Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM77090

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
ROMEO FED COM 701H

2. Name of Operator
CENTENNIAL RESOURCE PRODUCTION
Contact: KANICIA SCHLICHTING
Email: kanicia.schlichting@cdevinc.com

9. API Well No.
30-025-45557-00-X1

3a. Address
1001 17TH STREET SUITE 1800
DENVER, CO 80202

3b. Phone No. (include area code)
Ph: 720.499.1537

10. Field and Pool or Exploratory Area
ANTELOPE RIDGE-WOLFCAMP

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 22 T24S R34E Tract D 400FNL 817FEL
32.209190 N Lat, 103.463753 W Lon

11. County or Parish, State
LEA COUNTY, NM

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

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

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

Centennial Resource Production, LLC respectfully requests to change the Casing and Cementing program as follows.

Please see attachments.

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

Electronic Submission #535341 verified by the BLM Well Information System
For CENTENNIAL RESOURCE PRODUCTION, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 10/26/2020 (21PP0312SE)

Name *(Printed/Typed)* KANICIA SCHLICHTING — Title SR REGULATORY ANALYST

Signature (Electronic Submission) — Date 10/23/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JEROMY PORTER — Title PETROLEUM ENGINEER — Date 11/14/2020

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

Office Hobbs

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

(Instructions on page 2)

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

Revisions to Operator-Submitted EC Data for Sundry Notice #535341

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM077090	NMNM77090
Agreement:		
Operator:	CENTENNIAL RESOURCE PRODUCTION 1001 17 STREET SUITE 1800 DENVER, CO 80202 Ph: 720-499-1537	CENTENNIAL RESOURCE PRODUCTION 1001 17TH STREET SUITE 1800 DENVER, CO 80202 Ph: 720.441.5515
Admin Contact:	KANICIA SCHLICHTING SR REGULATORY ANALYST E-Mail: kanicia.schlichting@cdevinc.com Ph: 720.499.1537	KANICIA SCHLICHTING SR REGULATORY ANALYST E-Mail: kanicia.schlichting@cdevinc.com Ph: 720.499.1537
Tech Contact:	KANICIA SCHLICHTING SR REGULATORY ANALYST E-Mail: kanicia.schlichting@cdevinc.com Ph: 720.499.1537	KANICIA SCHLICHTING SR REGULATORY ANALYST E-Mail: kanicia.schlichting@cdevinc.com Ph: 720.499.1537
Location: State: County:	 NM LEA	 NM LEA
Field/Pool:	ANTELOPE RIDGE; WOLFCAMP	ANTELOPE RIDGE-WOLFCAMP
Well/Facility:	ROMEO FEDERAL COM 701H Sec 22 T24S R34E Mer NMP SWSE 400FNL 817FEL 32.209192 N Lat, 103.463749 W Lon	ROMEO FED COM 701H Sec 22 T24S R34E Tract D 400FNL 817FEL 32.209190 N Lat, 103.463753 W Lon

Romeo Federal Com 701H Updated casing and cement

BOP Rating Depth 12318' TVD

Casing

Casing Id	String Type	Hole Size	Casing Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joins SF Type	Joint SF	Body SF Type	Body SF
1	Conductor	26	20	New	API	N	0	120	0	3535	3415	120	H40	94	Weld						
2	Surface	12.25	9.625	New	API	N	0	1300	0	3535	2235	1300	J55	40	LTC	4.01	34.99	Dry	10	Dry	17.62
3	Intermediate	8.75	7.625	New	API	N	0	11610	0	3535	-8065	11610	HCP-110	29.7	TEC-LOCK FJ	1.98	2.89	Dry	2.17	Dry	3.1
4	Production	6.75	5.5	New	API	N	0	12662	0	3535	-8783	12662	P110 RY	20	VAM-EDGE SF	1.30	3.63	Dry	2.34	Dry	2.96
5	Production	6.75	5.5	New	API	N	12662	19863	12318	-8783	-8783	7201	P110 HC	20	VAM-EDGE SF	1.30	3.63	Dry	2.34	Dry	2.96

Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity (sx)	Yield	Density	Cu FT	Excess %	Cement Type	Additives
Conductor	Lead		0	120	121	1.49	12.9	181	N/A	Grout	Bentonite 4% BWOC, Cellophane #/sx, CaCl2 2% BWOC.
Surface	Lead		0	800	288	1.74	13.5	501	100	Class C Premium	Premium Gel Bentonite 4%, C-45 Econolite 0.25%, Phenoseal 0.25#/sk, CaCl 1%, Defoamer C-41P 0.75%
Surface	Tail		800	1300	234	1.34	14.8	313	100	Class C Premium	C-45 Econolite 0.10%, CaCl 1.0%
Intermediate	Lead		0	11110	819	3.44	10.7	2817	150	TXI Light weight	Salt 1.77/sk, C-45 Econolite 2.25%, STE 6.00%, Citric Acid 0.18%, C-19 0.10%, CSA-1000 0.20%, C-530P 0.30%, CTB-15 LCM 7#/sk, Gyp Seal 8#/sk
Intermediate	Tail		11110	11610	45	1.33	14.8	60	20	Class C Premium	C-45 Econolite 0.10%, Citric acid 0.05%, C503P 0.25%
Production	Lead		0	11762	416	3.41	10.6	1417	30	TXI Light weight	Salt 8.98#/sk, STE 6.00%, Citric acid 0.20%, CSA-1000 0.23%, C47B 0.10%, C-503P 0.30%
Production	Tail		11762	19863	758	1.24	14.2	940	25	50:25:25 Class H: Poz: CPO18	Citric acid 0.03%, CSA-1000 0.05%, C47B 0.25%, C-503P 0.30%

Circulating Medium Table

	Top Depth	Bottom Depth	Mud Type	Min weight (l	Max weight (lbs./gal.)
Surface	0	1300	FW	8.4	9.5
Intermediate	1300	11610	Brine	9	10
Production	11610	19863	OBM	11.5	14.5

Centennial Resource Development - Well Control Plan

A. Component and Preventer Compatibility Table

Component	OD (inches)	Preventer	RWP
Drillpipe	5	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Heavyweight Drillpipe	5	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Drill collars and MWD tools	6 ¾	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Mud Motor	6 ¾	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
Production Casing	5-1/2	Upper VBR: 3.5 – 5.5 Lower VBR: 3.5 – 5.5	10M
All	0 – 13 5/8	Annular	5M
Open-hole	-	Blind rams	10M

VBR = Variable Bore Rams

RWP = Rated Working Pressure

MWD = Measurement While Drilling (directional tools)

B. Well Control Procedures

I. General Procedures While Drilling:

1. Sound alarm (alert crew).
2. Space out drill-string.
3. Shut down pumps and stop rotary.
4. Open HCR
5. Shut-in well – utilizing upper VBRs.
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record
    - I. Shut-in drillpipe pressure (SIDPP) and shut-in casing pressure (SCIP).
    - II. Pit gain
    - III. Time
11. Regroup, identify forward plan

II. General Procedure While Tripping

1. Sound alarm (alert crew).
2. Stab full opening safety valve and close
3. Space out drillstring.
4. Open HCR
5. Shut-in well – utilizing upper VBRs
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
11. Regroup and identify forward plan.

III. General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out string.
4. Open HCR
5. Shut-in well – utilizing upper VBRs.
6. Close choke
7. Confirm shut-in.
8. Notify rig manager and Centennial company representative.
9. Call Centennial drilling engineer
10. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
11. Regroup and identify forward plan.

IV. General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Open HCR
3. Shut-in with blind rams
4. Close choke
5. Confirm shut-in
6. Notify rig manager and Centennial company representative.
7. Call Centennial drilling engineer
8. Read and record:
    I. SIDPP AND SICP
    II. Pit gain
    III. Time
9. Regroup and identify forward plan.

V. General Procedures While Pulling BHA Thru BOP Stack

1. **Prior to pulling last joint of drillpipe thru stack**:
   - I. Perform flow check, if flowing
     - a. Sound alarm, alert crew
     - b. Stab full opening safety valve and close
     - c. Space out drillstring with tool joint just beneath the upper pipe ram.
     - d. Open HCR
     - e. Shut-in utilizing upper VBRs
     - f. Close choke
     - g. Confirm shut-in
     - h. Notify rig manager and Centennial company representative.
     - i. Call Centennial drilling engineer
     - j. Read and record:
       - i. SIDPP and SICP
       - ii. Pit gain
       - iii. Time
   - II. Regroup and identify forward plan

2. **With BHA in the BOP stack and compatible ram preventer and pipe combo immediately available**:
   - a. Sound alarm, alert crew
   - b. Stab full opening safety valve and close
   - c. Space out drillstring with tool joint just beneath the upper pipe ram.
   - d. Open HCR
   - e. Shut-in utilizing upper VBRs
   - f. Close choke
   - g. Confirm shut-in
   - h. Notify rig manager and Centennial company representative.
   - i. Call Centennial drilling engineer
   - j. Read and record:
     - i. SIDPP and SICP
     - ii. Pit gain
     - iii. Time
   - II. Regroup and identify forward plan

3. **With BHA in the BOP stack and no compatible ram preventer and pipe combo immediately availiable**:
    I. Sound alarm, alert crew.
    II. If possible to pick up high enough, pull string clear of the stack and follow Open Hole (III) scenario.
    III. If impossible to pick up high enough to pull the string clear of the stack:
        a. Stab crossover, make up one joint/stand of drill pipe and full opening safety valve and close.
        b. Space out drillstring with tool joint just beneath the upper pipe ram.
        c. Open HCR
        d. Shut-in utilizing upper VBRs.
        e. Close choke
        f. Confirm shut-in
        g. Notify rig manager and Centennial company representative.
        h. Call Centennial drilling engineer
        i. Read and record:
            i. SIDPP and SICP
            ii. Pit gain
            iii. Time
    IV. Regroup and identify forward plan.

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

TEC-LOCK FJ

7.625" 29.7 LB/FT (.375" Wall)
P110-HSCY

Pipe Body Data

Nominal OD:	7.625	in
Nominal Wall:	0.375	in
Nominal Weight:	29.70	lb/ft
Plain End Weight:	29.22	lb/ft
Material Grade:	P110-HSCY	
Mill/Specification:	BORUSAN MANNESMANN	
Yield Strength:	125,000	psi
Tensile Strength:	130,000	psi
Nominal ID:	6.875	in
API Drift Diameter:	6.750	in
Special Drift Diameter:	NA	in
RBW:	0.875	
Body Yield:	1,068,000	lbf
Burst:	10,750	psi
Collapse:	7,360	psi

Connection Data

Standard OD:	7.625	in
Pin Bored ID:	6.875	in
Critical Section Area:	6.299	in²
Tensile Efficiency:	70.0%	
Compressive Efficiency:	62.0%	
Longitudinal Yield Strength:	747,600	lbf
Compressive Limit:	662,160	lbf
Internal Pressure Rating:	8,610	psi
External Pressure Rating:	7,360	psi
Maximum Bend:	29	°/100ft

Operational Data

Minimum Makeup Torque:	3,600	ft*lbf
Optimum Makeup Torque:	7,100	ft*lbf
Maximum Makeup Torque:	10,500	ft*lbf
Minimum Yield:	16,100	ft*lbf
Makeup Loss:	5.97	in

Notes

Preliminary DataSheet

The Connection ratings are structural

HUNTING

Generated on Aug 29, 2019

Issued on: 25 Jan. 2019

VAM USA

VAM EDGE SF

Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift	Connection
5 1/2 in.	20.00 lb/ft	0.361 in.	P110EC	4.653 in.	VAM® EDGE SF

PIPE PROPERTIES		
Nominal OD		5.500 in.
Nominal ID		4.778 in.
Nominal Cross Section Area		5.828 sqin.
Grade Type	Extended Collapse	
Minimum wall		87.5 %RBW
Min. Yield Strength		125 ksi
Max. Yield Strength		140 ksi
Min. Ultimate Tensile Strength		135 ksi
Tensile Yield Strength		729 klb
Internal Yield Pressure		14,360 psi
Collapse pressure		12,090 psi

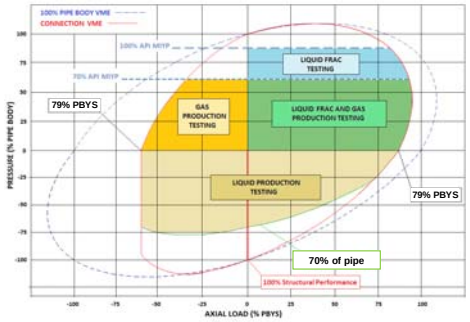
CONNECTION PROPERTIES	
Connection Type	Premium Integral Semi-Flush
Connection OD (nom)	5.765 in.
Connection ID (nom)	4.706 in.
Make-Up Loss	5.236 in.
Critical Cross Section	4.611 in.
Tension Efficiency	79 % of pipe
Compression Efficiency	79 % of pipe
Internal Pressure Efficiency with Water	100 % of pipe
Internal Pressure Efficiency with Gas	70 % of pipe
External Pressure Efficiency	70 % of pipe

CONNECTION PERFORMANCES	
Tensile Yield Strength	576 klb
Compression Resistance, Sealability	576 klb
Compression Resistance, Structural	576 klb
Internal Yield Pressure with Water	14,360 psi
Internal Yield Pressure with Gas	10,050 psi
External Pressure, Sealability	8,460 psi
External Pressure, Structural	12,090 psi
Max. Bending with Sealability	40 °/100ft

TORQUE VALUES	
Min. Make-up torque	16,950 ft.lbs
Opti. Make-up torque	17,950 ft.lbs
Max. Make-up torque	18,950 ft.lbs
Max. Torque with Sealability	29,500 ft.lbs
Max. Torsional Value	32,500 ft.lbs

The solution for High Torque, High Tension Shale play needs

VAM® EDGE SF™ is a gas-tight expanded box premium connection with increased tension and torque capacity, making it ideal for production casing in the Shale plays. The tapered two-step design technology means that it stabs deep with very low risk of cross-threading. VAM® EDGE SF™'s high tension rating plus extremely high torque capacity make it ideal to run a full string length as production casing in Shale wells with extended horizontal sections.



Do you need help on this product? - Remember no one knows VAM® like VAM

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Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

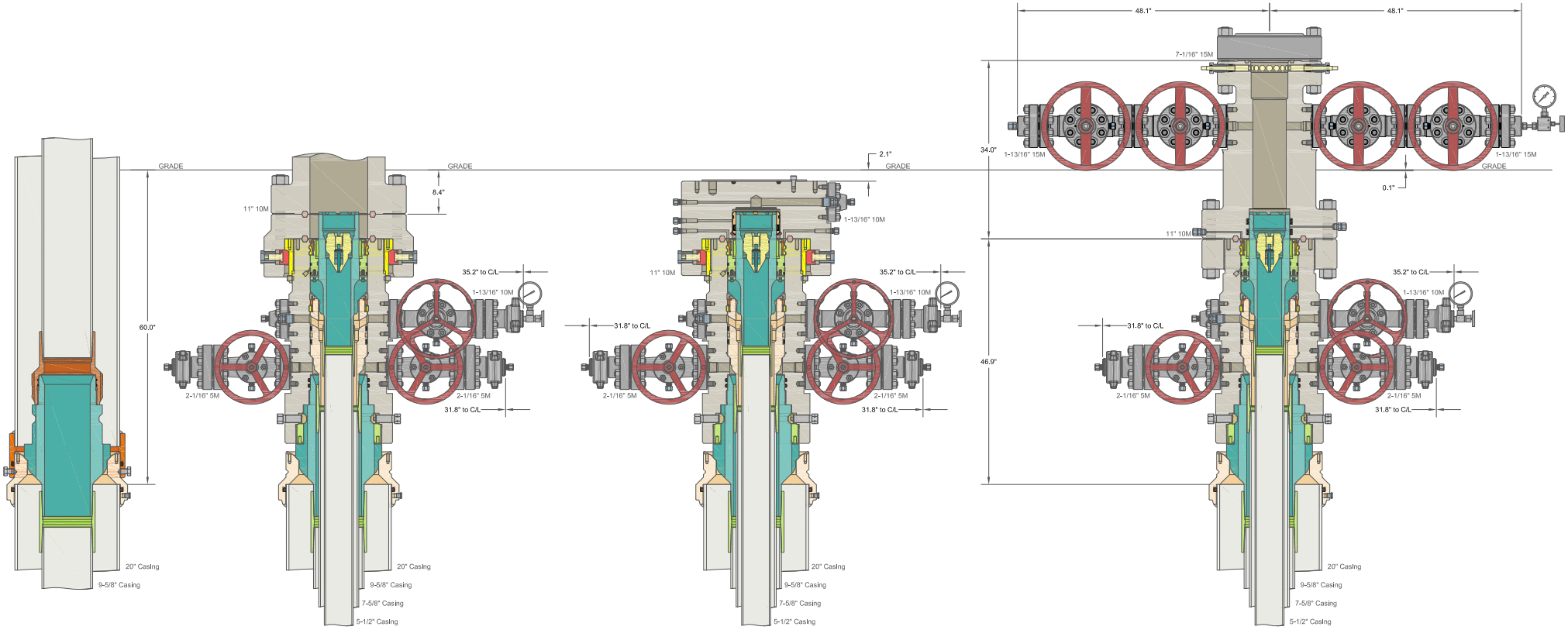
Romeo Federal Com 701H

Centennial Drilling Plan for 3-Casing String Wolfcamp Formation

Cactus Multi-Bowl Wellhead

9-5/8" x 7-5/8" x 5-1/2" Casing Design

1. Drill 12-1/4" surface hole to Total Depth with Rig and perform wellbore cleanup cycles.
2. Run and land 9-5/8" casing to Depth.
3. Cement 13-3/8" casing – cement to surface.
4. Cut / Dress Conductor and 9-5/8" casing as needed, land Cactus Multi-bowl system with baseplate supported by 20" conductor.
5. Test to 70% of 9-5/8" casing collapse. Place nightcap with Pressure Gauge on wellhead and test seals to 70% of Casing Collapse.
6. Bleed Pressure if necessary and remove nightcap. Nipple up and test BOPE with test plug per Onshore Order 2.
7. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
8. Install wear bushing then drill out 9-5/8" shoe-track plus 20' and conduct FIT to minimum of the MW equivalent anticipated to control the formation pressure to the next casing point.
9. Drill 8-3/4" Intermediate hole to 7-5/8" casing point. (~ 100' above KOP).
10. Remove wear bushing then run and land 7-5/8" Intermediate with mandrel hanger in wellhead.
11. Cement 7-5/8 casing – cement to surface.
12. Washout stack then run wash tool in wellhead and wash hanger and pack-off setting area.
13. Install pack-off and test to 10000 psi for 15 minutes.
    a. Test casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst. Cement must have achieved 500psi compressive strength prior to test.
14. Install wear bushing then drill out 7-5/8" shoe-track plus 20' and conduct FIT to minimum MW equivalent to control the formation pressure to TD of well.
15. Drill 6-3/4" Vertical hole to KOP with Curve BHA.
16. Drill 6-3/4" Curve, landing in production interval – Trip for Lateral BHA.
17. Drill 6-3/4" Lateral to Permitted BHL, perform cleanup cycles and trip out to run 5-1/2" Semi-Flush Production Casing.
18. Remove wear bushing then run 5-1/2" 20# TCBC production casing to TD landing casing mandrel in wellhead.
19. Cement 5-1/2" Production string to surface.
20. Run in with wash tool and wash wellhead area – install pack-off and test to 10,000psi for 15 minutes.
21. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
22. Test nightcap void to 10,000psi for 30 minutes.



SURFACE DRILL PHASE

DRILLING PHASE

SKID PHASE

COMPLETION PHASE

ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

CENTENNIAL

20" x 9-5/8" x 7-5/8" x 5-1/2" MBU-T-CFL-R-DLBO Wellhead System
With 11" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head
& Quick Connect Equipment for Drilling and Skid

DRAWN	DLE	13AUG20
APPRV		
DRAWING NO.	SDT-2814	