

**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**

Form C-101  
August 1, 2011

Permit 341129

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

|                                                                                                     |                                           |                               |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------|
| 1. Operator Name and Address<br>TAP ROCK OPERATING, LLC<br>523 Park Point Drive<br>Golden, CO 80401 |                                           | 2. OGRID Number<br>372043     |
|                                                                                                     |                                           | 3. API Number<br>30-025-51586 |
| 4. Property Code<br>334067                                                                          | 5. Property Name<br>QUEEN KEELY STATE COM | 6. Well No.<br>153H           |

**7. Surface Location**

|               |               |                 |              |              |                  |               |                   |               |               |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|-------------------|---------------|---------------|
| UL - Lot<br>B | Section<br>21 | Township<br>21S | Range<br>33E | Lot Idn<br>B | Feet From<br>287 | N/S Line<br>N | Feet From<br>1864 | E/W Line<br>E | County<br>Lea |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|-------------------|---------------|---------------|

**8. Proposed Bottom Hole Location**

|               |               |                 |              |              |                |               |                   |               |               |
|---------------|---------------|-----------------|--------------|--------------|----------------|---------------|-------------------|---------------|---------------|
| UL - Lot<br>O | Section<br>28 | Township<br>21S | Range<br>33E | Lot Idn<br>O | Feet From<br>5 | N/S Line<br>S | Feet From<br>1650 | E/W Line<br>E | County<br>Lea |
|---------------|---------------|-----------------|--------------|--------------|----------------|---------------|-------------------|---------------|---------------|

**9. Pool Information**

|                                  |       |
|----------------------------------|-------|
| WC-025 G-08 S213304D;BONE SPRING | 97895 |
|----------------------------------|-------|

**Additional Well Information**

|                           |                             |                                            |                         |                                    |
|---------------------------|-----------------------------|--------------------------------------------|-------------------------|------------------------------------|
| 11. Work Type<br>New Well | 12. Well Type<br>OIL        | 13. Cable/Rotary                           | 14. Lease Type<br>State | 15. Ground Level Elevation<br>3748 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>21636 | 18. Formation<br>3rd Bone Spring Carbonate | 19. Contractor          | 20. Spud Date<br>6/20/2023         |
| Depth to Ground water     |                             | Distance from nearest fresh water well     |                         | Distance to nearest surface water  |

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

| Type | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 14.75     | 11.75       | 42               | 1785          | 936             | 0             |
| Int1 | 11        | 8.625       | 32               | 5545          | 855             | 0             |
| Prod | 7.875     | 5.5         | 20               | 21636         | 2464            | 0             |

**Casing/Cement Program: Additional Comments**

|  |
|--|
|  |
|--|

**22. Proposed Blowout Prevention Program**

| Type       | Working Pressure | Test Pressure | Manufacturer |
|------------|------------------|---------------|--------------|
| Annular    | 5000             | 2500          |              |
| Double Ram | 10000            | 5000          |              |
| Pipe       | 10000            | 5000          |              |

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.  
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

**OIL CONSERVATION DIVISION**

|                                                       |                                                   |
|-------------------------------------------------------|---------------------------------------------------|
| Printed Name: Electronically filed by Christian Combs | Approved By: Paul F Kautz                         |
| Title: Regulatory Manager                             | Title: Geologist                                  |
| Email Address: ccombs@taprk.com                       | Approved Date: 6/9/2023 Expiration Date: 6/9/2025 |
| Date: 6/1/2023 Phone: 720-360-4028                    | Conditions of Approval Attached                   |

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

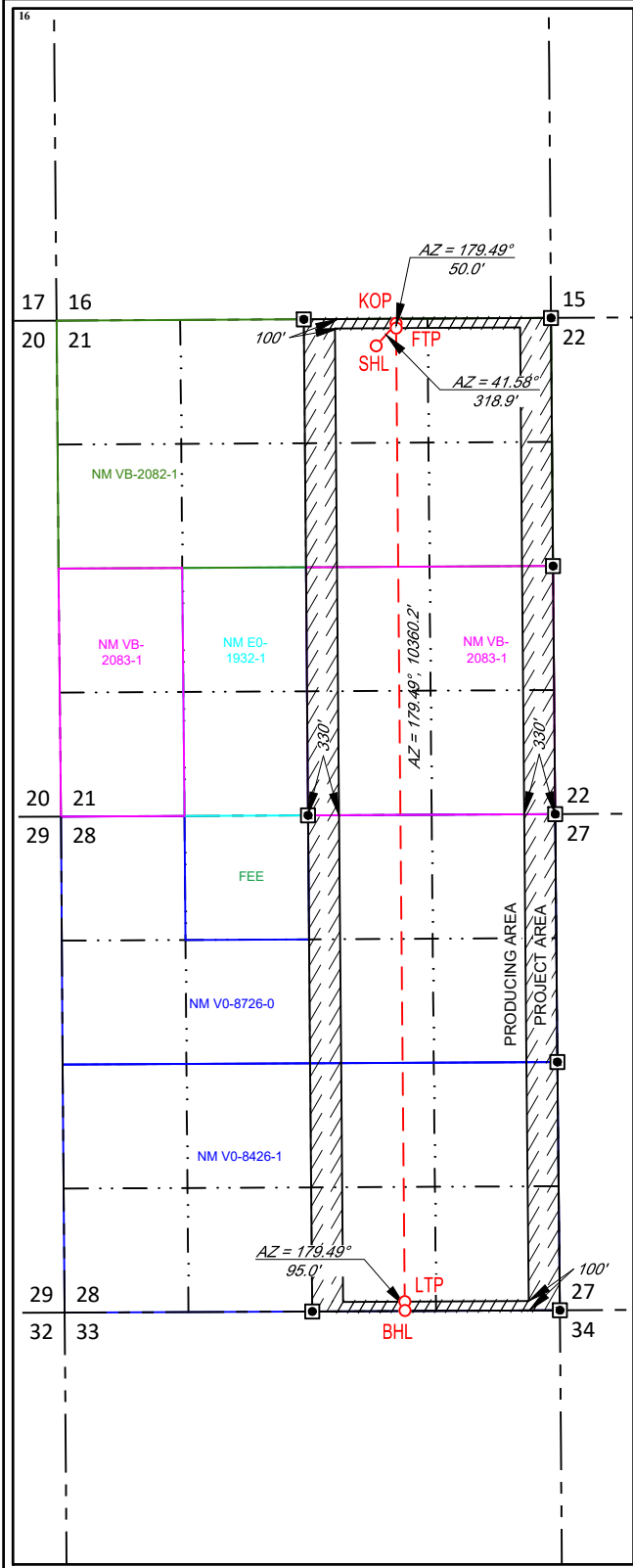
|                                      |                                                        |                                                                     |
|--------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------|
| <sup>1</sup> API Number<br>30-025-   | <sup>2</sup> Pool Code<br>97895                        | <sup>3</sup> Pool Name<br>WC-025 G-08 S213304D;BONE SPRING          |
| <sup>4</sup> Property Code<br>334067 | <sup>5</sup> Property Name<br>QUEEN KEELY STATE COM    |                                                                     |
| <sup>7</sup> OGRID No.<br>372043     | <sup>8</sup> Operator Name<br>TAP ROCK OPERATING, LLC. | <sup>6</sup> Well Number<br>153H<br><sup>9</sup> Elevation<br>3748' |

| <sup>10</sup> Surface Location |         |          |       |         |               |                  |               |                |        |
|--------------------------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no.                  | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| B                              | 21      | 21-S     | 33-E  | -       | 287'          | NORTH            | 1864'         | EAST           | LEA    |

| <sup>11</sup> 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 |
| 0                                                            | 28      | 21-S     | 33-E  | -       | 5'            | SOUTH            | 1650'         | EAST           | LEA    |

|                                      |                               |                                  |                         |
|--------------------------------------|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br>640 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |
|--------------------------------------|-------------------------------|----------------------------------|-------------------------|

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.



|                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|
| NEW MEXICO EAST<br>NAD 1983                                                                                                                     |
| <u>SURFACE LOCATION (SHL)</u><br>287' FNL - SEC. 21<br>1864' FEL - SEC. 21<br>X=775197 Y=535847<br>LAT.: N 32.4708215<br>LONG.: W 103.5750267   |
| <u>KICK OFF POINT (KOP)</u><br>50' FNL - SEC. 21<br>1650' FEL - SEC. 21<br>X=775409 Y=536085<br>LAT.: N 32.4714730<br>LONG.: W 103.5743350      |
| <u>FIRST TAKE POINT (FTP)</u><br>100' FNL - SEC. 21<br>1650' FEL - SEC. 21<br>X=775409 Y=536035<br>LAT.: N 32.4713356<br>LONG.: W 103.5743347   |
| <u>LAST TAKE POINT (LTP)</u><br>100' FSL - SEC. 28<br>1650' FEL - SEC. 28<br>X=775502 Y=525675<br>LAT.: N 32.4428594<br>LONG.: W 103.5742726    |
| <u>BOTTOM HOLE LOCATION (BHL)</u><br>5' FSL - SEC. 28<br>1650' FEL - SEC. 28<br>X=775503 Y=525580<br>LAT.: N 32.4425982<br>LONG.: W 103.5742721 |

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.

Signature

Jeff Trlica

5/22/2023

Date

Printed Name

jtrlica@taprk.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 to the best of my belief.

05/01/2023

Date of Survey

Signature and Seal of Professional Surveyor

RAMON DOMINGUEZ

NEW MEXICO

24508

PROFESSIONAL SURVEYOR

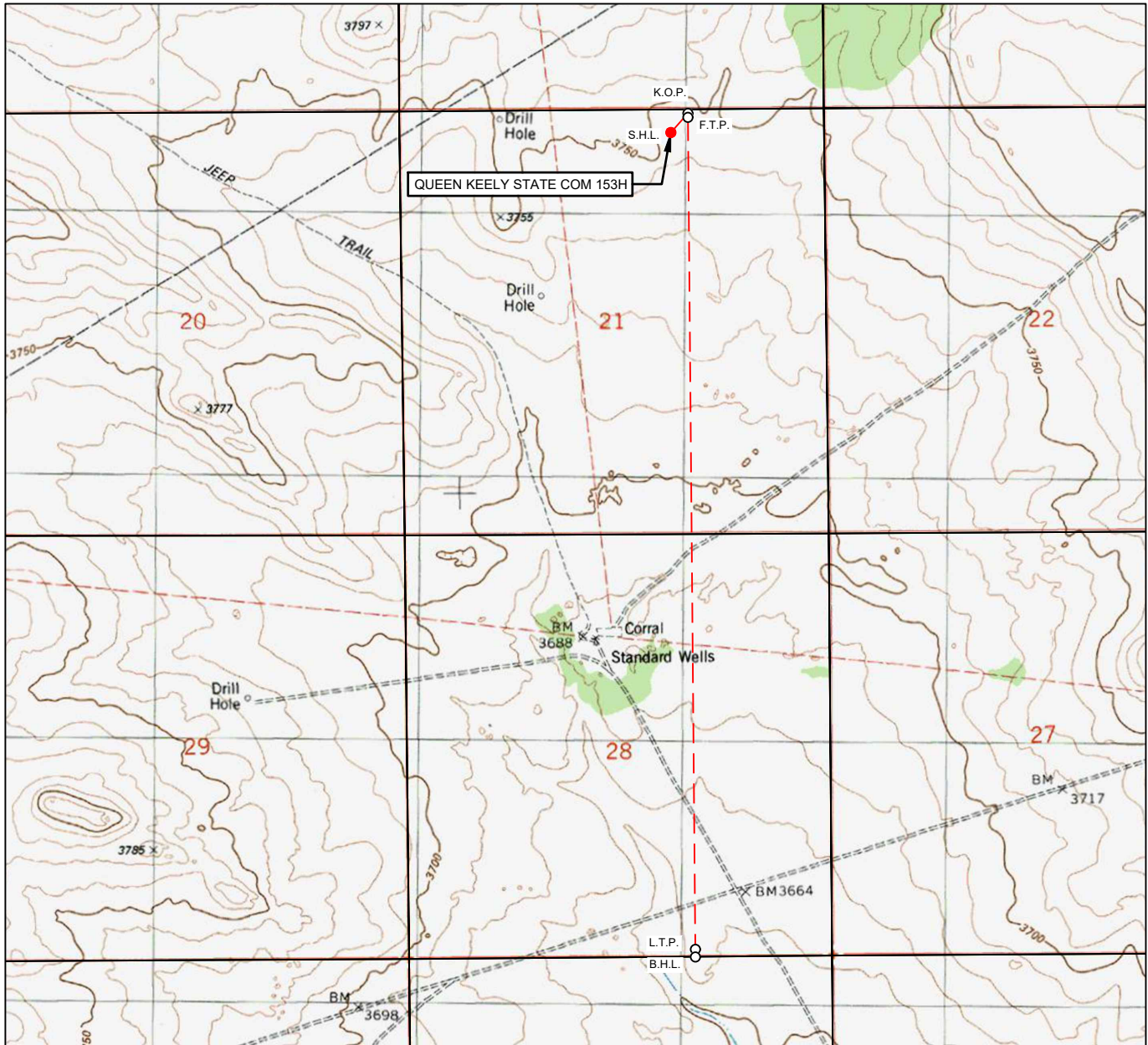
5/10/2023 12:43:38 PM

Certificate Number

Released to Imaging: 6/9/2023 1:31:31 PM

S:\SURVEY\TAPROCK\QUEEN\_KEELY\FINAL\_PRODUCTS\ILO\_QUEEN\_KEELY\_STATE\_COM\_153H.DWG 5/10/2023 12:43:38 PM mark.hamilton

## LOCATION &amp; ELEVATION VERIFICATION MAP

LEASE NAME & WELL NO.: QUEEN KEELY STATE COM 153H

SECTION 21 TWP 21-S RGE 33-E SURVEY N.M.P.M.  
 COUNTY LEA STATE NM ELEVATION 3748'  
 DESCRIPTION 287' FNL & 1864' FEL

LATITUDE N 32.4708215 LONGITUDE W 103.5750267

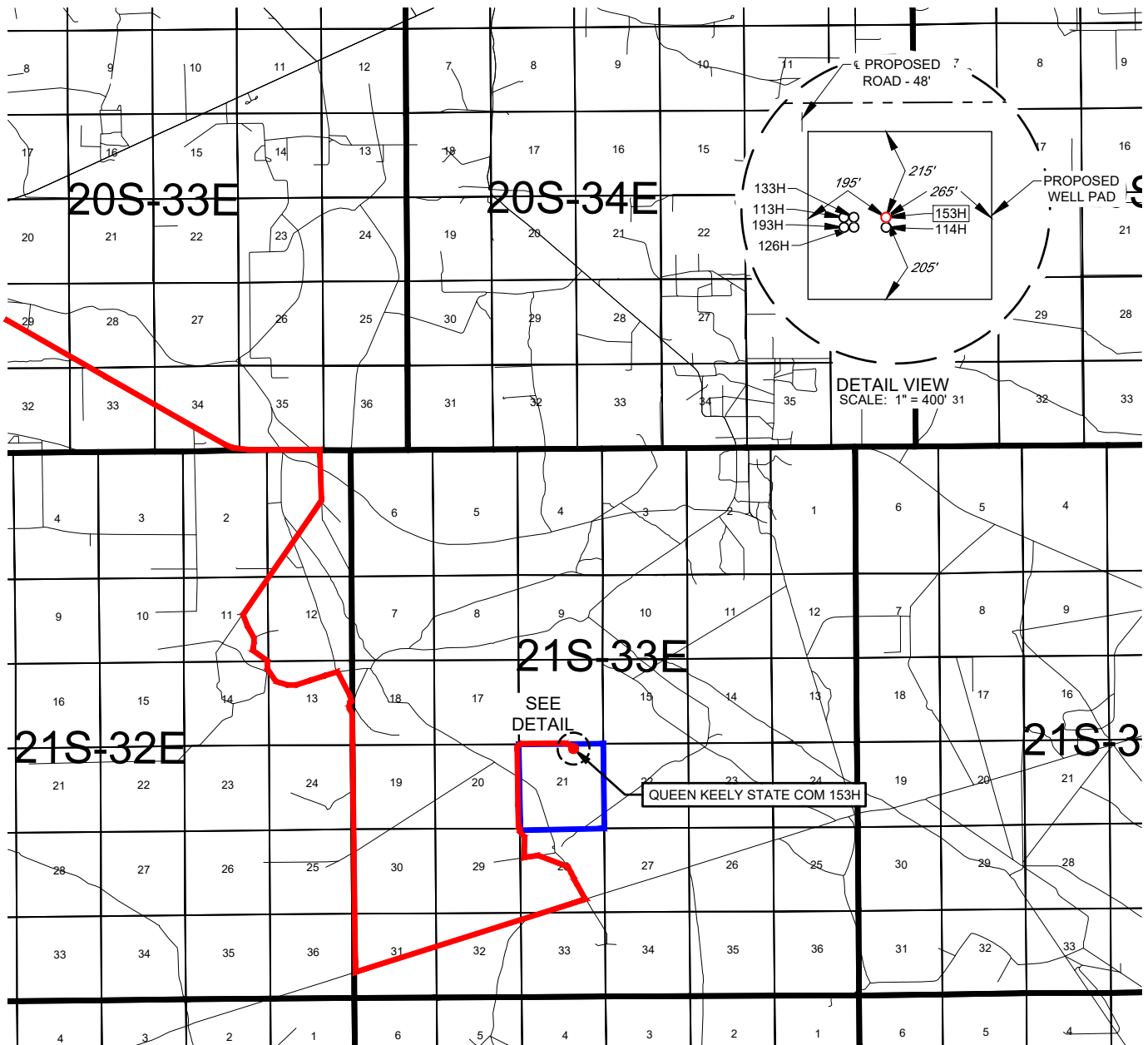
SCALE: 1" = 2000'  
 0' 1000' 2000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.



481 WINSOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
 WWW.TOPOGRAPHIC.COM

EXHIBIT 2  
VICINITY MAPLEASE NAME & WELL NO.: QUEEN KEELY STATE COM 153HSECTION 21 TWP 21-S RGE 33-E SURVEY N.M.P.M.COUNTY LEA STATE NMDESCRIPTION 287' FNL & 1864' FEL

## DISTANCE &amp; DIRECTION

FROM INT. OF NM-176 E. & COUNTY RD 28. GO SOUTH ON NM-176 E  $\pm 6.4$  MILES, THENCE SOUTH (RIGHT) ON A LEASE RD  $\pm 2.2$  MILES, THENCE SOUTH (LEFT) ON A LEASE RD  $\pm 0.8$  MILES, THENCE EAST (LEFT) ON DELAWARE BASIN RD.  $\pm 4.5$  MILES, THENCE NORTHEAST (RIGHT) ON A LEASE RD.  $\pm 2.9$  MILES, THENCE NORTH (LEFT) ON A LEASE RD.  $\pm 2.6$  MILES TO A POINT  $\pm 301$  FEET NORTHWEST OF THE LOCATION.

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.



SCALE: 1" = 10000'

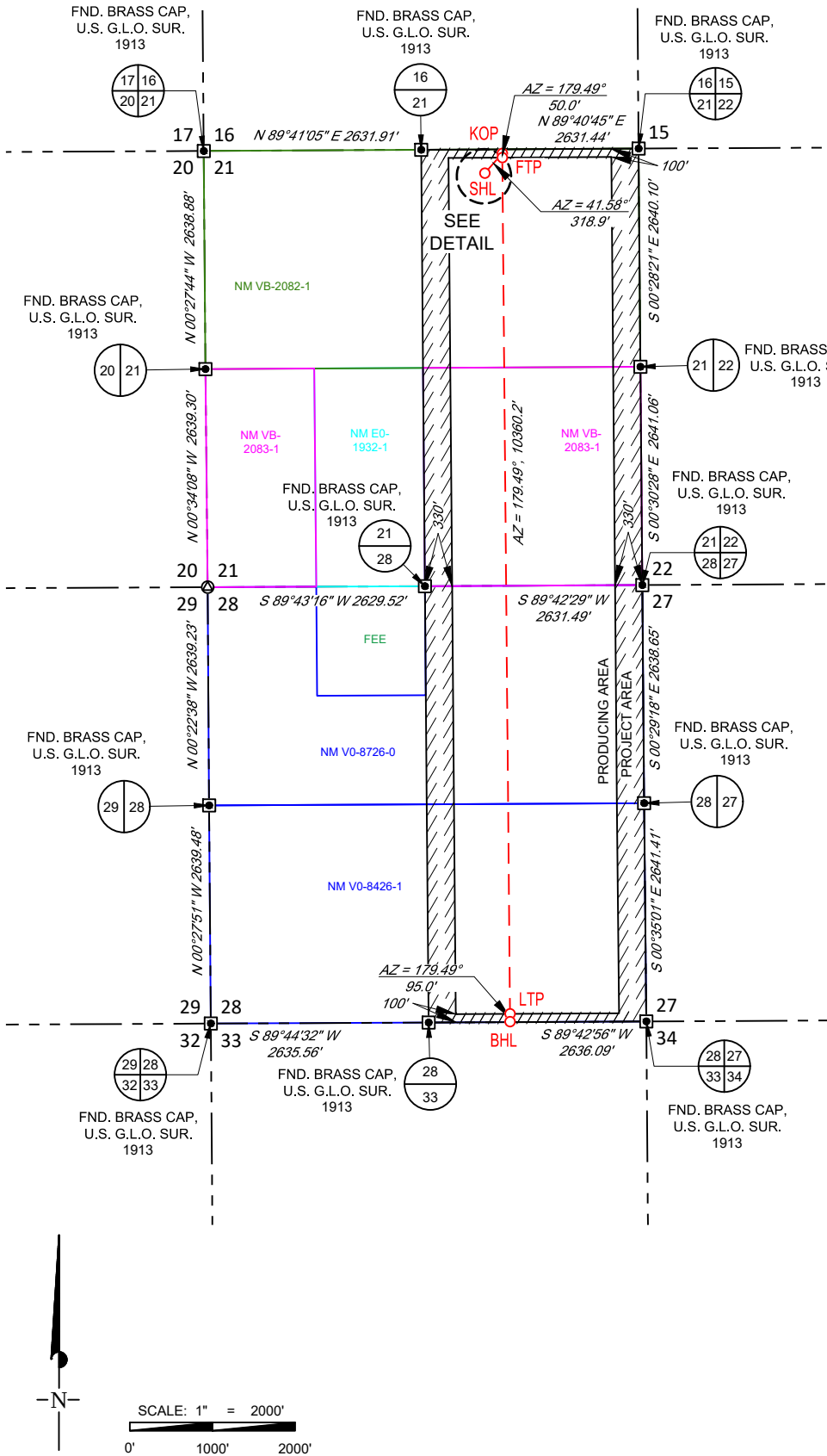
0' 5000' 10000'



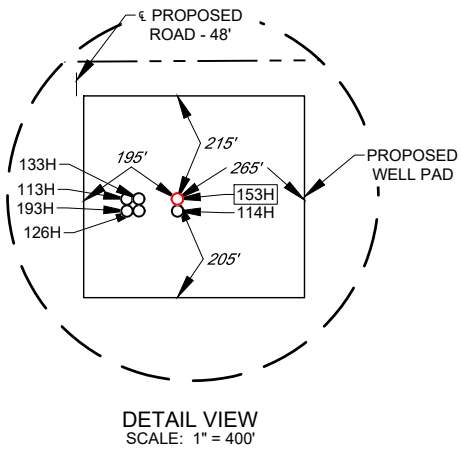
481 WINSOFT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
WWW.TOPOGRAPHIC.COM

TAP  
ROCK  
EXHIBIT 2A

SECTION 21, TOWNSHIP 21-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO



| NEW MEXICO EAST<br>NAD 1983 |  |
|-----------------------------|--|
| SURFACE LOCATION (SHL)      |  |
| 287' FNL - SEC. 21          |  |
| 1864' FEL - SEC. 21         |  |
| X=775197 Y=535847           |  |
| LAT.: N 32.4708215          |  |
| LONG.: W 103.5750267        |  |
| KICK OFF POINT (KOP)        |  |
| 50' FNL - SEC. 21           |  |
| 1650' FEL - SEC. 21         |  |
| X=775409 Y=536085           |  |
| LAT.: N 32.4714730          |  |
| LONG.: W 103.5743350        |  |
| FIRST TAKE POINT (FTP)      |  |
| 100' FNL - SEC. 21          |  |
| 1650' FEL - SEC. 21         |  |
| X=775409 Y=536035           |  |
| LAT.: N 32.4713356          |  |
| LONG.: W 103.5743347        |  |
| LAST TAKE POINT (LTP)       |  |
| 100' FSL - SEC. 28          |  |
| 1650' FEL - SEC. 28         |  |
| X=775502 Y=525675           |  |
| LAT.: N 32.4428594          |  |
| LONG.: W 103.5742726        |  |
| BOTTOM HOLE LOCATION (BHL)  |  |
| 5' FSL - SEC. 28            |  |
| 1650' FEL - SEC. 28         |  |
| X=775503 Y=525580           |  |
| LAT.: N 32.4425982          |  |
| LONG.: W 103.5742721        |  |

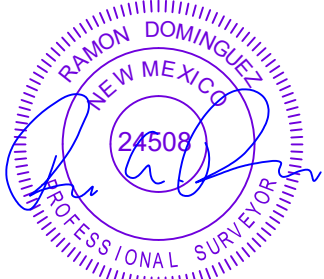


LEASE NAME & WELL NO.: QUEEN KEELY STATE COM 153H

SECTION 21 TWP 21-S RGE 33-E SURVEY N.M.P.M.  
COUNTY LEA STATE NM  
DESCRIPTION 287' FNL & 1864' FEL

DISTANCE & DIRECTION  
FROM INT. OF NM-176 E. & COUNTY RD 28, GO SOUTH ON NM-176 E ±6.4 MILES, THENCE SOUTH (RIGHT) ON A LEASE RD ±2.2 MILES, THENCE SOUTH (LEFT) ON A LEASE RD ±0.8 MILES, THENCE EAST (LEFT) ON DELAWARE BASIN RD. ±4.5 MILES, THENCE NORTHEAST (RIGHT) ON A LEASE RD. ±2.9 MILES, THENCE NORTH (LEFT) ON A LEASE RD. ±2.6 MILES TO A POINT ±301 FEET NORTHWEST OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.  
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



5/10/2023 12:43:40 PM  
Ramon A Dominguez, P.S. No. 24508

**TOPOGRAPHIC**  
LOYALTY INNOVATION LEGACY  
481 WINSOFT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
WWW.TOPOGRAPHIC.COM

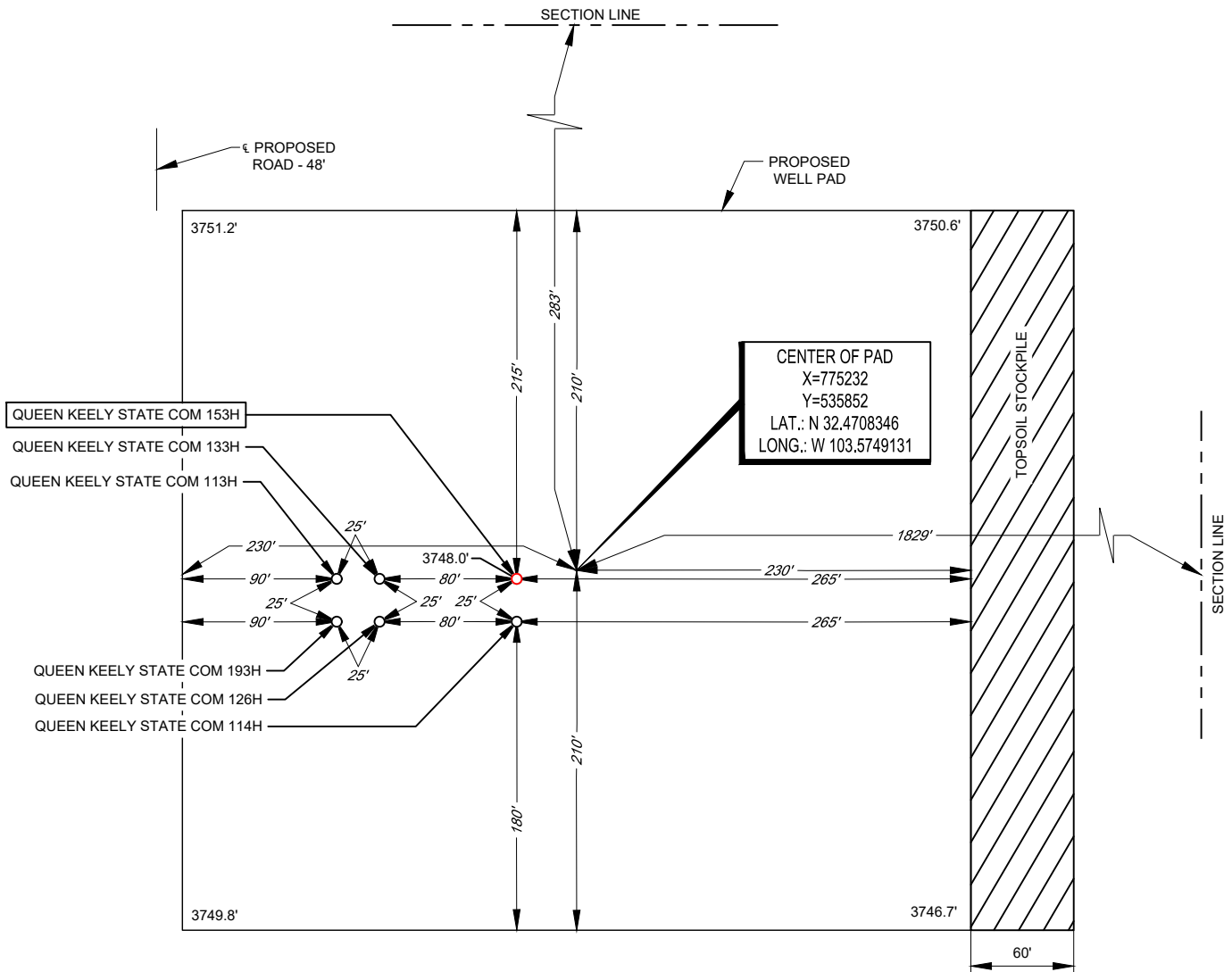
## EXHIBIT 2B



SECTION 21, TOWNSHIP 21-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO

DETAIL VIEW  
SCALE: 1" = 100'

**LEGEND**  
--- SECTION LINE  
--- PROPOSED ROAD



LEASE NAME & WELL NO.: QUEEN KEELY STATE COM 153H  
153H LATITUDE N 32.4708215 153H LONGITUDE W 103.5750267  
CENTER OF PAD IS 283' FNL & 1829' FEL

"PRELIMINARY, THIS DOCUMENT SHALL NOT  
BE RECORDED FOR ANY PURPOSE."

Ramon A Dominguez, P.S. No. 24508

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET. ELEVATIONS USED ARE NAVD88, OBTAINED THROUGH AN OPUS SOLUTION.

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. ONLY THE DATA SHOWN ABOVE IS BEING CERTIFIED TO, ALL OTHER INFORMATION WAS INTENTIONALLY OMITTED. THIS PLAT IS ONLY INTENDED TO BE USED FOR A PERMIT AND IS NOT A BOUNDARY SURVEY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

SCALE: 1" = 100'  
0' 50' 100'



481 WINSOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
WWW.TOPOGRAPHIC.COM

**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**

Form APD Conditions

Permit 341129

**PERMIT CONDITIONS OF APPROVAL**

|                                                                                                            |                                      |
|------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Operator Name and Address:<br>TAP ROCK OPERATING, LLC [372043]<br>523 Park Point Drive<br>Golden, CO 80401 | API Number:<br>30-025-51586          |
|                                                                                                            | Well:<br>QUEEN KEELY STATE COM #153H |

| OCD<br>Reviewer | Condition                                                                                                                                                                                                                                                            |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pkautz          | Notify OCD 24 hours prior to casing & cement                                                                                                                                                                                                                         |
| pkautz          | Will require a File As Drilled C-102 and a Directional Survey with the C-104                                                                                                                                                                                         |
| 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 |
| 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                  |
| pkautz          | R-111P CEMENT MUST CIRCULATE ON ALL STRINGS                                                                                                                                                                                                                          |
| pkautz          | The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud                                                                                                                                                                   |
| pkautz          | MUST SUBMIT C-103A PRIOR TO SPUDDING WITH CORRECTED CEMENT PROGRAM                                                                                                                                                                                                   |



# **Tap Rock Resources, LLC**

**Lea County, NM (NAD 83 NME)  
(Queen Keely State Com) Sec-21\_T-21-S\_R-33-E  
Queen Keely State Com #153H**

**OWB**

**Plan: Plan #1**

## **Standard Planning Report**

**25 May, 2023**





# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

|                    |                             |                      |                |
|--------------------|-----------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD 83 NME) |                      |                |
| <b>Map System:</b> | US State Plane 1983         | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983   |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone     |                      |                |

|                              |                                              |                          |                  |
|------------------------------|----------------------------------------------|--------------------------|------------------|
| <b>Site</b>                  | (Queen Keely State Com) Sec-21_T-21-S_R-33-E |                          |                  |
| <b>Site Position:</b>        |                                              | <b>Northing:</b>         | 535,191.00 usft  |
| <b>From:</b>                 | Map                                          | <b>Easting:</b>          | 772,614.00 usft  |
| <b>Position Uncertainty:</b> | 0.0 usft                                     | <b>Slot Radius:</b>      | 13-3/16 "        |
|                              |                                              | <b>Latitude:</b>         | 32° 28' 8.651 N  |
|                              |                                              | <b>Longitude:</b>        | 103° 35' 0.303 W |
|                              |                                              | <b>Grid Convergence:</b> | 0.40 °           |

|                             |                             |                            |                                     |
|-----------------------------|-----------------------------|----------------------------|-------------------------------------|
| <b>Well</b>                 | Queen Keely State Com #153H |                            |                                     |
| <b>Well Position</b>        | <b>+N/-S</b>                | 656.0 usft                 | <b>Northing:</b> 535,847.00 usft    |
|                             | <b>+E/-W</b>                | 2,583.0 usft               | <b>Easting:</b> 775,197.00 usft     |
| <b>Position Uncertainty</b> | 0.0 usft                    | <b>Wellhead Elevation:</b> | <b>Latitude:</b> 32° 28' 14.961 N   |
|                             |                             |                            | <b>Longitude:</b> 103° 34' 30.100 W |
|                             |                             |                            | <b>Ground Level:</b> 3,748.0 usft   |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OWB               |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2015          | 05/23/23           | 6.32                   | 60.21                | 47,469.97831768            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #1                        |                     |                      |                      |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                  | PLAN                | <b>Tie On Depth:</b> | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |
|                          | 0.0                            | 0.0                 | 0.0                  | 179.49               |

|                                 |                        |                          |                     |                |
|---------------------------------|------------------------|--------------------------|---------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 05/25/23                 |                     |                |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>    | <b>Remarks</b> |
| 1                               | 0.0                    | 21,636.3                 | Plan #1 (OWB)       | MWD            |
|                                 |                        |                          | OWSG MWD - Standard |                |



# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

| Plan Sections         |                 |             |                       |              |              |                         |                        |                       |         |                   |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|-------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target            |
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.00                    | 0.00                   | 0.00                  | 0.00    |                   |
| 1,300.0               | 0.00            | 0.00        | 1,300.0               | 0.0          | 0.0          | 0.00                    | 0.00                   | 0.00                  | 0.00    |                   |
| 2,004.0               | 7.04            | 46.41       | 2,002.2               | 29.8         | 31.3         | 1.00                    | 1.00                   | 0.00                  | 46.41   |                   |
| 4,115.5               | 7.04            | 46.41       | 4,097.8               | 208.2        | 218.7        | 0.00                    | 0.00                   | 0.00                  | 0.00    |                   |
| 4,819.5               | 0.00            | 0.00        | 4,800.0               | 238.0        | 250.0        | 1.00                    | -1.00                  | 0.00                  | 180.00  |                   |
| 10,801.5              | 0.00            | 0.00        | 10,782.0              | 238.0        | 250.0        | 0.00                    | 0.00                   | 0.00                  | 0.00    |                   |
| 11,689.5              | 88.80           | 182.85      | 11,354.8              | -322.3       | 222.1        | 10.00                   | 10.00                  | 0.00                  | 182.85  |                   |
| 11,857.4              | 88.80           | 179.49      | 11,358.3              | -490.1       | 218.7        | 2.00                    | 0.00                   | -2.00                 | -90.02  |                   |
| 15,866.2              | 88.80           | 179.49      | 11,442.3              | -4,497.9     | 254.4        | 0.00                    | 0.00                   | 0.00                  | 0.00    | 4500°VS (Queen Ke |
| 15,881.2              | 89.10           | 179.49      | 11,442.5              | -4,512.9     | 254.5        | 2.00                    | 2.00                   | -0.02                 | -0.45   |                   |
| 21,636.3              | 89.10           | 179.49      | 11,532.9              | -10,267.0    | 306.0        | 0.00                    | 0.00                   | 0.00                  | 0.00    | PBHL (Queen Keely |



# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

| Planned Survey                    |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft)             | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 0.0                               | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 100.0                             | 0.00            | 0.00        | 100.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 200.0                             | 0.00            | 0.00        | 200.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 300.0                             | 0.00            | 0.00        | 300.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 400.0                             | 0.00            | 0.00        | 400.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 500.0                             | 0.00            | 0.00        | 500.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 600.0                             | 0.00            | 0.00        | 600.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 700.0                             | 0.00            | 0.00        | 700.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 800.0                             | 0.00            | 0.00        | 800.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 900.0                             | 0.00            | 0.00        | 900.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 1,000.0                           | 0.00            | 0.00        | 1,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 1,100.0                           | 0.00            | 0.00        | 1,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 1,200.0                           | 0.00            | 0.00        | 1,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| 1,300.0                           | 0.00            | 0.00        | 1,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |  |
| <b>NUDGE - Build 1.00</b>         |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 1,400.0                           | 1.00            | 46.41       | 1,400.0               | 0.6          | 0.6          | -0.6                    | 1.00                    | 1.00                   | 0.00                  |  |
| 1,500.0                           | 2.00            | 46.41       | 1,500.0               | 2.4          | 2.5          | -2.4                    | 1.00                    | 1.00                   | 0.00                  |  |
| 1,600.0                           | 3.00            | 46.41       | 1,599.9               | 5.4          | 5.7          | -5.4                    | 1.00                    | 1.00                   | 0.00                  |  |
| 1,700.0                           | 4.00            | 46.41       | 1,699.7               | 9.6          | 10.1         | -9.5                    | 1.00                    | 1.00                   | 0.00                  |  |
| 1,800.0                           | 5.00            | 46.41       | 1,799.4               | 15.0         | 15.8         | -14.9                   | 1.00                    | 1.00                   | 0.00                  |  |
| 1,900.0                           | 6.00            | 46.41       | 1,898.9               | 21.6         | 22.7         | -21.4                   | 1.00                    | 1.00                   | 0.00                  |  |
| 2,004.0                           | 7.04            | 46.41       | 2,002.2               | 29.8         | 31.3         | -29.5                   | 1.00                    | 1.00                   | 0.00                  |  |
| <b>HOLD - 2111.5 at 2004.0 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 2,100.0                           | 7.04            | 46.41       | 2,097.5               | 37.9         | 39.8         | -37.5                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,200.0                           | 7.04            | 46.41       | 2,196.8               | 46.3         | 48.7         | -45.9                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,300.0                           | 7.04            | 46.41       | 2,296.0               | 54.8         | 57.6         | -54.3                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,400.0                           | 7.04            | 46.41       | 2,395.2               | 63.2         | 66.4         | -62.7                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,500.0                           | 7.04            | 46.41       | 2,494.5               | 71.7         | 75.3         | -71.0                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,600.0                           | 7.04            | 46.41       | 2,593.7               | 80.2         | 84.2         | -79.4                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,700.0                           | 7.04            | 46.41       | 2,693.0               | 88.6         | 93.1         | -87.8                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,800.0                           | 7.04            | 46.41       | 2,792.2               | 97.1         | 101.9        | -96.1                   | 0.00                    | 0.00                   | 0.00                  |  |
| 2,900.0                           | 7.04            | 46.41       | 2,891.5               | 105.5        | 110.8        | -104.5                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,000.0                           | 7.04            | 46.41       | 2,990.7               | 114.0        | 119.7        | -112.9                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,100.0                           | 7.04            | 46.41       | 3,090.0               | 122.4        | 128.6        | -121.3                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,200.0                           | 7.04            | 46.41       | 3,189.2               | 130.9        | 137.5        | -129.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,300.0                           | 7.04            | 46.41       | 3,288.5               | 139.3        | 146.3        | -138.0                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,400.0                           | 7.04            | 46.41       | 3,387.7               | 147.8        | 155.2        | -146.4                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,500.0                           | 7.04            | 46.41       | 3,487.0               | 156.2        | 164.1        | -154.7                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,600.0                           | 7.04            | 46.41       | 3,586.2               | 164.7        | 173.0        | -163.1                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,700.0                           | 7.04            | 46.41       | 3,685.4               | 173.1        | 181.8        | -171.5                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,800.0                           | 7.04            | 46.41       | 3,784.7               | 181.6        | 190.7        | -179.9                  | 0.00                    | 0.00                   | 0.00                  |  |
| 3,900.0                           | 7.04            | 46.41       | 3,883.9               | 190.0        | 199.6        | -188.2                  | 0.00                    | 0.00                   | 0.00                  |  |
| 4,000.0                           | 7.04            | 46.41       | 3,983.2               | 198.5        | 208.5        | -196.6                  | 0.00                    | 0.00                   | 0.00                  |  |
| 4,100.0                           | 7.04            | 46.41       | 4,082.4               | 206.9        | 217.3        | -205.0                  | 0.00                    | 0.00                   | 0.00                  |  |
| 4,115.5                           | 7.04            | 46.41       | 4,097.8               | 208.2        | 218.7        | -206.3                  | 0.00                    | 0.00                   | 0.00                  |  |
| <b>DROP - -1.00</b>               |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 4,200.0                           | 6.19            | 46.41       | 4,181.7               | 214.9        | 225.8        | -212.9                  | 1.00                    | -1.00                  | 0.00                  |  |
| 4,300.0                           | 5.19            | 46.41       | 4,281.3               | 221.8        | 233.0        | -219.7                  | 1.00                    | -1.00                  | 0.00                  |  |
| 4,400.0                           | 4.19            | 46.41       | 4,380.9               | 227.4        | 238.9        | -225.3                  | 1.00                    | -1.00                  | 0.00                  |  |
| 4,500.0                           | 3.19            | 46.41       | 4,480.7               | 231.9        | 243.6        | -229.7                  | 1.00                    | -1.00                  | 0.00                  |  |
| 4,600.0                           | 2.19            | 46.41       | 4,580.6               | 235.1        | 247.0        | -232.9                  | 1.00                    | -1.00                  | 0.00                  |  |
| 4,700.0                           | 1.19            | 46.41       | 4,680.6               | 237.1        | 249.1        | -234.9                  | 1.00                    | -1.00                  | 0.00                  |  |
| 4,800.0                           | 0.19            | 46.41       | 4,780.5               | 238.0        | 250.0        | -235.7                  | 1.00                    | -1.00                  | 0.00                  |  |



# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

| Planned Survey                    |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft)             | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 4,819.5                           | 0.00            | 0.00        | 4,800.0               | 238.0        | 250.0        | -235.8                  | 1.00                    | -1.00                  | 0.00                  |  |
| <b>HOLD - 5982.0 at 4819.5 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 4,900.0                           | 0.00            | 0.00        | 4,880.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,000.0                           | 0.00            | 0.00        | 4,980.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,100.0                           | 0.00            | 0.00        | 5,080.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,200.0                           | 0.00            | 0.00        | 5,180.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,300.0                           | 0.00            | 0.00        | 5,280.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,400.0                           | 0.00            | 0.00        | 5,380.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,500.0                           | 0.00            | 0.00        | 5,480.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,600.0                           | 0.00            | 0.00        | 5,580.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,700.0                           | 0.00            | 0.00        | 5,680.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,800.0                           | 0.00            | 0.00        | 5,780.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 5,900.0                           | 0.00            | 0.00        | 5,880.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,000.0                           | 0.00            | 0.00        | 5,980.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,100.0                           | 0.00            | 0.00        | 6,080.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,200.0                           | 0.00            | 0.00        | 6,180.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,300.0                           | 0.00            | 0.00        | 6,280.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,400.0                           | 0.00            | 0.00        | 6,380.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,500.0                           | 0.00            | 0.00        | 6,480.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,600.0                           | 0.00            | 0.00        | 6,580.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,700.0                           | 0.00            | 0.00        | 6,680.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,800.0                           | 0.00            | 0.00        | 6,780.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 6,900.0                           | 0.00            | 0.00        | 6,880.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,000.0                           | 0.00            | 0.00        | 6,980.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,100.0                           | 0.00            | 0.00        | 7,080.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,200.0                           | 0.00            | 0.00        | 7,180.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,300.0                           | 0.00            | 0.00        | 7,280.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,400.0                           | 0.00            | 0.00        | 7,380.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,500.0                           | 0.00            | 0.00        | 7,480.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,600.0                           | 0.00            | 0.00        | 7,580.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,700.0                           | 0.00            | 0.00        | 7,680.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,800.0                           | 0.00            | 0.00        | 7,780.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 7,900.0                           | 0.00            | 0.00        | 7,880.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,000.0                           | 0.00            | 0.00        | 7,980.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,100.0                           | 0.00            | 0.00        | 8,080.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,200.0                           | 0.00            | 0.00        | 8,180.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,300.0                           | 0.00            | 0.00        | 8,280.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,400.0                           | 0.00            | 0.00        | 8,380.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,500.0                           | 0.00            | 0.00        | 8,480.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,600.0                           | 0.00            | 0.00        | 8,580.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,700.0                           | 0.00            | 0.00        | 8,680.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,800.0                           | 0.00            | 0.00        | 8,780.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 8,900.0                           | 0.00            | 0.00        | 8,880.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,000.0                           | 0.00            | 0.00        | 8,980.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,100.0                           | 0.00            | 0.00        | 9,080.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,200.0                           | 0.00            | 0.00        | 9,180.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,300.0                           | 0.00            | 0.00        | 9,280.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,400.0                           | 0.00            | 0.00        | 9,380.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,500.0                           | 0.00            | 0.00        | 9,480.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,600.0                           | 0.00            | 0.00        | 9,580.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,700.0                           | 0.00            | 0.00        | 9,680.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,800.0                           | 0.00            | 0.00        | 9,780.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 9,900.0                           | 0.00            | 0.00        | 9,880.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |



# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

| Planned Survey                  |                 |             |                       |              |              |                         |                         |                        |                       |  |
|---------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft)           | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 10,000.0                        | 0.00            | 0.00        | 9,980.5               | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,100.0                        | 0.00            | 0.00        | 10,080.5              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,200.0                        | 0.00            | 0.00        | 10,180.5              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,300.0                        | 0.00            | 0.00        | 10,280.5              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,400.0                        | 0.00            | 0.00        | 10,380.5              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,500.0                        | 0.00            | 0.00        | 10,480.5              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,600.0                        | 0.00            | 0.00        | 10,580.5              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,700.0                        | 0.00            | 0.00        | 10,680.5              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| 10,801.5                        | 0.00            | 0.00        | 10,782.0              | 238.0        | 250.0        | -235.8                  | 0.00                    | 0.00                   | 0.00                  |  |
| KOP - Build 10.00               |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 10,850.0                        | 4.85            | 182.85      | 10,830.5              | 235.9        | 249.9        | -233.7                  | 10.00                   | 10.00                  | 0.00                  |  |
| 10,900.0                        | 9.85            | 182.85      | 10,880.1              | 229.6        | 249.6        | -227.3                  | 10.00                   | 10.00                  | 0.00                  |  |
| 10,950.0                        | 14.85           | 182.85      | 10,928.9              | 218.9        | 249.0        | -216.7                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,000.0                        | 19.85           | 182.85      | 10,976.6              | 204.0        | 248.3        | -201.8                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,050.0                        | 24.85           | 182.85      | 11,022.8              | 185.0        | 247.4        | -182.8                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,100.0                        | 29.85           | 182.85      | 11,067.2              | 162.1        | 246.2        | -159.9                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,150.0                        | 34.85           | 182.85      | 11,109.4              | 135.3        | 244.9        | -133.2                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,200.0                        | 39.85           | 182.85      | 11,149.2              | 105.1        | 243.4        | -102.9                  | 10.00                   | 10.00                  | 0.00                  |  |
| 11,250.0                        | 44.85           | 182.85      | 11,186.1              | 71.4         | 241.7        | -69.3                   | 10.00                   | 10.00                  | 0.00                  |  |
| 11,300.0                        | 49.85           | 182.85      | 11,220.0              | 34.7         | 239.9        | -32.6                   | 10.00                   | 10.00                  | 0.00                  |  |
| 11,350.0                        | 54.85           | 182.85      | 11,250.5              | -4.8         | 237.9        | 6.9                     | 10.00                   | 10.00                  | 0.00                  |  |
| 11,400.0                        | 59.85           | 182.85      | 11,277.5              | -46.9        | 235.8        | 49.0                    | 10.00                   | 10.00                  | 0.00                  |  |
| 11,450.0                        | 64.85           | 182.85      | 11,300.7              | -91.1        | 233.6        | 93.2                    | 10.00                   | 10.00                  | 0.00                  |  |
| 11,500.0                        | 69.85           | 182.85      | 11,319.9              | -137.2       | 231.3        | 139.2                   | 10.00                   | 10.00                  | 0.00                  |  |
| 11,550.0                        | 74.85           | 182.85      | 11,335.1              | -184.7       | 229.0        | 186.8                   | 10.00                   | 10.00                  | 0.00                  |  |
| 11,600.0                        | 79.85           | 182.85      | 11,346.0              | -233.4       | 226.5        | 235.5                   | 10.00                   | 10.00                  | 0.00                  |  |
| 11,650.0                        | 84.85           | 182.85      | 11,352.6              | -282.9       | 224.1        | 284.9                   | 10.00                   | 10.00                  | 0.00                  |  |
| 11,689.5                        | 88.80           | 182.85      | 11,354.8              | -322.3       | 222.1        | 324.2                   | 10.00                   | 10.00                  | 0.00                  |  |
| EOC/TRN - DLS 2.00 TFO -90.02   |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 11,700.0                        | 88.80           | 182.64      | 11,355.1              | -332.8       | 221.6        | 334.8                   | 2.00                    | 0.00                   | -2.00                 |  |
| 11,800.0                        | 88.80           | 180.64      | 11,357.1              | -432.7       | 218.7        | 434.7                   | 2.00                    | 0.00                   | -2.00                 |  |
| 11,857.4                        | 88.80           | 179.49      | 11,358.3              | -490.1       | 218.7        | 492.1                   | 2.00                    | 0.00                   | -2.00                 |  |
| Start 4008.8 hold at 11857.4 MD |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 11,900.0                        | 88.80           | 179.49      | 11,359.2              | -532.7       | 219.1        | 534.6                   | 0.00                    | 0.00                   | 0.00                  |  |
| 12,000.0                        | 88.80           | 179.49      | 11,361.3              | -632.7       | 219.9        | 634.6                   | 0.00                    | 0.00                   | 0.00                  |  |
| 12,100.0                        | 88.80           | 179.49      | 11,363.4              | -732.6       | 220.8        | 734.6                   | 0.00                    | 0.00                   | 0.00                  |  |
| 12,200.0                        | 88.80           | 179.49      | 11,365.5              | -832.6       | 221.7        | 834.6                   | 0.00                    | 0.00                   | 0.00                  |  |
| 12,300.0                        | 88.80           | 179.49      | 11,367.6              | -932.6       | 222.6        | 934.5                   | 0.00                    | 0.00                   | 0.00                  |  |
| 12,400.0                        | 88.80           | 179.49      | 11,369.7              | -1,032.6     | 223.5        | 1,034.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 12,500.0                        | 88.80           | 179.49      | 11,371.8              | -1,132.5     | 224.4        | 1,134.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 12,600.0                        | 88.80           | 179.49      | 11,373.9              | -1,232.5     | 225.3        | 1,234.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 12,700.0                        | 88.80           | 179.49      | 11,376.0              | -1,332.5     | 226.2        | 1,334.5                 | 0.00                    | 0.00                   | 0.00                  |  |
| 12,800.0                        | 88.80           | 179.49      | 11,378.1              | -1,432.5     | 227.1        | 1,434.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 12,900.0                        | 88.80           | 179.49      | 11,380.2              | -1,532.4     | 228.0        | 1,534.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,000.0                        | 88.80           | 179.49      | 11,382.3              | -1,632.4     | 228.9        | 1,634.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,100.0                        | 88.80           | 179.49      | 11,384.4              | -1,732.4     | 229.7        | 1,734.4                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,200.0                        | 88.80           | 179.49      | 11,386.5              | -1,832.4     | 230.6        | 1,834.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,300.0                        | 88.80           | 179.49      | 11,388.5              | -1,932.3     | 231.5        | 1,934.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,400.0                        | 88.80           | 179.49      | 11,390.6              | -2,032.3     | 232.4        | 2,034.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,500.0                        | 88.80           | 179.49      | 11,392.7              | -2,132.3     | 233.3        | 2,134.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,600.0                        | 88.80           | 179.49      | 11,394.8              | -2,232.3     | 234.2        | 2,234.3                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,700.0                        | 88.80           | 179.49      | 11,396.9              | -2,332.2     | 235.1        | 2,334.2                 | 0.00                    | 0.00                   | 0.00                  |  |
| 13,800.0                        | 88.80           | 179.49      | 11,399.0              | -2,432.2     | 236.0        | 2,434.2                 | 0.00                    | 0.00                   | 0.00                  |  |



# Intrepid Planning Report



|                  |                             |                                     |                                  |
|------------------|-----------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db  | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC     | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME) | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)     | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                         |                                     |                                  |
| <b>Design:</b>   | Plan #1                     |                                     |                                  |

| Planned Survey                  |                 |             |                       |              |              |                         |                         |                        |                       |
|---------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)           | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 13,900.0                        | 88.80           | 179.49      | 11,401.1              | -2,532.2     | 236.9        | 2,534.2                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0                        | 88.80           | 179.49      | 11,403.2              | -2,632.2     | 237.8        | 2,634.2                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0                        | 88.80           | 179.49      | 11,405.3              | -2,732.1     | 238.6        | 2,734.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0                        | 88.80           | 179.49      | 11,407.4              | -2,832.1     | 239.5        | 2,834.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0                        | 88.80           | 179.49      | 11,409.5              | -2,932.1     | 240.4        | 2,934.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0                        | 88.80           | 179.49      | 11,411.6              | -3,032.1     | 241.3        | 3,034.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,500.0                        | 88.80           | 179.49      | 11,413.7              | -3,132.0     | 242.2        | 3,134.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0                        | 88.80           | 179.49      | 11,415.8              | -3,232.0     | 243.1        | 3,234.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0                        | 88.80           | 179.49      | 11,417.9              | -3,332.0     | 244.0        | 3,334.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0                        | 88.80           | 179.49      | 11,419.9              | -3,431.9     | 244.9        | 3,434.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,900.0                        | 88.80           | 179.49      | 11,422.0              | -3,531.9     | 245.8        | 3,534.0                 | 0.00                    | 0.00                   | 0.00                  |
| 15,000.0                        | 88.80           | 179.49      | 11,424.1              | -3,631.9     | 246.7        | 3,633.9                 | 0.00                    | 0.00                   | 0.00                  |
| 15,100.0                        | 88.80           | 179.49      | 11,426.2              | -3,731.9     | 247.6        | 3,733.9                 | 0.00                    | 0.00                   | 0.00                  |
| 15,200.0                        | 88.80           | 179.49      | 11,428.3              | -3,831.8     | 248.4        | 3,833.9                 | 0.00                    | 0.00                   | 0.00                  |
| 15,300.0                        | 88.80           | 179.49      | 11,430.4              | -3,931.8     | 249.3        | 3,933.9                 | 0.00                    | 0.00                   | 0.00                  |
| 15,400.0                        | 88.80           | 179.49      | 11,432.5              | -4,031.8     | 250.2        | 4,033.9                 | 0.00                    | 0.00                   | 0.00                  |
| 15,500.0                        | 88.80           | 179.49      | 11,434.6              | -4,131.8     | 251.1        | 4,133.8                 | 0.00                    | 0.00                   | 0.00                  |
| 15,600.0                        | 88.80           | 179.49      | 11,436.7              | -4,231.7     | 252.0        | 4,233.8                 | 0.00                    | 0.00                   | 0.00                  |
| 15,700.0                        | 88.80           | 179.49      | 11,438.8              | -4,331.7     | 252.9        | 4,333.8                 | 0.00                    | 0.00                   | 0.00                  |
| 15,800.0                        | 88.80           | 179.49      | 11,440.9              | -4,431.7     | 253.8        | 4,433.8                 | 0.00                    | 0.00                   | 0.00                  |
| 15,866.2                        | 88.80           | 179.49      | 11,442.3              | -4,497.9     | 254.4        | 4,500.0                 | 0.00                    | 0.00                   | 0.00                  |
| Start DLS 2.00 TFO -0.45        |                 |             |                       |              |              |                         |                         |                        |                       |
| 15,881.2                        | 89.10           | 179.49      | 11,442.5              | -4,512.9     | 254.5        | 4,515.0                 | 2.00                    | 2.00                   | -0.02                 |
| Start 5755.0 hold at 15881.2 MD |                 |             |                       |              |              |                         |                         |                        |                       |
| 15,900.0                        | 89.10           | 179.49      | 11,442.8              | -4,531.7     | 254.7        | 4,533.8                 | 0.00                    | 0.00                   | 0.00                  |
| 16,000.0                        | 89.10           | 179.49      | 11,444.4              | -4,631.7     | 255.6        | 4,633.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,100.0                        | 89.10           | 179.49      | 11,446.0              | -4,731.6     | 256.5        | 4,733.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,200.0                        | 89.10           | 179.49      | 11,447.5              | -4,831.6     | 257.4        | 4,833.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,300.0                        | 89.10           | 179.49      | 11,449.1              | -4,931.6     | 258.3        | 4,933.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,400.0                        | 89.10           | 179.49      | 11,450.7              | -5,031.6     | 259.2        | 5,033.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,500.0                        | 89.10           | 179.49      | 11,452.2              | -5,131.6     | 260.0        | 5,133.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,600.0                        | 89.10           | 179.49      | 11,453.8              | -5,231.6     | 260.9        | 5,233.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,700.0                        | 89.10           | 179.49      | 11,455.4              | -5,331.5     | 261.8        | 5,333.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,800.0                        | 89.10           | 179.49      | 11,457.0              | -5,431.5     | 262.7        | 5,433.6                 | 0.00                    | 0.00                   | 0.00                  |
| 16,900.0                        | 89.10           | 179.49      | 11,458.5              | -5,531.5     | 263.6        | 5,533.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,000.0                        | 89.10           | 179.49      | 11,460.1              | -5,631.5     | 264.5        | 5,633.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,100.0                        | 89.10           | 179.49      | 11,461.7              | -5,731.5     | 265.4        | 5,733.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,200.0                        | 89.10           | 179.49      | 11,463.2              | -5,831.5     | 266.3        | 5,833.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,300.0                        | 89.10           | 179.49      | 11,464.8              | -5,931.4     | 267.2        | 5,933.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,400.0                        | 89.10           | 179.49      | 11,466.4              | -6,031.4     | 268.1        | 6,033.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,500.0                        | 89.10           | 179.49      | 11,467.9              | -6,131.4     | 269.0        | 6,133.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,600.0                        | 89.10           | 179.49      | 11,469.5              | -6,231.4     | 269.9        | 6,233.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,700.0                        | 89.10           | 179.49      | 11,471.1              | -6,331.4     | 270.8        | 6,333.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,800.0                        | 89.10           | 179.49      | 11,472.6              | -6,431.4     | 271.7        | 6,433.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,900.0                        | 89.10           | 179.49      | 11,474.2              | -6,531.3     | 272.6        | 6,533.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,000.0                        | 89.10           | 179.49      | 11,475.8              | -6,631.3     | 273.5        | 6,633.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,100.0                        | 89.10           | 179.49      | 11,477.4              | -6,731.3     | 274.4        | 6,733.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,200.0                        | 89.10           | 179.49      | 11,478.9              | -6,831.3     | 275.3        | 6,833.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,300.0                        | 89.10           | 179.49      | 11,480.5              | -6,931.3     | 276.2        | 6,933.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,400.0                        | 89.10           | 179.49      | 11,482.1              | -7,031.3     | 277.0        | 7,033.4                 | 0.00                    | 0.00                   | 0.00                  |
| 18,500.0                        | 89.10           | 179.49      | 11,483.6              | -7,131.2     | 277.9        | 7,133.4                 | 0.00                    | 0.00                   | 0.00                  |
| 18,600.0                        | 89.10           | 179.49      | 11,485.2              | -7,231.2     | 278.8        | 7,233.4                 | 0.00                    | 0.00                   | 0.00                  |
| 18,700.0                        | 89.10           | 179.49      | 11,486.8              | -7,331.2     | 279.7        | 7,333.4                 | 0.00                    | 0.00                   | 0.00                  |



# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 18,800.0              | 89.10           | 179.49      | 11,488.3              | -7,431.2     | 280.6        | 7,433.4                 | 0.00                    | 0.00                   | 0.00                  |
| 18,900.0              | 89.10           | 179.49      | 11,489.9              | -7,531.2     | 281.5        | 7,533.4                 | 0.00                    | 0.00                   | 0.00                  |
| 19,000.0              | 89.10           | 179.49      | 11,491.5              | -7,631.2     | 282.4        | 7,633.4                 | 0.00                    | 0.00                   | 0.00                  |
| 19,100.0              | 89.10           | 179.49      | 11,493.1              | -7,731.1     | 283.3        | 7,733.4                 | 0.00                    | 0.00                   | 0.00                  |
| 19,200.0              | 89.10           | 179.49      | 11,494.6              | -7,831.1     | 284.2        | 7,833.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,300.0              | 89.10           | 179.49      | 11,496.2              | -7,931.1     | 285.1        | 7,933.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,400.0              | 89.10           | 179.49      | 11,497.8              | -8,031.1     | 286.0        | 8,033.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,500.0              | 89.10           | 179.49      | 11,499.3              | -8,131.1     | 286.9        | 8,133.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,600.0              | 89.10           | 179.49      | 11,500.9              | -8,231.1     | 287.8        | 8,233.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,700.0              | 89.10           | 179.49      | 11,502.5              | -8,331.0     | 288.7        | 8,333.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,800.0              | 89.10           | 179.49      | 11,504.0              | -8,431.0     | 289.6        | 8,433.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,900.0              | 89.10           | 179.49      | 11,505.6              | -8,531.0     | 290.5        | 8,533.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,000.0              | 89.10           | 179.49      | 11,507.2              | -8,631.0     | 291.4        | 8,633.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,100.0              | 89.10           | 179.49      | 11,508.7              | -8,731.0     | 292.3        | 8,733.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,200.0              | 89.10           | 179.49      | 11,510.3              | -8,831.0     | 293.2        | 8,833.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,300.0              | 89.10           | 179.49      | 11,511.9              | -8,930.9     | 294.0        | 8,933.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,400.0              | 89.10           | 179.49      | 11,513.5              | -9,030.9     | 294.9        | 9,033.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,500.0              | 89.10           | 179.49      | 11,515.0              | -9,130.9     | 295.8        | 9,133.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,600.0              | 89.10           | 179.49      | 11,516.6              | -9,230.9     | 296.7        | 9,233.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,700.0              | 89.10           | 179.49      | 11,518.2              | -9,330.9     | 297.6        | 9,333.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,800.0              | 89.10           | 179.49      | 11,519.7              | -9,430.9     | 298.5        | 9,433.2                 | 0.00                    | 0.00                   | 0.00                  |
| 20,900.0              | 89.10           | 179.49      | 11,521.3              | -9,530.9     | 299.4        | 9,533.1                 | 0.00                    | 0.00                   | 0.00                  |
| 21,000.0              | 89.10           | 179.49      | 11,522.9              | -9,630.8     | 300.3        | 9,633.1                 | 0.00                    | 0.00                   | 0.00                  |
| 21,100.0              | 89.10           | 179.49      | 11,524.4              | -9,730.8     | 301.2        | 9,733.1                 | 0.00                    | 0.00                   | 0.00                  |
| 21,200.0              | 89.10           | 179.49      | 11,526.0              | -9,830.8     | 302.1        | 9,833.1                 | 0.00                    | 0.00                   | 0.00                  |
| 21,300.0              | 89.10           | 179.49      | 11,527.6              | -9,930.8     | 303.0        | 9,933.1                 | 0.00                    | 0.00                   | 0.00                  |
| 21,400.0              | 89.10           | 179.49      | 11,529.1              | -10,030.8    | 303.9        | 10,033.1                | 0.00                    | 0.00                   | 0.00                  |
| 21,500.0              | 89.10           | 179.49      | 11,530.7              | -10,130.8    | 304.8        | 10,133.1                | 0.00                    | 0.00                   | 0.00                  |
| 21,600.0              | 89.10           | 179.49      | 11,532.3              | -10,230.7    | 305.7        | 10,233.1                | 0.00                    | 0.00                   | 0.00                  |
| 21,636.3              | 89.10           | 179.49      | 11,532.9              | -10,267.0    | 306.0        | 10,269.3                | 0.00                    | 0.00                   | 0.00                  |
| TD at 21636.3         |                 |             |                       |              |              |                         |                         |                        |                       |



# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

| Design Targets                                                                                                                 |                  |                 |               |                 |                 |                    |                   |                  |                   |
|--------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|------------------|-------------------|
| Target Name<br>- hit/miss target<br>- Shape                                                                                    | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude         | Longitude         |
| FTP (Queen Keely Sta<br>- plan misses target center by 199.6usft at 11275.1usft MD (11203.5 TVD, 53.3 N, 240.8 E)<br>- Point   | 0.00             | 0.01            | 11,348.0      | 188.0           | 212.0           | 536,035.00         | 775,409.00        | 32° 28' 16.807 N | 103° 34' 27.609 W |
| KOP (Queen Keely Sta<br>- plan misses target center by 234.2usft at 11250.0usft MD (11186.1 TVD, 71.4 N, 241.7 E)<br>- Point   | 0.00             | 0.00            | 11,348.0      | 238.0           | 212.0           | 536,085.00         | 775,409.00        | 32° 28' 17.301 N | 103° 34' 27.605 W |
| 4500'VS (Queen Keely<br>- plan hits target center<br>- Rectangle (sides W100.0 H4,688.0 D30.0)                                 | 1.20             | 179.49          | 11,442.3      | -4,497.9        | 254.4           | 531,349.10         | 775,451.37        | 32° 27' 30.438 N | 103° 34' 27.504 W |
| LTP (Queen Keely Sta<br>- plan misses target center by 1.5usft at 21541.3usft MD (11531.4 TVD, -10172.0 N, 305.2 E)<br>- Point | 0.00             | 0.00            | 11,532.9      | -10,172.0       | 305.0           | 525,675.00         | 775,502.00        | 32° 26' 34.290 N | 103° 34' 27.384 W |
| PBHL (Queen Keely Sta<br>- plan hits target center<br>- Rectangle (sides W100.0 H5,767.0 D30.0)                                | 0.90             | 179.49          | 11,532.9      | -10,267.0       | 306.0           | 525,580.00         | 775,503.00        | 32° 26' 33.350 N | 103° 34' 27.380 W |

| Formations               |                          |                      |           |            |                      |  |
|--------------------------|--------------------------|----------------------|-----------|------------|----------------------|--|
| Measured Depth<br>(usft) | Vertical Depth<br>(usft) | Name                 | Lithology | Dip<br>(°) | Dip Direction<br>(°) |  |
| 1,760.5                  | 1,760.0                  | Rustler              |           |            |                      |  |
| 2,193.2                  | 2,190.0                  | Top Salt             |           |            |                      |  |
| 5,429.5                  | 5,410.0                  | Base Salt            |           |            |                      |  |
| 5,494.5                  | 5,475.0                  | Delaware             |           |            |                      |  |
| 5,494.5                  | 5,475.0                  | Lamar                |           |            |                      |  |
| 5,514.5                  | 5,495.0                  | Bell                 |           |            |                      |  |
| 5,529.5                  | 5,510.0                  | Ramsey               |           |            |                      |  |
| 5,979.5                  | 5,960.0                  | Cherry               |           |            |                      |  |
| 6,989.5                  | 6,970.0                  | Brushy               |           |            |                      |  |
| 8,739.5                  | 8,720.0                  | Bone Spring          |           |            |                      |  |
| 8,929.5                  | 8,910.0                  | Bone Spring Base     |           |            |                      |  |
| 9,264.5                  | 9,245.0                  | Avalon Middle        |           |            |                      |  |
| 9,919.5                  | 9,900.0                  | 1st Bone Spring      |           |            |                      |  |
| 10,294.5                 | 10,275.0                 | 2nd Bone Spring Carb |           |            |                      |  |
| 10,494.5                 | 10,475.0                 | 2nd Bone Spring Sand |           |            |                      |  |
| 11,086.0                 | 11,055.0                 | 3rd Bone Spring Carb |           |            |                      |  |



# Intrepid Planning Report



|                  |                                                 |                                     |                                  |
|------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db                      | <b>Local Co-ordinate Reference:</b> | Well Queen Keely State Com #153H |
| <b>Company:</b>  | Tap Rock Resources, LLC                         | <b>TVD Reference:</b>               | KB @ 3774.0usft                  |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)                     | <b>MD Reference:</b>                | KB @ 3774.0usft                  |
| <b>Site:</b>     | (Queen Keely State Com)<br>Sec-21_T-21-S_R-33-E | <b>North Reference:</b>             | Grid                             |
| <b>Well:</b>     | Queen Keely State Com #153H                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                |
| <b>Wellbore:</b> | OWB                                             |                                     |                                  |
| <b>Design:</b>   | Plan #1                                         |                                     |                                  |

| Plan Annotations            |                             |                   |                 |                                 |
|-----------------------------|-----------------------------|-------------------|-----------------|---------------------------------|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                         |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                 |
| 1,300.0                     | 1,300.0                     | 0.0               | 0.0             | NUDGE - Build 1.00              |
| 2,004.0                     | 2,002.2                     | 29.8              | 31.3            | HOLD - 2111.5 at 2004.0 MD      |
| 4,115.5                     | 4,097.8                     | 208.2             | 218.7           | DROP - -1.00                    |
| 4,819.5                     | 4,800.0                     | 238.0             | 250.0           | HOLD - 5982.0 at 4819.5 MD      |
| 10,801.5                    | 10,782.0                    | 238.0             | 250.0           | KOP - Build 10.00               |
| 11,689.5                    | 11,354.8                    | -322.3            | 222.1           | EOC/TRN - DLS 2.00 TFO -90.02   |
| 11,857.4                    | 11,358.3                    | -490.1            | 218.7           | Start 4008.8 hold at 11857.4 MD |
| 15,866.2                    | 11,442.3                    | -4,497.9          | 254.4           | Start DLS 2.00 TFO -0.45        |
| 15,881.2                    | 11,442.5                    | -4,512.9          | 254.5           | Start 5755.0 hold at 15881.2 MD |
| 21,636.3                    | 11,532.9                    | -10,267.0         | 306.0           | TD at 21636.3                   |

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

Submit Electronically  
Via E-permitting

## 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:** \_\_\_\_\_ Tap Rock Operating LLC \_\_\_\_\_ **OGRID:** \_\_\_\_\_ 372043 \_\_\_\_\_ **Date:** \_6/1/23

**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 |
|------------------------|-----|------------------|-------------------|-----------------------|-----------------------|----------------------------|
| Queen Keely State 153H |     | Sec 21 T21S R33E | 287 FNL, 1864 FEL | 1842                  | 2431                  | 4337                       |
|                        |     |                  |                   |                       |                       |                            |

**IV. Central Delivery Point Name:** \_\_\_Queen Keely 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 |
|------------------------|-----|-----------|-----------------|------------------------------|------------------------|-----------------------|
| Queen Keely State 153H |     | 7/28/23   | 10/06/23        | 11/13/23                     | 12/10/23               | 12/10/23              |
|                        |     |           |                 |                              |                        |                       |

**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:      |
| Printed Name: Jeff Trlica                                                                        |
| Title: Regulatory Specialist                                                                     |
| E-mail Address: <a href="mailto:jtrlica@taprk.com">jtrlica@taprk.com</a>                         |
| Date: 6/1/2023                                                                                   |
| Phone: 720-772-5910                                                                              |
| <b>OIL CONSERVATION DIVISION</b><br><b>(Only applicable when submitted as a standalone form)</b> |
| Approved By:                                                                                     |
| Title:                                                                                           |
| Approval Date:                                                                                   |
| Conditions of Approval:                                                                          |

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

Each surface facility design includes the following process equipment: 3-phase separators (1 separator per well), a sales gas scrubber, one or two 3-phase heater treaters, a vapor recovery tower (VRT), a VRU compressor, multiple water and oil tanks, as well as flare knockouts (HP & LP), and flares (HP & LP). All process vessels will be sized to separate oil, water, gas based upon typical/historical & predicted well performance. Each process vessel will be fitted with an appropriately sized PSV as per ASME code requirements to mitigate vessel rupture and loss of containment. Additionally, the process vessels will be fitted with pressure transmitters tied to the facility control system which will allow operations to monitor pressures and when necessary, shut-in the facility to avoid vessel over-pressure and the potential vent of natural gas. Natural gas will preferentially be sold to pipeline, and only during upset/emergency conditions will gas be directed to the HP flare system. Flash gas from both the 3-phase heater treater and the VRT will be recompressed using a VRU compressor and this gas will also preferentially be directed to the gas sales pipeline. Oil tanks & water tanks will be fitted with 16 oz thief hatches as well as PVRVs to protect the tanks from rupture/collapse. Additionally, the tank vapor outlets and tank vapor capture system will be sized to keep tank pressures below 12 oz. The tank vapor capture system will include a tank vapor blower & knockout as well as a low-pressure flare and knockout. Tank vapors will preferentially be directed to the VRU and the sales gas pipeline. Only during process upsets/emergency conditions will tank vapors be directed to the LP flare system.

**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. ← See attached reg for requirements.

- During drilling operations- Gas meters will be installed at the shakers and Volume Totalizers will be installed on the pits. In the event that elevated gas levels, or a pit gain are observed, returns will be diverted to a gas buster. Gas coming off the gas buster will be combusted at the flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During completions operations, including stimulation and frac plug drill out operations, hydrocarbon production to surface is minimized. When gas production does occur, gas will be combusted at a flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During production operations, all process vessels (separators, heater treaters, VRTs, Tanks) will recompress (where necessary) and route gas outlets into the natural gas gathering pipeline. Gas will preferentially be routed to natural gas gathering pipeline and the flare system will be used only during emergency, malfunction, or if the gas does not meet pipeline specifications. In the event of flaring off-specification gas, operations will pull gas samples twice a week and will also route gas back to pipeline as soon as the gas meets specification. Exceptions to this will include only those qualified exceptions per the regulation 19.15.27.8 Subsection D.

- To comply with state performance standards, separation and storage equipment will be designed to handle the maximum anticipated throughput and pressure to minimize waste and reduce the likelihood of venting gas to atmosphere. Additionally, each storage atmospheric tank (Oil & Water) will be fitted with a level transmitter to facilitate gauging of the tank without opening of the thief hatch. Any gas collected through the tank vent system is expected to be recompressed and routed to sales. However, in the event of an emergency, the tank vapor capture system will be designed to combust the gas using a flare stack fitted with a continuous or automatic ignitor. The flare stack will be properly anchored and will be located a minimum of 100 feet from the well and storage tanks. Operators will conduct weekly AVO inspections. These AVO inspection records will be stored for the required 5-year period and will be made available upon Division request.

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

- When performing routine or preventive maintenance on a vessel or tank, initially all inlet valves are closed, and the vessel or tank is allowed to depressurize through the normal outlet connections to gas sales and/or liquid tanks. Once the vessel or tank is depressurized to lowest acceptable sales outlet pressure, usually around 20 psig, a temporary low-pressure flowline is connected from the vessel or tank to the Vapor Recovery Unit (VRU) for further pressure reduction. Once depressurized to less than 1-2 psig, the remaining natural gas in the vessel or tank is vented to atmosphere through a controlled pressure relief valve. Once the vessel or tank is depressurized to atmospheric pressure, the vessel or tank can be safely opened, and maintenance performed.

