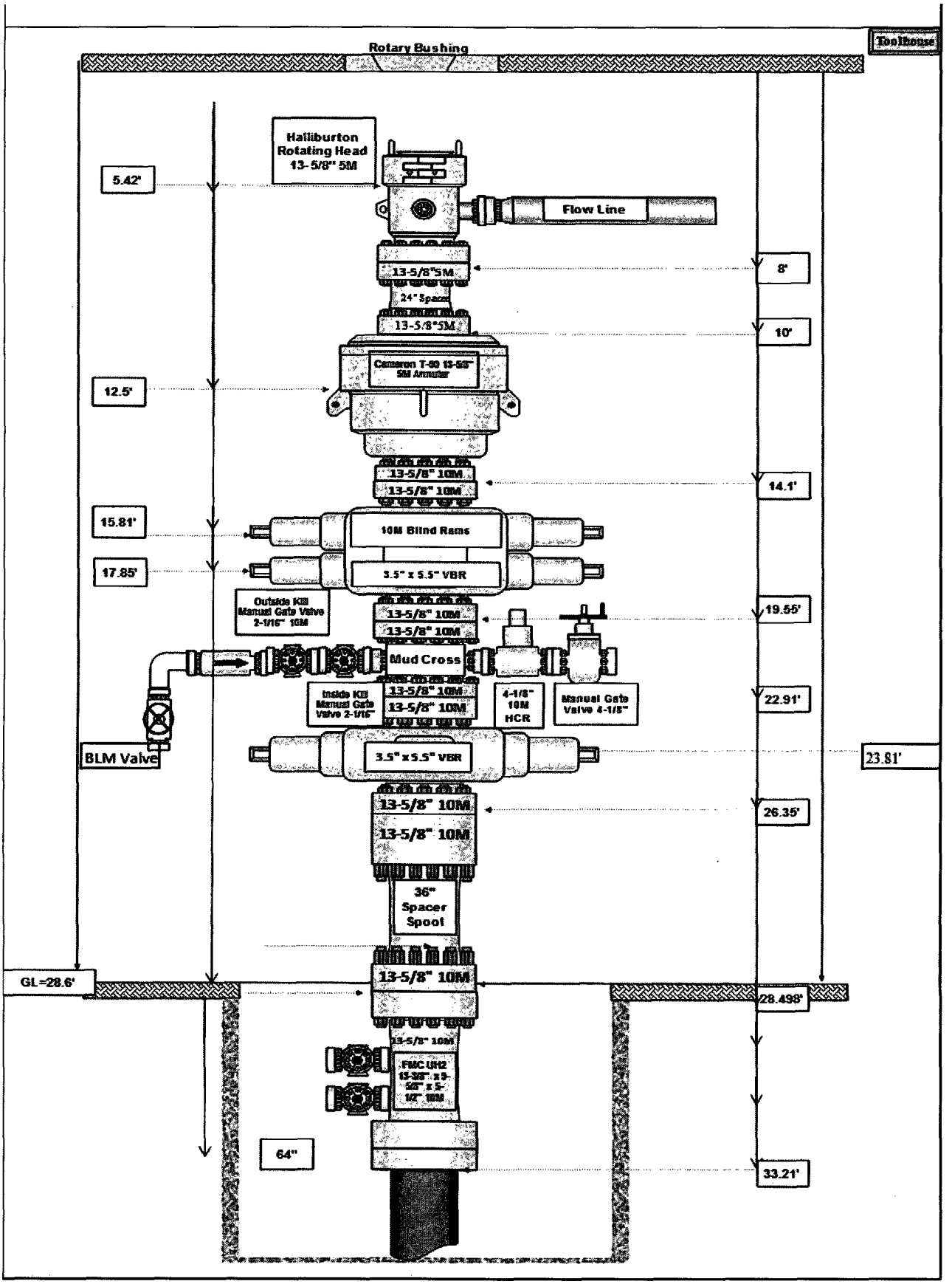
Minimum System Pressure Rating: 10,000 PSI



10M AND 15M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[53 FR 49661, Dec. 9, 1988 and 54 FR 39528, Sept. 27, 1989]

Diagram D


Rotary Bushing
Toolhouse
Halliburton Rotating Head 13-5/8" 5M
5.42'
Flow Line
13-5/8"5M
8'
24" Spacer
13-5/8"5M
10'
Cameron T-80 13-5/8" 5M Annular
12.5'
13-5/8" 10M
13-5/8" 10M
14.1'
15.81'
10M Blind Rams
17.85'
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13-5/8" 10M
13-5/8" 10M
19.55'
Mud Cross
Inside Kill Manual Gate Valve 2-1/16"
13-5/8" 10M
13-5/8" 10M
4-1/8" 10M HCR
Manual Gate Valve 4-1/8"
22.91'
BLM Valve
3.5" x 5.5" VBR
23.81'
13-5/8" 10M
13-5/8" 10M
26.35'
36" Spacer Spool
13-5/8" 10M
GL=28.6'
28.498'
13-5/8" 10M
FMC UH2
64"
33.21'

Diagram A

CHOKE MANIFOLD SCHEMATIC

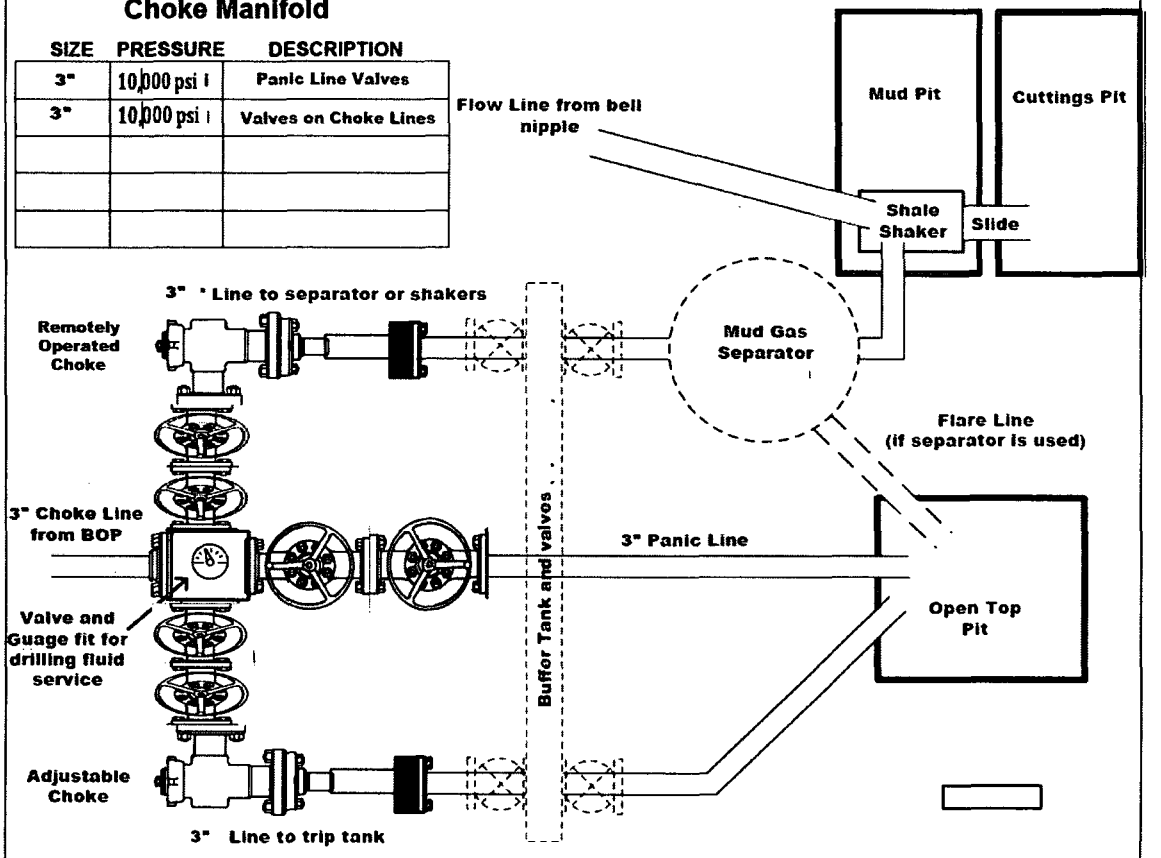
Minimum Requirements

OPERATION : Wolfcamp A wells

Minimum System Pressure Rating : 10,000 psi

Choke Manifold

SIZE	PRESSURE	DESCRIPTION
3"	10,000 psi	Panic Line Valves
3"	10,000 psi	Valves on Choke Lines



Installation Checklist

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After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer

Wellname: _____

Representative: _____

Date: _____

Diagram B

10M BLOWOUT PREVENTER SCHEMATIC

Minimum Requirements

OPERATION: Wolfcamp Wells in Salado Draw

Minimum System Pressure Rating: 10,000 PSI

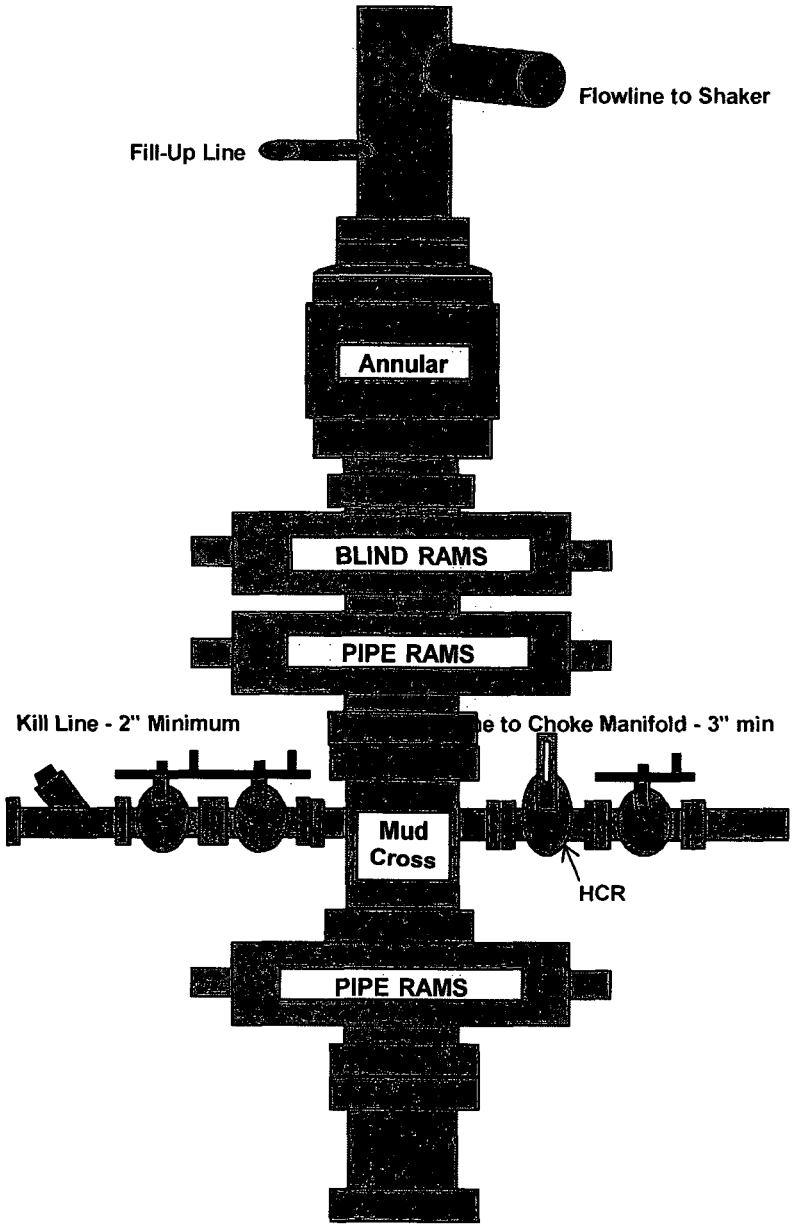


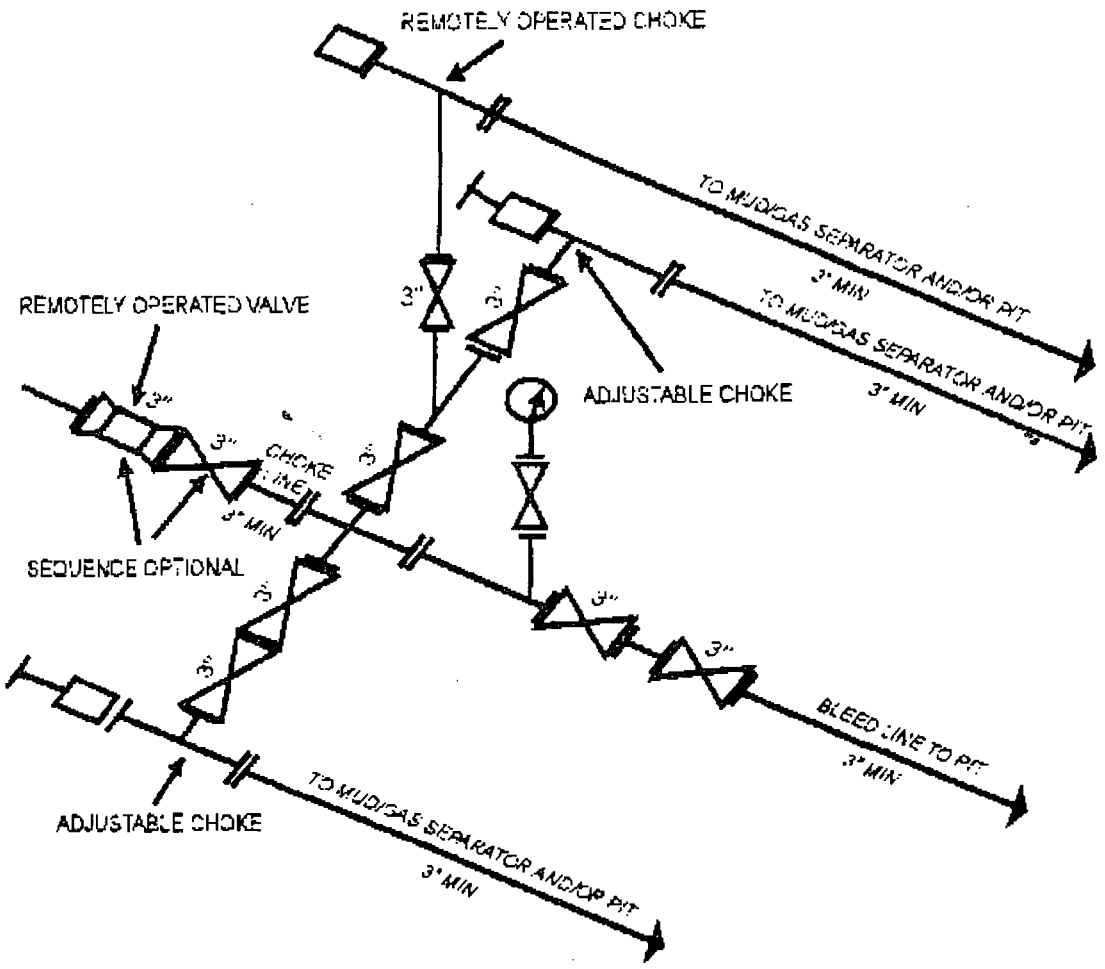
Diagram C

10M Choke Manifold SCHEMATIC

Minimum Requirements

OPERATION: Production and Open Hole Sections

Minimum System Pressure Rating: 10,000 PSI



10M AND 15M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[53 FR 49661, Dec. 9, 1988 and 54 FR 39528, Sept. 27, 1989]

Diagram D

Continental

ContiTech

Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: INTERMEDIATE 1 (800' - 4,540')

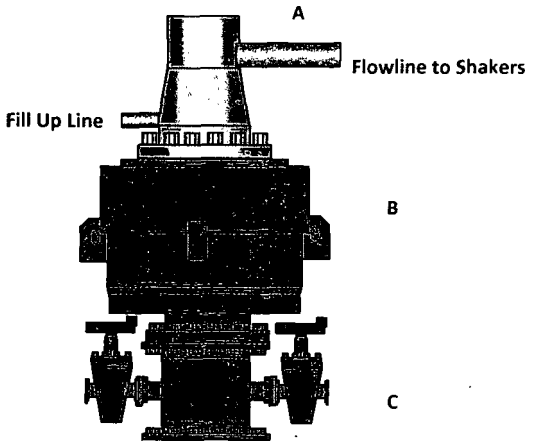
	SIZE	RATING	DESCRIPTION
A			BELL NIPPLE
B	21-1/4"	2,000 PSI	ANNULAR
C	21-1/4"	2,000 PSI	MUD CROSS
D			
E			
F			
G			
DSA			AS REQUIRED

KILL LINE

SIZE	RATING	DESCRIPTION
2"	2000 PSI	GATE VALVE

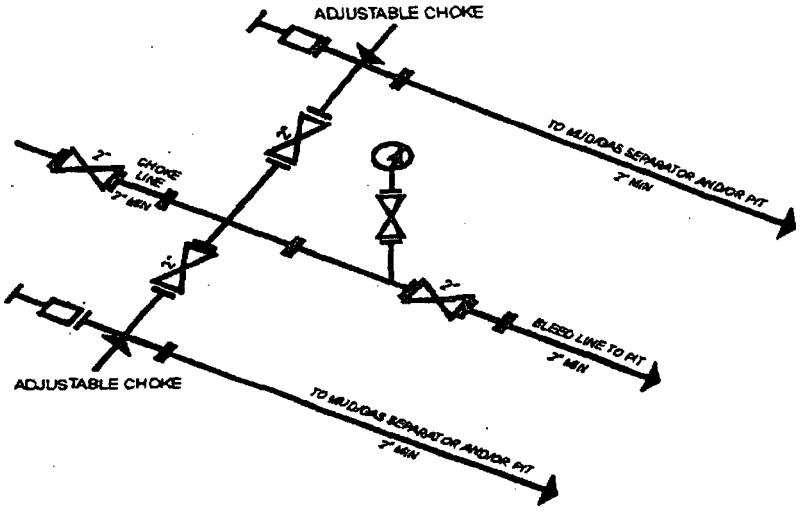
CHOKE LINE

SIZE	RATING	DESCRIPTION
2"	2000 PSI	GATE VALVE



2" MINIMUM KILL LINE

2" MINIMUM CHOKE LINE



2M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: INTERMEDIATE 2 (4,540' - 12,000')

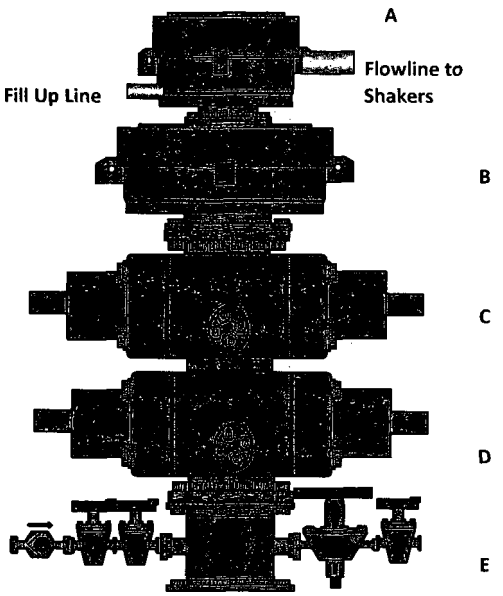
	SIZE	RATING	DESCRIPTION
A			ROTATING HEAD
B	16-3/4"	5,000 PSI	ANNULAR
C	16-3/4"	5,000 PSI	BLIND RAM
D	16-3/4"	5,000 PSI	PIPE RAM
E	16-3/4"	5,000 PSI	MUD CROSS
F			
G			
DSA			AS REQUIRED

KILL LINE

SIZE	RATING	DESCRIPTION
2"	5,000 PSI	GATE VALVE
2"	5,000 PSI	GATE VALVE
2"	5,000 PSI	CHECK VALVE

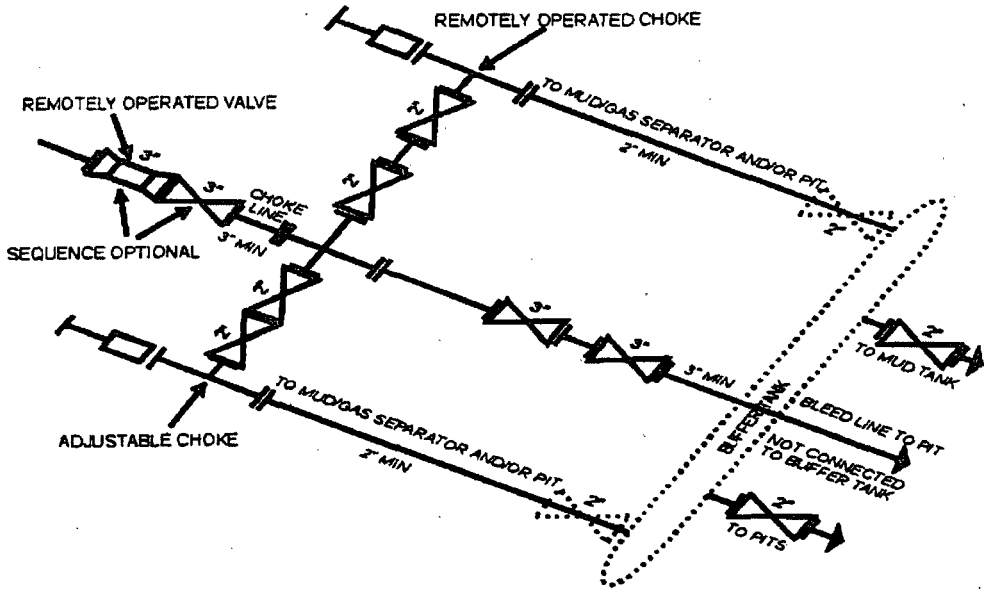
CHOKE LINE

SIZE	RATING	DESCRIPTION
3"	5,000 PSI	HCR VALVE
3"	5,000 PSI	GATE VALVE



CHECK VALVE
2" MINIMUM KILL LINE

HCR VALVE
3" MINIMUM CHOKE LINE



5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: PRODUCTION LINER 1&2 AND PROD OPEN HOLE (12,000' - 19,100')

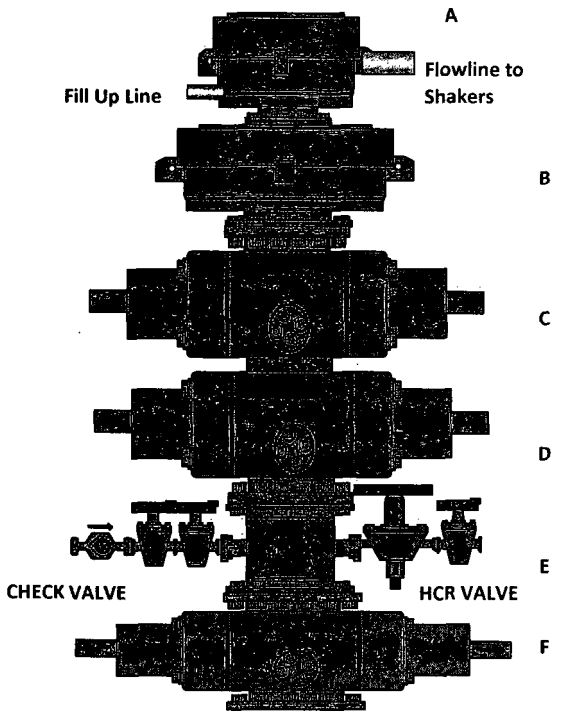
	SIZE	RATING	DESCRIPTION
A			ROTATING HEAD
B	13-5/8"	10,000 PSI	ANNULAR
C	13-5/8"	10,000 PSI	BLIND RAM
D	13-5/8"	10,000 PSI	PIPE RAM
E	13-5/8"	10,000 PSI	MUD CROSS
F	13-5/8"	10,000 PSI	PIPE RAM
G			
DSA			AS REQUIRED

KILL LINE

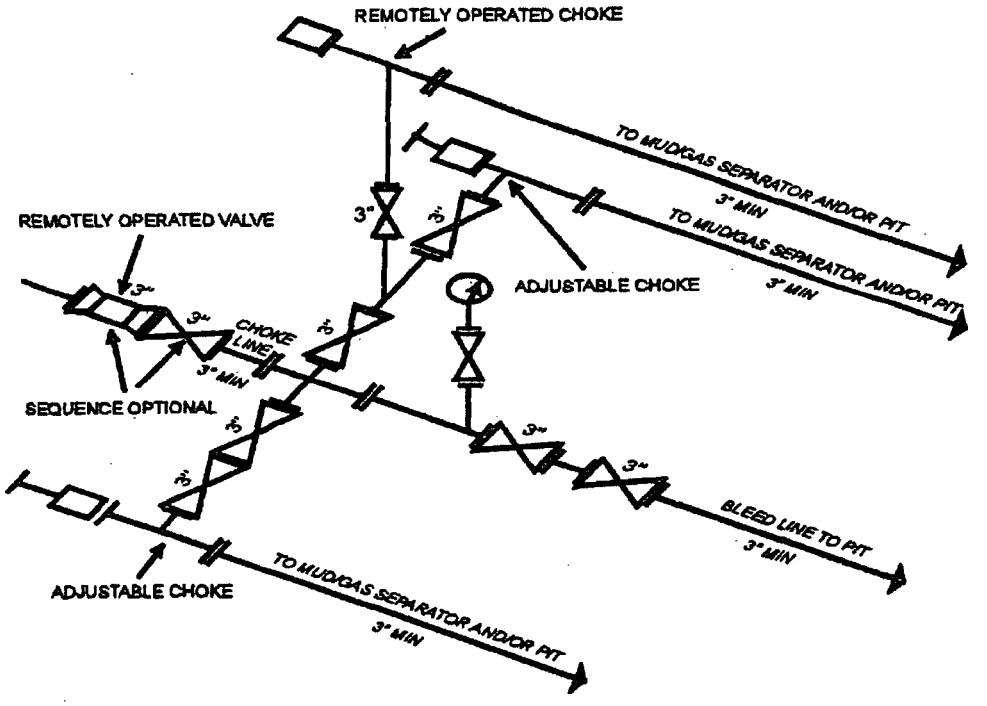
SIZE	RATING	DESCRIPTION
2"	10,000 PSI	GATE VALVE
2"	10,000 PSI	HYD GATE VALVE
2"	10,000 PSI	CHECK VALVE

CHOKE LINE

SIZE	RATING	DESCRIPTION
3"	10,000 PSI	HCR VALVE
3"	10,000 PSI	GATE VALVE



2" MINIMUM KILL LINE 3" MINIMUM CHOKE LINE



10M AND 15M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[53 FR 49661, Dec. 9, 1988 and 54 FR 39528, Sept. 27, 1989]

Continental

ContiTech

Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: INTERMEDIATE 1 (800' - 4,540')

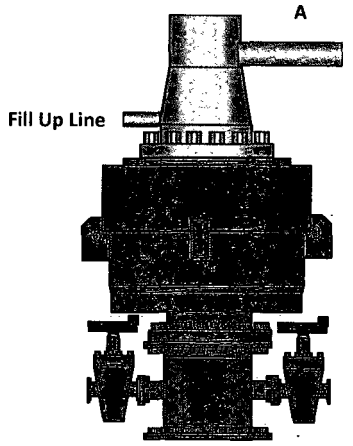
	SIZE	RATING	DESCRIPTION
A			BELL NIPPLE
B	21-1/4"	2,000 PSI	ANNULAR
C	21-1/4"	2,000 PSI	MUD CROSS
D			
E			
F			
G			
DSA			AS REQUIRED

KILL LINE

SIZE	RATING	DESCRIPTION
2"	2000 PSI	GATE VALVE

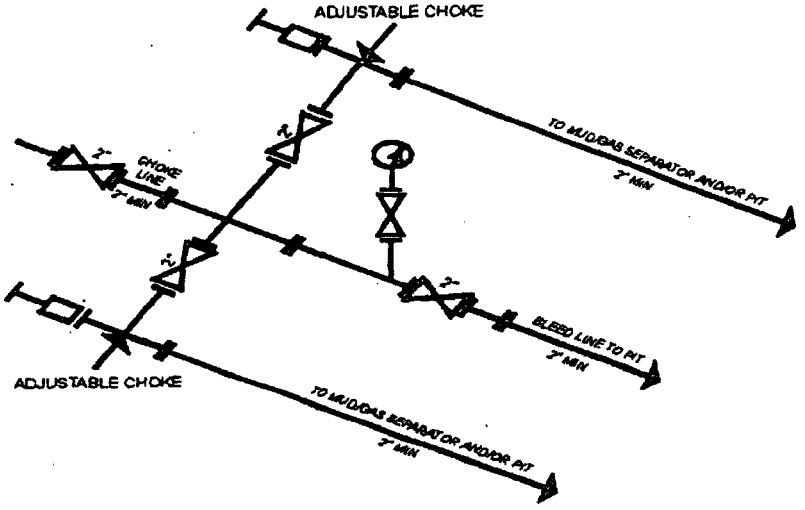
CHOKE LINE

SIZE	RATING	DESCRIPTION
2"	2000 PSI	GATE VALVE



2" MINIMUM KILL LINE

2" MINIMUM CHOKE LINE



2M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: INTERMEDIATE 2 (4,540' - 12,000')

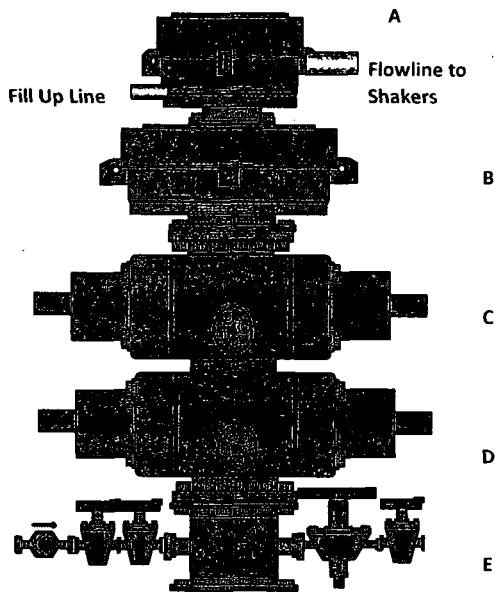
	SIZE	RATING	DESCRIPTION
A			ROTATING HEAD
B	16-3/4"	5,000 PSI	ANNULAR
C	16-3/4"	5,000 PSI	BLIND RAM
D	16-3/4"	5,000 PSI	PIPE RAM
E	16-3/4"	5,000 PSI	MUD CROSS
F			
G			
DSA			AS REQUIRED

KILL LINE

SIZE	RATING	DESCRIPTION
2"	5,000 PSI	GATE VALVE
2"	5,000 PSI	GATE VALVE
2"	5,000 PSI	CHECK VALVE

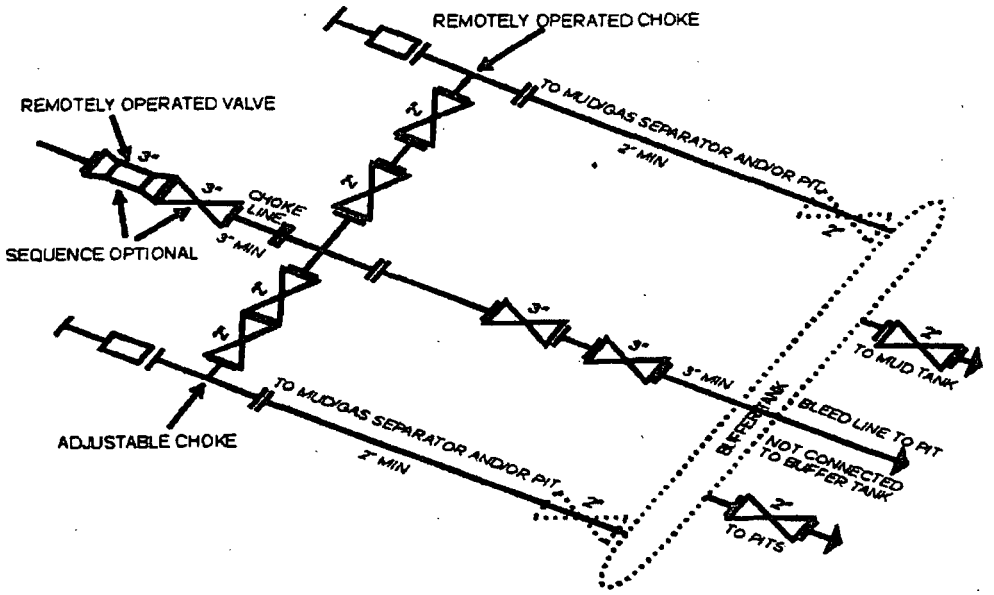
CHOKE LINE

SIZE	RATING	DESCRIPTION
3"	5,000 PSI	HCR VALVE
3"	5,000 PSI	GATE VALVE



CHECK VALVE
2" MINIMUM KILL LINE

HCR VALVE
3" MINIMUM CHOKE LINE



5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: PRODUCTION LINER 1&2 AND PROD OPEN HOLE (12,000' - 19,100')

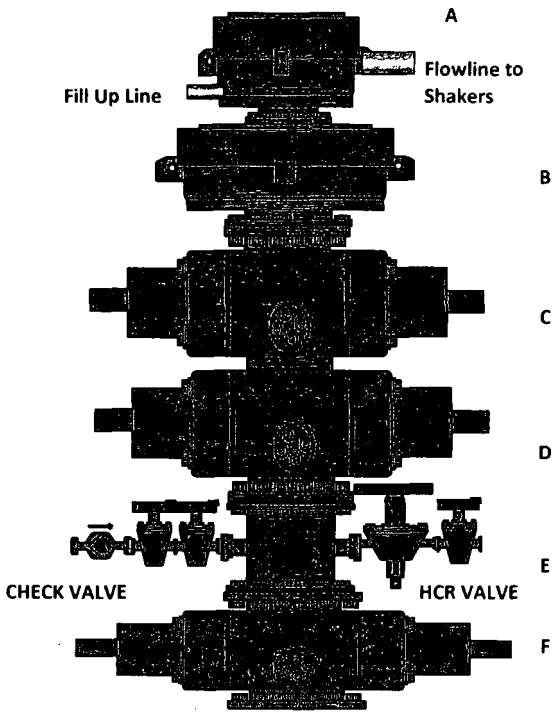
	SIZE	RATING	DESCRIPTION
A			ROTATING HEAD
B	13-5/8"	10,000 PSI	ANNULAR
C	13-5/8"	10,000 PSI	BLIND RAM
D	13-5/8"	10,000 PSI	PIPE RAM
E	13-5/8"	10,000 PSI	MUD CROSS
F	13-5/8"	10,000 PSI	PIPE RAM
G			
DSA			AS REQUIRED

KILL LINE

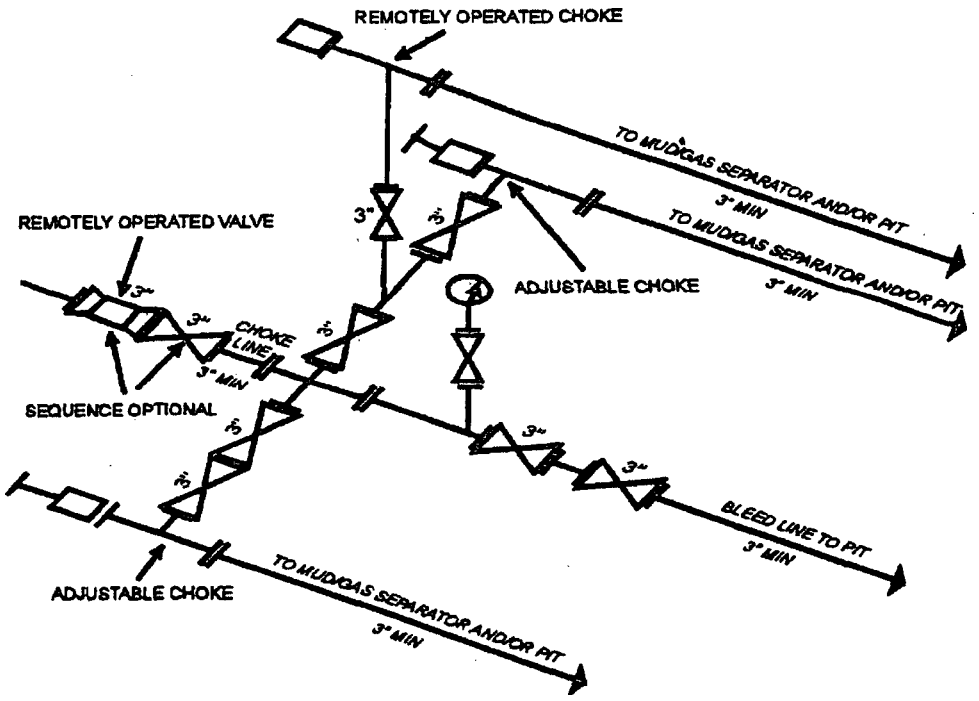
SIZE	RATING	DESCRIPTION
2"	10,000 PSI	GATE VALVE
2"	10,000 PSI	HYD GATE VALVE
2"	10,000 PSI	CHECK VALVE

CHOKE LINE

SIZE	RATING	DESCRIPTION
3"	10,000 PSI	HCR VALVE
3"	10,000 PSI	GATE VALVE



2" MINIMUM KILL LINE 3" MINIMUM CHOKE LINE



10M AND 15M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[53 FR 49661, Dec. 9, 1988 and 54 FR 39528, Sept. 27, 1989]

Continental

ContiTech

Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: INTERMEDIATE 1 (800' - 4,540')

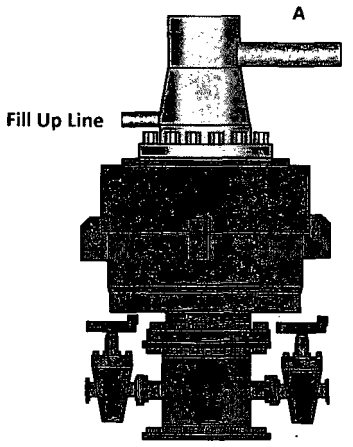
	SIZE	RATING	DESCRIPTION
A			BELL NIPPLE
B	21-1/4"	2,000 PSI	ANNULAR
C	21-1/4"	2,000 PSI	MUD CROSS
D			
E			
F			
G			
DSA			AS REQUIRED

KILL LINE

SIZE	RATING	DESCRIPTION
2"	2000 PSI	GATE VALVE

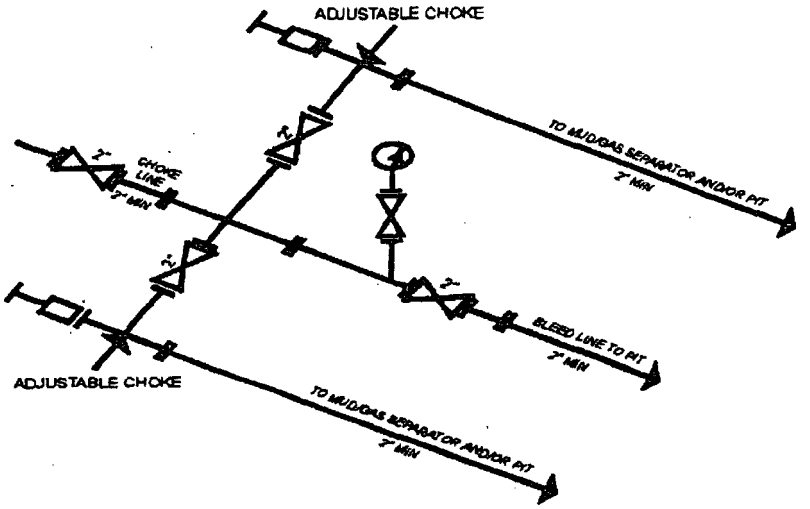
CHOKE LINE

SIZE	RATING	DESCRIPTION
2"	2000 PSI	GATE VALVE



2" MINIMUM KILL LINE

2" MINIMUM CHOKE LINE



2M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: INTERMEDIATE 2 (4,540' - 12,000')

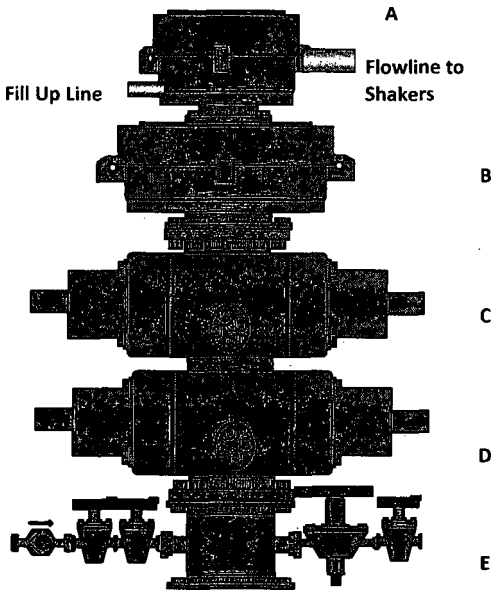
	SIZE	RATING	DESCRIPTION
A			ROTATING HEAD
B	16-3/4"	5,000 PSI	ANNULAR
C	16-3/4"	5,000 PSI	BLIND RAM
D	16-3/4"	5,000 PSI	PIPE RAM
E	16-3/4"	5,000 PSI	MUD CROSS
F			
G			
DSA			AS REQUIRED

KILL LINE

SIZE	RATING	DESCRIPTION
2"	5,000 PSI	GATE VALVE
2"	5,000 PSI	GATE VALVE
2"	5,000 PSI	CHECK VALVE

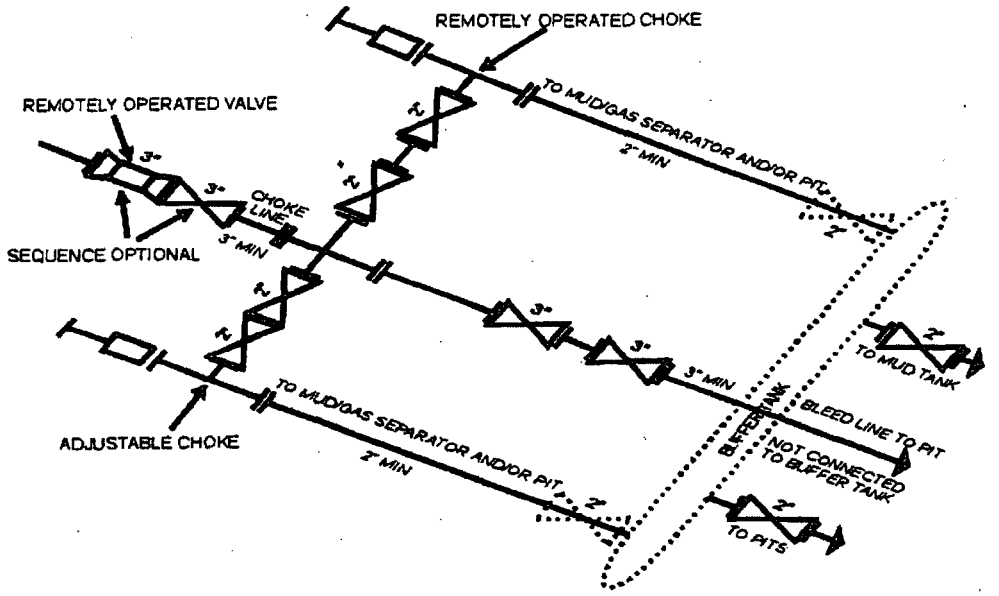
CHOKE LINE

SIZE	RATING	DESCRIPTION
3"	5,000 PSI	HCR VALVE
3"	5,000 PSI	GATE VALVE



CHECK VALVE
2" MINIMUM KILL LINE

HCR VALVE
3" MINIMUM CHOKE LINE



5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

BLOWOUT PREVENTER SCHEMATIC

HOLE SECTIONS: PRODUCTION LINER 1&2 AND PROD OPEN HOLE (12,000' - 19,100')

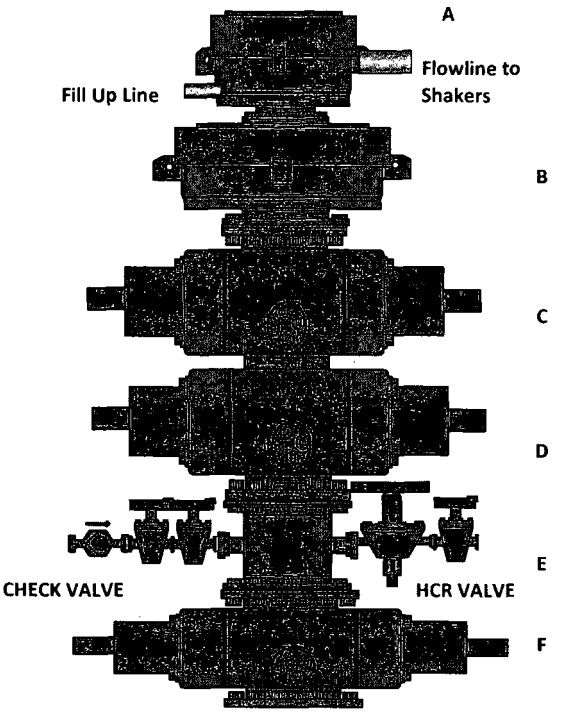
	SIZE	RATING	DESCRIPTION
A			ROTATING HEAD
B	13-5/8"	10,000 PSI	ANNULAR
C	13-5/8"	10,000 PSI	BLIND RAM
D	13-5/8"	10,000 PSI	PIPE RAM
E	13-5/8"	10,000 PSI	MUD CROSS
F	13-5/8"	10,000 PSI	PIPE RAM
G			
DSA			AS REQUIRED

KILL LINE

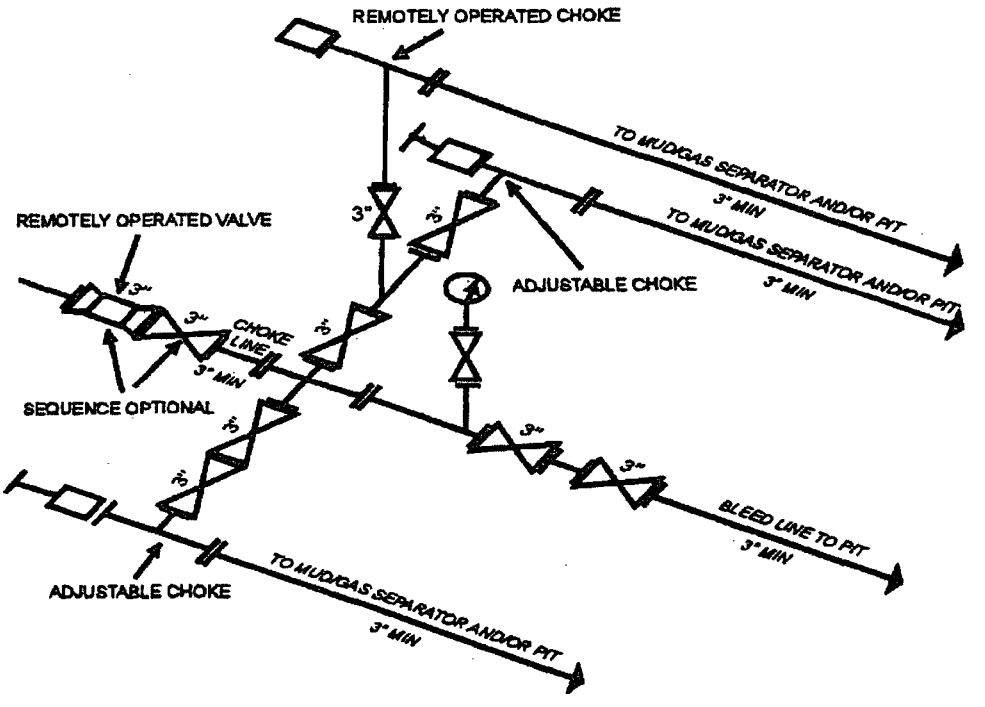
SIZE	RATING	DESCRIPTION
2"	10,000 PSI	GATE VALVE
2"	10,000 PSI	HYD GATE VALVE
2"	10,000 PSI	CHECK VALVE

CHOKE LINE

SIZE	RATING	DESCRIPTION
3"	10,000 PSI	HCR VALVE
3"	10,000 PSI	GATE VALVE



2" MINIMUM KILL LINE 3" MINIMUM CHOKE LINE



10M AND 15M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[53 FR 49661, Dec. 9, 1988 and 54 FR 39528, Sept. 27, 1989]

Continental

ContiTech

Hose Data Sheet

CRI Order No.	538332
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500412631 CBC544771, CBC544769, CBC544767, CBC544763, CBC544768, CBC544745, CBC544744, CBC544746
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOURC/W BX155 ST/ST INLAID R.GR.
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE SOUR C/W BX155 ST/ST INLAID R.GR.
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

1. **FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Rustler		580	580
Castile		2,710	2,710
Lamar		4,510	4,510
Bell Canyon		4,560	4,560
Cherry Canyon		5,570	5,570
Brushy Canyon		7,130	7,130
Bone Spring Lime		8,630	8,630
Upper Avalon		8,700	8,700
Top Bone Spring 1		9,650	9,650
Top Bone Spring 2		10,230	10,230
Top Bone Spring 3		10,320	10,320
Wolfcamp A		11,900	11,900
Wolfcamp B		12,600	12,600
Wolfcamp C		13,100	13,100
Wolfcamp D		14,100	14,100
Strawn		14,600	14,600
Atoka		15,000	15,000
Morrow		15,900	15,900
Barnett Shale		16,700	16,700
Mississippian Lime		17,400	17,400
Woodford		17,790	17,790
Silurian		17,950	17,950
Fusselman		18,815	18,815
Montoya		19,100	19,100

2. **ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS**

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Expected Base of Fresh Water		400
W	Castile	2,710
W	Lamar	4,510
O / W	Bell Canyon	4,560
O / W	Cherry Canyon	5,570
O / W	Brushy Canyon	7,130
O / G / W	Bone Spring Lime	8,630
O / G / W	Upper Avalon	8,700
O / G / W	Top Bone Spring 1	9,650
O / G / W	Top Bone Spring 2	10,230
O / G / W	Top Bone Spring 3	10,320
O / G / W	Wolfcamp A	11,900
O / G / W	Wolfcamp B	12,600
O / G / W	Wolfcamp C	13,100
O / G / W	Wolfcamp D	14,100
O / G / W	Strawn	14,600
G / W	Atoka	15,000
G / W	Morrow	15,900
W	Barnett Shale	16,700
W	Mississippian Lime	17,400
W	Woodford	17,790
W	Top Silurian	17,950
W	Top Fusselman	18,815
W	Montoya	19,100

All shows of fresh water and minerals will be reported and protected.

3. **BOP EQUIPMENT**

A 2M 21-1/4 BOP will be installed and tested to drill the 18-1/2" hole section (800' to 4,540'). Please see schematic. The BOP will be tested as a 2M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoe. Max anticipated pressure in hole section 2250 psi.

A 5M 16-3/4 BOP will be installed and tested to drill the 14-3/4" hole section (4,540' to 12,000'). Please see schematic. The BOP will be tested as a 5M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoe. Max anticipated pressure in hole section 5920 psi.

A 10M 13-5/8 BOP will be installed and tested to drill the 12-1/4", 8-1/2", and 5-7/8" hole section (12,000' to 19,100'). Please see schematic. The BOP will be tested as a 10M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoe. Max anticipated pressure in hole section 9200 psi.

Chevron request a variance to use a felxible line with flanged ends between the BOP and the choke manifold. (Choke Line)

BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. Chevron requests a variance to use a FMC Technologies Multibowl wellhead. Please see attached wellhead schematic.

4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	800'	24"	20"	94#	J-55	BTC	New
Intermediate 1	0'	4,540'	18-1/2"	16"	97#	L-80	BTC	New
Intermediate 2	0'	12,000'	14-3/4"	13-3/8"	72#	TN-110SS	513	New
Production Liner 1	11,700'	17,410'	12-1/4"	9-5/8"	53.5#	T-95IC	Blue	New
Production Tieback	0'	11,700'	N/A	9-5/8"	53.5#	TN-110HS	Blue	New
Production Liner 2	17,110'	17,950'	8-1/2"	7"	26#	L80	Blue	New
Production Open Hole	17,950'	19,100'	5-7/8"	N/A	N/A	N/A	N/A	N/A

b. Casing design subject to revision based on geologic conditions encountered.

c. ***A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalculated & sent to the BLM prior to drilling.**

SF Calculations based on the following "Worst Case" casing design:

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.4	1.13	4.68	1.56
Intermediate 1	1.28	1.34	3.37	1.51
Intermediate 2	1.21	1.05	1.63	1.35
Production Liner 1	2.29	1.14	2.89	1.57
Production Tieback	1.31	1.41	2.18	1.41
Production Liner 2	1.31	2.63	2.39	1.44

The following worst case load cases were considered for calculation of the above Min. Safety Factors:

Burst Design	Surf	Int1	Int2	Prod Liner1	Prod Tieback	Prod Liner2
Pressure Test- Surface, Int, Prod Csg P external: Mud weight above TOC, PP below P internal: Test psi + next section heaviest mud in csg	X	X	X	X	X	X
Displace to Gas- Surf Csg P external: Mud weight above TOC, PP below P internal: Dry Gas from Next Csg Point	X					
Gas over mud (60/40) - Int Csg/Liner P external: Mud weight above TOC, PP below P internal: 60% gas over 40% mud from Pilot hole TD PP		X				
Gas over mud (50/50) - Int Csg/Liner P external: Mud weight above TOC, PP below P internal: 50% gas over 50% mud from Pilot hole TD PP			X	X	X	X
Stimulation (Acid Job) Pressures- Prod Csg P external: Mud weight above TOC, PP below P internal: Max pemitted inj pressure w/ heaviest fluid				X	X	X
Tubing Leak- Prod Csg P external: Mud weight above TOC, PP below P internal: Leak just below surf, 9.1 ppg packer fluid				X	X	X
Collapse Design						
Partial Evacuation P external: Mud weight gradient P internal: Dry Gas to 2000', Mud Weight Gradient Below		X	X	X	X	X
Full Evacuation P external: Mud weight gradient P internal: none	X					
Fluid Drop Above Packer P external: Mud weight gradient P internal: 9.1 ppg packer fluid drops till blanced with TD PP				X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: displacement fluid - water	X	X	X	X	X	X
Tension Design						
100k lb overpull	X	X	X	X	X	X

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water	Volume
Surface				(ppg)	(cu ft/sk)	Open Hole		gal/sk	bbls
Tail	Class C	0'	800'	14.8	1.33	100	962	6.37	227
Intermediate Csg 1									
Lead	50:50 Poz: Class C + Extender, Antifoam, Retarder, Salt	0'	3,540'	11.9	2.37	50	1018	13.45	430
Tail	Class C + Retarder	3,540'	4,540'	14.8	1.33	50	603	6.37	143
Intermediate Csg 2									
Lead	50:50 Poz: Class C + Extender, Antifoam	4,240'	11,000'	11.9	2.36	10	1567	13.40	279
Tail	Class H + Retarder + Extender + Dispersant	11,000'	12,000'	15.6	1.23	10	299	5.41	53
Production Liner1									
Lead	Class H + Extender, Antifoam, Dispersant, Gas Control, Viscosifier, Retarder	11,700'	16,410'	15.6	1.20	10	1617	5.40	288
Tail	Class H + Extender, Antifoam, Dispersant, Gas Control, Viscosifier, Retarder	16,410'	17,410'	15.6	1.20	10	376	5.40	67
Production Tieback									
Tail	Class H + Antifoam, Dispersant, Fluid Loss, Retarder, Extender	0'	11,700'	15.6	1.20	0	3832	5.40	683
Production Liner2									
Tail	TXI + Antifoam, Dispersant, Viscosifier, Fluid Loss, Retarder	17,110'	17,950'	12.5	1.56	50	150	8.38	27

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.

6. MUD PROGRAM

From	To	Type	Weight	Viscosity	Filtrate
0'	800'	Spud Mud	8.3 – 9.0	28-36	N/C
800'	4,540'	Brine Water	10 – 10.4	28-32	N/C
4,540'	12,000'	OBM	8.7-10.0	40-60	20-30
12,000'	17,410'	OBM	12.2-15.6	55-75	10-15
17,410'	17,950'	WBM	8.8-9.6	35-45	<10
17,950'	19,100'	Cut Brine	8.4-9.0	28-32	N/C

A closed system will by utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated – a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

a. Drill stem tests are not planned.
b. The logging program will be as follows:

TYPE	Logs	Interval
Mudlogs	2 Man Mud Log	4,540' to TD
LWD	MWD Gamma	4,540' to TD
OH Logs	Quad Combo	17,950' - 19,100' Injection Zone
CH Logs	CBL	17,110' - 17,870' Production Liner 2

c. A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. No abnormal pressure or temperatures are expected. Estimated BHP is: **9200 psi**
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

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	Wedge 513®
	Connection OD Option
	REGULAR
Pipe Features	
Outside Diameter	13.375 in.
Wall Thickness (Weight)	0.514 in.
Grade	TN 110SS
PIPE BODY DATA	
Geometry	
Nominal OD	13.375 in.
OD Tolerance	API
Nominal Weight	72.00 lbs/ft
Drift	12.25 in.
Nominal ID	12.347 in.
Wall Thickness	0.514 in.
Plain End Weight	70.67 lbs/ft
Performance	
Collapse	2880 psi
Body Yield Strength	2284 x1000 lbs
Internal Yield	7400 psi
SMYS	110000 psi
CONNECTION DATA	
Geometry	
Connection OD	13.375 in.
Connection ID	12.294 in.
Make-up Loss	4.940 in.
Threads per in	3.06
Connection OD Option	REGULAR
Performance	
Tension Efficiency	62.1 %
Joint Yield Strength	1418.364 x1000 lbs
Internal Pressure Capacity	7400 psi
	73.7 %

Compression Efficiency	
Compression Strength	1683.308 x1000 lbs
Max. Allowable Bending	23.6 °/100 ft
External Pressure Capacity	2880 psi
Make-Up Torques	
Minimum	26000 ft-lbs
Optimum	31000 ft-lbs
Maximum	46000 ft-lbs
Operation Limit Torques	
Operating Torque	145000 ft-lbs
Yield Torque	218000 ft-lbs

Notes

For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Printed on: 09/25/2017

	Blue®
	Connection OD Option
	REGULAR
Pipe Features	
Outside Diameter	9.625 in.
Wall Thickness (Weight)	0.545 in.
Grade	T95-ICY

PIPE BODY DATA

Geometry

Nominal OD	9.625 in.
OD Tolerance	API
Nominal Weight	53.50 lbs/ft
Drift	8.5 in.
Nominal ID	8.535 in.
Wall Thickness	0.545 in.
Plain End Weight	52.9 lbs/ft

Performance

Collapse	8300 psi
Body Yield Strength	1555 x1000 lbs
Internal Yield	9910 psi
SMYS	100000 psi

CONNECTION DATA

Geometry

Connection OD	10.626 in.
Coupling Length	11.693 in.
Connection ID	8.545 in.
Make-up Loss	5.065 in.
Threads per in	4
Connection OD Option	REGULAR

Performance

Tension Efficiency	100.0 %
Joint Yield Strength	1555 x1000 lbs
	9910 psi

Internal Pressure Capacity	
Compression Efficiency	100 %
Compression Strength	1555 x1000 lbs
Max. Allowable Bending	48 °/100 ft
External Pressure Capacity	8300 psi
Make-Up Torques	
Minimum	23000 ft-lbs
Optimum	25560 ft-lbs
Maximum	28120 ft-lbs
Shoulder Torques	
Minimum	3830 ft-lbs
Maximum	21730 ft-lbs
Operation Limit Torques	
Operating Torque	54880 ft-lbs
Yield Torque	84430 ft-lbs

Notes

For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Printed on: 09/25/2017

	Blue®
	Connection OD Option
	REGULAR
Pipe Features	
Outside Diameter	7.000 in.
Wall Thickness (Weight)	0.362 in.
Grade	L80 Type 1

PIPE BODY DATA

Geometry

Nominal OD	7 in.
OD Tolerance	API
Nominal Weight	26.00 lbs/ft
Drift	6.151 in.
Nominal ID	6.276 in.
Wall Thickness	0.362 in.
Plain End Weight	25.69 lbs/ft

Performance

Collapse	5410 psi
Body Yield Strength	604 x1000 lbs
Internal Yield	7240 psi
SMYS	80000 psi

CONNECTION DATA

Geometry

Connection OD	7.677 in.
Coupling Length	10.551 in.
Connection ID	6.189 in.
Make-up Loss	4.480 in.
Threads per in	4
Connection OD Option	REGULAR

Performance

Tension Efficiency	100.0 %
Joint Yield Strength	604 x1000 lbs
	7240 psi

Internal Pressure Capacity	
Compression Efficiency	100 %
Compression Strength	604 x1000 lbs
Max. Allowable Bending	52 °/100 ft
External Pressure Capacity	5410 psi
Make-Up Torques	
Minimum	8110 ft-lbs
Optimum	9010 ft-lbs
Maximum	9910 ft-lbs
Shoulder Torques	
Minimum	1350 ft-lbs
Maximum	7660 ft-lbs
Operation Limit Torques	
Operating Torque	16465 ft-lbs
Yield Torque	25330 ft-lbs

Notes

For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: CALICHE

Access onsite topsoil source depth: 0

Offsite topsoil source description:

Onsite topsoil removal process: NONE NEEDED

Access other construction information:

Access miscellaneous information:

Number of access turnouts: 60 **Access turnout map:**

Drainage Control

New road drainage crossing: CROSSING,LOW WATER

Drainage Control comments: DITCHING WILL BE CONSTRUCTED ON BOTH SIDES OF ROAD CROWNING SHALL BE DONE ON THE ACCESS ROAD DRIVING SURF.

Road Drainage Control Structures (DCS) description: DITCHING WILL BE CONSTRUCTED ON BOTH SIDES OF THE ROAD DRAINAGE CONTROL SYSTEM SHALL BE CONSTRUCTED ON THE ENTIRE LENGTH OF ROAD BY USE OF ANY OF THE FOLLOWING: DITCHES, SIDE HILL OUT-SLOPING AND IN-SLOPING, LEAD OFF DITCHES, CULVERT INSTALLATION, OR LOW WATER CROSSINGS.

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:

Maelstrom_SWD_1_Mile_Rad_Map_20171121123358.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:

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Production Facilities map:

Maelstrom_SWD_No_1_Aerial_Detail_20171121123508.pdf
Maelstrom_SWD_No.1_Prelim_Powerline_20171122070555.pdf
Maelstrom_SWD_No.1_Prelim_Water_Line_20171122070611.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

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

Describe type: INTER, PROD, SURF CSG, STIMULATION

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: FEDERAL

Water source transport method: PIPELINE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 659461.25 **Source volume (acre-feet):** 85

Source volume (gal): 27697372

Water source and transportation map:

Maelstrom_SWD_No_1_Aerial_Detail_20171121124304.pdf

Water source comments:

New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

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.):**

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

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 USED TO CONSTRUCT WELL PAD AND ROADS. MATERIAL WILL BE PURCHASED FROM PRIVATE LAND OWNER (OLIVER KIEHNE) CALICHE PIT LOCATED IN SEC 27, T26S, R33E, LEA COUNTY, NM, AND ALTERNATIVE @ N2 SEC21, T26S, R33E, LEA CNTY, NM. NOTIFICATION SHALL BE GIVEN TO BLM AT LEAST 3 WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OF ACCESS ROAD AND OR WELL PAD.
Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: GARBAGE

Waste content description: GARBAGE AND TRASH WILL BE COLLECTED IN A TRASH CONTAINER AND DISPOSED OF PROPERLY AT A STATE APPROVED DISPOSAL FACILITY. ALL TRASH ON AND AROUND THE WELL SITE WILL BE COLLECTED FOR DISPOSAL.
Amount of waste: 200 pounds

Waste disposal frequency : Daily

Safe containment description: WILL BE COLLECTED IN TRASH CONTAINER & DISPOSED OF AT STATE APPROVED FACILITY
Safe containmant attachment:

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

Disposal location description: STATE APPROAVED 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

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

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

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:

Maelstrom_SWD_Well_Plat_20171121125934.pdf
Maelstrom_SWD_Rig_Layout_20171121130002.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:**

Multiple Well Pad Number:

Recontouring attachment:

Maelstrom_SWD_Reclamation_Map_20171121130053.pdf
Maelstrom_SWD_SUP_20171121130112.pdf

Drainage/Erosion control construction: SEE SURFACE USE PLAN ATTACHED

Drainage/Erosion control reclamation: SEE SURFACE USE PLAN ATTACHED

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Well pad proposed disturbance (acres): 8.26
Road proposed disturbance (acres): 1.23
Powerline proposed disturbance (acres): 0.37
Pipeline proposed disturbance (acres): 6.54
Other proposed disturbance (acres): 0

Total proposed disturbance: 16.4

Well pad interim reclamation (acres): 0
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 0

Well pad long term disturbance (acres): 4.32
Road long term disturbance (acres): 1.23
Powerline long term disturbance (acres): 0.19
Pipeline long term disturbance (acres): 4.36
Other long term disturbance (acres): 0

Total long term disturbance: 10.1

Disturbance Comments:

Reconstruction method: SEE SURFACE USE PLAN

Topsoil redistribution: SEE SURFACE USE PLAN

Soil treatment: SEE SURFACE USE PLAN

Existing Vegetation at the well pad: MESQUITE, SHRUBS, GRASS

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: MESQUITE, SHRUBS, GRASS

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: MESQUITE, SHRUBS, GRASS

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: MESQUITE, SHRUBS, GRASS

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:

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

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:**

Total pounds/Acre:

Seed Summary	
Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: NONE NEEDED

Weed treatment plan attachment:

Monitoring plan description: NONE NEEDED

Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

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:**

Disturbance type: EXISTING ACCESS ROAD

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:

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

USFS Forest/Grassland: **USFS Ranger District:**

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:**

Disturbance type: PIPELINE

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:

Operator Name: CHEVRON USA INCORPORATED

Well Name: MAELSTROM SWD **Well Number:** 1

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? YES **Use APD as ROW?** YES

ROW Type(s): 288103 ROW – Salt Water Disposal Pipeline/Facility

ROW Applications

SUPO Additional Information: PIPELINES: 10" STEEL BURIED PIPELINE, 9541.21' WILL BE LAID FROM WELL RUNNING SOUTH ALONG THE PROPOSED ACCESS ROAD TO AN EXISTING LEASE ROAD THEN ADJACENT TO LEASE ROAD TO THE RECYCLE FACILITY IN SEC 14 & 13. ROW WILL BE APPLIED FOR THRU BLM. POWERLINES: APPROX 1629.03' WILL BE INSTALLED FROM THE PROPOSED SWD AND BE ROUTED SOUTH ALONG THE PROPOSED ACCESS ROAD TO THE EXISTING POWER LINE RUNNING EAST/WEST WITHIN THE EXISTING ROW IN SOUTH HALF OF SEC 15.

Use a previously conducted onsite? YES

Previous Onsite information: ON SITE PERFORMED BY BLM NRS: PAUL MURPHY 10/17/2017

Other SUPO Attachment

Maelstrom_SWD_Cut_Fill_20171121132020.pdf

Section 1 - General

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

Section 1 - General

Would you like to address long-term produced water disposal?

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options?

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:

Decribe 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?

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:

Decribe 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?

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?

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

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:

AFMSS

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

Bond Info Data Report

08/16/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: CA0329

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: