

|                            |                                                       |                                  |
|----------------------------|-------------------------------------------------------|----------------------------------|
| Well Name: SCHLITZ FED COM | Well Location: T25S / R26E / SEC 16 / SESE /          | County or Parish/State:          |
| Well Number: 213H          | Type of Well: CONVENTIONAL GAS WELL                   | Allottee or Tribe Name:          |
| Lease Number: NMNM19836    | Unit or CA Name:                                      | Unit or CA Number:               |
| US Well Number: 3001549024 | Well Status: Approved Application for Permit to Drill | Operator: TAP ROCK OPERATING LLC |

Notice of Intent

Sundry ID: 2655656

|                                                |                              |
|------------------------------------------------|------------------------------|
| Type of Submission: Notice of Intent           | Type of Action: Other        |
| Date Sundry Submitted: 02/04/2022              | Time Sundry Submitted: 10:38 |
| Date proposed operation will begin: 03/18/2022 |                              |

**Procedure Description:** Tap Rock requests the option to run a 3 string casing design that sets 13-3/8 inch surface casing, 9-5/8 inch intermediate casing, and 5-1/2 inch production casing. The 4 string design was updated to include 7-5/8 inch W-441 instead of originally permitted W-513. See attached updated drill plans with updated casing and mud tables.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

APD\_Drilling\_Plan\_\_\_Schlitz\_213\_3.18\_20220318073235.pdf

|                                   |                                                              |                                         |
|-----------------------------------|--------------------------------------------------------------|-----------------------------------------|
| <b>Well Name:</b> SCHLITZ FED COM | <b>Well Location:</b> T25S / R26E / SEC 16 / SESE /          | <b>County or Parish/State:</b>          |
| <b>Well Number:</b> 213H          | <b>Type of Well:</b> CONVENTIONAL GAS WELL                   | <b>Allottee or Tribe Name:</b>          |
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| <b>US Well Number:</b> 3001549024 | <b>Well Status:</b> Approved Application for Permit to Drill | <b>Operator:</b> TAP ROCK OPERATING LLC |

Conditions of Approval

Additional Reviews

Sec\_16\_25S\_26E\_NMP\_\_Schlitz\_Fed\_Com\_213H\_Eddy\_NMNM100324\_Tap\_Rock\_COAs\_\_\_Updated\_for\_sundry\_20220321152136.pdf

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.

|                                                       |                                         |
|-------------------------------------------------------|-----------------------------------------|
| <b>Operator Electronic Signature:</b> JEFFREY TRLICA  | <b>Signed on:</b> MAR 18, 2022 07:33 AM |
| <b>Name:</b> TAP ROCK OPERATING LLC                   |                                         |
| <b>Title:</b> Regulatory Analyst                      |                                         |
| <b>Street Address:</b> 523 PARK POINT DRIVE SUITE 200 |                                         |
| <b>City:</b> GOLDEN                                   | <b>State:</b> CO                        |
| <b>Phone:</b> (720) 772-5910                          |                                         |
| <b>Email address:</b> JTRLICA@TAPRK.COM               |                                         |

Field Representative

|                             |               |             |
|-----------------------------|---------------|-------------|
| <b>Representative Name:</b> |               |             |
| <b>Street Address:</b>      |               |             |
| <b>City:</b>                | <b>State:</b> | <b>Zip:</b> |
| <b>Phone:</b>               |               |             |
| <b>Email address:</b>       |               |             |

BLM Point of Contact

|                                        |                                              |
|----------------------------------------|----------------------------------------------|
| <b>BLM POC Name:</b> CHRISTOPHER WALLS | <b>BLM POC Title:</b> Petroleum Engineer     |
| <b>BLM POC Phone:</b> 5752342234       | <b>BLM POC Email Address:</b> cwalls@blm.gov |
| <b>Disposition:</b> Approved           | <b>Disposition Date:</b> 03/21/2022          |
| <b>Signature:</b> Chris Walls          |                                              |



Drilling Operations Plan  
 Schlitz Fed Com #213H  
 Tap Rock Operating, LLC  
 SHL 647' FSL & 913' FEL, Sec. 16  
 BHL 200' FNL & 1980' FEL, Sec. 9  
 T. 25S., R. 26E., Eddy County, NM

Elevation above Sea Level: 3429'

## **DRILLING PROGRAM**

### **1. Estimated Tops**

| Formation           | TVD  | MD    | Lithologies | Bearing      |
|---------------------|------|-------|-------------|--------------|
| Quaternary Deposits | 0    | 0     | Surface     | None         |
| Rustler Anhydrite   | 375  | 375   |             | Salt         |
| Salado              | 980  | 980   | Salt        | Salt         |
| Base Salt           | 1715 | 1715  | Salt        | Salt         |
| Lamar               | 1925 | 1925  | Sandstone   | None         |
| Bell Canyon         | 1975 | 1975  | Sandstone   | Hydrocarbons |
| Cherry Canyon       | 2935 | 2935  | Sandstone   | Hydrocarbons |
| Brushy Canyon       | 3845 | 3852  | Sandstone   | Hydrocarbons |
| Bone Spring Lime    | 5490 | 5557  | Limestone   | Hydrocarbons |
| Upper Avalon        | 5610 | 5681  | Sandstone   | Hydrocarbons |
| Midde Avalon        | 5935 | 6018  | Sandstone   | Hydrocarbons |
| Lower Avalon        | 6240 | 6335  | Sandstone   | Hydrocarbons |
| 1st Bone Spring     | 6420 | 6521  | Sandstone   | Hydrocarbons |
| 2nd Bone Spring     | 6710 | 6822  | Limestone   | Hydrocarbons |
| 3rd Bone Spring     | 7265 | 7398  | Sandstone   | Hydrocarbons |
| Wolfcamp            | 8580 | 8742  | Shale       | Hydrocarbons |
| KOP                 | 8267 | 8410  | Shale       | Hydrocarbons |
| TD                  | 8840 | 19037 | Shale       | Hydrocarbons |

### **2. Notable Zones**

Wolfcamp A 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:



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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.

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. Tap Rock requests a variance to run 7-5/8" BTC casing inside 9-5/8" BTC casing will be less than the 0.422" stand off regulation. Through conversations with BLM representatives, Tap Rock has received approval for this design as long as the 7-5/8" flush casing was run throughout the entire 300' cement tie back section between 9-5/8" and 7-5/8" casing.

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.



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#### 4. Casing & Cement

All Casing will be new.

| Name             | Hole Size | Casing Size | Standard | Tapered | Top MD | Bottom MD | Top TVD | BTM TVD | Grade | Weight | Thread | Collapse | Burst | Tension |
|------------------|-----------|-------------|----------|---------|--------|-----------|---------|---------|-------|--------|--------|----------|-------|---------|
| Surface          | 17 1/2    | 13 3/8      | API      | No      | 0      | 400       | 0       | 400     | J-55  | 54.5   | BUTT   | 1.13     | 1.15  | 1.6     |
| 1st Intermediate | 12 1/4    | 9 5/8       | API      | No      | 0      | 1945      | 0       | 1945    | J-55  | 40     | BUTT   | 1.13     | 1.15  | 1.6     |
| 2nd Intermediate | 8 3/4     | 7 5/8       | API      | No      | 0      | 1645      | 0       | 1645    | P-110 | 29.7   | BUTT   | 1.13     | 1.15  | 1.6     |
| 2nd Intermediate | 8 3/4     | 7 5/8       | NON API  | Yes     | 1645   | 8310      | 1645    | 8167    | P-110 | 29.7   | W-441  | 1.13     | 1.15  | 1.6     |
| Production       | 6 3/4     | 5 1/2       | NON API  | No      | 0      | 8110      | 0       | 7967    | P-110 | 20     | TXP    | 1.13     | 1.15  | 1.6     |
| Production       | 6 3/4     | 5 1/2       | NON API  | Yes     | 8110   | 19037     | 7967    | 8840    | P-110 | 20     | W-441  | 1.13     | 1.15  | 1.6     |

| Section      | Drilled Interval |      |       | Casing Size | Standard | Tapered | 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 1/2           | 0    | 400   | 13 3/8      | API      | No      | 0                 | 400       | 0       | 400     | J-55           | 54.5   | BUTT   | 1.13     | 1.15  | 1.6     |
| Intermediate | 12 1/4           | 400  | 1975  | 9 5/8       | API      | No      | 0                 | 1975      | 0       | 1975    | J-55           | 40     | BUTT   | 1.13     | 1.15  | 1.6     |
| Production   | 8 3/4            | 1975 | 8410  | 5 1/2       | NON API  | No      | 0                 | 8110      | 0       | 7967    | P-110          | 20     | TXP    | 1.13     | 1.15  | 1.6     |
|              | 6 3/4            | 8410 | 19037 | 5 1/2       | NON API  | No      | 8110              | 19037     | 7967    | 8840    | 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      | 633   | 1.35  | 854    | 14.8   | 100%   | C      | 5% NCI + LCM                             |
| 1st Intermediate | Lead | 0      | 462   | 1.74  | 804    | 13.5   | 65%    | C      | Bentonite + 1% CaCL2 + 8% NaCl + LCM     |
|                  | Tail | 1556   | 151   | 1.33  | 201    | 14.8   | 65%    | C      | 5% NaCl + LCM                            |
| 2nd Intermediate | Lead | 1645   | 346   | 2.22  | 768    | 11.5   | 35%    | TXI    | Fluid Loss + Dispersant + Retarder + LCM |
|                  | Tail | 7310   | 99    | 1.37  | 136    | 13.2   | 35%    | H      | Fluid Loss + Dispersant + Retarder + LCM |
| Production       | Tail | 7610   | 1046  | 1.14  | 1193   | 14.5   | 25%    | H      | Fluid Loss + Dispersant + Retarder + LCM |

| Name         | Type | Top MD | Sacks | Yield | Cu. Ft | Weight | Excess | Cement | Additives                                |
|--------------|------|--------|-------|-------|--------|--------|--------|--------|------------------------------------------|
| Surface      | Lead | 0      | 214   | 1.72  | 368    | 13.5   | 100%   | C      | 5% NCI + LCM                             |
|              | Tail | 265    | 313   | 1.33  | 417    | 14.8   | 100%   | C      | 5% NCI + LCM                             |
| Intermediate | Lead | 0      | 197   | 2.12  | 417    | 11.0   | 65%    | C      | Bentonite + 1% CaCL2 + 8% NaCl + LCM     |
|              | Tail | 975    | 389   | 1.33  | 517    | 14.8   | 65%    | C      | 5% NaCl + LCM                            |
| Production   | Lead | 1775   | 598   | 3.35  | 2003   | 10.5   | 20%    | H      | Fluid Loss + Dispersant + Retarder + LCM |
|              | Tail | 8410   | 1051  | 1.63  | 1713   | 13.5   | 20%    | H      | Fluid Loss + Dispersant + Retarder + LCM |

#### 5. Mud Program

| Name           | Top  | Bottom | Type         | Mud Weight | Visc  | Fluid Loss |
|----------------|------|--------|--------------|------------|-------|------------|
| Surface        | 0    | 400    | FW Spud Mud  | 8.30       | 28    | NC         |
| Intermediate   | 400  | 1945   | Brine Water  | 10.00      | 30-32 | NC         |
| Intermediate 2 | 1945 | 8310   | FW/Cut Brine | 9.00       | 30-32 | NC         |
| Production     | 8310 | 19037  | Oil Base Mud | 10.50      | 50-70 | <10        |

| Name         | Top  | Bottom | Type         | Mud Weight | Visc  | Fluid Loss |
|--------------|------|--------|--------------|------------|-------|------------|
| Surface      | 0    | 400    | FW Spud Mud  | 8.30       | 28    | NC         |
| Intermediate | 400  | 1975   | Brine Water  | 10.00      | 30-32 | NC         |
| Production   | 1975 | 19037  | FW/Cut Brine | 9.00       | 30-32 | NC         |



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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.

#### **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  $\approx 4,827$  psi. Expected bottom hole temperature is  $\approx 160^{\circ}$  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.

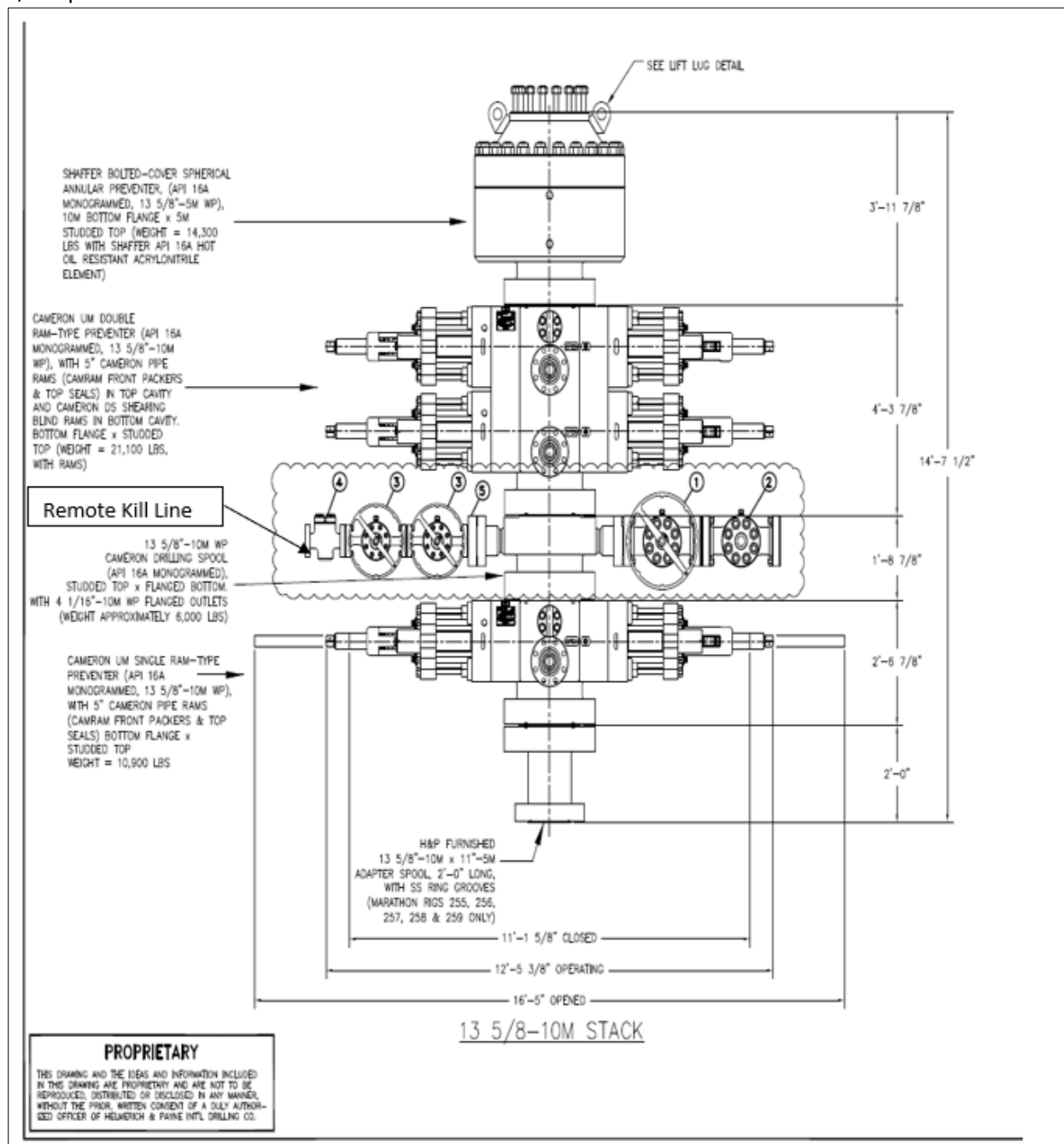
#### **8. Other Information**

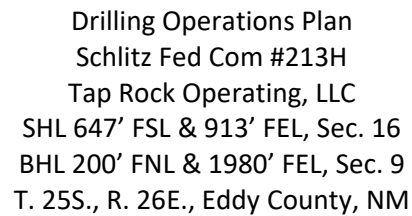
Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 30 days. If production casing is run an additional 60 days will be required to complete and construct surface facilities.



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5,000 psi BOP Stack

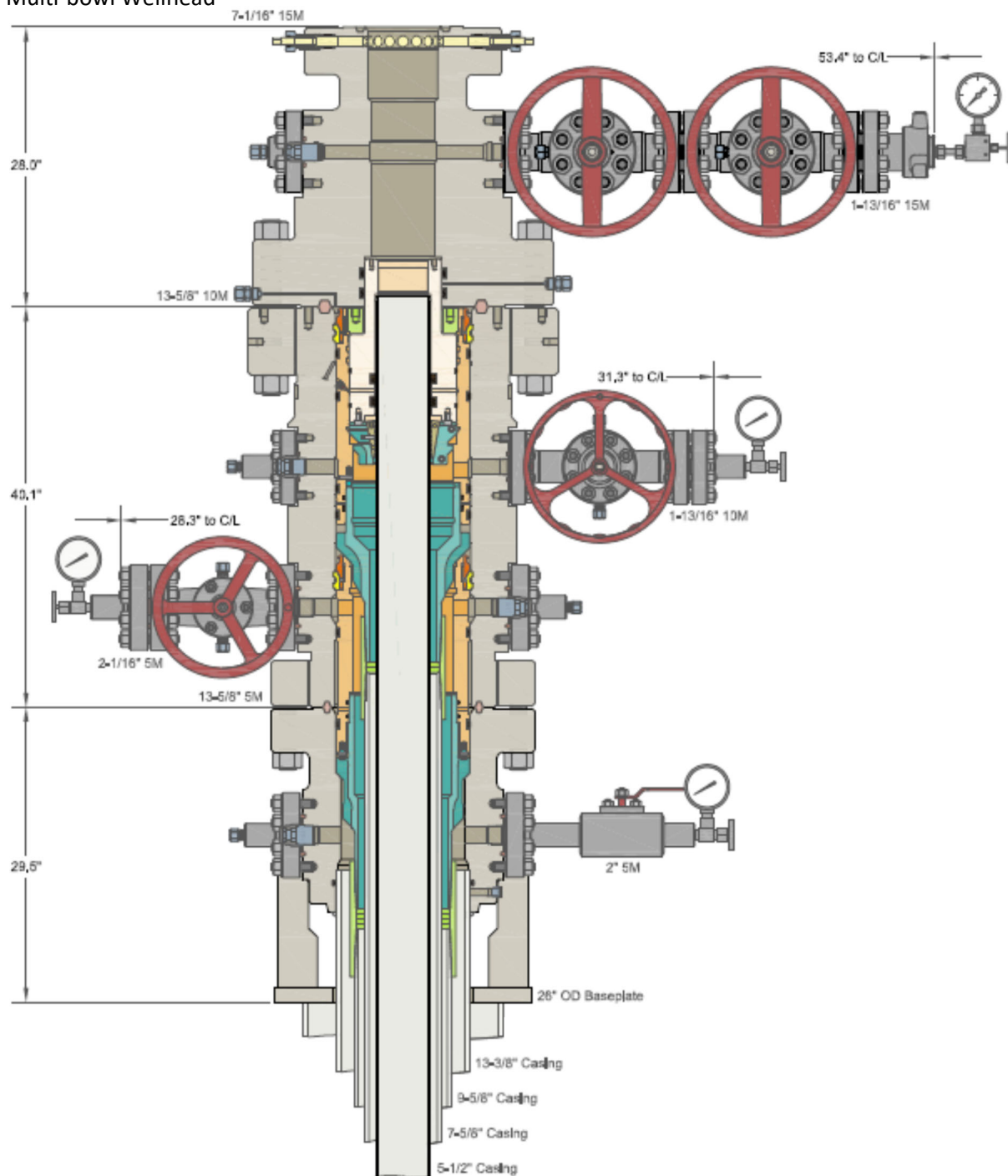






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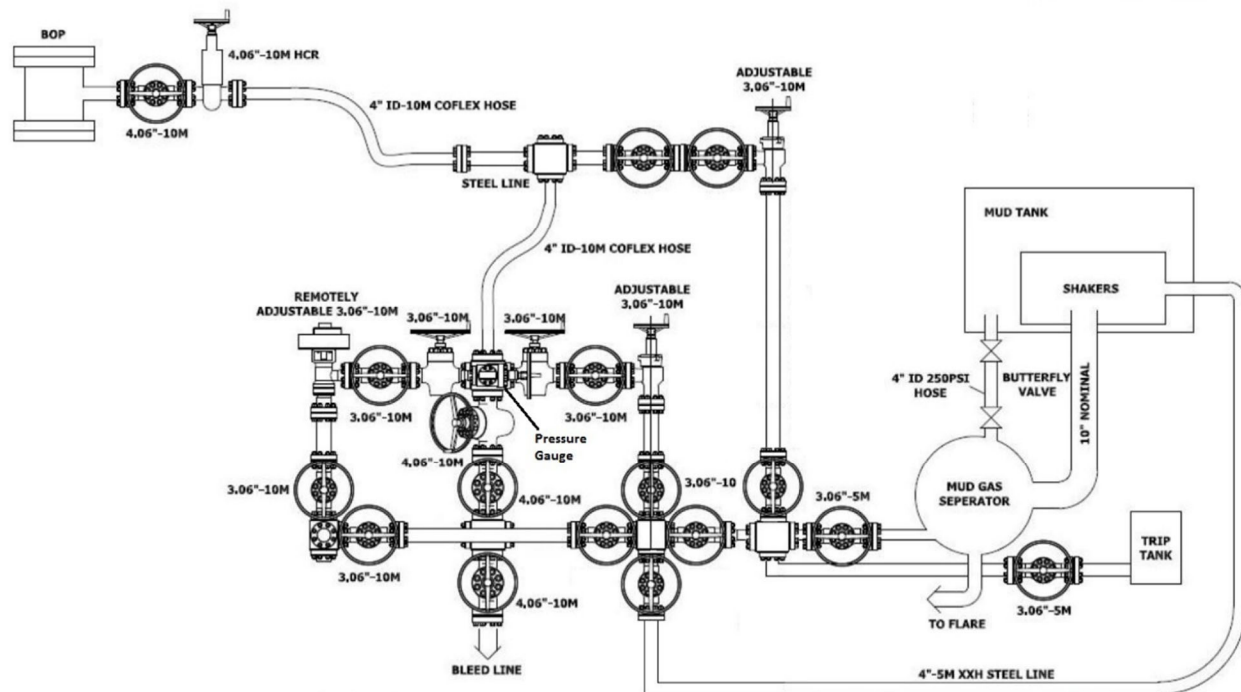
Multi-bowl Wellhead





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10M Choke Layout



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

*Updated COAs per sundry approved on 03/21/2022. Includes surface string depth adjustment and 3-string / 4-string alternate casing design.*

|                             |                         |
|-----------------------------|-------------------------|
| <b>OPERATOR'S NAME:</b>     | Tap Rock Operating LLC  |
| <b>WELL NAME &amp; NO.:</b> | Schlitz Fed Com 213H    |
| <b>LOCATION:</b>            | Sec 16 / 25S /26E / NMP |
| <b>COUNTY:</b>              | Eddy County, New Mexico |

### COA

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

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware and Bone Spring** formations. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

### B. CASING

*Operator has been approved for a 3-string or 4-string design. First two strings must come to surface. 4-string second intermediate and production casing require a 300 ft tie back because operator does not meet 0.422" clearance requirement; 3-string production casing requires a 300 ft tie back because operator does not meet 0.422" clearance requirement.*

1. The 13-3/8 inch surface casing shall be set at approximately 400 feet (a minimum of 70 feet (Eddy 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 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.
2. **If utilizing four-string plan:** 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 lead cement slurry due to cave/karst or potash.**
3. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:
- **If utilizing three-string plan:** Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
- =
- **If utilizing four-string plan:** Cement should tie-back at least **300 feet** into previous casing string (operator did not meet 0.422" clearance requirement). Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
- ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should tie-back at least **300 feet** into previous casing string (operator did not meet 0.422" clearance requirement). 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.

#### **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
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> 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 integrity 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 integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
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.
  - 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.

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**District IV**  
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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**

COMMENTS  
  
Action 91885

COMMENTS

|                                                                                  |                                                      |
|----------------------------------------------------------------------------------|------------------------------------------------------|
| Operator:<br>TAP ROCK OPERATING, LLC<br>523 Park Point Drive<br>Golden, CO 80401 | OGRID:<br>372043                                     |
|                                                                                  | Action Number:<br>91885                              |
|                                                                                  | Action Type:<br>[C-103] NOI Change of Plans (C-103A) |

COMMENTS

| Created By | Comment                                   | Comment Date |
|------------|-------------------------------------------|--------------|
| jagarcia   | Approved, John Garcia, Petroleum Engineer | 7/5/2022     |

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CONDITIONS  
  
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CONDITIONS

| Created By | Condition | Condition Date |
|------------|-----------|----------------|
| jagarcia   | None      | 7/5/2022       |