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.

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.

[318027]

2. Name of Operator

[372165]

9. API Well No. **30-025-50263**

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory **[96434]**
XXXXXXX

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

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

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

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
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	Office	

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

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.

NGMP Rec 05/25/2022

KZ
06/21/2022

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/04/2022

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

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

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-50263	96434	Ojo Chiso; Bone Spring

[4] Property Code	[5] Property Name	[6] Well Number
318027	ROMEO FEDERAL COM	311H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3464.0'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	27	24S	34E		2338	NORTH	505	WEST	LEA

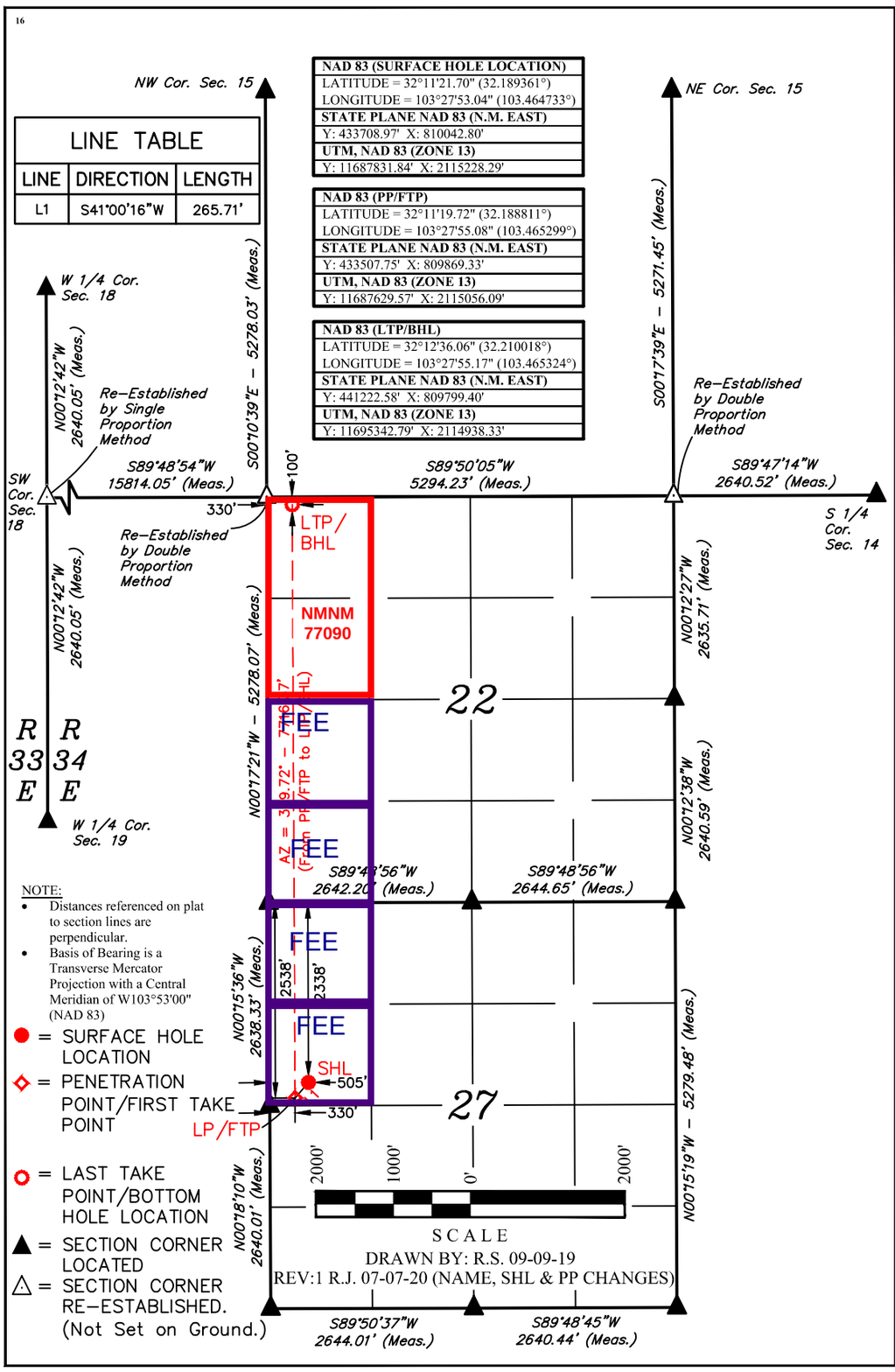
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	22	24S	34E		100	NORTH	330	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240			

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

[16]



[17] OPERATOR CERTIFICATION

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

02/02/21
Signature Date

Kanicia Schlichting
Printed Name

kanicia.schlichting@cdevinc.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

JULY 01, 2020
Date of Survey
Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 07-07-20

Certificate Number:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
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	ROMEO FEDERAL COM	311H

[7] OGRID No.	[8] Operator Name	[9] Elevation
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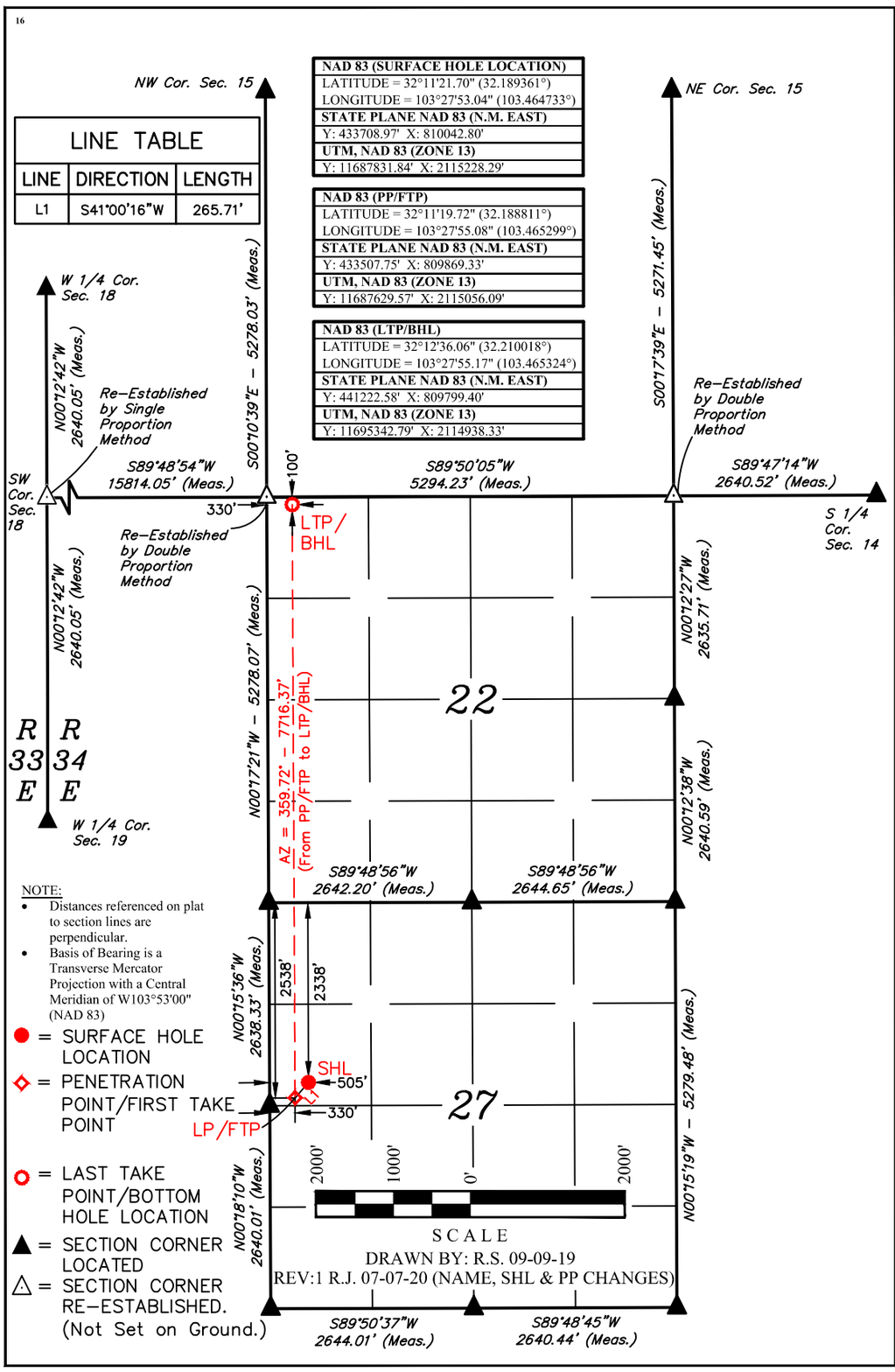

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION
◇ = PENETRATION POINT/FIRST TAKE POINT
○ = LAST TAKE POINT/BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

SCALE
DRAWN BY: R.S. 09-09-19
REV:1 R.J. 07-07-20 (NAME, SHL & PP CHANGES)

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02/02/21
Signature Date

Kanicia Schlichting
Printed Name

kanicia.schlichting@cdevinc.com
E-mail Address

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JULY 01, 2020
Date of Survey
Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 07-07-20

Certificate Number:

AFMSS

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

Application for Permit to Drill

APD Package Report

Date Printed:

APD ID:	Well Status:
APD Received Date:	Well Name:
Operator:	Well Number:

APD Package Report Contents

- Form 3160-3

- Operator Certification Report

- Application Report
- Application Attachments
  -- Well Plat: 2 file(s)

- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 1 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 2 file(s)
  -- Casing Design Assumptions and Worksheet(s): 5 file(s)
  -- Hydrogen sulfide drilling operations plan: 1 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  -- Other Facets: 6 file(s)
  -- Other Variances: 1 file(s)

- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 1 file(s)
  -- New Road Map: 1 file(s)
  -- Additional Attachment: 1 file(s)
  -- Attach Well map: 1 file(s)
  -- Production Facilities map: 2 file(s)
  -- Water source and transportation map: 1 file(s)
  -- Construction Materials source location attachment: 1 file(s)
  -- Well Site Layout Diagram: 2 file(s)
  -- Recontouring attachment: 1 file(s)
  -- Surface use plan certification document: 1 file(s)
  -- Other SUPO Attachment: 1 file(s)

- PWD Report

- PWD Attachments
  -- None

- Bond Report
- Bond Attachments
  -- None

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.

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Additional Operator Remarks

Location of Well

0. SHL: SWNW / 2338 FNL / 505 FWL / TWSP: 24S / RANGE: 34E / SECTION: 27 / LAT: 32.189361 / LONG: -103.464733 (TVD: 0 feet, MD: 0 feet)

PPP: SWNW / 2538 FNL / 330 FWL / TWSP: 24S / RANGE: 34E / SECTION: 27 / LAT: 32.188811 / LONG: -103.465299 (TVD: 10270 feet, MD: 10603 feet)

BHL: NWNW / 100 FNL / 330 FWL / TWSP: 24S / RANGE: 34E / SECTION: 22 / LAT: 32.210018 / LONG: -103.465324 (TVD: 10270 feet, MD: 17700 feet)

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 Resources**
LEASE NO.:	**NMNM77090**
LOCATION:	Section 27, T.24 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Romeo Fed Com 311H
SURFACE HOLE FOOTAGE:	2338'/N & 505'/W
BOTTOM HOLE FOOTAGE	100'/N & 330'/W

COA

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

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.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1150** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

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hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

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

Operator shall filled 1/3rd casing with fluid for the intermediate casing to maintain collapse safety factor.

2. The minimum required fill of cement behind the **9-5/8** inch 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 tail cement slurry due to cave/karst or potash.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **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.

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D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, 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)

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

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

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

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig

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- Notify the BLM when moving in and removing the Spudder Rig.
- Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
- BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

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

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

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

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

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

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

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

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

 Approval Date: 03/04/2022

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

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

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

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall

have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

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

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

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
ZS 012722

Approval Date: 03/04/2022

AFMSS

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

Operator Certification Data Report

03/10/2022

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: **Signed on:** 02/04/2021

Title:

Street Address:

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

Phone:

Email address:

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

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

Application Data Report
03/10/2022

APD ID: 10400068704 **Submission Date:** 02/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400068704 **Tie to previous NOS?** N **Submission Date:** 02/04/2021

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: NMNM77090 **Lease Acres:**

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

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

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO **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: ROMEO FEDERAL COM **Well Number:** 311H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** FIRST BONE SPRING **Pool Name:** OJO CHISO, BONE SPRING

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** Romeo Federal Com SWNW 27 Pad **Number:** 1

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: 20 Miles **Distance to nearest well:** 35 FT **Distance to lease line:** 505 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Romeo_Fed_Com_311H_C102_plat_20210203195153.pdf

Romeo_Fed_Com_311H_C102_Lease_plat_20210203195153.pdf

Well work start Date: 03/17/2022 **Duration:** 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 23782 **Reference Datum:** GROUND LEVEL

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	2338	FNL	505	FWL	24S	34E	27	Aliquot SWNW	32.189361	-103.464733	LEA	NEW MEXICO	NEW MEXICO	F	FEE	3464	0	0	Y
KOP Leg #1	2338	FNL	505	FWL	24S	34E	27	Aliquot SWNW	32.189361	-103.464733	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-6233	9704	9697	Y

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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	2538	FNL	330	FWL	24S	34E	27	Aliquot SWNW	32.188811	-103.465299	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-6806	10603	10270	Y
EXIT Leg #1	100	FNL	330	FWL	24S	34E	22	Aliquot NWNW	32.210018	-103.465324	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 77090	-6806	17700	10270	Y
BHL Leg #1	100	FNL	330	FWL	24S	34E	22	Aliquot NWNW	32.210018	-103.465324	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 77090	-6806	17700	10270	Y

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

Drilling Plan Data Report
03/10/2022

APD ID: 10400068704 **Submission Date:** 02/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1544931	RUSTLER	3468	1090	1090	SANDSTONE	NONE	N
1544933	LAMAR	-1902	5370	5370	SHALE	USEABLE WATER	N
1544934	BELL CANYON	-1974	5442	5442	SANDSTONE	NATURAL GAS, OIL	N
1544935	CHERRY CANYON	-2874	6342	6342	SANDSTONE	NATURAL GAS, OIL	N
1544936	BRUSHY CANYON	-4429	7897	7897	SANDSTONE	NATURAL GAS, OIL	N
1544937	BONE SPRING LIME	-5819	9287	9287	OTHER : Carbonate	NATURAL GAS, OIL	N
1544938	AVALON SAND	-5840	9308	9308	SHALE	CO2, NATURAL GAS, OIL	Y
1544939	FIRST BONE SPRING SAND	-6782	10250	10250	SANDSTONE	NATURAL GAS, OIL	N
1544940	BONE SPRING 2ND	-6983	10451	10451	SHALE	NATURAL GAS, OIL	N
1544941	BONE SPRING 3RD	-8355	11823	11823	SANDSTONE	NATURAL GAS, OIL	N

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 10270

Equipment: The BOP and related equipment will meet or exceed the requirements of a 5M-psi system as set forth in On Shore Order No. 2. See attached BOP Schematic. 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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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 choke manifold for this well. The Flex Hose specifications are listed on the following pages.
Testing Procedure: The BOP test shall be performed before drilling out of the surface 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 3500 psi. 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:

HP489_10M_Choke_Manifold_20201101220449.pdf

BOP Diagram Attachment:

CDEV_Well_Control_Plan_20201101230926.pdf

HP489_BOP_Schematic_CoFlex_Choke_5K_2019_1_29_20201101220457.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	CONDUCTOR	26	20.0	NEW	API	N	0	120	0	120	3464	3344	120	H-40	94	OTHER - weld						
2	SURFACE	17.5	13.375	NEW	API	N	0	1150	0	1150	3464	2314	1150	J-55	54.5	OTHER - BTC	1.99	27.34	DRY	13.61	DRY	13.61
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5400	0	5395	3468	-1931	5400	J-55	40	LT&C	1.3	8.43	DRY	2.41	DRY	2.92
4	PRODUCTION	8.75	5.5	NEW	API	N	0	10603	0	10270	3468	-6806	10603	T-95	23	OTHER - VA roughneck AC	2.08	14.16	DRY	2.71	DRY	2.71
5	PRODUCTION	8.5	5.5	NEW	API	N	10603	17700	10270	10270	-6806	-6806	7097	T-95	23	OTHER - VA roughneck AC	2.08	14.16	DRY	2.71	DRY	2.71

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20201101222024.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Casing Attachments

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20201101221404.pdf

5.5in_x_23ppf_T95_VAroughneck_20210203170823.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

CASING_ASSUMPTIONS_WORKSHEET_20201101221651.pdf

5.5in_x_23ppf_T95_VAroughneck_20210203170741.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	0	0	0	0	0	0	0	0
CONDUCTOR	Lead		0	120	121	1.49	12.9	181	0	Grout	Bentonite 4% BWOC, Cellophane #/sx, CaCl2 2% BWOC.

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	650	519	1.74	13.5	903	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		650	1150	518	1.34	14.8	695	100	Class C Premium	C-45 Econolite 0.10%, CaCl 1.0%
INTERMEDIATE	Lead		0	4900	1157	3.44	10.7	3979	150	TX Lightweight	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		4900	5400	141	1.33	14.8	188	20	Class C Premium	C-45 Econolite 0.10%, Citric acid 0.05%, C503P 0.25%
PRODUCTION	Lead		0	9704	951	3.41	10.6	3244	30	TXI Lightweight	Salt 8.98#/sk, STE 6.00%, Citric acid 0.20%, CSA-1000 0.23%, C47B 0.10%, C-503P 0.30%
PRODUCTION	Tail		9704	17700	1868	1.24	14.2	2316	25	50:25:25 Class H: Poz: CPO18	Citric acid 0.03%, CSA-1000 0.05%, C47B 0.25%, C-503P 0.30%

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

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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	1150	OTHER : FW	8.6	9.5							
1150	5400	OTHER : Brine	9	10							
5400	17700	OTHER : Brine/OBM	8.8	10							

Section 6 - Test, Logging, Coring

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

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

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

DIRECTIONAL SURVEY,GAMMA RAY LOG,

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5340 **Anticipated Surface Pressure:** 3080

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_20210204131701.docx

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

ROMEO_FED_COM_311H___AC_REPORT_20210204131759.pdf
ROMEO_FED_COM_311H___DIRECTIONAL_REPORT_20210204131759.pdf

Other proposed operations facets description:

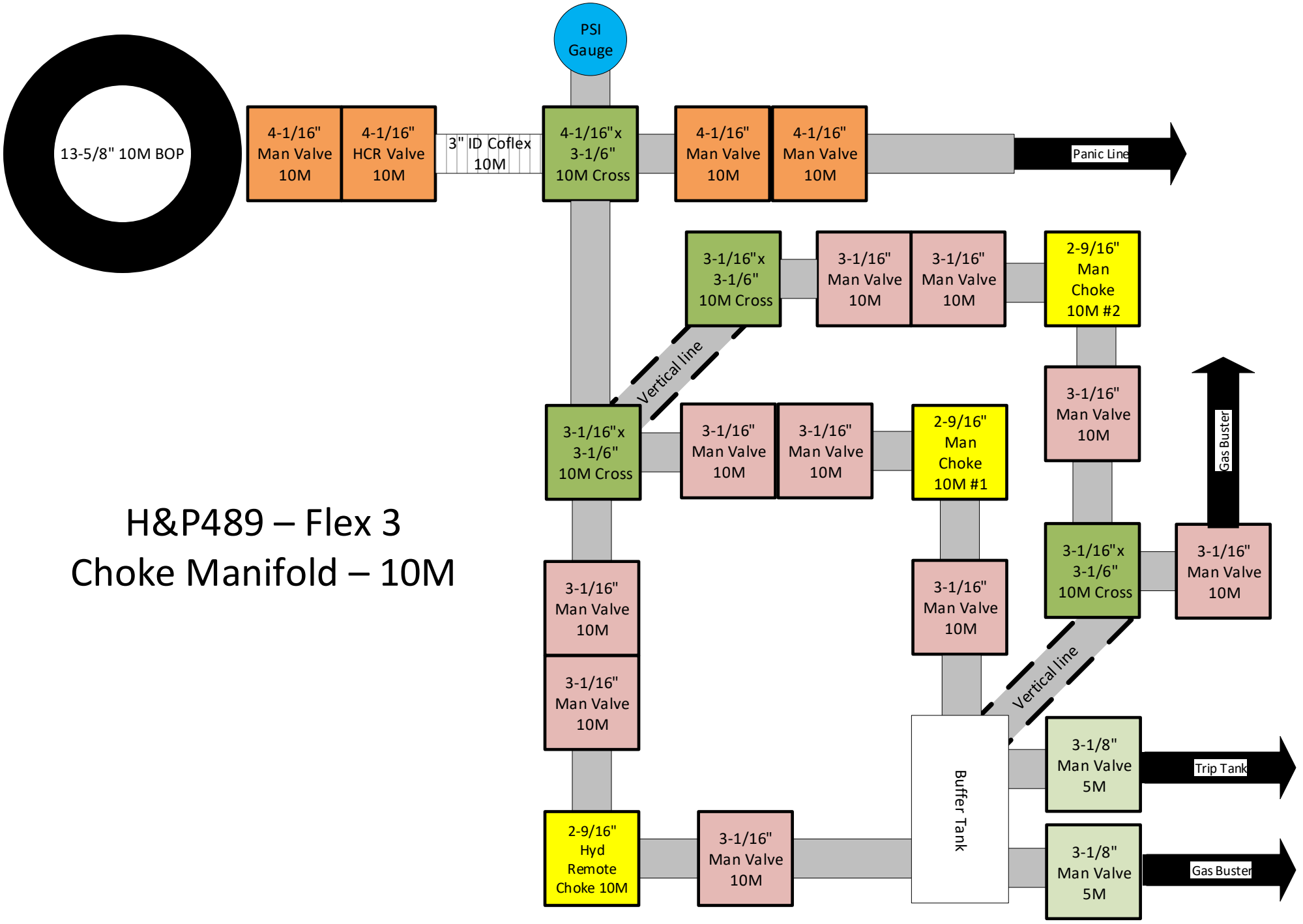
Gas Capture, WBD, Geo prog attached.

Other proposed operations facets attachment:

CRD_Batch_Setting_Procedures_20201101230021.pdf
Romeo_111H_312H_Gas_Capture_Plan_20210203175048.pdf
GEOPROG_Romeo_Fed_311H_PRELIM_1_20210204131820.pdf
WBD_20210204131956.pdf
Wellhead_Schematic_20210204131956.pdf
Multibowl_Procedure_20210204132013.pdf

Other Variance attachment:

H_P_489_Flex_Hose_Specs_Continental_Hose_SN_67255_20201101230253.pdf



H&P489 – Flex 3
Choke Manifold – 10M

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	Annular	5M
Mud Motor	6 ¾	Annular	5M
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

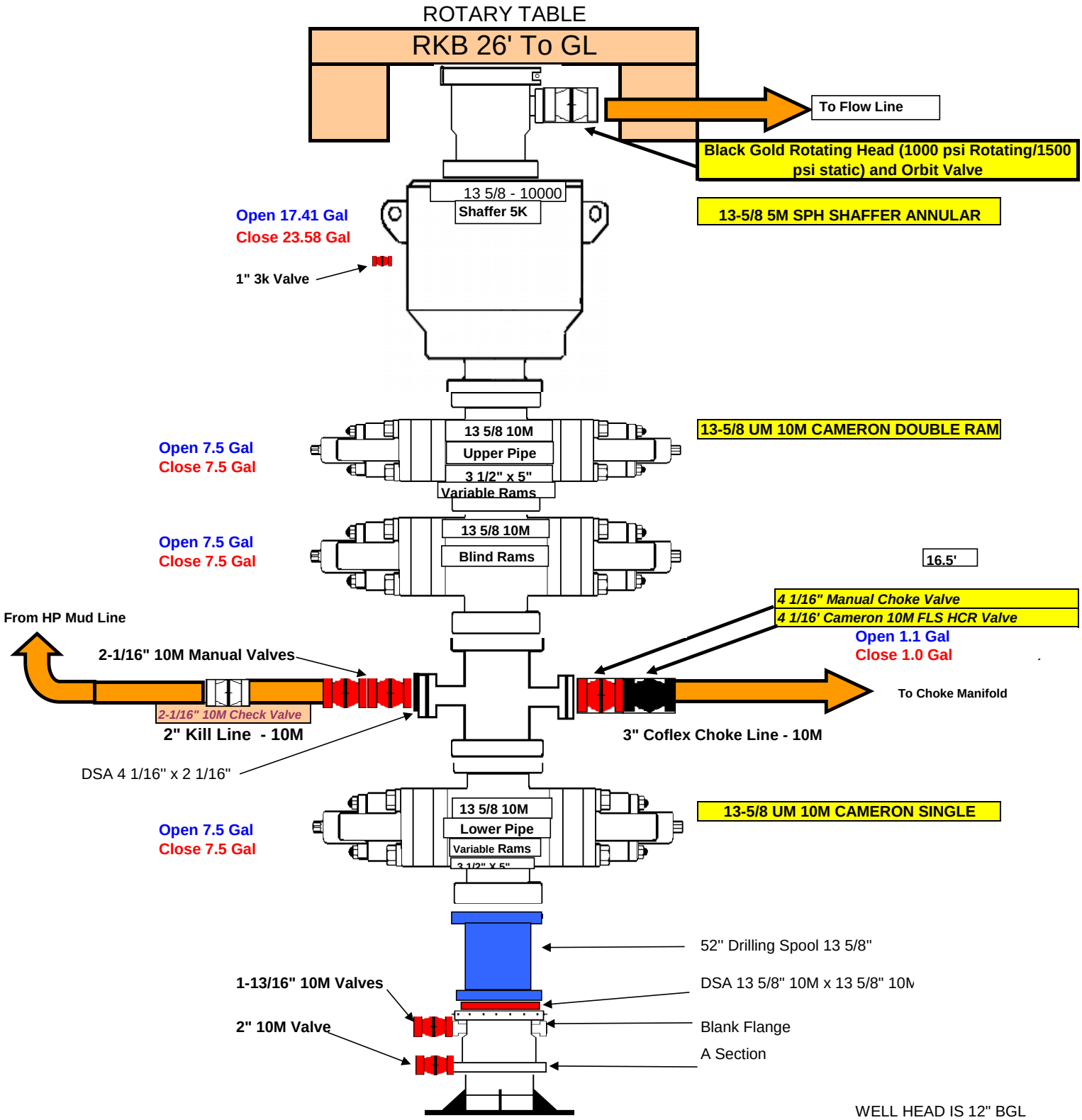
1. **Prior to pulling last joint of drillpipe thru stack**:
   - I. Perform flow check, if flowing
     - a. Sound alarm, alert crew
     - b. Stab full opening safety valve and close
     - c. Space out drillstring with tool joint just beneath the upper pipe ram.
     - d. Open HCR
     - e. Shut-in 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.**

H&P 489


ROTARY TABLE
RKB 26' To GL
To Flow Line
Black Gold Rotating Head (1000 psi Rotating/1500 psi static) and Orbit Valve
13 5/8 - 10000
Shaffer 5K
13-5/8 5M SPH SHAFFER ANNULAR
Open 17.41 Gal
Close 23.58 Gal
1" 3k Valve
13 5/8 10M
Upper Pipe
3 1/2" x 5"
Variable Rams
13-5/8 UM 10M CAMERON DOUBLE RAM
Open 7.5 Gal
Close 7.5 Gal
13 5/8 10M
Blind Rams
Open 7.5 Gal
Close 7.5 Gal
16.5'
4 1/16" Manual Choke Valve
4 1/16' Cameron 10M FLS HCR Valve
Open 1.1 Gal
Close 1.0 Gal
From HP Mud Line
2-1/16" 10M Manual Valves
To Choke Manifold
2-1/16" 10M Check Valve
2" Kill Line - 10M
3" Coflex Choke Line - 10M
DSA 4 1/16" x 2 1/16"
13 5/8 10M
Lower Pipe
Variable Rams
13-5/8 UM 10M CAMERON SINGLE
Open 7.5 Gal
Close 7.5 Gal
52" Drilling Spool 13 5/8"
1-13/16" 10M Valves
DSA 13 5/8" 10M x 13 5/8" 10M
2" 10M Valve
Blank Flange
A Section
WELL HEAD IS 12" BGL

CASING ASSUMPTIONS WORKSHEET:

Centralizer Program:

Surface: - 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
- No Cement baskets will be run

Production: - 1 welded bow spring centralizer on a stop ring 6' above float shoe
- 1 centralizer every other joint to the top of the tail cement
- 1 centralizer every 4 joints to 500' below the top of the lead cement
- The actual number and placement of centralizers will be determined from hole deviation and potential production zones. Centralizers will be run for maximum practical standoff and through all potential productive zones.

- All casing strings below the conductor shall be tested, prior to drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

  No freshly hard banded pipe will be rotated in the surface casing

  - CENTENNIAL RESOURCE DEVELOPOMENT will not employ an air-drill rig for the surface casing. The casing shoe will be tested by drilling 5'-10' out from under the shoe and pressure testing to the maximum expected mud weight equivalent as shown in the mud program listed in the drilling plan.

TECHNICAL DATA SHEET

Connection: **VAroughneckAC**
Size: **5 1/2 in X 23.00 lb/ft**
Drift: **standard**
Bevel: **standard**

Grade: **T95-1**
Material:

	US Customary	Metric
Yield Strength Min.	95,000 psi	655 Mpa
Yield Strength Max.	110,000 psi	758 Mpa
Tensile Strength Min.	105,000 psi	724 Mpa

Pipe:

	US Customary	Metric		US Customary	Metric
Nominal OD:	5.500 in	139.70 mm	Wall Thickness:	0.415 in	10.54 mm
Nominal ID:	4.670 in	118.62 mm	Standard Drift:	4.545 in	115.44 mm
Nominal Weight:	23.00 lb/ft	34.38 kg/m	Pipe Body Yield Strength:	630 klb	2,800 kN
Pipe Cross Section:	6.630 in²	4,277.41 mm²			

Connection:

	US Customary	Metric		
OD:	6.300 in	160.02 mm	Threads per inch:	5 Threads
ID:	4.669 in	118.60 mm		
Length:	8.976 in	228.00 mm		

Connection Performance (Uniaxial Load):

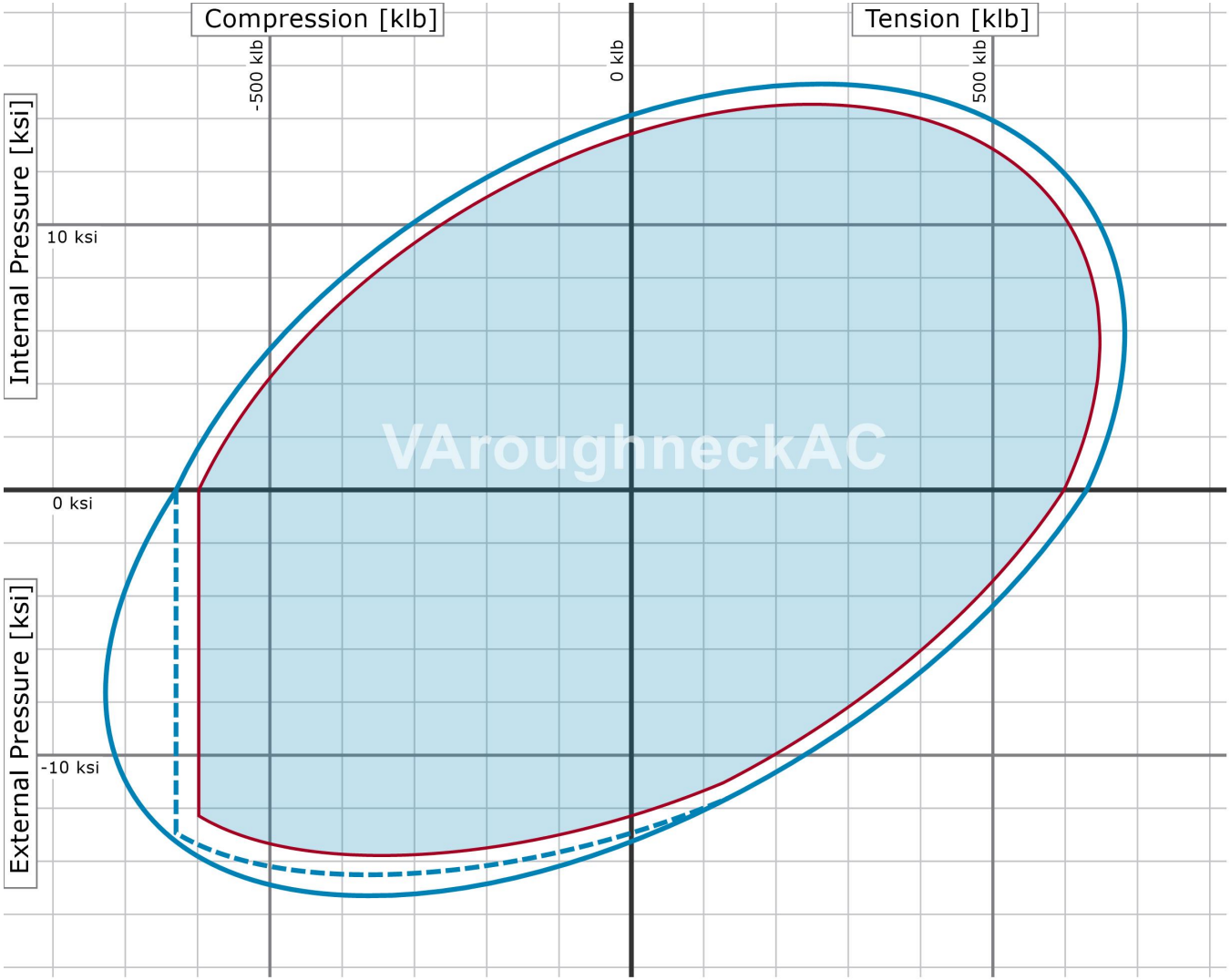
	US Customary	Metric		US Customary	Metric
Joint Strength:	630 klb	2,800 kN	Tension Efficiency:	> 100.0 %	
Collapse Resistance:.	12,940 psi	89.20 Mpa	Displacement:	1.242 gal/ft	15.43 l/m
Internal Yield Pressure:	12,550 psi	86.50 Mpa	Production:	0.890 gal/ft	11.05 l/m
Load on Coupling Face:	542 klb	2,410 kN			

Field Make Up (Friction Factor = 1.0):

	US Customary	Metric		US Customary	Metric
Minimum Torque:	16,150 ft.lb	21,890 Nm	Make-Up Loss:	4.370 in	111.00 mm
Optimum Torque:	17,940 ft.lb	24,320 Nm	Yield Torque:	22,420 ft.lb	30,400 Nm
Maximum Torque:	19,730 ft.lb	26,750 Nm			
Min. Torque on Shoulder:	%				

voestalpine
ONE STEP AHEAD.

LOAD ENVELOPE



Recommended Field of Application

Pipe Body Envelope

Pipe Body Collapse

Efficiency (% Pipe Body) under Uniaxial Loads	
Tension:	100.0 %
Compression:	100.0 %
Internal Pressure:	100.0 %
External Pressure:	100.0 %

Sealability Rating (% Efficiency) under Combined Loads	
Tension:	100.0 %
Compression:	100.0 %
Internal Pressure:	100.0 %
External Pressure:	100.0 %

Test Conditions	
Test Medium:	Fluid
Von Mises Envelope:	95.0 %
Bending:	20.00 °/100ft

The graph is calculated under consideration of the requirements of EN ISO 13679 and API 5C3. The combined loads are calculated without the consideration of wall thickness tolerances and differ from the values in the data sheet, which are calculated with tolerances determined by API. Any printout is NOT SUBJECT TO REGULAR REVISION. The generated performance envelope shall solely be used as a tool to facilitate the comparison of performance properties under combined loads, of different grades, sizes and connections of voestalpine Tubulars products. Field-specific safety/design factors as well as other loads are not considered. Thus the results shall by no means be used to replace the own string design engineering or to justify any warranty/guaranty cases.

voestalpine
ONE STEP AHEAD.

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Min. Torque on Shoulder:	%				

voestalpine
ONE STEP AHEAD.

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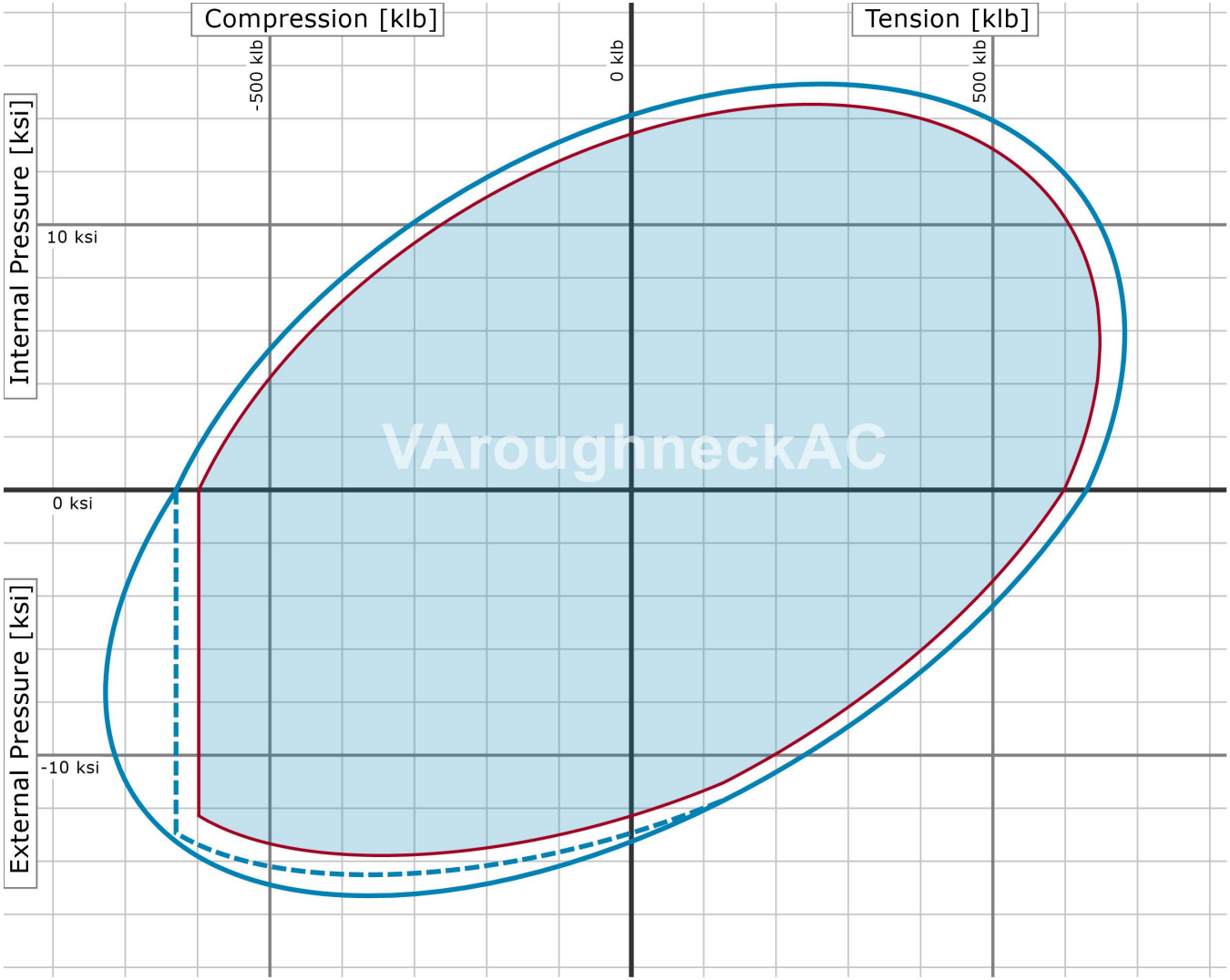

Recommended Field of Application

Pipe Body Envelope

Pipe Body Collapse

Efficiency (% Pipe Body) under Uniaxial Loads	
Tension:	100.0 %
Compression:	100.0 %
Internal Pressure:	100.0 %
External Pressure:	100.0 %

Sealability Rating (% Efficiency) under Combined Loads	
Tension:	100.0 %
Compression:	100.0 %
Internal Pressure:	100.0 %
External Pressure:	100.0 %

Test Conditions	
Test Medium:	Fluid
Von Mises Envelope:	95.0 %
Bending:	20.00 °/100ft

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voestalpine
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NEW MEXICO

LEA
ROMEO FEDERAL
ROMEO FED COM 311H

ROMEO FED COM 311H

Plan: PWP0

Standard Survey Report

16 October, 2020

Centennial Resource Development

Survey Report

Company:	NEW MEXICO	**Local Co-ordinate Reference:**	Well ROMEO FED COM 311H
Project:	LEA	**TVD Reference:**	RKB=3464+26 @ 3490.0ft (HP 489)
Site:	ROMEO FEDERAL	**MD Reference:**	RKB=3464+26 @ 3490.0ft (HP 489)
Well:	ROMEO FED COM 311H	**North Reference:**	True
Wellbore:	ROMEO FED COM 311H	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**Database:**	Compass

Project LEA

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site ROMEO FEDERAL

Site Position:		**Northing:**	0.00 m	**Latitude:**	0° 0' 0.000 N
From:	Map	**Easting:**	29,719,522.30 m	**Longitude:**	152° 28' 52.124 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.00 °

Well ROMEO FED COM 311H

Well Position	**+N/-S**	0.0 ft	**Northing:**	3,562,458.33 m	**Latitude:**	32° 11' 21.700 N
	+E/-W	0.0 ft	**Easting:**	644,722.87 m	**Longitude:**	103° 27' 53.040 W
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,464.0 ft

Wellbore ROMEO FED COM 311H

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.70	60.23	48,783.47943533

Design PWP0

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	358.60

Survey Tool Program **Date** 10/16/2020

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,700.0	PWP0 (ROMEO FED COM 311H)	MWD+IFR1+MS	OWSG_Rev2_ MWD + IFR1 + Multi-Station Correction

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	3.00	221.20	2,299.9	-5.9	-5.2	-5.8	1.00	1.00	0.00
7,080.0	3.00	221.20	7,073.3	-194.1	-170.0	-189.9	0.00	0.00	0.00
7,380.0	0.00	0.00	7,373.2	-200.0	-175.1	-195.7	1.00	-1.00	0.00
9,704.0	0.00	0.00	9,697.2	-200.0	-175.1	-195.7	0.00	0.00	0.00
10,603.8	90.00	0.40	10,270.0	372.8	-171.1	376.8	10.00	10.00	0.00
13,861.8	90.00	359.76	10,270.0	3,630.8	-166.5	3,633.7	0.02	0.00	-0.02
17,700.0	90.00	359.76	10,270.0	7,468.9	-182.5	7,471.1	0.00	0.00	0.00

Centennial Resource Development

Survey Report

Company:	NEW MEXICO	**Local Co-ordinate Reference:**	Well ROMEO FED COM 311H
Project:	LEA	**TVD Reference:**	RKB=3464+26 @ 3490.0ft (HP 489)
Site:	ROMEO FEDERAL	**MD Reference:**	RKB=3464+26 @ 3490.0ft (HP 489)
Well:	ROMEO FED COM 311H	**North Reference:**	True
Wellbore:	ROMEO FED COM 311H	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**Database:**	Compass

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
LTP/BHL - ROMEO FED - plan hits target center - Circle (radius 50.0)	0.00	0.00	10,270.0	7,468.9	-182.5	3,564,733.83	644,634.75	32° 12' 35.617 N	103° 27' 55.164 W
FTP - ROMEO FED COI - plan misses target center by 237.2ft at 10154.0ft MD (10102.3 TVD, -32.2 N, -174.0 E) - Circle (radius 50.0)	0.00	0.00	10,270.0	-200.0	-175.0	3,562,396.62	644,670.39	32° 11' 19.721 N	103° 27' 55.077 W

Checked By: _____ Approved By: _____ Date: _____

Centennial Resource Development
New Mexico Multi-Well Pad Drilling
Batch Setting Procedures

➢ Avalon and Bone Springs Formations

13-3/8" Surface Casing - CRD intends to preset 13-3/8" casing to a depth approved in the APD. 17-1/2" Surface Holes will be batch drilled by a Surface Preset 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.

1. Drill 17-1/2" Surface hole to Approved Depth with Surface Preset Rig and perform wellbore cleanup cycles. Trip out and rack back drilling BHA.
2. Run and land 13-3/8" 54.5# J55 BTC casing to depth approved in APD.
3. Cement 13-3/8" casing with cement to surface and floats holding.
4. Cut / Dress 20" Conductor and 13-3/8" casing as needed, weld on Cameron Multi-bowl system with baseplate supported by 20" conductor (see Illustration 1-1 Below). Weld performed per Cameron weld procedure.
5. Test Weld to 70% of 13-3/8" casing collapse or ~ 790psi.
6. Install nightcap with Pressure Gauge on wellhead. Nightcap is shown on final wellhead Stack up Illustration #2-2 page 3.
7. Skid Rig to adjacent well to drill Surface hole.
8. Surface casing test will be performed by the Big Rig in order to allow ample time for Cement to develop 500psi compressive strength. Casing test to 0.22 psi/ft or 1500 psi whichever is greater - not to exceed 70% casing burst.

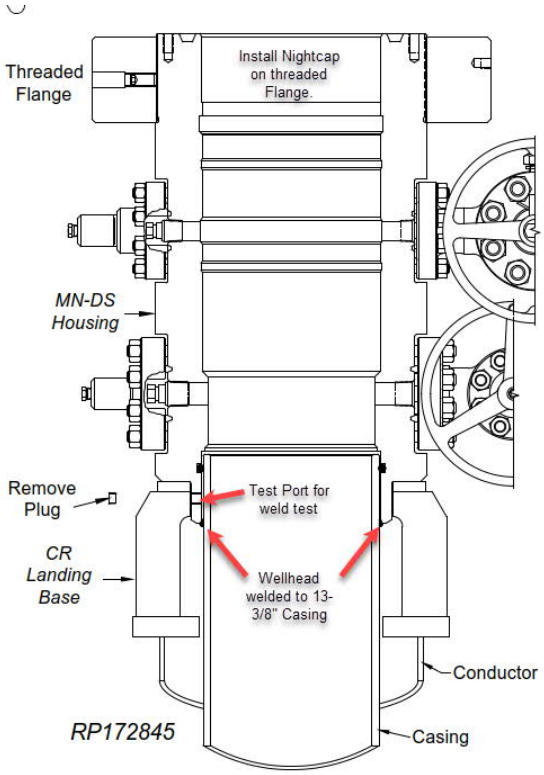


Illustration 1-1

- Intermediate and Production Casing – For all subsequent Intermediate and Production Casing Strings, the Big Rig will remove the nightcap and install and test BOPE. Prior to drill out the 13-3/8" Casing will be tested to 0.22psi/ft or 1500psi whichever is greater. The well will be drilled below 13-3/8" to its intended final TD in the Avalon or Bonesprings formations. 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. The

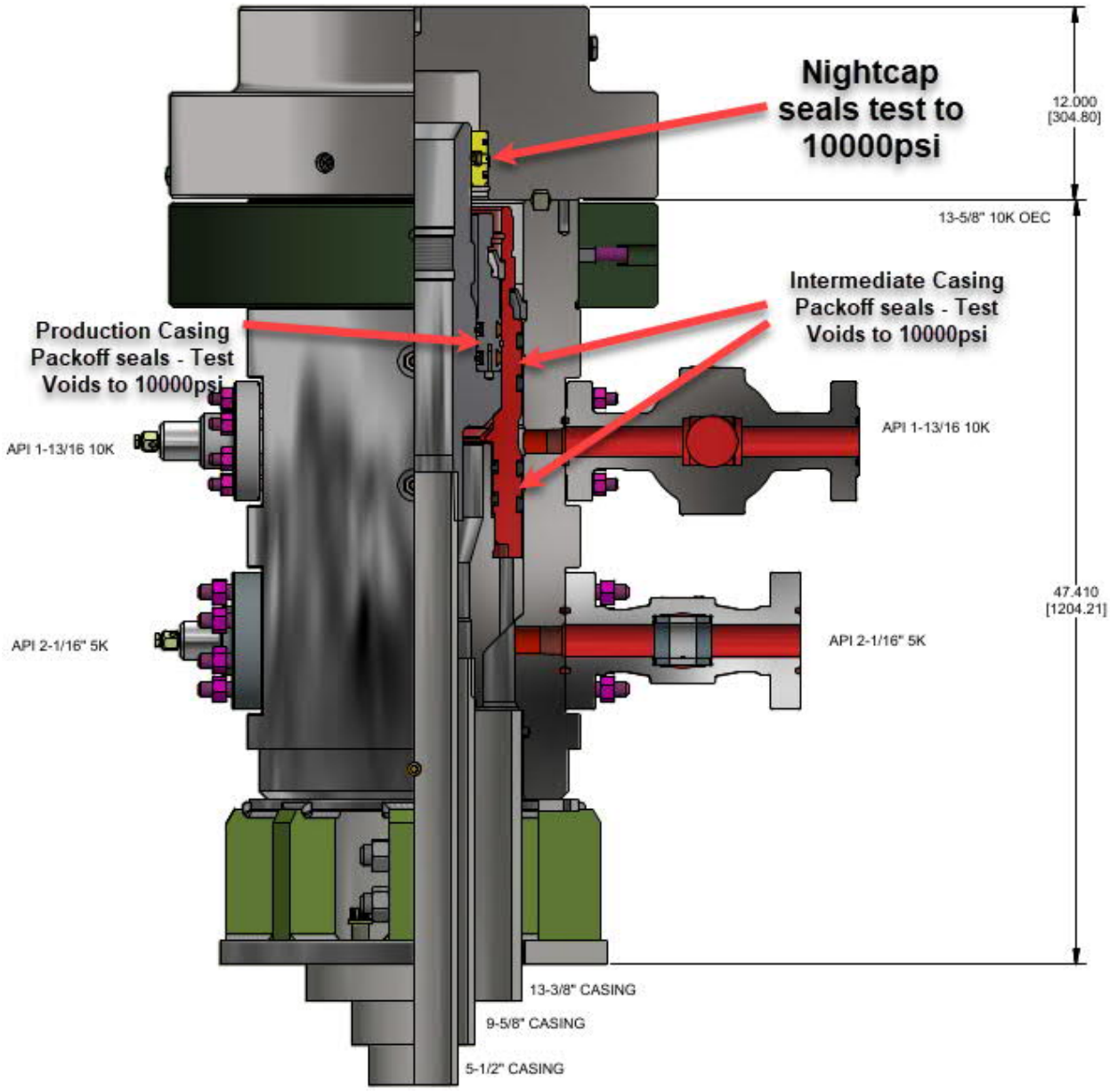
➢ Wolfcamp Formations

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 Surface Preset 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.

1. Drill 17-1/2" Surface hole to Approved Depth with Surface Preset Rig and perform wellbore cleanup cycles. Trip out and rack back drilling BHA.
2. Run and land 13-3/8" 54.5# J55 BTC casing to depth approved in APD.
3. Cement 13-3/8" casing with cement to surface and floats holding.
4. Cut / Dress 20" Conductor and 13-3/8" casing as needed, weld on Cameron Multi-bowl system with baseplate supported by 20" conductor (see Illustration 1-1). Weld performed per Cameron weld procedure.
5. Test Weld to 70% of 13-3/8" casing collapse or ~ 790psi.
6. Install nightcap with Pressure Gauge on wellhead. Nightcap is shown on final wellhead Stack up Illustration #2-2 on page 3.
7. Subsequent casing test will be performed by the Big Rig in order to allow ample time for Cement to develop 500psi compressive strength. Casing test to 0.22 psi/ft or 1500 psi whichever is greater - not to exceed 70% casing burst.

Intermediate Casing – CRD intends to Batch set all intermediate casing strings to a depth approved in the APD, typically set 100' above KOP in the 3rd Bonesprings Carbonate. For the last intermediate section drilled on pad, the associated production interval will immediately follow. Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

1. Big Rig will remove the nightcap and install and test BOPE.
2. Test Surface 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.
3. 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.
4. Drill Intermediate hole to approved casing point. Trip out of hole with BHA to run Casing.
5. Remove wear bushing then run and land Intermediate Casing with mandrel hanger in wellhead.
6. Cement casing to surface with floats holding.
7. Washout stack then run wash tool in wellhead and wash hanger and pack-off setting area.
8. Install pack-off and test void to 10000 psi for 15 minutes. Nightcap shown on final wellhead stack up illustration 2-2 on page 3.
9. 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.
10. Install nightcap – skid rig to adjacent well to drill Intermediate hole.



WITH CAP

Illustration 2-2

Production Casing – CRD intends to Batch set all Production casings, except for the last intermediate hole. In this case the production interval will immediately follow the intermediate section on that well. Appropriate notifications will be made prior Testing BOPE, and prior to running/cementing all casing strings.

1. Big Rig will remove the nightcap and install and test BOPE.
2. Install wear bushing then drill Intermediate shoe-track plus 20' and conduct FIT to minimum MW equivalent to control the formation pressure to TD of well.
3. Drill Vertical hole to KOP – Trip out for Curve BHA.
4. Drill Curve, landing in production interval – Trip for Lateral BHA.

5. Drill Lateral / Production hole to Permitted BHL, perform cleanup cycles and trip out to run 5-1/2" Production Casing.
6. Remove wear bushing then run 5-1/2" production casing to TD landing casing mandrel in wellhead.
7. Cement 5-1/2" Production string to surface with floats holding.
8. Run in with wash tool and wash wellhead area – install pack-off and test void to 10000psi for 15 minutes.
9. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
10. Test nightcap void to 10000psi for 30 minutes per illustration 2-2 page 3.
11. Skid rig to adjacent well on pad to drill production hole.

GEOLOGIC PROG

CENTENNIAL RESOURCE DEVELOPMENT, LLC

WELL NAME	Romeo Fed Com 311H				10/8/2020	
AREA	Solomon		API			
HZ TARGET	FBSG Sand		WI %			
LAT LENGTH	7,700		AFE#			
TRRC PERMIT			COUNTY	Lea		

	TWNP	RNG	SECTION	FOOTAGE	COMMENT
SHL	24S	34E	27	2338' FNL 505' FWL	On lease. Drill S to N.
FTP/PP	24S	34E	27	2538' FNL 330' FWL	
LTP	24S	34E	22	100' FNL 330' FWL	
BHL	24S	34E	22	100' FNL 330' FWL	

GROUND LEVEL	3,466'	RIG KB	26'	KB ELEV	3,492'		
GEOLOGIST	Isabel Harper	isabel.harper@cdevinc.com	(303) 589-8841				

LOGGING No open hole logging.
MWD GR from drill out of surface casing to TD.

MUDLOGGING Standard mud logging and mud gas detection.
Mud loggers on from drill out of surface casing to TD.

FORMATION	TVD	SSTVD	THICKNESS	FINAL MD	FINAL TVD	DELTA
Rustler	1,090'	2,402'	619'			
Salado	1,709'	1,783'	2,042'			
BX BLM (Fletcher Anhydrite)	3,751'	-259'	1,619'			
Lamar	5,370'	-1,878'	72'			
Bell Canyon	5,442'	-1,950'	900'			
Cherry Canyon	6,342'	-2,850'	218'			
Manzanita Lime	6,560'	-3,068'	1,337'			
Brushy Canyon	7,897'	-4,405'	1,390'			
Bone Spring Lime	9,287'	-5,795'	21'			
Avalon	9,308'	-5,816'	942'			
First Bone Spring Sand	10,250'	-6,758'	201'			
Second Bone Spring Shale	10,451'	-6,959'	826'			
Third Bone Spring Carb	11,277'	-7,785'	546'			
Third Bone Spring Sand	11,823'	-8,331'	385'			
Wolfcamp	12,208'	-8,716'				
Target Top at 0' VS	10,252'	-6,760'	32'			
Target Base at 0' VS	10,284'	-6,792'				
HZ TARGET AT 0' VS	10,270'	-6,778'				

TARGET: KBTVD = 10270' at VS, INC = 90.0 deg
Target Window +10/-10'

COMMENT:

GEOLOGIC PROG

OFFSET TYPE WELLS

CENTENNIAL RESOURCE DEVELOPMENT, LLC

	DRILLING WELL	Romeo Fed Com 311H			10/8/2020	
	HZ TARGET	FBSG Sand		AREA	Solomon	
	PRIMARY TYPE LOG			SECONDARY TYPE LOG		
	Madera 8706 JV-P Com 1			Romeo Fed Com 1H		
	30-025-29917			30-025-42999		
LOCATION	24S 34E Sec27/ 1980 FNL 660 FWL			24S 34E Sec22/ 400' FNL 660' FWL		
DISTANCE	700' NE of planned FTP			1.5 mi North of Sfc		
DIRECTION SURVEY	No			Yes		
KB ELEV	3,493'			3,554'		
FORMATION	TVD	SSTVD	DELTA	TVD	SSTVD	DELTA
Rustler	1,091'	2,402'	619'			
Salado	1,710'	1,783'	2,042'			
BX BLM (Fletcher Anhydrite)	3,752'	-259'	1,619'			
Lamar	5,371'	-1,878'	72'			
Bell Canyon	5,443'	-1,950'	900'	5,498'	-1,944'	892'
Cherry Canyon	6,343'	-2,850'	218'	6,390'	-2,836'	226'
Manzanita Lime	6,561'	-3,068'	1,337'	6,616'	-3,062'	1,249'
Brushy Canyon	7,898'	-4,405'	1,390'	7,865'	-4,311'	1,366'
Bone Spring Lime	9,288'	-5,795'	21'	9,231'	-5,677'	50'
Avalon	9,309'	-5,816'	942'	9,281'	-5,727'	1,004'
First Bone Spring Sand	10,251'	-6,758'	201'	10,285'	-6,731'	217'
Second Bone Spring Shale	10,452'	-6,959'	826'	10,502'	-6,948'	
Third Bone Spring Carb	11,278'	-7,785'	546'			
Third Bone Spring Sand	11,824'	-8,331'	385'			
Wolfcamp	12,209'	-8,716'				
Reservoir Top	10,253'	-6,760'	32'	10,287'	-6,733'	32'
Reservoir Base	10,285'	-6,792'		10,319'	-6,765'	

Comments

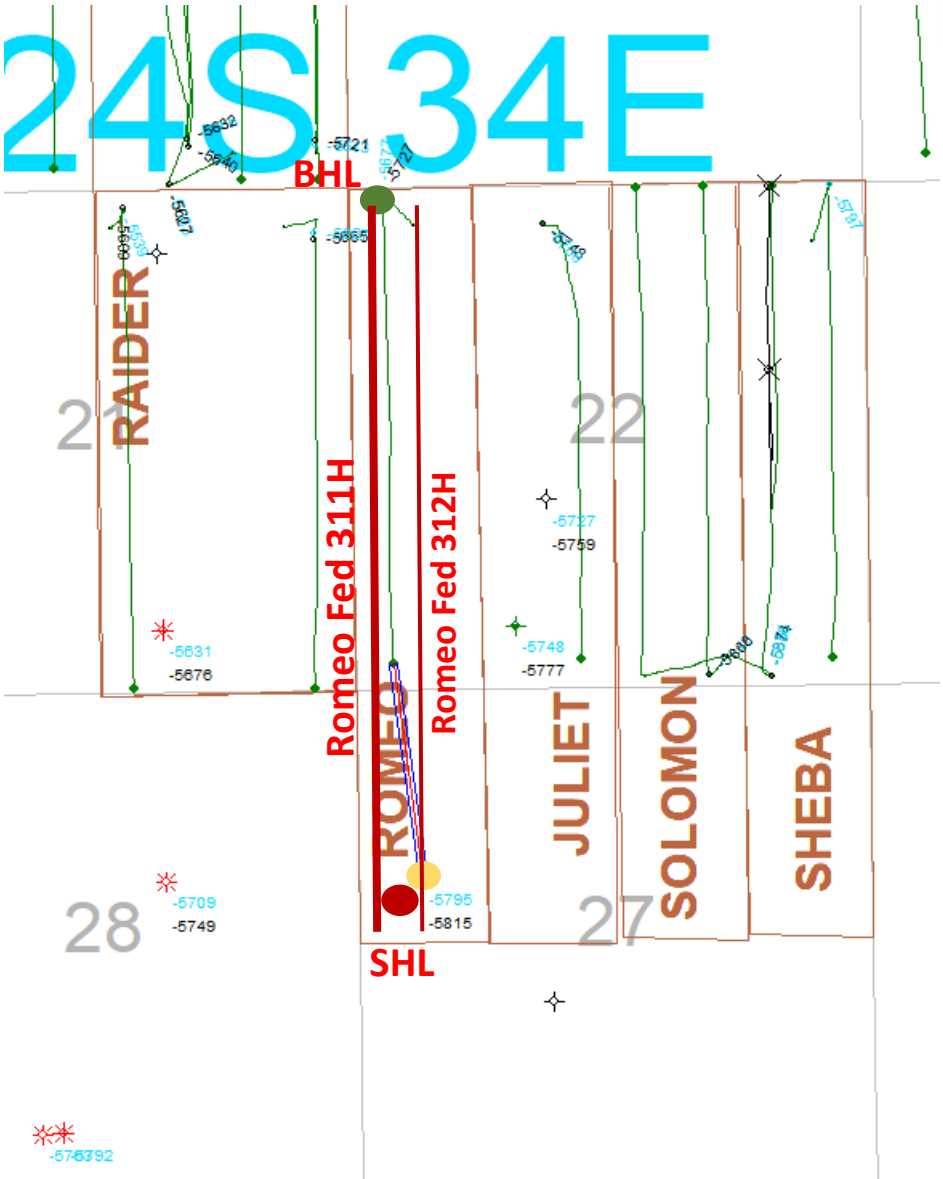
GEOLOGIC PROG

OFFSET TYPE WELLS

CENTENNIAL RESOURCE DEVELOPMENT, LLC

DRILLING WELL	Romeo Fed Com 311H			10/8/2020
HZ TARGET	FBSG Sand		AREA	Solomon
PRIMARY TYPE LOG			SECONDARY TYPE LOG	
Madera 8706 JV-P Com 1			Romeo Fed Com 1H	
30-025-29917			30-025-42999	
LOCATION	24S 34E Sec27/ 1980 FNL 660 FW		24S 34E Sec22/ 400' FNL 660' FW	
DISTANCE	700' NE of planned FTP		1.5 mi North of Sfc	
DIRECTION SURVEY	No		Yes	
KB ELEV	3,493'		3,554'	

LOCATION & STRUCTURE MAP



Location Map

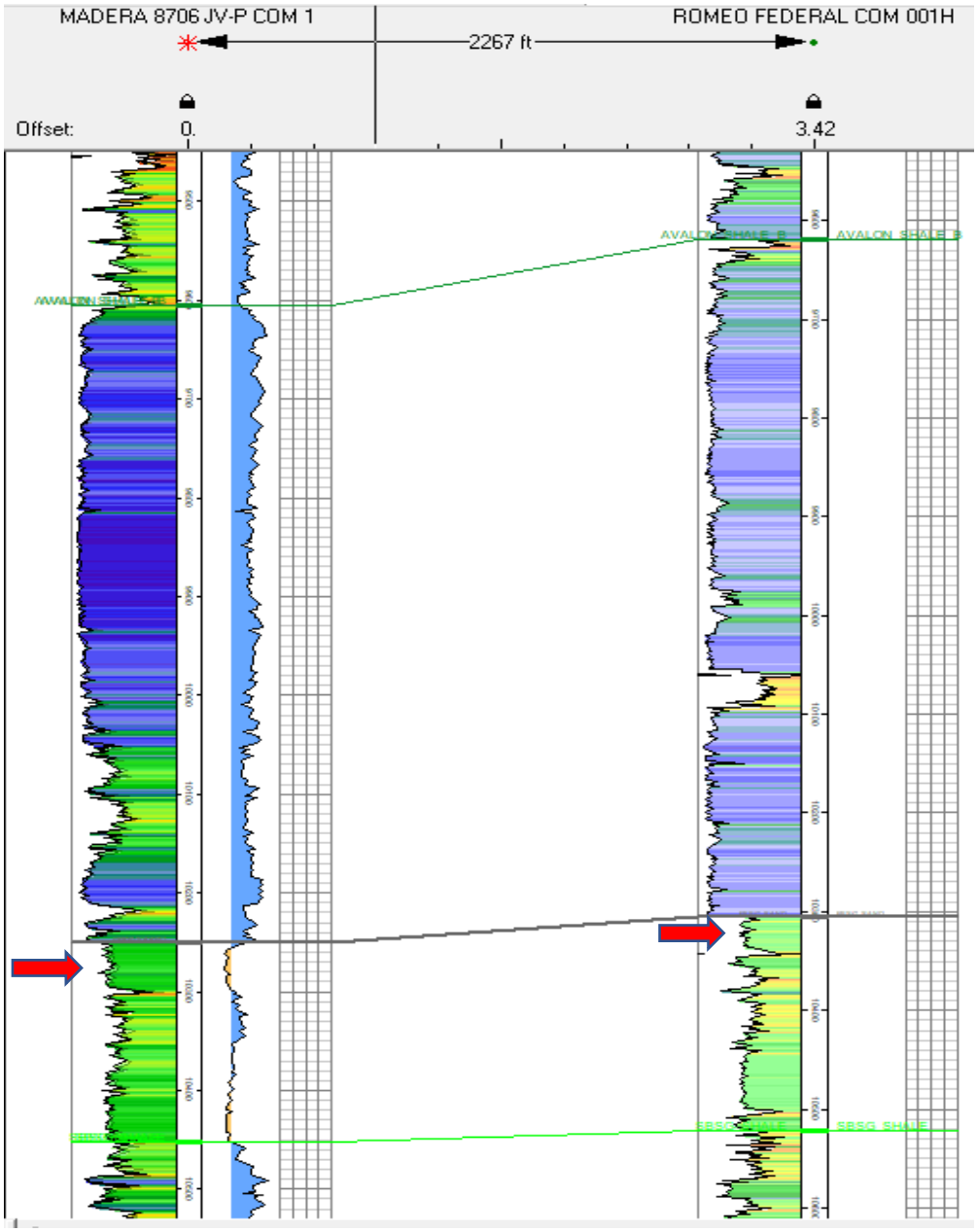
GEOLOGIC PROG

OFFSET TYPE SECTION

CENTENNIAL RESOURCE DEVELOPMENT, LLC

	DRILLING WELL	Romeo Fed Com 311H		10/8/2020
	HZ TARGET	FBSG Sand	AREA	FBSG Sand
	PRIMARY TYPE LOG		SECONDARY TYPE LOG	
	Madera 8706 JV-P Com 1		Romeo Fed Com 1H	
	30-025-29917		30-025-42999	
LOCATION	24S 34E Sec27/ 1980 FNL 660 FW		24S 34E Sec22/ 400' FNL 660' FWL	
DISTANCE	700' NE of planned FTP		1.5 mi North of Sfc	
DIRECTION SURVEY	No		Yes	
KB ELEV	3,493'		3,554'	

Type Log and Target Zone



GEOLOGIC PROG

GEOPHYSICAL DATA

POTENTIAL GEOHAZARDS

SEISMIC DISPLAYS

GEOLOGIC PROG

MUD LOG DISTRIBUTION DETAILS

CENTENNIAL RESOURCE DEVELOPMENT, LLC	WELL NAME	Romeo Fed Com 311H		10/8/2020
	AREA	Solomon	API	
	HZ TARGET	FBSG Sand	WI %	
	LAT LENGTH	7700	AFE#	
	TRRC PERMIT		COUNTY	Lea

GEOLOGIST	Isabel Harper	isabel.harper@cdevinc.com	(303) 589-8841

Mud Logging Company		
None		
TBD	TBD	TBD
Contact 2	email	phone
Contact 3	email	phone

Daily distribution data requirements and protocol

geodata@cdevinc.com; joe.woodske@cdevinc.com; drilling@cdevinc.com; dawn.billesbach@cdevinc.com, Andrew.welshhans@cdevinc.com; liam.kaltenback@cdevinc.com; nick.daniele@cdevinc.com;Isabel.Harper@cdevinc.com

Daily email distribution list

Final distribution data requirements

Final distribution list

Contact Information	Reports	Hard Copies	Digital data	Cuttings
Centennial Resource Development, c/o Joe Woodske, 1001 17th street, Suite 1800,	email final set	2 copies of 5" MD Vertical, 2 copies of 5" Horizontal and	email final set	
SCAL, Inc., 2613 South County Road 1257, Midland, TX 79706				**No Dried Samples to be Collected**
MWD Only: Centennial Resource Development, c/o Sarah Ferreyros, 1001 17th street, Suite	email final set	2 copies of the 5" MD vertical logs 2 copies of the 5"	email final set	

Project Geologist:	Isabel Harper	**Production:**	Brandon Morin
Operations Geologist:	Joe Woodske	**Surface Land:**	Bailey Joplim
Drilling:	Ronny Hise	**Mineral Land:**	Gavin Smith

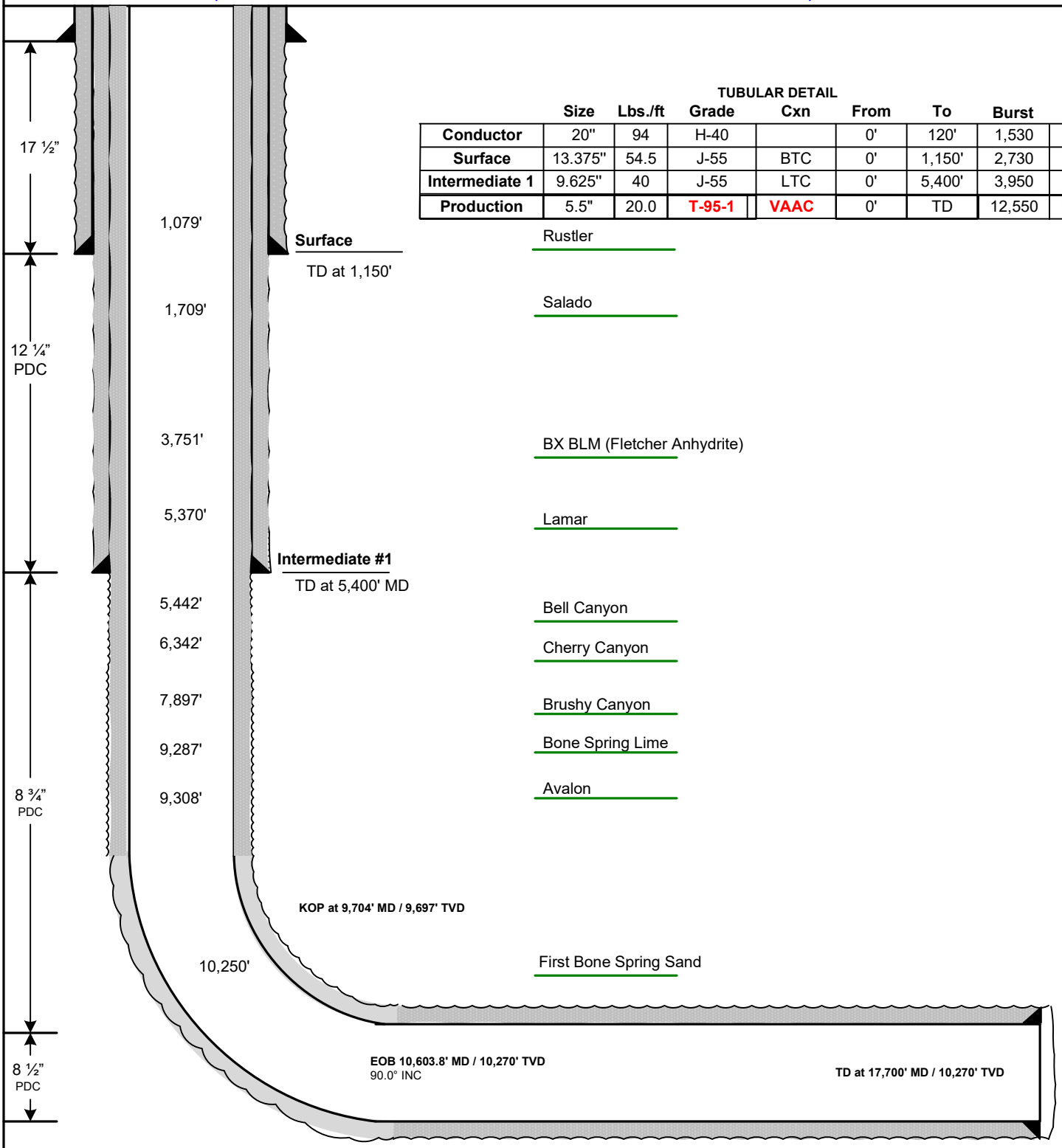
CENTENNIAL | WBD

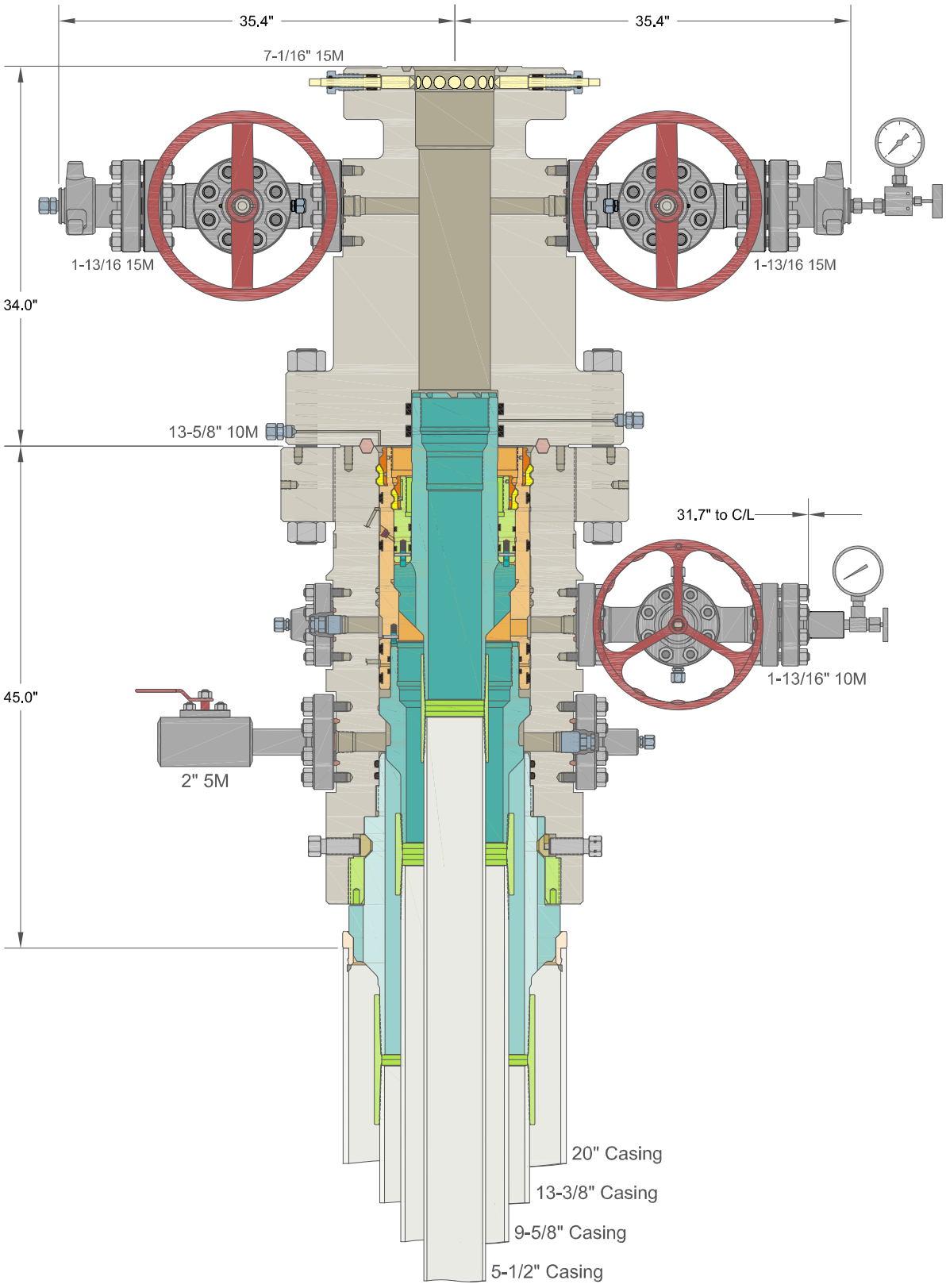
Well : Romeo Fed Com 311H
Area : Solomon **FM tgt :** FBSG Sand
County : Lea **State** : NM
Location : Lot E Section 27, T24S, R34E; 2,338' FNL & 505' FWL
BHL : Lot D, Section 22, T24S, R34E; 100' FNL & 330' FWL
KB Elev : 3,489.5' MSL **KB** : 26.5' AGL **GL Elev** : 3,464' MSL

CENTENNIAL RESOURCE DEVELOPMENT, INC

TUBULAR DETAIL

	Size	Lbs./ft	Grade	Cxn	From	To	Burst	Cllps
Conductor	20"	94	H-40		0'	120'	1,530	520
Surface	13.375"	54.5	J-55	BTC	0'	1,150'	2,730	1,130
Intermediate 1	9.625"	40	J-55	LTC	0'	5,400'	3,950	2,570
Production	5.5"	20.0	T-95-1	VAAC	0'	TD	12,550	12,940





ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	CENTENNIAL RESOURCE DEVELOPMENT LEE CO, NM	
20" x 13-3/8" x 9-5/8" x 5-1/2" 10M MBU-3T-CFL-R-DBLO System With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head, 20" Landing Ring & Pin Down Mandrel Casing Hangers	DRAWN	DLE 10JUN20
	APPRV	
	DRAWING NO.	HBE0000338

Romeo Fed Com 311H

Centennial Drilling Plan for 3-Casing String Bone Springs Formation

13-3/8" x 9-5/8" x 5-1/2" Casing Design

1. Drill 17-1/2" surface hole to Total Depth with Spudder Rig and perform wellbore cleanup cycles.
2. Run and land 13-3/8" casing to Depth.
3. Cement 13-3/8" casing – cement to surface.
4. Cut / Dress Conductor and 13-3/8" casing as needed, weld on Cactus Multi-bowl system with baseplate supported by 20" conductor.
5. Test Weld to 70% of 13-3/8" 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 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.
9. Drill 12-1/4" Intermediate hole to 9-5/8" casing point. (Base Capitan Reef).
10. Remove wear bushing then run and land 9-5/8" Intermediate Casing with mandrel hanger in wellhead.
11. Cement 9-5/8 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 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. Cement must have achieved 500psi compressive strength prior to test.
14. 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.
15. Drill 8-3/4" Vertical hole to KOP – Trip out for Curve BHA.
16. Drill 8-3/4" Curve, landing in production interval – Trip for Lateral BHA.
17. Drill 8-1/2" Lateral to Permitted BHL, perform cleanup cycles and trip out to run 5-1/2" Production Casing.
18. Remove wear bushing then run 5-1/2" 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 5000psi for 15 minutes.
21. Install BPV in 5-1/2" mandrel hanger – Nipple down BOPE and install nightcap.
22. Test nightcap void to 5000psi for 30 minutes.

Continental
ContiTech

CONTITECH RUBBER Industrial Kft.	No:QC-DB- 210/ 2014
	Page: 9 / 113

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE					CERT. N°:	504	
PURCHASER:	ContiTech Oil & Marine Corp.				P.O. N°:	4500409659	
CONTITECH RUBBER order N°:	538236		HOSE TYPE:	3" ID	Choke and Kill Hose		
HOSE SERIAL N°:	67255		NOMINAL / ACTUAL LENGTH:		10,67 m / 10,77 m		
W.P. 68,9 MPa	10000 psi		T.P. 103,4 MPa	15000 psi	Duration:	60	min.

Pressure test with water at
ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.
→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°		Quality	Heat N°
3" coupling with	9251	9254	AISI 4130	A0579N
4 1/16" 10K API b.w. Flange end			AISI 4130	035608

Not Designed For Well Testing **API Spec 16 C**

Temperature rate:"B"

All metal parts are flawless

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

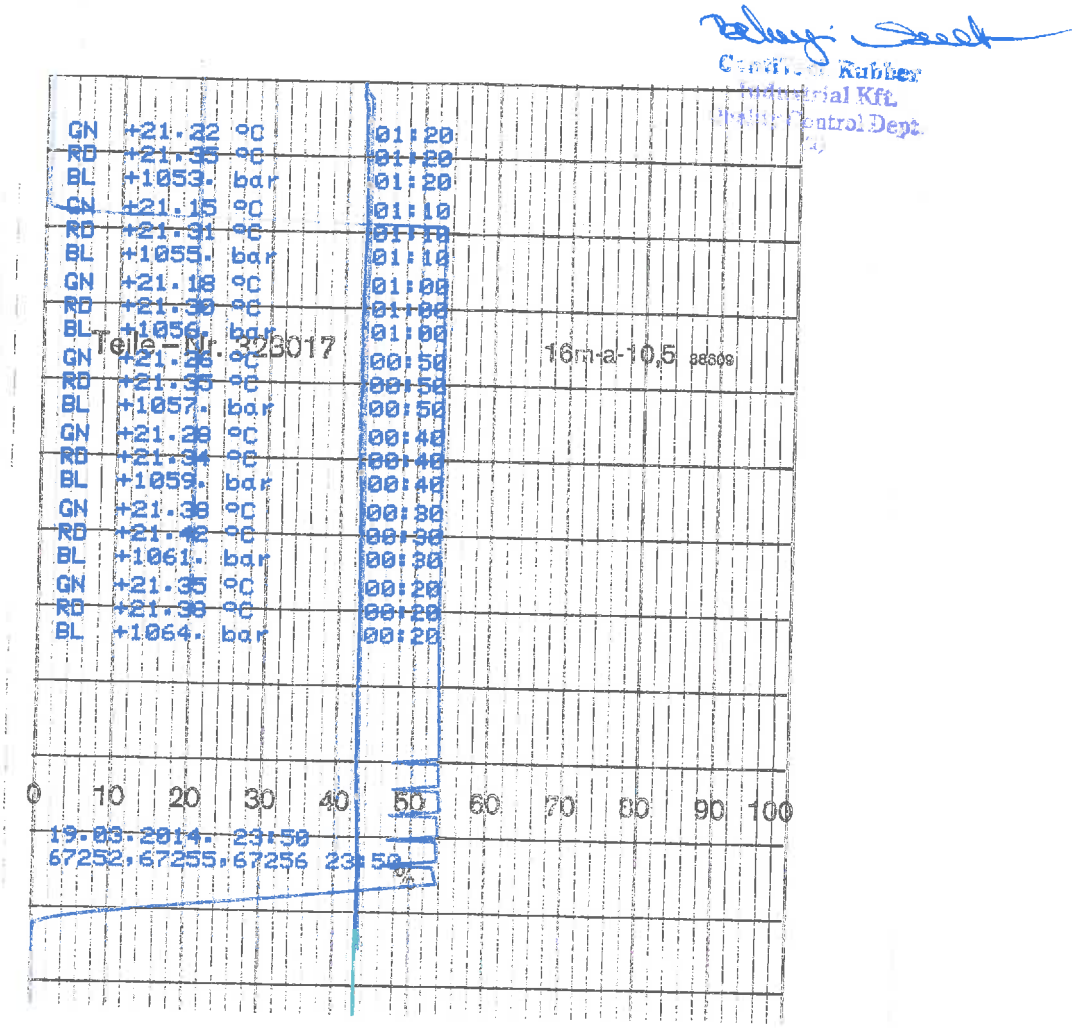
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes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

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
20. March 2014.		ContiTech Rubber Industrial Kft. Quality Control Dept.

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE No: 501, 504, 505

Page: 1 / 1



Hose Data Sheet

CRI Order No.	538236
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500409659
Item No.	1
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" 10K API SPEC 6A TYPE 6BX FLANGE C/W BX155 R.GR.SOUR
Type of coupling other end	FLANGE 4.1/16" 10K API SPEC 6A TYPE 6BX FLANGE C/W BX155 R.GR.SOUR
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 + GAS RESISTANT SOUR
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
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

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

SUPO Data Report
03/10/2022

APD ID: 10400068704 **Submission Date:** 02/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Romeo_11H_Existing_Roads_plat_20210203175431.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Romeo_111H_Existing_Roads_plat_20210203182058.pdf

New road type: COLLECTOR

Length: 4203.38 Feet **Width (ft.):** 65

Max slope (%): 2 **Max grade (%):** 7

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: Drainage and erosion will be constantly monitored to prevent compromising the road intergrity, and to protect the surrounding native topography.

New road access plan or profile prepared? N

New road access plan attachment:

Access road engineering design? N

Access road engineering design attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 4

Offsite topsoil source description:

Onsite topsoil removal process: Equipment will be used to strip 4 inches in depth and stockpile, utilizing berms for run-off.

Access other construction information:

Access miscellaneous information: FEE/FEE/FED. Pit has been identified for use in the attached exhibit. Caliche will be hauled from the existing concho pit located in the SE/NW4, Sec 6, T25S, R35E

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: CULVERT

Drainage Control comments: Will be monitored and repaired as necessary.

Road Drainage Control Structures (DCS) description: Drainage and erosion will be constantly monitored to prevent compromising the road intergrity, and to protect the surrounding native topography.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Romeo_Fed_Com_Freshwater_Caliche_Route_20210203175750.pdf

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Romeo_11H_Existing_wells_plat_20210203175910.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Production facility will be located on the N2 of Sec. 27, T24S-R34E where oil and gas sales will take place. Facility pad is 300' x 500'.

Production Facilities map:

ROMEO_JULIET_CTB_REV_07_22_20_20201101234109.pdf

Romeo_Juliet_CTB_Layout__1__20201101233618.pdf

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: STIMULATION

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 225000 **Source volume (acre-feet):** 29.00094667

Source volume (gal): 9450000

Water source and transportation map:

Romeo_Fed_Com_Freshwater_Caliche_Route_20210203180010.pdf

Water source comments: Temporary surface lines, 2.35 miles, will be used to transport water for drilling and completion operations from private pit to Juliet development.- Existing freshwater pit in Sec 16-T24S-R34E will be utilized for fresh water and source location for recycled water is tbd.
New water well? N

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:

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.):**

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche will be hauled from the existing Concho pit located in the NW/4, Sec 6, T25S, R35E. Pit has been identified for use in the attached exhibit.

Construction Materials source location attachment:

Romeo_Fed_Com_Freshwater_Caliche_Route_20210203180050.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Brine water based drilling fluid.

Amount of waste: 1500 barrels

Waste disposal frequency : Monthly

Safe containment description: Steel tanks with plastic-lined containment berms.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to State approved facility.

Waste type: DRILLING

Waste content description: Fresh water based drilling fluid.

Amount of waste: 1500 barrels

Waste disposal frequency : Weekly

Safe containment description: Steel tanks with plastic-lined containment berms

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to state approved facility.

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Waste type: SEWAGE

Waste content description: Grey water/Human waste

Amount of waste: 5000 gallons

Waste disposal frequency : Weekly

Safe containment description: Approved waste storage tanks with containment

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to state approve facility.

Waste type: GARBAGE

Waste content description: General trash/garbage

Amount of waste: 5000 pounds

Waste disposal frequency : Weekly

Safe containment description: Enclosed trash trailer.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Haul to state approved facility.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

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?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Description of cuttings location 10205 cubic ft of waste, stored in steel tanks. Hauled off to a commercial state approved facility.

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?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Romeo_111H_Rig_Layout_plat_20210203183120.pdf
Romeo_111H_Location_Layout_plat_20210203183121.pdf

Comments: FEE/FEE/FED

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** Romeo Federal Com SWNW 27 Pad

Multiple Well Pad Number: 1

Recontouring attachment:

Romeo_111H_Reclamation_plat_20210203183147.pdf

Drainage/Erosion control construction: Culverts will be installed on an as needed basis.

Drainage/Erosion control reclamation: Water breaks will be added if needed, to prevent unnatural erosion and loss of vegetation.

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Well pad proposed disturbance (acres): 73532
Road proposed disturbance (acres): 6.177
Powerline proposed disturbance (acres): 0
Pipeline proposed disturbance (acres): 0.103
Other proposed disturbance (acres): 0
Total proposed disturbance: 73538.28

Well pad interim reclamation (acres): 4.361
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 4.361

Well pad long term disturbance (acres): 3.171
Road long term disturbance (acres): 6.177
Powerline long term disturbance (acres): 0
Pipeline long term disturbance (acres): 0.103
Other long term disturbance (acres): 0
Total long term disturbance: 9.450999999999999

Disturbance Comments:

Reconstruction method: This pad will not be reclaimed as it is a drill island.

Topsoil redistribution: Topsoil will be stock piled along the north fill slope and south edge of the borrow area. Topsoil along the south edge of borrow area will be redistributed over the borrow area at this is a drill island and will not be reclaimed.

Soil treatment: Native soil will be used in the initial construction of the well pad. Pad will be compacted using fresh water, dust control measures will be implemented as needed.

Existing Vegetation at the well pad: Surface disturbance will be limited to well site surveyed and extending south to borrow deficit quantities. Topsoil will be stored along the north edge of pad site and south edge of borrow area.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Will be windrowed to the edge of the disturbance and be utilized as a barrier from water run-off.

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Will be windrowed to the edge of the disturbance and be utilized as a barrier from water run-off.

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Will be windrowed to the edge of the disturbance and be utilized as a barrier from water run-off.

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Jamon **Last Name:** Hohensee

Phone: (432)241-4283 **Email:** jamon.hohensee@cdevinc.com

Seedbed prep: Prepare a 3-5 inch deep seedbed, with the top 3-4 inches consisting of topsoil.

Seed BMP: Seeding will be done in the proper season and monitored for the re-establishment of native vegetation.

Seed method: Broadcast

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Spray for noxious weeds and bare ground as needed.

Weed treatment plan attachment:

Monitoring plan description: All disturbed areas will be closely monitored for any primary or secondary noxious weeds.

Monitoring plan attachment:

Success standards: No primary or secondary noxious weed will be allowed. Vegetation will be returned to its native standard.

Pit closure description: No open pits will be constructed.

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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:**

Fee Owner: Fee Owner Depercated **Fee Owner Address:**

Phone: (999)999-9999 **Email:** none@aol.com

Surface use plan certification: YES

Surface use plan certification document:

SUR2199_QUAIL_RANCH_MEMO_SUCA_Sec_15__16__21__22__27__T24S__R34E_11.10.18_2021020413252

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: Book 2144, page 73

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

Right of Way needed? N **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: Onsite not required. FEE/FEE/FED

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

Use a previously conducted onsite? N

Previous Onsite information:

Other SUPO Attachment

Romeo_Fed_Com_111H__112H__311H__312H_SUPO_20210203181703.pdf

LEA COUNTY, NM
KEITH MANES, COUNTY CLERK
000035441
Book2144 Page 514
1 of 2
01/09/2019 03:24 PM
BY ANGELA BEAUCHAMP

EXHIBIT C

MEMORANDUM OF SURFACE USE AND COMPENSATION AGREEMENT

For good and valuable consideration, Quail Ranch, LLC, whose address is One Concho Center, 600 West Illinois Avenue, Midland, Texas 79701 ("**Surface Owner**"), and Centennial Resource Production, LLC, a Delaware limited liability company, whose address is 1001 17th Street, Suite 1800, Denver, CO 80202, ("**Operator**"), have entered into that certain Surface Use and Compensation Agreement dated to be effective as of November 10, 2018 ("**Agreement**"), for the purpose of setting forth certain terms and conditions under which Operator can conduct various surface uses and/or operations in, on and under the following described lands owned by Surface Owner in Lea County, New Mexico (the "**Subject Lands**"), to-wit:

All of Section 15, All off Section 16, the North ½ of Section 21 and the East ½ of the Southeast ¼ and the West ½ of the Southwest ¼ of Section 21, All of Section 22, the Northwest ¼ of Section 27, The North ½ and Southwest ¼ of the Northeast ¼ of Section 27 and the North ½ of the Southwest ¼ of Section 27, all in Township 24 South, Range 34 East, N.M.P.M., Lea County, New Mexico

The Agreement is for a term beginning on the Effective Date, being November 10, 2018, and as long thereafter as Operator conducts oil and gas operations on the Subject Lands or any portion thereof with no cessation of such oil and gas operations of more than one hundred eighty (180) consecutive days. The Agreement, with all of its terms, covenants, and other provisions, is referred to and incorporated into this Memorandum for all purposes. This Memorandum is placed of record for the purpose of giving notice of the Agreement, which, by its express terms, shall run with the land and is binding upon the respective heirs, successors, assigns and personal representatives of Surface Owner and Operator. An original of the Agreement is maintained in the files of both Surface Owner and Operator at their respective addresses set forth above.

This Memorandum is signed as of the date of acknowledgment of the signatures of Surface Owner and Operator's authorized officer below but is effective for all purposes as of the effective date of the Agreement, as stated above.

SURFACE OWNER:

QUAIL RANCH, LLC

By: _____
Christopher Boehler
Attorney-In-Fact

OPERATOR:

CENTENNIAL RESOURCE PRODUCTION, LLC

By: _____ BT
Sean Marshall
VP of Land

SUR2199

LEA COUNTY, NM
KEITH MANES, COUNTY CLERK
000035441
Book2144 Page 514
2 of 2
01/09/2019 03:24 PM
BY ANGELA BEAUCHAMP

ACKNOWLEDGMENTS

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

This instrument was acknowledged before me on this 18th day of December, 2018, by Christopher Boehler, as Attorney-In-Fact for QUAIL RANCH, LLC, a Delaware limited liability company, on behalf of said limited liability company.

Kimberly Kennedy
Notary Public-State of Texas

My commission expires:
3/8/2022

Kimberly Kennedy
Notary Public, State of Texas
Notary ID 13148289-4
My Commission Exp. 03-08-2022

STATE OF DENVER §
§
COUNTY OF COLORADO §

This instrument was acknowledged before me on this 12th day of November, 2018, by Sean Marshall, as Vice President of Land] for Centennial Resource Production, LLC, a Delaware limited liability company, on behalf of said company.

Reagan M Adams
Notary Public-State of Colorado

My commission expires:

REAGAN M ADAMS
Notary Public – State of Colorado
Notary ID 20174034384
My Commission Expires Aug 16, 2021

ROMEO FED COM 111H, 112H, 311H, 312H

SURFACE USE PLAN

EXISTING ROADS (ROAD PLAT ATTACHED AS PLAT #1)

- The operator will improve or maintain existing road in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or the dust suppression chemicals on roadways.

DRIVING DIRECTIONS (ATTACHED AS PLAT #2)

- COMMENCING AT THE INTERSECTION OF HIGHWAY 18 AND HIGHWAY 128 IN JAL, NEW MEXICO, PROCEED IN A NORTHWESTERLY, THEN WESTERLY DIRECTION ALONG HIGHWAY 128 APPROXIMATELY 20.6 MILES TO THE JUNCTION OF THIS ROAD AND DELAWARE BASIN ROAD TO THE NORTH; TURN RIGHT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 3.0 MILES TO THE JUNCTION OF THIS ROAD AND SHELL ROAD TO THE EAST; TURN RIGHT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 2.3 MILES TO THE JUNCTION OF THIS ROAD AND ANTELOPE RIDGE ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 1.6 MILES TO THE JUNCTION OF THIS ROAD AND ADOBE ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 1.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN RIGHT AND PROCEED IN A

EASTERLY DIRECTION APPROXIMATELY 0.3 MILES TO THE BEGINNING OF THE PROPOSED ACCESS FOR THE MASTIFF 22 FEDERAL STATE COM 4H WELL PAD TO THE SOUTH; FOLLOW ROAD FLAGS IN A SOUTHERLY DIRECTION APPROXIMATELY 579' TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE SOUTHWEST; FOLLOW ROAD FLAGS IN A SOUTHWESTERLY, THEN SOUTHERLY, THEN WESTERLY DIRECTION APPROXIMATELY 314' TO THE PROPOSED LOCATION. TOTAL DISTANCE FROM JAL, NEW MEXICO TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 29.0 MILES.

NEW OR RECONSTRUCTED ACCESS ROADS (ATTACHED AS PLAT #3)

- There will be approximately 4,204'' of new road construction for the well pad and facilities.
- Road Width: The access roads shall have a driving surface that creates the smallest possible surface disturbance and does not exceed 65'. (see "Access Road ROW" plat attached)
- Maximum Grade: 2.50%
- Crown Design: Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2%. The road shall conform to cross section and plans for typical road construction found in the BLM Gold Book.
- Ditch Design: Ditching will be constructed on both sides of road.
- Cattle guards: None suggested.
- Major Cuts and Fills: 2:1 during drilling and completions.
- Type of surfacing Material: Caliche.

LOCATION OF EXISTING WELLS (DIAGRAM & SPREADSHEET ATTACHED AS PLAT #4)

- 1-mile radius map and well details attached.

LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES (WORK AREA DETAIL MAP ATTACHED AS PLAT #5)

- FACILITIES:

- Production facility will be located on the N2 of Sec. 27, T24S-R34E where oil and gas sales will take place.
- Oil and gas sales pipelines will be built to the north side of the facility pad.
- Open vent exhaust stacks will be modified to prevent birds or bats from entering, discourage perching, roosting and nesting.
- Facility will have a secondary containment at least 1.5 times the holding capacity of largest storage tank.
- All above ground structures will be painted non-reflective shale green for blending with the environment.
- The tank battery will be connected to the existing water gathering system in the field for permanent water disposal.

LOCATION OF PROPOSED ROW (WELL PLAT ATTACHED AS PLAT #6)

- Pipelines: 1 – buried SWD pipeline <12 ¾" OD , approximately 1,475', will be laid from facility in section 27, going north to an existing SWD line in the SW4 of section 22-T24S-R34E.
  - A ROW will be required for these pipelines.
  - All construction activity will be confined to the approved ROW.
  - Pipeline will stay within approved ROW.
- Powerlines: A powerline, will be installed from the well location to an existing Centennial takepoint tbd within section 22-T24S-R34E.
- Powerline will continue from the facility pad to each of the drill pads located in the N2 of section 27-T24S-R34E.
  - A ROW will be required for all OHE line.
  - All construction activity will be confined to the approved ROW.
  - Powerline will run parallel to the road and will stay within approved ROW.

LOCATION AND TYPES OF WATER (PLAT ATTACHED AS PLAT #7)

- Existing freshwater pit in Sec 16-T24S-R34E will be utilized for fresh water and source location for recycled water is tbd.
- Fresh water will be obtained from a private water source.
- Temporary expanding water surface line will be used to transport water for drilling and completion operations from the pipeline to the Romeo

location along existing road a total of approx. 13,358’ from the well location to the existing frac pond in Sec 16-T24S-R34E.

- Fresh water line will run parallel to the existing road, then north within an existing pipeline right of way.

CONSTRUCTION MATERIAL (ATTACHED AS PLAT #8)

- Caliche will be hauled from the existing Basin pit located in the NW/4, Sec 6, T25S, R35E}. Pit has been identified for use in the attached exhibit.
- Any native caliche on the proposed site can be used by "flipping" the location and using all native soils.
  - Notification shall be given to BLM at 575/234-5909 at least 2 working days prior to commencing construction of access road and /or well pad.

METHODS FOR HANDLING WASTE

- Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.
- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.
- Human waste and grey water will be properly contained and disposed of properly at a state approve disposal facility.
- After drilling and completion operations, trash, chemicals, salts frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.
- The well will be drilled utilizing a closed loop system. Drill cuttings will be properly disposed of into steel tank and taken to an NMOCD approved disposal facility.

ANCILLARY FACILITIES

- None

WELL SITE LAYOUT (WELL SITE PLAT ATTACHED AS PLAT #9)

- Well Site Plat
  - Exterior well pad dimensions are 550’ x 535’.
  - Interior well pad dimensions from point of entry (well head) of the westernmost well are N-160’, S-350’, W-260’, E-275’. The length to the east includes 35’ spacing for next well on multi-well pad (three wells). Total disturbance area needed for construction of well pad will be 7.532 acres.
  - Top soil placement is on the north where interim reclamation is planned to be completed upon completion of well and evaluation of best management practices.

PROPOSED PAD CUT & FILL (PLAT ATTACHED AS PLAT #10)

- Cut and fill: will be minimal.

RIG LAYOUT (ATTACHED AS PLAT #11)

PLANS FOR SURFACE RECLAMATION (RECLAMATION PLAT ATTACHED AS PLAT #12)

RECLAMATION OBJECTIVES

- The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.
- The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.

- IF CIRCUMSTANCES ALLOW, INTERIM RECLAMATION AND/OR FINAL RECLAMATION ACTIONS WILL BE COMPLETED. WE WILL GAIN WRITTEN PERMISSION FROM THE BLM IF MORE TIME IS NEEDED.

RECLAMATION WILL BE PERFORMED BY USING THE FOLLOWING PROCEDURES:

INTERIM RECLAMATION PROCEDURES

- Within 6 months, Centennial will contact BLM Surface Management Specialists to devise the best strategies to reduce the size of the location. Current plans for interim reclamation include reducing the pad size to approximately 3.989 acres from the proposed size of 4.870 acres. the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not require for production. A plan will be submitted showing where interim reclamation will be completed to allow for safe operations, protection of the environment outside of drilled well, and following best Management practices found in the BLM “Gold Book”.
- In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to res-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Notice: Constructed slopes may be much steeper during drilling but will be recontoured to the above ratios during interim reclamation.
- Topsoil will be evenly re-spread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture (BLM#2), free of noxious weeds, will be used.
- Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.

- The interim reclamation will be monitored periodically to ensure that vegetation has reestablished.

Final Reclamation (well pad, buried pipelines, and powerlines, etc.)

- Prior to final reclamation procedures, the well pad, road and surrounding area will be cleared of material, trash, and equipment.
- All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
- All disturbed areas, including roads, pipelines, pads, production facilities and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends in distinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
- After all the disturbed areas have been properly prepared; the areas will be seeded with the proper BLM see mixture (BLM #2), free of noxious weeds.
- Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding areas.

SURFACE OWNERSHIP

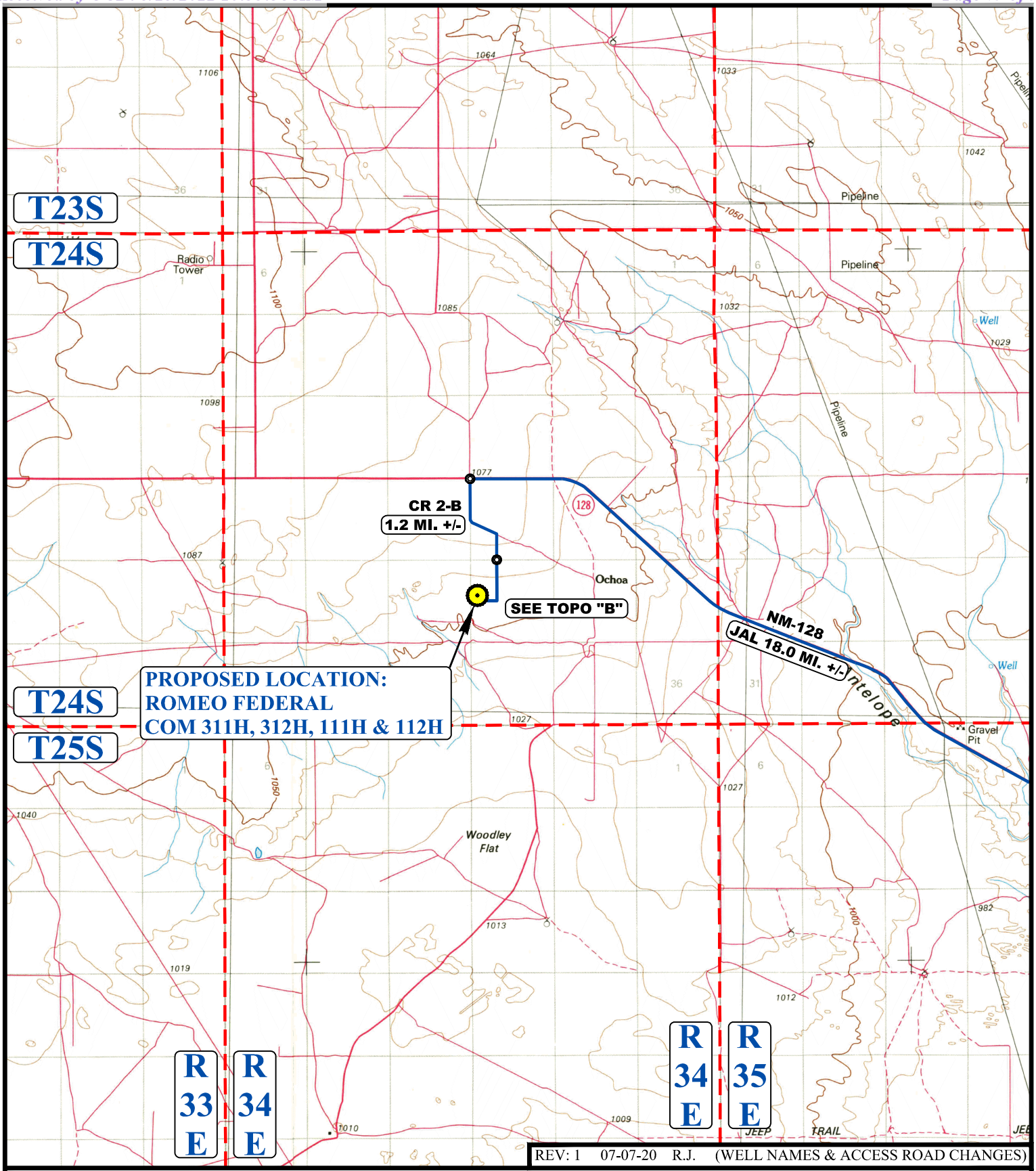
- Well pad and all other infrastructure is on Fee Surface (Quail Ranch)

OTHER INFORMATION (PLATS ATTACHED AS PLAT 13)

- On-site performed by BLM NRS Paul Murphy 10/18/18
- Erosion / Drainage: Drainage control system shall be constructed on the entire length of road using any of the following: ditches, side hill out-sloping and in-sloping, lead-off ditched, culvert installation, or low water crossings.
- Enclosure fencing will be installed around open cellar to prevent livestock or large wildlife from being trapped after installation, or low water crossings.
- Enclosure fencing will be installed around open cellar to prevent livestock or large wildlife from being trapped after installation. Fencing

will remain in place while no activity is present and until backfilling takes place.

- Terrain: Landscape is flat
- Soil: Sandy loam
- Vegetation: Vegetation present in surrounding area includes mesquite, shrubs, and grass (needle-grass, burro grass, dropseed).
- Wildlife: No wildlife observed, but it is likely that deer, rabbits, coyotes and rodents pass through the area.
- Surface Water: No surface water concerns.
- Cave Karst: Low Karst area with no cave or visual signs of caves found.
- Watershed Protection: The entire perimeter of the well pad will be bermed to prevent oil, salt and other chemical contaminates from leaving the well pad.



REV: 1 07-07-20 R.J. (WELL NAMES & ACCESS ROAD CHANGES)

LEGEND:

PROPOSED LOCATION

N

CENTENNIAL RESOURCE PRODUCTION, LLC

ROMEO FEDERAL COM 311H, 312H, 111H & 112H
SW 1/4 NW 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	N.R.	07-01-20	SCALE
DRAWN BY	J.L.G.	09-10-19	1 : 100,000
ACCESS ROAD MAP			TOPO A

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

PROCEED IN A WESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION FROM JAL, NEW MEXICO ALONG NM-128 APPROXIMATELY 18.0 MILES TO THE JUNCTION OF THIS ROAD AND COUNTY ROAD 2B TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE SOUTH; FOLLOW ROAD FLAGS IN A SOUTHERLY, THEN WESTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 4,141' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM JAL, NEW MEXICO TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 20.0 MILES.

REV: 1 07-07-20 R.J. (WELL NAMES & ACCESS ROAD CHANGES)

CENTENNIAL RESOURCE PRODUCTION, LLC

ROMEO FEDERAL COM 311H, 312H, 111H & 112H
SW 1/4 NW 1/4, SECTION 27, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

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

SURVEYED BY	N.R.	07-01-20	
DRAWN BY	J.L.G.	09-10-19	

ROAD DESCRIPTION

AFMSS

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

PWD Data Report

03/10/2022

APD ID: 10400068704 **Submission Date:** 02/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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? N

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: ROMEO FEDERAL COM **Well Number:** 311H

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? N

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: ROMEO FEDERAL COM **Well Number:** 311H

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? N

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? N

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? N

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: ROMEO FEDERAL COM **Well Number:** 311H

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

03/10/2022

APD ID: 10400068704 **Submission Date:** 02/04/2021

Operator Name: CENTENNIAL RESOURCE PRODUCTION LLC

Well Name: ROMEO FEDERAL COM **Well Number:** 311H

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

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001841

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

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

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

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-50263	96434	RED HILLS;BONE SPRING, NORTH

[4] Property Code	[5] Property Name	[6] Well Number
318027	ROMEO FEDERAL COM	311H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372165	CENTENNIAL RESOURCE PRODUCTION, LLC	3464.0'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	27	24S	34E		2338	NORTH	505	WEST	LEA

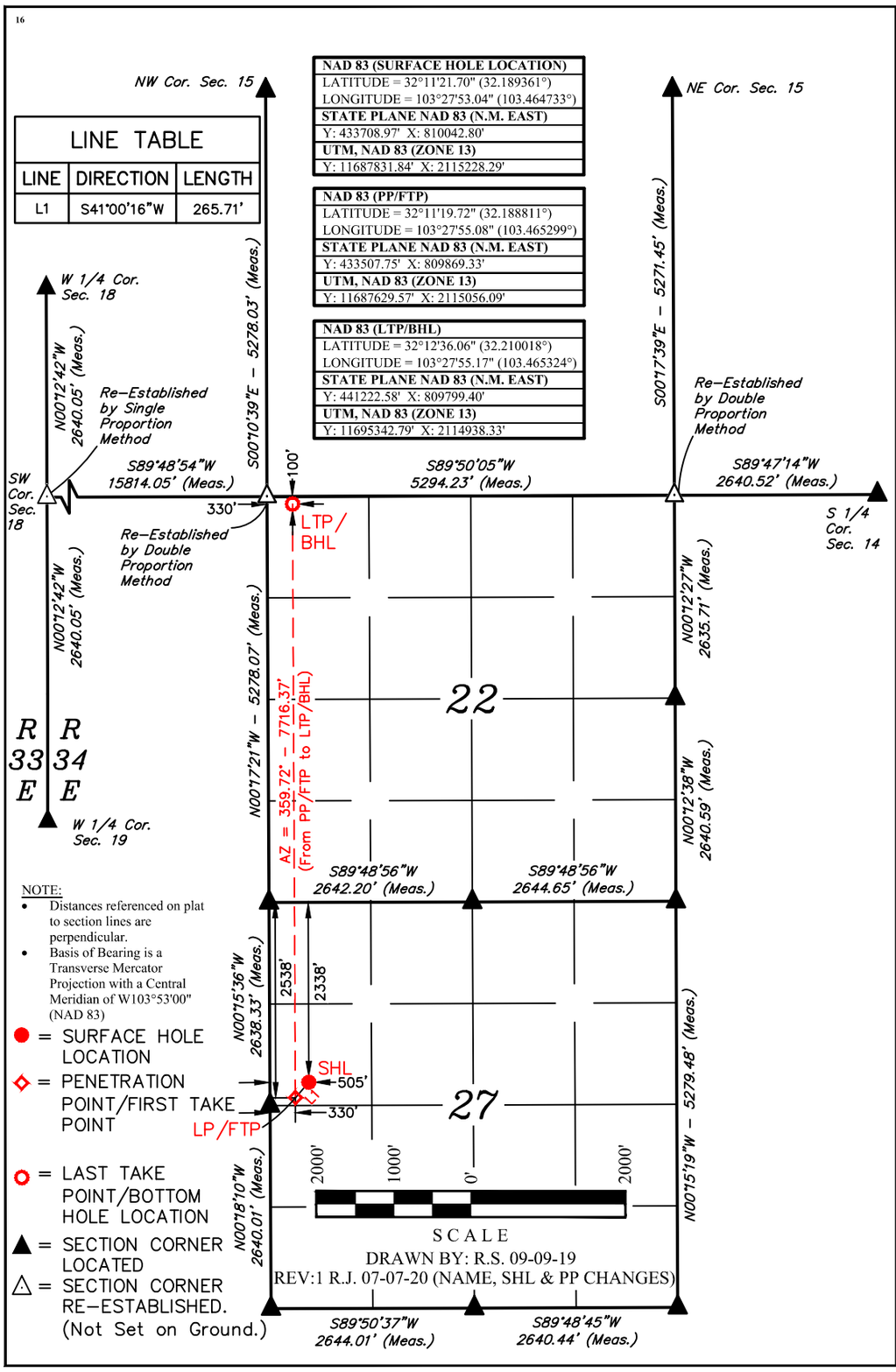
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	22	24S	34E		100	NORTH	330	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240			

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

[16]



NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION
◇ = PENETRATION POINT/FIRST TAKE POINT
○ = LAST TAKE POINT/BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

SCALE
DRAWN BY: R.S. 09-09-19
REV:1 R.J. 07-07-20 (NAME, SHL & PP CHANGES)

[17] OPERATOR CERTIFICATION

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

5/25/22
Signature Date

Meghan Twele
Printed Name

meghan.twele@cdevinc.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

JULY 01, 2020
Date of Survey
Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 07-07-20

Certificate Number:

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Centennial Resource Prod, LLC **OGRID:** 372165 **Date:** 4/5/2022

II. Type: ■ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Romeo Federal Com 111H		E-27-24S-34E	2298FNL&505FWL	1800 BBL/D	2700 BBL/D	12.240 BBL/D
Romeo Federal Com 112H		E-27-24S-34E	2298FNL&540FWL	1800 BBL/D	2700 BBL/D	12.240 BBL/D
Romeo Federal Com 311H	30-025-50263	E-27-24S-34E	2338FNL&505FWL	3600 BBL/D	4320 MCF/D	18,000 BBL/D
Romeo Federal Com 312H		E-27-24S-34E	2338FNL&540FWL	3600 BBL/D	4320 MCF/D	18,000 BBL/D

IV. Central Delivery Point Name: Raider 502/503/701 CDP [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Romeo Federal Com 111H		1/1/2024	1/9/2024	2/1/2024	2/20/2024	2/20/2024
Romeo Federal Com 112H		1/15/2024	1/23/2024	2/1/2024	2/20/2024	2/20/2024
Romeo Federal Com 311H	30-025-50263	7/29/2022	9/06/2022	11/29/2022	12/31/2022	12/31/2022
Romeo Federal Com 312H		8/2/2022	8/10/2022	11/29/2022	12/31/2022	12/31/2022

VI. Separation Equipment: ■ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ■ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ■ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

■ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

■ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Stewart MacCallum
Printed Name:	Stewart MacCallum
Title:	Director of Marketing
E-mail Address:	Stewart.MacCallum@cdevinc.com
Date:	05/23/2022
Phone:	(720) 499-1458

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

Centennial Resource Production, LLC (372165)

Natural Gas Management Plan Descriptions

VI. Separation Equipment:

Centennial utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations. Our goal is to maintain 5 minutes of retention time in the test vessel and 20 minutes in the heater treater at peak production rates. The gas produced is routed from the separator to the gas sales line.

VII. Operational Practices:

Drilling

During Centennial's drilling operations it is uncommon for venting or flaring to occur. If flaring is needed due to safety concerns, gas will be routed to a flare and volumes will be estimated.

Flowback

During completion/recompletion flowback operations, after separation flowback begins and as soon as it is technically feasible, Centennial routes gas though a permanent separator and the controlled facility where the gas is either sold or flared through a high-pressure flare if needed.

Production

Per 19.15.27.8.D, Centennial's facilities are designed to minimize waste. Our produced gas will only be vented or flared in an emergency or malfunction situation, except as allowed for normal operations noted in 19.15.27.8.D(2) & (4). All gas that is flared is metered. All gas that may be vented will be estimated.

Performance Standards

Centennial utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations.

All of Centennial's permanent storage tanks associated with production operations which are routed to a flare or control device are equipped with an automatic gauging system.

All of Centennial's flare stacks, both currently installed and for future installation, are:

1) Appropriately sized and designed to ensure proper combustion efficiency.
2) Equipped with an automatic ignitor or continuous pilot.
3) Anchored and located at least 100 feet from the well and storage tanks.

Centennial's field operations and HSE teams have implemented an AVO inspection schedule that adheres to the requirements of 19.15.27.8.E(5).

All of our operations and facilities are designed to minimize waste. We routinely employ the following methods and practices:

- Closed-loop systems
- Enclosed and properly sized tanks

- Vapor recovery units to maximize recovery of low-pressure gas streams and potential unauthorized emissions
- Low-emitting or electric engines whenever practical
- Combustors and flare stacks in the event of a malfunction or emergency
- Routine facility inspections to identify leaking components, functioning control devices, such as flares and combustors, and repair / replacement of malfunctioning components where applicable

Measurement or estimation

Centennial measures or estimates the volumes of natural gas vented, flared and/or beneficially used for all of our drilling, completing and producing wells. We utilize accepted industry standards and methodology which can be independently verified. Annual GOR testing is completed on our wells and will be submitted as required by the OCD. None of our equipment is designed to allow diversion around metering elements except during inspection, maintenance and repair operations.

VIII. Best Management Practices:

Centennial utilizes the following BMPs to minimize venting during active and planned maintenance activities:

- Use a closed-loop process wherever possible during planned maintenance activities, such as blowdowns, liquid removal, and work over operations.
- Employ low-emitting or electric engines for equipment, such as compressors
- Adhere to a strict preventative maintenance program which includes routine facility inspections, identification of component malfunctions, and repairing or replacing components such as hatches, seals, valves, etc. where applicable
- Utilize vapor recovery units (VRU's) to maximize recovery of volumes of low-pressure gas streams and potential unauthorized emissions
- Route low pressure gas and emissions streams to a combustion device to prevent venting where necessary

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 110370

CONDITIONS

Operator: CENTENNIAL RESOURCE PRODUCTION, LLC 1001 17th Street, Suite 1800 Denver, CO 80202	OGRID: 372165
	Action Number: 110370
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	6/21/2022
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	6/21/2022
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	6/21/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	6/21/2022