

Office  
 District I – (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II – (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III – (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV – (505) 476-3460  
 1220 S. St. Francis Dr., Santa Fe, NM  
 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 Revised July 18, 2013

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| WELL API NO.<br>30-025-48647                                                                        |
| 5. Indicate Type of Lease<br>STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> |
| 6. State Oil & Gas Lease No.                                                                        |
| 7. Lease Name or Unit Agreement Name<br>Apollo State Com                                            |
| 8. Well Number 136H                                                                                 |
| 9. OGRID Number 372043                                                                              |
| 10. Pool name or Wildcat<br>WC-025 G-09 S243310P; UPPER WOLFCAMP                                    |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.)<br>3541 GR                                       |

|                                                                                                                                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SUNDRY NOTICES AND REPORTS ON WELLS<br>(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)                |  |
| 1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>                                                                                        |  |
| 2. Name of Operator<br>TAP ROCK OPERATING, LLC                                                                                                                                                                        |  |
| 3. Address of Operator<br>523 PARK POINT DR, SUITE 200, GOLDEN, CO 80401                                                                                                                                              |  |
| 4. Well Location<br>Unit Letter <u>0</u> : <u>848</u> feet from the <u>SOUTH</u> line and <u>1835</u> feet from the <u>EAST</u> line<br>Section <u>21</u> Township <u>24S</u> Range <u>33E</u> NMPM County <u>LEA</u> |  |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.)<br>3541 GR                                                                                                                                                         |  |

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO:                                                       |                                                  | SUBSEQUENT REPORT OF:                            |                                          |
|-------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|------------------------------------------|
| PERFORM REMEDIAL WORK <input type="checkbox"/>                                | PLUG AND ABANDON <input type="checkbox"/>        | REMEDIAL WORK <input type="checkbox"/>           | ALTERING CASING <input type="checkbox"/> |
| TEMPORARILY ABANDON <input type="checkbox"/>                                  | CHANGE PLANS <input checked="" type="checkbox"/> | COMMENCE DRILLING OPNS. <input type="checkbox"/> | P AND A <input type="checkbox"/>         |
| PULL OR ALTER CASING <input type="checkbox"/>                                 | MULTIPLE COMPL <input type="checkbox"/>          | CASING/CEMENT JOB <input type="checkbox"/>       |                                          |
| DOWNHOLE COMMINGLE <input type="checkbox"/>                                   |                                                  |                                                  |                                          |
| CLOSED-LOOP SYSTEM <input type="checkbox"/>                                   |                                                  |                                                  |                                          |
| OTHER: BHL/Surface Casing/Depth and Formation Change <input type="checkbox"/> |                                                  | OTHER: <input type="checkbox"/>                  |                                          |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Tap Rock Operating LLC is requesting permission to alter the Bottom Hole Location, Depth, and Surface Hole/Casing in the Apollo State Com 136H. Please see below for detail:

Previously Approved Bottom Hole Location: 30' FNL, 1880' FEL, Section 16, Township 24S, Range 33E.  
 Requested Bottom Hole Location: 30' FNL, 1650' FEL, Section 16, Township 24S, Range 33E.

This Bottom Hole Change will also alter the depth and the formation from the TRIPPLE X; BONE SPRING, WEST to the WC-025 G-09 S243310P; UPPER WOLFCAMP.

The previously approved surface hole of 13.5 inch will be increased to 17.5 inches and the Surface casing will be altered from 10.75 inch 45.5 lb surface casing to 13.375 inch 54.5 lb J-55 surface casing.

Please see the updated Plat, Drill Plan, and Casing spec for more detail.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Ramsey TITLE Regulatory Analyst DATE 5/20/2021

Type or print name Bill Ramsey E-mail address: bramsey@taprk.com PHONE: 720-238-2787

**For State Use Only**

APPROVED BY: P. Kautz TITLE \_\_\_\_\_ DATE 05/27/2021  
 Conditions of Approval (if any) \_\_\_\_\_

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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>30-025-48647 | <sup>2</sup> Pool Code<br>98135                        | <sup>3</sup> Pool Name<br>WC-025 G-09 S243310P:UPPER WOLFCAMP |
| <sup>4</sup> Property Code<br>328891    | <sup>5</sup> Property Name<br>APOLLO STATE COM         | <sup>6</sup> Well Number<br>136H                              |
| <sup>7</sup> OGRID No.<br>#372043       | <sup>8</sup> Operator Name<br>TAP ROCK OPERATING, LLC. | <sup>9</sup> Elevation<br>3541'                               |

<sup>10</sup>Surface Location

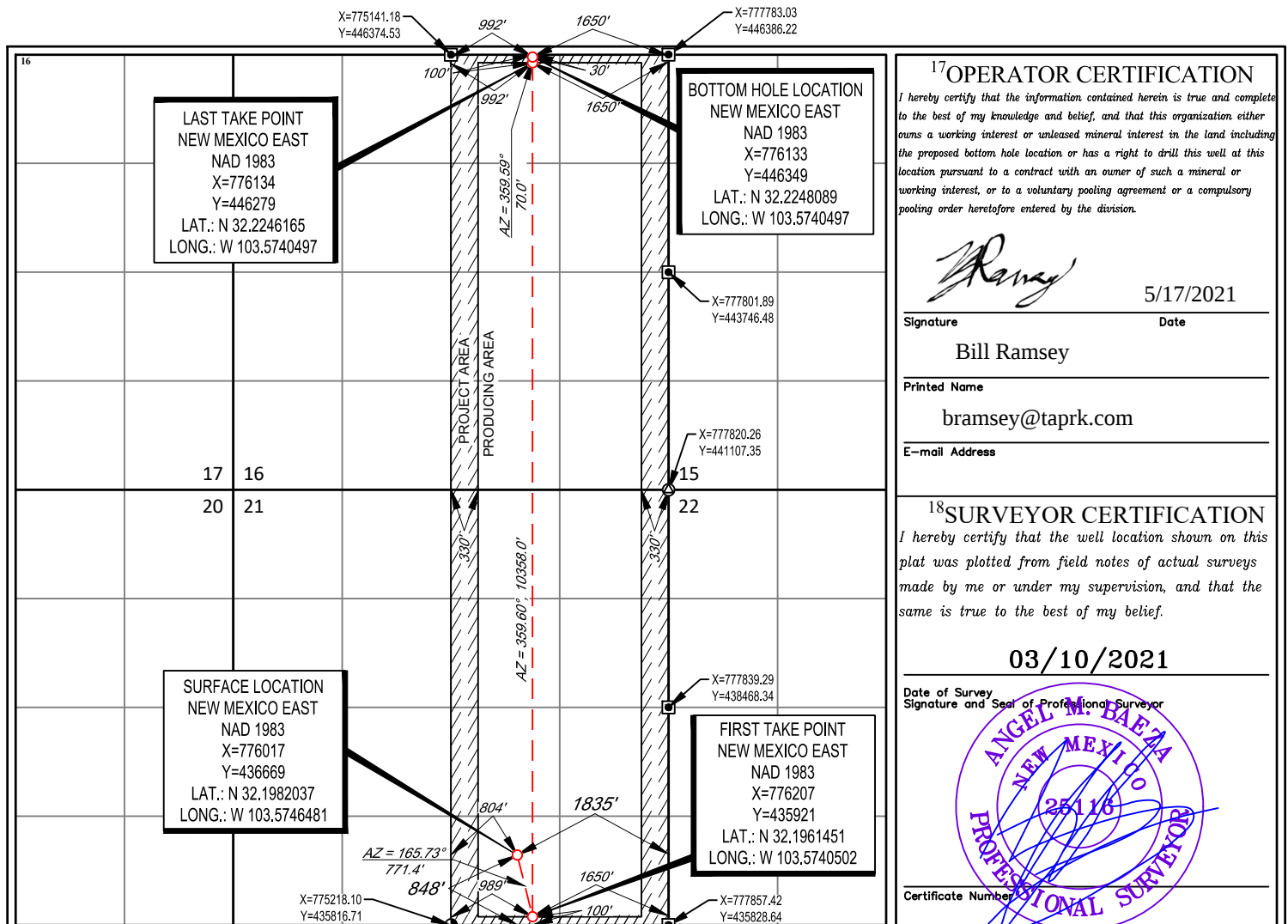
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| 0             | 21      | 24-S     | 33-E  | -       | 848'          | SOUTH            | 1835'         | 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| B             | 16      | 24-S     | 33-E  | -       | 30'           | NORTH            | 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.

<sup>17</sup>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.

*Bill Ramsey*  
Signature Date 5/17/2021

Bill Ramsey

Printed Name

bramsey@taprk.com

E-mail Address

<sup>18</sup>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.

03/10/2021

Date of Survey Signature and Seal of Professional Surveyor

ANGEL M. BAEZA  
NEW MEXICO  
PROFESSIONAL SURVEYOR  
25116  
Certificate Number

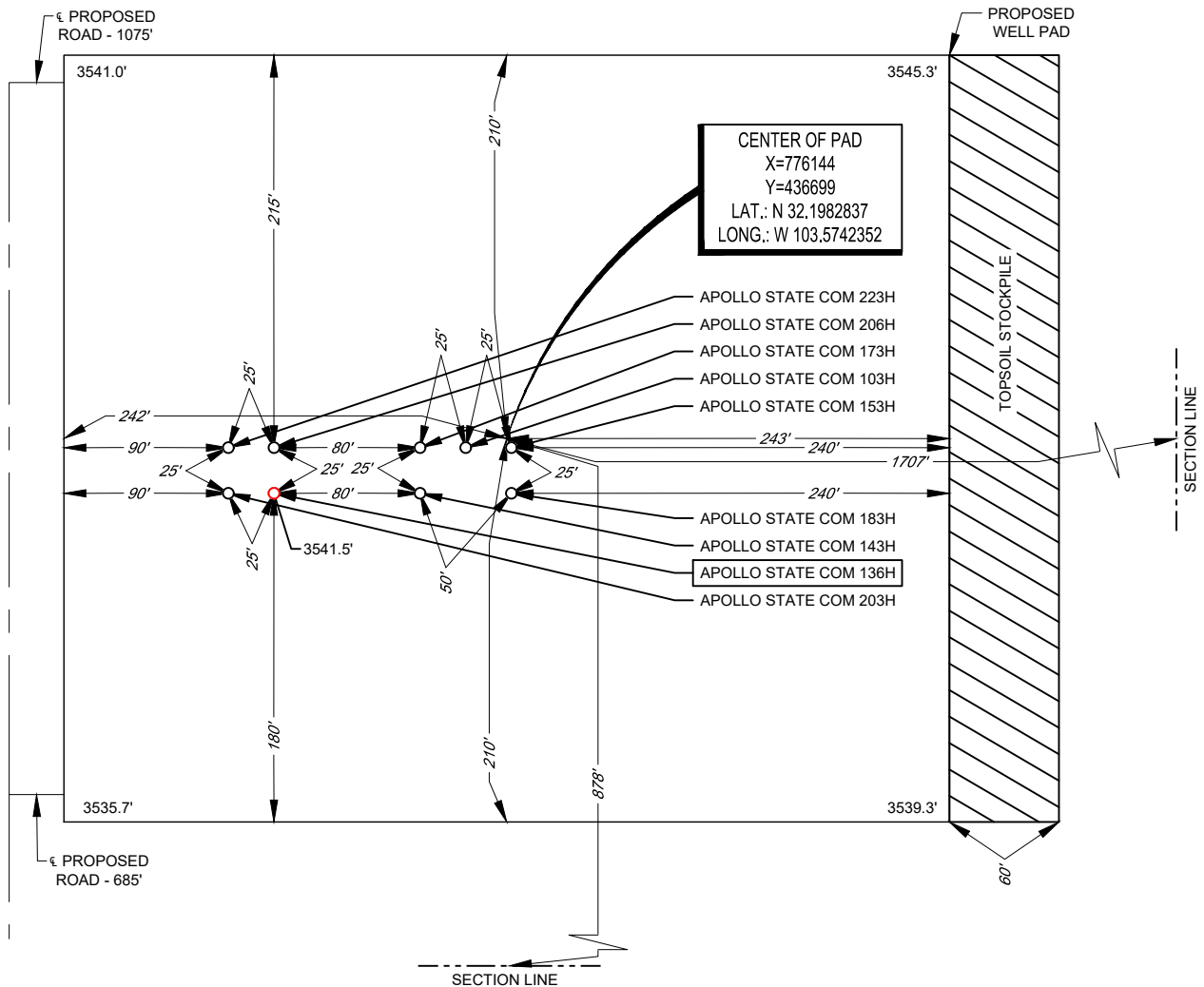


## LEGEND

----- SECTION LINE  
 --- PROPOSED ROAD

SECTION 21, TOWNSHIP 24-S, RANGE 33-E, N.M.P.M.  
 LEA COUNTY, NEW MEXICO

DETAIL VIEW  
 SCALE: 1" = 100'



LEASE NAME & WELL NO.: APOLLO STATE COM 136H  
 136H LATITUDE N 32.1982037 136H LONGITUDE W 103.5746481

CENTER OF PAD IS 878' FSL & 1707' FEL



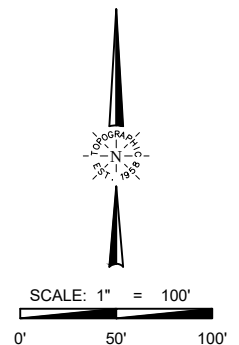
Angel M. Baeza, P.S. No. 25116

May 13, 2021

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"



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140  
 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

## Apollo State Com 136

| Type  | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC | Mud          |
|-------|-----------|-------------|------------------|---------------|-----------------|---------------|--------------|
| Surf  | 17.5      | 13.375      | 54.5             | 1220          | 1280            | 0             | Fresh Water  |
| Int 1 | 9.875     | 7.625       | 29.7             | 9000          | 2557            | 0             | Diesel Brine |
|       | 8.75      | 7.625       | 29.7             | 11848         |                 |               | Diesel Brine |
| Prod  | 6.75      | 5.5         | 20               | 22748         | 700             | 11648         | OBM          |

Intermediate mud system will be the direct brine emulsion fluid (brine based with diesel emulsified in it). Tap Rock requests the option of switching to a two stage cement job on the 7-5/8" intermediate casing string with the first stage lead and tail being pumped conventionally with the calculated top of cement to surface. If necessary, the second stage will be performed as a bradenhead squeeze with planned cement from the Brushy Canyon (anticipated loss zone) to surface if cement is not circulated to surface during the first stage. Additionally, a top out consisting of Class C cement will be executed as needed after the first two stages. Tap Rock also requests the option to run a DV tool, the depth will be adjusted depending on current hole conditions. Cement volumes will be adjusted accordingly. The DV tool will be set a minimum of 50' below the previous casing shoe and a maximum of 200' above the current casing shoe. If cement is not circulated to surface on the 1st stage job, the 2nd stage will be pumped as planned. The DVT set depth will be between 5,000-6,000'.



# **Tap Rock Resources, LLC**

**Lea County, NM (NAD 83 NME)  
(Apollo State Com) Sec-21\_T-24-S\_R-33-E  
Apollo State Com #136H**

**OWB**

**Plan: Plan #1**

## **Standard Planning Report**

**19 May, 2021**





# Intrepid Planning Report



|                  |                                         |                                     |                             |
|------------------|-----------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db              | <b>Local Co-ordinate Reference:</b> | Well Apollo State Com #136H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3567.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3567.0usft             |
| <b>Site:</b>     | (Apollo State Com) Sec-21_T-24-S_R-33-E | <b>North Reference:</b>             | Grid                        |
| <b>Well:</b>     | Apollo State Com #136H                  | <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>                  | (Apollo State Com) Sec-21_T-24-S_R-33-E |                          |                   |
| <b>Site Position:</b>        |                                         | <b>Northing:</b>         | 436,694.00 usft   |
| <b>From:</b>                 | Map                                     | <b>Easting:</b>          | 776,122.00 usft   |
| <b>Position Uncertainty:</b> | 0.0 usft                                | <b>Slot Radius:</b>      | 13-3/16 "         |
|                              |                                         | <b>Latitude:</b>         | 32° 11' 53.775 N  |
|                              |                                         | <b>Longitude:</b>        | 103° 34' 27.504 W |
|                              |                                         | <b>Grid Convergence:</b> | 0.40 °            |

|                             |                        |                            |                                     |
|-----------------------------|------------------------|----------------------------|-------------------------------------|
| <b>Well</b>                 | Apollo State Com #136H |                            |                                     |
| <b>Well Position</b>        | <b>+N/-S</b>           | -25.0 usft                 | <b>Northing:</b> 436,669.00 usft    |
|                             | <b>+E/-W</b>           | -105.0 usft                | <b>Easting:</b> 776,017.00 usft     |
| <b>Position Uncertainty</b> | 0.0 usft               | <b>Wellhead Elevation:</b> | <b>Latitude:</b> 32° 11' 53.535 N   |
|                             |                        |                            | <b>Longitude:</b> 103° 34' 28.728 W |
|                             |                        |                            | <b>Ground Level:</b> 3,541.0 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          | 04/02/21           | 6.54                   | 59.99                | 47,531.98282748            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <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                  | 359.59               |

|                                 |                        |                          |                  |                     |
|---------------------------------|------------------------|--------------------------|------------------|---------------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b>            | 05/19/21                 |                  |                     |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Remarks</b>      |
| 1                               | 0.0                    | 22,757.7                 | Plan #1 (OWB)    | MWD                 |
|                                 |                        |                          |                  | OWSG MWD - Standard |

|                              |                        |                    |                              |                     |                     |                                |                               |                              |                |                    |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|--------------------|
| <b>Plan Sections</b>         |                        |                    |                              |                     |                     |                                |                               |                              |                |                    |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> | <b>TFO (°)</b> | <b>Target</b>      |
| 0.0                          | 0.00                   | 0.00               | 0.0                          | 0.0                 | 0.0                 | 0.00                           | 0.00                          | 0.00                         | 0.00           |                    |
| 1,200.0                      | 0.00                   | 0.00               | 1,200.0                      | 0.0                 | 0.0                 | 0.00                           | 0.00                          | 0.00                         | 0.00           |                    |
| 1,999.8                      | 8.00                   | 172.86             | 1,997.2                      | -55.3               | 6.9                 | 1.00                           | 1.00                          | 0.00                         | 172.86         |                    |
| 6,978.8                      | 8.00                   | 172.86             | 6,927.8                      | -742.7              | 93.1                | 0.00                           | 0.00                          | 0.00                         | 0.00           |                    |
| 7,778.6                      | 0.00                   | 0.00               | 7,725.0                      | -798.0              | 100.0               | 1.00                           | -1.00                         | 0.00                         | 180.00         |                    |
| 11,948.6                     | 0.00                   | 0.00               | 11,895.0                     | -798.0              | 100.0               | 0.00                           | 0.00                          | 0.00                         | 0.00           |                    |
| 12,848.6                     | 90.00                  | 6.60               | 12,468.0                     | -228.8              | 165.9               | 10.00                          | 10.00                         | 0.00                         | 6.60           |                    |
| 13,199.2                     | 90.00                  | 359.59             | 12,468.0                     | 121.0               | 184.8               | 2.00                           | 0.00                          | -2.00                        | -90.00         |                    |
| 22,758.4                     | 90.00                  | 359.59             | 12,468.0                     | 9,680.0             | 116.0               | 0.00                           | 0.00                          | 0.00                         | 0.00           | PBHL (Apollo State |



# Intrepid Planning Report



|                  |                                         |                                     |                             |
|------------------|-----------------------------------------|-------------------------------------|-----------------------------|
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| <b>Well:</b>     | Apollo State Com #136H                  | <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                  |
| 1,165.0                  | 0.00            | 0.00        | 1,165.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Rustler Anhydrite</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 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                  | 1.00            | 172.86      | 1,300.0               | -0.9         | 0.1          | -0.9                    | 1.00                    | 1.00                   | 0.00                  |
| 1,400.0                  | 2.00            | 172.86      | 1,400.0               | -3.5         | 0.4          | -3.5                    | 1.00                    | 1.00                   | 0.00                  |
| 1,500.0                  | 3.00            | 172.86      | 1,499.9               | -7.8         | 1.0          | -7.8                    | 1.00                    | 1.00                   | 0.00                  |
| 1,600.0                  | 4.00            | 172.86      | 1,599.7               | -13.8        | 1.7          | -13.9                   | 1.00                    | 1.00                   | 0.00                  |
| 1,657.5                  | 4.57            | 172.86      | 1,657.0               | -18.1        | 2.3          | -18.1                   | 1.00                    | 1.00                   | 0.00                  |
| <b>Top Salt</b>          |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,700.0                  | 5.00            | 172.86      | 1,699.4               | -21.6        | 2.7          | -21.7                   | 1.00                    | 1.00                   | 0.00                  |
| 1,800.0                  | 6.00            | 172.86      | 1,798.9               | -31.1        | 3.9          | -31.2                   | 1.00                    | 1.00                   | 0.00                  |
| 1,900.0                  | 7.00            | 172.86      | 1,898.3               | -42.4        | 5.3          | -42.4                   | 1.00                    | 1.00                   | 0.00                  |
| 1,999.8                  | 8.00            | 172.86      | 1,997.2               | -55.3        | 6.9          | -55.3                   | 1.00                    | 1.00                   | 0.00                  |
| 2,100.0                  | 8.00            | 172.86      | 2,096.4               | -69.1        | 8.7          | -69.2                   | 0.00                    | 0.00                   | 0.00                  |
| 2,200.0                  | 8.00            | 172.86      | 2,195.5               | -82.9        | 10.4         | -83.0                   | 0.00                    | 0.00                   | 0.00                  |
| 2,300.0                  | 8.00            | 172.86      | 2,294.5               | -96.7        | 12.1         | -96.8                   | 0.00                    | 0.00                   | 0.00                  |
| 2,400.0                  | 8.00            | 172.86      | 2,393.5               | -110.6       | 13.9         | -110.6                  | 0.00                    | 0.00                   | 0.00                  |
| 2,500.0                  | 8.00            | 172.86      | 2,492.5               | -124.4       | 15.6         | -124.5                  | 0.00                    | 0.00                   | 0.00                  |
| 2,600.0                  | 8.00            | 172.86      | 2,591.6               | -138.2       | 17.3         | -138.3                  | 0.00                    | 0.00                   | 0.00                  |
| 2,700.0                  | 8.00            | 172.86      | 2,690.6               | -152.0       | 19.0         | -152.1                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0                  | 8.00            | 172.86      | 2,789.6               | -165.8       | 20.8         | -165.9                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0                  | 8.00            | 172.86      | 2,888.6               | -179.6       | 22.5         | -179.7                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0                  | 8.00            | 172.86      | 2,987.7               | -193.4       | 24.2         | -193.6                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0                  | 8.00            | 172.86      | 3,086.7               | -207.2       | 26.0         | -207.4                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.0                  | 8.00            | 172.86      | 3,185.7               | -221.0       | 27.7         | -221.2                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0                  | 8.00            | 172.86      | 3,284.8               | -234.8       | 29.4         | -235.0                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0                  | 8.00            | 172.86      | 3,383.8               | -248.6       | 31.2         | -248.8                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.0                  | 8.00            | 172.86      | 3,482.8               | -262.4       | 32.9         | -262.6                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0                  | 8.00            | 172.86      | 3,581.8               | -276.2       | 34.6         | -276.5                  | 0.00                    | 0.00                   | 0.00                  |
| 3,700.0                  | 8.00            | 172.86      | 3,680.9               | -290.0       | 36.3         | -290.3                  | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0                  | 8.00            | 172.86      | 3,779.9               | -303.8       | 38.1         | -304.1                  | 0.00                    | 0.00                   | 0.00                  |
| 3,900.0                  | 8.00            | 172.86      | 3,878.9               | -317.6       | 39.8         | -317.9                  | 0.00                    | 0.00                   | 0.00                  |
| 4,000.0                  | 8.00            | 172.86      | 3,977.9               | -331.4       | 41.5         | -331.7                  | 0.00                    | 0.00                   | 0.00                  |
| 4,100.0                  | 8.00            | 172.86      | 4,077.0               | -345.3       | 43.3         | -345.6                  | 0.00                    | 0.00                   | 0.00                  |
| 4,200.0                  | 8.00            | 172.86      | 4,176.0               | -359.1       | 45.0         | -359.4                  | 0.00                    | 0.00                   | 0.00                  |
| 4,300.0                  | 8.00            | 172.86      | 4,275.0               | -372.9       | 46.7         | -373.2                  | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0                  | 8.00            | 172.86      | 4,374.1               | -386.7       | 48.5         | -387.0                  | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0                  | 8.00            | 172.86      | 4,473.1               | -400.5       | 50.2         | -400.8                  | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0                  | 8.00            | 172.86      | 4,572.1               | -414.3       | 51.9         | -414.6                  | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0                  | 8.00            | 172.86      | 4,671.1               | -428.1       | 53.6         | -428.5                  | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0                  | 8.00            | 172.86      | 4,770.2               | -441.9       | 55.4         | -442.3                  | 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 Apollo State Com #136H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3567.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3567.0usft             |
| <b>Site:</b>     | (Apollo State Com) Sec-21_T-24-S_R-33-E | <b>North Reference:</b>             | Grid                        |
| <b>Well:</b>     | Apollo State Com #136H                  | <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) |
| 4,900.0                     | 8.00            | 172.86      | 4,869.2               | -455.7       | 57.1         | -456.1                  | 0.00                    | 0.00                   | 0.00                  |
| 4,935.1                     | 8.00            | 172.86      | 4,904.0               | -460.6       | 57.7         | -461.0                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Base Salt</b>            |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,000.0                     | 8.00            | 172.86      | 4,968.2               | -469.5       | 58.8         | -469.9                  | 0.00                    | 0.00                   | 0.00                  |
| 5,100.0                     | 8.00            | 172.86      | 5,067.2               | -483.3       | 60.6         | -483.7                  | 0.00                    | 0.00                   | 0.00                  |
| 5,152.3                     | 8.00            | 172.86      | 5,119.0               | -490.5       | 61.5         | -491.0                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Delaware Mountain Gp</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,173.5                     | 8.00            | 172.86      | 5,140.0               | -493.5       | 61.8         | -493.9                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Lamar</b>                |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,200.0                     | 8.00            | 172.86      | 5,166.3               | -497.1       | 62.3         | -497.6                  | 0.00                    | 0.00                   | 0.00                  |
| 5,214.9                     | 8.00            | 172.86      | 5,181.0               | -499.2       | 62.6         | -499.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Bell Canyon</b>          |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,237.1                     | 8.00            | 172.86      | 5,203.0               | -502.2       | 62.9         | -502.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Ramsey Sand</b>          |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,300.0                     | 8.00            | 172.86      | 5,265.3               | -510.9       | 64.0         | -511.4                  | 0.00                    | 0.00                   | 0.00                  |
| 5,400.0                     | 8.00            | 172.86      | 5,364.3               | -524.7       | 65.8         | -525.2                  | 0.00                    | 0.00                   | 0.00                  |
| 5,500.0                     | 8.00            | 172.86      | 5,463.4               | -538.5       | 67.5         | -539.0                  | 0.00                    | 0.00                   | 0.00                  |
| 5,600.0                     | 8.00            | 172.86      | 5,562.4               | -552.3       | 69.2         | -552.8                  | 0.00                    | 0.00                   | 0.00                  |
| 5,700.0                     | 8.00            | 172.86      | 5,661.4               | -566.1       | 70.9         | -566.6                  | 0.00                    | 0.00                   | 0.00                  |
| 5,800.0                     | 8.00            | 172.86      | 5,760.4               | -580.0       | 72.7         | -580.5                  | 0.00                    | 0.00                   | 0.00                  |
| 5,900.0                     | 8.00            | 172.86      | 5,859.5               | -593.8       | 74.4         | -594.3                  | 0.00                    | 0.00                   | 0.00                  |
| 6,000.0                     | 8.00            | 172.86      | 5,958.5               | -607.6       | 76.1         | -608.1                  | 0.00                    | 0.00                   | 0.00                  |
| 6,100.0                     | 8.00            | 172.86      | 6,057.5               | -621.4       | 77.9         | -621.9                  | 0.00                    | 0.00                   | 0.00                  |
| 6,196.4                     | 8.00            | 172.86      | 6,153.0               | -634.7       | 79.5         | -635.2                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Cherry Canyon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,200.0                     | 8.00            | 172.86      | 6,156.5               | -635.2       | 79.6         | -635.7                  | 0.00                    | 0.00                   | 0.00                  |
| 6,300.0                     | 8.00            | 172.86      | 6,255.6               | -649.0       | 81.3         | -649.5                  | 0.00                    | 0.00                   | 0.00                  |
| 6,400.0                     | 8.00            | 172.86      | 6,354.6               | -662.8       | 83.1         | -663.4                  | 0.00                    | 0.00                   | 0.00                  |
| 6,500.0                     | 8.00            | 172.86      | 6,453.6               | -676.6       | 84.8         | -677.2                  | 0.00                    | 0.00                   | 0.00                  |
| 6,600.0                     | 8.00            | 172.86      | 6,552.7               | -690.4       | 86.5         | -691.0                  | 0.00                    | 0.00                   | 0.00                  |
| 6,700.0                     | 8.00            | 172.86      | 6,651.7               | -704.2       | 88.2         | -704.8                  | 0.00                    | 0.00                   | 0.00                  |
| 6,800.0                     | 8.00            | 172.86      | 6,750.7               | -718.0       | 90.0         | -718.6                  | 0.00                    | 0.00                   | 0.00                  |
| 6,900.0                     | 8.00            | 172.86      | 6,849.7               | -731.8       | 91.7         | -732.5                  | 0.00                    | 0.00                   | 0.00                  |
| 6,978.8                     | 8.00            | 172.86      | 6,927.8               | -742.7       | 93.1         | -743.3                  | 0.00                    | 0.00                   | 0.00                  |
| 7,000.0                     | 7.79            | 172.86      | 6,948.8               | -745.6       | 93.4         | -746.2                  | 1.00                    | -1.00                  | 0.00                  |
| 7,100.0                     | 6.79            | 172.86      | 7,048.0               | -758.2       | 95.0         | -758.8                  | 1.00                    | -1.00                  | 0.00                  |
| 7,200.0                     | 5.79            | 172.86      | 7,147.4               | -769.0       | 96.4         | -769.7                  | 1.00                    | -1.00                  | 0.00                  |
| 7,300.0                     | 4.79            | 172.86      | 7,246.9               | -778.2       | 97.5         | -778.9                  | 1.00                    | -1.00                  | 0.00                  |
| 7,400.0                     | 3.79            | 172.86      | 7,346.7               | -785.6       | 98.4         | -786.3                  | 1.00                    | -1.00                  | 0.00                  |
| 7,500.0                     | 2.79            | 172.86      | 7,446.5               | -791.3       | 99.2         | -792.0                  | 1.00                    | -1.00                  | 0.00                  |
| 7,600.0                     | 1.79            | 172.86      | 7,546.4               | -795.2       | 99.7         | -795.9                  | 1.00                    | -1.00                  | 0.00                  |
| 7,700.0                     | 0.79            | 172.86      | 7,646.4               | -797.5       | 99.9         | -798.2                  | 1.00                    | -1.00                  | 0.00                  |
| 7,730.6                     | 0.48            | 172.86      | 7,677.0               | -797.8       | 100.0        | -798.5                  | 1.00                    | -1.00                  | 0.00                  |
| <b>Brushy Canyon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,778.6                     | 0.00            | 0.00        | 7,725.0               | -798.0       | 100.0        | -798.7                  | 1.00                    | -1.00                  | 0.00                  |
| 7,800.0                     | 0.00            | 0.00        | 7,746.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 7,900.0                     | 0.00            | 0.00        | 7,846.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,000.0                     | 0.00            | 0.00        | 7,946.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,100.0                     | 0.00            | 0.00        | 8,046.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,200.0                     | 0.00            | 0.00        | 8,146.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,300.0                     | 0.00            | 0.00        | 8,246.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,400.0                     | 0.00            | 0.00        | 8,346.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,500.0                     | 0.00            | 0.00        | 8,446.4               | -798.0       | 100.0        | -798.7                  | 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 Apollo State Com #136H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3567.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3567.0usft             |
| <b>Site:</b>     | (Apollo State Com) Sec-21_T-24-S_R-33-E | <b>North Reference:</b>             | Grid                        |
| <b>Well:</b>     | Apollo State Com #136H                  | <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) |
| 8,600.0                     | 0.00            | 0.00        | 8,546.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,700.0                     | 0.00            | 0.00        | 8,646.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,800.0                     | 0.00            | 0.00        | 8,746.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 8,900.0                     | 0.00            | 0.00        | 8,846.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,000.0                     | 0.00            | 0.00        | 8,946.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,100.0                     | 0.00            | 0.00        | 9,046.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,149.6                     | 0.00            | 0.00        | 9,096.0               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Bone Spring Lime</b>     |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,200.0                     | 0.00            | 0.00        | 9,146.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,250.6                     | 0.00            | 0.00        | 9,197.0               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Upper Avalon</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,300.0                     | 0.00            | 0.00        | 9,246.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,400.0                     | 0.00            | 0.00        | 9,346.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,493.6                     | 0.00            | 0.00        | 9,440.0               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Middle Avalon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,500.0                     | 0.00            | 0.00        | 9,446.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,600.0                     | 0.00            | 0.00        | 9,546.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,700.0                     | 0.00            | 0.00        | 9,646.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,800.0                     | 0.00            | 0.00        | 9,746.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 9,858.6                     | 0.00            | 0.00        | 9,805.0               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Lower Avalon</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,900.0                     | 0.00            | 0.00        | 9,846.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,000.0                    | 0.00            | 0.00        | 9,946.4               | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,100.0                    | 0.00            | 0.00        | 10,046.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,161.6                    | 0.00            | 0.00        | 10,108.0              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>1st Bone Spring Sand</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,200.0                    | 0.00            | 0.00        | 10,146.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,300.0                    | 0.00            | 0.00        | 10,246.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,400.0                    | 0.00            | 0.00        | 10,346.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,500.0                    | 0.00            | 0.00        | 10,446.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,560.6                    | 0.00            | 0.00        | 10,507.0              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Carb</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,600.0                    | 0.00            | 0.00        | 10,546.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0                    | 0.00            | 0.00        | 10,646.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0                    | 0.00            | 0.00        | 10,746.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 10,836.6                    | 0.00            | 0.00        | 10,783.0              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Sand</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,900.0                    | 0.00            | 0.00        | 10,846.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0                    | 0.00            | 0.00        | 10,946.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0                    | 0.00            | 0.00        | 11,046.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0                    | 0.00            | 0.00        | 11,146.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0                    | 0.00            | 0.00        | 11,246.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,371.6                    | 0.00            | 0.00        | 11,318.0              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>3rd Bone Spring Carb</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,400.0                    | 0.00            | 0.00        | 11,346.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,500.0                    | 0.00            | 0.00        | 11,446.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,600.0                    | 0.00            | 0.00        | 11,546.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,700.0                    | 0.00            | 0.00        | 11,646.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,800.0                    | 0.00            | 0.00        | 11,746.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,900.0                    | 0.00            | 0.00        | 11,846.4              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,948.6                    | 0.00            | 0.00        | 11,895.0              | -798.0       | 100.0        | -798.7                  | 0.00                    | 0.00                   | 0.00                  |
| 11,950.0                    | 0.14            | 6.60        | 11,896.4              | -798.0       | 100.0        | -798.7                  | 10.00                   | 10.00                  | 0.00                  |
| 11,957.6                    | 0.90            | 6.60        | 11,904.0              | -797.9       | 100.0        | -798.6                  | 10.00                   | 10.00                  | 0.00                  |



# Intrepid Planning Report



**Database:** EDM 5000.15 Single User Db  
**Company:** Tap Rock Resources, LLC  
**Project:** Lea County, NM (NAD 83 NME)  
**Site:** (Apollo State Com) Sec-21\_T-24-S\_R-33-E  
**Well:** Apollo State Com #136H  
**Wellbore:** OWB  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Apollo State Com #136H  
**TVD Reference:** KB @ 3567.0usft  
**MD Reference:** KB @ 3567.0usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

| 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) |
| <b>3rd Bone Spring Sand</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,000.0                    | 5.14            | 6.60        | 11,946.3              | -795.7       | 100.3        | -796.4                  | 10.00                   | 10.00                  | 0.00                  |
| 12,050.0                    | 10.14           | 6.60        | 11,995.8              | -789.1       | 101.0        | -789.8                  | 10.00                   | 10.00                  | 0.00                  |
| 12,100.0                    | 15.14           | 6.60        | 12,044.6              | -778.3       | 102.3        | -779.0                  | 10.00                   | 10.00                  | 0.00                  |
| 12,150.0                    | 20.14           | 6.60        | 12,092.3              | -763.2       | 104.0        | -763.9                  | 10.00                   | 10.00                  | 0.00                  |
| 12,200.0                    | 25.14           | 6.60        | 12,138.4              | -744.1       | 106.2        | -744.8                  | 10.00                   | 10.00                  | 0.00                  |
| 12,250.0                    | 30.14           | 6.60        | 12,182.7              | -721.1       | 108.9        | -721.8                  | 10.00                   | 10.00                  | 0.00                  |
| 12,270.2                    | 32.16           | 6.60        | 12,200.0              | -710.7       | 110.1        | -711.4                  | 10.00                   | 10.00                  | 0.00                  |
| <b>3rd BS W Sand</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,300.0                    | 35.14           | 6.60        | 12,224.8              | -694.3       | 112.0        | -695.1                  | 10.00                   | 10.00                  | 0.00                  |
| 12,317.6                    | 36.90           | 6.60        | 12,239.0              | -684.0       | 113.2        | -684.8                  | 10.00                   | 10.00                  | 0.00                  |
| <b>Wolfcamp A X Sand</b>    |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,350.0                    | 40.14           | 6.60        | 12,264.3              | -664.0       | 115.5        | -664.8                  | 10.00                   | 10.00                  | 0.00                  |
| 12,400.0                    | 45.14           | 6.60        | 12,301.1              | -630.3       | 119.4        | -631.2                  | 10.00                   | 10.00                  | 0.00                  |
| 12,450.0                    | 50.14           | 6.60        | 12,334.8              | -593.6       | 123.6        | -594.5                  | 10.00                   | 10.00                  | 0.00                  |
| 12,500.0                    | 55.14           | 6.60        | 12,365.1              | -554.2       | 128.2        | -555.1                  | 10.00                   | 10.00                  | 0.00                  |
| 12,536.5                    | 58.78           | 6.60        | 12,385.0              | -523.8       | 131.7        | -524.8                  | 10.00                   | 10.00                  | 0.00                  |
| <b>Wolfcamp A Y Sand</b>    |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,550.0                    | 60.14           | 6.60        | 12,391.9              | -512.2       | 133.1        | -513.2                  | 10.00                   | 10.00                  | 0.00                  |
| 12,600.0                    | 65.14           | 6.60        | 12,414.9              | -468.1       | 138.2        | -469.1                  | 10.00                   | 10.00                  | 0.00                  |
| 12,650.0                    | 70.14           | 6.60        | 12,433.9              | -422.2       | 143.5        | -423.2                  | 10.00                   | 10.00                  | 0.00                  |
| 12,700.0                    | 75.14           | 6.60        | 12,448.8              | -374.8       | 149.0        | -375.9                  | 10.00                   | 10.00                  | 0.00                  |
| 12,750.0                    | 80.14           | 6.60        | 12,459.5              | -326.3       | 154.6        | -327.4                  | 10.00                   | 10.00                  | 0.00                  |
| 12,800.0                    | 85.14           | 6.60        | 12,465.9              | -277.1       | 160.3        | -278.2                  | 10.00                   | 10.00                  | 0.00                  |
| 12,848.6                    | 90.00           | 6.60        | 12,468.0              | -228.8       | 165.9        | -230.0                  | 10.00                   | 10.00                  | 0.00                  |
| 12,900.0                    | 90.00           | 5.57        | 12,468.0              | -177.8       | 171.3        | -179.0                  | 2.00                    | 0.00                   | -2.00                 |
| 13,000.0                    | 90.00           | 3.57        | 12,468.0              | -78.1        | 179.3        | -79.4                   | 2.00                    | 0.00                   | -2.00                 |
| 13,100.0                    | 90.00           | 1.57        | 12,468.0              | 21.8         | 183.8        | 20.5                    | 2.00                    | 0.00                   | -2.00                 |
| 13,199.2                    | 90.00           | 359.59      | 12,468.0              | 121.0        | 184.8        | 119.7                   | 2.00                    | 0.00                   | -2.00                 |
| 13,300.0                    | 90.00           | 359.59      | 12,468.0              | 221.8        | 184.0        | 220.5                   | 0.00                    | 0.00                   | 0.00                  |
| 13,400.0                    | 90.00           | 359.59      | 12,468.0              | 321.8        | 183.3        | 320.5                   | 0.00                    | 0.00                   | 0.00                  |
| 13,500.0                    | 90.00           | 359.59      | 12,468.0              | 421.8        | 182.6        | 420.5                   | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0                    | 90.00           | 359.59      | 12,468.0              | 521.8        | 181.9        | 520.5                   | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0                    | 90.00           | 359.59      | 12,468.0              | 621.8        | 181.2        | 620.5                   | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0                    | 90.00           | 359.59      | 12,468.0              | 721.8        | 180.4        | 720.5                   | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0                    | 90.00           | 359.59      | 12,468.0              | 821.8        | 179.7        | 820.5                   | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0                    | 90.00           | 359.59      | 12,468.0              | 921.8        | 179.0        | 920.5                   | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0                    | 90.00           | 359.59      | 12,468.0              | 1,021.8      | 178.3        | 1,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0                    | 90.00           | 359.59      | 12,468.0              | 1,121.8      | 177.6        | 1,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0                    | 90.00           | 359.59      | 12,468.0              | 1,221.8      | 176.8        | 1,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0                    | 90.00           | 359.59      | 12,468.0              | 1,321.8      | 176.1        | 1,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,500.0                    | 90.00           | 359.59      | 12,468.0              | 1,421.8      | 175.4        | 1,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0                    | 90.00           | 359.59      | 12,468.0              | 1,521.8      | 174.7        | 1,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0                    | 90.00           | 359.59      | 12,468.0              | 1,621.8      | 174.0        | 1,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0                    | 90.00           | 359.59      | 12,468.0              | 1,721.8      | 173.3        | 1,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 14,900.0                    | 90.00           | 359.59      | 12,468.0              | 1,821.8      | 172.5        | 1,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,000.0                    | 90.00           | 359.59      | 12,468.0              | 1,921.8      | 171.8        | 1,920.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,100.0                    | 90.00           | 359.59      | 12,468.0              | 2,021.8      | 171.1        | 2,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,200.0                    | 90.00           | 359.59      | 12,468.0              | 2,121.8      | 170.4        | 2,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,300.0                    | 90.00           | 359.59      | 12,468.0              | 2,221.8      | 169.7        | 2,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,400.0                    | 90.00           | 359.59      | 12,468.0              | 2,321.8      | 168.9        | 2,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,500.0                    | 90.00           | 359.59      | 12,468.0              | 2,421.7      | 168.2        | 2,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,600.0                    | 90.00           | 359.59      | 12,468.0              | 2,521.7      | 167.5        | 2,520.5                 | 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 Apollo State Com #136H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3567.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3567.0usft             |
| <b>Site:</b>     | (Apollo State Com) Sec-21_T-24-S_R-33-E | <b>North Reference:</b>             | Grid                        |
| <b>Well:</b>     | Apollo State Com #136H                  | <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) |
| 15,700.0              | 90.00           | 359.59      | 12,468.0              | 2,621.7      | 166.8        | 2,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,800.0              | 90.00           | 359.59      | 12,468.0              | 2,721.7      | 166.1        | 2,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,900.0              | 90.00           | 359.59      | 12,468.0              | 2,821.7      | 165.3        | 2,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,000.0              | 90.00           | 359.59      | 12,468.0              | 2,921.7      | 164.6        | 2,920.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,100.0              | 90.00           | 359.59      | 12,468.0              | 3,021.7      | 163.9        | 3,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,200.0              | 90.00           | 359.59      | 12,468.0              | 3,121.7      | 163.2        | 3,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,300.0              | 90.00           | 359.59      | 12,468.0              | 3,221.7      | 162.5        | 3,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,400.0              | 90.00           | 359.59      | 12,468.0              | 3,321.7      | 161.7        | 3,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,500.0              | 90.00           | 359.59      | 12,468.0              | 3,421.7      | 161.0        | 3,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,600.0              | 90.00           | 359.59      | 12,468.0              | 3,521.7      | 160.3        | 3,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,700.0              | 90.00           | 359.59      | 12,468.0              | 3,621.7      | 159.6        | 3,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,800.0              | 90.00           | 359.59      | 12,468.0              | 3,721.7      | 158.9        | 3,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,900.0              | 90.00           | 359.59      | 12,468.0              | 3,821.7      | 158.1        | 3,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,000.0              | 90.00           | 359.59      | 12,468.0              | 3,921.7      | 157.4        | 3,920.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,100.0              | 90.00           | 359.59      | 12,468.0              | 4,021.7      | 156.7        | 4,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,200.0              | 90.00           | 359.59      | 12,468.0              | 4,121.7      | 156.0        | 4,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,300.0              | 90.00           | 359.59      | 12,468.0              | 4,221.7      | 155.3        | 4,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,400.0              | 90.00           | 359.59      | 12,468.0              | 4,321.7      | 154.5        | 4,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,500.0              | 90.00           | 359.59      | 12,468.0              | 4,421.7      | 153.8        | 4,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,600.0              | 90.00           | 359.59      | 12,468.0              | 4,521.7      | 153.1        | 4,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,700.0              | 90.00           | 359.59      | 12,468.0              | 4,621.7      | 152.4        | 4,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,800.0              | 90.00           | 359.59      | 12,468.0              | 4,721.7      | 151.7        | 4,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,900.0              | 90.00           | 359.59      | 12,468.0              | 4,821.7      | 150.9        | 4,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,000.0              | 90.00           | 359.59      | 12,468.0              | 4,921.7      | 150.2        | 4,920.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,100.0              | 90.00           | 359.59      | 12,468.0              | 5,021.7      | 149.5        | 5,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,200.0              | 90.00           | 359.59      | 12,468.0              | 5,121.7      | 148.8        | 5,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,300.0              | 90.00           | 359.59      | 12,468.0              | 5,221.7      | 148.1        | 5,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,400.0              | 90.00           | 359.59      | 12,468.0              | 5,321.7      | 147.4        | 5,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,500.0              | 90.00           | 359.59      | 12,468.0              | 5,421.7      | 146.6        | 5,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,600.0              | 90.00           | 359.59      | 12,468.0              | 5,521.7      | 145.9        | 5,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,700.0              | 90.00           | 359.59      | 12,468.0              | 5,621.7      | 145.2        | 5,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,800.0              | 90.00           | 359.59      | 12,468.0              | 5,721.7      | 144.5        | 5,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 18,900.0              | 90.00           | 359.59      | 12,468.0              | 5,821.7      | 143.8        | 5,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,000.0              | 90.00           | 359.59      | 12,468.0              | 5,921.7      | 143.0        | 5,920.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,100.0              | 90.00           | 359.59      | 12,468.0              | 6,021.7      | 142.3        | 6,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,200.0              | 90.00           | 359.59      | 12,468.0              | 6,121.7      | 141.6        | 6,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,300.0              | 90.00           | 359.59      | 12,468.0              | 6,221.7      | 140.9        | 6,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,400.0              | 90.00           | 359.59      | 12,468.0              | 6,321.6      | 140.2        | 6,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,500.0              | 90.00           | 359.59      | 12,468.0              | 6,421.6      | 139.4        | 6,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,600.0              | 90.00           | 359.59      | 12,468.0              | 6,521.6      | 138.7        | 6,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,700.0              | 90.00           | 359.59      | 12,468.0              | 6,621.6      | 138.0        | 6,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,800.0              | 90.00           | 359.59      | 12,468.0              | 6,721.6      | 137.3        | 6,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 19,900.0              | 90.00           | 359.59      | 12,468.0              | 6,821.6      | 136.6        | 6,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,000.0              | 90.00           | 359.59      | 12,468.0              | 6,921.6      | 135.8        | 6,920.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,100.0              | 90.00           | 359.59      | 12,468.0              | 7,021.6      | 135.1        | 7,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,200.0              | 90.00           | 359.59      | 12,468.0              | 7,121.6      | 134.4        | 7,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,300.0              | 90.00           | 359.59      | 12,468.0              | 7,221.6      | 133.7        | 7,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,400.0              | 90.00           | 359.59      | 12,468.0              | 7,321.6      | 133.0        | 7,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,500.0              | 90.00           | 359.59      | 12,468.0              | 7,421.6      | 132.2        | 7,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,600.0              | 90.00           | 359.59      | 12,468.0              | 7,521.6      | 131.5        | 7,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,700.0              | 90.00           | 359.59      | 12,468.0              | 7,621.6      | 130.8        | 7,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,800.0              | 90.00           | 359.59      | 12,468.0              | 7,721.6      | 130.1        | 7,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 20,900.0              | 90.00           | 359.59      | 12,468.0              | 7,821.6      | 129.4        | 7,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,000.0              | 90.00           | 359.59      | 12,468.0              | 7,921.6      | 128.6        | 7,920.5                 | 0.00                    | 0.00                   | 0.00                  |



# Intrepid Planning Report



**Database:** EDM 5000.15 Single User Db  
**Company:** Tap Rock Resources, LLC  
**Project:** Lea County, NM (NAD 83 NME)  
**Site:** (Apollo State Com) Sec-21\_T-24-S\_R-33-E  
**Well:** Apollo State Com #136H  
**Wellbore:** OWB  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Apollo State Com #136H  
**TVD Reference:** KB @ 3567.0usft  
**MD Reference:** KB @ 3567.0usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 21,100.0              | 90.00           | 359.59      | 12,468.0              | 8,021.6      | 127.9        | 8,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,200.0              | 90.00           | 359.59      | 12,468.0              | 8,121.6      | 127.2        | 8,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,300.0              | 90.00           | 359.59      | 12,468.0              | 8,221.6      | 126.5        | 8,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,400.0              | 90.00           | 359.59      | 12,468.0              | 8,321.6      | 125.8        | 8,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,500.0              | 90.00           | 359.59      | 12,468.0              | 8,421.6      | 125.1        | 8,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,600.0              | 90.00           | 359.59      | 12,468.0              | 8,521.6      | 124.3        | 8,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,700.0              | 90.00           | 359.59      | 12,468.0              | 8,621.6      | 123.6        | 8,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,800.0              | 90.00           | 359.59      | 12,468.0              | 8,721.6      | 122.9        | 8,720.5                 | 0.00                    | 0.00                   | 0.00                  |
| 21,900.0              | 90.00           | 359.59      | 12,468.0              | 8,821.6      | 122.2        | 8,820.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,000.0              | 90.00           | 359.59      | 12,468.0              | 8,921.6      | 121.5        | 8,920.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,100.0              | 90.00           | 359.59      | 12,468.0              | 9,021.6      | 120.7        | 9,020.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,200.0              | 90.00           | 359.59      | 12,468.0              | 9,121.6      | 120.0        | 9,120.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,300.0              | 90.00           | 359.59      | 12,468.0              | 9,221.6      | 119.3        | 9,220.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,400.0              | 90.00           | 359.59      | 12,468.0              | 9,321.6      | 118.6        | 9,320.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,500.0              | 90.00           | 359.59      | 12,468.0              | 9,421.6      | 117.9        | 9,420.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,600.0              | 90.00           | 359.59      | 12,468.0              | 9,521.6      | 117.1        | 9,520.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,700.0              | 90.00           | 359.59      | 12,468.0              | 9,621.6      | 116.4        | 9,620.5                 | 0.00                    | 0.00                   | 0.00                  |
| 22,758.4              | 90.00           | 359.59      | 12,468.0              | 9,680.0      | 116.0        | 9,678.9                 | 0.00                    | 0.00                   | 0.00                  |

## Design Targets

| Target Name<br>- hit/miss target<br>- Shape                                                                                     | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|---------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| LTP (Apollo State Cor<br>- plan misses target center by 0.5usft at 22688.4usft MD (12468.0 TVD, 9610.0 N, 116.5 E)<br>- Point   | 0.00          | 0.00         | 12,468.0   | 9,610.0      | 117.0        | 446,279.00      | 776,134.00     | 32° 13' 28.620 N | 103° 34' 26.576 W |
| PBHL (Apollo State C<br>- plan hits target center<br>- Rectangle (sides W100.0 H10,428.0 D30.0)                                 | 0.00          | 359.59       | 12,468.0   | 9,680.0      | 116.0        | 446,349.00      | 776,133.00     | 32° 13' 29.313 N | 103° 34' 26.582 W |
| FTP (Apollo State Cor<br>- plan misses target center by 213.2usft at 12432.1usft MD (12323.1 TVD, -607.1 N, 122.1 E)<br>- Point | 0.00          | 0.00         | 12,468.0   | -748.0       | 190.0        | 435,921.00      | 776,207.00     | 32° 11' 46.120 N | 103° 34' 26.578 W |



# Intrepid Planning Report



|                  |                                         |                                     |                             |
|------------------|-----------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db              | <b>Local Co-ordinate Reference:</b> | Well Apollo State Com #136H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3567.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3567.0usft             |
| <b>Site:</b>     | (Apollo State Com) Sec-21_T-24-S_R-33-E | <b>North Reference:</b>             | Grid                        |
| <b>Well:</b>     | Apollo State Com #136H                  | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Wellbore:</b> | OWB                                     |                                     |                             |
| <b>Design:</b>   | Plan #1                                 |                                     |                             |

## Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name                 | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------|-----------------------|----------------------|-----------|---------|-------------------|
| 1,165.0               | 1,165.0               | Rustler Anhydrite    |           |         |                   |
| 1,657.5               | 1,657.0               | Top Salt             |           |         |                   |
| 4,935.1               | 4,904.0               | Base Salt            |           |         |                   |
| 5,152.3               | 5,119.0               | Delaware Mountain Gp |           |         |                   |
| 5,173.5               | 5,140.0               | Lamar                |           |         |                   |
| 5,214.9               | 5,181.0               | Bell Canyon          |           |         |                   |
| 5,237.1               | 5,203.0               | Ramsey Sand          |           |         |                   |
| 6,196.4               | 6,153.0               | Cherry Canyon        |           |         |                   |
| 7,730.6               | 7,677.0               | Brushy Canyon        |           |         |                   |
| 9,149.6               | 9,096.0               | Bone Spring Lime     |           |         |                   |
| 9,250.6               | 9,197.0               | Upper Avalon         |           |         |                   |
| 9,493.6               | 9,440.0               | Middle Avalon        |           |         |                   |
| 9,858.6               | 9,805.0               | Lower Avalon         |           |         |                   |
| 10,161.6              | 10,108.0              | 1st Bone Spring Sand |           |         |                   |
| 10,560.6              | 10,507.0              | 2nd Bone Spring Carb |           |         |                   |
| 10,836.6              | 10,783.0              | 2nd Bone Spring Sand |           |         |                   |
| 11,371.6              | 11,318.0              | 3rd Bone Spring Carb |           |         |                   |
| 11,957.6              | 11,904.0              | 3rd Bone Spring Sand |           |         |                   |
| 12,270.2              | 12,200.0              | 3rd BS W Sand        |           |         |                   |
| 12,317.6              | 12,239.0              | Wolfcamp A X Sand    |           |         |                   |
| 12,536.5              | 12,385.0              | Wolfcamp A Y Sand    |           |         |                   |

## Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                         |
|-----------------------|-----------------------|-------------------|--------------|---------------------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                 |
| 1,200.0               | 1,200.0               | 0.0               | 0.0          | NUDGE - Build 1.00              |
| 1,999.8               | 1,997.2               | -55.3             | 6.9          | HOLD - 4979.0 at 1999.8 MD      |
| 6,978.8               | 6,927.8               | -742.7            | 93.1         | DROP - -1.00                    |
| 7,778.6               | 7,725.0               | -798.0            | 100.0        | HOLD - 4170.0 at 7778.6 MD      |
| 11,948.6              | 11,895.0              | -798.0            | 100.0        | KOP - Build 10.00               |
| 12,848.6              | 12,468.0              | -228.8            | 165.9        | EOC/TRN - DLS 2.00 TFO -90.00   |
| 13,199.2              | 12,468.0              | 121.0             | 184.8        | Start 9559.2 hold at 13199.2 MD |
| 22,758.4              | 12,468.0              | 9,680.0           | 116.0        | TD at 22758.4                   |



## Casing and Tubing Performance Data

### PIPE BODY DATA

#### GEOMETRY

|                  |              |                       |           |                            |           |
|------------------|--------------|-----------------------|-----------|----------------------------|-----------|
| Outside Diameter | 13.375 in    | Wall Thickness        | 0.380 in  | API Drift Diameter         | 12.459 in |
| Nominal Weight   | 54.50 lbs/ft | Nominal ID            | 12.615 in | Alternative Drift Diameter | n.a.      |
| Plain End Weight | 52.79 lbs/ft | Nominal cross section | 15.513 in |                            |           |

#### PERFORMANCE

|                    |            |                         |            |                   |            |
|--------------------|------------|-------------------------|------------|-------------------|------------|
| Steel Grade        | J55        | Minimum Yield           | 55,000 psi | Minimum Ultimate  | 75,000 psi |
| Tension Yield      | 853,000 in | Internal Pressure Yield | 2,730 psi  | Collapse Pressure | 1,130 psi  |
| Available Seamless | Yes        | Available Welded        | Yes        |                   |            |

### CONNECTION DATA

TYPE: BTC

#### GEOMETRY

|                 |           |                |   |                      |   |
|-----------------|-----------|----------------|---|----------------------|---|
| Coupling Reg OD | 14.375 in | Threads per in | 5 | Thread turns make up | 1 |
|-----------------|-----------|----------------|---|----------------------|---|

#### PERFORMANCE

|                |             |                    |            |                              |            |
|----------------|-------------|--------------------|------------|------------------------------|------------|
| Steel Grade    | J55         | Coupling Min Yield | 55,000 psi | Coupling Min Ultimate        | 75,000 psi |
| Joint Strength | 909,000 lbs |                    |            | Internal Pressure Resistance | 2,730 psi  |

**District I**  
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**District II**  
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Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
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**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 28895

CONDITIONS

|                                                                                  |                                                      |
|----------------------------------------------------------------------------------|------------------------------------------------------|
| Operator:<br>TAP ROCK OPERATING, LLC<br>523 Park Point Drive<br>Golden, CO 80401 | OGRID:<br>372043                                     |
|                                                                                  | Action Number:<br>28895                              |
|                                                                                  | Action Type:<br>[C-103] NOI Change of Plans (C-103A) |

CONDITIONS

|            |           |                |
|------------|-----------|----------------|
| Created By | Condition | Condition Date |
| pkautz     | None      | 5/27/2021      |