

Form 200 (Rev. 10/12)
NOBBS OCD
NOV 29 2017

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
NMLC062749B

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No. (320074)
ZIA HILLS 19 FEDERAL COM 112H

9. API Well No.
70-025-44239
10. Field and Pool, or Exploratory (98065)
WOLFCAMP / WOLFCAMP

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

1a. Type of work: DRILL REENTER
1b. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone

2. Name of Operator
CONOCOPHILLIPS COMPANY (217817)

3a. Address
600 N. Dairy Ashford Rd Houston TX 77079
3b. Phone No. (include area code)
(281)293-1748

4. Location of Well (Report location clearly and in accordance with any State requirements.)
At surface SENW / 2498 FNL / 1699 FWL / LAT 32.028664 / LONG -103.717561
At proposed prod. zone NESW / 2618 FSL / 2310 FWL / LAT 32.057406 / LONG -103.715614

14. Distance in miles and direction from nearest town or post office*
44.9 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)
172 feet

16. No. of acres in lease
321.45

17. Spacing Unit dedicated to this well
320

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

19. Proposed Depth
11619 feet / 22167 feet

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

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

22. Approximate date work will start*
11/01/2017

23. Estimated duration
90 days

24. Attachments

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

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

25. Signature (Electronic Submission) Name (Printed/Typed) Ashley Bergen / Ph: (432)688-6938 Date 07/31/2017

Title Associate, Regulatory MCBU

Approved by (Signature) (Electronic Submission) Name (Printed/Typed) Cody Layton / Ph: (575)234-5959 Date 11/17/2017

Title Supervisor Multiple Resources 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.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS
Approval Date: 11/17/2017

KZ
12/01/17

Double sided
X



U.S. Department of the Interior
Bureau of Land Management

Application for Permit to Drill

APD Package Report

Date Printed: 11/21/2017 07:45 AM

APD ID: 10400017408

Well Status: AAPD

APD Received Date: 07/31/2017 03:42 PM (217817)

Well Name: ZIA HILLS 19 FEDERAL COM 720074

Operator: CONOCOPHILLIPS COMPANY

Well Number: 112H

APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
 - Well Plat: 1 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
 - Blowout Prevention Choke Diagram Attachment: 1 file(s)
 - Blowout Prevention BOP Diagram Attachment: 1 file(s)
 - Casing Design Assumptions and Worksheet(s): 4 file(s)
 - Hydrogen sulfide drilling operations plan: 2 file(s)
 - Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
 - Other Facets: 4 file(s)
 - Other Variances: 3 file(s)
- SUPO Report
- SUPO Attachments
 - Existing Road Map: 1 file(s)
 - New Road Map: 1 file(s)
 - Attach Well map: 1 file(s)
 - Water source and transportation map: 1 file(s)
 - Well Site Layout Diagram: 2 file(s)
 - Existing Vegetation at the well pad attachment: 1 file(s)
 - ROW Applications: 1 file(s)
 - Other SUPO Attachment: 9 file(s)
- PWD Report
- PWD Attachments
 - None

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APD ID: 10400017408	Submission Date: 07/31/2017	Highlighted data reflects the most recent changes Show Final Text
Operator Name: CONOCOPHILLIPS COMPANY		
Well Name: ZIA HILLS 19 FEDERAL COM	Well Number: 112H	
Well Type: OIL WELL	Well Work Type: Drill	

Section 1 - General

APD ID: 10400017408	Tie to previous NOS?	Submission Date: 07/31/2017
BLM Office: CARLSBAD	User: Ashley Bergen	Title: Associate, Regulatory MCBU
Federal/Indian APD: FED	Is the first lease penetrated for production Federal or Indian? FED	
Lease number: NMLC062749B	Lease Acres: 321.45	
Surface access agreement in place?	Allotted?	Reservation:
Agreement in place? NO	Federal or Indian agreement:	
Agreement number:		
Agreement name:		
Keep application confidential? NO		
Permitting Agent? NO	APD Operator: CONOCOPHILLIPS COMPANY	
Operator letter of designation:		

Operator Info

Operator Organization Name: CONOCOPHILLIPS COMPANY

Operator Address: 600 N. Dairy Ashford Rd

Operator PO Box:

Operator City: Houston **State:** TX

Operator Phone: (281)293-1748

Operator Internet Address:

Zip: 77079

Section 2 - Well Information

Well in Master Development Plan? NO	Mater Development Plan name:	
Well in Master SUPO? NO	Master SUPO name:	
Well in Master Drilling Plan? NO	Master Drilling Plan name:	
Well Name: ZIA HILLS 19 FEDERAL COM	Well Number: 112H	Well API Number:
Field/Pool or Exploratory? Field and Pool	Field Name: WOLFCAMP	Pool Name: WOLFCAMP
Is the proposed well in an area containing other mineral resources? NONE		

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Describe other minerals:

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

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: ZIA Number: 112H

Well Class: HORIZONTAL

HILLS 19 PAD

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: 44.9 Miles

Distance to nearest well: 33 FT

Distance to lease line: 172 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: ZIA_HILLS_19_FEDERAL_COM_112H_C_102_07-27-2017.pdf

Well work start Date: 11/01/2017

Duration: 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	249 8	FNL	169 9	FWL	26S	32E	19	Aliquot SENW 4	32.02866 - 103.7175 61		LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 62749B	318 0 2	0	0
KOP Leg #1	283 6	FNL	243 1	FWL	26S	32E	19	Aliquot SENW 1	32.02773 - 103.7151 98		LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 62749B	- 781 8	110 00	110 00
PPP Leg #1	234 1	FNL	231 0	FWL	26S	32E	19	Aliquot SENW 9	32.02908 - 103.7155 92		LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 62749B	- 829 8	114 80	114 80



APD ID: 10400017408

Submission Date: 07/31/2017

Highlighted data reflects the most recent changes

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	QUATERNARY	3182	0	0		NONE	No
2	RUSTLER	2063	1119	1119	DOLOMITE, ANHYDRITE	NONE	No
3	SALADO	1893	1289	1289	SALT	NONE	No
4	CASTILE	903	2279	2279	SALT	NATURAL GAS, OIL	No
5	DELAWARE	-1077	4259	4259	SANDSTONE	NATURAL GAS, OIL	No
6	CHERRY CANYON	-1987	5169	5169	SANDSTONE	NATURAL GAS, OIL	No
7	BRUSHY CANYON	-3467	6649	6649	SANDSTONE	NATURAL GAS, OIL	No
8	BONE SPRING	-4867	8049	8049	SANDSTONE	NATURAL GAS, OIL	No
9	BONE SPRING 1ST	-6022	9204	9204	SANDSTONE	NATURAL GAS, OIL	No
10	BONE SPRING 2ND	-6697	9879	9879	SANDSTONE	NATURAL GAS, OIL	No
11	BONE SPRING 3RD	-7167	10349	10349	LIMESTONE	NATURAL GAS, OIL	No
12	WOLFCAMP	-8197	11379	11379	LIMESTONE, SHALE, SANDSTONE	NATURAL GAS, OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M

Rating Depth: 22167

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.

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

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

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. See attached "Drill Plan" document.

Choke Diagram Attachment:

Zia_Hills_19_Pad_2_Choke_Manifold_07-27-2017.pdf

BOP Diagram Attachment:

Zia_Hills_19_Pad_2_BOPE_07-27-2017.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	14.75	11.75	NEW	API	N	0	1170	0	1170	-8437	-9607	1170	J-55	47	BUTT	2.89	5.87	DRY	15.4	DRY	15.4
2	INTERMEDIATE	10.875	8.625	NEW	API	N	0	11400	0	11400	-8437	-19837	11400	P-110	32	BUTT	1.48	1.55	DRY	3.53	DRY	3.53
3	PRODUCTION	7.875	5.5	NEW	API	N	0	22167	0	22167	-8437	-30604	22167	P-110	23	OTHER - TXP	1.5	1.71	DRY	2.29	DRY	2.29

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

ZIA_HILLS_19_FEDERAL_COM_112H_csg_design_07-27-2017.pdf

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Casing Attachments

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

ZIA_HILLS_19_FEDERAL_COM_112H_csg_design_07-27-2017.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

ZIA_HILLS_19_FEDERAL_COM_112H_csg_design_07-27-2017.pdf

Zia_Hills_19_Pad_2_Production_csg_specification_07-27-2017.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	1170	470	1.68	13.5	789	100	CLASS C	+ 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 + 0.125lb/sk LCM + 0.1% Dispersant.
SURFACE	Tail				240	1.35	14.8	324	100	CLASS C	0.2% Anti-Foam + 0.1% Lost Circ Control
INTERMEDIATE	Lead		0	1140 0	800	2.7	11	2160	30	CLASS C	75.00 lb/sk BWOB D049 + 1.00 % BWOB D013 Retarder + 10.00

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											% BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti foam + 2.00 % BWOB D154 Extender + 0.15 % BWOB D208 Viscosifier
INTERMEDIATE	Tail				670	1.29	13.5	864	30	Class C	75.00 lb/sk BWOB D049 + 0.50 % BWOB D013 Retarder + 1.00 % BWOB D020 Extender + 3.00 lb/sk WBWOB D042 Extender + 0.02 gal/sk VBWOB D047Anti foam + 0.10 % BWOB D065 Dispersant + 0.13 lb/sk WBWOB D130 Lost Circulation + 0.30 % BWOB D238 Fluid loss
PRODUCTION	Lead		0	2216 7	0	0	0	0	0	no lead	no lead
PRODUCTION	Tail				2322	1.08	16.4	2507	15	Class H	1.00 % BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti Foam + 0.10 % BWOB D065 Dispersant + 0.15 % BWOB D255 Fluid loss + 0.30 % BWOB D800 Retarder

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: 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: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

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	1170	SPUD MUD	8.34	8.6							
0	1140 0	OIL-BASED MUD	8.6	9.4							
0	2216 7	OIL-BASED MUD	9.5	13.5							

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.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8157

Anticipated Surface Pressure: 5600.82

Anticipated Bottom Hole Temperature(F): 203

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

ZIA_HILLS_19_PAD_2_H2S_C_Plan_07-27-2017.pdf

ZIA_HILLS_19_PAD_2_Rig_Layout_07-27-2017.pdf

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

ZIA_HILLS_19_FEDERAL_COM_112H_Directional_Plan_07-31-2017.pdf

ZIA_HILLS_19_FEDERAL_COM_112H_Wellbore_Schematic_20170915125602.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Zia_Hills_19_Pad_2_Gas_Capture_Plan_07-27-2017.pdf

Zia_Hills_19_Pad_2_Drill_Waste_Containment_07-27-2017.pdf

ZIA_HILLS_19_112H_Drilling_plan_20170915125622.pdf

Option_2_for_cement_plan_20170915125653.pdf

Other Variance attachment:

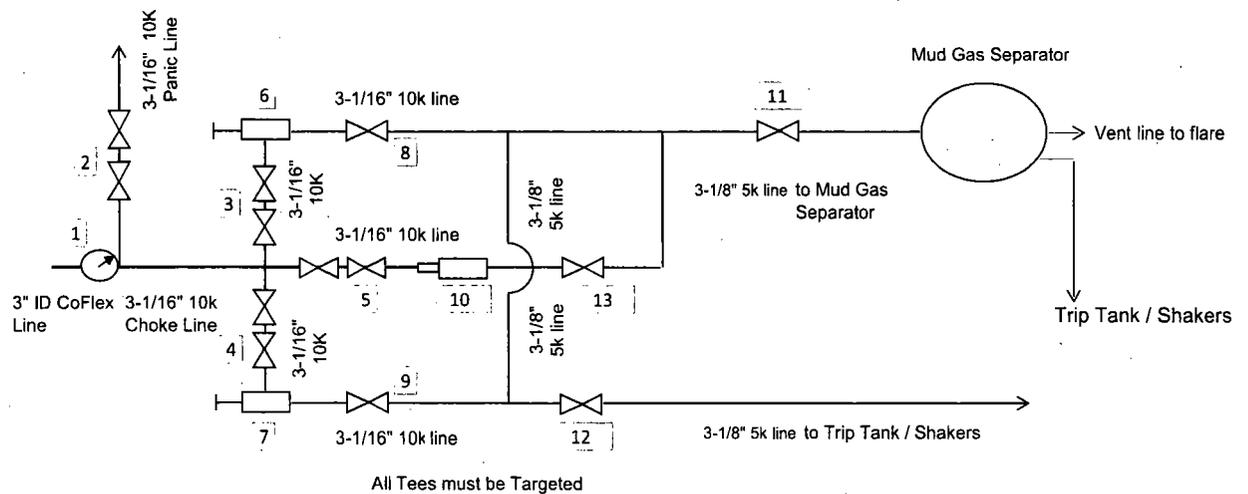
Zia_Hills_19_Pad_2_Flexhose_Variance_07-27-2017.pdf

Zia_Hills_19_Pad_2_Generic_WH_07-27-2017.pdf

Zia_Hills_19_Pad_2_Running_Procedure_2_20170915125701.pdf

CHOKE MANIFOLD ARRANGEMENT - 10M Choke

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

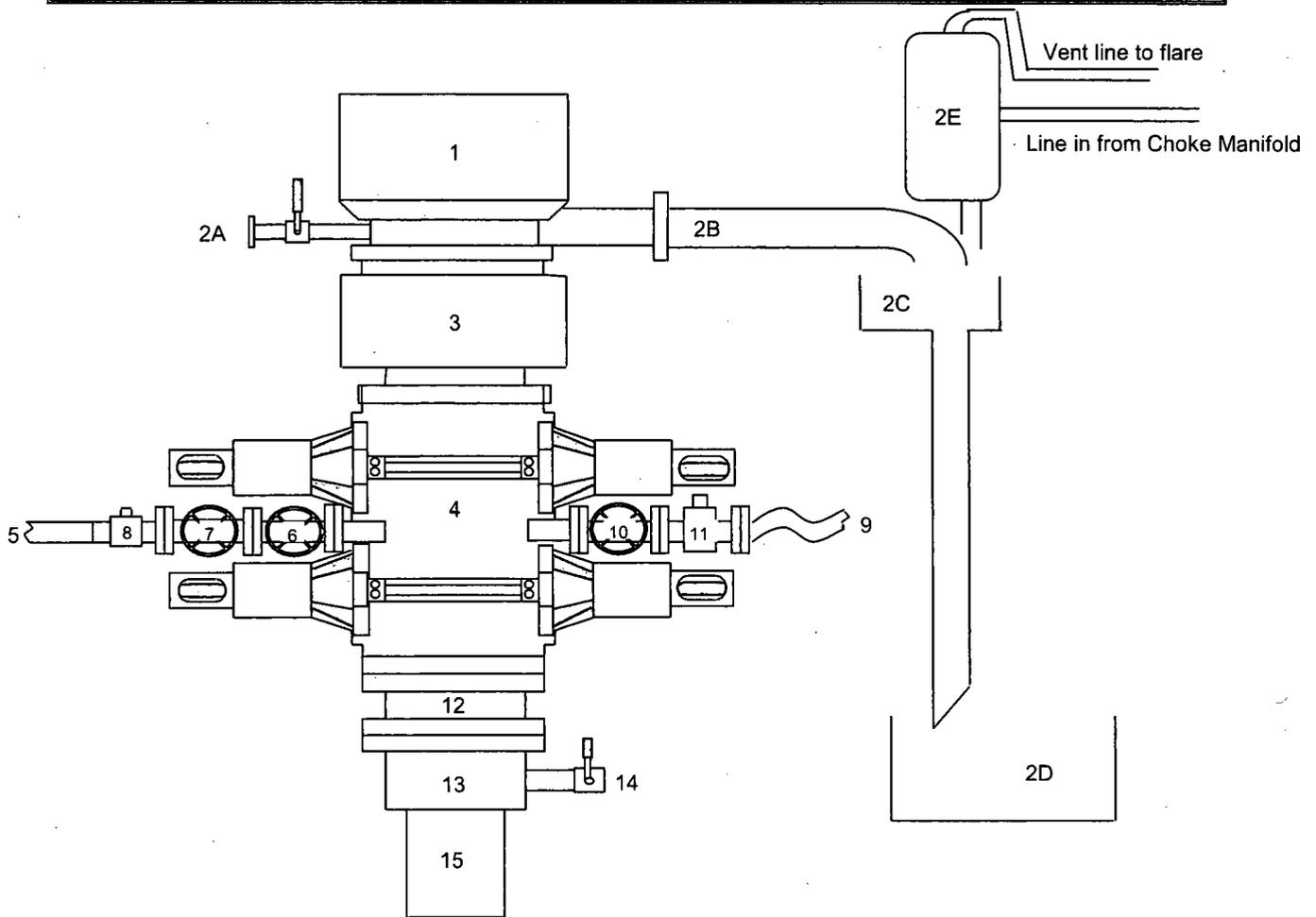


Item	Description
1	Pressure Gauge
2	2 Gate Valves, 3-1/16" 10M
3	2 Gate Valves, 3-1/16" 10M
4	2 Gate Valves, 3-1/16" 10M
5	2 Gate Valves, 3-1/16" 10M
6	Upper Manual Adjustable Choke, 4-1/16", 10M
7	Lower Manual Adjustable Choke, 4-1/16", 10M
8	Gate Valve, 3-1/16" 10M
9	Gate Valve, 3-1/16" 10M
10	Remote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

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

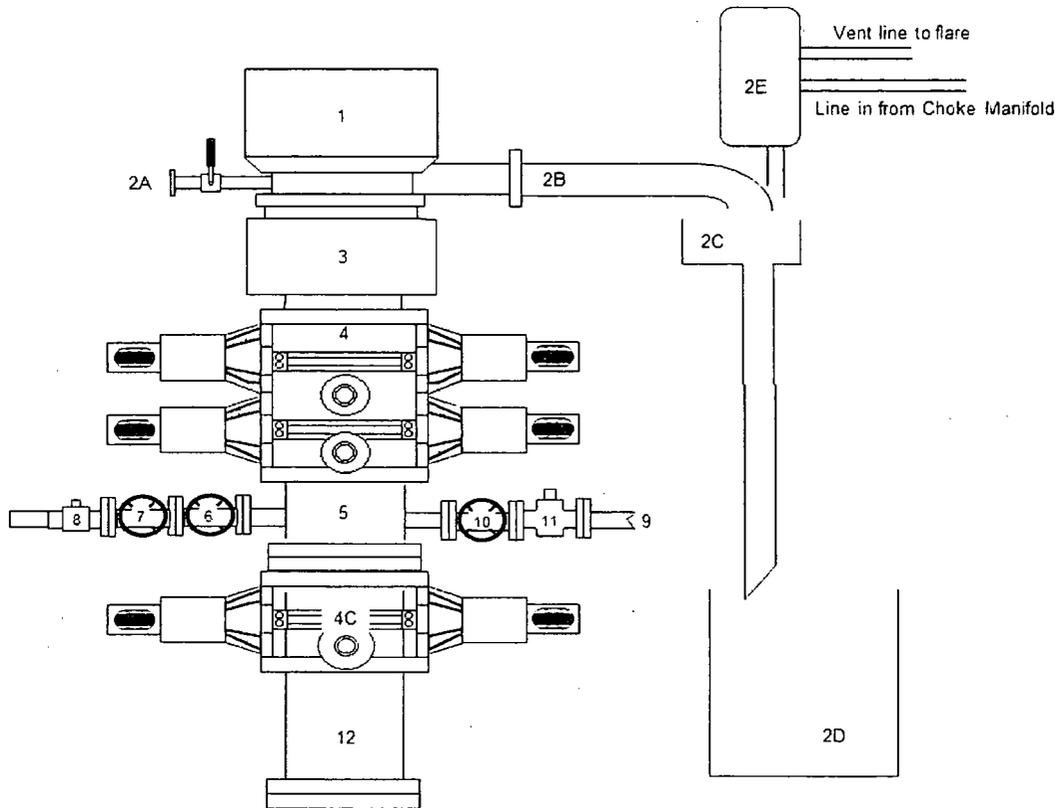
*Choke manifold will have one remotely operated valve and a manual adjustable valve in front of the choke manifold, as detailed in the Onshore Order 2. It currently contains one 10M hydraulic choke for a total of three choke branches (two manual and one hydraulic).

BLOWOUT PREVENTER ARRANGEMENT - 13-5/8" 5M BOPE
per Onshore Oil and Gas Order No. 2 utilizing 5M Rated Equipment



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

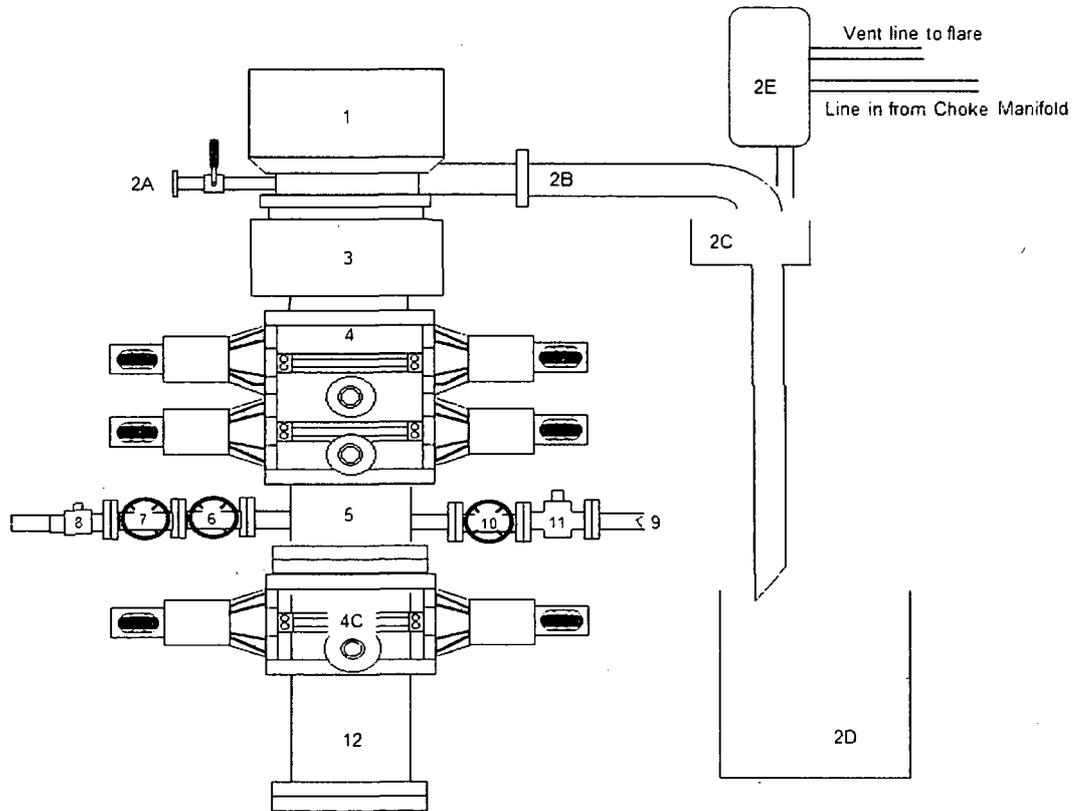
BLOWOUT PREVENTER ARRANGEMENT - 11" 10M BOPE
per Onshore Oil and Gas Order No. 2 utilizing 10M Rated Equipment



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

BLOWOUT PREVENTER ARRANGEMENT - 13-5/8" 10M BOPE

per Onshore Oil and Gas Order No. 2 utilizing 10M Rated Equipment



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

Type	Depth MD	Depth TVD	Csg length ft	Wt	MIY	Col	Tensile	Drill Fluid
Surface Casing	1170	1170	1170	47	3070	1510	737000	8.6
Intermediate 1 Casing	11400	11369	11400	32	7860	3420	1006000	9.4
Intermediate 2 Casing	0	0	0	0				
Production 1 Casing	22167	11604	22167	23	12630	11100	641000	12
Production 2 Casing								

Uses TVD!!!!

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

SFb = Pi / BHP

Where

- Pi is the rated pipe Burst (Minimum Internal Yield) Pressure in pounds per square inch (psi)
- BHP is bottom hole pressure in pounds per square inch (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

SFb = 3070 / 523 = 5.87

Intermediate 1 Casing

SFb = 7860 / 5557 = 1.41

Intermediate 2 Casing

SFb = 0 / 0 = #DIV/0!

Production 1 Casing

SFb = 12630 / 7241 = 1.74

Production 2 Casing

SFb = 0 / 0 = #DIV/0!

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

SFc = Pc / (MW x .052 x Ls)

Where

- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

SFc = 1510 / 523 = 2.89

Intermediate 1 Casing

SFc = 3420 / 5557 = 0.62 ★

Intermediate 2 Casing

SFc = 0 / 0 = #DIV/0!

Production 1 Casing

SFc = 11100 / 7241 = 1.53

Production 2 Casing

SFc = 0 / 0 = #DIV/0!

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFi

SFi = Fj / Wt

Where

- Fj is the rated pipe Joint Strength in pounds (lbs)
- Wt is the weight of the casing string in pounds (lbs)

The Minimum Acceptable Joint Strength Design (Safety) Factor SFT = 1.6 dry or 1.8 buoyant

Surface Casing

SFi Dry = 737000 / 54990 = 13.4
SFi Bouyant = 737000 / (54990 x 0.869) = 15.4

Intermediate 1 Casing

SFi Dry = 1006000 / 364800 = 2.76
SFi Bouyant = 1006000 / (364800 x 0.856) = 3.22

Intermediate 2 Casing

SFi Dry = 0 / 0 = #DIV/0!
SFi Bouyant = 0 / (0 x 1.000) = #DIV/0!

Production 1 Casing

SFi Dry = 641000 / 266892 = 2.40
SFi Bouyant = 641000 / (266892 x 0.817) = 2.94

Production 2 Casing

SFi Dry = 0 / 0 = #DIV/0!
SFi Bouyant = 0 / (0 x 1.000) = #DIV/0!

★ SF=1.48 is based on internal ConocoPhillips casing design assuming 1/3 casing evacuation

Production Casing Specification Sheet

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

August 29 2016



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

Size: 5.500 in.
Wall: 0.361 in.
Weight: 20.00 lbs/ft
Grade: P110
Min. Wall Thickness: 87.5 %

PIPE BODY DATA			
GEOMETRY			
Nominal OD	5.500 in.	Nominal Weight	20.00 lbs/ft
Nominal ID	4.778 in.	Wall Thickness	0.361 in.
Plain End Weight	19.83 lbs/ft	Standard Drift Diameter	4.653 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	641 x 1000 lbs	Internal Yield	12630 psi
Collapse	11100 psi	SMYS	110000 psi
TENARISXP® BTC CONNECTION DATA			
GEOMETRY			
Connection OD	6.100 in.	Coupling Length	9.450 in.
Critical Section Area	5.828 sq. in.	Threads per in.	5.00
		Connection ID	4.766 in.
		Make-Up Loss	4.204 in.
PERFORMANCE			
Tension Efficiency	100 %	Joint Yield Strength	641 x 1000 lbs
Structural Compression Efficiency	100 %	Structural Compression Strength	641 x 1000 lbs
External Pressure Capacity	11100 psi	Internal Pressure Capacity ⁽¹⁾	12630 psi
		Structural Bending ⁽²⁾	92 %/100 ft
ESTIMATED MAKE-UP TORQUES ⁽³⁾			
Minimum	11270 ft-lbs	Optimum	12520 ft-lbs
		Maximum	13770 ft-lbs
OPERATIONAL LIMIT TORQUES			
Operating Torque	21500 ft-lbs	Yield Torque	23900 ft-lbs

ConocoPhillips, ZIA HILLS 19 FEDERAL COM 112H

1. Geologic Formations

TVD of target	11,619'	Pilot hole depth	N/A
MD at TD:	22,167'	Deepest expected fresh water:	300

Basin

Formation	Depth (TVD) from KB	SSTVD (ft.)	Water/Mineral Bearing/Target Zone	Hazards *
Quaternary Fill	Surface	0	Water	
Base of Fresh Water	300	300	Water	
Rustler	1,119	2060	Water	
Top of Salt / Salado	1,279	1900	Mineral	
Castile	2,629	550	Mineral	
Delaware Top / Base Salt	4,229	-1050	O & G	
Ford Shale	4,354	-1175	O & G	
Cherry Canyon	5,154	-1975	O & G	
Brushy Canyon	6,629	-3450	O & G	
Bone Springs	8,029	-4850	O & G	
Bone Springs 3 rd Carb	10,339	-1760	O & G	
WolfCamp	11,379	-8200	O & G	
WolfCamp 1	11,604	-8425	O & G	

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

2. Casing Program

ConocoPhillips Company respectfully requests to approve the following 3-string casing and cementing program with the 8-5/8" casing set in the Top of Wolfcamp formation. The intent for the casing and cementing program:

- Drill 14-3/4" surface hole to Rustler.
- Drill 10-5/8" hole from Rustler to Top of WolfCamp formation with the same density mud (OBM or Saturated Brine).
- Case and cement the well with 11-3/4" surface, 10-5/8" 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 11-3/4" casing and 8-5/8" casing to surface. Cement 5-1/2" casing to lap inside 8-5/8" casing shoe.
- 5-1/2" TXP buttress Casing Connection in 7-7/8" OH for minimum of 0.422 in clearance per Onshore Oil and Gas Order #2 III.B.

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Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
14.75"	0	1170	11.75"	47.0	J55	BTC	2.89	5.87	15.4
10.875"	0	11400	8.625"	32.0	P110	BTC	**1.48	1.55	3.53
7.875"	0	22167	5.5"	23.0	P110	TXP	1.50	1.71	2.29
BLM Minimum Safety Factor							1.125	1.00	1.6 Dry 1.8 Wet

**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

Must have table for contingency casing

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

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3. Cementing Program

Option 1:

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (Estimated hours)	Slurry Description
Surf.	470	13.5	1.68	8.94	8	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl ₂ + 0.125lb/sk LCM + 0.1% Dispersant.
	240	14.8	1.35	6.38	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control
Inter.	800	11.0	2.7	16.5	18	Lead: Class C 75.00 lb/sk BWOB D049 + 1.00 % BWOB D013 Retarder + 10.00 % BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti foam + 2.00 % BWOB D154 Extender + 0.15 % BWOB D208 Viscosifier
	570	13.5	1.29	6.02	7	Tail: Class C 75.00 lb/sk BWOB D049 + 0.50 % BWOB D013 Retarder + 1.00 % BWOB D020 Extender + 3.00 lb/sk WBWOB D042 Extender + 0.02 gal/sk VBWOB D047 Anti foam + 0.10 % BWOB D065 Dispersant + 0.13 lb/sk WBWOB D130 Lost Circulation + 0.30 % BWOB D238 Fluid loss
Prod.	2290	16.4	1.08	4.38	10	Tail: Class H + 1.00 % BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti Foam + 0.10 % BWOB D065 Dispersant + 0.15 % BWOB D255 Fluid loss + 0.30 % BWOB D800 Retarder
	DV/ACP Tool: NO					

Option 2:

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (Estimated hours)	Slurry Description
Surf.	470	13.5	1.68	8.94	8	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl ₂ + 0.125lb/sk LCM + 0.1% Dispersant.
	240	14.8	1.35	6.38	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control
Inter.	370	11.0	2.7	16.5	18	Lead: Class C 75.00 lb/sk BWOB D049 + 1.00 % BWOB D013 Retarder + 10.00 % BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti foam + 2.00 % BWOB D154 Extender + 0.15 % BWOB D208 Viscosifier

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	570	13.5	1.29	6.02	7	Tail: Class C 75.00 lb/sk BWOB D049 + 0.50 % BWOB D013 Retarder + 1.00 % BWOB D020 Extender + 3.00 lb/sk WBWOB D042 Extender + 0.02 gal/sk VBWOB D047 Anti foam + 0.10 % BWOB D065 Dispersant + 0.13 lb/sk WBWOB D130 Lost Circulation + 0.30 % BWOB D238 Fluid loss
DV/ACP Tool: 4,200'						
	420	11.0	3.10	19.03	15	2nd Stage Lead: Class 'C' + 2.00 % BWOB Extender + 3.40 lb/sk WBWOB D042 Extender + 0.02 gal/sk VBWOB D047 Anti Foam + 2.00 % BWOB D079 Extender + 5.00 % BWOB D154 Extender + 1.00 % BWOB S001 CaCl2
Prod.	2290	16.4	1.08	4.38	10	Tail: Class H + 1.00 % BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti Foam + 0.10 % BWOB D065 Dispersant + 0.15 % BWOB D255 Fluid loss + 0.30 % BWOB D800 Retarder
DV/ACP Tool: NO						

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. 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.

Casing String	TOC	% Excess in OH
Surface	0'	>100%
Intermediate	0'	>30%
Production	10,400'	>15%

Include Pilot Hole Cementing specs: NO PILOT HOLE.

Pilot hole depth N/A

KOP

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

4. Pressure Control Equipment

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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:
10-5/8"	11" or 13-5/8"	10M	Annular	x	50% of working pressure
			Blind Ram	x	
			Pipe Ram	x	100% of working pressure
			Double Ram	x	
			Other*		
7-7/8"	11" or 13-5/8"	10M	Annular	x	50% of working pressure
			Blind Ram	x	
			Pipe Ram	x	100% of working pressure
			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.

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 5600 psi. The pressure test to MASP and 50% for annular shall be performed with a test plug after installing the casing head and nipping up the 5M BOPE system prior to drilling out the surface casing.

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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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • See attached schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1,170	Spud Mud	8.34 - 8.6	32-36	N/C
0	11,400	Cut-Brine or OBM	8.6-9.4	30-40	≤5
0	22,167	Oil Base Mud	9.5-13.5	30-40	≤5

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

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

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	PEX	
--	-----	--

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	8157 psi
Abnormal Temperature	No

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

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

8. Other facets of operation

Is this a walking operation? If yes, describe. Yes, please see below.

Will be pre-setting casing? If yes, describe. Yes, please see below.

Spudder Rig and Batch Drilling Operations:

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.

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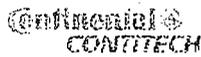
Attachments:

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

Option 2:

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (Estimated hours)	Slurry Description
Surf.	470	13.5	1.68	8.94	8	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl ₂ + 0.125lb/sk LCM + 0.1% Dispersant.
	240	14.8	1.35	6.38	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control
Inter.	370	11.0	2.7	16.5	18	Lead: Class C 75.00 lb/sk BWOB D049 + 1.00 % BWOB D013 Retarder + 10.00 % BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti foam + 2.00 % BWOB D154 Extender + 0.15 % BWOB D208 Viscosifier
	570	13.5	1.29	6.02	7	Tail: Class C 75.00 lb/sk BWOB D049 + 0.50 % BWOB D013 Retarder + 1.00 % BWOB D020 Extender + 3.00 lb/sk WBWOB D042 Extender + 0.02 gal/sk VBWOB D047 Anti foam + 0.10 % BWOB D065 Dispersant + 0.13 lb/sk WBWOB D130 Lost Circulation + 0.30 % BWOB D238 Fluid loss
	DV/ACP Tool: 4,200'					
	420	11.0	3.10	19.03	15	2nd Stage Lead: Class 'C' + 2.00 % BWOB Extender + 3.40 lb/sk WBWOB D042 Extender + 0.02 gal/sk VBWOB D047 Anti Foam + 2.00 % BWOB D079 Extender + 5.00 % BWOB D154 Extender + 1.00 % BWOB S001 CaCl ₂
Prod.	2290	16.4	1.08	4.38	10	Tail: Class H + 1.00 % BWOB D020 Extender + 0.02 gal/sk VBWOB D047 Anti Foam + 0.10 % BWOB D065 Dispersant + 0.15 % BWOB D255 Fluid loss + 0.30 % BWOB D800 Retarder
	DV/ACP Tool: NO					

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 45 / 2012
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Hose Data Sheet

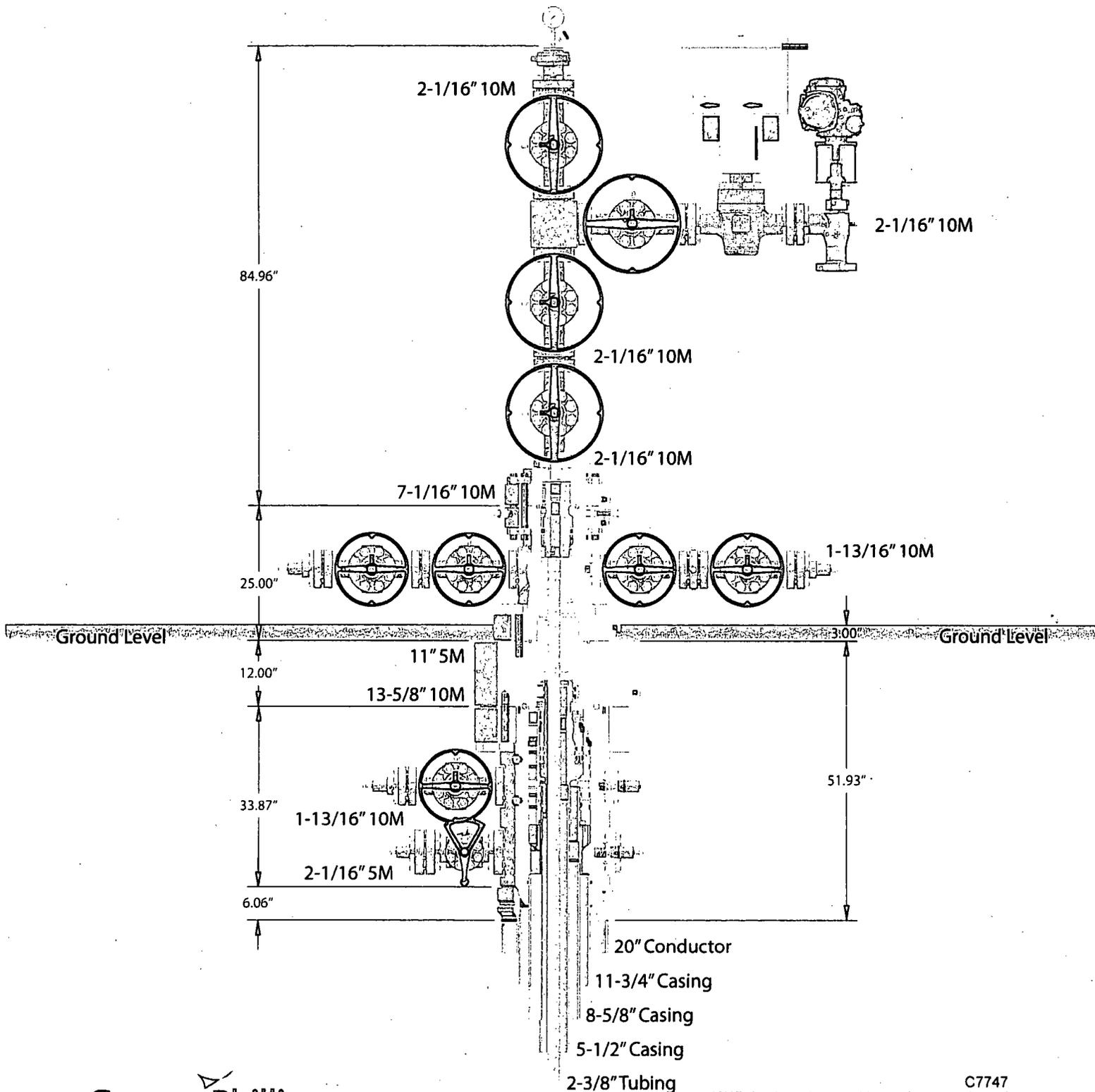
CRI Order No.	516273
Customer	ContiTech Beattie Co.
Customer Order No	PO5438 STOCK
Item No.	3
Hose Type	Flexible Hose
Standard	API SPEC 16 C
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSIBX155 RING GROOVE
Type of coupling other end	FLANGE 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



QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 184	
PURCHASER: ContiTech Bealtis 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 <p style="text-align: center;">See attachment. (1 page)</p>					
↑ 10 mm = 10 Min. → 10 mm = 20 MPa					
COUPLINGS Type		Serial N°		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: 30. January 2012.		Inspector		Quality Control: ContiTech Rubber Industrial Kft. Quality Control Dept. <i>[Signature]</i>	

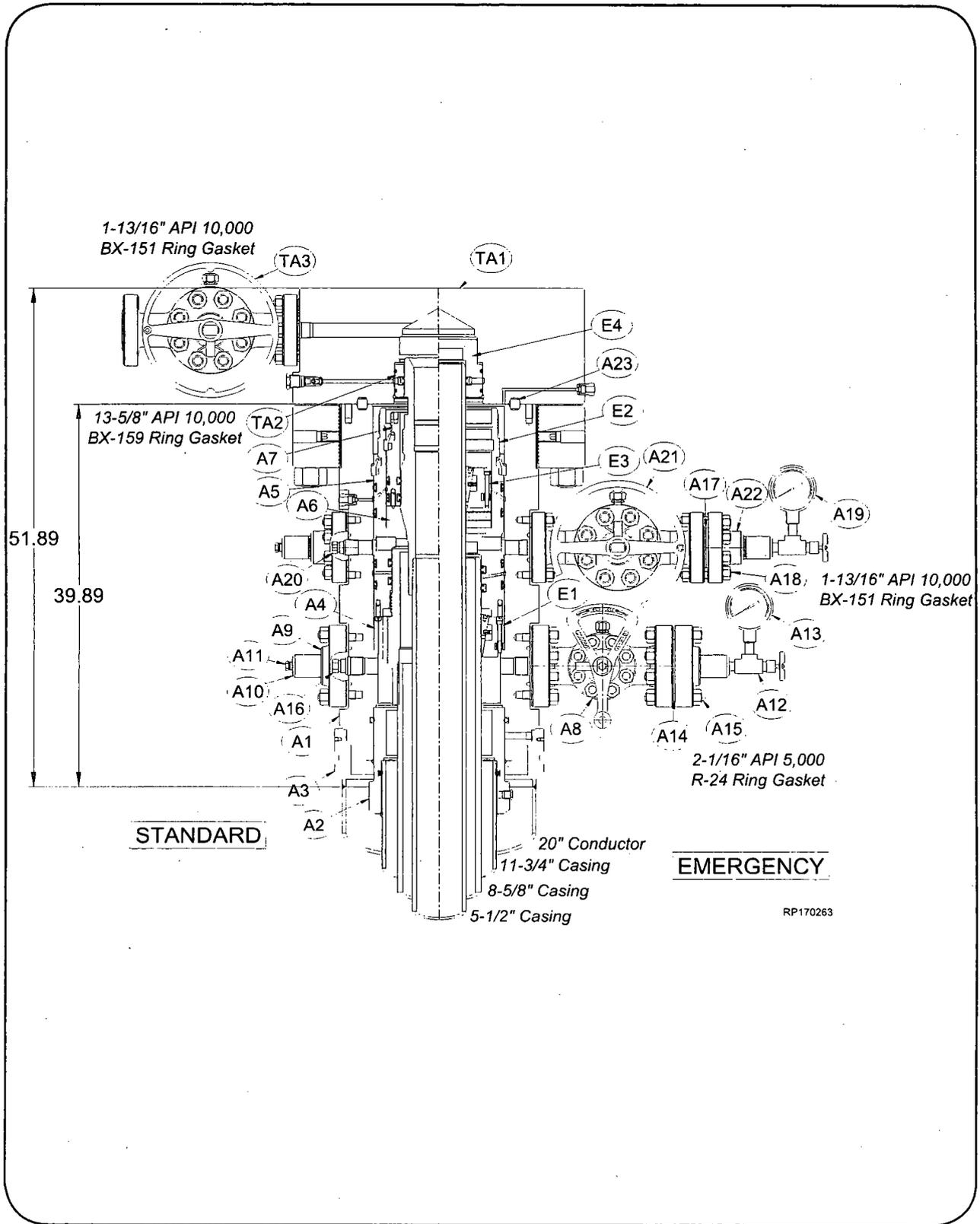


13-5/8" 10M MN-DS Wellhead System with CXS Completion



C7747
 NOTE: All dimensions on this drawing are estimated measurements and should be evaluated by engineering.

System Drawing



Bill of Materials

NOTE Contact your Cameron representative for replacement part inquiries. Cameron personnel can check the latest revision of the assembly bill-of-material to obtain the appropriate and current replacement part number.

MN-DS HOUSING		
Item Qty	Description	
A1 1	Conversion; Casing Head Housing, Type 'Mn-Ds', 10K, 13-5/8 Nom 10K Oec BX-159 w/20,500-4TPI LH Stub Acme Top f/ Thded Flg and Prep f/ Internal Snap Ring x 13-3/8 SOW Btm w/ Four Grout Ports, w/ (2) Upper 1-13/16 API 10K BX-151 Outlets w/1-1/4 API Vr Thds Part# 2031060-48-02	
A2 1	Body, Bushing Reducer, 13-3/8 SOW x 11-3/4 SOW Part# 2310058-03-01	
A3 1	Body, Load Ring f/ 20 Casing (.375 C.S. Casing) To Accept Low Pressure Adapter Part# 2329761-07-01	
A4 1	Casing Hanger, Mandrel, Type 'Mn-Ds', 13-5/8 Nom x 8-5/8 API BC Box Thd Btm x 10.000-4TPI L.H Stub Acme Running Thd, Min Bore: 8.000, 10,000 Psi Max Working Pressure, 700,000 Lbs Max Hanging Load Part# 2345509-17	
A5 1	Assy; Packoff Support Bushing, Type MN-DS', 13-5/8 10K, w/ 13-5/8 Nom Dovetail Seal, and 9-5/8 Nom 'T' Seal and w/ Internal and External Lock Ring Prep, Min. Bore 8.835 Part# 2161673-01-01	
A6 1	Rotating Mandrel Hanger, Type 'MN-DS'; 11 Nom, 5-1/2 20 Lb/Ft Tenaris XP Buttress Box Thd Btm X 7.500- 4 TPI Stub ACME Running Thd w/ 5.010 OD type 'H' BPV Thd w/ 7 Nom Slick Neck Top, w/ FLOW-by Slots; Min Bore: 4.754 Part# 2345649-49-01	

MN-DS HOUSING		
Item Qty	Description	
A7 1	Assy; Seal Packoff f/ 11 Nom Type 'Mn-Ds', w/ 9.875-4TPI LH Stub Acme Thd w/ 7.75 Dbl 'T' Seals At ID and Dovetails At OD Part# 2217588-05-03	
A8 1	Gate Valve, Manual, Model M Pow-R-Seal, 2-1/16 Bore, 5K Psi, 2-1/16 API Flg x Flg Part# 2148451-31-22	
A9 2	Companion Flange, 2-1/16 API 5K x 2" API LP Thd Part# 142362-01-03-02	
A10 4	Bull Plug 2" LP w/ 1/2 NPT x 3.750" Lg Part# 007481-01	
A11 2	Bleeder Fitting, Plug 1/2 NPT 4140 Nace Part# 2738068-02	
A12 2	Needle Valve, 1/2 NPT 10000 Psi Part# 006818-23	
A13 1	Pressure Gauge 0-5M Liquid Filled Part# Y52100-00300791	
A14 3	Ring Gasket, R-24 Part# 702001-24-02	
A15 8	Stud w/(2) Nuts 7/8" x 6" Lg Part# Y51201-20220301	
A16 1	VR Plug 1-1/2 In 11-1/2 TPI - 3/4 TPF 'Vee' Tubing Thd, 2-1/16 2K - 10K Part# 2222164-02-01	
A17 3	Ring Gasket, BX-151 Part# 702003-15-12	
A18 8	Stud w/(2) Nuts, 3/4"-10 x 5-1/4" Lg Part# Y51201-20120201	
A19 1	Pressure Gauge 0-10M Liquid Filled Part# Y52100-00301391	

MN-DS HOUSING		
Item Qty	Description	
A20 1	VR Plug 1-1/4 LP Thd, 1-13/16 2K - 10K Part# 2222164-01-01	
A21 1	Gate Valve, Manual, Model FLS, 1-13/16 Bore, 10K Psi, 1-13/16 API Flg x Flg Part# 141510-41-91-01	
A22 2	Companion Flange, 1-13/16 API 10K w/ 2" API Line Pipe, 5000 Psi WP Part# 142359-01-03-02	
A23 1	Ring Gasket, BX-159 Part# 702003-15-92	

RP-003766

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13-5/8" 10K MN-DS System
20" x 11-3/4" x 8-5/8" x 5-1/2" Casing Program



Bill of Materials

NOTE Contact your Cameron representative for replacement part inquiries. Cameron personnel can check the latest revision of the assembly bill-of-material to obtain the appropriate and current replacement part number.

SERVICE TOOLS		
Item Qty	Description	
ST1 1	Conversion Assy; Casing Head Torque Tool, f/ 'MN-DS' w/ Lift Plate, 13-3/8 In API 8Rnd Short Thread Casing Box Thread Top X .750-10UNC (16) Bolt Pattern Btm, (8) Torque Pins, Min Bore: 12.605 Part# 2143701-75	
ST1A 1	Conversion Body; Lift Plate for Casing Head Torque Tool w/ Exrt 14.75 Stub ACMERng Thd and (2) OD O-ring Seals Part# 2143700-76	
ST2 1	Assy; Test Plug, Type "C" 13-5/8" Nom f/ Use In Cactus Head w/ WQ Seal 4-1/2" IF Box X 4-1/2" IF Pin Btm, w/ Weep Hole On Top Portion Of Test Plug Part# 2247044-01-01	
ST3 1	Weldment and Assy; Wear Bushing Running & Retrieving Tool IC-2, 13-5/8" Nom x 4-1/2" IF Box Btm x Top Part# 2301310-02	
ST4 1	Assy; Wear Bushing, f/ 13-5/8" Nom 10K Type 'Mn-Ds' Housing, Installed w/ (4) O-Rings & (4) Welded Stop Lugs Min Bore: 12.615 Part# 2367788-02	
ST5 1	Assy; Running Tool, 13-5/8" Nom, w/ 8-5/8 BC Box Thd Top x 10.000-4TPI LH Stub Acme Running Thd Btm, C/ W Single O-Ring and (3) Centralizing Ribs, Min Bore: 8.00 Part# 2161757-98-01	
ST6 1	Assy; Jetting Tool, 13-5/8" Nom Compact Housing, Type 'SSMC' Part# 2125914-01	

SERVICE TOOLS		
Item Qty	Description	
ST7 1	Running Tool, 'MN-DS' Type f/ 13-5/8" Nom Packoff Support Bushing w/ 4-1/2" API IF Thd Top x 4-1/2" API IF Thd Btm and 12.375" 4-TPI LH Stub Acme Thd, Safe Working Load: 275K Lbf Part# 2017712-10-01	
ST8 1	Assy; Test Plug, Type 'IC', 11" Nom 4-1/2" IF Box X Pin Btm, w/ Weep Hole On Top Portion Of Test Plug, w/(2)Dovetail Seal Grooves Part# 2247042-07-01	
ST9 1	Weldment and Assembly, Retrieving Tool, 11" In Nom x 4-1/2" IF Box Btm x Top, Min Bore: 4.19" Part# 2367902-01-01	
ST10 1	Assy; Wear Bushing, f/ 11" Nom Type 'MN-DS', Min Bore: 8.910" Part# 2125720-06	
ST11 1	Assy; Rotating Fluted Mandrel Hanger Running Tool, TSDS-S; 11 Nom X 7.500-4TPI Stub ACME Thd Btm X 5-1/2 23 Lb/Ft TSH Blue Box Thd Top, w/ 1/8-27 NPT Test Port Part# 2161757-83-01	
ST12 1	Running Tool; F/ 11 Nom Seal Assembly w/ 4-1/2 API IF Thd Top X 2-7/8 API IF Thd Btm and 9.875-4 TPI LH Stub ACME Thd Part# 2017712-15-01	
ST13 1	Assy; Casing Head Running Tool; 14.750-4 TPI LH Internal Stub ACME Thd Btm X 11-3/4 API 8Rnd Short Thd Casing Box Thd Top; Min Bore: 11.359 Part# 2254468-04-01	
ST14 1	Assy; Low Pressure Adapter; 24.00 OD X 22.740 ID Part# 2222008-06-01	

EMERGENCY EQUIPMENT		
Item Qty	Description	
E1 1	Assy; MN-DS-IC-1 Casing Slip, 13-5/8 Nom X 8-5/8 Casing; w/ Holes F/ Antirotation Pins, (Control Height) Part# 2161741-09-01	
E2 1	Assy; Emergency Bushing Packoff Support, 'MN-DS', 13-5/8, w/ 13-5/8 Dovetail; 8-5/8 'T' Seals, w/ Internal and External Lockring Prep; 10K Service Part# 2161673-20-01	
E3 1	Assy; Casing Hanger, IC-2, 11" x 5-1/2", (f/ 10K Above and Below) Part# 2357372-01-01	
E4 1	Assy; 'NX' Bushing Nom 11" x 5-1/2" OD Csg w/ Integral Bit Guide Part# 2161829-02-01	

CAPPING FLANGE		
Item Qty	Description	
TA1 1	Assy; Capping Flg, 7-1/16" API 10K BX-156 Std'd Blind Top x 13-5/8" API 10K BX-159 Std'd Btm, w/ One 1-13/16" API 10K BX-151 Std'd Side Outlet, w/ 1-13/16" API Vr Thd, w/ 11" 'NX' Btm Prep, Oal: 12" Part# 2392883-03-01	
TA2 1	Assy 'NX' Bushing Nom 11" w/ 7" OD Csg Part# 608783-17	
TA3 1	Gate Valve, Manual, Model FLS, 1-13/16 Bore, 10K Psi, 1-13/16 API Flg x Flg Part# 141510-41-91-01	



13-5/8" 10K MN-DS System
20" x 11-3/4" x 8-5/8" x 5-1/2" Casing Program

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Rev 01
Page 11

APD ID: 10400017408

Submission Date: 07/31/2017

Highlighted data
reflects the most
recent changes

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Zia_Hills_19_Pad_2_Existing_Road_Maps_07-27-2017.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: The roads from the well pad to the Facility are existing roads and will be upgraded.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Zia_Hills_19_Pad_2_Access_Road_Map_07-27-2017.pdf

New road type: RESOURCE

Length: 582 Feet

Width (ft.): 30

Max slope (%): 2

Max grade (%): 2

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: The inside slope of the side ditches shall be 3:1. Any topsoil removed from the access road will be conserved as appropriate and with low profile. This access road is on fairly level ground. No additional erosion control is planned.

New road access plan or profile prepared? NO

New road access plan attachment:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: OFFSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth:

Offsite topsoil source description: Caliche will be from a BLM approved source or third-party commercial location. Material meets BLM requirements and standards. The Cattle guard on the SW side of the pad will be replaced and the road will be upgraded.

Onsite topsoil removal process:

Access other construction information:

Access miscellaneous information: The access road and existing road will be 30' wide for a 20' wide drive-able surface and 5' on each side to accommodate the size of the rig. 582' is new road and the remainder is existing road that will be upgraded.

Number of access turnouts: 1

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: The proposed road to the location is surveyed and staked with stations set along the centerline at specific intervals. The road will be centerline crowned with a 2% crown for appropriate drainage. The inside slope of the side ditches shall be 3:1. Any topsoil removed from the access road will be conserved as appropriate. This access road is on level ground.

Road Drainage Control Structures (DCS) description: No additional road drainage is needed other than standard BLM requirements for this area and those discussed in the BLM "Gold Book". This access road is on level ground.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

ZIA_HILLS_19_FEDERAL_COM_112H_One_Mile_Radius_07-27-2017.pdf

Existing Wells description:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: Zia Hills Buck CF1 is located in Section 19, T26S, R32E and was staked on 4/18/17. Dimensions are 1000'X500'. The Battery was submitted with the Zia Hills 19 Pad #1 APDs. Zia Hills 19 Federal COM 101H- APD ID#10400015368 Zia Hills 19 Federal COM 102H-APD ID# 10400015572 Zia Hills 19 Federal COM 103H- APD ID# 10400015525 Zia Hills 19 Federal COM 104H- APD ID# 10400015588 Zia Hills 19 Federal COM 105H- APD ID#10400015608 Zia Hills 19 Federal COM 106H- APD ID# 10400015609 Zia Hills 19 Federal COM 107H- APD ID# 10400015610 Zia Hills 19 Federal COM 108H- APD ID# 10400015651

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: STIMULATION

Water source type: GW WELL

Describe type:

Source latitude: 31.970142

Source longitude: -103.75827

Source datum: NAD27

Water source permit type: WATER WELL

Source land ownership: FEDERAL

Water source transport method: PIPELINE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 6666.6665

Source volume (acre-feet): 0.8592873

Source volume (gal): 280000

Water source and transportation map:

Zia_Hills_19_Pad_2_Water_Wells_07-27-2017.pdf

Water source comments: Water will be trucked from the water wells in Texas to the frac ponds and from the frac ponds the water will be sent via temp pipe lines. However, COP plans to use additional/ different water well(s) depending on availability at the time of fracturing the wells but the locations will meet BLM requirements and standards.

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Clean caliche will be used to construct well pad, road, and facility pad. Our first source for caliche will be from Kiehne's pit is located in Section 21, T26S, R32E, Lea County, NM and the second source will be State Pit 643-Eddy located in Section 15, T25S, R27E, Eddy County, NM. However, COP plans to use additional caliche source(s) depending on caliche availability at the time of location construction and material will meet BLM requirements and standards. Trucking for source material will utilize authorized roads as per Access Road Topo A attached.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drilling fluid and cuttings

Amount of waste: 130 barrels

Waste disposal frequency : Daily

Safe containment description: Cuttings will be held in a closed-loop system and trucked to an approved disposal facility.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Trucked to approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Zia_Hills_19_Pad_2_Location_Layout_07-27-2017.pdf

Zia_Hills_19_Pad_2_Arch_Boundary_07-27-2017.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: ZIA HILLS 19 PAD

Multiple Well Pad Number: 112H

Recontouring attachment:

Drainage/Erosion control construction: Topsoil will be stripped and set along designated side of the wellsite. The next layer of dirt (stockpile) is done with the cut and fill method whereby the highest portion of the wellsite is pushed to lower portion(s) to balance the pad. The access road is done in a similar manner. To the greatest extent practicable, the location is placed so that the least amount of dirt is to be cut and disturbed, and so a good balance can be maintained during project. Topsoil stockpile will have lowest practicable profile to reduce wind erosion. For more detail please see attached Surface Use

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Plan of Operations.

Drainage/Erosion control reclamation: Upon project completion, if this well is a producer, excess caliche is removed from the interim reclamation portion of pad. Topsoil stockpile is balanced back onto the unused portion of the well pad and re-contoured as appropriate. Any drainage ditches will not be blocked with topsoil and/or organic material. Lowering the profile of the topsoil stockpile will reduce wind erosion. Erosion controls will be maintained per BLM guidelines and conditions. For more detail please see attached Surface Use Plan of Operations. Reclamation activities are planned to be accomplished within six months of project completion, contingent upon weather. A site specific "Reclamation Diagram" interim plan is attached. At such time as well is permanently abandoned, ConocoPhillips Company will contact the BLM for development of final rehabilitation plan. Upon abandonment, a dry hole marker will be installed as directed by Authorized BLM Officer at the time, in accordance with 43 CFR 3162.6. An above ground dry hole marker sealing the casing will have a weep hole which will allow pressure to dissipate and make detection of any fluid seepage easier. If below ground "well marker" is directed, ConocoPhillips Company will follow BLM requirements and standards for that method of abandonment. During final reclamation erosion is to be minimized through lower profile of any soil piles. Please see attached Surface Use Plan of Operations for more information.

Wellpad long term disturbance (acres): 4.028

Wellpad short term disturbance (acres): 1.758

Access road long term disturbance (acres): 0.4

Access road short term disturbance (acres): 0

Pipeline long term disturbance (acres): 5.3879704

Pipeline short term disturbance (acres): 0

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 9.81597

Total short term disturbance: 1.758

Reconstruction method: If this well is a producer site rehabilitation will be completed within six months, weather permitting. Excess caliche will be removed, as appropriate and either disposed of in a permitted facility or, if clean, stored for future use. Topsoil from the stockpile will be spread along areas to be interim reclaimed. Any drainage ditches will not be blocked with topsoil. Under normal weather conditions, the timetable for rehabilitation will allow two to three months to complete any re-contouring and top-soiling necessary. At such time as well is permanently abandoned, ConocoPhillips Company will contact BLM for development of final rehabilitation plan. Upon abandonment, a dry hole marker will be installed as directed by Authorized BLM Officer at the time, in accordance with 43 CFR 3162.6. An above ground dry hole marker sealing the casing will have a weep hole which will allow pressure to dissipate and make detection of any fluid seepage easier. If below ground "well marker" is directed, ConocoPhillips Company will follow BLM requirements and standards for that method of abandonment. Excess caliche will be removed, as appropriate and either disposed of in a permitted facility. Location soil may be "flipped" with BLM concurrence, clean topsoil spread and re-contoured to blend with surrounding area. This method will be accomplished in accordance to BLM standards set forth by the Authorized Officer

Topsoil redistribution: Areas planned for interim reclamation will be re-contoured to the extent feasible. Topsoil will be evenly re-spread and re-vegetated over the disturbed area not needed for continuing production operations. At such time as well is abandoned, disturbed areas will be re-contoured to a contour that blends with surrounding landscape. Topsoil will be redistributed evenly over the entire disturbed site to depth of 4-6 inches.

Soil treatment: The topsoil will be stripped and set along the designated perimeter of the wellsite. The next layer of dirt is moved with the cut and fill method whereby the highest point of the wellsite is cut into and then pushed to a lower side to balance the well pad. Upon well completion, the soil will be balanced back onto portions of the pad not needed for long-term operations. Erosion will be minimized by maintaining a lower stockpile profile.

Existing Vegetation at the well pad: Based on an existing EA in the vicinity, the proposed area is expected to be classified as transitional between the Plains-Mesa Sand Scrub and Chihuahuan Desert Scrub plant communities. The area surrounding the location is expected to have dominant shrub species including white thorn acia, range ratany, javelin bushy, honey mesquite, invading creosote and a few althorns. Dominant grass species in the project included but not limited to sand and mesa dropseed, roa grande bristlegrass, black grama and burrograss. An EA will be performed that will list species in the area.

Existing Vegetation at the well pad attachment:

Zia_Hills_19_Pad_2_Location_Photos_07-31-2017.pdf

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre
------------------	--------------------

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

First Name: ashley

Last Name: bergen

Phone: (432)688-6938

Email: ashley.bergen@cop.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Two Class B noxious weed species, African rue and Malta starthistle and two Class C noxious weed species, Russian olive and salt cedar are of concern. ConocoPhillips Company will consult with BLM for acceptable weed control methods, if the need arises. Any weed control would follow USEPA and BLM requirements and standards. No noxious weed species are expected in the project area.

Weed treatment plan attachment:

Monitoring plan description: Weeds will be controlled on disturbed areas within the exterior limits of the well pad. Monitoring will be in accordance with Best Management Practices and guidelines established by BLM.

Monitoring plan attachment:

Success standards: Reclamation success standards will utilize BLM approved methods.

Pit closure description: No pits will be used, a closed-loop system will be in place

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Section 12 - Other Information

Right of Way needed? YES

Use APD as ROW? NO

ROW Type(s):

ROW Applications

Zia_Hills_19_Pad_2_SF299_07-27-2017.pdf

SUPO Additional Information: Onsite conducted 4/18/17

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

Zia_Hills_19_Pad_2_Pipeline_07-27-2017.pdf

Zia_Hills_19_Pad_2_CTB_Location_07-31-2017.pdf

ZIA_HILLS_BUCK_CF1_07-31-2017.pdf

ZIA_HILLS_BUCK_CF1_Access_Road_07-31-2017.pdf

ZIA_HILLS_BUCK_CF1_Pipelines_07-31-2017.pdf

ZIA_HILLS_BUCK_CF1_Power_Line_07-31-2017.pdf

ZIA_HILLS_BUCK_CF1_Preliminary_Plot_Plan_07-31-2017.pdf

Zia_Hills_19_Pad_2_Reclamation_Diagram_20170830145639.pdf

Zia_Hills_19_Federal_COM_112H_Surface_Use_Plan_20170830145659.pdf

BEGINNING AT THE INTERSECTION OF HIGHWAY 18 AND HIGHWAY 128, PROCEED IN A WESTERLY, THEN NORTHWESTERLY DIRECTION FROM JAL, NEW MEXICO ALONG HIGHWAY 128 APPROXIMATELY 30.0 MILES TO THE JUNCTION OF THIS ROAD AND J-1/ORLA ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY , THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 13.6 MILES TO THE JUNCTION OF THIS ROAD AND BATTLE AXE ROAD/CR J-2 TO THE WEST; TURN RIGHT AND PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 1.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN RIGHT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 0.1 MILES THE BEGINNING OF THE PROPOSED ACCESS TO THE EAST; FOLLOW ROAD FLAGS IN A EASTERLY DIRECTION APPROXIMATELY 582' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM JAL, NEW MEXICO TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 44.9 MILES.

REV: 1 06-19-17 V.L.D. (PAD NAME CHANGE)

ConocoPhillips Company

ZIA HILLS 19 FEDERAL PAD 2
SE 1/4 NW 1/4, SECTION 19, T26S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	04-19-17	
DRAWN BY	V.L.D.	05-03-17	
ROAD DESCRIPTION			



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

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? 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:

Assigned injection well API number?

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Injection well name:

Injection well API number:

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):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



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

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:



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

Operator Certification Data Report

11/21/2017

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Ashley Bergen

Signed on: 07/31/2017

Title: Associate, Regulatory MCBU

Street Address: 3300 N. A Street

City: Midland

State: TX

Zip: 79710

Phone: (432)688-6938

Email address: Ashley.Bergen@conocophillips.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: ZIA HILLS 19 FEDERAL COM

Well Number: 112H

	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
PPP Leg #1	0	FSL	2315	FWL	26S	32E	18	Aliquot SESW 6	32.035526	-103.715598	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC062749C	-8268	11450	11450
PPP Leg #1	0	FSL	2311	FWL	26S	32E	7	Aliquot SESW 9	32.050209	-103.715609	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM0392082A	-8268	11450	11450
EXIT Leg #1	2338	FSL	2310	FWL	26S	32E	7	Aliquot NESW 6	32.056636	-103.715614	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM0392082A	-8437	21837	11619
BHL Leg #1	2618	FSL	2310	FWL	26S	32E	7	Aliquot NESW 6	32.057406	-103.715614	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM0392082A	-8437	22167	11619



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:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

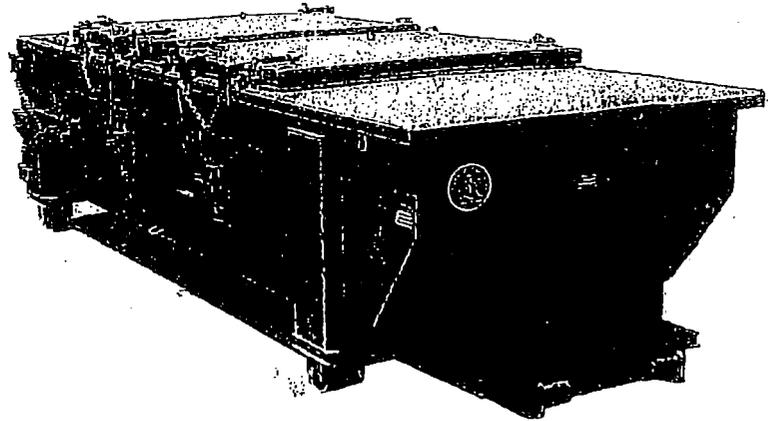
Lined pit bond amount:

Additional bond information attachment:

SPECIFICATIONS

Heavy Duty Split Metal Rolling Lid

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



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

