HOBBS OCD

14-946

Form 3160-3
(March 2012)

AUG 2 2 2016

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OCD Hobbs

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
SHL: NMLC 071985 BHL: E066220006

6. If Indian, Allotee or Tribe Name

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

1a. Type of work: [X] DRILL [ ] REENTER

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

8. Lease Name and Well No. (315128)
War Hammer 25 Federal COM 5H

2. Name of Operator
ConocoPhillips Company (217817)

9. API Well No.
30-025- 43391

3a. Address P.O. Box 51810 Midland, TX 79710

3b. Phone No. *(include area code)*
(432)688-6938

10. Field and Pool, or Exploratory
~~Wolfcamp~~ WC-025 G-09 S263225A; WOLFCAMP (98081)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 370' FNL & 624' FEL (NENE), Sect 25- 26S- 32E
At proposed prod. zone 50' FSL & 710' FEL (Lot 1), Sect. 36 26S- 32E

11. Sec., T. R. M. or Blk. and Survey or Area
Sect. 25, 26S, 32E

14. Distance in miles and direction from nearest town or post office*
~35.6 miles SW from Jal, NM

12. County or Parish
Lea

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
SHL: 370'
BHL: 50'

16. No. of acres in lease
NMLC 071985: 209.82
NMLC 069515:1080.00

17. Spacing Unit dedicated to this well
E2E2 SEC. 25 & NENE & LOT 1 SECT. 36= 224.99 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
33'

19. Proposed Depth
19,450' MD

20. BLM/BIA Bond No. on file
ES0085

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3133'

22. Approximate date work will start*
01/01/2016

23. Estimated duration
30 Days

24. Attachments

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

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 required by the BLM.

25. Signature Ashley Bergen
Name *(Printed/Typed)* Ashley Bergen
Date 7/24/15

Title
Regulatory Specialist

Approved by *(Signature)* /s/George MacDonell
Name *(Printed/Typed)*
Date AUG 19 2016

Title FIELD MANAGER
Office CARLSBAD FIELD OFFICE

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.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

KZ 08/22/16

JM

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

ConocoPhillips, WAR HAMMER 25 FEDERAL COM 5H

1. Geologic Formations

TVD of target	12,171	Pilot hole depth	N/A
MD at TD:	19,450	Deepest expected fresh water:	300

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Base of Fresh Water	300	Water	
Rustler	736	Water	
Top of Salt / Salado	1,181	Salt	
Castile	2,981	Salt	
Delaware Top / Base Salt	4,649	Oil/Gas	Loss of Circulation
Ford Shale	4,769	Oil/Gas	
Cherry Canyon	5,652	Oil/Gas	Loss of Circulation
Brushy Canyon	7,310	Oil/Gas	Loss of Circulation
Bone Springs	8,666	Oil/Gas	Loss of Circulation
Bone Springs 3rd Carb	10,844	Oil/Gas	
WolfCamp	11,960	Oil/Gas	
WolfCamp 1	12,171	Target Zone	
WolfCamp 2	12,891	Oil/Gas	

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

ConocoPhillips Company respectfully requests the option to not run 10-3/4" 45.5# J-55 W511 (Flushed Connection) Casing and spare it as a contingency if the next hole section failed to support the hydrostatic column of the previous mud weight OR to Preset the 10-3/4" casing should a spudder rig become available. The intent for the casing and cementing program – Not Run 10-3/4" Casing Option is to:

- Drill the 12-3/4" or 9-7/8" hole sections with the same density mud (OBM or Saturated Brine).
- Case and cement the well with 13-3/8" surface, 7-5/8" intermediate and 5" production casing (3-strings).
- Isolate the Salt & Delaware utilizing Annulus Casing Packer and Stage Tool if necessary.
- Bring cement from 7-5/8" casing shoe to surface.
- Provided that if the hole can no longer support the hydrostatic column of the previous mud weight, a contingency plan to run the 10-3/4" casing will be the preferred if severe losses occurs during drilling the well.

ConocoPhillips, WAR HAMMER 25 FEDERAL COM 5H

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.50"	0	810	13.375"	54.5	J55	BTC	2.88	6.97	19.3
12.25"	0	4,650	10.75"	45.5	J55	TenW511	**2.82	1.41	3.38
9.875"	0	11,960	7.625"	29.7	P110	BTC	1.52	1.57	3.13
6.75"	0	19,450	5.0"	18	P110	TenBLUE / TXPBTC	1.52	1.57	2.65
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

**COP Collapse Design: Mud drop to hydrostatic column equilibrium with pore pressure of the lost circulation zone.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	Y
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	530	13.6	1.73	10.88	7	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 +0.125lb/sk LCM + 0.1% Dispersant.
	310	14.8	1.35	6.39	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control + 2 lbs/bbl CemNET (losses Control)
Inter. 1	900	11.9	1.91	11.85	7	Lead: Class C + 8.0% Bentonite + 0.2% Anti-Foam + 0.125lb/sk LCM + 0.2% Dispersant + 0.2% Retarder + 2 lbs/bbl CemNET (losses Control).
	140	14.8	1.33	8.23	5	Tail: Class C + 0.2% Anti-Foam + 0.3% Retarder + 0.5% Extender + 2 lbs/bbl CemNET (losses Control).
	DV/ECP Tool: NO					
Inter. 2	900	11.5	2.576	14.21	17	Lead: Class 'C' + 4.00% MPA-5 + 10.00 lb/sk BA-90 + 0.50% BA-10A + 0.30% CD-32 + 1.00% SMS + 1.30% R-3 + 5.00 lb/sk LCM-1 + 0.25 lb/sk Cello Flake + 0.005 gps FP-13L + 0.005 lb/sk Static Free
	115	13.5	1.41	6.337	7	Tail: Class 'C' + 0.25% MPA250 + 0.20% CD-32 + 0.20% R-3 + 5.00 lb/sk LCM-1 + 0.005 gps FP-13L + 0.005 lb/sk Static Free
	DV/ECP Tool: 4,800' (OPTIONAL)					
	410	11.5	2.576	14.21	17	Lead: Class 'C' + 4.00% MPA-5 + 10.00 lb/sk BA-90 + 0.50% BA-10A + 0.30% CD-32 + 1.00% SMS + 1.30% R-3 + 5.00 lb/sk LCM-1 + 0.25 lb/sk Cello Flake + 0.005 gps FP-13L + 0.005 lb/sk Static Free
Prod.	900	16.4	1.10	4.26	5	Tail: Class H + 1.800 gal/sk Gas Control Agent + 0.025 gal/sk Dispersant + 0.080 gal/sk Retarder + 0.030 gal/sk Anti-Foam.
	DV/ECP Tool NO'					

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	>100%
Intermediate 1	0'	>100%
Intermediate 2	0'	>30%
Production	11,400'	>25%

Include Pilot Hole Cementing specs: NO PILOT HOLE.
Pilot hole depth N/A
KOP

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft3/sack	Water gal/sk	Slurry Description and Cement Type

4. Pressure Control Equipment

	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		± 1,500 psi
			Pipe Ram		
			Double Ram	x	
			Other*		
9-7/8"	13-5/8"	5M	Annular	x	50% of working pressure
			Blind Ram	x	5M
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4"	13-5/8"	5M/10M	Annular	x	5M
			Blind Ram	x	10M
			Pipe Ram	x	
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

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.
	Y /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.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	810	Spud Mud	8.6-9.3	32-36	N/C
0	4,650	Brine or OBM	8.6-10.2	28-30	≤5
0	11,960	Cut-Brine or OBM	8.6-9.2	30-40	≤5
0	19,450	Oil Base Mud	9.5-12.0	30-40	≤5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
x	GR from 200' above KOP to TD (GR as part of the BHA while drilling). Not log in the lateral.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain
x	Dry samples taken 30' from intermediate 1 casing point to TD. GC Tracers KOP to TD.

Additional logs planned		Interval
	Resistivity	
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4.918 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

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

8. Other facets of operation

Is this a walking operation? If yes, describe. Yes, please see below.
Will be pre-setting casing? If yes, describe. Yes, please see below.

Spudder Rig and Batch Drilling Operations: Depending on rig availability, ConocoPhillips may pre-set the surface and the contingency intermediate1 casing. The reasons would be to improve time and cost savings.

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:

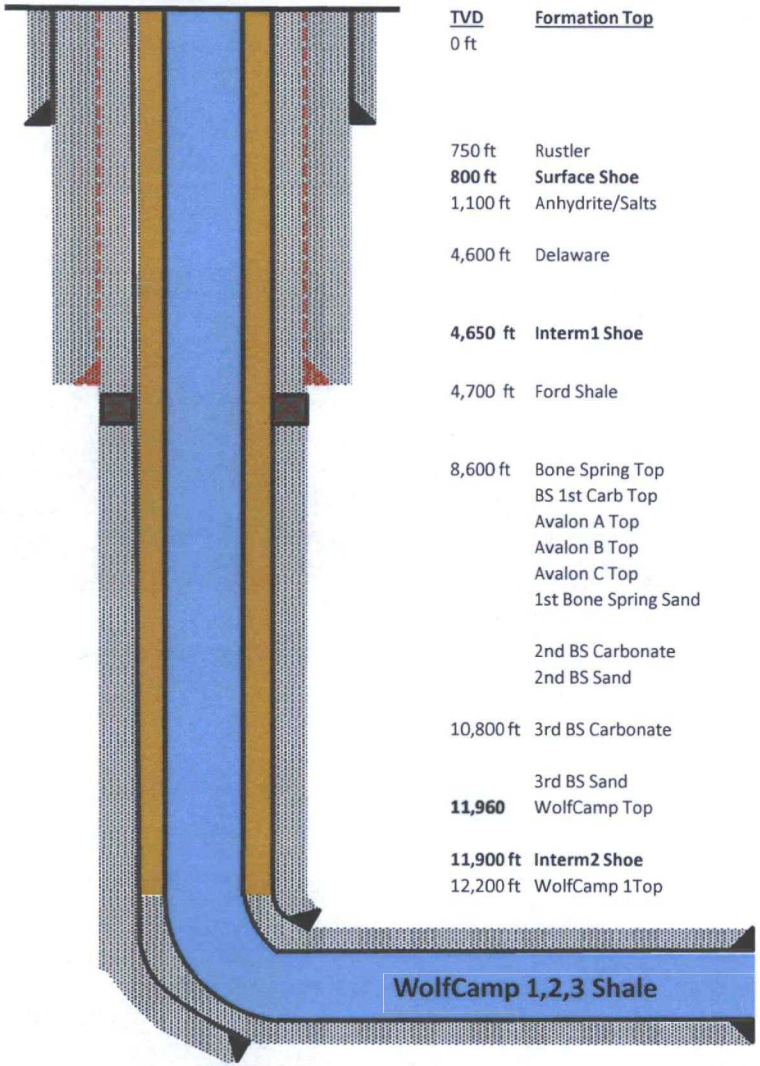
1. Move-in PD822 to War Hammer 25 Federal COM 5H
2. Drill and pre-set Surface & Intermediate Casing
3. Skid to War Hammer 25 Federal COM 6H
4. Drill and pre-set Surface & Intermediate Casing
5. Move-in H&P Flex 3 rig to War Hammer 25 Federal COM 5H
6. Drill, Set & Cement Intermediate2 Casing
7. Skid to War Hammer 25 Federal COM 6H
8. Drill, Set & Cement Intermediate2 Casing
9. Drill, Set & Cement Production Casing
10. Skid to War Hammer 25 Federal COM 5H
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.

Attachments:

Attachment#1: Directional Plan.
Attachment#2: Wellbore Casing & Cementing Schematic.
Attachment#3: Wellhead Schematic.
Attachment #4: BOP Schematic.
Attachment #5: Choke Schematic.
Attachment #6: Special (Premium) Connections.
Attachment #7: Flex Hose Documentation.
Attachment #8: Spudder Rig Specifications.

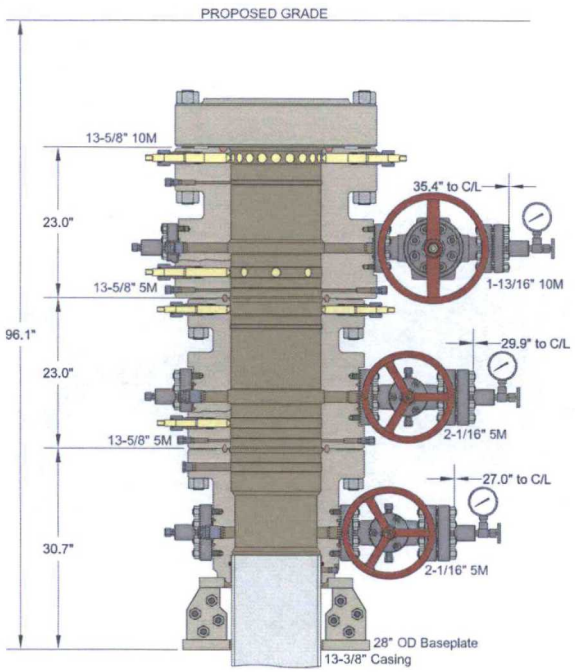
Attachment #2



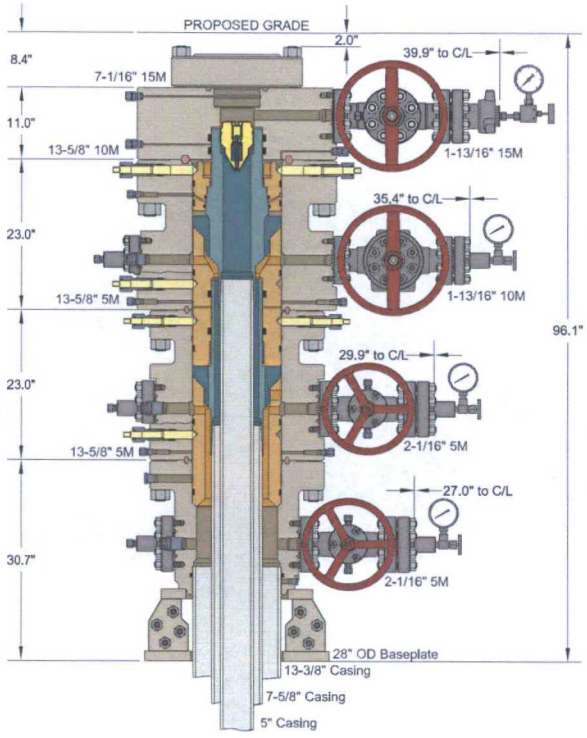
TVD	Formation Top
0 ft	
750 ft	Rustler
800 ft	**Surface Shoe**
1,100 ft	Anhydrite/Salts
4,600 ft	Delaware
4,650 ft	**Interm1 Shoe**
4,700 ft	Ford Shale
8,600 ft	Bone Spring Top
	BS 1st Carb Top
	Avalon A Top
	Avalon B Top
	Avalon C Top
	1st Bone Spring Sand
	2nd BS Carbonate
	2nd BS Sand
10,800 ft	3rd BS Carbonate
	3rd BS Sand
11,960	WolfCamp Top
11,900 ft	**Interm2 Shoe**
12,200 ft	WolfCamp 1Top
19,500 ft	**TD**
~6,500 ft	**Lateral**

- Surface Section (Pre-set):
  - Objective: Protect fresh water horizons.
  - Drill 17-1/2" hole to +/- 800 ft. "Rustler"
  - Mud weight: 8.6 – 9.1 ppg FW-Native Mud
  - **Set 13-3/8" 54.5# J-55 BTC casing.**
  - Cement to surface.
- ***Intermediate1 Section (Only for Contingency or Pre-set Option):***
  - ***Objective: Isolate the Salado Salt and Delaware Sand interval.***
  - ***Drill 12-1/4" hole to +/- 4,650 ft. "Ford Shale"***
  - ***Mud weight: 10.0 ppg Brine.***
  - ***Set 10-3/4" 45.5 J-55 Tenaris W511 casing.***
  - ***Cement to surface.***
- Intermediate2 Section:
  - Objective: Isolate depleted/weak formations above BS3S/WC.
  - Drill 9-7/8" hole to +/- 11,960 ft.
  - **Mud weight: 8.6 – 9.2 ppg Brine or OBM w/ 25 ppb WBS**
  - **Set 7-5/8" 29.7# P-110 BTC casing.**
  - Cement to surface.
  - 2 -Stage Contingency with Packer/Stage Collars
- Production Section:
  - Objective: Provide zonal isolation of production interval and provide medium for stimulation.
  - Drill 6-3/4" hole to +/-19,000ft – 20,000ft. "Production TD"
  - Mud Weight: 9.5 – 12.0 ppg OBM.
  - **Set 5" 18# P-110 TenBlue/TXP casing.**
  - Cement lap 500 ft above previous shoe (near KOP).

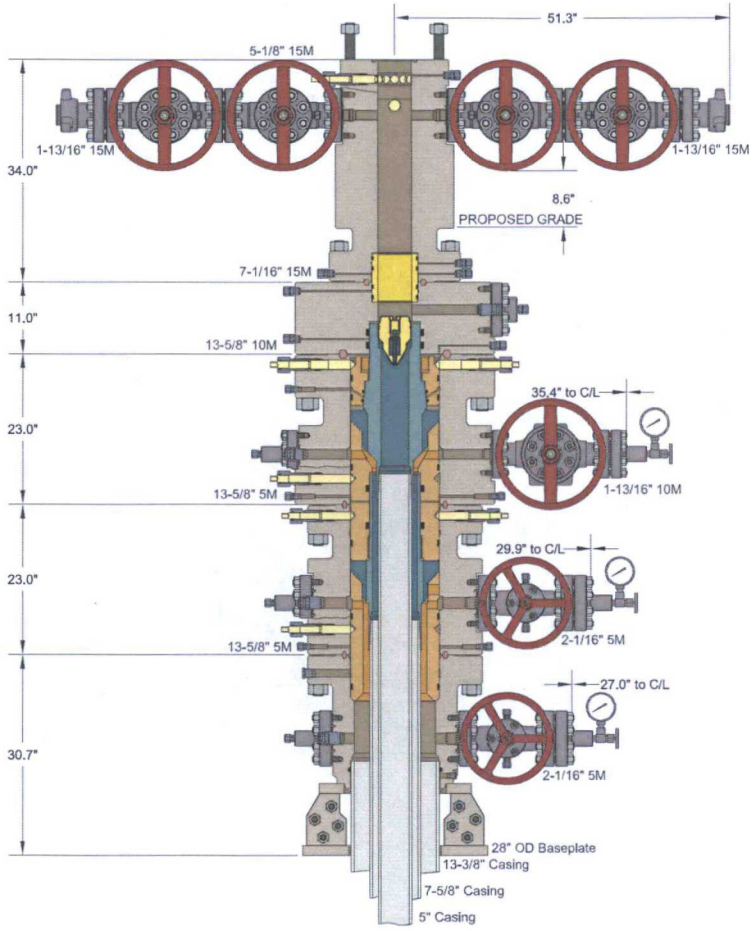
Attachment#3



SPUD CONFIGURATION

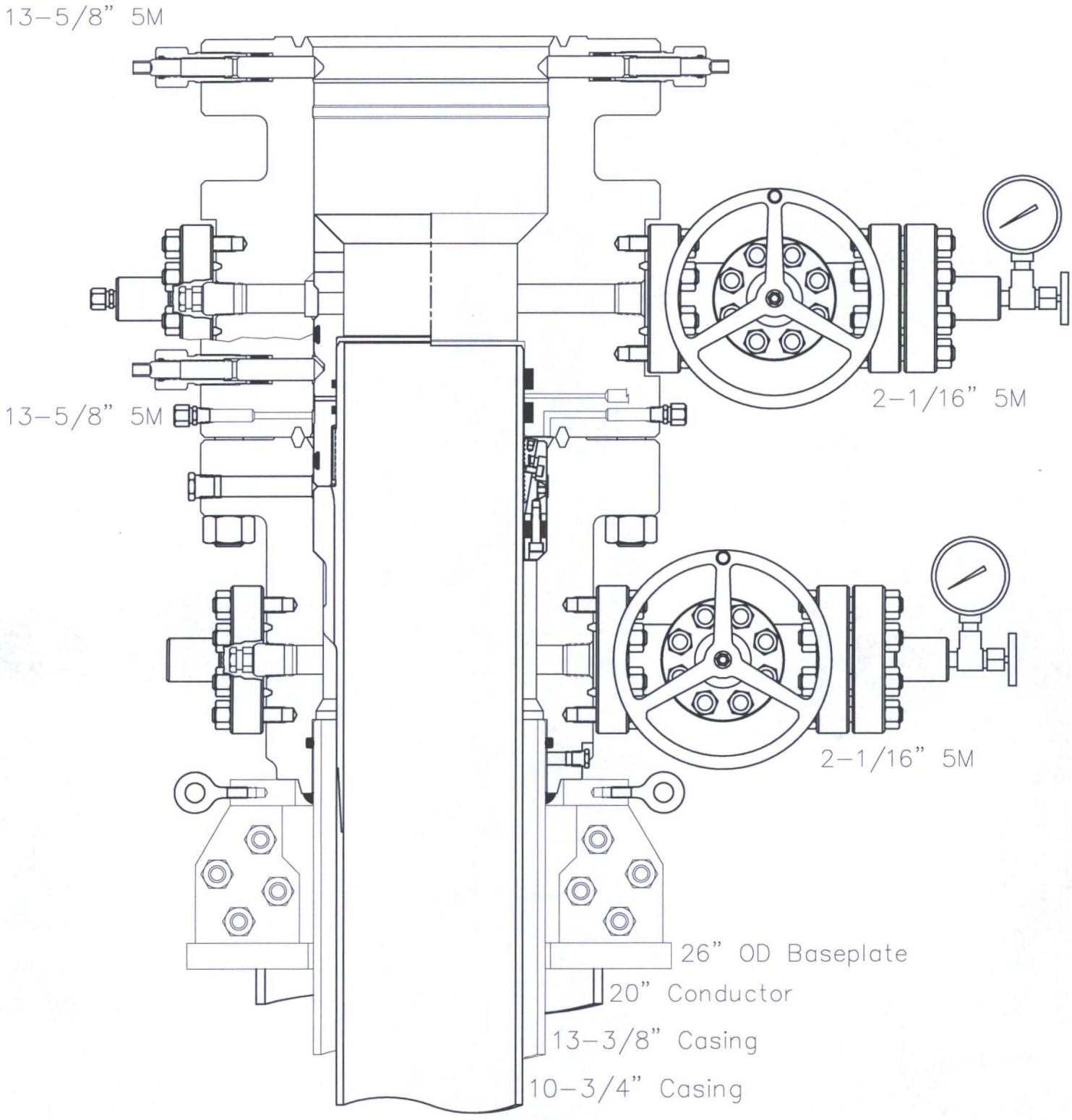


DRILL & SKID CONFIGURATION



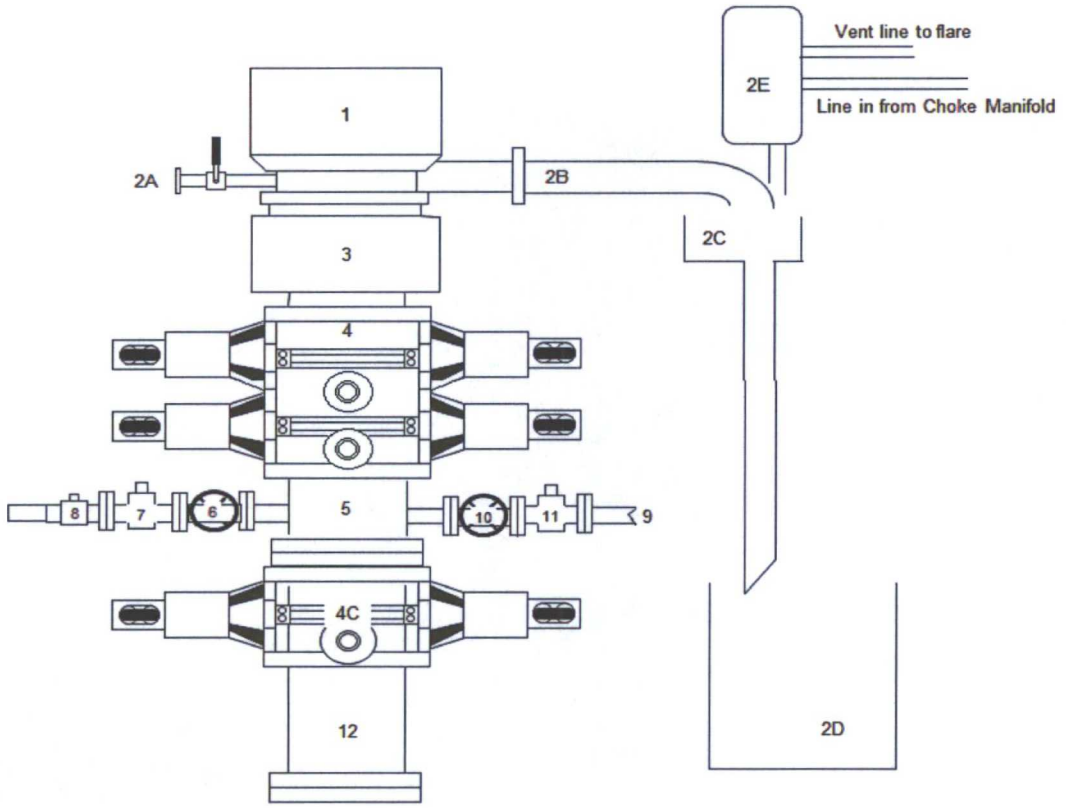
COMPLETION CONFIGURATION

CACTUS WELLHEAD LLC	CONOCOPHILLIPS 3 STRING CONFIGURATION		
13-3/8" x 7-5/8" x 5" 5M MBS2 Wellhead System With 13-5/8" 10M x 7-1/16" 15M DBLHPS DSPA And 7-1/16" 15M x 5-1/8" 15M CMT-FB-EN Tubing Head, 34" Tall	DRAWN	THH	09JUN15
	APPRV		
	DRAWING NO.	ODE0000491-A	


13-5/8" 5M
13-5/8" 5M
2-1/16" 5M
2-1/16" 5M
26" OD Baseplate
20" Conductor
13-3/8" Casing
10-3/4" Casing

Attachment #4

BLOWOUT PREVENTER ARRANGEMENT - H&P486
5M System per Onshore Oil and Gas Order No. 2 utilizing 10M Rated Equipment

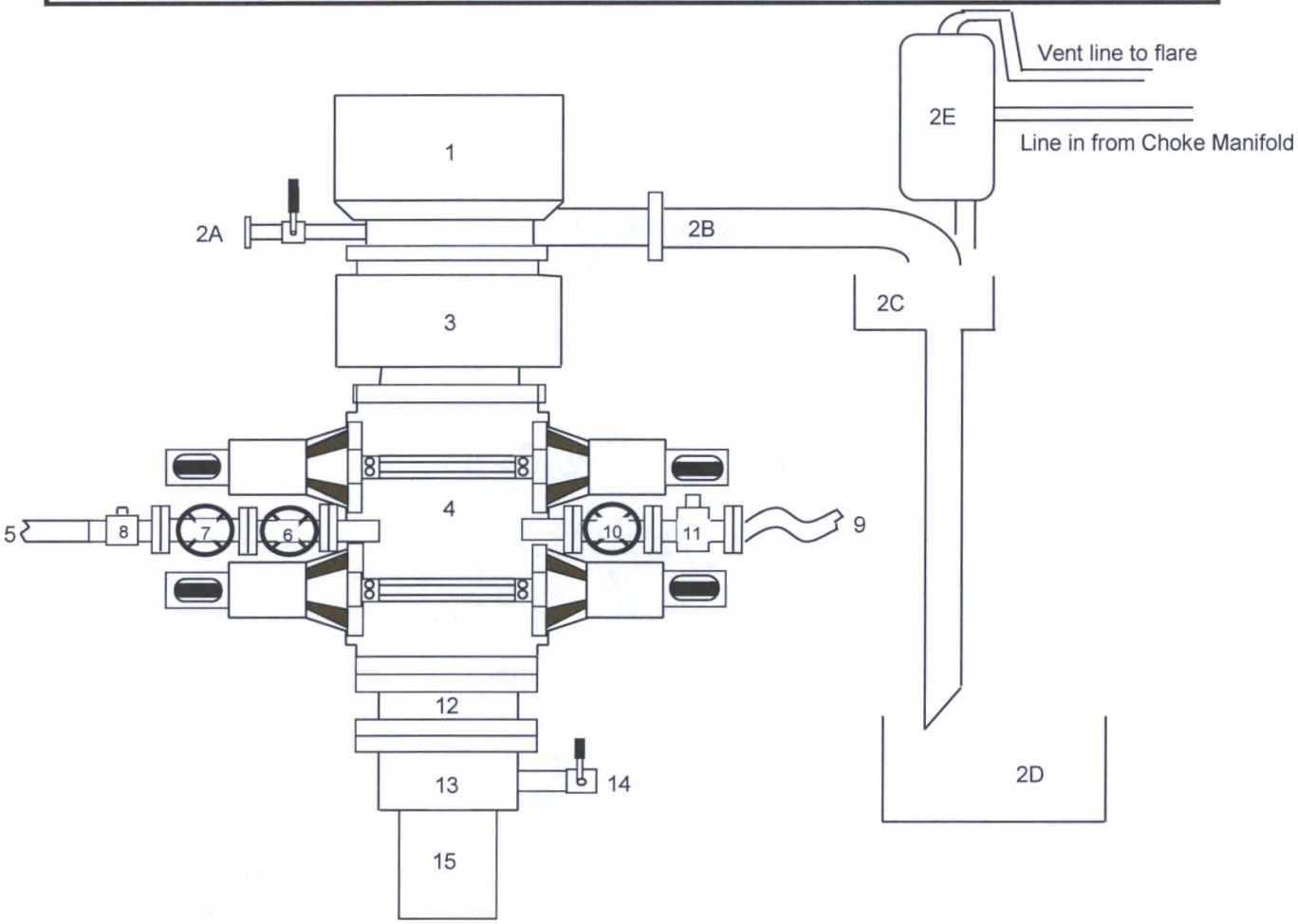


Item	Description
1	Rotating Head
2A	Fill up Line and Valve
2B	Flow Line (8")
2C	Shale Shakers and Centrifuges
2D	Cuttings Bins for Zero Discharge
2E	Mud Gas Separator with vent line to flare and return line to mud system
3	Annular Preventer (13-5/8", 5M)
4	Double Ram (13-5/8", 10M, Bline Ram bottom x Pipe Ram top)
5	Drilling Spool (13-5/8" 10M)
4C	Single Ram (13-5/8", 10M, Pipe Rams)
6	Kill Line Gate Valve, Inner (4-1/16", 10k psi WP)
7	Kill Line Gate Valve, Outer (4-1/16", 10k psi WP)
8	Kill Line Check Valve (4-1/16, 10k psi WP)
9	CoFlex Choke Line (4-1/16", 10k psi WP)
10	Choke Line Gate Valve, Inner (4-1/16", 10k psi WP)
11	Choke Line Hydraulically Operated Gate Valve, Outer, (4-1/6" 10k psi WP HCR)
12	Drilling Spool Adapter (13-5/8", 10M)

Drawn by:
James Chen P.E.
Drilling Engineer, ConocoPhillips Company
Date: September 23rd, 2014

BLOWOUT PREVENTER ARRANGEMENT

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

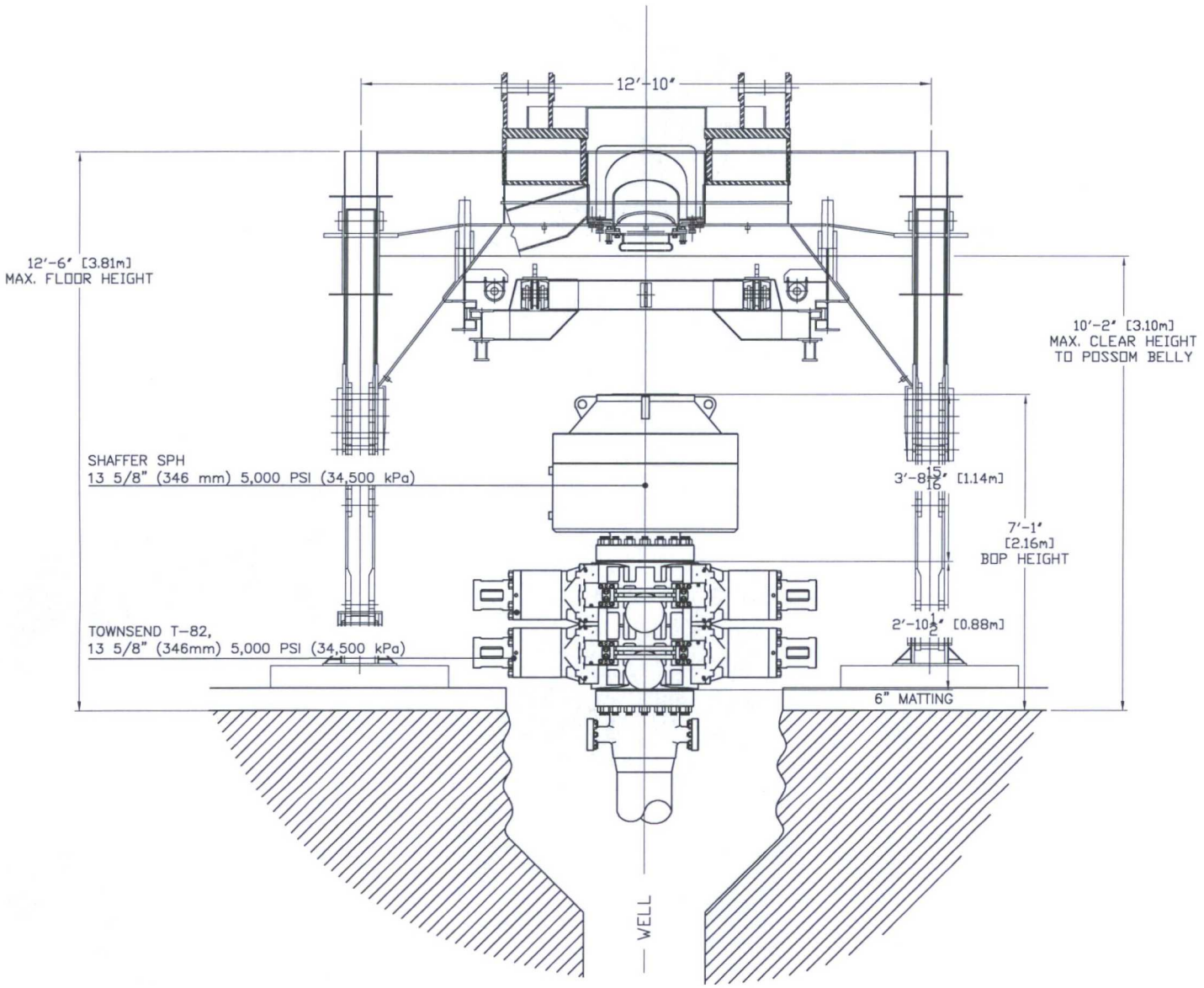


Item	Description
1	Rotating Head, 13-5/8"
2A	Fill up Line and Valve
2B	Flow Line (10")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (13-5/8", 5M)
4	Double Ram (13-5/8", 5M, 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

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

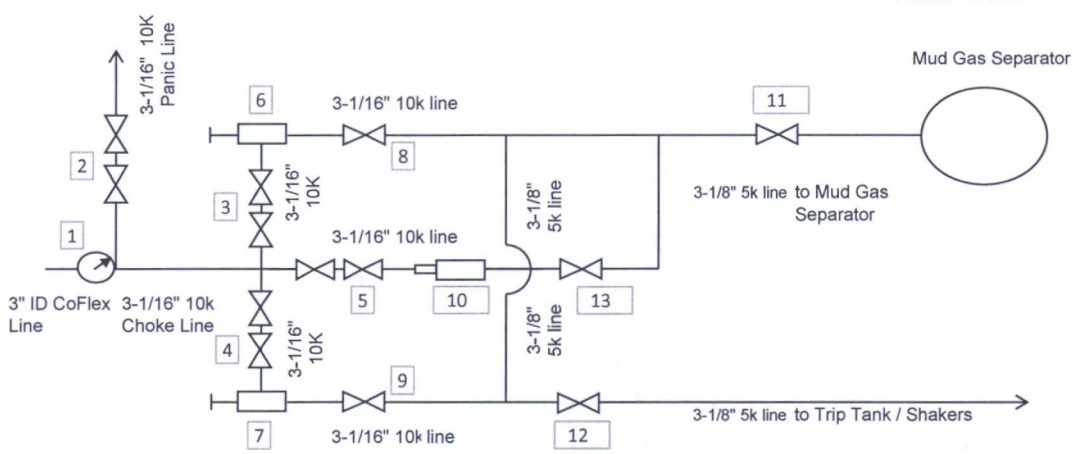
PRECISION DRILLING

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

Attachment #5

CHOKE MANIFOLD ARRANGEMENT - HP486

10M System per Onshore Oil and Gas Order No. 2 utilizing 5M/10M Equipment



All Tees must be Targeted

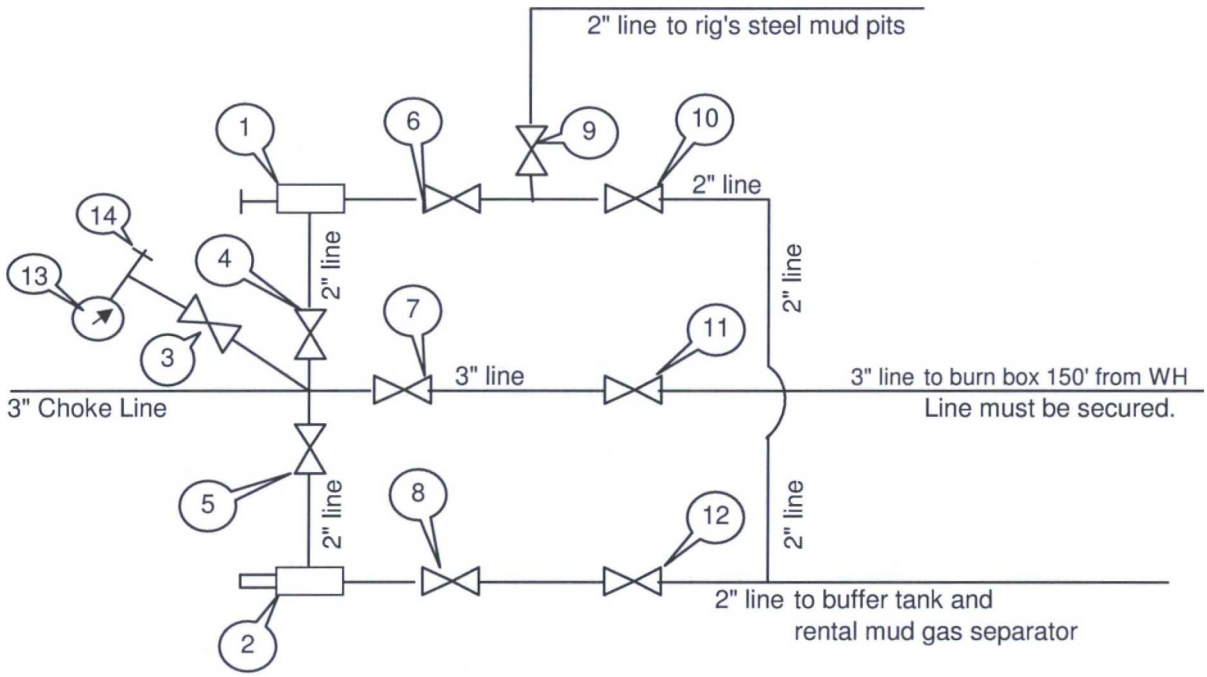
Item	Description
1	Pressure Gauge
2	2 Gate Valves, 3-1/16" 10M
3	2 Gate Valves, 3-1/16" 10M
4	2 Gate Valves, 3-1/16" 10M
5	2 Gate Valves, 3-1/16" 10M
6	Upper Manual Adjustable Choke, 4-1/16", 10M
7	Lower Manual Adjustable Choke, 4-1/16", 10M
8	Gate Valve, 3-1/16" 10M
9	Gate Valve, 3-1/16" 10M
10	Remote Controlled Hydraulic Adjustable Choke, 4-1/16", 10M
11	Gate Valve, 3-1/8" 5M
12	Gate Valve, 3-1/8" 5M
13	Gate Valve, 3-1/16" 10M

The 10M Choke Manifold & Valves will be tested to rated working pressure.

Drawn by:
James Chen, P.E.
Drilling Engineer, ConocoPhillips Company
Date: June 25th-2014

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

Attachment #6

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		

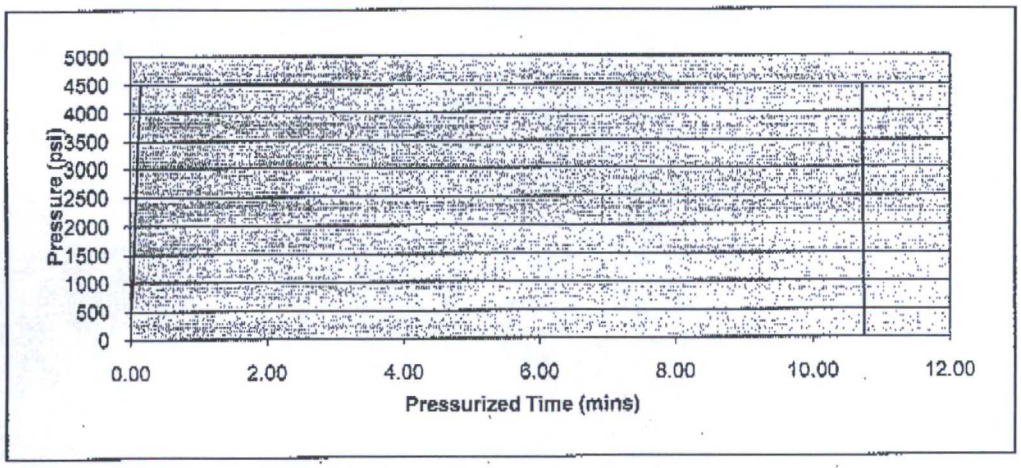
BLANKING DIMENSIONS

Attachment #7

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) 771-9739

T E S T C E R T I F I C A T E

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

Attachment #8

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		

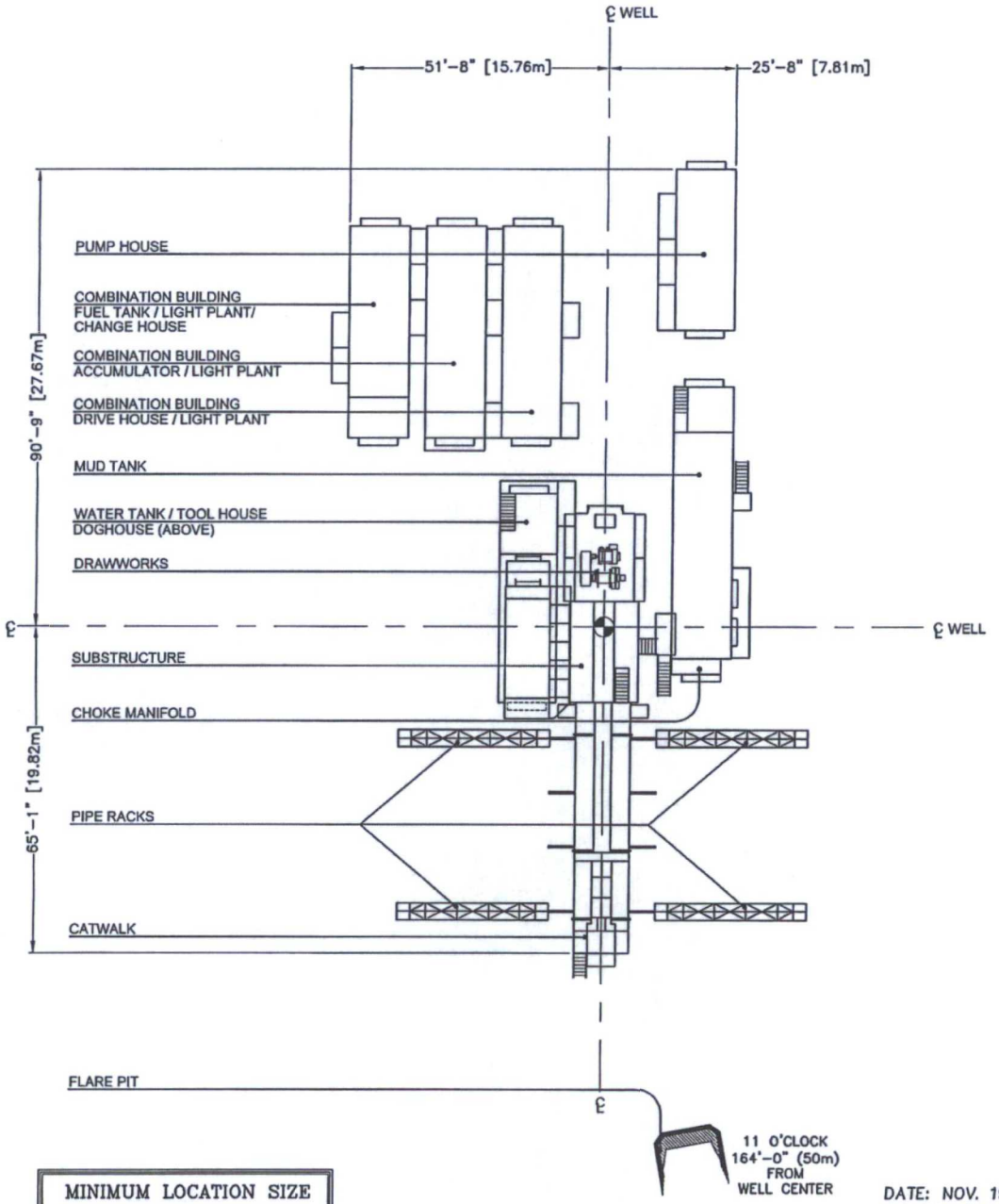
NOTES

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–I2
APPROVED BY OSC #1

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

PRECISION DRILLING

CALGARY, ALBERTA, CANADA

Closed Loop System Design, Operating and Maintenance, and Closure Plan

ConocoPhillips Company
Well: Golden Spur 36 COM W1 1H
Location: Sec. 36, T26S, R31E
Date: 11/18/2015

ConocoPhillips proposes the following plan for design, operating and maintenance, and closure of our proposed closed loop system for the above named well:

1. We propose to use a closed loop system with steel pits, haul-off bins, and frac tanks for containing all cuttings, solids, mud, water, brine, and liquids. We will not dig a pit, nor will we use a drying pad, nor will we build an earth pit above ground level, nor will we dispose of or bury any waste on location.

   All drilling waste and all drilling fluids (fresh water, brine, mud, cuttings, drill solids, cement returns, and any other liquid or solid that may be involved) will be contained on location in the rig's steel pits or in haul-off bins or in frac tanks as needed. The intent is as follows:

   - We propose to use the rigs' steel pits for containing and maintaining the drilling fluids.
   - We propose to remove cuttings and drilled solids from the mud by using solids control equipment and to contain such cuttings and drilled solids on location in haul-off bins.
   - We propose that any excess water that may need to be stored on location will be stored in tanks.

The closed loop system components will be inspected daily by each tour and any needed repairs will be made immediately. Any leak in the system will be repaired immediately, and any spilled liquids and/or solids will be cleaned immediately, and the area where any such spill occurred will be remediated immediately.

2. Cuttings and solids will be removed from location in haul-off bins by an authorized contractor and disposed of at an authorized facility. For this well, we propose the following disposal facility:

   R-360 Inc.
   4507 West Carlsbad Hwy, Hobbs, NM 88240,
   P.O. Box 388; Hobbs, New Mexico 88241
   Toll Free Phone: 877.505.4274, Local Phone Number: 432.638.4076

   The physical address for the plant where the disposal facility is located is Highway 62/180 at mile marker 66 (33 miles East of Hobbs, NM and 32 miles West of Carlsbad, NM).

   The Permit Number for R-360 is NM-01-0006.

   A photograph showing the type of haul-off bins that will be used is attached.

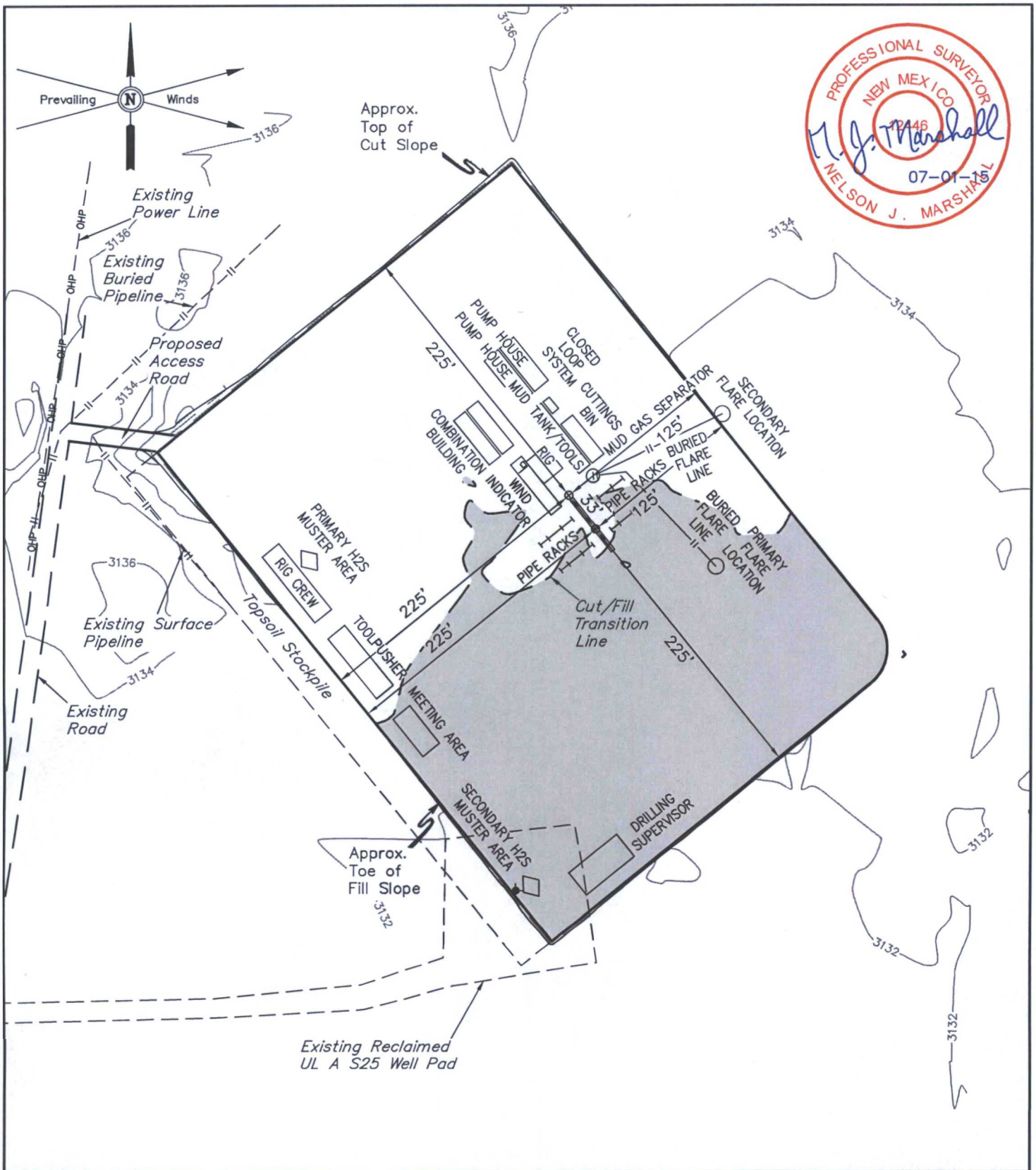
3. Mud will be transported by vacuum truck and disposed of at R-360 Inc. at the facility described above.

4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:

   - Nabors Well Services Company, 3221 NW County Rd; Hobbs, NM 88240, PO 5208 Hobbs, NM, 88241, Permit SWD 092. (Well Location: **Section 3, T19S R37E**)

   - Basic Energy Services, P.O. Box 1869; Eunice, NM 88231 Phone Number: 575.394.2545, Facility located at Hwy 18, Mile Marker 19; Eunice, NM.

James Chen
Drilling Engineer
Office: 281-206-5244
Cell: 832-768-1647



PROFESSIONAL SURVEYOR
NEW MEXICO
12446
NELSON J. MARSHALL
07-01-15

NOTES:
- Contours shown at 2' intervals.
- May have different number of Pump Houses and Combination Buildings.

ConocoPhillips

ConocoPhillips Company

WAR HAMMER 25 FEDERAL COM 6H & COM 5H
SECTION 25, T26S, R32E, N.M.P.M.
NE 1/4 NE 1/4

DRAWN BY: S.F.	SCALE: 1" = 100'	REVISED: 06-25-15 T.E.
DATE: 01-27-14	REVISED: 05-23-14	

UINTAH ENGINEERING & LAND SURVEYING

Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

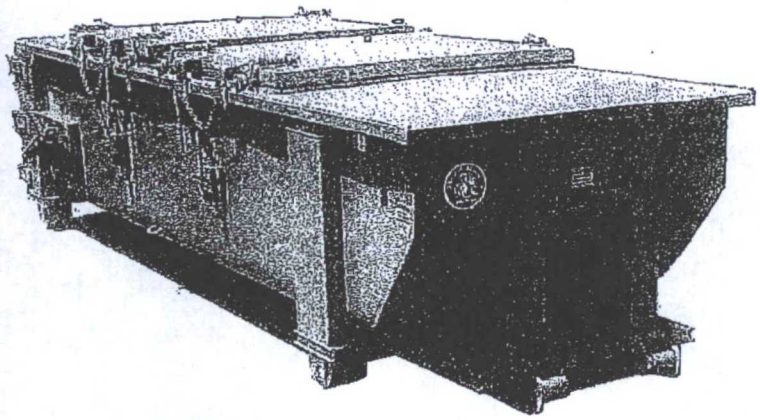
TYPICAL RIG LAYOUT

FIGURE #3

SPECIFICATIONS

Heavy Duty Split Metal Rolling Lid

FLOOR: 3/16" PL one piece
CROSS MEMBER: 3 x 4.1 channel 16" on center
WALLS: 3/16" PL solid welded with tubing top, inside liner hooks
DOOR: 3/16" PL with tubing frame
FRONT: 3/16" PL slant formed
PICK UP: Standard cable with 2" x 6" x 1/4" rails, gusset at each crossmember
WHEELS: 10 DIA x 9 long with rease fittings
DOOR LATCH: 3 independent ratchet binders with chains, vertical second latch
GASKETS: Extruded rubber seal with metal retainers
WELDS: All welds continuous except sub-structure crossmembers
FINISH: Coated inside and out with direct to metal, rust inhibiting acrylic enamel color coat
HYDROTESTING: Full capacity static test
DIMENSIONS: 22'-11" long (21'-8" inside), 99" wide (88" inside), see drawing for height
OPTIONS: Steel grit blast and special paint, Ampliroll, Heil and Dino pickup
ROOF: 3/16" PL roof panels with tubing and channel support frame
LIDS: (2) 68" x 90" metal rolling lids spring loaded, self raising
ROLLERS: 4" V-groove rollers with delrin bearings and grease fittings
OPENING: (2) 60" x 82" openings with 8" divider centered on container
LATCH: (2) independent ratchet binders with chains per lid
GASKETS: Extruded rubber seal with metal retainers



CONT.	A	B
20 YD	41	53
25 YD	53	65
30 YD	65	77