Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM050346

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.
SOMBRERO FED COM
301H (326386)

2. Name of Operator
CENTENNIAL RESOURCE PRODUCTION LLC (372165)

9. API Well No.
30-025-46178

3a. Address
1001 17th Street, Suite 1800 Denver CO 80202

3b. Phone No. *(include area code)*
(720)499-1400

10. Field and Pool, or Exploratory (97895)
RUSSELL / WC-025 G-08 S213304D; BO

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SESW / 700 FSL / 1545 FWL / LAT 32.488092 / LONG -103.614834
At proposed prod. zone SESW / 100 FSL / 1320 FWL / LAT 32.471928 / LONG -103.615574

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 7 / T21S / R33E / NMP

14. Distance in miles and direction from nearest town or post office*
33 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)
700 feet

16. No of acres in lease
151.49

17. Spacing Unit dedicated to this well
160

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

19. Proposed Depth
11650 feet / 16556 feet

20. BLM/BIA Bond No. in file
FED: NMB001496

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3901 feet

22. Approximate date work will start*
04/01/2020

23. Estimated duration
90 days

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Kanicia Schlichting / Ph: (720)499-1537	06/22/2018

Title
Sr. Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Christopher Walls / Ph: (575)234-2234	01/06/2020

Title	Office
Petroleum Engineer	CARLSBAD

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

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

GCP Rec 01/09/2020

APPROVED WITH CONDITIONS

KZ 01/13/2020

NSL

REQUIRES NSL

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 01/06/2020

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: SESW / 700 FSL / 1545 FWL / TWSP: 21S / RANGE: 33E / SECTION: 7 / LAT: 32.488092 / LONG: -103.614834 (TVD: 0 feet, MD: 0 feet)
   PPP: NENW / 100 FNL / 1320 FWL / TWSP: 21S / RANGE: 33E / SECTION: 18 / LAT: 32.485894 / LONG: -103.615638 (TVD: 11504 feet, MD: 11600 feet)
   BHL: SESW / 100 FSL / 1320 FWL / TWSP: 21S / RANGE: 33E / SECTION: 18 / LAT: 32.471928 / LONG: -103.615574 (TVD: 11650 feet, MD: 16556 feet)

BLM Point of Contact

Name: Priscilla Perez
Title: Legal Instruments Examiner
Phone: 5752345934
Email: pperez@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Centennial Resource Production, LLC**
LEASE NO.:	**NMNM-050346**
WELL NAME & NO.:	**Sombrero Fed Com 301H**
SURFACE HOLE FOOTAGE:	**0700' FSL & 1545' FWL**
BOTTOM HOLE FOOTAGE	**0100' FSL & 1320' FWL Sec. 18, T. 21 S., R 33 E.**
LOCATION:	**Section 07, T. 21 S., R 33 E., NMPM**
COUNTY:	**County, New Mexico**

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

[redacted]

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

R-111-P Potash
Capitan Reef
Possibility of water flows in the Salado and Artesia Group.
Possibility of lost circulation in the Artesia Group, Capitan Reef, and Delaware.
Abnormal pressures may be encountered when penetrating the 3rd Bone Spring lime and all subsequent formations.

Approval Date: 01/06/2020

B. CASING

1. The **20** inch surface casing shall be set at approximately **1825** feet (**in a competent bed <u>below the Magenta Dolomite</u>, which is a <u>Member of the Rustler</u>, and if salt is encountered, set casing at least 25 feet above the salt**) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **<u>24 hours in the Potash Area</u>** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

    13-3/8 1st Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing, which shall be set at approximately **3800** feet (**below the Yates and above the Capitan Reef**), is:

    - Cement to surface. If cement does not circulate see B.1.a, c-d above.
      Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.

    ❖ In <u>R111 Potash Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

    ❖ In <u>Capitan Reef Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

9-5/8 2nd Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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

   - Cement to surface. If cement does not circulate see B.1.a, c-d above.
     Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Capitan Reef and potash.

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

   - Cement to surface as proposed. Operator shall provide method of verification. **Excess calculates to 24% - Additional cement may be required.**

C. **PRESSURE CONTROL**

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be psi.

3. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch 1st intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** inch 1st intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

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

D. **SPECIAL REQUIREMENT (S)**

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

☐ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 3933612

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

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

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

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement

program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

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

5. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

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

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

B. PRESSURE CONTROL

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

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's

requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

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

    a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

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

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

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

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

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

    g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

JAM 111219

AFMSS

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

Operator Certification Data Report

01/06/2020

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: Kanicia Schlichting **Signed on:** 07/03/2019

Title: Sr. Regulatory Analyst

Street Address:

City: **State:** **Zip:**

Phone: (720)499-1537

Email address: Kanicia.schlichting@cdevinc.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

APD ID: 10400031523 **Submission Date:** 06/22/2018

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

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

[redacted]

Show Final Text

Section 1 - General

APD ID: 10400031523 **Tie to previous NOS?** **Submission Date:** 06/22/2018

BLM Office: CARLSBAD **User:** Kanicia Schlichting **Title:** Sr. Regulatory Analyst

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM050346 **Lease Acres:** 151.49

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? YES **APD Operator:** CENTENNIAL RESOURCE PRODUCTION LLC

Operator letter of designation:

Operator Info

Operator Organization Name: CENTENNIAL RESOURCE PRODUCTION LLC

Operator Address: 1001 17th Street, Suite 1800

Zip: 80202

Operator PO Box:

Operator City: Denver **State:** CO

Operator Phone: (720)499-1400

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: SOMBRERO FED COM **Well Number:** 301H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** RUSSELL **Pool Name:** WC-025 G-08 S213304D; BONE SPRING

Is the proposed well in an area containing other mineral resources? POTASH

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Is the proposed well in an area containing other mineral resources? POTASH

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:** SOMBRERO **Number:** SOUTH

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 33 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 700 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: SOMBRERO_FED_COM_301H___C102_20190703080018.pdf

SOMBRERO_FED_COM_301H___Lease_Plat_20190703080019.pdf

Well work start Date: 04/01/2020 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 23786 **Reference Datum:**

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	700	FSL	1545	FWL	21S	33E	7	Aliquot SESW	32.488092	-103.614834	LEA	NEW MEXICO	NEW MEXICO	S	STATE	3901	0	0	
KOP Leg #1	700	FSL	1545	FWL	21S	33E	7	Aliquot SESW	32.488092	-103.614834	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-7176	11118	11077	

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	100	FNL	1320	FWL	21S	33E	18	Aliquot NENW	32.485894	-103.615563	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 050346	-7603	11600	11504	
EXIT Leg #1	100	FSL	1320	FWL	21S	33E	18	Aliquot SESW	32.471928	-103.615574	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-7749	16556	11650	
BHL Leg #1	100	FSL	1320	FWL	21S	33E	18	Aliquot SESW	32.471928	-103.615574	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-7749	16556	11650	

APD ID: 10400031523 **Submission Date:** 06/22/2018

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

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

[redacted]

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
250295	RUSTLER	3901	1680	1680	SANDSTONE	NONE	N
491394	CAPITAN REEF	-14	3915	3915	OTHER : carbonate	USEABLE WATER	N
491395	BELL CANYON	-1697	5598	5598	SANDSTONE	NATURAL GAS, OIL	N
491396	CHERRY CANYON	-1994	5895	5895	SANDSTONE	NATURAL GAS, OIL	N
491397	BRUSHY CANYON	-3429	7330	7330	SANDSTONE	NATURAL GAS, OIL	N
491398	BONE SPRING LIME	-5085	8986	8986	OTHER : Carbonate	NATURAL GAS, OIL	N
491399	AVALON SAND	-5209	9110	9110	SHALE	CO2, NATURAL GAS, OIL	N
491400	BONE SPRING 1ST	-6087	9988	9988	SANDSTONE	NATURAL GAS, OIL	N
491401	BONE SPRING 2ND	-6369	10270	10270	OTHER, SHALE : Carbonate	NATURAL GAS, OIL	N
491402	BONE SPRING 3RD	-7646	11547	11547	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 11650

Equipment: From the Base of the 20" Surface pipe, the well will be equipped with a 2M Annular system with rotating head. See attached 2M BOPE Schematic. Before drilling out the 20" surface pipe, the 2M system will be tested to 250psi low and 1000psi high by an independant service company. The 2M BOP and related equipment will meet or exceed the requirements of a 2M psi system as set forth in On Shore Order No. 2 while drilling below the 20" shoe and to TD of Intemediate #1 (13-3/8" Casing). Once the 13-3/8" Casing is cemented at the base of the Salt Zone, the 20" 2M BOPE and 21-1/4" wellhead will be removed and a 13-5/8" 5M Multi-bowl wellhead and 13-5/8" BOPE will be installed. From the base of the 13-3/8" surface pipe, through running of the production string, the well will be equipped with the 5M-psi BOP system as set forth in On Shore Order No. 2. See attached schematic of the 13-5/8" Cameron Multi-bowl wellhead and 5M BOPE. A. Casinghead: 13 5/8" – 5,000 psi SOW x 13" – 5,000 psi WP Intermediate Spool: 13" – 5,000 psi WP x 11" – 5,000 psi WP Tubinghead: 11" – 5,000 psi WP x 7 1/16" – 15,000 psi WP B. Minimum Specified Pressure Control Equipment • Annular preventer • One Pipe ram, One blind ram • Drilling spool, or blowout preventer with 2 side outlets. Choke side will be a 3-inch minimum diameter, kill line shall be at least 2-inch diameter • 3 inch diameter choke line • 2 – 3 inch choke line valves • 2 inch kill line • 2 chokes with 1 remotely controlled from rig floor (see Figure 2) • 2 – 2 inch kill line valves and a check valve • Upper kelly cock valve with

handle available • When the expected pressures approach working pressure of the system, 1 remote kill line tested to stack pressure (which shall run to the outer edge of the substructure and be unobstructed) • Lower kelly cock valve with handle available • Safety valve(s) and subs to fit all drill string connections in use • Inside BOP or float sub available • Pressure gauge on choke manifold • All BOPE connections subjected to well pressure shall be flanged, welded, or clamped • Fill-up line above the uppermost preventer. C. Auxiliary Equipment • Audio and visual mud monitoring equipment shall be placed to detect volume changes indicating loss or gain of circulating fluid volume. (OOS 1, III.C.2) • Gas Buster will be used below intermediate casing setting depth. • Upper and lower kelly cocks with handles, safety valve and subs to fit all drill string connections and a pressure gauge installed on choke manifold.
Requesting Variance? YES

Variance request: Centennial Resource Production, LLC hereby requests to use a flex hose on H&P 650's choke manifold for the Sombrero Fed Com 301H well. The Flex Hose specifications are listed on the following pages.
Testing Procedure: From the Base of the 20" Surface pipe, the well will be equipped with a 2M Annular system with rotating head. See attached 2M BOPE Schematic. Before drilling out the 20" surface pipe, the 2M system will be tested to 250psi low and 1000psi high by an independant service company. The 2M BOP and related equipment will meet or exceed the requirements of a 2M psi system as set forth in On Shore Order No. 2 while drilling below the 20" shoe and to TD of Intemediate #1 (13-3/8" Casing). Once the 13-3/8" Casing is cemented at the base of the Salt Zone, the 20" 2M BOPE and 21-1/4" wellhead will be removed and a 13-5/8" 5M Multi-bowl wellhead and 13-5/8" BOPE will be installed. From the base of the 13-3/8" surface pipe, through running of the production string, the well will be equipped with the 5M-psi BOP system as set forth in On Shore Order No. 2. "The BOP test shall be performed before drilling out of the 13-3/8"" casing shoe and will occur at a minimum: a. when initially installed b. whenever any seal subject to test pressure is broken c. following related repairs d. at 30 day intervals e. checked daily as to mechanical operating conditions. The ram type preventer(s) will be tested using a test plug to 250 psi (low) and 5,000 psi (high) (casinghead WP) with a test plug upon its installation onto the 13" surface casing. If a test plug is not used, the ram type preventer(s) shall be tested to 70% of the minimum internal yield pressure of the casing. The annular type preventer(s) shall be tested to 3500psi. Pressure will be maintained for at least 10 minutes or until provisions of the test are met, whichever is longer. • A Sundry Notice (Form 3160 5), along with a copy of the BOP test report, shall be submitted to the local BLM office within 5 working days following the test. • If the bleed line is connected into the buffer tank (header), all BOP equipment including the buffer tank and associated valves will be rated at the required BOP pressure. • The BLM office will be provided with a minimum of four (4) hours' notice of BOP testing to allow witnessing. The BOP Configuration, choke manifold layout, and accumulator system, will be in compliance with Onshore Order 2 for a 5,000 psi system. A remote accumulator will be used. Pressures, capacities, and specific placement and use of the manual and/or hydraulic controls, accumulator controls, bleed lines, etc., will be identified at the time of the BLM 'witnessed BOP test. Any remote controls will be capable of both opening and closing all preventers and shall be readily accessible".
Choke Diagram Attachment:

HP650_10M_Choke_Manifold_20190703081941.pdf

BOP Diagram Attachment:

CDEV_BOP_Wellhead_Running_Procedure_4_String_Bonesprings_20190703082002.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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

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	CONDUCTOR	36	OTHER	NEW	API	N	0	120	0	120	3901	3781	120	H-40	119	OTHER - Weld						
2	SURFACE	24	20.0	NEW	API	N	0	1750	0	1750	3901	2151	1750	K-55	133	LT&C	1.74	3.54	DRY	9.13	DRY	6.24
3	INTERMEDIATE	17.5	13.375	NEW	API	N	0	3306	0	3300	3901	601	3306	J-55	61	OTHER - BTC	1.24	1.8	DRY	4.78	DRY	4.78
4	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5445	0	5400	3901	-1499	5445	J-55	40	LT&C	1.4	1.48	DRY	2.41	DRY	2.92
5	PRODUCTION	8.75	5.5	NEW	API	N	0	11118	0	11077	3901	-7176	11118	OTHER	20	OTHER - TCBC-HT	1.84	2.09	DRY	5.65	DRY	5.65
6	PRODUCTION	805	5.5	NEW	API	N	11118	16556	11077	11650	-7176	-7749	5438	OTHER	20	OTHER - TCBC-HT	1.75	1.99	DRY	55.93	DRY	55.93

Casing Attachments

Casing ID: 1 **String Type:** CONDUCTOR

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Casing Attachments

Casing ID: 2 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20190703082333.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20190703082538.pdf

Casing ID: 4 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20190703082758.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Casing Attachments

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20190703083001.pdf

Technical_Data_Sheet_HIS_TCBC_HT_5.5_20__P110RY_20190703083002.pdf

Casing ID: 6 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20190703083156.pdf

Technical_Data_Sheet_HIS_TCBC_HT_5.5_20__P110RY_20190703083156.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
PRODUCTION	Lead					0					
CONDUCTOR	Lead					1.49					

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead					1.74					
SURFACE	Tail										
INTERMEDIATE	Lead					3.44					
INTERMEDIATE	Tail										
INTERMEDIATE	Lead					3.44					
INTERMEDIATE	Tail										
PRODUCTION	Lead					3.41					
PRODUCTION	Tail										

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

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 quantities of mud materials will be on the well site at all times for the purpose of assuring well control and maintaining wellbore integrity. Surface interval will employ fresh water mud. The intermediate hole will utilize a diesel emulsified brine fluid to inhibit salt washout and prevent severe fluid losses. The production hole will employ oil base fluid to inhibit formation reactivity and of the appropriate density to maintain well control.

Describe the mud monitoring system utilized: Centrifuge separation system. Open tank monitoring with EDR will be used for drilling fluids and return volumes. Open tank monitoring will be used for cement and cuttings return volumes. Mud properties will be monitored at least every 24 hours using industry accepted mud check practices.

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
1750	3306	OTHER : Brine water	9.8	10							
0	1750	OTHER : Fresh water	8.6	9.5							
3306	5445	OTHER : Cut Brine/FW	8.3	9.5							
5445	11118	OTHER : Brine/OBM	8.8	10.5							

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Section 6 - Test, Logging, Coring

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

Will utilize MWD/LWD (Gamma ray logging) from intermediate hole to TD of the well.

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

GR

Coring operation description for the well:

No core, drill stem test, or open hole log is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6361 **Anticipated Surface Pressure:** 3798

Anticipated Bottom Hole Temperature(F): 170

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

H2S_Plan_Sombrero_Fed_Com_301H_20190703084353.pdf

SOMBRERO_FED_COM_201H___Rig_layout_20190827071717.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

SOMBRERO_FED_COM_301H_Dir_AC_Plot_Report_20190703084448.pdf

Other proposed operations facets description:

Bone Springs Formations

o 13-3/8" Surface Casing - CRD intends to preset 13-3/8" casing to a depth approved in the APD. Surface Holes will be batch set by a Spudder rig. Appropriate notifications will be made prior to spudding the well, running and cementing casing and prior to skidding to the rig to the next well on pad.

o Intermediate and Production Casing – For all subsequent Intermediate and Production Casing Strings, the well will be drilled below 13-3/8" to it's intended final TD. Batch drilling will not be executed for casing strings below the 13-3/8". Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

Please see attached Gas Capture Plan

Other proposed operations facets attachment:

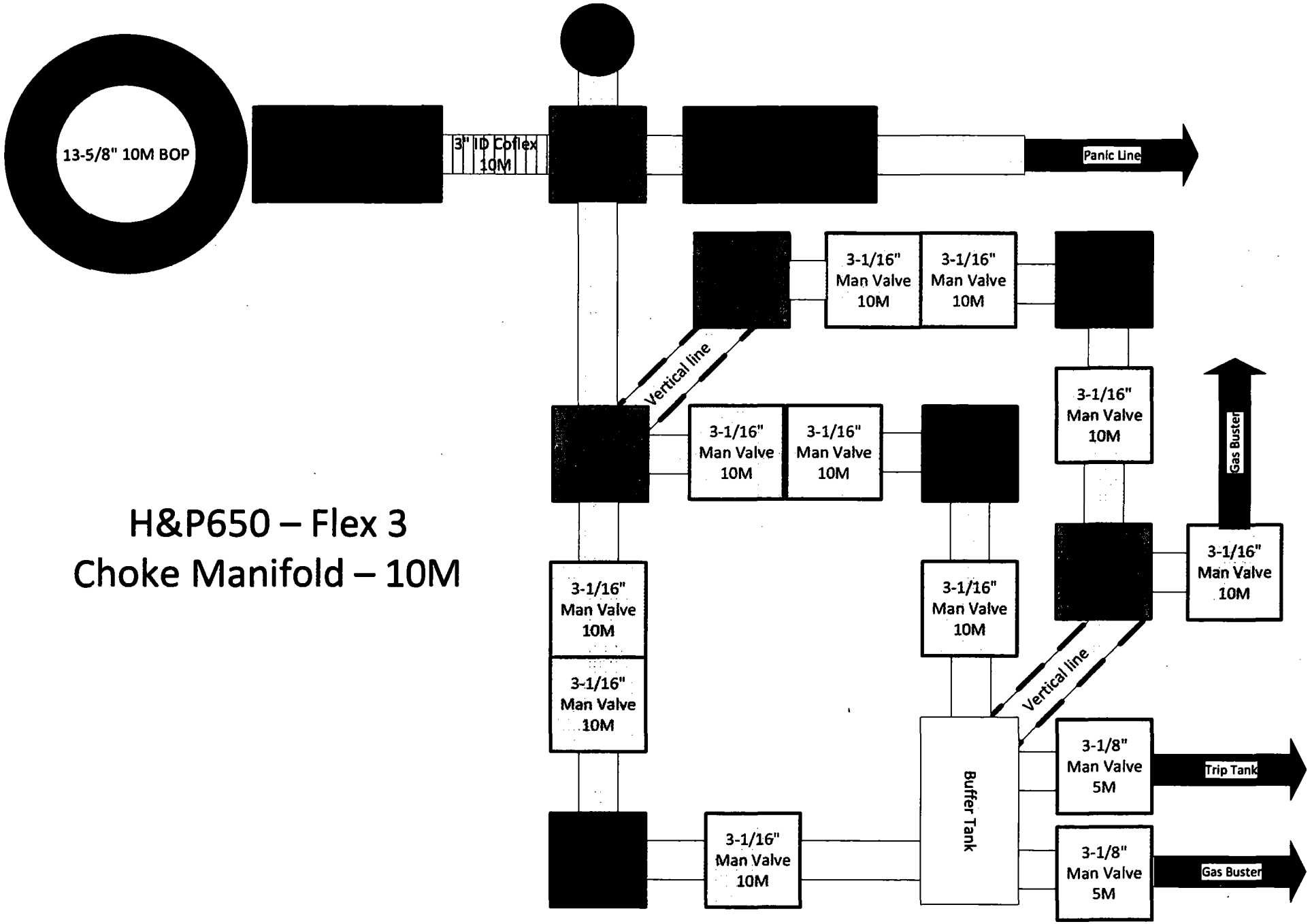
Sombrero_Gas_Capture_Plan_20190703084507.docx

Other Variance attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

H_P650_Flex_Hose____Continental_Hose_PO_4500409659_SN_67255_20190703084908.pdf



H&P650 – Flex 3
Choke Manifold – 10M

BOPE Installed and tested before drilling which hole? (in)	Casing Size (in)	Min Required WP	Type	x	Tested to: (psi)
17-1/2	20	2M	Annular	x	50% of Working Pressure
			Pipe		
			Blind		
			Double Ram		
12-1/4	13-5/8	5M	Annular	x	3500
			Pipe	x	5000
			Blind	x	5000
			Double Ram	x	5000
8-3/4 x 8-1/2	9-5/8	5M	Annular	x	3500
			Pipe	x	5000
			Blind	x	5000
			Double Ram	x	5000

Centennial Wellhead Running Procedure
4 Casing String Bone Springs Design
~Potash Stips~

Equipment Installed Prior to Drilling Operations

- **30" x 118.65ppf H40 Conductor set at 120' Below GL.**

1. Drill 24" surface hole to total depth.
2. Perform Wellbore cleanup cycles then POOH for 20" casing.
3. Run and cement 20" casing – cement to surface.
4. Dress conductor and 20" casing as needed, weld on 21-1/4" 2M Wellhead system with baseplate.
    a. Test weld to 70% of 20" casing collapse.
5. NU and test 2M BOPE with test plug per onshore order 2.
    a. Test 20" casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst.
6. Install wear bushing then drill out 20" shoe-track plus 20' and conduct a FIT to minimum MW equivalent to the formation pressure to the next casing point.
7. Drill 17-1/2" Intermediate-1 to 13-3/8 casing point (Base Salt).
8. Remove wear bushing then run and land 13-3/8" casing with mandrel hanger in 21-1/4" wellhead.
9. Cement 13-3/8" casing – cement to surface.
10. Washout stack - Run wash tool in wellhead and wash hanger.
11. Cut both 20" Casing and 13-3/8" Casing, and in process remove 21-1/4" 2M Wellhead system.
12. Dress 20" and 13-3/8" as required. Weld on Cameron Multi-bowl 5M MN-DS wellhead system to 13-3/8" casing with 32" baseplate supported by both 30" Conductor and 20" Surface Casing.
13. Test Weld to 70% of 13-3/8" casing collapse.
14. NU and test 13-5/8" BOPE with test plug per onshore order 2.
    a. Test 13-3/8" casing per COA WOC timing (.22 psi/ft or 1500 psi whichever is greater) - not to exceed 70% casing burst.
15. Install wear bushing then drill out 13-3/8" shoe-track plus 20' and conduct FIT to minimum of the MW equivalent anticipated to control the formation pressure to the next casing point.
16. Drill 12-1/4" Intermediate -2 hole to 9-5/8" casing point. (Base Capitan Reef).
17. Remove wear bushing then run and land 9-5/8" Intermediate with mandrel hanger in wellhead.
18. Cement 9-5/8 casing – cement to surface.
19. Washout stack, Run wash tool in wellhead and wash hanger and packoff setting area.
20. Install packoff and test to 5000 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.
21. Install wear bushing then drill out 9-5/8" shoe-track plus 20' and conduct FIT to minimum MW equivalent to control the formation pressure to TD of well.
22. Drill 8-3/4" Vertical hole to KOP – Trip out for Curve BHA.

23. Drill 8-3/4" Curve, landing in production interval – Trip for Lateral BHA.
24. Drill 8-1/2" Lateral to Permitted BHL, perform cleanup cycles and trip out to run 5-1/2" Production Casing.
25. Remove wear bushing then run 5-1/2" production casing to TD landing casing mandrel in wellhead.
26. Cement 5-1/2" Production string to surface.
27. Run in with wash tool and wash wellhead area – install packoff and test to 5000psi for 15 minutes.
28. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
29. Test nightcap void to 5000psi for 30 minutes.

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

PWD Data Report

01/06/2020

APD ID: 10400031523 **Submission Date:** 06/22/2018

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

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

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

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

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

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

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

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

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

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

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

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

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

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

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

Other PWD discharge volume (bbl/day):

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

01/06/2020

APD ID: 10400031523 **Submission Date:** 06/22/2018

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: SOMBRERO FED COM **Well Number:** 301H

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

[redacted]

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001496

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: