Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office OCD Artesia

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM0405444

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other: INJECTION

8. Well Name and No.
UBER NORTH SWD 1

2. Name of Operator
MESQUITE SWD, INC.
Contact: MELANIE WILSON
E-Mail: mjp1692@gmail.com

9. API Well No.
30-015-43805

3a. Address
PO BOX 1479
CARLSBAD, NM 88221

3b. Phone No. (include area code)
Ph: 575-914-1461

10. Field and Pool or Exploratory Area
SWD;DEVONIAN

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 15 T23S R31E Mer NMP NWNE 516FNL 2355FEL

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Mesquite SWD, Inc. requests permission to make the following changes to the originally approved APD:

RECEIVED
OCT 25 2018
DISTRICT II-ARTESIA O.C.D.

Casing
~~Production~~ Surface
Approved: 20" 106.5# J55 LTC set at 680'
Change to: 20" 94# J55 BTC set at 680'

1st Intermediate
Approved: 13 3/8" 68# J55 BTC set at 4275'. Cmt in 2 stages
Change to: 13 3/8" ~~54.5#~~ 68# J55 BTC set at 4275'. Cmt in single stage

SEE ATTACHED FOR CONDITIONS OF APPROVAL
email to P. Goetze 10-25-2018

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #438158 verified by the BLM Well Information System
For MESQUITE SWD, INC., sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 10/04/2018 ()

Name *(Printed/Typed)* SHERYL BAKER — Title DRILLING SUPERINTENDENT

Signature (Electronic Submission) — Date 10/03/2018

Accepted For Record
NMOCD
12-11-18

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Mustafa Hague — Title Petroleum Engineer — Date 10-17-2018

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Carlsbad Field Office

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.

(Instructions on page 2)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Rec'd 12-7-18

Additional data for EC transaction #438158 that would not fit on the form

32. Additional remarks, continued

2nd Intermediate
Approved: 9 5/8" 58.4# L80 LTC set at 11500'
Change to: 9 5/8" 53.5# N80 BTC set at 11500'

Production
Approved: 7" 29# P110/35# HCL80 LTC set 0-16500'
Change to: 7 5/8" 39# P110 FJM set 11200'-16510'

Open Hole
Approved: 5 7/8" open hole 16500-17500'
Change to: 6 1/2" open hole 16510-17500'

Tubing
Approved: 4 1/2" 11.6# P110/L80 set 0-16500'
Change to: 7" x 5 1/2" tapered string. 7" 0-10800', 5 1/2" 10800-16500'

Pressure Control
Approved: 10M BOP with 10M annular preventer
Change to: Nipple up on 20" csg w/2M BOP system. Nipple up on 13 3/8" csg w/5M BOP system. Nipple up on 9 5/8" csg w/10M BOP system. Request variance for use of 10M BOP with 5M annular. Well Control Plan and BOP diagrams are attached.

Mesquite SWD, Inc.
Well Control Plan

A. Component and Preventer Compatibility Table

Component	OD	Preventer	RWP
Drill Pipe	5"	Upper VBR: 4" - 7" Lower: 5" fixed	10M
Heavyweight Drill Pipe	5"	Upper VBR: 4" - 7" Lower: 5" fixed	10M
Drill Collars & MWD Tools	6 1/2"	Upper VBR: 4" – 7"	10M
Mud Motor	6 1/2"	Upper VBR: 4" – 7"	10M
Production Casing	5 1/2"	Upper VBR: 4" – 7"	10M
All	0 – 13 5/8"	Annular	5M
Open Hole		Brind Rams	10M

B. Well Control Procedures

I. <u>General Procedures While Drilling</u>:
- a. Sound alarm – alert crew
- b. Space out drill string
- c. Shut down pumps and stop rotary
- d. Open HCR
- e. Shut well in, utilizing upper VBRs
- f. Close choke
- g. Confirm shut in
- h. Notify rig manager and Mesquite SWD, Inc. company representative
- i. Call Mesquite SWD, Inc. engineer
- j. Read and record:
  - i. Shut in drill pressure and shut in casing pressure
  - ii. Pit gain
  - iii. Time
- k. Regroup, identify forward plan

II. <u>General Procedures While Tripping</u>:
- a. Sound alarm – alert crew
- b. Stab full opening safety valve and close
- c. Space out drill string
- d. Open HCR
- e. Shut well in, utilizing upper VBRs
- f. Close choke
- g. Confirm shut in
- h. Notify rig manager and Mesquite SWD, Inc. company representative
- i. Call Mesquite SWD, Inc. engineer
- j. Read and record:
  - i. Shut in drill pressure and shut in casing pressure
  - ii. Pit gain
  - iii. Time
- k. Regroup, identify forward plan

Mesquite SWD, Inc.
Well Control Plan

III. General Procedures While Running Casing:

a. Sound alarm – alert crew
b. Stab full opening safety valve and close
c. Space out drill string
d. Open HCR
e. Shut well in, utilizing upper VBRs
f. Close choke
g. Confirm shut in
h. Notify rig manager and Mesquite SWD, Inc. company representative
i. Call Mesquite SWD, Inc. engineer
j. Read and record:
    i. Shut in drill pressure and shut in casing pressure
    ii. Pit gain
    iii. Time
k. Regroup, identify forward plan

IV. General Procedures With No Pipe in Hole (Open Hole):

a. Sound alarm – alert crew
b. Open HCR
c. Shut well in with blind rams
d. Close choke
e. Confirm shut in
f. Notify rig manager and Mesquite SWD, Inc. company representative
g. Call Mesquite SWD, Inc. engineer
h. Read and record:
    i. Shut in drill pressure and shut in casing pressure
    ii. Pit gain
    iii. Time
i. Regroup, identify forward plan

V. General Procedures While Pulling BHL Through BOP Stack:

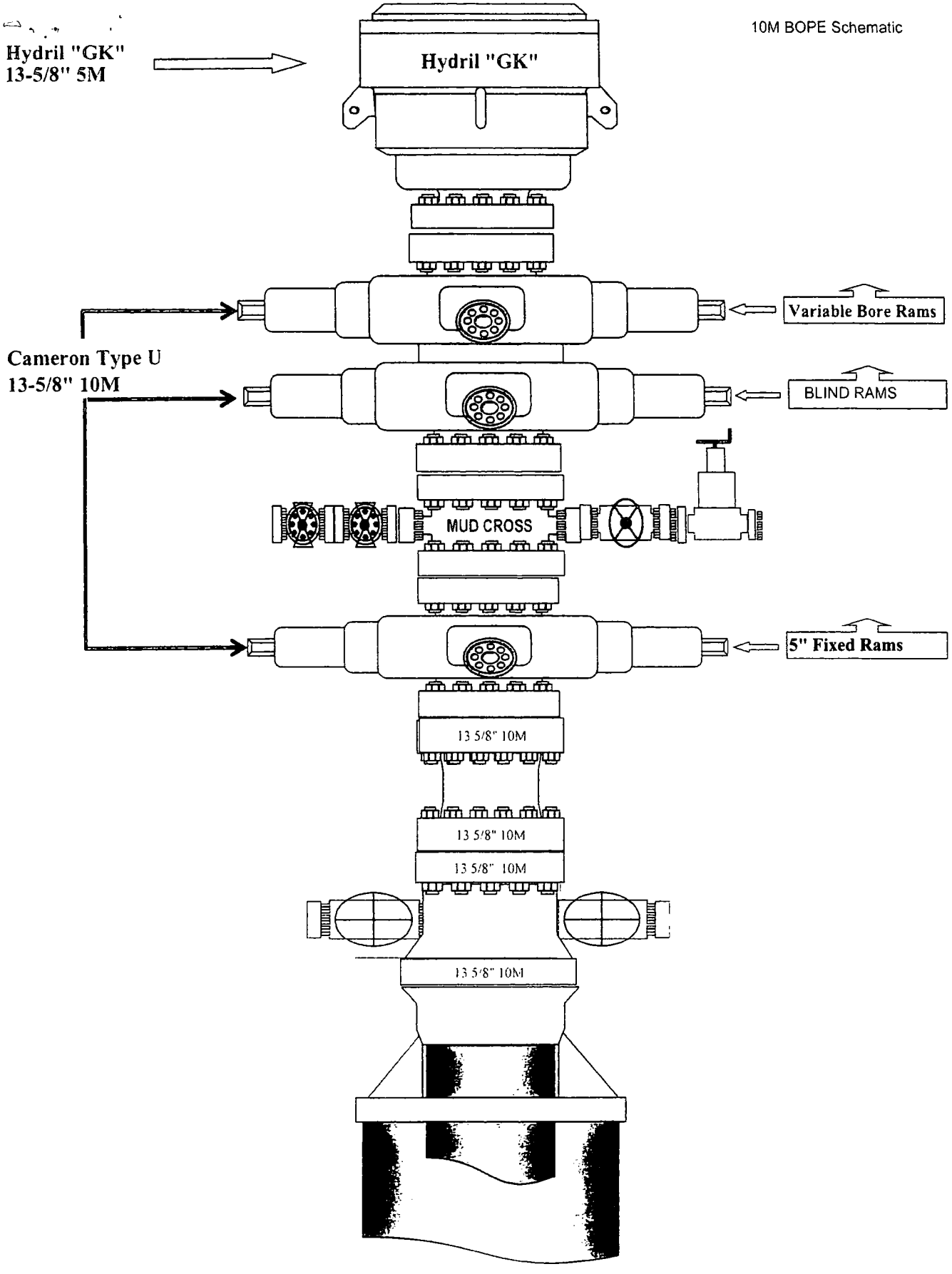
1. Prior to pulling last joint of drill pipe through stack
    A. Perform flow check and if flowing:
        a. Sound alarm – alert crew
        b. Stab full opening safety valve and close
        c. Space out drill string with tool joint just beneath upper pipe ram
        d. Open HCR
        e. Shut well in utilizing upper VBRs
        f. Close choke
        g. Confirm shut in
        h. Notify rig manager and Mesquite SWD, Inc. company representative
        i. Call Mesquite SWD, Inc. engineer
        j. Read and record:
            i. Shut in drill pressure and shut in casing pressure
            ii. Pit gain
            iii. Time
        k. Regroup, identify forward plan

2. With BHL in the BOP stack and compatible ram preventer and pipe combo immediately available.
   a. Sound alarm – alert crew
   b. Stab full opening safety valve and close
   c. Space out drill string with tool joint just beneath upper pipe ram
   d. Open HCR
   e. Shut well in utilizing upper VBRs
   f. Close choke
   g. Confirm shut in
   h. Notify rig manager and Mesquite SWD, Inc. company representative
   i. Call Mesquite SWD, Inc. engineer
   j. Read and record:
      i. Shut in drill pressure and shut in casing pressure
      ii. Pit gain
      iii. Time
   k. Regroup, identify forward plan

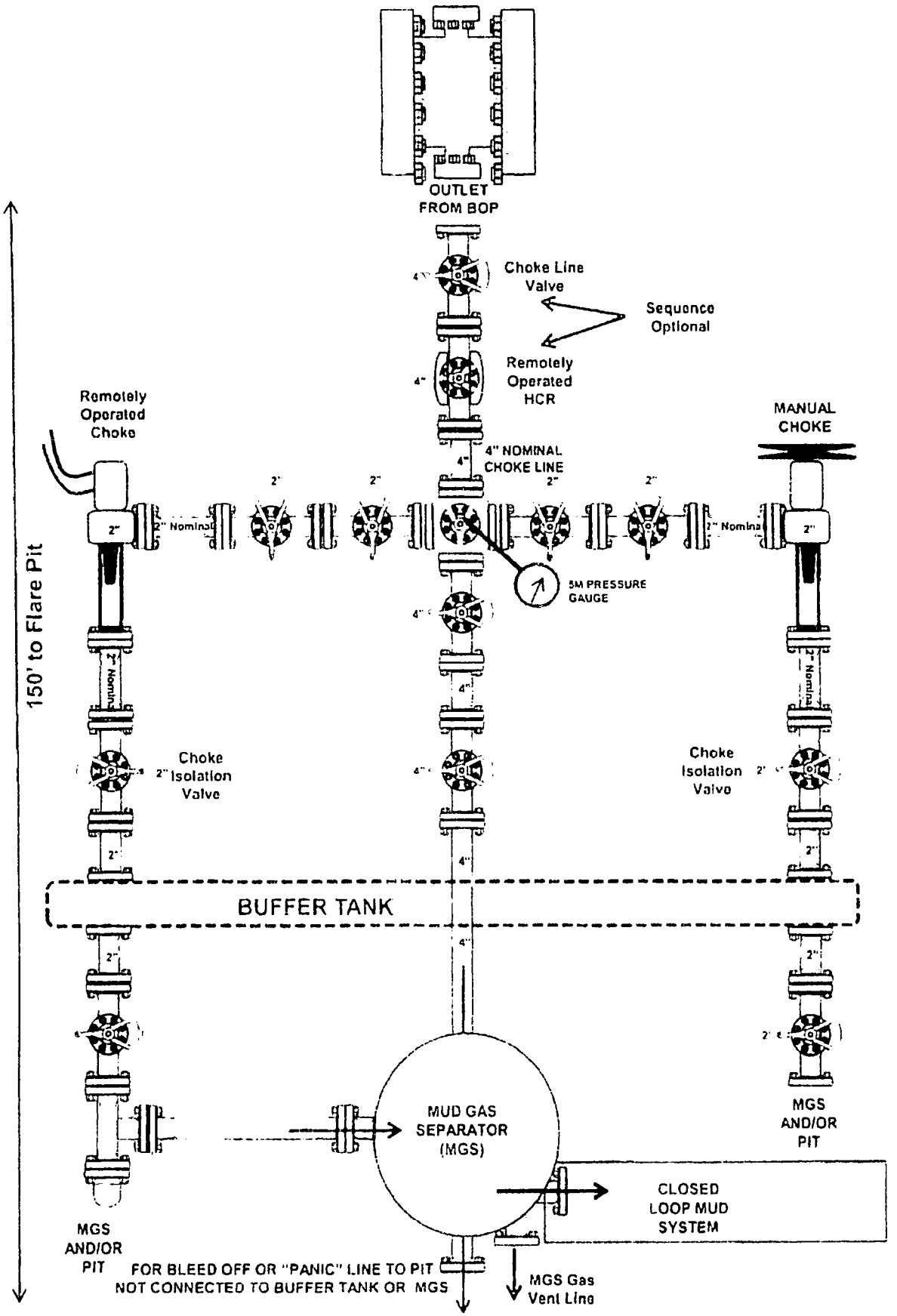
3. With BHA in the BOP stack and no compatible ram preventer and pipe combo immediately available
   a. Sound alarm – alert crew
   b. If possible to pick up high enough, pull string clear of the stack and follow Open Hole scenario (III)
   c. If impossible to pick up high enough to pull the string clear of the stack:
      i. Stab crossover, make up one joint/stand of drill pipe and full opening safety valve and close
      ii. Space out drill string with tool joint just beneath the upper pipe ram
      iii. Open HCR
      iv. Shut in utilizing upper VBRs
      v. Close choke
      vi. Confirm shut in
      vii. Notify rig manager and Mesquite SWD, Inc. company representative
      viii. Read and record:
         1. Shut in drill pipe pressure and shut in casing pressure
         2. Pit gain
         3. Time
   d. Regroup and identify forward plan

** If annular is used to shut in well and pressure build to or is expected to get to 50% of RWP, confirm space-out and swap to upper VBRs for shut in.

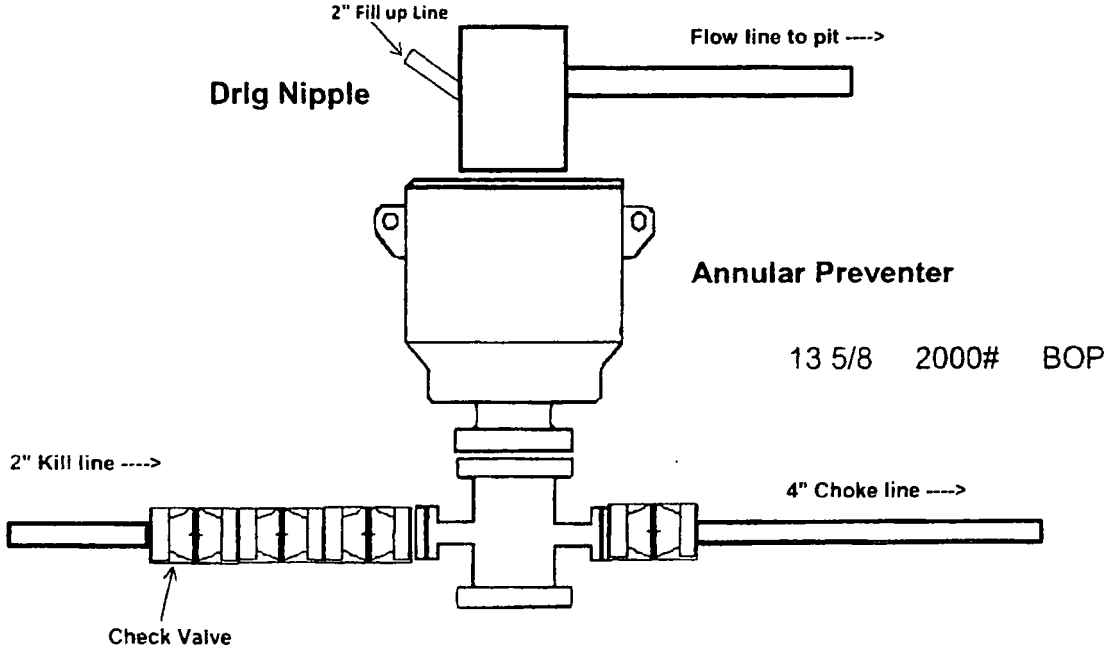
10M BOPE Schematic



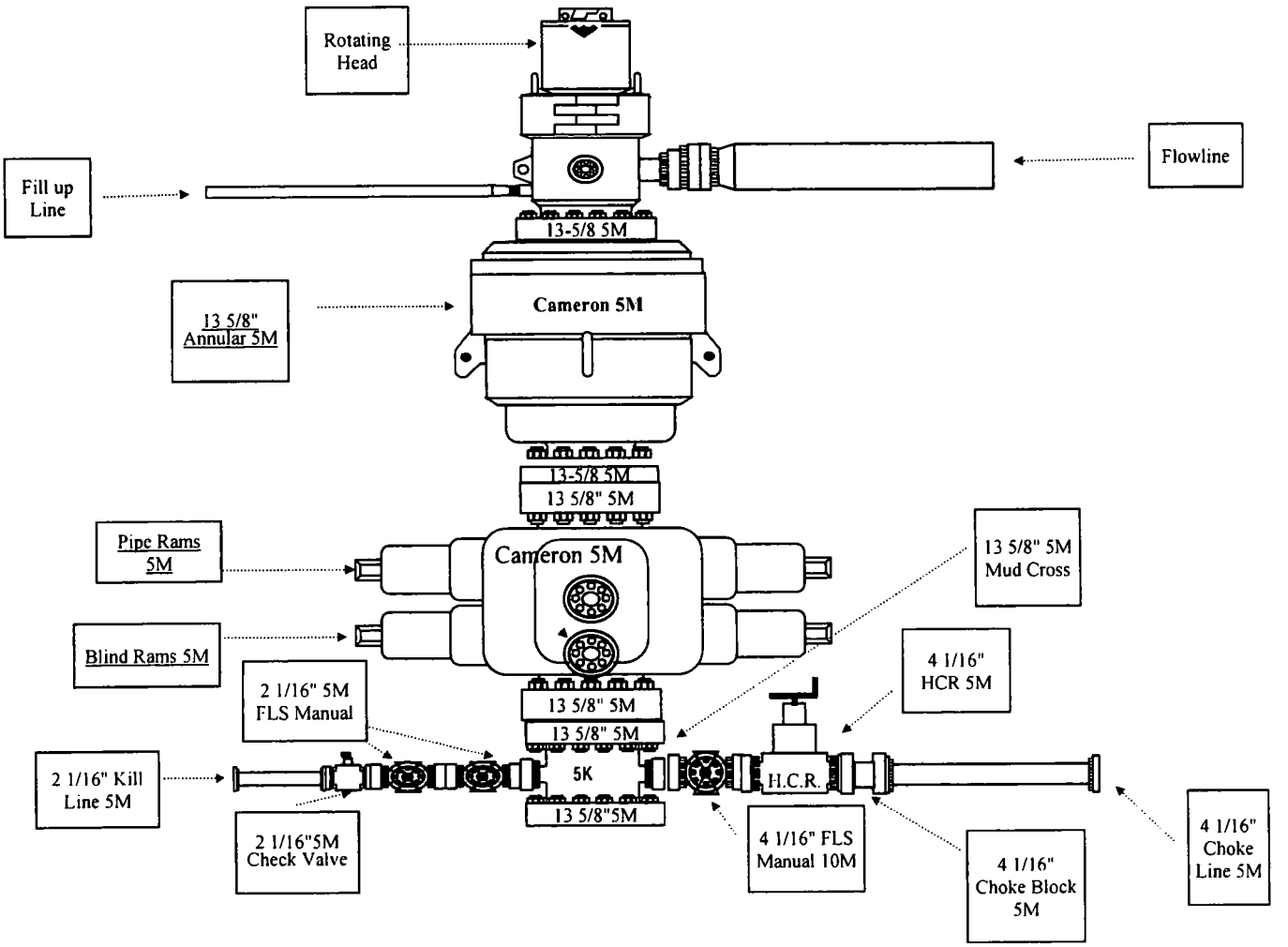
2M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)



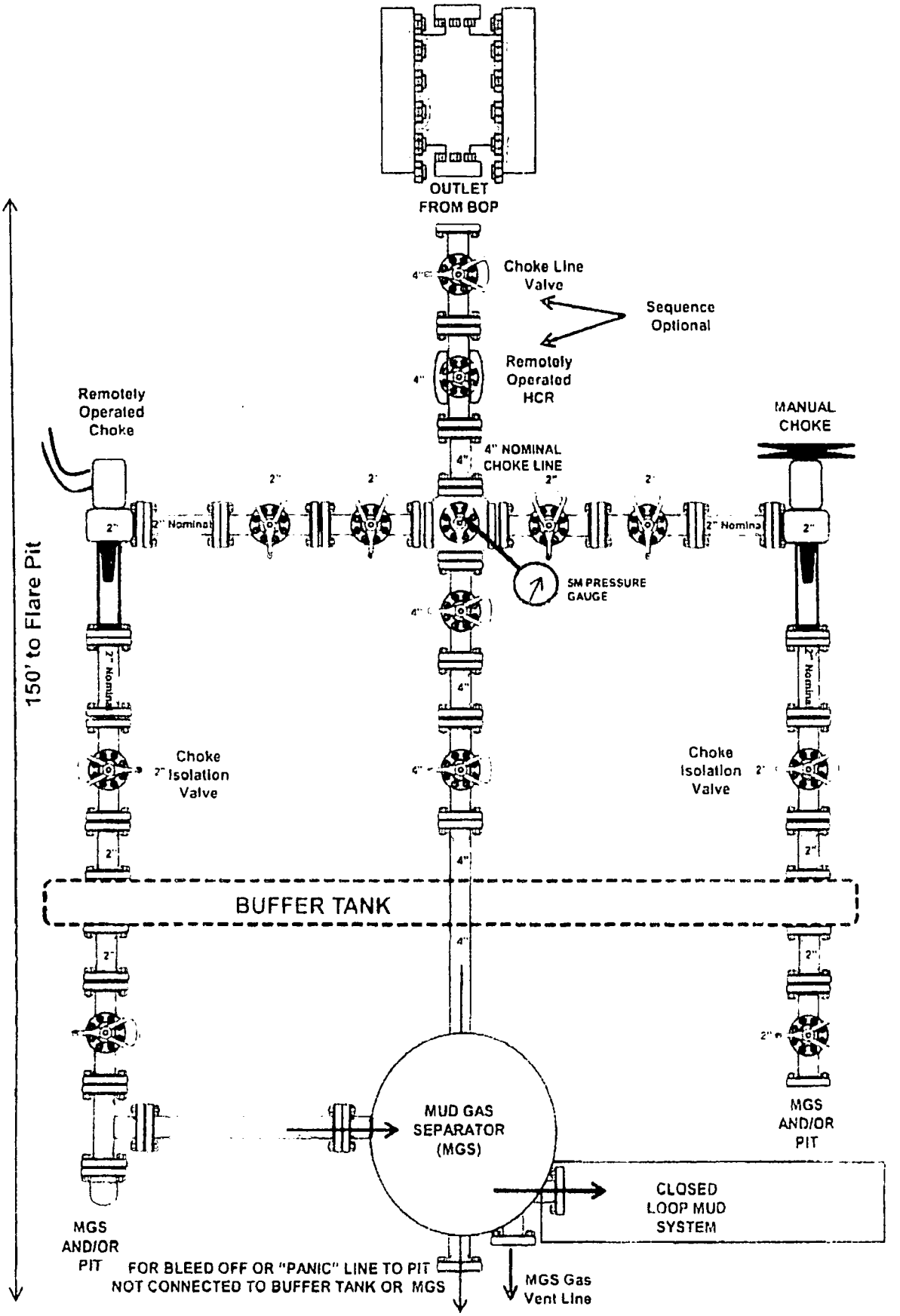
2,000 psi BOP Schematic



5M BOP with 5M Annular
Mesquite SWD, Inc.

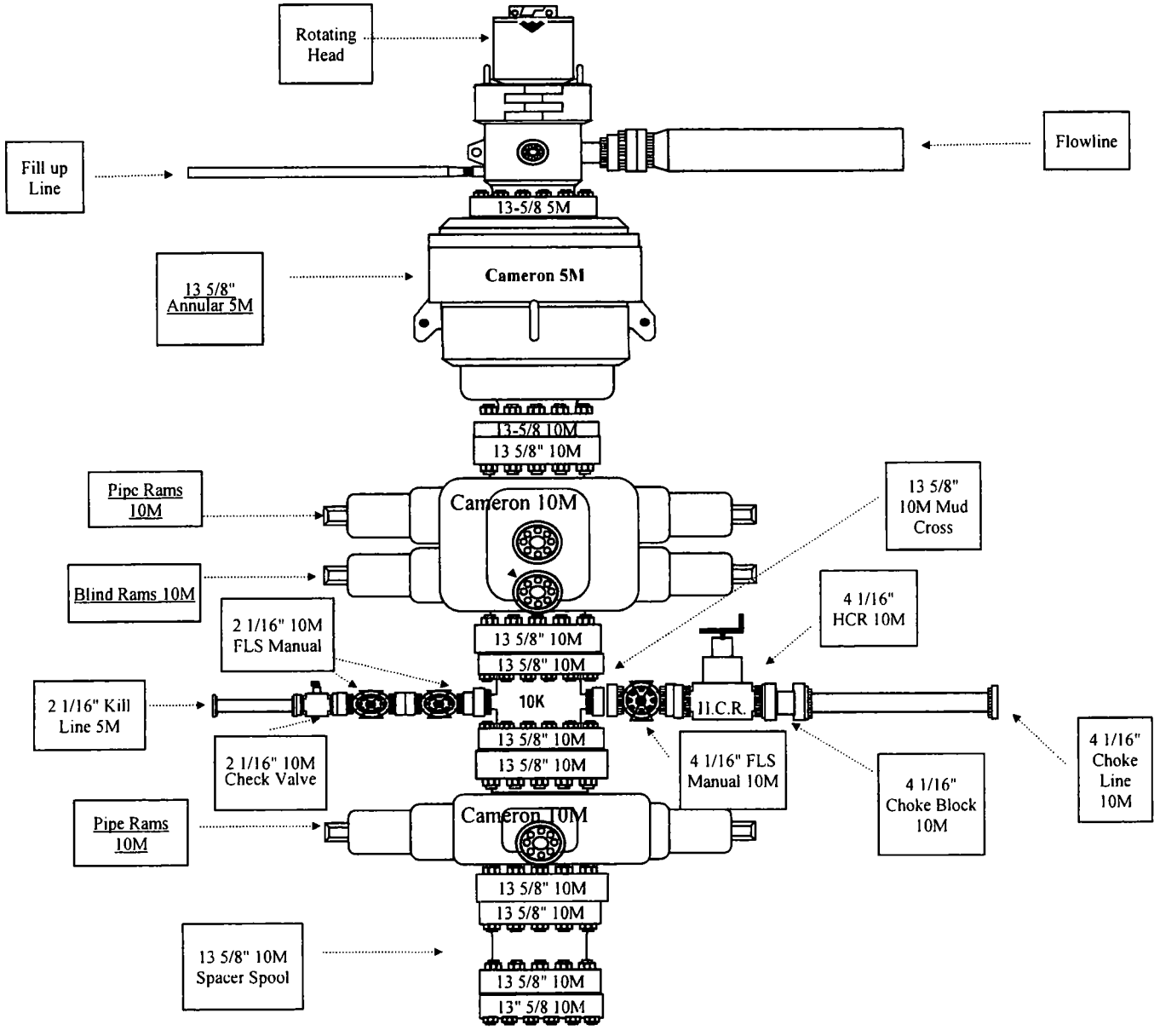


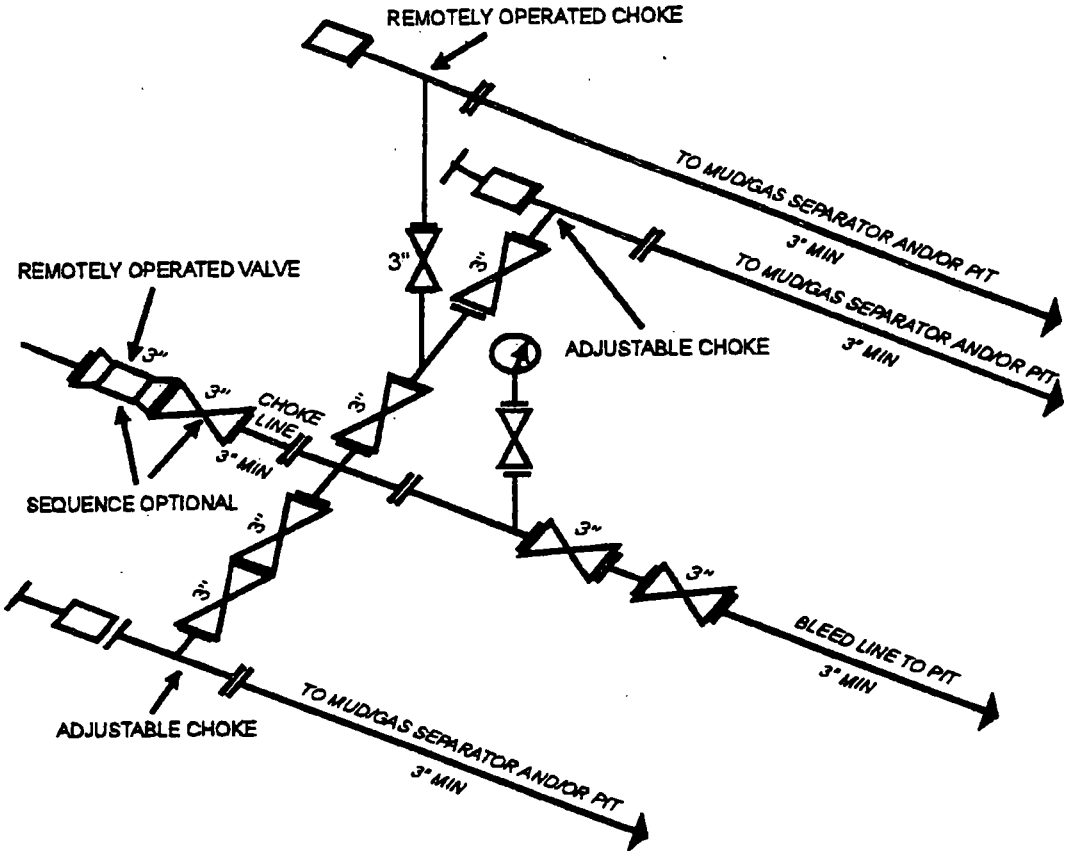
5M Choke Manifold Equipment (with MGS + closed loop)



10M BOP with 5M Annular
Mesquite SWD, Inc.

Hole Sections Utilized
***12 1/4" Hole below 1st Intermdiate Casing**
***8 3/4" - 6 1/2" Hole below 2nd Intermediate casing**





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

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

CASING TABLES

Dimensional & Grade Designators								Collapse Resistance
OD Size	Weight T&C	Weight P E	NOM Wall	NOM I D	API Drift	Alternate Drift	Product	
in.	lb/ft	lb/ft	in.	in.	in	in.	Grade	psi
7 5/8	33.70	33.07	0.430	6.765	6.640	--	R95	7 280
7 5/8	33.70	33.07	0.430	6.765	6.640	--	T95	7 280
7 5/8	33.70	33.07	0.430	6.765	6.640	-	USS C95	7 280
7 5/8	33.70	33.07	0.430	6.765	6.640	--	USS C100	7 490
7 5/8	33.70	33.07	0.430	6.765	6.640	--	C110	7 870
7 5/8	33.70	33.07	0.430	6.765	6.640	--	P110 SR16	7 870
7 5/8	33.70	33.07	0.430	6.765	6.640	--	P110	7 870
7 5/8	33.70	33.07	0.430	6.765	6.640	--	P110 HC	9 110
7 5/8	33.70	33.07	0.430	6.765	6.640	--	P110 HP	9 850
7 5/8	33.70	33.07	0.430	6.765	6.640	--	Q125	9 350
7 5/8	33.70	33.07	0.430	6.765	6.640	--	Q125 HC	9 450
7 5/8	33.70	33.07	0.430	6.765	6.640	--	Q125 HP	10 220
7 5/8	33.70	33.07	0.430	6.765	6.640	--	USS140	9 630
7 5/8	33.70	33.07	0.430	6.765	6.640	--	USS V150	8 850
7 5/8	39.00	38.08	0.500	6.625	6.500	--	USS GT80S	8 820
7 5/8	39.00	38.08	0.500	6.625	6.500	--	L80	8 820
7 5/8	39.00	38.08	0.500	6.625	6.500	--	L80 HC	9 450
7 5/8	39.00	38.08	0.500	6.625	6.500	--	L80 HP	10 010
7 5/8	39.00	38.08	0.500	6.625	6.500	-	N80 Type 1	8 820
7 5/8	39.00	38.08	0.500	6.625	6.500	--	N80	8 820
7 5/8	39.00	38.08	0.500	6.625	6.500	--	N80 HC	9 450
7 5/8	39.00	38.08	0.500	6.625	6.500	-	N80 HP	10 770
7 5/8	39.00	38.08	0.500	6.625	6.500	--	C90	9 620
7 5/8	39.00	38.08	0.500	6.625	6.500	--	USS C90	9 620
7 5/8	39.00	38.08	0.500	6.625	6.500	--	R95	10 000
7 5/8	39.00	38.08	0.500	6.625	6.500	--	T95	10 000
7 5/8	39.00	38.08	0.500	6.625	6.500	--	USS C95	10 000
7 5/8	39.00	38.08	0.500	6.625	6.500	--	USS C100	10 370
7 5/8	39.00	38.08	0.500	6.625	6.500	--	C110	11 080
7 5/8	39.00	38.08	0.500	6.625	6.500	--	P110 SR16	11 080
7 5/8	**39.00**	**38.08**	**0.500**	**6.625**	**6.500**	**--**	**P110**	**11 080**
7 5/8	39.00	38.08	0.500	6.625	6.500	--	P110 HC	12,180
7 5/8	39.00	38.08	0.500	6.625	6.500	--	P110 HP	13 130
7 5/8	39.00	38.08	0.500	6.625	6.500	--	Q125	12,060
7 5/8	39.00	38.08	0.500	6.625	6.500	-	Q125 HC	12,810
7 5/8	39.00	38.08	0.500	6.625	6.500	--	Q125 HP	13,790
7 5/8	39.00	38.08	0.500	6.625	6.500	--	USS140	12 930
7 5/8	39.00	38.08	0.500	6.625	6.500	--	USS V150	13,440
7 5/8	42.80	42.43	0.562	6.501	6.376	--	USS GT80S	10,810
7 5/8	42.80	42.43	0.562	6.501	6.376	-	L80	10,810
7 5/8	42.80	42.43	0.562	6.501	6.376	--	L80 HC	11,170
7 5/8	42.80	42.43	0.562	6.501	6.376	--	L80 HP	11,740
7 5/8	42.80	42.43	0.562	6.501	6.376	-	N80 Type 1	10,810
7 5/8	42.80	42.43	0.562	6.501	6.376	--	N80	10,810
7 5/8	42.80	42.43	0.562	6.501	6.376	-	N80 HC	11,730

TENSION				Internal Yield							Ductile Rupture	Outside Diameter	
				API Historical				Lame' - Von Mises					
Joint Strength, 1,000 lbs				Pipe Body	Threaded & Coupled			Open End	Capped End		Capped End	Regular Coupling	Special Clr Coupling
Yield	Threaded and Coupled				STC	LTC	BTC						
Pipe Body	STC	LTC	BTCa	psi	psi	psi	psi	psi	psi		psi	in.	in.
923	--	772	925	9,370	--	9,370	9,370	9,310	10,270		9,430	8.500	8.125
923	--	772	925	9,370	--	9,370	9,370	9,310	10,270		10,420	8.500	8.125
923	--	772	925	9,370	--	9,370	9,370	9,310	10,270		10,420	8.500	8.125
972	--	812	971	9,860	--	9,860	9,860	9,800	10,810		10,950	8.500	8.125
1,069	--	--	--	10,850	--	--	--	10,780	11,890		12,000	8.500	8.125
1,069	--	901	1,093	1,550	--	1,550	1,550	1,550	11,890		0	8.500	8.125
1,069	--	901	1,093	10,850	--	10,850	10,850	10,780	11,890		12,500	8.500	8.125
1,069	--	901	1,093	10,850	--	10,850	10,850	10,780	11,890		12,500	8.500	8.125
1,215	--	992	1,166	12,330	--	12,330	12,330	12,250	13,510		13,100	8.500	8.125
1,215	--	1,009	1,197	12,330	--	12,330	12,330	12,250	13,510		13,600	8.500	--
1,215	--	1,009	1,197	12,330	--	12,330	12,330	12,250	13,510		13,600	8.500	--
1,312	--	1,068	1,257	13,310	--	13,310	13,310	13,230	14,590		14,180	8.500	--
1,361	--	1,128	1,334	13,810	--	13,810	13,810	13,720	15,130		15,230	8.500	--
1,458	--	1,207	1,424	14,790	--	14,790	14,790	14,700	16,210		16,320	8.500	--
895	--	786	945	9,190	--	9,190	9,190	9,110	9,970		9,940	8.500	8.125
895	--	786	945	9,190	--	9,190	9,190	9,110	9,970		9,940	8.500	8.125
895	--	786	945	9,190	--	9,190	9,190	9,110	9,970		9,940	8.500	8.125
951	--	820	961	9,770	--	9,770	9,770	9,680	10,590		9,940	8.500	8.125
895	--	798	981	9,190	--	9,190	9,190	9,110	9,970		8,650	8.500	8.125
895	--	798	981	9,190	--	9,190	9,190	9,110	9,970		10,470	8.500	8.125
895	--	798	981	9,190	--	9,190	9,190	9,110	9,970		10,470	8.500	8.125
1,063	--	914	1,065	10,910	--	10,490	9,790	10,820	11,840		11,070	8.500	8.125
1,007	--	867	1,013	10,340	--	10,340	10,340	10,250	11,220		11,630	8.500	8.125
1,007	--	867	1,013	10,340	--	10,340	10,340	10,250	11,220		11,630	8.500	8.125
1,063	--	914	1,065	10,910	--	10,910	10,910	10,820	11,840		11,070	8.500	8.125
1,063	--	914	1,065	10,910	--	10,910	10,910	10,820	11,840		12,240	8.500	8.125
1,063	--	914	1,065	10,910	--	10,910	10,910	10,820	11,840		12,240	8.500	8.125
1,119	--	960	1,119	11,490	--	11,490	11,490	11,390	12,460		12,860	8.500	8.125
1,231	--	--	--	12,640	--	--	--	12,530	13,710		14,100	8.500	8.125
1,231	--	1,066	1,258	1,800	--	1,800	1,800	1,800	13,710		0	8.500	8.125
1,231	**--**	**1,066**	**1,258**	**12,640**	**--**	**12,640**	**12,640**	**12,530**	**13,710**		**14,680**	**8.500**	**8.125**
1,231	--	1,066	1,258	12,640	--	12,640	12,640	12,530	13,710		14,680	8.500	8.125
1,394	--	1,173	1,343	14,360	--	14,360	13,460	14,240	15,580		15,380	8.500	8.125
1,399	--	1,194	1,379	14,360	--	14,360	14,360	14,240	15,580		15,980	8.500	--
1,399	--	1,194	1,379	14,360	--	14,360	14,360	14,240	15,580		15,980	8.500	--
1,501	--	1,264	1,447	15,510	--	15,510	15,290	15,380	16,820		16,650	8.500	--
1,567	--	1,335	1,536	16,080	--	16,080	16,080	15,950	17,450		17,890	8.500	--
1,679	--	1,428	1,640	17,230	--	17,230	17,230	17,090	18,690		19,170	8.500	--
998	--	891	1,053	10,320	--	10,320	9,790	10,220	11,120		11,240	8.500	8.125
998	--	891	1,053	10,320	--	10,320	9,790	10,220	11,120		11,240	8.500	8.125
998	--	891	1,053	10,320	--	10,320	9,790	10,220	11,120		11,240	8.500	8.125
1,060	--	930	1,070	10,970	--	10,490	9,790	10,850	11,820		11,240	8.500	8.125
998	--	905	1,093	10,320	--	10,320	9,790	10,220	11,120		9,760	8.500	8.125
998	--	905	1,093	10,320	--	10,320	9,790	10,220	11,120		11,830	8.500	8.125
998	--	905	1,093	10,320	--	10,320	9,790	10,220	11,120		11,830	8.500	8.125

Performance Properties

Pipe Nominal OD	Nominal Weight	Plain-End Weight	Nominal Wall	Drift Diameter	Pin Bored ID	Makeup Loss	Connection Efficiency	55 KSI Tensile and Compressive Strength	80 KSI Tensile and Compressive Strength	95 KSI Tensile and Compressive Strength
inches	lbs/ft	lbs/ft	inches	inches	inches	inches		1000 lbs	1000 lbs	1000 lbs
3 1/2	9.2	8.81	2.992	2.867	2.906	2.93	63.10%	90	131	155
3 1/2	10.2	9.92	2.922	2.797	2.836	3.17	62.64%	100	146	173
3 1/2	12.7	12.53	2.750	2.625	2.664	3.67	61.77%	125	182	216
3 1/2	14.3	14.11	2.640	2.515	2.554	4.05	61.48%	140	204	242
4	9.5	9.12	3.548	3.423	3.462	2.81	63.97%	94	137	163
4	11.0	10.47	3.476	3.351	3.390	2.93	62.77%	106	154	183
4	11.6	11.35	3.428	3.303	3.342	3.18	63.02%	116	168	200
4	13.2	12.95	3.340	3.215	3.254	3.43	62.45%	131	190	226
4 1/2	11.6	11.36	4.000	3.875	3.914	2.94	63.57%	117	170	202
4 1/2	12.6	12.25	3.958	3.833	3.872	3.07	63.24%	125	182	216
4 1/2	13.5	13.05	3.920	3.795	3.834	3.19	62.80%	132	193	229
4 1/2	15.1	15.00	3.826	3.701	3.740	3.44	62.28%	151	220	261
5	11.5	11.24	4.560	4.435	4.474	2.70	63.70%	116	168	200
5	13.0	12.84	4.494	4.369	4.408	2.95	63.15%	131	191	226
5	15.0	14.88	4.408	4.283	4.322	3.20	62.69%	151	219	261
5	18.0	17.95	4.276	4.151	4.190	3.58	62.00%	180	262	311
5	20.3	20.03	4.184	4.059	4.098	3.83	61.59%	199	290	344
5	20.8	20.65	4.156	4.031	4.070	3.95	61.56%	205	299	355
5	21.4	21.32	4.126	4.001	4.040	4.08	61.57%	212	309	366
5	23.2	23.11	4.044	3.919	3.958	4.33	61.42%	229	334	396
5 1/2	15.5	15.36	4.950	4.825	4.864	2.80	58.02%	144	210	249
5 1/2	17.0	16.89	4.892	4.767	4.806	2.97	58.14%	159	231	274
5 1/2	20.0	19.83	4.778	4.653	4.692	3.30	58.09%	186	271	322
5 1/2	23.0	22.56	4.670	4.545	4.584	3.47	57.66%	210	306	363
5 1/2	26.0	25.56	4.548	4.500	4.539	3.80	54.10%	224	325	386
6 5/8	20.0	19.51	6.049	5.924	5.963	3.27	59.60%	188	273	325
6 5/8	23.2	22.21	5.965	5.840	5.879	3.60	59.95%	215	313	372
6 5/8	24.0	23.60	5.921	5.796	5.835	3.76	60.03%	229	333	396
6 5/8	28.0	27.67	5.791	5.666	5.705	4.10	59.56%	266	388	460
6 5/8	28.6	28.60	5.761	5.636	5.675	4.10	59.21%	274	398	473
6 5/8	32.0	31.23	5.675	5.550	5.589	4.43	59.44%	300	436	518
6 5/8	33.0	32.74	5.625	5.500	5.539	4.60	59.38%	314	457	543
7	20.0	19.56	6.456	6.331	6.370	3.41	60.12%	190	277	328
7	23.0	22.65	6.366	6.250	6.289	3.58	58.80%	215	313	372
7	26.0	25.69	6.276	6.151	6.190	3.91	59.57%	247	360	427
7	29.0	28.75	6.184	6.125	6.164	4.24	56.15%	261	380	451
7	32.0	31.70	6.094	6.000	6.039	4.41	57.92%	297	432	513
7 5/8	26.40	25.59	0.328	6.844	6.883	3.76	59.94%	248	360	428
7 5/8	29.70	29.06	0.375	6.750	6.789	3.92	59.41%	279	406	482
7 5/8	33.70	33.07	0.430	6.640	6.679	4.26	59.23%	316	460	547
7 5/8	35.80	35.59	0.465	6.570	6.609	4.42	59.09%	340	495	587
(7 5/8)	(39.00)	(38.08)	(0.500)	(6.500)	(6.539)	(4.75)	(59.55%)	(366)	(533)	(633)
7 5/8	42.80	42.43	0.562	6.376	6.415	5.09	59.42%	407	593	704
7 5/8	45.30	44.71	0.595	6.310	6.349	5.25	59.34%	429	623	740
7 3/4	46.10	45.51	0.595	6.500	6.539	5.26	56.81%	418	608	722
8 5/8	28.00	27.04	0.304	7.892	7.931	3.91	60.71%	265	386	458
8 5/8	32.00	31.13	0.352	7.875	7.914	4.25	55.57%	280	407	483
8 5/8	36.00	35.17	0.400	7.700	7.739	4.58	60.70%	345	502	596
8 5/8	40.00	39.33	0.450	7.625	7.664	4.91	59.48%	378	550	653

Notes:

1. Connection efficiency is calculated by dividing the connection-critical area by the nominal pipe body area.
2. Tensile and compressive strengths are calculated by multiplying the pipe body yield and connection critical area.

Contact U. S. Steel Tubular Products to receive information for grades not listed.