Form 3160-3
(June 2015)

OCD – HOBBS
09/23/2020
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FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC0068281A

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

7. If Unit or CA Agreement, Name and No.
ZIA HILLS BS/WC / NMNM138329X

8. Lease Name and Well No.
ZHU 1932 BS
9H [327863]

2. Name of Operator
CONOCOPHILLIPS COMPANY [217817]

9. API Well No. 30-025-47779

3a. Address
PO Box 2197 Houston TX 77252

3b. Phone No. *(include area code)*
(281)293-1748

10. Field and Pool, or Exploratory [98009]
JENNINGS; BONE SPRING, WEST / BOI

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NESW / 2239 FSL / 1612 FWL / LAT 32.027097 / LONG -103.717837
At proposed prod. zone LOT 3 / 50 FSL / 1714 FWL / LAT 32.000342 / LONG -103.717356

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 19 / T26S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*
44.5 miles

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)
1545 feet

16. No of acres in lease
321.15

17. Spacing Unit dedicated to this well
304.44

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

19. Proposed Depth
9383 feet / 19556 feet

20. BLM/BIA Bond No. in file
FED: ES0085

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3182 feet

22. Approximate date work will start*
03/20/2020

23. Estimated duration
90 days

24. Attachments

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

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

25. Signature
(Electronic Submission)

Name *(Printed/Typed)*
Jeremy Lee / Ph: (832)486-2510

Date
05/14/2019

Title
Regulatory Coordinator

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575)234-5959

Date
04/01/2020

Title
Assistant Field Manager Lands & Minerals

Office
CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

GCP Rec 09/23/2020

SL

APPROVED WITH CONDITIONS

Approval Date: 04/01/2020

(Continued on page 2)

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**CONOCOPHILLIPS COMPANY**
LEASE NO.:	**NMLC0068281A**
WELL NAME & NO.:	ZHU 1932 BS 9H
SURFACE HOLE FOOTAGE:	2239'/S & 1612'/W
BOTTOM HOLE FOOTAGE	50'/S & 1714'/W
LOCATION:	Section 19, T.26 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	(•) None	( ) Secretary	( ) R-111-P
Cave/Karst Potential	( ) Low	(•) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Other	[ ] 4 String Area	[ ] Capitan Reef	[ ] WIPP
Other	[x] Fluid Filled	[ ] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[ ] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Cherry and Brushy Canyon formations. 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.

B. CASING

Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1313 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) 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 will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
  Excess cement calculates to -25%, additional cement might be required.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

Option 1:

a. 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.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **3000 (3M)** psi.

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 2500 psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

GENERAL 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)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. 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 are located, this does not include the dog house or stairway area.

3. 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.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: 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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. 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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. 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.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. 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. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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.

3. 5M or higher 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.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. 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. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. 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.

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

f. 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.

g. 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.

h. 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.

C. 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.

D. 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.

OTA03252020

AFMSS

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

Application Data Report

04/02/2020

APD ID: 10400041575

Submission Date: 05/14/2019

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS

Well Number: 9H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400041575

Tie to previous NOS? N

Submission Date: 05/14/2019

BLM Office: CARLSBAD

User: Jeremy Lee

Title: Regulatory Coordinator

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMLC0068281A

Lease Acres: 321.15

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM138329X

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: CONOCOPHILLIPS COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: CONOCOPHILLIPS COMPANY

Operator Address: PO Box 2197

Zip: 77252

Operator PO Box:

Operator City: Houston

State: TX

Operator Phone: (281)293-1748

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: ZHU 1932 BS

Well Number: 9H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: JENNINGS; BONE SPRING, WEST

Pool Name: BONE SPRING

Is the proposed well in an area containing other mineral resources? NONE

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Is the proposed well in an area containing other mineral resources? NONE

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

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** ZIA HILLS 19 PAD **Number:** 3

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 44.5 Miles **Distance to nearest well:** 33 FT **Distance to lease line:** 1545 FT

Reservoir well spacing assigned acres Measurement: 304.44 Acres

Well plat: ZHU_1932_BS_9H_C_102_20190514150343.pdf

Well work start Date: 03/20/2020 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:**

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	2239	FSL	1612	FWL	26S	32E	19	Aliquot NESW	32.027097	-103.717837	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0068281A	3182	0	0	
KOP Leg #1	3001	FSL	1729	FWL	26S	32E	19	Aliquot SENW	32.02919	-103.717445	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0068281B	-5485	8715	8667	
PPP Leg #1-1	2588	FSL	1736	FWL	26S	32E	19	Aliquot NESW	32.028051	-103.717441	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0068281A	-4779	8008	7961	

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
EXIT Leg #1	100	FSL	1714	FWL	26S	32E	31	Lot 3	32.00048	-103.717356	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 120910	-6201	19456	9383	
BHL Leg #1	50	FSL	1714	FWL	26S	32E	31	Lot 3	32.000342	-103.717356	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 120910	-6201	19556	9383	

APD ID: 10400041575 **Submission Date:** 05/14/2019

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
450220	QUATERNARY	3183	22	22		NONE	N
450221	RUSTLER	2070	1113	1113	ANHYDRITE, DOLOMITE	NONE	N
450222	SALADO	1900	1283	1283	SALT	NONE	N
450223	CASTILE	910	2273	2273	SALT	NONE	N
450224	DELAWARE	-1066	4249	4249	SANDSTONE	NATURAL GAS, OIL	N
450225	CHERRY CANYON	-1974	5157	5157	SANDSTONE	NATURAL GAS, OIL	N
450226	BRUSHY CANYON	-3450	6633	6633	SANDSTONE	NATURAL GAS, OIL	N
450227	BONE SPRING	-4835	8018	8018	SANDSTONE	NATURAL GAS, OIL	N
663719	BONE SPRING 1ST	-6026	9209	9209	SANDSTONE	NATURAL GAS, OIL	Y
663720	BONE SPRING 2ND	-6734	9917	9917	SANDSTONE	NATURAL GAS, OIL	N
663721	BONE SPRING 3RD	-7236	10419	10419	LIMESTONE	NATURAL GAS, OIL	N

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 9383

Equipment: Rotating Head, Annular Preventer, Pipe/Blind Rams, Kill Lines, Choke Lines, Adapter Spool

Requesting Variance? YES

Variance request: A variance to use flexible choke line(s) from the BOP to Choke Manifold. Testing certificate is attached in "Flexhose Variance data" document. A variance to use a multibowl wellhead system. Please see attached in section 8 of drilling plan. A variance is requested to use a 5M annular and test the annular to 100% of its working pressure. The variance is requested in conjunction with the attached well control plan.
Testing Procedure: BOP/BOPE will be isolated from the casing and tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. BOPE controls will be installed prior to drilling under the surface casing and will be used until the completion of drilling operations. The intermediate interval and the

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

production interval will be tested per 10M working system requirements. See attached "Drill Plan" document.

Choke Diagram Attachment:

10M_Choke_Manifold_20190502150726.pdf

BOP Diagram Attachment:

10M_BOPE_System_20190502150738.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1313	0	1313			1313	J-55	54.5	OTHER - BTC	2.73	4.41	DRY	12.7	DRY	12.7
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	9940	0	9383			9940	OTHER	40	OTHER - BTC	1.29	1.28	DRY	2.33	DRY	2.33
3	PRODUCTION	8.5	5.5	NEW	API	N	0	19556	0	9383			19556	OTHER	20	OTHER - TXP	4.03	3.2	DRY	3.88	DRY	3.88

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

ZHU_1932_BS_9H_Csg_Design_20190507090300.pdf

13.375_54.5_lb_J55_20190508064012.pdf

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

ZHU_1932_BS_9H_Csg_Design_20190507090752.pdf

9.625_40_lb_L_80_IC_20190508064021.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

ZHU_1932_BS_9H_Csg_Design_20190507090944.pdf

5.5_20_lb_P_110_ICY_20190508064031.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	983	1100	1.73	12.8	1902	200	Control Set 'C'	1.0% CaCl2, 1.0% SMS, 1.0% OGC-60, ¼ lb/sk Polyflake, ½ ppb FiberBlock
SURFACE	Tail		983	1383	660	1.33	14.8	868	200	0:1:0 'Type III'	0.5% CaCl2, ¼ lb/sk Polyflake, ½ ppb FiberBlock

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		0	5157	2370	1.73	11	4087	200	Thermal 35	10% NaCl, 0.9% CFR, 0.7% CFL-4, 0.1% LTR, 0.2% SPC-II, 0.4% CDF-4P, ¼ lb/sk Polyflake, ½ ppb FiberBlock
INTERMEDIATE	Lead	5157	813	8215	610	2.7	11	1628	70	WBL	0.5% CFL-4, 0.6% LTR, 0.2% SPC-II, 0.4% CDF-4P, ¼ lb/sk Polyflake, ½ ppb FiberBlock
INTERMEDIATE	Tail		8215	9940	470	1.59	13.2	741	30	Thermal 35	10% NaCl, 0.9% CFR, 0.7% CFL-4, 0.1% LTR, 0.2% SPC-II, 0.4% CDF-4P, ¼ lb/sk Polyflake, ½ ppb FiberBlock
PRODUCTION	Lead		0	19556	0	0	0	0	0	No Lead	No Lead
PRODUCTION	Tail		7715	19556	2524	1.19	15.6	3003	10	1:1:0 'Poz:Lafarge G'	20% Silica Flour, 8% Silica Flume, 2% FWCA-H (FWC-2), 0.3% HTR, 0.5% CR-4 (MCR-4), 1% TAE-1 (SEA-1), 1% CFL-4, 0.2% CFR-5, 0.3% ASM-3 (AS-3)

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. See attached "Drill Plan" for additional information.

Describe the mud monitoring system utilized: Closed-loop mud system using steel mud containers will be on location. Mud monitoring of any changes in levels (gains or losses) will use Pressure Volume Temperature, Pason, Visual Observations. See attached "Drill Plan" for additional information.

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1313	OTHER : Fresh Water	8.34	8.6							
1383	9383	OTHER : Emulsified Brine	8.6	9.2							
9383	9383	OTHER : Brine	8.6	9.2							

Section 6 - Test, Logging, Coring

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

Production tests will be conducted multiple times per week, through a test separator, during first months following completion. Thereafter, tests will be less frequently. See attached "Drill Plan" for additional information.

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

GR

Coring operation description for the well:

No coring operation is planned at this time.
ConocoPhillips Company requests a variance to the requirement to run a neutron porosity log for any wells within one mile of an existing well with a neutron porosity log (vertical well, or vertical portion of a horizontal well). If there is an existing neutron log within one mile, ConocoPhillips requests to log gamma ray only. If there is not an existing neutron log within one mile, ConocoPhillips request to run a GR/N log on the vertical section of one well per pad.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6568 **Anticipated Surface Pressure:** 4503.74

Anticipated Bottom Hole Temperature(F): 285

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Hydrogen sulfide drilling operations plan:

ZIA_HILLS_19_PAD_3_H2S_C_Plan_20190409122039.pdf

Zia_Hills_19_Pad_3_Rig_Layout_20190514150453.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

ZHU_1932_BS_9H_WP01_20190514150541.pdf

ZHU_1932_BS_9H_Drill_Plan_20200214130954.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Zia_Hills_19_Pad_3_Drill_Waste_Containment_20190503074622.pdf

Kelly_Cock_20190503083827.pdf

ZHU_1932_BS_9H_Cement_20190507093031.pdf

ZHU_1932_BS_7H_10H_Gas_Capture_Plan_20190507093056.pdf

ZHU_1932_BS_9H__Drilling_Plan_20190507093329.pdf

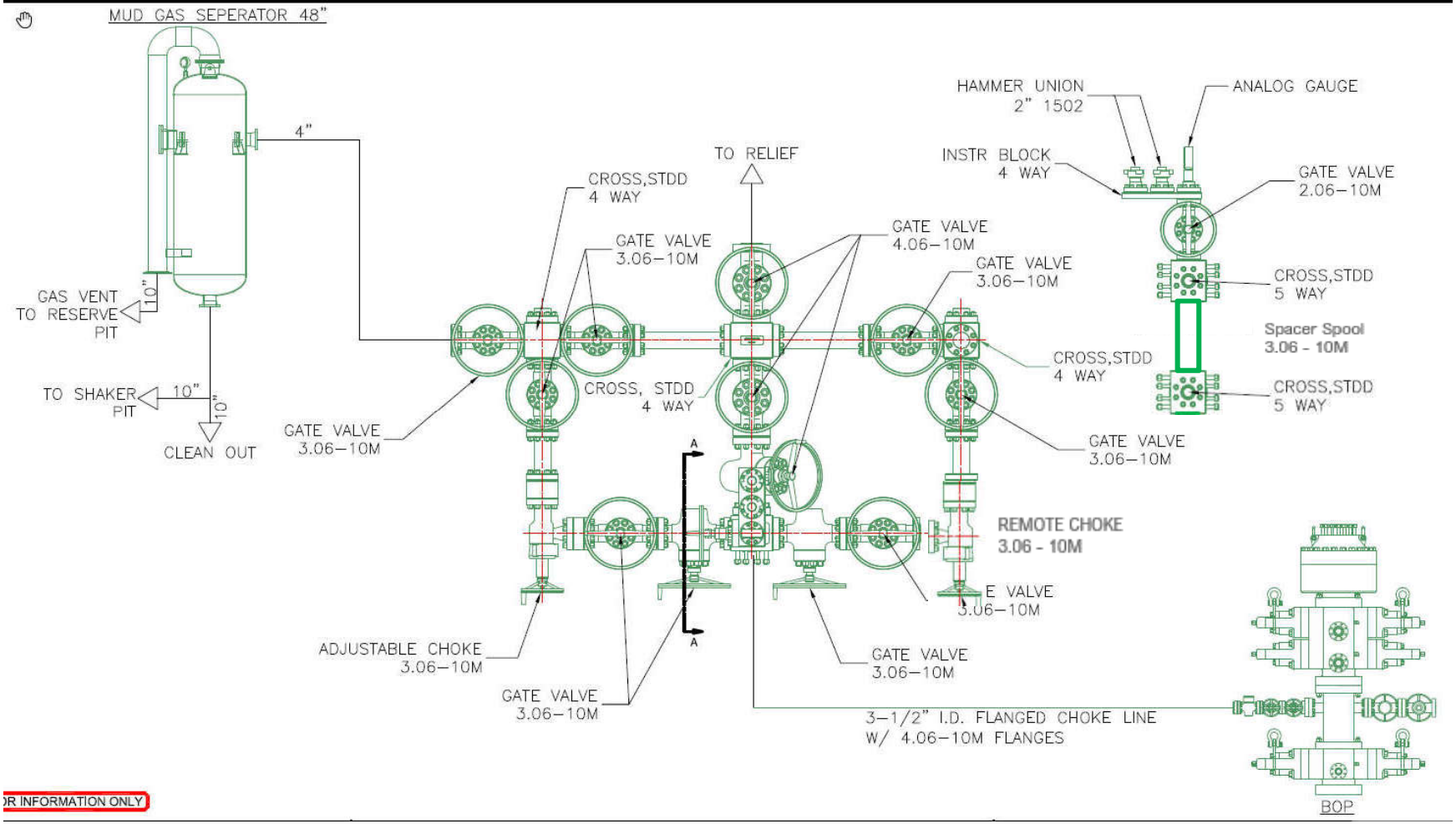
Other Variance attachment:

Zia_Hills_19_Pad_3_Flexhose_Variance_20190503074836.pdf

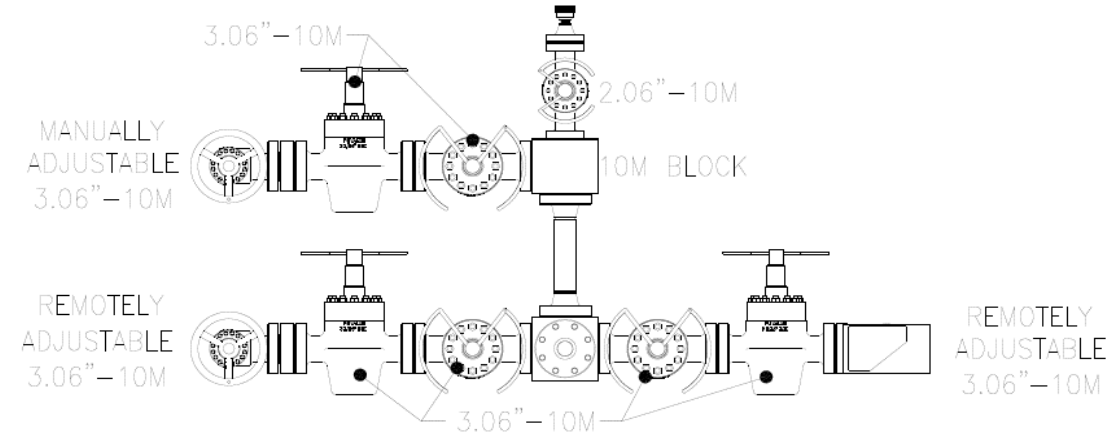
Wild_Well_Control_Plan_20190409123424.pdf

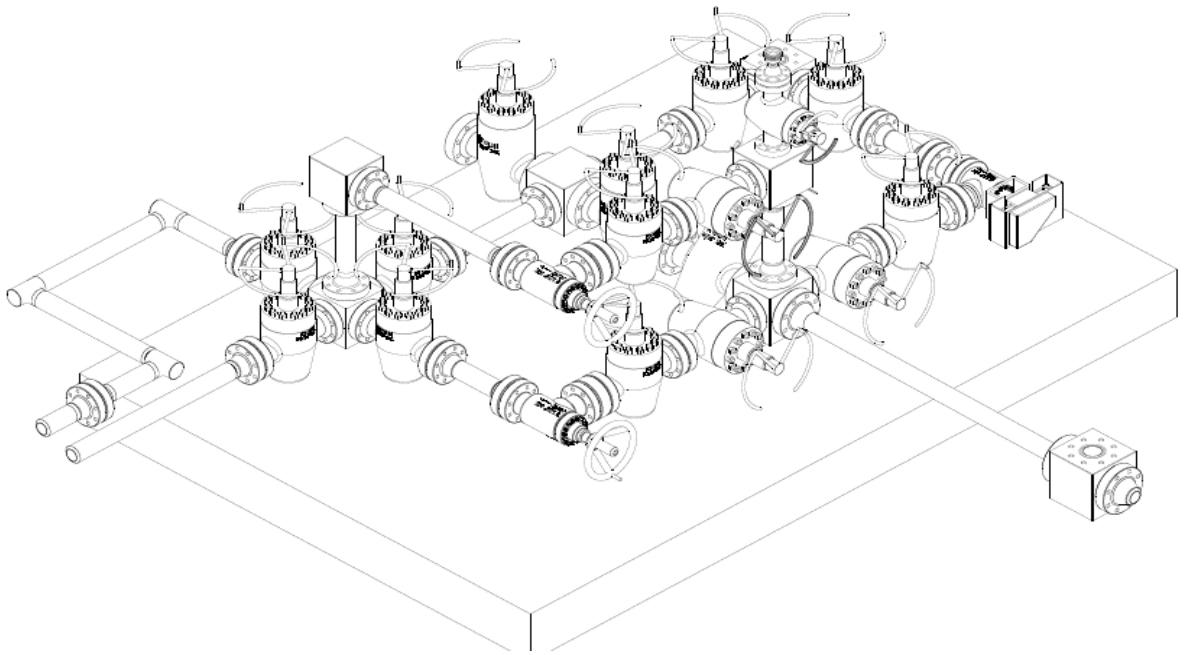
SD_053032_01_Pg_1__3_String__20200214131024.pdf

Choke Manifold 10M psi



OR INFORMATION ONLY


3.06"–10M
2.06"–10M
MANUALLY
ADJUSTABLE
3.06"–10M
10M BLOCK
REMOTELY
ADJUSTABLE
3.06"–10M
REMOTELY
ADJUSTABLE
3.06"–10M
3.06"–10M



BOPE Configuration & Specifications
13-5/8" x 10,000 psi System

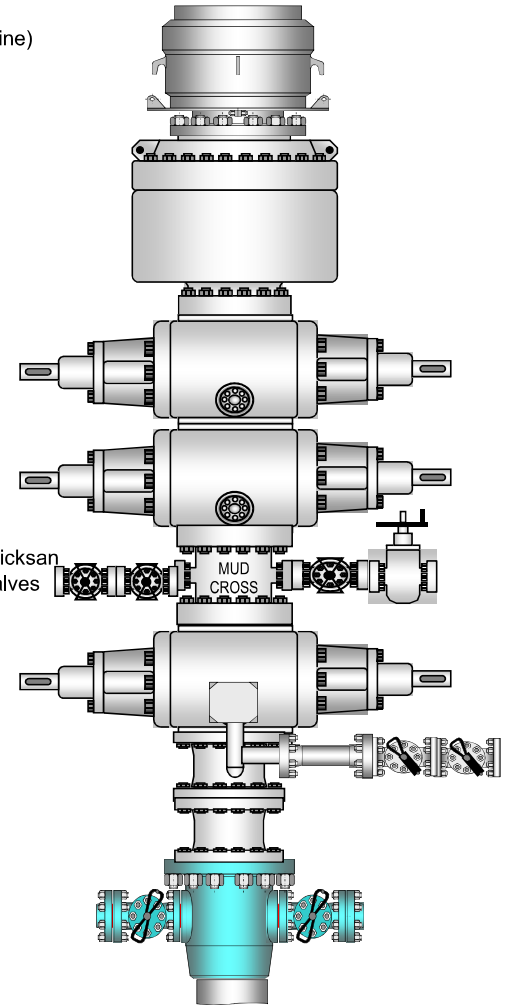
Rotating Head (w/ fill up line)
13-5/8" x 10k psi

Annular Preventer
13-5/8" x 5k psi

Pipe Ram
13-5/8" x 10k psi

Blind Ram
13-5/8" x 10k psi

Kill Line 2-1/16" x 10k Chicksan
(2) 2-1/16" x 10k Gate Valves
Outer Check Valve



Choke Line 6" x 3" x 10k psi
4-1/16" x 10k psi Inner Manual Valve
4 - 1/16" x 10k psi Outer Remote HCR

Pipe Ram
13-5/8" x 10k psi

2" x 5k psi Gate Valves
Pressure Testing Lines

Spacer Spool
13-5/8" x 10k psi

Casing Head
13-5/8" x 10k psi

ZHU 1932 BS 9H **Sec 19 T26S R32E** **Lea, Co, NM** **5/7/2019**

SURFACE CASING DESIGN INFORMATION

Setting Depth: **1,313' MD** **1,313' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
13.375	54.5	J-55	BTC	12.612	12.459	1,130 / 960	2,730 / 2,320	909 / 772

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
14.375	12.612	12.459	BTC	1,130 / 960	2,730 / 2,320	909 / 772

Surface Casing Test Pressure = 1,500 psi

Pressure Test Prior to Drill Out

Minimum Design / Safety Factors COP

Burst	*Collapse*	*Tension (Body &*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
4.41	*2.73*	*12.70*	Dry
		14.63	Bouyed

INTERMEDIATE CASING DESIGN INFORMATION

Setting Depth: **9,940' MD** **9,383' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
9.625	40.0	L80-IC	BTC	8.835	8.75	3,870 / 3,685	5,750 / 5000	916 / 654

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
10.625	8.835	8.75	BTC	3,870 / 3,685	5,750 / 5000	947 / 676

Production Casing Test Pressure = TBD

Minimum Design / Safety Factors

Burst	*Collapse*	*Tension (Body & Connection)*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
1.28	*1.29*	*2.33*	Dry
		2.71	Bouyed

PRODUCTION CASING DESIGN INFORMATION

Setting Depth: **19,556' MD** **9,383' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
5.5	20	P-110 ICY	TXP	4.778	4.653	12,100 / 11,524	14,360 / 12,487	729 / 521

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
6.1	4.766	4.653	TXP	12,100 / 11,524	14,360 / 12,487	729 / 521

Production Casing Test Pressure = TBD

Minimum Design / Safety Factors

Burst	*Collapse*	*Tension (Body & Connection)*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
3.20	*4.03*	*3.88*	Dry
		4.52	Bouyed

TXP® BTC

Printed on: 22/04/2019

		Min. Wall Thickness	87.5%	(*)GradeP110-ICY	
Outside Diameter	5.500 in.	Connection OD Option	REGULAR	Coupling	Pipe Body
Wall Thickness	0.361 in.	Drift	API Standard	Body: White	1st Band: White
Grade	P110-ICY*	Type	Casing	1st Band: Pale Green	2nd Band: Pale Green
				2nd Band: -	3rd Band: Pale Green
				3rd Band: -	4th Band: -

PIPE BODY DATA

Geometry

Nominal OD	5.500 in.	Nominal Weight	20 lbs/ft	Drift	4.653 in.
Nominal ID	4.778 in.	Wall Thickness	0.361 in.	Plain End Weight	19.83 lbs/ft
OD Tolerance	API				

Performance

Body Yield Strength	729 x1000 lbs	Internal Yield	14360 psi	SMYS	125000 psi
Collapse	12100 psi				

CONNECTION DATA

Geometry

Connection OD	6.100 in.	Coupling Length	9.450 in.	Connection ID	4.766 in.
Make-up Loss	4.204 in.	Threads per in	5	Connection OD Option	REGULAR

Performance

Tension Efficiency	100.0 %	Joint Yield Strength	729.000 x1000 lbs	Internal Pressure Capacity [1]	14360.000 psi
Compression Efficiency	100 %	Compression Strength	729.000 x1000 lbs	Max. Allowable Bending	104 °/100 ft
External Pressure Capacity	12100.000 psi				

Make-Up Torques

Minimum	11540 ft-lbs	Optimum	12820 ft-lbs	Maximum	14100 ft-lbs

Operation Limit Torques

Operating Torque	22700 ft-lbs	Yield Torque	25250 ft-lbs		

Notes

This connection is fully interchangeable with:

[1] Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.

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

ZHU 1932 BS 9H **Sec 19 T26S R32E** **Lea, Co, NM** **5/7/2019**

SURFACE CASING DESIGN INFORMATION

Setting Depth: **1,313' MD** **1,313' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
13.375	54.5	J-55	BTC	12.612	12.459	1,130 / 960	2,730 / 2,320	909 / 772

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
14.375	12.612	12.459	BTC	1,130 / 960	2,730 / 2,320	909 / 772

Surface Casing Test Pressure = 1,500 psi

Pressure Test Prior to Drill Out

Minimum Design / Safety Factors COP

Burst	*Collapse*	*Tension (Body &*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
4.41	*2.73*	*12.70*	Dry
		14.63	Bouyed

INTERMEDIATE CASING DESIGN INFORMATION

Setting Depth: **9,940' MD** **9,383' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
9.625	40.0	L80-IC	BTC	8.835	8.75	3,870 / 3,685	5,750 / 5000	916 / 654

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
10.625	8.835	8.75	BTC	3,870 / 3,685	5,750 / 5000	947 / 676

Production Casing Test Pressure = TBD

Minimum Design / Safety Factors

Burst	*Collapse*	*Tension (Body & Connection)*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
1.28	*1.29*	*2.33*	Dry
		2.71	Bouyed

PRODUCTION CASING DESIGN INFORMATION

Setting Depth: **19,556' MD** **9,383' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
5.5	20	P-110 ICY	TXP	4.778	4.653	12,100 / 11,524	14,360 / 12,487	729 / 521

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
6.1	4.766	4.653	TXP	12,100 / 11,524	14,360 / 12,487	729 / 521

Production Casing Test Pressure = TBD

Minimum Design / Safety Factors

Burst	*Collapse*	*Tension (Body & Connection)*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
3.20	*4.03*	*3.88*	Dry
		4.52	Bouyed

TXP® BTC

Printed on: 22/04/2019

		Min. Wall Thickness	87.5%	(*)GradeJ55 (Casing)	
Outside Diameter	13.375 in.	Connection OD Option	REGULAR	Coupling	Pipe Body
Wall Thickness	0.380 in.	Drift	API Standard	Body: Bright Green	1st Band: Bright Green
Grade	J55 (Casing)*	Type	Casing	1st Band: White	2nd Band: -
				2nd Band: -	3rd Band: -
				3rd Band: -	4th Band: -

PIPE BODY DATA

Geometry

Nominal OD	13.375 in.	Nominal Weight	54.5 lbs/ft	Drift	12.459 in.
Nominal ID	12.615 in.	Wall Thickness	0.380 in.	Plain End Weight	52.79 lbs/ft
OD Tolerance	API				

Performance

Body Yield Strength	853 x1000 lbs	Internal Yield	2730 psi	SMYS	55000 psi
Collapse	1130 psi				

CONNECTION DATA

Geometry

Connection OD	14.375 in.	Coupling Length	10.825 in.	Connection ID	12.603 in.
Make-up Loss	4.891 in.	Threads per in	5	Connection OD Option	REGULAR

Performance

Tension Efficiency	100.0 %	Joint Yield Strength	853.000 x1000 lbs	Internal Pressure Capacity [1]	2730.000 psi
Compression Efficiency	100 %	Compression Strength	853.000 x1000 lbs	Max. Allowable Bending	19 °/100 ft
External Pressure Capacity	1130.000 psi				

Make-Up Torques

Minimum	21610 ft-lbs	Optimum	24010 ft-lbs	Maximum	26410 ft-lbs

Operation Limit Torques

Operating Torque	54300 ft-lbs	Yield Torque	68700 ft-lbs		

Notes

This connection is fully interchangeable with:

TXP® BTC - 13.375 in. - 61 / 68 / 72 lbs/ft

[1] Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.

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

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ZHU 1932 BS 9H **Sec 19 T26S R32E** **Lea, Co, NM** **5/7/2019**

SURFACE CASING DESIGN INFORMATION

Setting Depth: **1,313' MD** **1,313' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
13.375	54.5	J-55	BTC	12.612	12.459	1,130 / 960	2,730 / 2,320	909 / 772

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
14.375	12.612	12.459	BTC	1,130 / 960	2,730 / 2,320	909 / 772

Surface Casing Test Pressure = 1,500 psi

Pressure Test Prior to Drill Out

Minimum Design / Safety Factors COP

Burst	*Collapse*	*Tension (Body &*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
4.41	*2.73*	*12.70*	Dry
		14.63	Bouyed

INTERMEDIATE CASING DESIGN INFORMATION

Setting Depth: **9,940' MD** **9,383' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
9.625	40.0	L80-IC	BTC	8.835	8.75	3,870 / 3,685	5,750 / 5000	916 / 654

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
10.625	8.835	8.75	BTC	3,870 / 3,685	5,750 / 5000	947 / 676

Production Casing Test Pressure = TBD

Minimum Design / Safety Factors

Burst	*Collapse*	*Tension (Body & Connection)*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
1.28	*1.29*	*2.33*	Dry
		2.71	Bouyed

PRODUCTION CASING DESIGN INFORMATION

Setting Depth: **19,556' MD** **9,383' TVD**

PIPE BODY DIMENSIONAL / PERFORMANCE DATA:

SIZE (Inches)	WEIGHT (LB/FT)	GRADE	CPLG TYPE	BORE ID (Inches)	DRIFT ID (Inches)	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
5.5	20	P-110 ICY	TXP	4.778	4.653	12,100 / 11,524	14,360 / 12,487	729 / 521

CONNECTION DIMENSIONAL / PERFORMANCE DATA:

OD (Inches)	ID (Inches)	DRIFT (Inches)	CPLG TYPE	COLLAPSE (PSI) API / CoP	BURST (PSI) API / CoP	TENSION (1k LBS) API / CoP
6.1	4.766	4.653	TXP	12,100 / 11,524	14,360 / 12,487	729 / 521

Production Casing Test Pressure = TBD

Minimum Design / Safety Factors

Burst	*Collapse*	*Tension (Body & Connection)*
1.15	*1.05*	*1.40*

Actual Design / Safety Factors

Burst	*Collapse*	*Tension (Body)*	
3.20	*4.03*	*3.88*	Dry
		4.52	Bouyed

TXP® BTC

Printed on: 22/04/2019

		Min. Wall Thickness	87.5%	(*)GradeL80-IC	
Outside Diameter	9.625 in.	Connection OD Option	REGULAR	Coupling	Pipe Body
Wall Thickness	0.395 in.	Drift	API Standard	Body: Red	1st Band: Red
Grade	L80-IC*	Type	Casing	1st Band: Brown	2nd Band: Brown
				2nd Band: -	3rd Band: Pale Green
				3rd Band: -	4th Band: -

PIPE BODY DATA

Geometry

Nominal OD	9.625 in.	Nominal Weight	40 lbs/ft	Drift	8.679 in.
Nominal ID	8.835 in.	Wall Thickness	0.395 in.	Plain End Weight	38.97 lbs/ft
OD Tolerance	API				

Performance

Body Yield Strength	916 x1000 lbs	Internal Yield	5750 psi	SMYS	80000 psi
Collapse	3870 psi				

CONNECTION DATA

Geometry

Connection OD	10.625 in.	Coupling Length	10.825 in.	Connection ID	8.823 in.
Make-up Loss	4.891 in.	Threads per in	5	Connection OD Option	REGULAR

Performance

Tension Efficiency	100.0 %	Joint Yield Strength	916.000 x1000 lbs	Internal Pressure Capacity [1]	5750.000 psi
Compression Efficiency	100 %	Compression Strength	916.000 x1000 lbs	Max. Allowable Bending	38 °/100 ft
External Pressure Capacity	3870.000 psi				

Make-Up Torques

Minimum	18860 ft-lbs	Optimum	20960 ft-lbs	Maximum	23060 ft-lbs

Operation Limit Torques

Operating Torque	35600 ft-lbs	Yield Torque	43400 ft-lbs		

Notes

This connection is fully interchangeable with:

TXP® BTC - 9.625 in. - 36 / 43.5 / 47 / 53.5 / 58.4 lbs/ft

[1] Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.

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

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ConocoPhillips

H_2S Contingency Plan

November 2016

H_2S Contingency Plan Holders:

Attached is an H_2S Contingency Plan for COPC Permian Drilling working in the West Texas and Southeastern New Mexico areas operated by ConocoPhillips Company.

If you have any question regarding this plan, please call Matt Oster (830) 583-1297, or Ryan Vacarella (985) 217-7594.

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Section

HYDROGEN SULFIDE (H_2S) OPERATIONS

Contingency Plan
For
Permian Drilling Operations

ConocoPhillips Company

Mid-Continent Business Unit
Permian Asset Area

I.PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H_2S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of H_2S release. Release of H_2S must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

II. SCOPE

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H2S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H_2S could exist under specific weather conditions.

III. PROCEDURES

First Employee on Scene

____Assess the incident and ensure your own safety.

Note the following:

——— Location of the incident.
____Nature of the incident.
——— Wind direction and weather conditions.
____Other assistance that may be needed.

____ Call local supervisory personnel (refer to Section V: Emergency Call List) until personal contact is made with a person on the list.

____ Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).

____ Secure the site.

____ Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).

First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)

——— Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.

——— Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

DETECT the problem
ESTI**I**MATE likely harm without intervention
CHOOSE response objectives
IDENT**I**FY action options
DO the best option
EVALUATE the progress

____Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).

____Call your supervisor (refer to Section V: Emergency Call List).

____Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance).

____ Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).

____ Ensure site security.

___ Set barricades and /or warning signs at or beyond the calculated 100 ppm H_2S radius of exposure (ROE). All manned barricades must be equipped with an H_2S monitor and a 2-way radio.

___ Set roadblocks and staging area as determined.

____ Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:

Recording Secretary _____
Public Information Officer _____
Safety/Medical Officer _____
Decontamination Officer _____

____ Have the "Recording Secretary" begin documenting the incident on the "Incident Log" (refer to Section VIII: Forms/Reports).

____ If needed, request radio silence on all channels that use your radio tower stating that, until further notice, the channels should be used for emergency communications only.

____ Perform a Site Characterization and designate the following:

Hot Zone -- Hazardous Area
Warm Zone -- Preparation & Decontamination Area
Cold Zone -- Safe Area

AND

On-Scene Incident Command Post	(Cold Zone)
Public Relations Briefing Area	(Cold Zone)
Staging Area	(Cold Zone)
Triage Area	(Cold Zone)
Decontamination Area	(Warm Zone)

____Refer all media personnel to ConocoPhillips' On-Scene Public Information Officer (refer to Section VI: Public Media Relations).

____Coordinate the attempt to stop the release of H_2S. You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)

____Once the emergency is over, return the situation to normal by:

Confirming the absence of H_2S and combustible gas throughout the area,

Discontinuing the radio silence on all channels, stating that the emergency incident is over,

Removing all barricades and warning signs,

Allowing evacuees to return to the area, and

Advising all parties previously notified that the emergency has ended.

____ Ensure the proper regulatory authorities/agencies are notified of the incident (refer to Section V: Emergency Call List).

____ Clean up the site. (Be sure all contractor crews have had appropriate HAZWOPER training.)

____ Report completion of the cleanup to the Asset Environmentalist. (Environmentalist will report this to the proper State and/or Federal agencies.)

____ Fill out all required incident reports and send originals to the Safety Department. (Keep a copy for your records.)

- Company employee receiving occupational injury or illnesses.

- Company employee involved in a vehicle accident while driving a company vehicle.

- Company property that is damaged or lost.

- Accident involving the public or a contractor; includes personal injuries, vehicle accidents, and property damage. Also includes any situation, which could result in a claim against the Company.

- Hazardous Material Spill/Release Report Form

- Emergency Drill Report

____ Assist the Safety Department in the investigation of the incident. Review the factors that caused or allowed the incident to occur, and modify operating, maintenance, and/or surveillance procedures as needed. Make appropriate repairs and train or retrain employees in the use and operation of the system.

____ If this incident was simulated for practice in emergency response, complete the Emergency Drill Report found in Section VIII: Forms/Reports and submit a copy to the Drilling Manager. (Keep one copy in area files to document exercising of the plan.)

Emergency Procedures
Responsibility

In the event of a release of potentially hazardous amounts of H2S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.

2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.

3. Advise each contractor, service company, and all others entering the site that H2S may be encountered and the potential hazards that may exist.

4. Authorize the evacuation of local residents if H2S threatens their safety.

5. Keep the number of persons on location to a minimum during hazardous operations.

6. Direct corrective actions to control the flow of gas.

7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard.

   This should be used **ONLY AS A LAST RESORT**.

IV. EMERGENCY EQUIPMENT and MAINTENANCE

Emergency Equipment Suppliers

DXP/ Safety International – Odessa, Tx. 432.580.3770
H_2S monitors
Breathing air includes cascade systems
First aid and medical supplies
Safety equipment
H2S Specialist

Total Safety US Odessa, Tx/ Hobs, NM 432.561.5049 Odessa
H_2S monitors 575.392.2973 Hobbs
Breathing air includes cascade systems
First aid and medical supplies
Safety equipment

DXP/ Indian Fire & Safety – Hobbs, NM 575.393.3093
H_2S monitors
Breathing air including cascade systems trailer mounted
30 minute air packs
Safety Equipment

TC Safety – Odessa, Tx.
H_2S monitors 432.413.8240
Cascade systems trailer mounted
30 minute air packs
Safety Equipment
H2S Specialist

Secorp Industries – Odessa, Tx. 432.614.2565
H2S Monitor Systems
Cascade Systems
H2S Specialist
H2S, CPR, First Aid Training

Emergency Equipment and Maintenance (continued)

General Information

Materials used for repair should be suitable for use where H_2S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H_2S areas shall have received training on the hazards, characteristics, and properties of H_2S, and on procedures and safety equipment applicable for use in H_2S areas.

H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

3 – Fixed H2S sensors located as follows:
- 1 – on the rig floor
- 1 – at the Bell Nipple
- 1 – at the Shale Shaker or Flowline

1 – Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

2 – Windsocks that are clearly visible.

1 – Audible warning system located on rig floor

2 – Visual warning systems (Beacon Lights)
- 1 – Located at the rig floor
- 1 – Located in the mud mixing room

Note: All alarms (audible and visual) should be set to alarm at 10 ppm.

2 - Briefing areas clearly marked
- 2 - SCBA's at each briefing area
- 1- SCBA located at the Drilling Reps office

Note:
1. **All SCBA's must be positive pressure type only!!!**
2. **All SCBA's must either be Scott or Drager brand.**
3. **All SCBA's face pieces should be size large, unless otherwise specified by the Drilling Supervisor.**

5 – Emergency Escape Paks located at Top Doghouse.
Note: Ensure provisions are included for any personnel working above rig floor in derrick.

1 – Tri or Quad gas monitor located at the Drilling Reps office. This will be used to determine if the work area if safe to re-enter prior to returning to work following any alarm.

V. EMERGENCY CALL LIST:

The following is a priority list of personnel to contact in an emergency situation:

Supervisory Personnel	Office No.		Cellphone
Drilling Supt. (Unconventional) **Scott Nicholson**	432.688.9065		432.230.8010
Field Superintendents: **Clint Case.**	432.688.6878		940.231.2839
Safety Support: **Matt Oster** **Ryan Vaccarella**	830.583.1245 985.217.7594		601.540.6988 NA
Supt Operations-SEMN/Shale Mike Neuschafer	432.688.6834		713.419.9919
MCBU Safety Coordinator **James Buzan**	432.688.6860		832.630.4320
Manger GCBU/MCBU D & C **Seth Crissman**	832.486.6191		832.513.9308

EMERGENCY CALL LIST: State Officials

Regulatory Agencies

Texas Railroad Commission (District 8) Office: 432.684.5581
Midland, Texas

New Mexico Oil Conservation Commission Office: 575.393.6161
P. O. Box 1980
Hobbs, New Mexico 88240-1980

Bureau of Land Mngt.
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220

Office: 575.234.5972
Fax: 575.885.9264

EMERGENCY CALL LIST: Local Officials

Refer to the Location Information Sheet
Note: The LIS should include any area residents (i.e. rancher's house, etc)

VI. Public Media Relations

The **Public Information Officer** becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and **only with facts,** do not speculate about the cause, amount of damage, or the potential impact of the incident of the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

Note:
Do Not Say "No Comment." (This implies a cover-up.)

Do Not Disclose Names of Injured or Dead! Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.

VII. Public Notification/Evacuation

Alert and/or Evacuate People within the Exposure Area

1. Public Notification – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person **first** observing the leak should take **immediate** steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

   Note: Bilingual employees may be needed to assist in notification of residents.

2. Evacuation Procedures – Evacuation will proceed upwind from the source of the release of H_2S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

   Roadblocks and the staging area should be established as necessary for current wind conditions.

Note: In all situations, consideration should be given to wind direction and weather conditions. H_2S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

VIII. FORMS & REPORTS

I. Incident Log

II. Preliminary Emergency Information Sheet

III. Emergency Drill Report

IV. Onshore Hazardous Material Spill/Release Report Form

V. Immediate Report of Occupational Injury or Illness
Report of Accident-Public Contractor
Report of Loss or Damage to Company Property
Report of Automotive Incident

ConocoPhillips MCBU - Permian-Panhandle Gold Data

Planning - NM East State Zone - 3001
ZIA HILLS 1932 BS 9H
ZIA HILLS 1932 BS 9H

ZIA HILLS 1932 BS 9H

Plan: ZIA HILLS 1932 BS 9H_WP1

Standard Planning Report

07 May, 2019

Database:	EDT 14 Central Planning	**Local Co-ordinate Reference:**	Well ZIA HILLS 1932 BS 9H
Company:	ConocoPhillips MCBU - Permian-Panhandle Golc	**TVD Reference:**	RKB @ 3203.83ft
Project:	Planning - NM East State Zone - 3001	**MD Reference:**	RKB @ 3203.83ft
Site:	ZIA HILLS 1932 BS 9H	**North Reference:**	Grid
Well:	ZIA HILLS 1932 BS 9H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ZIA HILLS 1932 BS 9H		
Design:	ZIA HILLS 1932 BS 9H_WP1		

Project	Planning - NM East State Zone - 3001, Permian Basin - New Mexico - East/South East, Planning Project for Permian wells in NM		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site	ZIA HILLS 1932 BS 9H				
Site Position:		**Northing:**	374,082.591usft	**Latitude:**	32° 1' 37.097 N
From:	Map	**Easting:**	690,892.593usft	**Longitude:**	103° 43' 2.514 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.33 °

Well	ZIA HILLS 1932 BS 9H					
Well Position	**+N/-S**	0.00 ft	**Northing:**	374,082.591usfl	**Latitude:**	32° 1' 37.097 N
	+E/-W	0.00 ft	**Easting:**	690,892.593 usfl	**Longitude:**	103° 43' 2.514 W
Position Uncertainty		2.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,177.83 ft

Wellbore	ZIA HILLS 1932 BS 9H				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2018	2/14/2019	6.92	59.77	47,667.04315774

Design	ZIA HILLS 1932 BS 9H_WP1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	178.79	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,490.23	7.35	8.73	2,488.89	31.05	4.77	1.50	1.50	0.00	8.73	
8,025.04	7.35	8.73	7,978.18	731.25	112.29	0.00	0.00	0.00	0.00	
8,515.27	0.00	0.00	8,467.06	762.30	117.06	1.50	-1.50	0.00	180.00	
8,715.27	0.00	0.00	8,667.06	762.30	117.06	0.00	0.00	0.00	0.00	ZIA HILLS 19 409H
8,715.28	0.00	0.00	8,667.07	762.30	117.06	0.00	0.00	0.00	0.00	
9,840.28	90.00	179.52	9,383.27	46.13	123.00	8.00	8.00	0.00	179.52	
19,555.60	90.00	179.52	9,383.27	-9,668.86	203.62	0.00	0.00	0.00	0.00	ZIA HILLS 19 409H

Database:	EDT 14 Central Planning	**Local Co-ordinate Reference:**	Well ZIA HILLS 1932 BS 9H
Company:	ConocoPhillips MCBU - Permian-Panhandle Golc	**TVD Reference:**	RKB @ 3203.83ft
Project:	Planning - NM East State Zone - 3001	**MD Reference:**	RKB @ 3203.83ft
Site:	ZIA HILLS 1932 BS 9H	**North Reference:**	Grid
Well:	ZIA HILLS 1932 BS 9H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	ZIA HILLS 1932 BS 9H		
Design:	ZIA HILLS 1932 BS 9H_WP1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,490.23	7.35	8.73	2,488.89	31.05	4.77	-30.94	1.50	1.50	0.00
8,025.04	7.35	8.73	7,978.18	731.25	112.29	-728.72	0.00	0.00	0.00
8,515.27	0.00	0.00	8,467.06	762.30	117.06	-759.66	1.50	-1.50	0.00
8,715.27	0.00	0.00	8,667.06	762.30	117.06	-759.66	0.00	0.00	0.00
8,715.28	0.00	0.00	8,667.07	762.30	117.06	-759.66	0.00	0.00	0.00
9,840.28	90.00	179.52	9,383.27	46.13	123.00	-43.53	8.00	8.00	0.00
19,555.60	90.00	179.52	9,383.27	-9,668.86	203.62	9,671.00	0.00	0.00	0.00

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
ZIA HILLS 19 409H B - plan misses target center by 0.01ft at 19555.60ft MD (9383.27 TVD, -9668.86 N, 203.62 E) - Point	0.00	0.00	9,383.26	-9,668.86	203.62	364,414.230	691,096.199	32° 0' 1.406 N	103° 43' 0.790 W
ZIA HILLS 19 409H V - plan misses target center by 364.35ft at 5447.23ft MD (5421.56 TVD, 405.13 N, 62.21 E) - Point	0.00	0.00	5,374.93	762.30	117.06	374,844.850	691,009.644	32° 1' 44.634 N	103° 43' 1.104 W
ZIA HILLS 19 409H K - plan hits target center - Point	0.00	0.00	8,667.06	762.30	117.06	374,844.850	691,009.644	32° 1' 44.634 N	103° 43' 1.104 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
900.00	900.00	11 3/4" x 14 3/4"	11-3/4	14-3/4

WELL PLAN SUMMARY

1280 Extended Reach Single Lateral

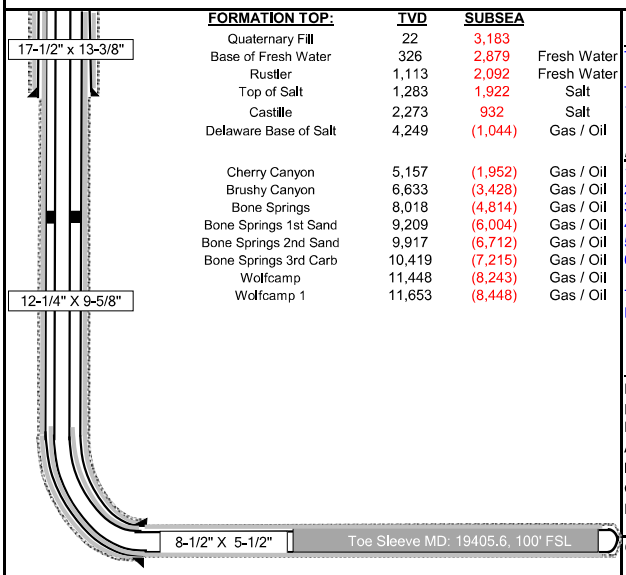
Date: Feb 14, 2020
Version: 1
Prepared by: M. Callahan

WELL: ZHU 1932 BS 9H
SURFACE LOC: Sec 19 T26S R32E — 2239' FSL 1612' FWL
BH LOC: Sec 31 T26S R32E — 50' FSL 1714' FWL
ELEVATIONS: GL 3,177.8' / KB +27.0'

COUNTY,STATE: Lea, Co, NM
API No.:
TRRC Permit:
BLM Permit:
WH Coord.: (NAD-27) LAT 32° 1' 37.1" N / LON 103° 43' 2.51" W

AFE: WAF.OND.
Drilling Network No.:
Invoice Handler ID: VENNECP

COST ESTIMATE	
DRILLING	
COMPLETION	
FACILITIES	
TOTAL	



FORMATION TOP:	TVD	SUBSEA	
Quaternary Fill	22	3,183	
Base of Fresh Water	326	2,879	Fresh Water
Rustler	1,113	2,092	Fresh Water
Top of Salt	1,283	1,922	Salt
Castille	2,273	932	Salt
Delaware Base of Salt	4,249	(1,044)	Gas / Oil
Cherry Canyon	5,157	(1,952)	Gas / Oil
Brushy Canyon	6,633	(3,428)	Gas / Oil
Bone Springs	8,018	(4,814)	Gas / Oil
Bone Springs 1st Sand	9,209	(6,004)	Gas / Oil
Bone Springs 2nd Sand	9,917	(6,712)	Gas / Oil
Bone Springs 3rd Carb	10,419	(7,215)	Gas / Oil
Wolfcamp	11,448	(8,243)	Gas / Oil
Wolfcamp 1	11,653	(8,448)	Gas / Oil
TARGET	19,556	9,383	Gas / Oil
Formation Dip Rate:	est 90.1° (up dip)		
PBTD	19,556	9,383	Gas / Oil

9 5/8 in. shoe 9940.28' MD 2285.13'FSL

Estimated BH Static Temperature (°F): 285
Max. Anticipated BH Pressure: 0.700 psi/ft — 6,568 psi — 13.5 ppg
Max Anticipated Surface Pressure: 3,606 psi

Objective

This well is to be drilled with safety and protection of the environment as the primary objectives.

The objective is to drill a 1280 single lateral well in the Bone Springs 1st Sand formation and completed with 5-1/2"cemented casing.

Notes

1.) This well will be drilled with Patterson 256 or a like kind rig.
2.) Refer to drilling procedure for additional detail and information.
3.) Offset well () located of surface location.
4.) The primary regulatory agency is the BLM.
5.) Surface: 2° max., 1°/ 100' DLS; svy every 500'
6.) Int: 7.3535° max., 0°/ 100'; svy every 90' (svy every 30' in build and drop, 30' in curve)
7.) Losses to be expected in Cherry and Brushy Canyon formations. Overpressure may be encountered throughout Delaware.

Goals

Have no lost time or recordable accidents.
Have no spills or adverse environmental impact.
Have no stuck pipe incidents.
Avoid lost circulation incidents.
Maintain well control and follow ConocoPhillips well control policy.
Obtain good mud log data.
Deliver usable wellbore to production department.

CONTACTS

		Office	Cell
Drilling Engineer:	Mike Callahan	832-486-2480	907-231-2176
Geologist:	Josh Day	281-206-5620	423-512-0347
Onsite Drilling Rep.:	Greg Rivera	432-309-9007	
	Manny Castillo		
Field Drilling Supt.:	James Taylor	830-583-4828	956-229-1393
	Patrick Wellman		432-215-7079
Drilling Supt.:	Troy McGinn	832-486-2575	346-242-4551

DRILLING FLUID:

	Type	Interval (MD)	Density ppg	Vis sec/qt	PV cP	YP #/100ft2	pH	FL mL	LGS % by vol	NaCl ppb sol	Remarks
Surface:	Fresh Water	Surface - 1,313'	8.6	28-50	1-5	2-6	7.5-8.5	NC	< 5.0	10,000	Rig Tanks
Intermediate 1:	Emulsified Brine	1313' - 9940'	9.2	28-50	1-5	2-6	7.5-8.5	NC	< 5.0	180,000	Rig Tanks
Production:	Brine	9940' - 19556'	9.2	50-70	18-25	8-14	9.5-10	< 8	< 8.0	400 - 00	Rig Tanks

Reference Drilling Fluids Program

CASING:

	Hole	TOP (MD)	BTM (MD)	Length	Size	Wt	Grade	Connection
Surface:	17-1/2"	27'	1,313'	1,286'	13 3/8	54.50	J-55	BTC
	ACP/DV Tool run 100' below water board depth if necessary							
Intermediate	12-1/4"	27'	9,940'	9,913'	9 5/8	40.00	L80-IC	BTC
Production:	8-1/2"	27'	19,556'	19,529'	5 1/2	20.00	P-110 ICY	TXP

CENTRALIZATION:
Surface Casing: 1 per 4 joints.
Intermediate Casing: Shoe joint. 1 per joint from FC to 7,800'. 1 per 2 joints 7,800' to 2,300'. 1 per 4 joints 2,300' to surface.
Production Liner: Rigid body 1 per 2 joints TD to Int Shoe. Bow Spring 1 per 2 joints Int shoe to 100' above KOP. 1 per 4 joints to surface

BOP:
Minimum - COP Class 3 Well Control Requirements
Rig - 13-5/8"x10M psi Rams / 4-1/16"x10M psi Manifold
Stackup - Rotating Head, Annular Preventer, Pipe Ram, Blind Ram, Mud Cross (Choke & Kill Valves), Pipe Ram
Waste Handling: Closed loop cuttings disposal system with haul off to approved facility.
Mud Pit: Float Based Electronic PVT with Flow Sensor and Gravity Trip Tank, Alarms +/- 10 BBLS
Wellhead: 13-5/8" x 10M psi (Casing Head - "A" Section)

CEMENT:

	Hole	MD	TVD	Spacer	Lead	Tail	COMMENTS
Surface:	17-1/2"X13-3/8"	1,313'	1,313'	20 bbl FW	1100 sx Control Set 'C' + adds 11.5ppg 2.66 ft3/sk	660 sx Type 'III' + adds 13ppg 1.34 ft3/sk	Cemented to surface w/ 200%XS Add FiberBlock
Intermediate:	12-1/4"X9-5/8"	9,940'	9,383	40 bbl Invert Spacer + 100 bbl SW	610 sx WBL + adds 11.5ppg 1.77 ft3/sk	470 sx Thermal 35 + adds 15ppg 1.63 ft3/sk	TOC 500' into previous casing shoe w/ 70%L / 30%T XS calc'd on 12.25" Add FiberBlock
Production:	8-1/2"X5-1/2"	19,556'	9,383'	40 bbl Visweep	2524 sx 1:1:0 'Poz:Lafarge G' + 20% Silica Flour + 8% Silica Fume + adds 15.6 ppg 1.19ft3/sk		Cemented to TOL w/ 10% XS calc'd on 8.5" hole, Displ. = volume to float collar +/- half shoe track

Reference Cementing Recommendation

DIRECTIONAL PLAN:

Comments	MD (ft)	INC (deg)	AZI (deg)	TVD (ft)	NS (ft)	EW (ft)	DLS (°/100')	VS (ft)	SEC-T-R	Section Line Distance	
Build @ 1.5°/100'	2,000'	0	0	2,000'	0	0	0	0	Sec 19 T26S R32E	2239' FSL	1612' FWL
End Build @ 7°	2,490'	7	9	2,489'	31	5	1.5	-31	Sec 19 T26S R32E	2270' FSL	1617' FWL
Drop @ 1.5°/100'	8,025'	7	9	7,978'	731	112	0.0	-729	Sec 19 T26S R32E	2970' FSL	1724' FWL
Complete Drop, Hold to KOP	8,515'	0	0	8,467'	762	117	1.5	-760	Sec 19 T26S R32E	3001' FSL	1729' FWL
KOP Build @ 8°/100'	8,715'	0	0	8,667'	762	117	0	-760	Sec 19 T26S R32E	3001' FSL	1729' FWL
Curve LP	9,840'	90	180	9,383'	46	123	8	-44	Sec 19 T26S R32E	2285' FSL	1735' FWL
Toe Sleeve 2	19,356'	90	180	9,383'	-9484	204	0	9,486	Sec 31 T26S R32E	150' FSL	1714' FWL
Toe Sleeve 1	19,406'	90	180	9,383'	-9534	204	0	9,536	Sec 31 T26S R32E	100' FSL	1714' FWL
PBHL/TD	19,556'	90	180	9,383'	-9669	204	0	9,671	Sec 31 T26S R32E	50' FSL	1714' FWL

Reference Directional Plan — MWD Surveys will be taken at 90' interval below surface casing, 30' while building curve, and every 90' while drilling lateral.

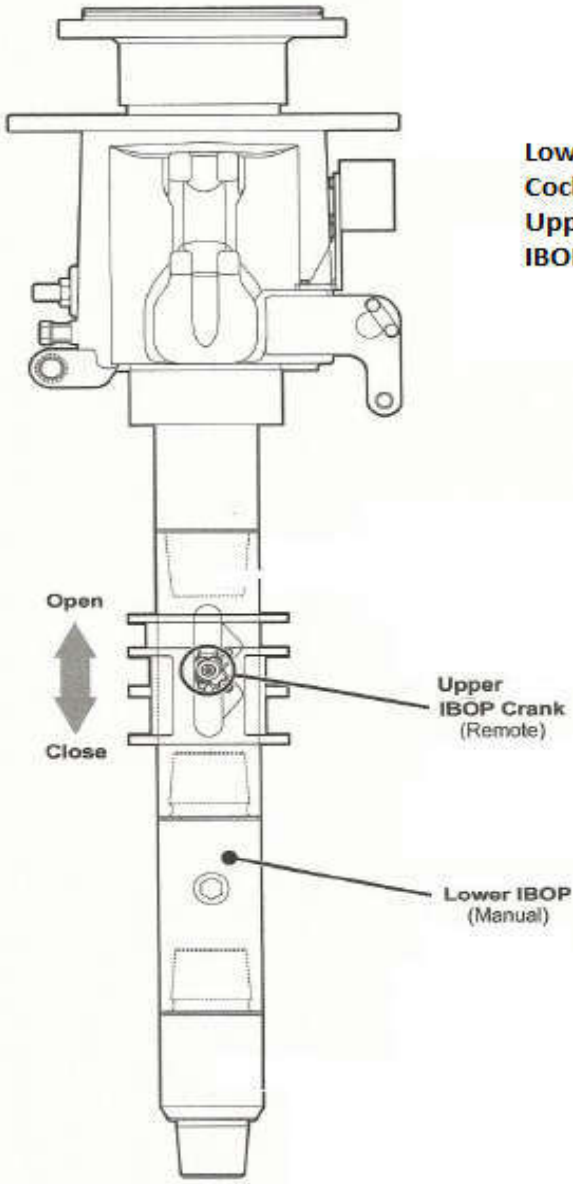
FORMATION EVALUATION:
Mud Logging - One-Man: First surface hole to TD. First intermediate hole to TD
Mud Logging - Two-Man: Intermediate Casing Point to TD
Open Hole - PEX: None
Cased Hole - GR/CBL/USIT: NA
MWD - GR: 200' above KOP to TD

Correlation Well:

OUR WORK IS NEVER SO URGENT OR IMPORTANT THAT WE CANNOT TAKE THE TIME TO DO IT SAFELY!

PH-75 pipehandler

the IBOP valves



Lower Kelly Cock and Upper Kelly Cock function are performed by Upper IBOP (inside BOP) and Lower IBOP in Top Drive

ZHU 1932 BS 9H
Sec 19 T26S R32E

13-3/8" Surface Casing:

Surface Casing Depth (Ft)	1,313
Surface Casing O.D. (In.)	13 3/8
Surface Casing ID (In)	12.612
Hole O.D. (In)	17 1/2
Excess (%)	200%
Volume Tail (Sx)	660
Yield Tail (Cu. Ft./Sx)	1.33
Yield Lead (Cu. Ft./Sx)	1.73
Shoe Joint (Ft)	40
Shoe Volume (Cu. Ft)	34.7
Tail feet of cement	400
Calculated Total Volume (Cu. Ft.)	2,771
Calc. Tail Volume (Cu. Ft.)	868
Calc. Lead Volume (Cu. Ft.)	1,902
Calc. Lead Volume (Sx)	1100
Lead Volume (bbls)	338.8
Tail volume (bbls)	154.6
Displacement Volume (bbls)	196.7

Stage 1

9-5/8" Intermediate Casing (Lead):

Production Casing O.D. (In.)	9.625
Production Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	70%
DV Tool Depth	5,157'
Yield Lead (Cu. Ft./Sx)	2.7
Calculated Total Lead (Cu. Ft.)	1,628
Calc. Lead Volume (Sx)	610
Lead Volume (bbls)	290

9-5/8" Intermediate Casing (Tail):

Production Casing Depth (Ft)	9,940'
Production Casing O.D. (In.)	9.625
Production Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	30%
KOP	8,715'
Top Tail (Ft) - 1000' above KOP	8,215'
Yield Tail (Cu. Ft./Sx)	1.59
Shoe Joint (Ft)	90
Shoe Volume (Cu. Ft)	38.3
Calc. Tail Volume (Cu. Ft.)	741
Required Tail Volume (Sx)	470
Tail Volume (bbls)	132
Displacement Volume (bbls)	747

Stage 2

9-5/8" Intermediate Casing (Tail):

Surface Casing Depth (ft)	1,313'
Surface Casing I.D. (In)	12.612
DV Tool Depth (Ft)	5,157'
Production Casing O.D. (In.)	9.625
Production Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	200%
Top Cement (Surface)	27'
Yield Tail (Cu. Ft./Sx)	1.73
Calc. Tail Volume (Cu. Ft.)	4,087
Required Tail Volume (Sx)	2370
Tail Volume (bbls)	728
Displacement Volume (bbls)	391

5-1/2" Production Liner (Tail):

Intermediate Casing Depth (Ft)	9,940'
Intermediate Casing O.D. (In.)	9.625
Intermediate Casing ID (In)	8.835
Production CasingTop Depth (Ft)	7,715'
Production Casing Depth (Ft)	19,556'
Production Casing O.D. (In.)	5.500
Production Casing ID (In)	4.778
Hole O.D. (In)	8.50
Excess (%)	10%
Yield Tail (Cu. Ft./Sx)	1.19
Shoe Joint (Ft)	12
Shoe Volume (Cu. Ft)	1.5
Calc. Tail Volume (Cu. Ft.)	3,003
Required Tail Volume (Sx)	2524
	534.9655463

Lead Cement Description:
Mix Weight 12.8 ppg
Control Set 'C'
1.0% $CaCl_2$
1.0% SMS
1.0% OGC-60
¼ lb/sk Polyflake
½ ppb FiberBlock

Tail Cement Description:
Mix Weight 14.8 ppg
0:1:0 'Type III'
0.5% $CaCl_2$
¼ lb/sk Polyflake
½ ppb FiberBlock

Intermediate Lead Cement Description:
Mix Weight 11 ppg
WBL
0.5% CFL-4
0.6% LTR
0.2% SPC-II
0.4% CDF-4P
¼ lb/sk Polyflake
½ ppb FiberBlock

Intermediate Tail Cement Description:
Mix Weight 13.2 ppg
Thermal 35
10% NaCl
0.9% CFR
0.7% CFL-4
0.1% LTR
0.2% SPC-II
0.4% CDF-4P
¼ lb/sk Polyflake
½ ppb FiberBlock

Intermediate Tail Cement Description:
Mix Weight ppg
Thermal 35
10% NaCl
0.9% CFR
0.7% CFL-4
0.1% LTR
0.2% SPC-II
0.4% CDF-4P
¼ lb/sk Polyflake
½ ppb FiberBlock

Production Liner Tail Cement Description:
Mix Weight 15.6 ppg
1:1:0 'Poz:Lafarge G'
20% Silica Flour
8% Silica Flume
2% FWCA-H (FWC-2)
0.3% HTR
0.5% CR-4 (MCR-4)
1% TAE-1 (SEA-1)
1% CFL-4
0.2% CFR-5
0.3% ASM-3 (AS-3)

Production Displacement

Volume to Latch down collar +/- .15 BBLS (half shoe track)

Component	Capacity	Length	Volume
Drill Pipe	.0108 bbl/ft	0	0
Liner (Liner top to Float Collar)	.01493bbl/ft	0	0
Total			0

Gas Capture Plan
Zia Hills 19 Federal Wells

ZHU 1932 BS Wells-Located in Sec. 19, T26S, R32E				
Well Name:	7H	8H	9H	10H
Well Location:	2239' FSL	2239' FSL	2239' FSL	2239' FSL
	1546' FWL	1579' FWL	1612' FWL	1645' FWL
Production Facility Name:	Zia Hills-Buck CF1			
Production Facility Location:	SWSE, Section 19, T26S, R32E			
Anticipated Completion Date:	60-120 days after drilling completed; dependent upon completion crew availability			
Initial Production Volumes:				
Oil (bopd)	865 BOPD	865 BOPD	865 BOPD	865 BOPD
Gas (mcfd)	1,888 MSCFD	1,888 MSCFD	1,888 MSCFD	1,888 MSCFD
Water (bwpd)	3,026 BWPD	3,026 BWPD	3,026 BWPD	3,026 BWPD
Date of First Production:	<45 days following completion operations			
Expected Well Life Expectancy:	30 years	30 years	30 years	30 years

ConocoPhillips, ZHU 1932 BS 9H

1. Target

TVD of target	**9,383'**	Pilot hole depth	N/A
MD at TD:	**19,556'**	Deepest expected fresh water:	300

2. Casing Program

ConocoPhillips Company respectfully requests to approve the following 3-string casing and cementing program with the 9-5/8" casing set in the Bone Spring. The intent for the casing and cementing program:

- Drill 17-1/2" surface hole to Rustler.
- Drill 12-1/4" hole from Rustler to Bone Spring with the same density mud (OBM or Saturated Brine).
- Case and cement the well with 13-3/8" surface, 9-5/8" intermediate and 5-1/2" production casing (3-strings).
- Isolate the Salt & Delaware utilizing Annulus Casing Packer and Stage Tool with 2-Stage Cement or Remediate with Bradenhead Squeeze if necessary.
- Bring cement for 13-3/8" casing and 9-5/8" casing to surface. Cement 5-1/2" casing to lap inside 9-5/8" casing shoe.
- 5-1/2" TXP buttress Casing Connection in 8-1/2" OH for minimum of 0.422 in clearance per Onshore Oil and Gas Order #2 III.B.

**COP Collapse Design: 1/3 Partial Evacuation to the next casing depth (TVD).

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

	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?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	

Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Cementing Program

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. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

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

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

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	11" or 13-5/8"	10M	Annular	x	100% of working pressure
			Blind Ram	x	75% of working pressure
			Pipe Ram	x	
			Double Ram	x	
			Other*		
8-1/2"	11" or 13-5/8"	10M	Annular	x	100% of working pressure
			Blind Ram	x	75% of working pressure
			Pipe Ram	x	

			Double Ram		x	
			Other*			

*Specify if additional ram is utilized.
Note: A 11" or 13-5/8" BOPE will be utilize depending on availability and Rig Substructure Clearance.

BOP/BOPE will be isolated from the casing and tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. BOPE controls will be installed prior to drilling under the surface casing and will be used until the completion of drilling operations. The intermediate interval and the production interval will be tested per 10M working system requirements. A variance is requested to use a 5M annular and test the annular to 100% of its working pressure. This variance is requested in conjunction with the attached well control plan.

Pipe rams will be operationally checked each 24-hour period. Choke manifold will have one remotely operated valve and a manual adjustable valve in front of the choke manifold, as detailed in the Onshore Order 2. It currently contains one 10M hydraulic choke for a total of three choke branches (two manual and one hydraulic).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.

A Spudder Rig may be used to drill the surface and/or intermediate hole for economical reason depending on availability.

The wellhead will be installed and tested as soon as the surface casing is cemented. Prior to drilling out the surface casing, ConocoPhillips shall nipple up a 10M BOPE & choke arrangement with 10M components and test to the rated working pressure of a 10M BOPE system as it is subjected to the maximum anticipated surface pressure 5647 psi. The pressure test to MASP and 100% for annular shall be performed with a test plug after installing the casing head and nippling up the 10M BOPE system prior to drilling out the surface casing.

However, ConocoPhillips shall nipple up a 10M BOPE with 5M Annular Preventer if drilling out surface casing with Primary Rig.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. • See attached data sheet & certification.	
	N	Are anchors required by manufacturer?

Y	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. • See attached schematic.

5. Mud Program

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/MDTotco/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).
	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.

Additional logs planned		**Interval**
	Resistivity	
	Density	
	CBL	
x	Mud log	
	PEX	
x	Bottom hole Gauge	

7. Drilling Conditions

Condition	**Specify what type and where?**
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:

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.

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 45 / 2012
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Continental CONTITECH

Hose Data Sheet

CRI Order No.	516273
Customer	ContiTech Beattie Co.
Customer Order No	PO5438 STOCK
Item No.	3
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSIBX155 RING GROOVE
Type of coupling other end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSI BX155 RING GROOVE
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL RESISTANT
Safety clamp	No
Lifting collar	No
Element C	No
Safety chain	No
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
MBR operating [m]	1,60
MBR storage [m]	1,40
Type of packing	WOODEN CRATE ISPM-15

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 184

PURCHASER:	ContiTech Beattie Co.	P.O. N°:	005438
CONTITECH ORDER N°:	516273	HOSE TYPE:	3" ID Choke and Kill Hose
HOSE SERIAL N°:	61477	NOMINAL / ACTUAL LENGTH:	10,67 m / 10,71 m

W.P.	68,9	MPa	10000	psi	T.P.	103,4	MPa	15000	psi

Duration: 60 min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	10178 10173	AISI 4130	20231
4 1/16" 10K API Flange end		AISI 4130	33051

NOT DESIGNED FOR WELL TESTING

API Spec 16 C

Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
30. January 2012.		ContiTech Rubber Industrial Kft. Quality Control Dept.

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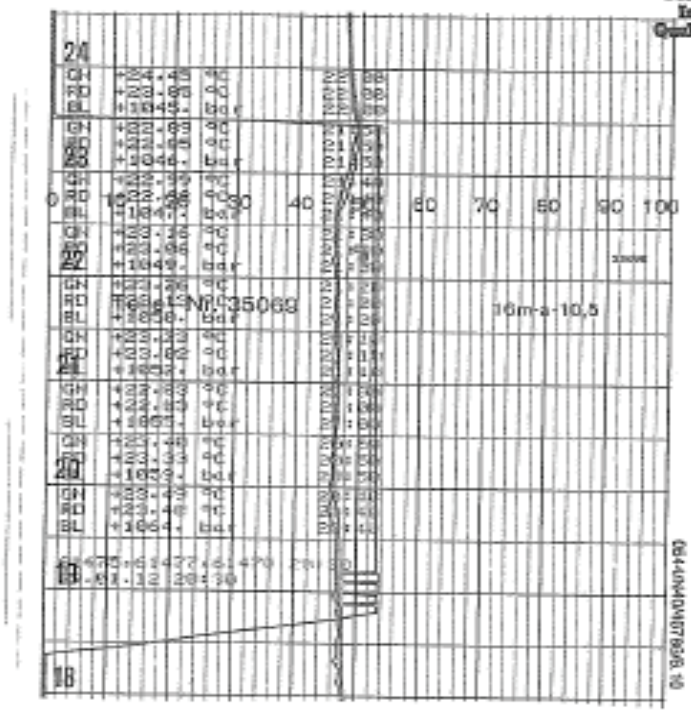
The Court of Csongrad County as Registry Court
Registry Court No: HU 06-09-002502
EU VAT No: HU11087209

Bank data
Commerzbank Zrt.
Budapest
14220408-26830003-00000000

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE *No: 182, 184, 185*

Page: 1 / 1

ContiTech Rubber Industrial Kft.
Quality Control Dept.
(1)



ConocoPhillips Wild Well Control Plan

1. DRILLING WELL CONTROL PLAN

1.1 WELL CONTROL - CERTIFICATIONS

Required IADC/IWCF Well Control Certifications Supervisor Level:

Any personnel who supervises or operates the BOP must possess a valid current IADC training certification and photo identification. This would include the onsite drilling supervisor, tool pusher/rig manager, driller, and any personnel that will be acting in these capacities. Another example of this may be a wireline or snubbing crew rigged up on the rig to assist the rig, the operator of each system must also have a valid control certification for their level of operation.

BLM recognizes IADC training as the industry approved accredited training. Online self-certifications will not be acceptable. Enforcement actions for the lack of a valid Supervisory Level certificate shall be prompt action to correct the deficiency. **Enforcement actions include but are not limited to immediate replacement of personnel lacking certifications, drilling operations being shut down or installment of a 10M annular.**

IADC Driller Level for all Drillers and general knowledge for the Assistant Driller, Derrick Hands, Floor Hands and Motor Hands is recognized by the BLM; however, a Driller Level certification will need to be presented only if acting in a temporary Driller Level certification capacity.

Well Control-Position/Roles

IADC Well control training and certification is targeted toward each role, e.g., Supervisor Level toward those who direct, Driller Level to those who act, Introductory to those who need to know.

- **Supervisor Level**
  - Specifies and has oversight that the correct actions are carried out
  - Role is to supervise well control equipment, training, testing, and well control events
  - Directs the testing of BOP and other well control equipment
  - Regularly direct well control crew drills
  - Land based rigs – usually runs the choke during a well kill operation
  - Due to role on the rig, training and certification is targeted more toward management of well control and managing an influx out of the well

- **Driller Level**
  - Performs an action to prevent or respond to well control accident
  - Role is to monitor the well via electronic devices while drilling and detect unplanned influxes
  - Assist with the testing of BOP and other well control equipment
  - Regularly assist with well control crew drills
  - When influx is detected, responsible to close the BOP
  - Due to role on the rig, training and certification is targeted more toward monitoring and shutting the well in (closing the BOP) when an influx is detected

(Well Control-Positions/Roles Continued)

- **Derrick Hand, Assistant Driller Introductory Level**
  - Role is to assist Driller with kick detection by physically monitoring the well at the mixing pits/tanks
  - Regularly record mud weights/viscosity for analysis by the Supervisor level and mud engineer so pre-influx signs can be detected
  - Mix required kill fluids as directed by Supervisor or Driller
  - Due to role on the rig, training and certification is targeted more toward monitoring for influxes, either via mud samples or visual signs on the pits/tanks

- **Motorman, Floor Hand Introductory Level**
  - Role is to assist the Supervisor, Driller, or Derrick Hand with detecting influxes
  - Be certain all valves are aligned for proper well control as directed by Supervisor
  - Perform Supervisor or Driller assigned tasks during a well control event
  - Due to role on the rig, training and certification is targeted more toward monitoring for influxes

1.2 WELL CONTROL-COMPONENT AND PREVENTER COMPATIBILITY CHECKLIST

The table below, which covers the drilling and casing of the 10M Stack portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

- **Example 8-3/4" Production hole section, 10M requirement**

Component	OD	Preventer	RWP
Drill pipe	5"	Fixed lower 5" Upper 4.5-7" VBR	10M
HWDP	5"	Fixed lower 5" Upper 4.5-7" VBR	10M
Drill collars and MWD tools	6.25-6.75"	Upper 4.5-7" VBR	10M
Mud Motor	6.75"	Upper 4.5-7" VBR	10M
Production casing	5.5"	Upper 4.5-7" VBR	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

- VBR = Variable Bore Ram. Compatible range listed in chart.

1.3 WELL CONTROL-BOP TESTING

BOP Test will be completed per Onshore Oil and Gas Order #2 Well Control requirements. The 5M Annular Preventer on a required 10M BOP stack will be tested to 70 % of rated working pressure including a 10 minute low pressure test. Pressure shall be maintained at least 10 minutes.

1.4 WELL CONTROL - DRILLS

The following drills are conducted and recorded in the Daily Drilling Report and the Contractor's reporting system while engaged in drilling operations:

Type	Frequency	Objective	Comments
Shallow gas kick drill - drilling	Once per well with crew on tour	Response training to a shallow gas influx	To be done prior to drilling surface hole if shallow gas is noted
Kick drill - drilling	Once per week per crew	Response training to an influx while drilling (bit on bottom)	Only one kick drill per week per crew is required, alternating between drilling and tripping.
Kick drill - tripping	Once per week per crew	Response training to an influx while tripping (bit off bottom). Practice stabbing TIW valve	
Choke drill	Once per well with crew on tour	Practice in operating the remotely operated choke with pressure in the well	Before drilling out of the last casing set above a prospective reservoir Include the scenario of flowing well with gas on drill floor as a table top
H_2S drill	Prior to drilling into a potential H_2S zone/reservoir	Practice in use of respiratory equipment	

1.5 WELL CONTROL – MONITORING

- Drilling operations which utilize static fluid levels in the wellbore as the active barrier element, a means of accurately monitoring fill-up and displacement volumes during trips are available to the driller and operator. A recirculating trip tank is installed and equipped with a volume indicator easily read from the driller's / operator's position. This data is recorded on a calibrated chart recorder or digitally. The actual volumes are compared to the calculated volumes.
- The On-Site Supervisor ensures hole-filling and pit monitoring procedures are established and documented for every rig operation.
- The well is kept full of fluid with a known density and monitored at all times even when out of the hole.
- Flow checks are a minimum of 15 minutes.
- A flow check is made:
    - In the event of a drilling break.
    - After indications of down hole gains or losses.
    - Prior to all trips out of the hole.
    - After pulling into the casing shoe.
    - Before the BHA enters the BOP stack.
    - If trip displacement is incorrect.

Well Control-Monitoring (Continued)

- Prior to dropping a survey instrument.
- Prior to dropping a core ball.
- After a well kill operation.
- When the mud density is reduced in the well.

- Flow checks may be made at any time at the sole discretion of the driller or his designate. The Onsite Supervisor ensures that personnel are aware of this authority and the authority to close the well in immediately without further consultation.
- Record slow circulating rates (SCR) after each crew change, bit trip, and 500' of new hole drilled and after any variance greater than 0.2 ppg in MW. Slow pump rate recordings should include return flow percent, TVD, MD & pressure. SCR's will be done on all pumps at 30, 40 & 50 SPM. Pressures will be recorded at the choke panel. SCR will be recorded in the IADC daily report and MRO Wellview daily report
- Drilling blind (i.e. without returns) is permissible only in known lithology where the absence of hydrocarbons has been predetermined and written approval of the Drilling Manager.
- All open hole logs to be run with pack-off, lubricator or Drilling Manager approved alternative means.
- The Drilling Contractor has a fully working pit level totalizer / monitoring system with read out for the driller and an audible alarm set to 10 BBL gain / loss volume. Systems are selectable to enable monitoring of all pits in use. Pit volumes are monitored at all times, especially when transferring fluids. Both systems data is recorded on a calibrated chart recorder or electronically.
- The Drilling Contractor has a fully working return mud flow indicator with drillers display and an audible alarm, and is adjustable to record any variance in return volumes.

1.6 WELL CONTROL – SHUT IN

- The "hard shut in" method (i.e. against a closed choke using either an annular or ram type preventer) is the Company standard.
- The HCR(s) or failsafe valves are left closed during drilling to prevent any erosion and buildup of solids. The adjustable choke should also be left closed.
- The rig specific shut in procedure, the BOP configuration along with space-out position for the tool joints is posted in the Driller's control cabin or doghouse.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Manager.
- During a well kill by circulation, constant bottom hole pressure is maintained throughout.
- Kill sheets are maintained by the Driller and posted in the Driller's control cabin or doghouse. The sheet is updated at a minimum every 500 feet.

2. SHUT-IN PROCEDURES:

2.1 PROCEDURE WHILE DRILLING

- Sound alarm (alert crew)
- Space out drill string – Stop rotating, pick the drill string up off bottom, and space out to ensure no tool joint is located in the BOP element selected for initial closure.
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
    - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify toolpusher/company representative
- Gather all relevant data required:
    - SIDPP and SICP
    - Hole Depth and Hole TVD
    - Pit gain
    - Time
    - Kick Volume
    - Pipe depth
    - MW in, MW out
    - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 2,500 psi or greater, the annular preventer CANNOT be used as per Oil Company Well Control Policy, swap to the upper BOP pipe ram.

2.2 PROCEDURE WHILE TRIPPING

- Sound alarm (alert crew)
- Stab full opening safety valve in the drill string and close.
- Space out drill string (ensure no tool joint is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
    - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
    - SIDPP and SICP
    - Hole Depth and Hole TVD
    - Pit gain

Procedure While Tripping (Continued)

  - Time
  - Kick Volume
  - Pipe depth
  - MW in, MW out
  - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
  If pressure has built or is anticipated during the kill to reach X,XXX psi or greater, the annular preventer CANNOT be used as per Company Well Control Policy, swap to the upper BOP pipe ram.

2.3 PROCEDURE WHILE RUNNING CASING

- Sound alarm (alert crew)
- Stab crossover and full opening safety valve and close
- Space out casing (ensure no coupling is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
  - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
  - SIDPP and SICP
  - Hole Depth and Hole TVD
  - Pit gain
  - Time
  - Kick Volume
  - Pipe depth
  - MW in, MW out
  - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
  If pressure has built or is anticipated during the kill to reach 2,500 psi or greater, the annular preventer CANNOT be used, swap to the upper BOP pipe ram.

2.4 PROCEDURE WITH NO PIPE IN HOLE (OPEN HOLE)

- Sound alarm (alert crew)
- Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
- Confirm shut-in
- Notify toolpusher/company representative
- Gather all relevant data required:
    - Shut-In Pressure
    - Hole Depth and Hole TVD
    - Pit gain
    - Time
    - Kick Volume
    - MW in, MW out
    - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit.

2.5 PROCEDURE WHILE PULLING BHA THRU STACK

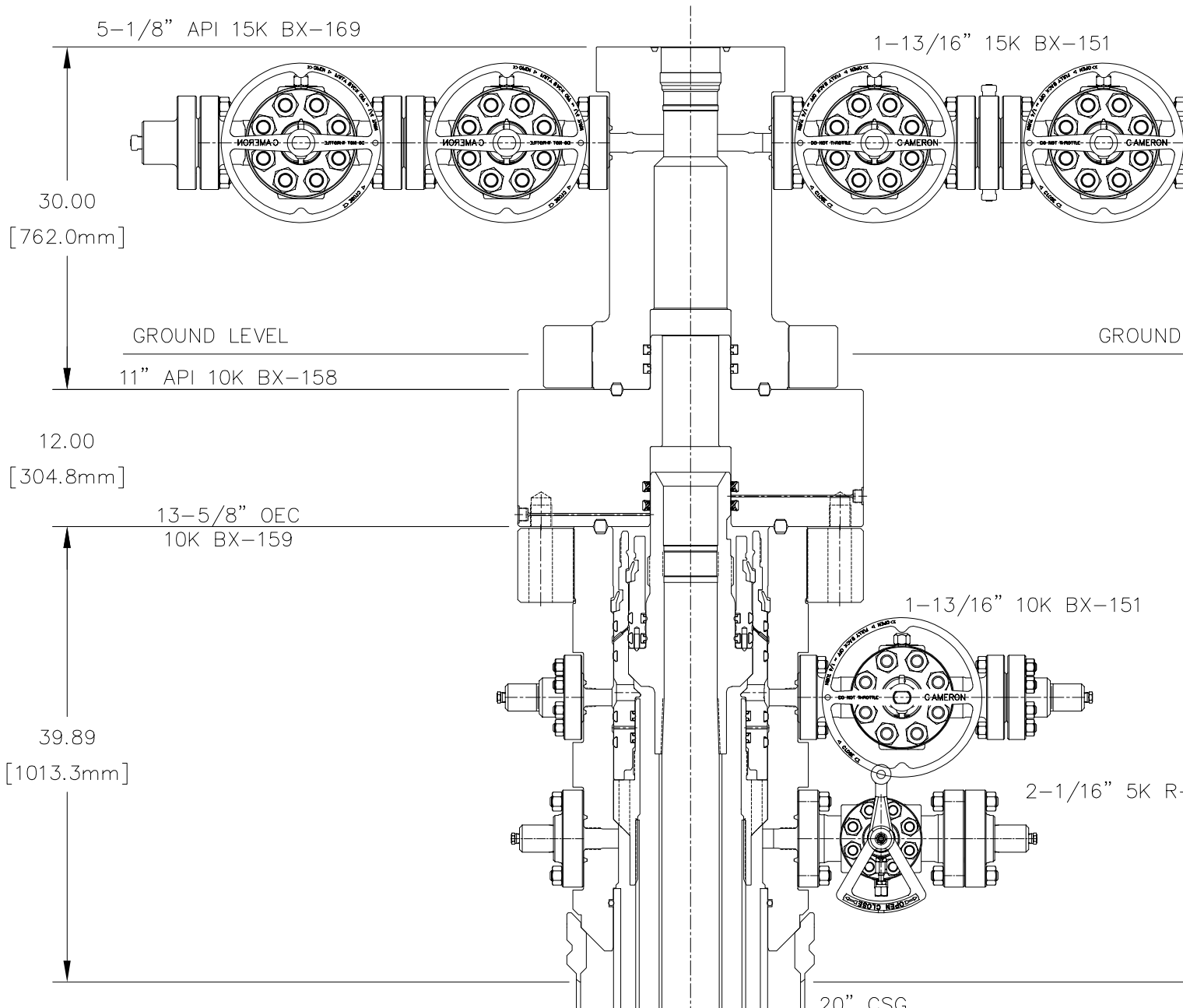
- PRIOR to pulling last joint of drill pipe thru the stack.
- Perform flow check, if flowing.
- Sound alarm (alert crew).
- Stab full opening safety valve and close
- Space out drill string with tool joint just beneath the upper pipe ram.
- Shut-in using upper pipe ram. (HCR and choke will already be in the closed position).
- Confirm shut-in.
- Notify toolpusher/company representative
- Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time
- Regroup and identify forward plan

- **With BHA in the stack and compatible ram preventer and pipe combo immediately available**.
    - Sound alarm (alert crew)
    - Stab crossover and full opening safety valve and close
    - Space out drill string with upset just beneath the compatible pipe ram.
    - Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
    - Confirm shut-in
    - Notify toolpusher/company representative
    - Read and record the following:
        - SIDPP and SICP
        - Pit gain

Procedures While Pulling BHA thru Stack (Continued)

    - Time
  - Regroup and identify forward plan

- **With BHA in the stack and <u>NO</u> compatible ram preventer and pipe combo immediately available**.
  - Sound alarm (alert crew)
  - If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
  - If impossible to pick up high enough to pull the string clear of the stack:
  - Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close
  - Space out drill string with tool joint just beneath the upper pipe ram.
  - Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
  - Confirm shut-in
  - Notify toolpusher/company representative
  - Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time


5–1/8" API 15K BX–169
1–13/16" 15K BX–151
30.00
[762.0mm]
GROUND LEVEL
GROUND
11" API 10K BX–158
12.00
[304.8mm]
13–5/8" OEC
10K BX–159
1–13/16" 10K BX–151
39.89
[1013.3mm]
2–1/16" 5K R-
20" CSG

APD ID: 10400041575 **Submission Date:** 05/14/2019

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS **Well Number:** 9H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

04/02/2020

APD ID: 10400041575

Submission Date: 05/14/2019

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZHU 1932 BS

Well Number: 9H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: ES0085

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCD – HOBBS
09/23/2020
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Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-47779	[98009]	Bone Spring ZIA HILLS;BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
327863	ZHU 1932 BS	9H

[7] OGRID No.	[8] Operator Name	[9] Elevation
217817	ConocoPhillips Company	3,181.8' (NAVD88)

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	19	26 S	32 E		2,239'	SOUTH	1,612'	WEST	LEA COUNTY

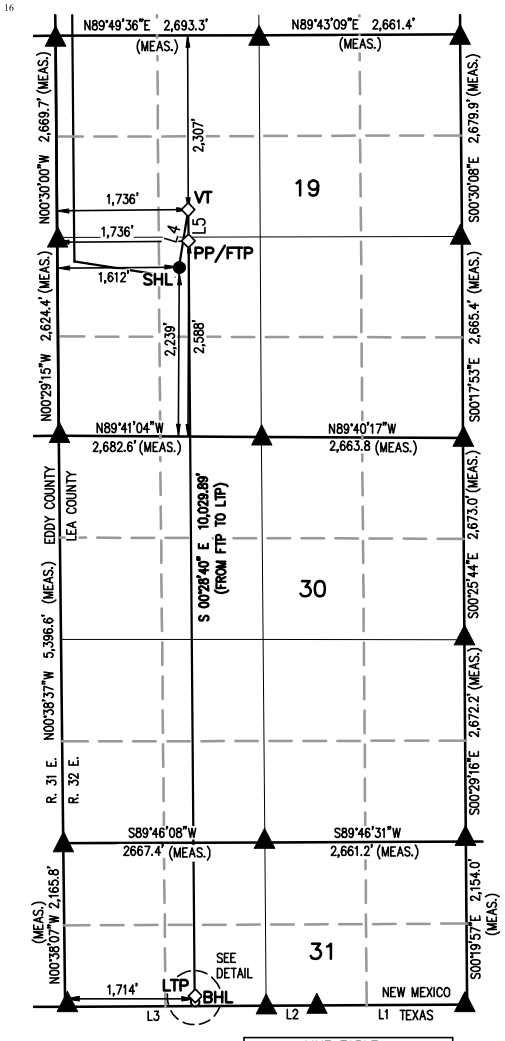
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	31	26 S	32 E		50'	SOUTH	1,714'	WEST	LEA COUNTY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
304.44			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

16



LEGEND
● SHL ○ BHL
◇ TAKE POINT
▲ FOUND MONUMENT

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 89°42'00" W	2,015.2'
L2	S 89°27'32" W	639.7'
L3	S 89°38'54" W	2,662.3'
L4	N 08°43'40" E	771.21'
L5	S 00°28'40" E	414.51'

0' 2000' 4000'

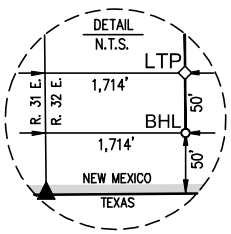
9H (SURFACE LOCATION)
2,239' FSL, 1,612' FWL (SEC. 19)
STATE PLANE NAD83(2011) (N.M. EAST)
N(Y): 374,139.77' E(X): 732,079.63'
LAT: 32°01'37.55" (32.027097°)
LON: −103°43'04.21" (−103.717837°)
STATE PLANE NAD27 (N.M. EAST)
N(Y): 374,082.59' N(Y): 374,082.59'
LAT: 32°01'37.10" (32.026971°)
LON: −103°43'02.51" (−103.717365°)

9H (VERTICAL TARGET)
2,307' FNL, 1,736' FWL (SEC. 19)
STATE PLANE NAD83(2011) (N.M. EAST)
N(Y): 374,902.04' E(X): 732,196.66'
LAT: 32°01'45.08" (32.029190°)
LON: −103°43'02.80" (−103.717445°)
STATE PLANE NAD27 (N.M. EAST)
N(Y): 374,844.85' E(X): 691,009.64'
LAT: 32°01'44.63" (32.029065°)
LON: −103°43'01.10" (−103.716973°)

9H (PP/FTP)
2,588' FSL, 1,736' FWL (SEC. 19)
STATE PLANE NAD83(2011) (N.M. EAST)
N(Y): 374,487.55' E(X): 732,200.11'
LAT: 32°01'40.98" (32.028051°)
LON: −103°43'02.79" (−103.717441°)
STATE PLANE NAD27 (N.M. EAST)
N(Y): 374,430.36' E(X): 691,013.08'
LAT: 32°01'40.53" (32.027925°)
LON: −103°43'01.09" (−103.716970°)

9H (LAST TAKE POINT)
100' FSL, 1,714' FWL (SEC. 31)
STATE PLANE NAD83(2011) (N.M. EAST)
N(Y): 364,458.00' E(X): 732,283.74'
LAT: 32°00'01.73" (32.000480°)
LON: −103°43'02.48" (−103.717356°)
STATE PLANE NAD27 (N.M. EAST)
N(Y): 364,401.06' E(X): 691,096.31'
LAT: 32°00'01.28" (32.000354°)
LON: −103°43'00.79" (−103.716886°)

9H (BOTTOM HOLE LOCATION)
50' FSL, 1,714' FWL (SEC. 31)
STATE PLANE NAD83(2011) (N.M. EAST)
N(Y): 364,408.01' E(X): 732,284.16'
LAT: 32°00'01.23" (32.000342°)
LON: −103°43'02.48" (−103.717356°)
STATE PLANE NAD27 (N.M. EAST)
N(Y): 364,351.06' E(X): 691,096.72'
LAT: 32°00'00.78" (32.000217°)
LON: −103°43'00.79" (−103.716885°)



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jeremy Lee 5/14/19
Signature Date

Jeremy Lee
Printed Name

Jeremy.L.Lee@cop.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey 04-14-2019
Signature and Seal of Professional Surveyor:

Certificate Number

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original to Appropriate District Office

OCD – HOBBS
09/23/2020
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GAS CAPTURE PLAN

☒ Original
☐ Amended

Operator & OGRID No.: ConocoPhillips Company/ 217817
Date: 4/9/19
Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: A C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule 19.15.18.12.A

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
ZHU 1932 BS 7H, 8H, 9H, 10H	Pending	Sec. 19, T26S, 32E	Various		Flared	Flaring is expected to be sporadic
009H	30-025-47779					

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Gas Transporter and will be connected to Gas Transporter low/high pressure gathering system located in XXXX County, New Mexico. It will require XXXXX' of pipeline to connect the facility to low/high pressure gathering system. Operator provides (periodically) to Gas Transporter a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Operator and Gas Transporter have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Gas Transporter Processing Plant located in Sec.XX, TWN XX, RNG XX , XXXX County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Gas Transporter system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines