Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.

OCD Hobbs

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

HOBBS OCD
NOV 16 2015
RECEIVED

5. Lease Serial No.
NMLC071985

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

8. Well Name and No.
BATTLE AXE 27 FEDERAL COM 1H

2. Name of Operator
CONOCOPHILLIPS COMPANY
Contact: ASHLEY BERGEN
E-Mail: ashley.bergen@conocophillips.com

9. API Well No.
30-025-42895-00-X1

3a. Address
MIDLAND, TX 79710

3b. Phone No. (include area code)
Ph: 432-688-6983

10. Field and Pool, or Exploratory
WC-025 G08 S263205N

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 27 T26S R32E NENE 250FNL 245FEL
32.012175 N Lat, 103.391794 W Lon

11. County or Parish, and State
LEA COUNTY, NM

12. CHECK 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	☐ Fracture Treat	☐ 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ConocoPhillips Company respectfully requests to amend the approved APD. COP will be using rig, Precision 822 instead of Pinnergy #1 to pre-set surface casing and the 1st intermediate string. The 1st intermediate string will be set with a 10 3/4" casing size at approximately 4000'.
The well above is planned to spud 11/17/15. Please see the following attachments:

- Spudder Rig and Skid Operations Description which includes the proposed casing and cementing program
- BOP/BOPE and Choke Manifold Schematic
- Coreflex Choke Line Test Certificate
- Spudder Rig Specifications/Layout
- Premium Connection Spec Sheets
- Wellhead Schematic

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #321728 verified by the BLM Well Information System
For CONOCOPHILLIPS COMPANY, sent to the Hobbs
Committed to AFMSS for processing by CHRISTOPHER WALLS on 11/05/2015 (16CRW0008SE)

Name *(Printed/Typed)* ASHLEY BERGEN — Title STAFF REGULATORY TECH

Signature (Electronic Submission) — Date 10/27/2015

KG

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

APPROVED
NOV 10 2015
/s/ Chris Walls
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Approved By — Title — Date

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

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NOV 23 2015

Sundry Notice Request
ConocoPhillips Company
Red Hills West; Wolfcamp
Battle Axe 27 Federal COM 1H

Lea County, New Mexico

ConocoPhillips Company respectfully requests to amend the approved permit to pre-set the surface and intermediate casings. The reasons would be to improve time and cost savings.

1. Spudder Rig and Skid Operations:

Precision Drilling #822 Rig will be used to drill the surface hole and intermediate hole (to set *1st intermediate casing string*). BLM will be contacted / notified 24 hours prior to commencing spudder rig operations and expected to take 10-12 days for a dual pad.

Surface casing and intermediate casing will be preset on all the wells on the same pad. Both hole sections will be drilled, cased and cemented according to casing program based on the approved permit. All casing strings will be tested in accordance to the rules and regulations per Onshore Order.

The wellhead will be nippled up and tested as soon as 13-3/8" surface casing is cut off after the applicable WOC time has been reached. Prior to drilling out the 13-3/8" surface casing, ConocoPhillips shall nipple up a 3M BOPE & choke arrangement with 5M components and test to the rated working pressure of a 3M BOPE system as it is subjected to the maximum anticipated surface pressure 1,500 psi (0.33 psi/ft pressure gradient assuming fully evacuated) per Onshore Order 2. The pressure test to MASP and 50% for annular shall be performed with a test plug after installing the 13-5/8" casing head and nippling up the 3M BOPE system prior to drilling out the 13-3/8" surface casing.

A blind flange cap of the same pressure rating as the wellhead will be secured to seal the wellbore on all casing strings. Pressure will be monitored via flanged port tied to a needle valve and pressure gauge to monitor pressures on each wellhead section and a means for intervention will be maintained while the drilling rig is not over the well.

The drilling operation will re-commence with a big Drilling Rig (H&P Flex 3 rig type) and a BOP stack based on the approved permit will be nippled up and tested on the wellhead before drilling operations resumes on each well. The rig will skid between each well until each well's section has been drilled in this possible order:

1. **Move-in** PD822 **to** Battle Axe 27 Federal COM 1H
2. **Drill and pre-set Surface & Intermediate Casing**
3. **Skid to** Battle Axe 27 Federal COM 2H
4. **Drill and pre-set Surface & Intermediate Casing**
5. **Move-in** H&P Flex 3 rig **to** Battle Axe 27 Federal COM 1H
6. **Drill, Set & Cement Intermediate2 Casing**
7. **Skid to** Battle Axe 27 Federal COM 2H
8. **Drill, Set & Cement Intermediate2 Casing**
9. **Drill, Set & Cement Production Casing**
10. **Skid to** Battle Axe 27 Federal COM 1H
11. **Drill, Set & Cement Production Casing**

Rig move in to drill will depend on rig availability and APD approval date. Once "Spudder Rigs" has performed pre-set surface and intermediate, the "Big Drilling Rig" shall return to each well to drill the remain sections per conditions of approval.

2. Proposed Casing and Cementing Program – Option to Preset 10-3/4" Casing at Delaware

ConocoPhillips Company respectfully requests the option to Preset 10-3/4" 45.5# J-55 TSH-W511 (Flushed Connection) Casing. The intent of the 10-3/4" intermediate casing and cementing program is to drill 9-7/8" hole and run 7-5/8" 29.7# P-110 BTC, later on, thus would improve time and cost savings.

All Tubulars used for this design will be new. A multi-bowl system will be utilized. **Option to Preset 10-3/4" will be as follows:**

Hole Size (in)	Casing (in)	Wt/Ft	Grade	Connection	Thread & Cplg OD	Depth (ft)	Depth (ftTVD)	Depth (ftMD)	BOPE System
17 1/2	13 3/8	54.5	J-55	BTC	14.375	0-950 660	950	950	N/A
12 1/4	***10-3/4***	***45.5***	***J-55***	***Tenaris W511***	***10.75***	***0-4000 4460***	***4000***	***4000***	***3M***
9-7/8	7 5/8	29.7	P-110	BTC	7.752	0-12000	11900	12000	5M
6 3/4	5	18	P-110	Tenaris Blue/TXP	5.720	0-19300	12085	19300	10M

Minimum casing design factors: Burst 1.0, Collapse 1.125, Tensile Strength 1.6 Dry / 1.0 Buoyant

Hole Size (in)	Casing (in)	Burst	Collapse	Tension	Minimum Clearance
17 1/2	13 3/8	5.94	2.46	19.2	1.5625
12 1/4	***10-3/4***	***1.64***	*****2.82***	***2.10***	***0.75***
9-7/8	7-5/8	1.7	**2.48	2.10	0.6875
6 3/4	5	1.58	1.53	3.39	0.515

***COP Collapse Design*

Mud drop to hydrostatic column equilibrium with pore pressure of lost circulation zone.

		Volume (sx)	Type	Weight (ppg)	Yield (ft3/sx)	Water (Gal/sx)	Excess	Cement Top
	Lead	530	Class C	13.6	1.73	10.88	>100%	Surface
Surface	*Tail*	310	Class C	14.8	1.35	6.39	>100%	650ft
Additives (BWOB): 4% Extender, 2% CaCl2, 0.125 lb/sx LCM, 0.2% Anti-Foam								
	Lead	***690***	***Tuned Light***	***11.9***	***1.91***	***11.85***	***>100%***	***Surface***
Intermediate 1	***Tail***	***140***	***Class C***	***14.8***	***1.33***	***8.23***	***>100%***	***3500ft***
Additives (BWOB): 4% Extender, 2% CaCl2, 0.125 lb/sx LCM, 0.2% Anti-Foam								
	Lead	900	Tuned Light	9.7	2.44	9.116	>30%	Surface
Intermediate 2	*Tail*	140	TXI	13.2	1.53	7.474	>30%	12000ft
Additives (BWOB): 0.4% Dispersant, 1 lb/sx Salt, 0.1% Retarder, 0.5% Fluid Loss, 3 lb/sx LCM								
	Lead							
Production	*Tail*	750	Class H	15	1.14	3.216	>35%	11400ft
Additives (BWOB): 0.4% Retarder, 0.2% Anti-foam, 0.7 Anti-gelling, 0.4% Fluid Loss, 2% Expanding Agent, 5.0% Silica								

2. Pressure Control Equipment:

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		± 1,500 psi
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

→ See COA - for Pressure control requirements below 10 3/4" casing

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	N — Are anchors required by manufacturer?
X	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. • Provide description here See attached schematic.

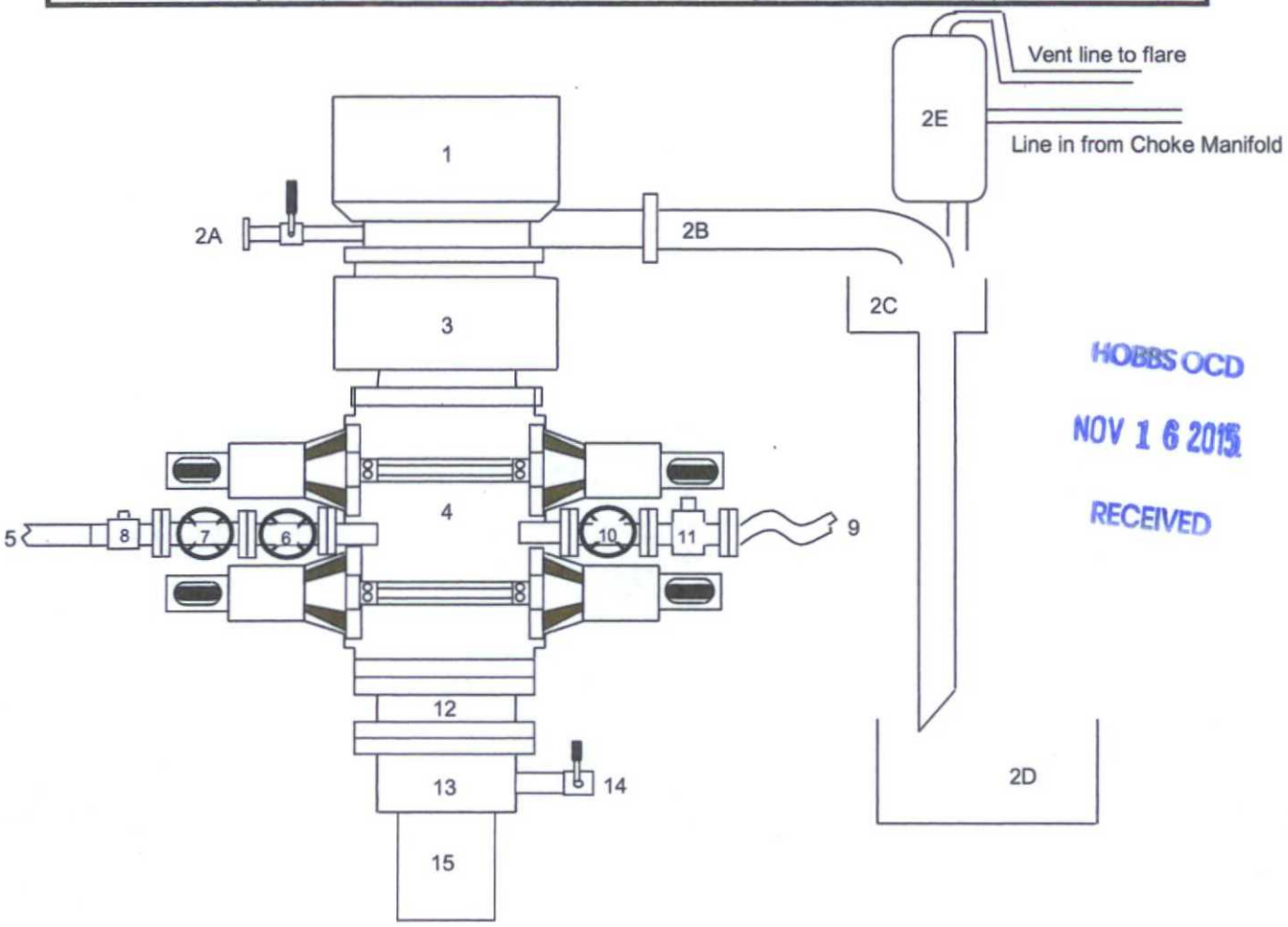
Attachments:

- Attachment # 1 ..... BOP/BOPE and Choke Manifold Schematic
- Attachment # 2 ..... Coflex Choke Line Test Certificate
- Attachment # 3 ..... Spudder Rig Specifications/Layout
- Attachment # 4 ..... Premium Connection Spec Sheets
- Attachment # 5 ..... Wellhead Schematic

Sundry request proposed 19 October 2015 by:
James Chen, P.E.
Drilling Engineer | ConocoPhillips Permian Shale
Office Phone: 281.206.5244
Cell Phone: 832.768.1647

BLOWOUT PREVENTER ARRANGEMENT

3M System per Onshore Oil and Gas Order No. 2 utilizing 3M and 5M Rated Equipment



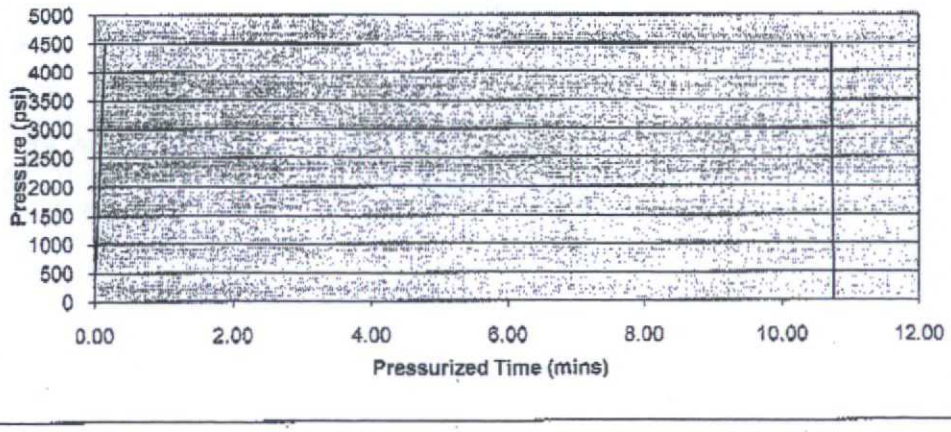
Item	Description
1	Rotating Head, 13-5/8"
2A	Fill up Line and Valve
2B	Flow Line (10")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (13-5/8", 5M)
4	Double Ram (13-5/8", 5M, equipped with Blind Rams and Pipe Rams)
5	Kill Line (2" flexible hose, 3000 psi WP)
6	Kill Line Valve, Inner (3-1/8", 3000 psi WP)
7	Kill Line Valve, Outer (3-1/8", 3000 psi WP)
8	Kill Line Check Valve (2-1/16", 3000 psi WP
9	Choke Line (5M Stainless Steel Coflex Line, 3-1/8" 3M API Type 6B, 3000 psi WP)
10	Choke Line Valve, Inner (3-1/8", 3000 psi WP)
11	Choke Line Valve, Outer, (Hydraulically operated, 3-1/8", 3000 psi WP)
12	Spacer Spool (13-5/8", 5M)
13	Casing Head (13-5/8" 5M)
14	Ball Valve and Threaded Nipple on Casing Head Outlet, 2" 5M
15	Surface Casing

James Chen, P.E.
Drilling Engineer | ConocoPhillips Permian Shale
Office Phone 281.206.5244
Cell Phone 832.768.1647

RELIANCE
Industrial Products USA, Ltd.
2030 E. 8th Street, Suite B • Greeley, CO 80631
Ph: (970) 346-3751 • Fax: (970) 353-3168 • *Toll Free:* (866) 771-9759

TEST CERTIFICATE

Customer:	PERCISION DRILLING	Cert No.:	25279TO1
P.O. #:	73011111	Date:	6/29/2912
Invoice #:	25279		
Material:	3 1/2" FIRE GUARD		
Description:	2" X 30'		
Coupling 1:	FLOATING FLANGE		
" Serial:			
" Quality:			
Coupling 2:	FLANGE		
" Serial:			
" Quality:			
Working Pressure :	3000		
Test Pressure:	4500		
Duration (mins):	10		

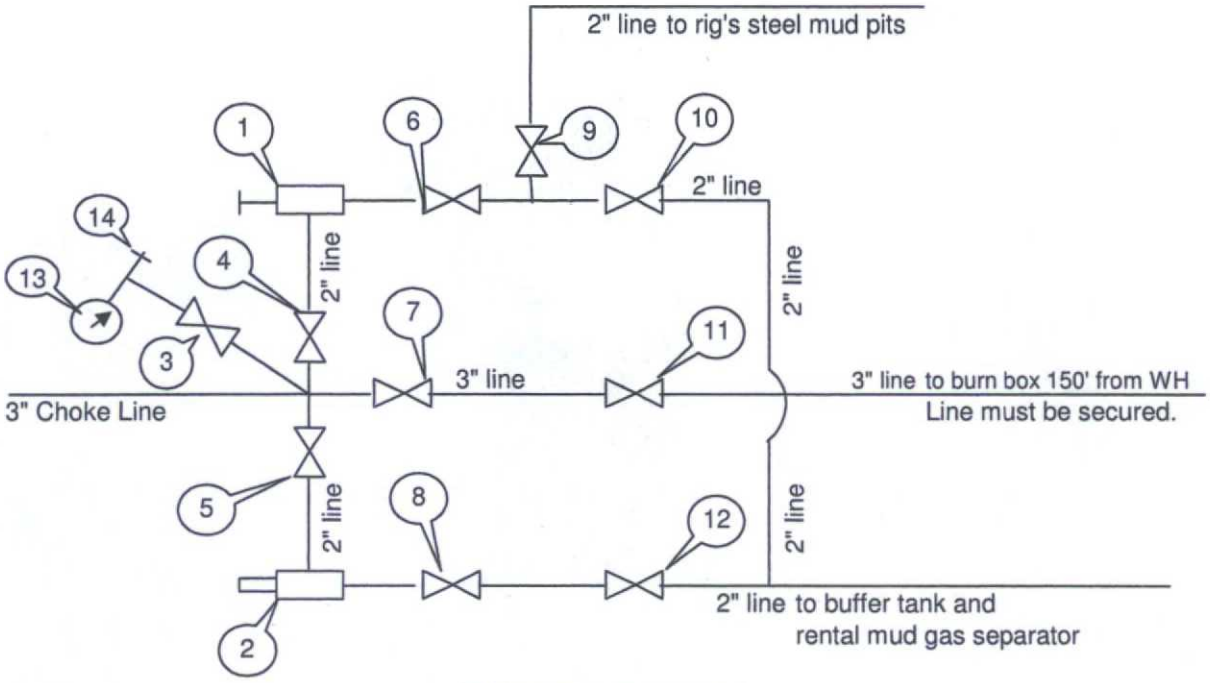


Conducted By: FLORES M.
Test Technician

☑ Acceptable
☐ Not Acceptable

CHOKE MANIFOLD ARRANGEMENT

3M System per Onshore Oil and Gas Order No. 2 utilizing 3M and 5M Equipment



All Tees must be targeted

Item	Description
1	Manual Adjustable Choke, 2-1/16", 3M
2	Remote Controlled Hydraulically Operated Adjustable Choke, 2-1/16", 3M
3	Gate Valve, 2-1/16" 5M
4	Gate Valve, 2-1/16" 5M
5	Gate Valve, 2-1/16" 5M
6	Gate Valve, 2-1/16" 5M
7	Gate Valve, 3-1/8" 3M
8	Gate Valve, 2-1/16" 5M
9	Gate Valve, 2-1/16" 5M
10	Gate Valve, 2-1/16" 5M
11	Gate Valve, 3-1/8" 3M
12	Gate Valve, 2-1/16" 5M
13	Pressure Gauge
14	2" hammer union tie-in point for BOP Tester

We will test each valve to 3000 psi from the upstream side.

Submitted by:
James Chen
Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company
Date: 21-March-2013

Precision DRILLING

Rig Inventory and Layout

RIG 822SSE

Active

Rig #	822	Rig Type	Super Single™ Electric
Superintendent	Johnny Ison	Operation Centre	Mid Continent
Category	Electric	Rig Type Code	SSE
Loads Winter (include boiler)	21	Class	Super Singles
Rated Vertical Depth (ft)	10000	Horse Power Range	1000 - 1200
Region	US Operations Group 1	Rig Locator Status	
Company	PDOS	Rig Phone Number	817-694-6797
		Plant Code	1505
Rated with Drill Pipe (in)	4 1/2		

DRAWWORKS

Mechanical/Electric	VFD	Auxiliary Brake	N/A
Drawworks	Alta-Rig ARS-1201-AC	Rated Power (hp)	1200
Drawworks Capacity (lbs)	320000	Number of lines	8
Drawworks Drive (Quantity)	Baylor CM628TUT (AC) (1)	Rating (hp) - Each Motor	1230

MAST

Mast Type	Single	Manufacturer	
Static Hook Load (lbs)	299000	Mast Clear Height (ft)	75'
Drill Line Size (in)	1	Number of lines	8
Drill Line SF=2 (lbs)	348300	Drill Line SF=3 (lbs)	232200

SUBSTRUCTURE

Substructure Type	Trailer	Manufacturer	
Floor Height (ft)	10' 10" - 12' 6"	Kelly Bushing to Ground (ft)	
Clear Height (ft)	8' 6" - 10' 2"		
Rotary Capacity (lbs)	299000	Setback Capacity (lbs)	No Limitation

This Rig Type is Equipped with a Pipe Arm

HOISTING AND ROTATING EQUIPMENT

Top Drive Model	Precision/Rostel PDCA50/70	Top Drive Capacity (tons)	150
Rotary Table Model	Slip Table	Rotary Table Capacity (lbs)	200000
		Rotary Table Clearance (in)	20-1/2
Power Wrench Model	W-N Apache 90-70	Maximum Diameter (in)	11-3/4

RIG 822SSE

MUD PUMPS AND MUD SYSTEM

MUD PUMP 1

Manufacturer & Model	BPMMP - BSF-1000 (Triplex)	Rated Power (hp)	1000
Stroke (in)	10		
Mud Pump Drive (Quantity)	Baylor CM628TUT (AC) (1)	Rating (hp) - Each Motor	1230

MUD PUMP 2

Manufacturer & Model	BPMMP - BSF-1000 (Triplex)	Rated Power (hp)	1000
Stroke (in)	10		
Mud Pump Drive (Quantity)	Baylor CM628TUT (AC) (1)	Rating (hp) - Each Motor	1230

MUD SYSTEM

Mud Tank Total Volume (bbl)	360	# of Mud Tanks	1
Premix Tank Volume (bbl)		Pill Tank Volume (bbl)	9.4
Trip Tank Volume (bbl)	15.7	TripTank Surface Area (ft^2)	18.3
Centrifugal Pump Quantity:	2	Centrifugal Pump Size	5 x 6
Shale Shaker Quantity	1	Shale Shaker	Brandt King Cobra Linear Motion
Atmospheric Degasser	Single - 30 in OD 3 in Inlet 8 in Vent Line		
Additional Information			

WELL CONTROL SYSTEM

Annular	Townsend Type-90	Pressure Rating (psi)	3000
		Size (in)	11
Rams			
Ram 1	Townsend T-82 - Single	Pressure Rating (psi)	3000
		Size (in)	11
Ram 2	Townsend T-82 - Single	Pressure Rating (psi)	3000
		Size (in)	11
Trim Type	Nace	BOP Additional Infomation	
Accumulator Manufacturer	E.C.S.	Remote Panel Type	Electric
Accumulator Volume (gal-US)	84	# of Stations:	5
Accumulator Pumps			
Choke Manifold Style (in)	2 x 3 x 2	Pressure Rating (psi)	3000
Well control equipment listed is rig's normal inventory. Well control equipment is subject to change; Operator should confirm current configuration and specific requirements with the Precision Drilling Contracts Representative.			

RIG 822SSE

ELECTRICAL POWER

Power Distribution Type 3 Diesel Electric Generators, each with Ross Hill 1402 Generator Bays powering 4 ABB ASC800 Drive Bays & Allen Bradley MCC

POWER GENERATION

Power Generators					
Quantity	2	Generator Drive	CAT C-32	Generator Rating (kW)	810
Quantity	1	Generator Drive	CAT C-18	Generator Rating (kW)	545

MISCELLANEOUS EQUIPMENT

Winterization	N/A	Boiler Rating (hp)	
Fuel Tank Qty	1	Total Fuel Tank Capacity (gal-US)	5200
Water Tank Qty	1	Total Water Tank Capacity (bbl)	375
Special Equipment	Hydraulic BOP Handler, Hydraulic Catheads, Hydraulic Catwalk, Hydraulic Pipe Arm, Power Tong, Substructure Leveling Jacks		

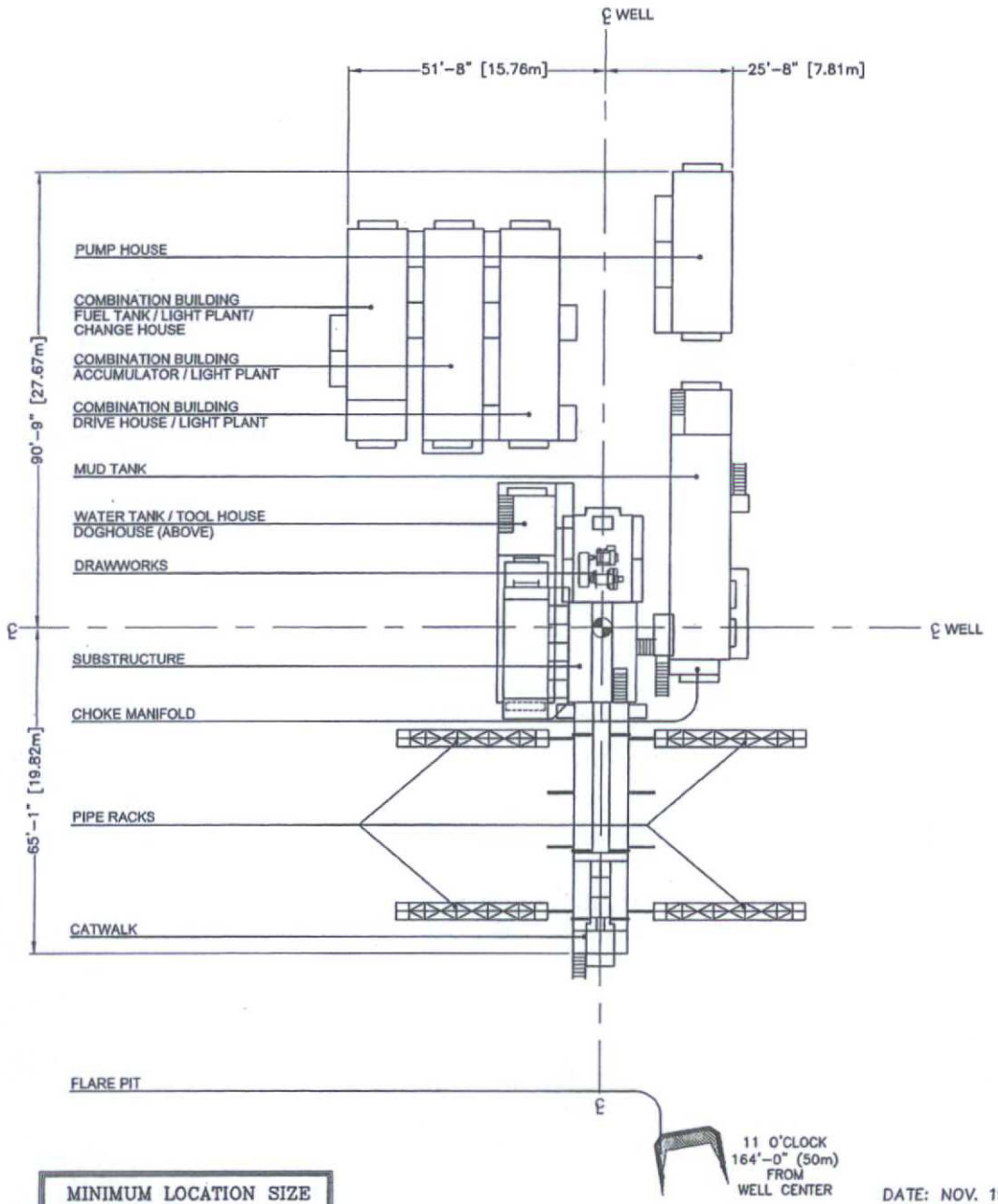
NOTES

TUBULARS

As the selection of tubulars is dependant on the planned well program, specific requirements are to be discussed with the contracts representative of Precision Drilling. Exact quantities and descriptions of the selected tubulars are available upon request.

RIG LAYOUT

RIG 822SSE



MINIMUM LOCATION SIZE FROM HOLE CENTER	
TO CROWN END	180'–6" (55m)
TO BACK OF RIG	147'–6" (45m)
TO DOG HOUSE SIDE	98'–6" (30m)
TO SUMP SIDE	65'–6" (20m)

DATE: NOV. 19, 2007
DWG NO.: 851–822SSE–12
APPROVED BY OSC #1

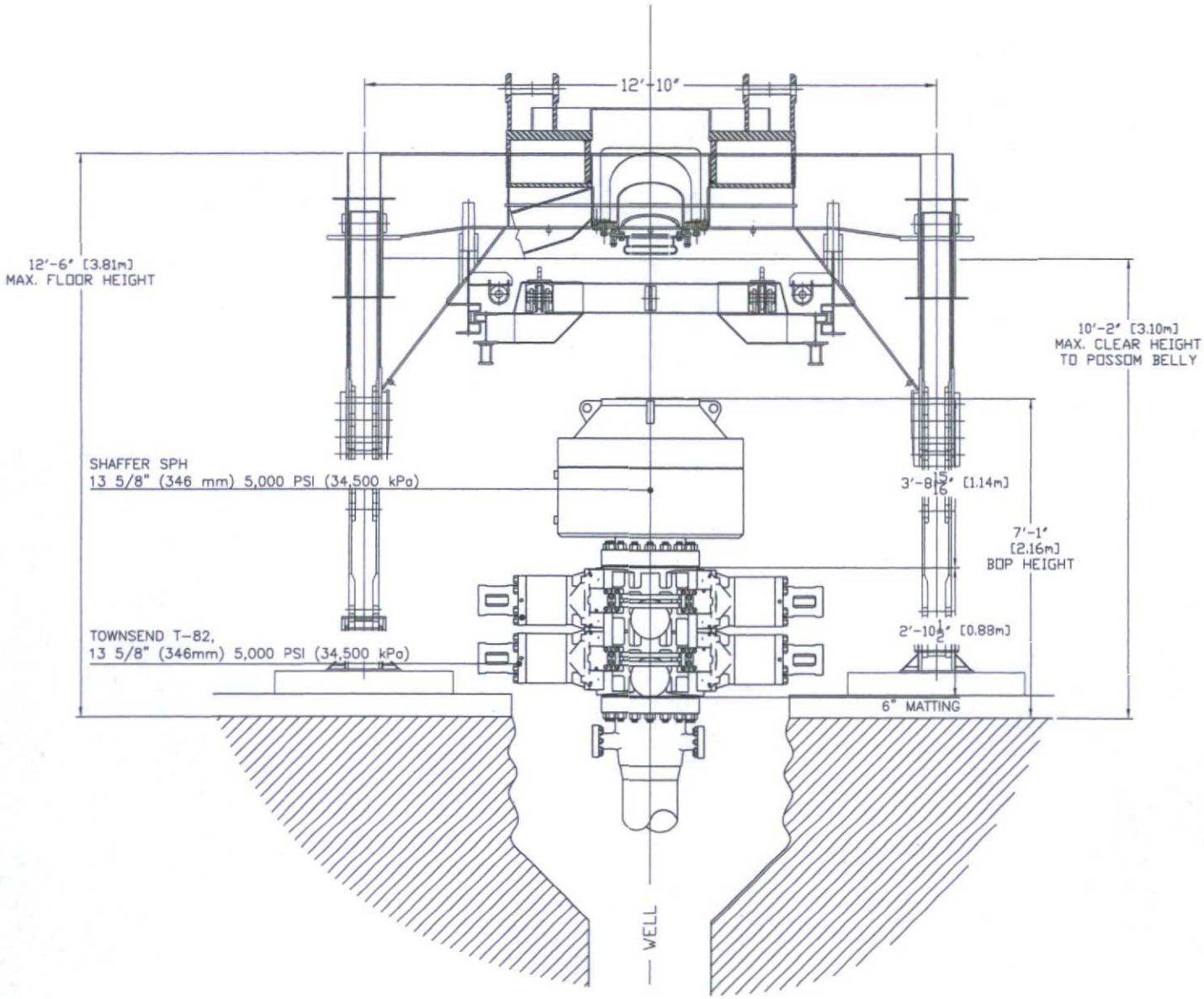
0'–0" (0m) 16'–6" (5m) 33'–0" (10m) 49'–6" (15m)

PRECISION DRILLING

CALGARY, ALBERTA, CANADA

BOP LAYOUT

RIG 822SSE



NOTE: STACK SHOWN IN VERTICAL POSITION FOR CLARITY

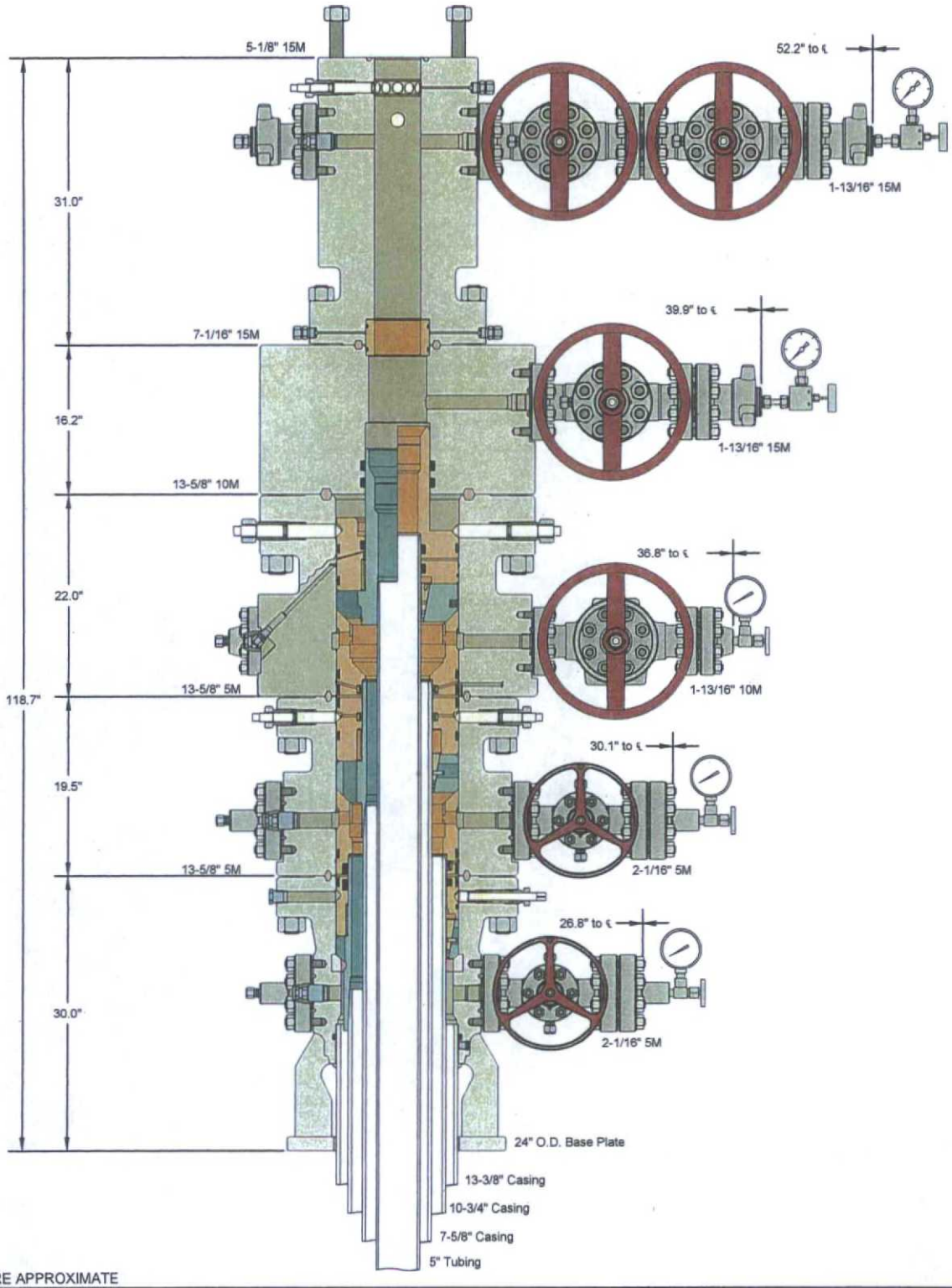
STACK COMPONENTS REPRESENTED ARE SUBJECT TO AVAILABILITY, PLEASE CONFIRM WITH WELL CONTROL DEPARTMENT MANAGER.

EQUIPMENT REPRESENTATION ONLY
NOT DRAWN TO SCALE

PRECISION DRILLING

DATE: 2015/10/05
DWG No.: BOP-822-006
DWG BY CTJ

GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE

CONOCOPHILLIPS COMPANY

13-3/8" x 10-3/4" x 7-5/8" x 5" 15M SH2/3STG Wellhead Assembly, With DSPA-DBLEBS and MTH-2FB Tubing Head

DRAWN	CDG	14OCT15
APPRV	VJK	15OCT15

FOR REFERENCE ONLY
DRAWING NO. 10010485

For the latest performance data, always visit our website: www.tenaris.com

October 12 2015

TenarisHydril

Size: 10.750 in.
Wall: 0.400 in.
Weight: 45.50 lbs/ft
Grade: J55
Min. Wall Thickness: 87.5 %

Connection: Wedge 511™
Casing/Tubing: CAS

PIPE BODY DATA

GEOMETRY

Nominal OD	**10.750** in.	Nominal Weight	**45.50** lbs/ft	Standard Drift Diameter	**9.794** in.
Nominal ID	**9.950** in.	Wall Thickness	**0.400** in.	Special Drift Diameter	**9.875** in.
Plain End Weight	**44.26** lbs/ft				

PERFORMANCE

Body Yield Strength	**715** x 1000 lbs	Internal Yield	**3580** psi	SMYS	**55000** psi
Collapse	**2090** psi				

WEDGE 511™ CONNECTION DATA

GEOMETRY

Connection OD	**10.750** in.	Connection ID	**9.922** in.	Make-Up Loss	**3.700** in.
Critical Section Area	**7.671** sq. in.	Threads per in.	**3.28**		

PERFORMANCE

Tension Efficiency	**59.0** %	Joint Yield Strength	**422** x 1000 lbs	Internal Pressure Capacity	**3360** psi
Compression Strength	**505** x 1000 lbs	Compression Efficiency	**70.6** %	Bending	**14** °/100 ft
External Pressure Capacity	**2090** psi				

MAKE-UP TORQUES

Minimum	**11000** ft-lbs	Optimum	**13200** ft-lbs	Maximum (*)	**19300** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**49000** ft-lbs	Yield Torque	**74000** ft-lbs		

BLANKING DIMENSIONS

October 21 2014

TenarisHydril

Size: 5.000 in.
Wall: 0.362 in.
Weight: 18.00 lbs/ft
Grade: P110
Min. Wall Thickness: 87.5 %

Connection: Blue®
Casing/Tubing: CAS
Coupling Option: REGULAR

PIPE BODY DATA

GEOMETRY

Nominal OD	**5.000** in.	Nominal Weight	**18.00** lbs/ft	Standard Drift Diameter	**4.151** in.
Nominal ID	**4.276** in.	Wall Thickness	**0.362** in.	Special Drift Diameter	**N/A**
Plain End Weight	**17.95** lbs/ft				

PERFORMANCE

Body Yield Strength	**580** x 1000 lbs	Internal Yield	**13940** psi	SMYS	**110000** psi
Collapse	**13470** psi				

BLUE® CONNECTION DATA

GEOMETRY

Connection OD	**5.630** in.	Coupling Length	**10.551** in.	Connection ID	**4.264** in.
Critical Section Area	**5.275** sq. in.	Make-Up Loss	**4.579** in.	Threads per in.	**5.00**

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**580** x 1000 lbs	Internal Pressure Capacity	**13940** psi
Compression Efficiency	**100** %	Compression Strength	**580** x 1000 lbs	Bending	**101** °/100 ft
External Pressure Capacity	**13470** psi				

MAKE-UP TORQUES

Minimum	**6400** ft-lbs	Target	**7110** ft-lbs	Maximum	**7820** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**ASK**	Yield Torque	**17600** ft-lbs		

SHOULDER TORQUES

Minimum	**1070** ft-lbs	Maximum	**6040** ft-lbs		

December 18 2014

Tenaris

Size: 5.000 in.
Wall: 0.362 in.
Weight: 18.00 lbs/ft
Grade: P110
Min. Wall Thickness: 87.5 %

Connection: TenarisXP™ BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

PIPE BODY DATA

GEOMETRY

Nominal OD	**5.000** in.	Nominal Weight	**18.00** lbs/ft	Standard Drift Diameter	**4.151** in.
Nominal ID	**4.276** in.	Wall Thickness	**0.362** in.	Special Drift Diameter	**N/A**
Plain End Weight	**17.95** lbs/ft				

PERFORMANCE

Body Yield Strength	**580** x 1000 lbs	Internal Yield	**13940** psi	SMYS	**110000** psi
Collapse	**13470** psi				

TENARISXP™ BTC CONNECTION DATA

GEOMETRY

Connection OD	**5.720** in.	Coupling Length	**9.325** in.	Connection ID	**4.264** in.
Critical Section Area	**5.275** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.141** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**580** x 1000 lbs	Internal Pressure Capacity(1)	**13940** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**580** x 1000 lbs	Structural Bending(2)	**101** °/100 ft
External Pressure Capacity	**13470** psi				

ESTIMATED MAKE-UP TORQUES(3)

Minimum	**N/A** ft-lbs	Target	**N/A** ft-lbs	Maximum	**N/A** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**ASK**	Yield Torque	**N/A** ft-lbs		

BLANKING DIMENSIONS

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ConocoPhillips Co
LEASE NO.:	LC071985
WELL NAME & NO.:	1H-Battle Axe 27 Federal Com
SURFACE HOLE FOOTAGE:	250'/N & 245'/E
BOTTOM HOLE FOOTAGE	50'/S & 380'/E, sec. 34
LOCATION:	Sec. 27, T. 26 S., R. 32 E.
COUNTY:	Lea County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Setting surface and 1st intermediate casing with Precision Rig

   a. Notify the BLM when removing the Precision Rig.

   b. Notify the BLM when moving in the H&P Flex Rig. Rig to be moved in within 90 days of notification that Precision Rig has left the location. Failure to notify or have rig on location within 90 days will result in an Incident of Non-Compliance.

   c. Once the H&P Flex Rig is on location, it will drill the Battle Axe 27 Fed Com 1H and 2H in conjunction using batch drilling.

d. BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as H&P Flex Rig is rigged up on well. CIT for the intermediate casing shall be performed and results recorded on subsequent sundry.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium Cave/Karst.
Abnormal pressures may occur in the Wolfcamp.
Possible water flows in the Salt and the Castile.
Possible lost circulation in the Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **660** feet (**in a competent bed <u>below the Magenta Dolomite</u>, a <u>Member of the Rustler</u>**) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **10-3/4** inch intermediate casing is: **(Ensure casing is set in the Lamar Limestone at approximately 4480')**

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 10-3/4" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

3. The minimum required fill of cement behind the **7-5/8** inch 2nd intermediate casing is:

    ☒ Cement to surface. Operator shall provide method of verification.
    Additional cement will be required as the excess calculates to -8%.

Formation below the 7-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

If cement does not circulate to surface on the the first two casings, the cement on the third casing must come to surface.

4. The minimum required fill of cement behind the **5** inch production casing is:

   ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Additional cement may be required as the excess calculates to -4%.**

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi. BOP/BOPE shall be tested after nipple up according to Onshore Order #2.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **10-3/4**" first intermediate casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and**

tested to stack pressure. BOP/BOPE shall be tested after nipple up according to Onshore Order #2.

5. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8** inch shoe shall be **10,000 (10M)** psi. **10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

6. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

    d. The results of the test shall be reported to the appropriate BLM office.

    e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

    g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test

does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 101415