

|                                             |                                                                               |                                          |
|---------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------|
| <b>Well Name:</b> CYPRESS 33 FED COM        | <b>Well Location:</b> T23S / R29E / SEC 28 / SESE / 32.2687268 / -103.9846009 | <b>County or Parish/State:</b> EDDY / NM |
| <b>Well Number:</b> 244H                    | <b>Type of Well:</b> CONVENTIONAL GAS WELL                                    | <b>Allottee or Tribe Name:</b>           |
| <b>Lease Number:</b> NMNM086024, NMNM136211 | <b>Unit or CA Name:</b>                                                       | <b>Unit or CA Number:</b>                |
| <b>US Well Number:</b> 3001547844           | <b>Well Status:</b> Approved Application for Permit to Drill                  | <b>Operator:</b> TAP ROCK OPERATING LLC  |

Notice of Intent

**Sundry ID:** 2640764

|                                                       |                                     |
|-------------------------------------------------------|-------------------------------------|
| <b>Type of Submission:</b> Notice of Intent           | <b>Type of Action:</b> Other        |
| <b>Date Sundry Submitted:</b> 10/20/2021              | <b>Time Sundry Submitted:</b> 08:23 |
| <b>Date proposed operation will begin:</b> 10/20/2021 |                                     |

**Procedure Description:** Tap Rock would like to alter the casing plan for the CYPRESS 33 FEDERAL COM #244H. Tap Rock is requesting permission to run one of the two options listed in the attached drill plan - A three or four string design. Tap Rock would also like to have the option of running a DV tool during cementing operations. If no DV tool is ran, we would like to cement the intermediate section in a single stage. Please see the attached Drill Plan for more detail.

Surface Disturbance

**Is any additional surface disturbance proposed?:** No

NOI Attachments

Procedure Description

Cypress\_33\_Federal\_244H\_Sundry\_10.13.21\_20211020082316.pdf

|                                             |                                                                               |                                          |
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Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

**Operator Electronic Signature:** JEFFREY TRLICA  
**Signed on:** OCT 20, 2021 08:23 AM  
**Name:** TAP ROCK OPERATING LLC  
**Title:** Regulatory Analyst  
**Street Address:** 523 PARK POINT DRIVE SUITE 200  
**City:** GOLDEN **State:** CO  
**Phone:** (720) 772-5910  
**Email address:** JTRLICA@TAPRK.COM

Field Representative

**Representative Name:**  
**Street Address:**  
**City:** **State:** **Zip:**  
**Phone:**  
**Email address:**

BLM Point of Contact

**BLM POC Name:** CHRISTOPHER WALLS  
**BLM POC Phone:** 5752342234  
**Disposition:** Approved  
**Signature:** Chris Walls  
**BLM POC Title:** Petroleum Engineer  
**BLM POC Email Address:** cwalls@blm.gov  
**Disposition Date:** 11/05/2021



Drilling Operations Plan  
Cypress Fed Com 244H  
Tap Rock Operating, LLC  
SHL 48' FSL & 1054' FEL, Sec. 28  
BHL 30' FSL & 750' FEL, Sec. 33  
T. 23S., R. 29E Eddy County, NM

Elevation above Sea Level: 3012'

## **DRILLING PROGRAM**

### **1. Estimated Tops**

| Formation           | TVD   | MD    | Lithologies | Bearing      |
|---------------------|-------|-------|-------------|--------------|
| Quaternary Deposits | 0     | 0     | Surface     | None         |
| Rustler Anhydrite   | 250   | 250   |             | Salt         |
| Salado              | 670   | 670   | Salt        | Salt         |
| Base Salt           | 2850  | 2850  |             | Salt         |
| Lamar               | 3055  | 3055  | Limestone   | None         |
| Bell Canyon         | 3060  | 3060  | Sandstone   | Hydrocarbons |
| Cherry Canyon       | 3930  | 3930  | Sandstone   | Hydrocarbons |
| Brushy Canyon       | 5105  | 5113  | Sandstone   | Hydrocarbons |
| Bone Spring         | 6755  | 6771  | Limestone   | Hydrocarbons |
| 1st Bone Spring     | 7710  | 7726  | Sandstone   | Hydrocarbons |
| 2nd Bone Spring     | 7985  | 8001  | Sandstone   | Hydrocarbons |
| 3rd Bone Spring     | 8830  | 8846  | Sandstone   | Hydrocarbons |
| KOP                 | 10421 | 10437 | Sandstone   | Hydrocarbons |
| Wolfcamp            | 9970  | 9986  | Shale       | Hydrocarbons |
| TD                  | 10985 | 16013 | Shale       | Hydrocarbons |

### **2. Notable Zones**

Wolfcamp C is the target formation.

### **3. Pressure Control**

Pressure Control Equipment (See Schematics):

A 15,000', 5,000 psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A top drive check valve and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. The wellhead will be a multi-bowl speed head.

BOP Test procedure will be as follows:

After surface casing is set and the BOP is nipped up, the BOP pressure tests will be made with a third party tester to 250 psi low, 5000 psi high, and the annular preventer will be tested to 2,500 psi. The BOP will be tested in this manner after nipple-up if any break of the stack occurs.



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#### Variance Requests:

Tap Rock requests a variance to run a multi-bowl speed head for setting the Intermediate 1, Intermediate 2, and Production Strings. Tap Rock requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Tap Rock requests a variance to have the option of batch drilling this well with other wells on the same pad. In the event that this well is batch drilled, after drilling surface, 1<sup>st</sup> intermediate, and 2<sup>nd</sup> intermediate hole sections and cementing 2<sup>nd</sup> intermediate casing, a 10M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test. Due to the Potash, Tap Rock will cement the 7-5/8" string to surface.

Tap Rock requests approval to possibly utilize a spudder rig to drill and set casing for the surface interval on this well. The spudder rig will be possibly utilized in order to reduce cost and save time. The wellhead will be installed and tested as soon as the surface casing is cut off per the existing COAs. A blind flange with the same pressure rating as the wellhead will be installed on the well. Once the spudder rig is removed, Tap Rock will secure the wellhead area by placing a guard rail around the cellar. Pressure will be monitored and a means for intervention will be maintained while the drilling rig is not over the well. Spudder rig operations are expected to take 2-3 days per well. Three wells on the pad will have surface casing set by the spudder rig as a part of this operation. The BLM will be notified 24 hours prior to commencing spudder rig operations. Within 90 days of the departure of the spudder rig, drilling operations will recommence on these wells. This rig will have a BOP stack equal or greater to the pressure rating required in the COAs. The BLM will be notified 24 hours before the larger rig moves on the pre-set wells. Tap Rock will have supervision on the spudder rig to ensure compliance with all BLM and NMOCD regulations.

If a DV tool is ran, the depth will be adjusted depending on current hole conditions. Cement volumes will be adjusted proportionally. The DV tool will be set a minimum of 50' below the previous casing shoe and at least 200' above the current casing shoe. If cement is not circulated to surface on the 1<sup>st</sup> cement job, the 2<sup>nd</sup> stage will be pumped as planned. If cement does not return to surface on the 2<sup>nd</sup> stage the BLM will be notified immediately.



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#### 4. Casing & Cement

All Casing will be new.

| Name             | Hole Size | Casing Size | Standard | Top MD | Bottom MD | Top TVD | BTM TVD | Grade | Weight | Thread | Collapse | Burst | Tension |
|------------------|-----------|-------------|----------|--------|-----------|---------|---------|-------|--------|--------|----------|-------|---------|
| Surface          | 17.5      | 13.375      | API      | 0      | 350       | 0       | 350     | J-55  | 54.5   | BUTT   | 1.13     | 1.15  | 1.6     |
| 1st Intermediate | 12.25     | 9.625       | API      | 0      | 3105      | 0       | 3105    | J-55  | 40     | BUTT   | 1.13     | 1.15  | 1.6     |
| 2nd Intermediate | 8.75      | 7.625       | NON API  | 0      | 10337     | 0       | 10321   | P-110 | 29.7   | W441   | 1.13     | 1.15  | 1.6     |
| Production       | 6.75      | 5.5         | NON API  | 0      | 10137     | 0       | 10121   | P-110 | 20     | TXP    | 1.13     | 1.15  | 1.6     |
| Production       | 6.75      | 5.5         | NON API  | 10137  | 16013     | 10121   | 10985   | P-110 | 20     | W441   | 1.13     | 1.15  | 1.6     |

| Section      | Drilled Interval |       |       | Casing Size | Standard | Casing Set Depths |           |         |         | Casing Details |        |        |          |       |         |
|--------------|------------------|-------|-------|-------------|----------|-------------------|-----------|---------|---------|----------------|--------|--------|----------|-------|---------|
|              | Hole Size        | Top   | Btm   |             |          | Top MD            | Bottom MD | Top TVD | BTM TVD | Grade          | Weight | Thread | Collapse | Burst | Tension |
| Surface      | 17.5             | 0     | 360   | 13.375      | API      | 0                 | 350       | 0       | 350     | J-55           | 54.5   | BUTT   | 1.13     | 1.15  | 1.6     |
| Intermediate | 9.875            | 360   | 7500  | 7.625       | API      | 0                 | 7200      | 0       | 7188    | P-110          | 29.7   | BUTT   | 1.13     | 1.15  | 1.6     |
|              | 8.75             | 7500  | 10347 | 7.625       | NON API  | 7200              | 10337     | 7188    | 10321   | P-110          | 29.7   | W441   | 1.13     | 1.15  | 1.6     |
| Production   | 6.75             | 10347 | 16013 | 5.5         | NON API  | 0                 | 10137     | 0       | 10121   | P-110          | 20     | TXP    | 1.13     | 1.15  | 1.6     |
| Production   | 6.75             |       | 5.5   | NON API     | 10137    | 16013             | 10121     | 10985   | P-110   | 20             | W441   | 1.13   | 1.15     | 1.6   |         |

\*OPTION TO RUN 3 STRING OR 4 STRING DESIGN

| Name             | Type | Top MD | Sacks | Yield | Cu. Ft | Weight | Excess | Cement | Additives                                |
|------------------|------|--------|-------|-------|--------|--------|--------|--------|------------------------------------------|
| Surface          | Tail | 0      | 360   | 1.35  | 486    | 14.8   | 100%   | C      | 5% NCI + LCM                             |
| 1st Intermediate | Lead | 0      | 552   | 2.18  | 1203   | 12.7   | 65%    | C      | Bentonite + 1% CaCL2 + 8% NaCl + LCM     |
|                  | Tail | 2329   | 302   | 1.33  | 401    | 14.8   | 65%    | C      | 5% NaCl + LCM                            |
| 2nd Intermediate | Lead | 0      | 528   | 2.4   | 1266   | 11.5   | 35%    | TXI    | Fluid Loss + Dispersant + Retarder + LCM |
|                  | Tail | 9337   | 87    | 1.56  | 136    | 13.2   | 35%    | H      | Fluid Loss + Dispersant + Retarder + LCM |
| Production       | Tail | 9837   | 377   | 1.71  | 645    | 14.2   | 25%    | H      | Fluid Loss + Dispersant + Retarder + LCM |

| Name         |         | Type    | Top MD | Sacks | Yield | Cu. Ft | Weight | Excess | Cement | Additives                                |
|--------------|---------|---------|--------|-------|-------|--------|--------|--------|--------|------------------------------------------|
| Surface      |         | Tail    | 0      | 360   | 1.35  | 486    | 14.8   | 100%   | C      | 5% NCI + LCM                             |
| Intermediate | Stage 1 | Lead    | 0      | 1234  | 2.4   | 2962   | 11.5   | 65%    | C      | Fluid Loss + Dispersant + Retarder + LCM |
|              |         | Tail    | 9337   | 106   | 1.56  | 166    | 13.2   | 65%    | C      | Fluid Loss + Dispersant + Retarder + LCM |
|              | Stage 2 | Primary | 0      | 690   | 2.4   | 1655   | 11.5   | 65%    | C      | Bentonite + 1% CaCL2 + 8% NaCl + LCM     |
|              |         | DVT     | 3255   |       |       |        |        |        |        |                                          |
| Production   |         | Primary | 9837   | 377   | 1.71  | 645    | 14.2   | 25%    | H      | Fluid Loss + Dispersant + Retarder + LCM |

\*OPTION TO RUN DV TOOL IF NECESSARY

#### 5. Mud Program

| Name           | Top   | Bottom | Type         | Mud Weight | Visc  | Fluid Loss |
|----------------|-------|--------|--------------|------------|-------|------------|
| Surface        | 0     | 350    | FW Spud Mud  | 8.30       | 28    | NC         |
| Intermediate   | 350   | 3105   | Brine Water  | 10.00      | 30-32 | NC         |
| Intermediate 2 | 3105  | 10337  | FW/Cut Brine | 9.00       | 30-32 | NC         |
| Production     | 10337 | 16013  | Oil Base Mud | 11.50      | 50-70 | <10        |

| Name         | Top   | Bottom | Type          | Mud Weight | Visc  | Fluid Loss |
|--------------|-------|--------|---------------|------------|-------|------------|
| Surface      | 0     | 350    | FW Gel        | 8.30       | 28    | NC         |
| Intermediate | 350   | 10347  | DBE/Cut Brine | 9.00       | 30-32 | NC         |
| Production   | 10347 | 16013  | Oil Base Mud  | 11.50      | 55-75 | <10        |

Electronic Pason mud monitor system complying with Onshore Order 1 will be used. All necessary mud products (e. g., barite, cedar bark) for weight addition and fluid loss control will always be on site. Mud program is subject to change due to hole conditions. A closed loop system will be used.



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#### **6. Cores, Tests, & Logs**

- Electric Logging Program: No open-hole logs are planned at this time for the pilot hole.
- GR will be collected while drilling through the MWD tools from 9.625" casing shoe to TD.
- A 2-person mud logging program will be used from 9.625" casing shoe to TD.
- No DSTs or cores are planned at this time.
- CBL w/ CCL from as far as gravity will let it fall to TOC.

#### **7. Down Hole Conditions**

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is  $\approx 7,426$  psi. Expected bottom hole temperature is  $\approx 170^{\circ}$  F.

Tap Rock does not anticipate that there will be enough H<sub>2</sub>S from the surface to the Wolfcamp formations to meet the BLM's Onshore Order 6 requirements for the submission of an "H<sub>2</sub>S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Tap Rock has an H<sub>2</sub>S safety package on all wells and an "H<sub>2</sub>S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be safely flared. All personnel will be familiar with all aspects of safe operation of equipment being used.

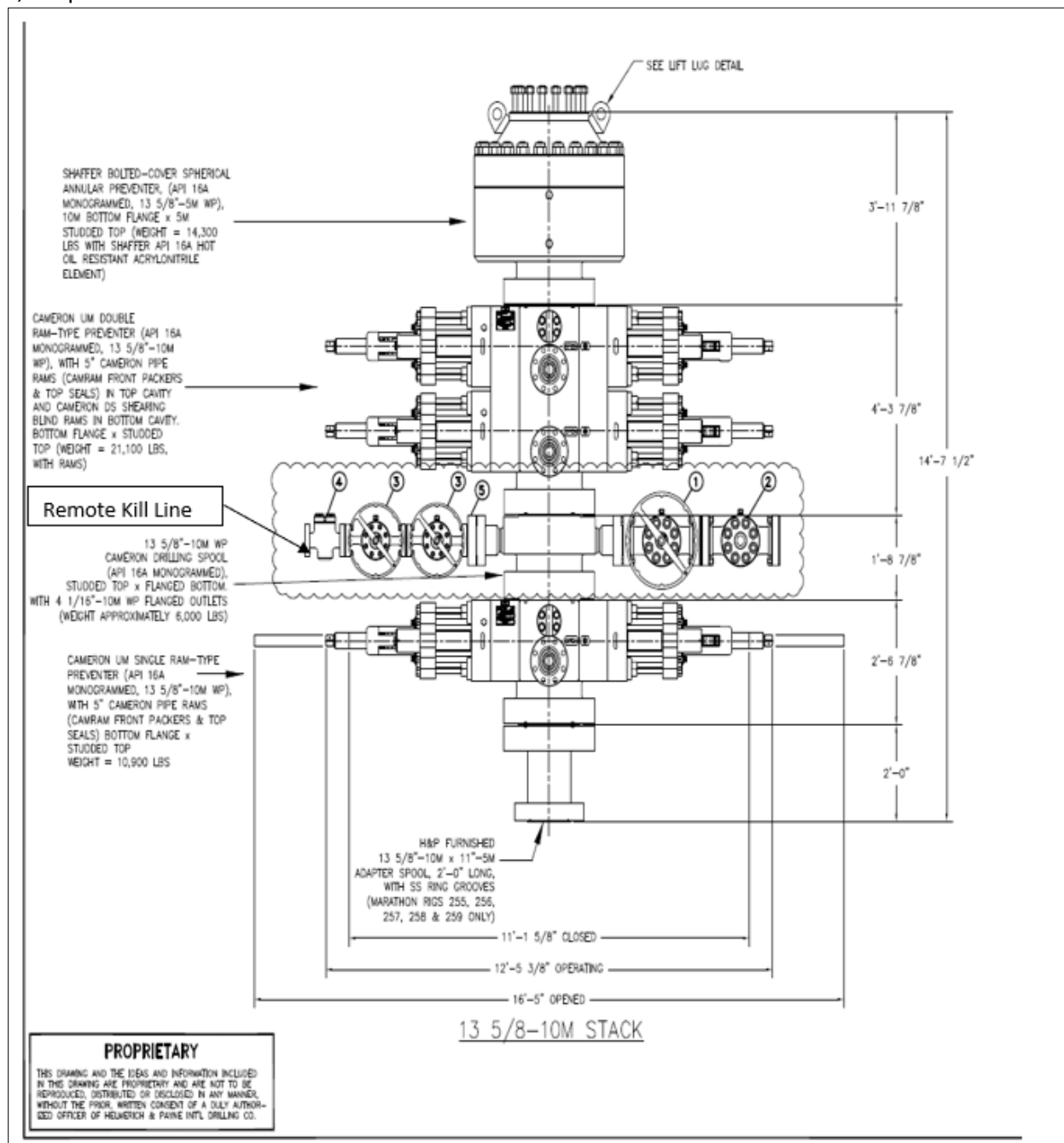
#### **8. Other**

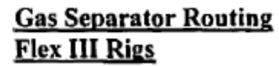
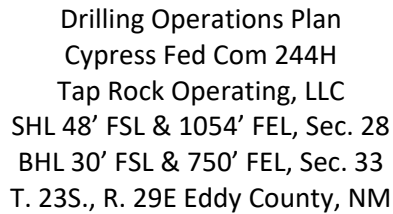
Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 30 days. If production casing is run an additional 60 days will be required to complete and construct surface facilities.



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5,000 psi BOP Stack

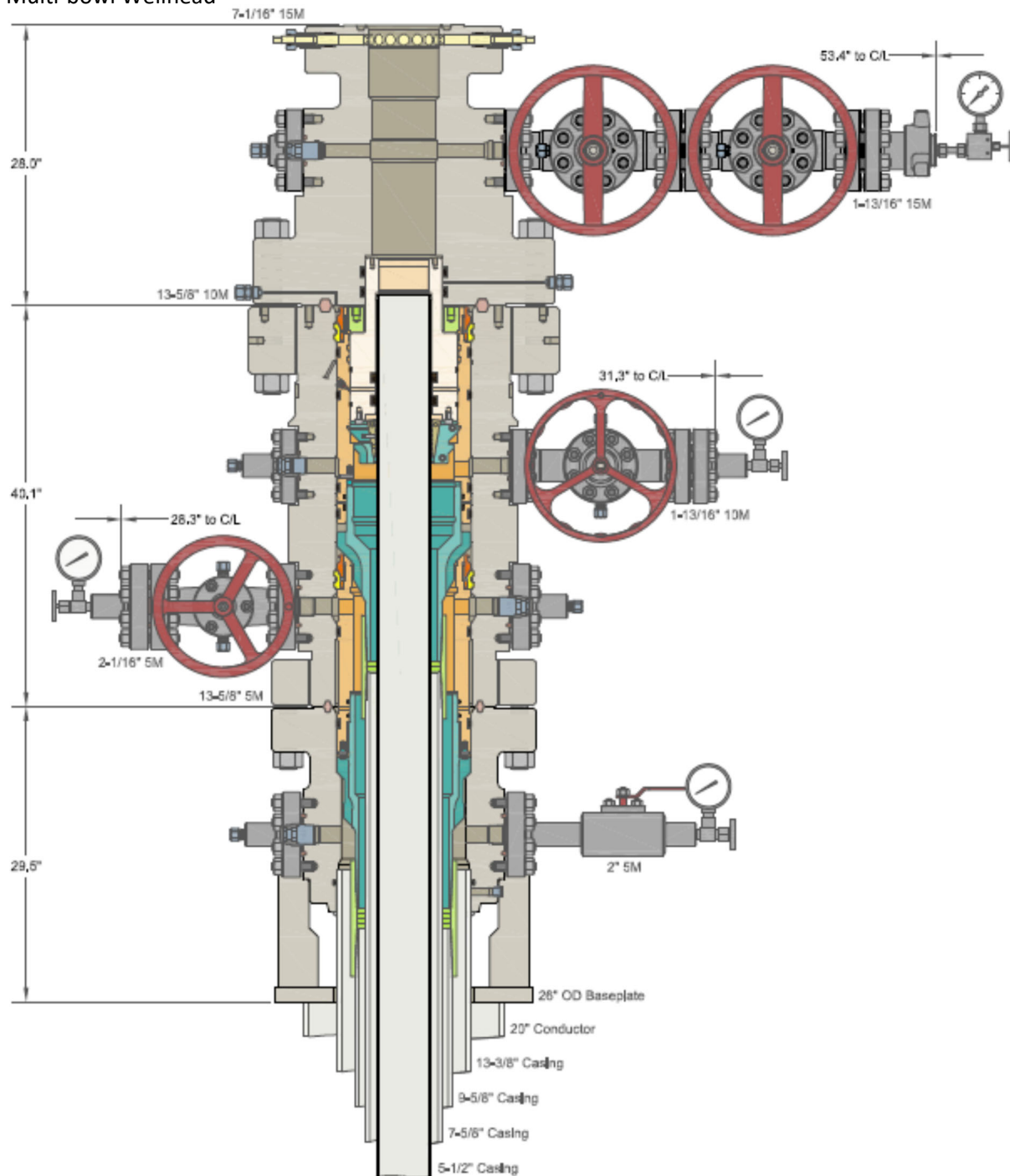






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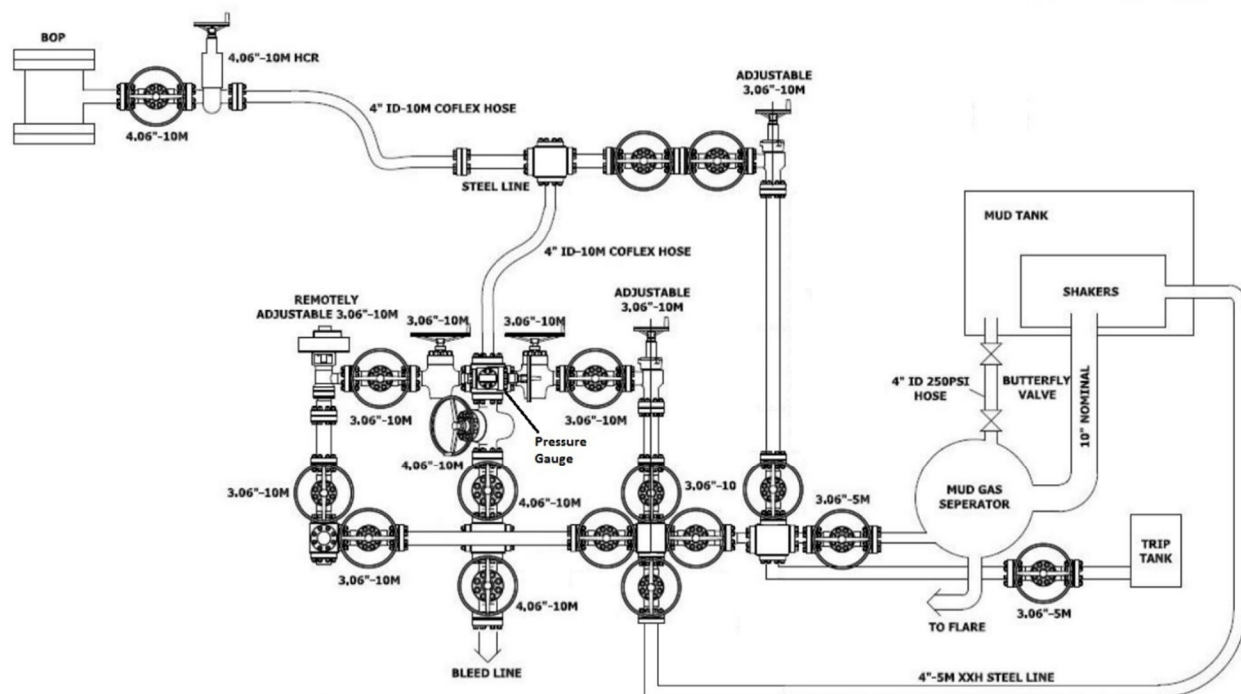
Multi-bowl Wellhead



10M Choke Layout



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**District I**

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**District II**

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**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**

COMMENTS

Action 60846

**COMMENTS**

|                                                                                  |                                                      |
|----------------------------------------------------------------------------------|------------------------------------------------------|
| Operator:<br>TAP ROCK OPERATING, LLC<br>523 Park Point Drive<br>Golden, CO 80401 | OGRID:<br>372043                                     |
|                                                                                  | Action Number:<br>60846                              |
|                                                                                  | Action Type:<br>[C-103] NOI Change of Plans (C-103A) |

**COMMENTS**

| Created By | Comment                                   | Comment Date |
|------------|-------------------------------------------|--------------|
| jagarcia   | Approved, John Garcia, Petroleum Engineer | 11/17/2021   |

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

CONDITIONS

Action 60846

**CONDITIONS**

|                                                                                  |                                                      |
|----------------------------------------------------------------------------------|------------------------------------------------------|
| Operator:<br>TAP ROCK OPERATING, LLC<br>523 Park Point Drive<br>Golden, CO 80401 | OGRID:<br>372043                                     |
|                                                                                  | Action Number:<br>60846                              |
|                                                                                  | Action Type:<br>[C-103] NOI Change of Plans (C-103A) |

**CONDITIONS**

| Created By | Condition                   | Condition Date |
|------------|-----------------------------|----------------|
| jagarcia   | Adhere to all previous COAs | 11/17/2021     |