

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101  
August 1, 2011

Permit 294819

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

|                                                                                                     |                                      |                               |
|-----------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------|
| 1. Operator Name and Address<br>TAP ROCK OPERATING, LLC<br>523 Park Point Drive<br>Golden, CO 80401 |                                      | 2. OGRID Number<br>372043     |
|                                                                                                     |                                      | 3. API Number<br>30-025-48655 |
| 4. Property Code<br>328891                                                                          | 5. Property Name<br>APOLLO STATE COM | 6. Well No.<br>154H           |

**7. Surface Location**

|               |               |                 |              |              |                  |               |                  |               |               |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|---------------|
| UL - Lot<br>P | Section<br>21 | Township<br>24S | Range<br>33E | Lot Idn<br>P | Feet From<br>843 | N/S Line<br>S | Feet From<br>502 | E/W Line<br>E | County<br>Lea |
|---------------|---------------|-----------------|--------------|--------------|------------------|---------------|------------------|---------------|---------------|

**8. Proposed Bottom Hole Location**

|               |               |                 |              |              |                 |               |                  |               |               |
|---------------|---------------|-----------------|--------------|--------------|-----------------|---------------|------------------|---------------|---------------|
| UL - Lot<br>A | Section<br>16 | Township<br>24S | Range<br>33E | Lot Idn<br>A | Feet From<br>30 | N/S Line<br>N | Feet From<br>331 | E/W Line<br>E | County<br>Lea |
|---------------|---------------|-----------------|--------------|--------------|-----------------|---------------|------------------|---------------|---------------|

**9. Pool Information**

|                            |       |
|----------------------------|-------|
| TRIPLE X;BONE SPRING, WEST | 96674 |
|----------------------------|-------|

**Additional Well Information**

|                           |                             |                                            |                         |                                    |
|---------------------------|-----------------------------|--------------------------------------------|-------------------------|------------------------------------|
| 11. Work Type<br>New Well | 12. Well Type<br>OIL        | 13. Cable/Rotary                           | 14. Lease Type<br>State | 15. Ground Level Elevation<br>3544 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>21865 | 18. Formation<br>3rd Bone Spring Carbonate | 19. Contractor          | 20. Spud Date<br>9/1/2021          |
| Depth to Ground water     |                             | Distance from nearest fresh water well     |                         | Distance to nearest surface water  |

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

**21. Proposed Casing and Cement Program**

| Type | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 17.5      | 13.375      | 54.5             | 1220          | 1100            | 0             |
| Int1 | 12.25     | 9.625       | 40               | 5220          | 1400            | 0             |
| Prod | 8.5       | 5.5         | 20               | 21860         | 3200            | 4000          |

**Casing/Cement Program: Additional Comments**

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| Tap Rock will drill 8.75" hole down to KOP of ~11,058' from 9-5/8" csg shoe then drill 8.5" curve and lateral. |
|----------------------------------------------------------------------------------------------------------------|

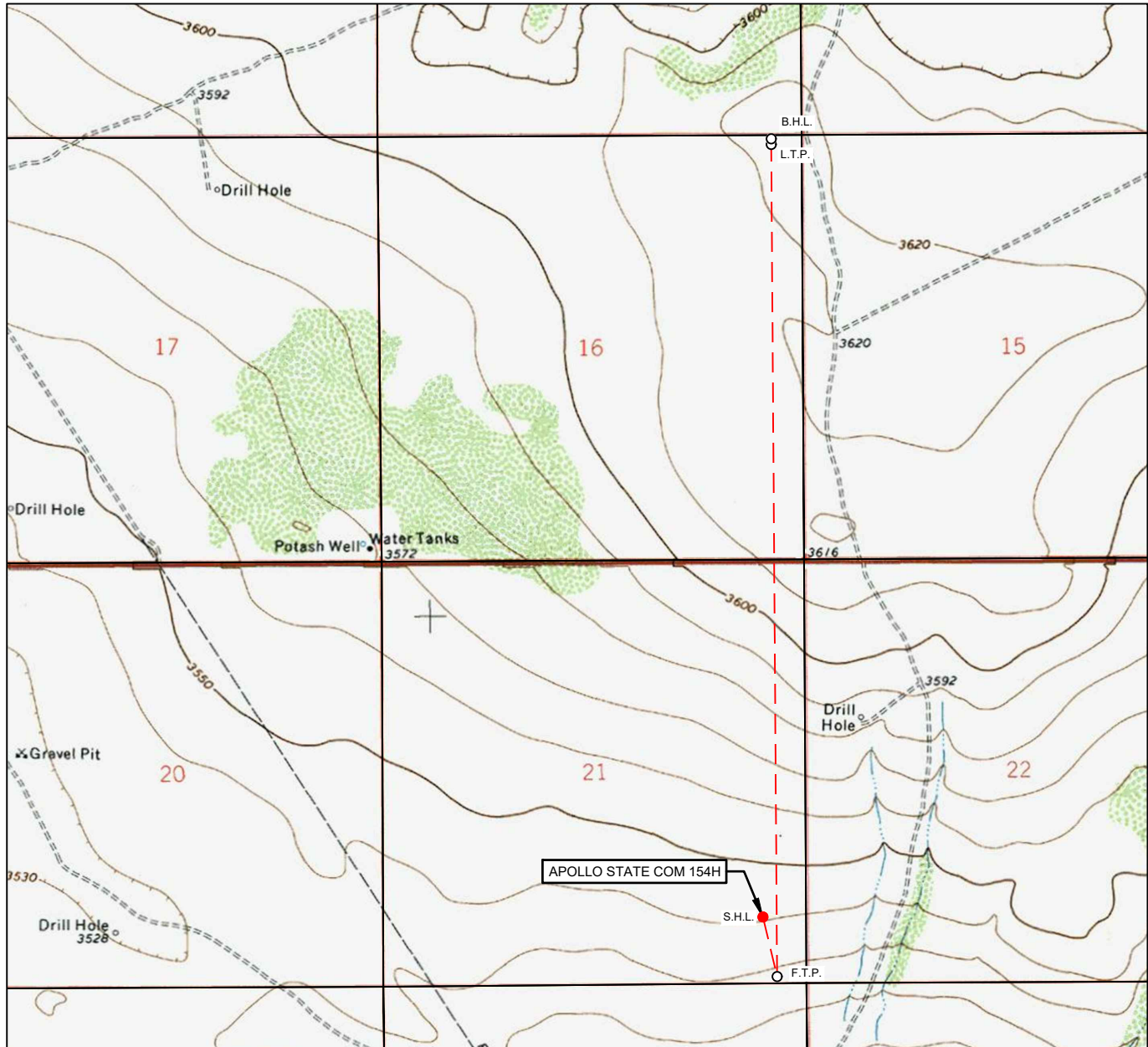
**22. Proposed Blowout Prevention Program**

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

|                                                                                                                                                                                                                                                                                                           |                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.<br><br>Signature: | <b>OIL CONSERVATION DIVISION</b>                         |
| Printed Name: Electronically filed by Christian Combs                                                                                                                                                                                                                                                     | Approved By: Paul F Kautz                                |
| Title: Regulatory Manager                                                                                                                                                                                                                                                                                 | Title: Geologist                                         |
| Email Address: ccombs@taprk.com                                                                                                                                                                                                                                                                           | Approved Date: 4/16/2021      Expiration Date: 4/16/2023 |
| Date: 4/14/2021      Phone: 720-360-4028                                                                                                                                                                                                                                                                  | Conditions of Approval Attached                          |



## LOCATION &amp; ELEVATION VERIFICATION MAP

LEASE NAME & WELL NO.: APOLLO STATE COM 154H

SECTION 21 TWP 24-S RGE 33-E SURVEY N.M.P.M.  
 COUNTY LEA STATE NM ELEVATION 3544'  
 DESCRIPTION 843' FSL & 502' FEL

LATITUDE N 32.1981780 LONGITUDE W 103.5703385

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

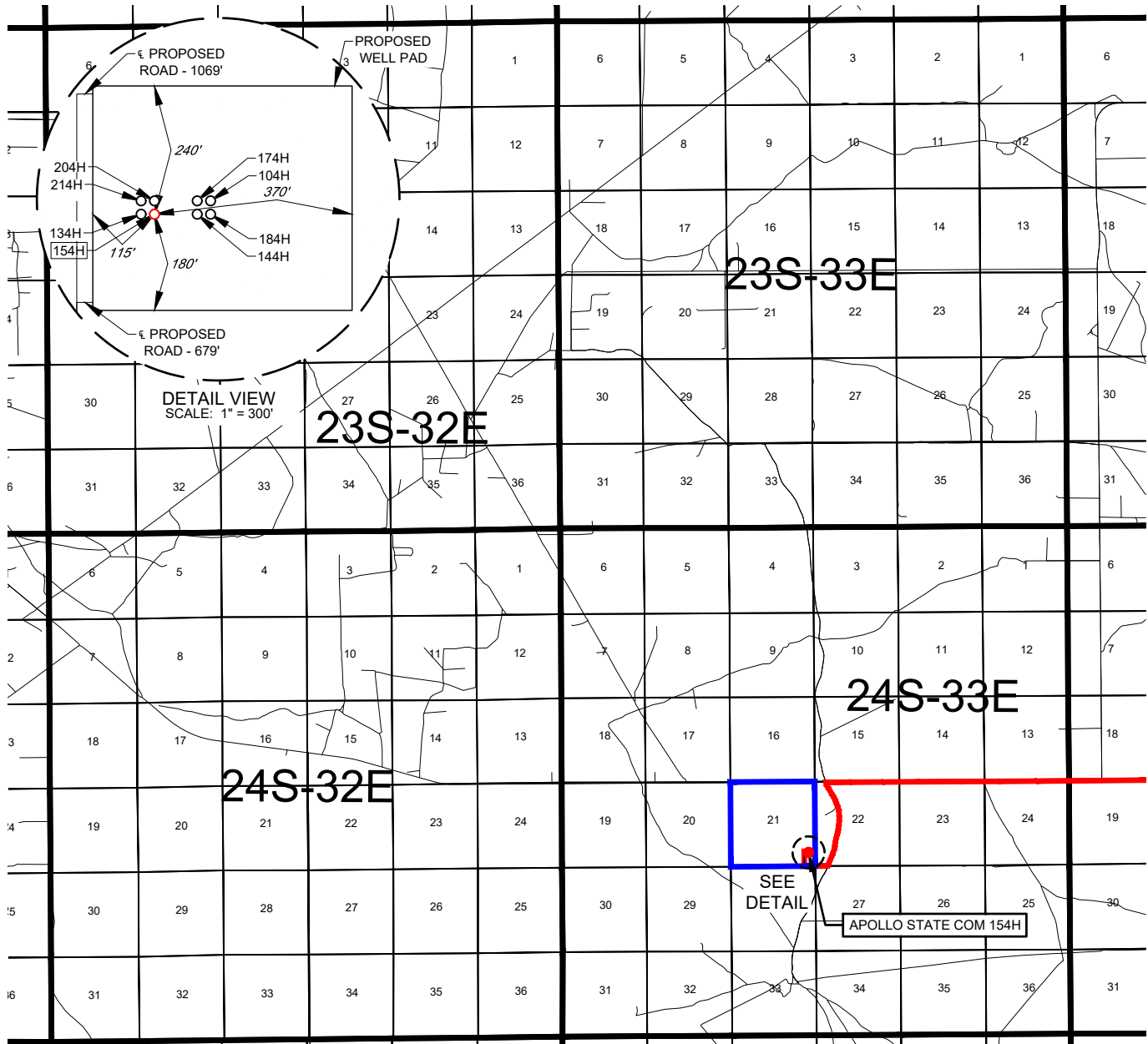
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF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

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



**TOPOGRAPHIC**  
 LOYALTY INNOVATION LEGACY

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

EXHIBIT 2  
VICINITY MAPLEASE NAME & WELL NO.: APOLLO STATE COM 154HSECTION 21 TWP 24-S RGE 33-E SURVEY N.M.P.M.  
COUNTY LEA STATE NM  
DESCRIPTION 843' FSL & 502' FEL

## DISTANCE &amp; DIRECTION

FROM INT. OF NM-128. & DELAWARE BASIN RD., GO WEST ON NM-128  
 ±3.3 MILES, THENCE SOUTH (LEFT) ON DIAMOND RD./J-2 ±1.1 MILES,  
 THENCE WEST (RIGHT) ON A LEASE RD. ±0.7 MILES, THENCE  
 NORTHWEST (RIGHT) ON A PROPOSED RD. ±679 FEET TO A POINT  
 ±201 FEET SOUTHWEST OF THE LOCATION.

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY  
 SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA  
 PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR  
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SCALE: 1" = 10000'  
 0' 5000' 10000'

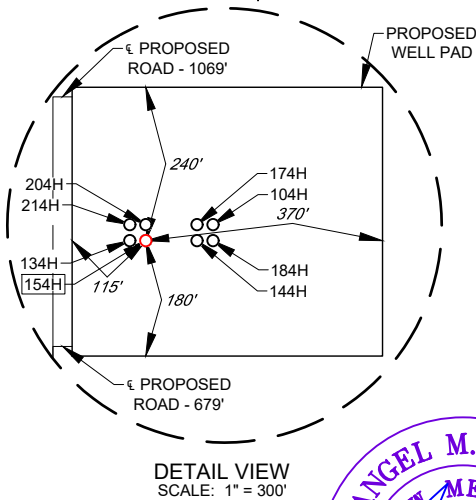
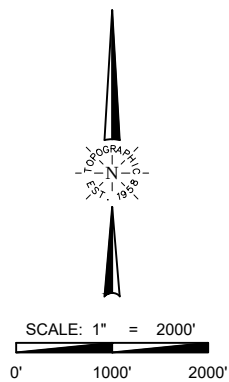
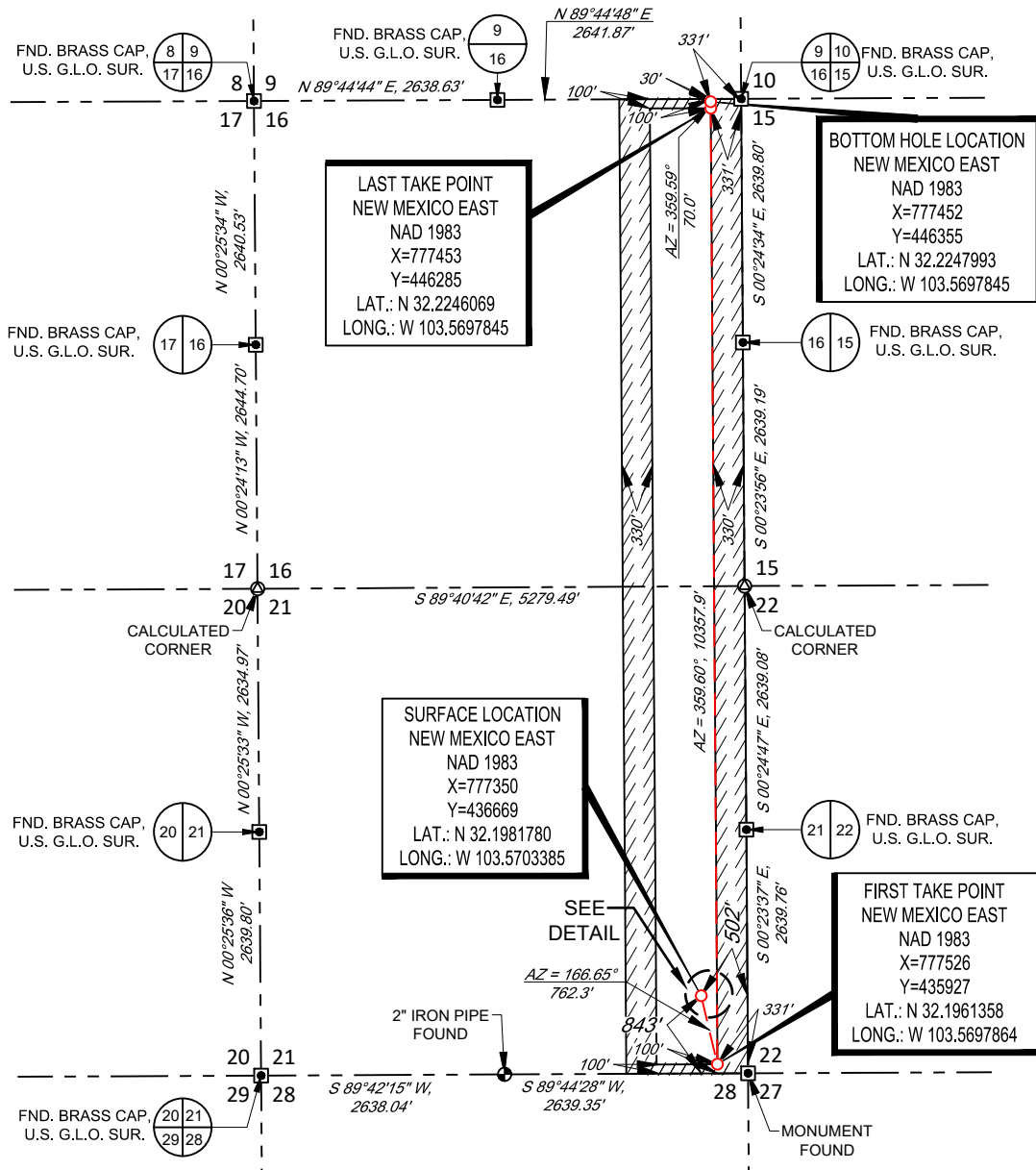


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TAP  
ROCK  
EXHIBIT 2A

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



LEASE NAME & WELL NO.: APOLLO STATE COM 154H

SECTION 21 TWP 24-S RGE 33-E SURVEY N.M.P.M.  
COUNTY LEA STATE NM  
DESCRIPTION 843' FSL & 502' FEL

DISTANCE & DIRECTION  
FROM INT. OF NM-128, & DELAWARE BASIN RD., GO WEST ON NM-128  
±3.3 MILES, THENCE SOUTH (LEFT) ON DIAMOND RD./J-2 ±1.1 MILES,  
THENCE WEST (RIGHT) ON A LEASE RD. ±0.7 MILES, THENCE  
NORTHWEST (RIGHT) ON A PROPOSED RD. ±679 FEET TO A POINT  
±201 FEET SOUTHWEST OF THE LOCATION.

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



Angel M. Baeza, P.S. No. 25116  
March 11, 2021

**TOPOGRAPHIC**  
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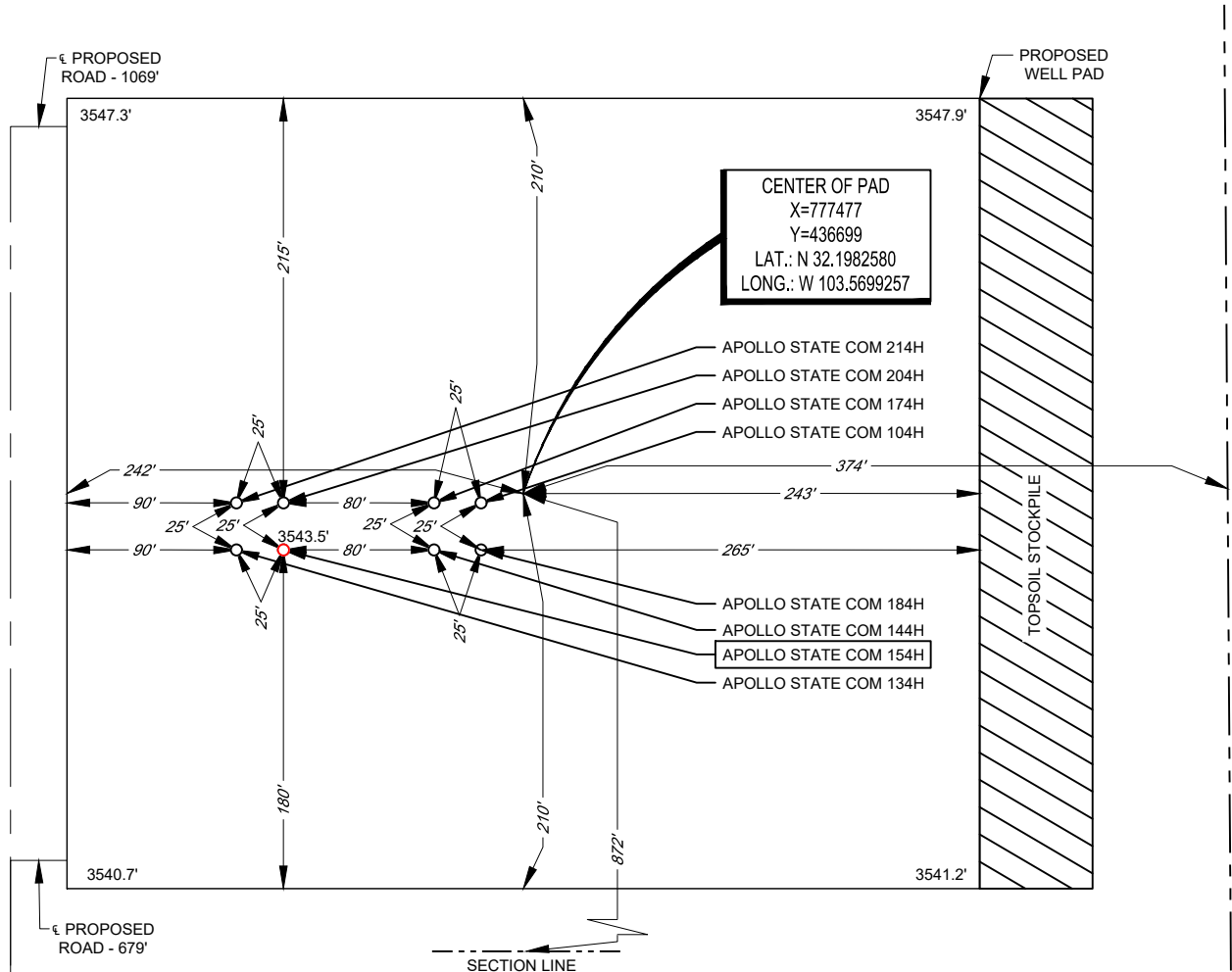


## LEGEND

----- 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 154H  
 154H LATITUDE N 32.1981780 154H LONGITUDE W 103.5703385

CENTER OF PAD IS 872' FSL & 374' FEL



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

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

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"



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



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

## GAS CAPTURE PLAN

Date: 4/16/2021

☒ Original

Operator & OGRID No.: [372043] TAP ROCK OPERATING, LLC

☐ Amended - Reason for  
Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

| Well Name              | API          | Well Location (ULSTR) | Footages    | Expected MCF/D | Flared or Vented | Comments                                                                                                                            |
|------------------------|--------------|-----------------------|-------------|----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| APOLLO STATE COM #154H | 30-025-48655 | P-21-24S-33E          | 0843S 0502E | 3400           | Flared           | Gas will be flared for ~21 days during flowback before being turned to the TB. Time est. depends on sales connect and well cleanup. |

### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to LUCID ENERGY DELAWARE, LLC and will be connected to LUCID ENERGY DELAWARE, LLC High/Low Pressure gathering system located in Lea County, New Mexico. It will require 2500' of pipeline to connect the facility to High/Low Pressure gathering system. TAP ROCK OPERATING, LLC provides (periodically) to LUCID ENERGY DELAWARE, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, TAP ROCK OPERATING, LLC and LUCID ENERGY DELAWARE, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at LUCID ENERGY DELAWARE, LLC Processing Plant located in Sec. 15, Twn. 24S, Rng. 33E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on LUCID ENERGY DELAWARE, LLC system at that time. Based on current information, it is TAP ROCK OPERATING, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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**State of New Mexico**  
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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Conditions

Permit 294819

**PERMIT CONDITIONS OF APPROVAL**

|                                                                                                            |                                 |
|------------------------------------------------------------------------------------------------------------|---------------------------------|
| Operator Name and Address:<br>TAP ROCK OPERATING, LLC [372043]<br>523 Park Point Drive<br>Golden, CO 80401 | API Number:<br>30-025-48655     |
|                                                                                                            | Well:<br>APOLLO STATE COM #154H |

| OCD Reviewer | Condition                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pkautz       | Notify OCD 24 hours prior to casing & cement                                                                                                                                                                                                                                                                                                                                                           |
| pkautz       | Will require a File As Drilled C-102 and a Directional Survey with the C-104                                                                                                                                                                                                                                                                                                                           |
| pkautz       | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string                                                                                                                                   |
| pkautz       | 1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --                                                                                                                                                                                                                                                         |
| pkautz       | If cement does not circulate to surface, must run temperature survey or other log to determine top of cement                                                                                                                                                                                                                                                                                           |
| pkautz       | Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water                                                                                                                                                                                                                                                                                                   |
| pkautz       | 1)- The Operator is to notify NMOC by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104                                                     |
| pkautz       | It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required. |
| pkautz       | Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.                                      |



# **Tap Rock Resources, LLC**

**Lea County, NM (NAD 83 NME)  
(Apollo State Com) Sec-21\_T-24-S\_R-33-E  
Apollo State Com #154H**

**OWB**

**Plan: Plan #1**

## **Standard Planning Report**

**05 April, 2021**





# Intrepid Planning Report



|                  |                                         |                                     |                             |
|------------------|-----------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db              | <b>Local Co-ordinate Reference:</b> | Well Apollo State Com #154H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3570.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3570.0usft             |
| <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 #154H                  | <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 #154H |                            |                                     |
| <b>Well Position</b>        | <b>+N/-S</b>           | -25.0 usft                 | <b>Northing:</b> 436,669.00 usft    |
|                             | <b>+E/-W</b>           | 1,228.0 usft               | <b>Easting:</b> 777,350.00 usft     |
| <b>Position Uncertainty</b> | 0.0 usft               | <b>Wellhead Elevation:</b> | <b>Latitude:</b> 32° 11' 53.442 N   |
|                             |                        |                            | <b>Longitude:</b> 103° 34' 13.215 W |
|                             |                        |                            | <b>Ground Level:</b> 3,544.0 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          | 04/05/21           | 6.54                   | 59.99                | 47,531.54244770            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <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>            | 04/05/21                 |                  |                     |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Remarks</b>      |
| 1                               | 0.0                    | 21,865.7                 | 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           |                    |
| 2,199.9                      | 10.00                  | 163.81             | 2,194.9                      | -83.6               | 24.3                | 1.00                           | 1.00                          | 0.00                         | 163.81         |                    |
| 5,947.1                      | 10.00                  | 163.81             | 5,885.1                      | -708.4              | 205.7               | 0.00                           | 0.00                          | 0.00                         | 0.00           |                    |
| 6,947.1                      | 0.00                   | 0.00               | 6,880.0                      | -792.0              | 230.0               | 1.00                           | -1.00                         | 0.00                         | 180.00         |                    |
| 11,058.1                     | 0.00                   | 0.00               | 10,991.0                     | -792.0              | 230.0               | 0.00                           | 0.00                          | 0.00                         | 0.00           |                    |
| 11,958.1                     | 90.00                  | 355.10             | 11,564.0                     | -221.1              | 181.1               | 10.00                          | 10.00                         | 0.00                         | 355.10         |                    |
| 12,182.7                     | 90.00                  | 359.59             | 11,564.0                     | 3.3                 | 170.7               | 2.00                           | 0.00                          | 2.00                         | 90.00          |                    |
| 21,865.7                     | 90.00                  | 359.59             | 11,564.0                     | 9,686.0             | 102.0               | 0.00                           | 0.00                          | 0.00                         | 0.00           | PBHL (Apollo State |



# Intrepid Planning Report



|                  |                                         |                                     |                             |
|------------------|-----------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db              | <b>Local Co-ordinate Reference:</b> | Well Apollo State Com #154H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3570.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3570.0usft             |
| <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 #154H                  | <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                  |
| 1,159.0                  | 0.00            | 0.00        | 1,159.0               | 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            | 163.81      | 1,300.0               | -0.8         | 0.2          | -0.8                    | 1.00                    | 1.00                   | 0.00                  |
| 1,400.0                  | 2.00            | 163.81      | 1,400.0               | -3.4         | 1.0          | -3.4                    | 1.00                    | 1.00                   | 0.00                  |
| 1,500.0                  | 3.00            | 163.81      | 1,499.9               | -7.5         | 2.2          | -7.6                    | 1.00                    | 1.00                   | 0.00                  |
| 1,600.0                  | 4.00            | 163.81      | 1,599.7               | -13.4        | 3.9          | -13.4                   | 1.00                    | 1.00                   | 0.00                  |
| 1,650.5                  | 4.50            | 163.81      | 1,650.0               | -17.0        | 4.9          | -17.0                   | 1.00                    | 1.00                   | 0.00                  |
| <b>Top Salt</b>          |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,700.0                  | 5.00            | 163.81      | 1,699.4               | -20.9        | 6.1          | -21.0                   | 1.00                    | 1.00                   | 0.00                  |
| 1,800.0                  | 6.00            | 163.81      | 1,798.9               | -30.1        | 8.8          | -30.2                   | 1.00                    | 1.00                   | 0.00                  |
| 1,900.0                  | 7.00            | 163.81      | 1,898.3               | -41.0        | 11.9         | -41.1                   | 1.00                    | 1.00                   | 0.00                  |
| 2,000.0                  | 8.00            | 163.81      | 1,997.4               | -53.5        | 15.6         | -53.7                   | 1.00                    | 1.00                   | 0.00                  |
| 2,100.0                  | 9.00            | 163.81      | 2,096.3               | -67.7        | 19.7         | -67.9                   | 1.00                    | 1.00                   | 0.00                  |
| 2,199.9                  | 10.00           | 163.81      | 2,194.9               | -83.6        | 24.3         | -83.8                   | 1.00                    | 1.00                   | 0.00                  |
| 2,300.0                  | 10.00           | 163.81      | 2,293.4               | -100.3       | 29.1         | -100.5                  | 0.00                    | 0.00                   | 0.00                  |
| 2,400.0                  | 10.00           | 163.81      | 2,391.9               | -116.9       | 34.0         | -117.2                  | 0.00                    | 0.00                   | 0.00                  |
| 2,500.0                  | 10.00           | 163.81      | 2,490.4               | -133.6       | 38.8         | -133.9                  | 0.00                    | 0.00                   | 0.00                  |
| 2,600.0                  | 10.00           | 163.81      | 2,588.9               | -150.3       | 43.6         | -150.6                  | 0.00                    | 0.00                   | 0.00                  |
| 2,700.0                  | 10.00           | 163.81      | 2,687.3               | -167.0       | 48.5         | -167.3                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0                  | 10.00           | 163.81      | 2,785.8               | -183.6       | 53.3         | -184.0                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0                  | 10.00           | 163.81      | 2,884.3               | -200.3       | 58.2         | -200.7                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0                  | 10.00           | 163.81      | 2,982.8               | -217.0       | 63.0         | -217.4                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0                  | 10.00           | 163.81      | 3,081.3               | -233.7       | 67.9         | -234.1                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.0                  | 10.00           | 163.81      | 3,179.7               | -250.3       | 72.7         | -250.9                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0                  | 10.00           | 163.81      | 3,278.2               | -267.0       | 77.5         | -267.6                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0                  | 10.00           | 163.81      | 3,376.7               | -283.7       | 82.4         | -284.3                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.0                  | 10.00           | 163.81      | 3,475.2               | -300.4       | 87.2         | -301.0                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0                  | 10.00           | 163.81      | 3,573.7               | -317.0       | 92.1         | -317.7                  | 0.00                    | 0.00                   | 0.00                  |
| 3,700.0                  | 10.00           | 163.81      | 3,672.1               | -333.7       | 96.9         | -334.4                  | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0                  | 10.00           | 163.81      | 3,770.6               | -350.4       | 101.8        | -351.1                  | 0.00                    | 0.00                   | 0.00                  |
| 3,900.0                  | 10.00           | 163.81      | 3,869.1               | -367.1       | 106.6        | -367.8                  | 0.00                    | 0.00                   | 0.00                  |
| 4,000.0                  | 10.00           | 163.81      | 3,967.6               | -383.7       | 111.4        | -384.5                  | 0.00                    | 0.00                   | 0.00                  |
| 4,100.0                  | 10.00           | 163.81      | 4,066.1               | -400.4       | 116.3        | -401.2                  | 0.00                    | 0.00                   | 0.00                  |
| 4,200.0                  | 10.00           | 163.81      | 4,164.5               | -417.1       | 121.1        | -417.9                  | 0.00                    | 0.00                   | 0.00                  |
| 4,300.0                  | 10.00           | 163.81      | 4,263.0               | -433.8       | 126.0        | -434.7                  | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0                  | 10.00           | 163.81      | 4,361.5               | -450.4       | 130.8        | -451.4                  | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0                  | 10.00           | 163.81      | 4,460.0               | -467.1       | 135.7        | -468.1                  | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0                  | 10.00           | 163.81      | 4,558.5               | -483.8       | 140.5        | -484.8                  | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0                  | 10.00           | 163.81      | 4,657.0               | -500.5       | 145.3        | -501.5                  | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0                  | 10.00           | 163.81      | 4,755.4               | -517.1       | 150.2        | -518.2                  | 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 #154H  
**Wellbore:** OWB  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well Apollo State Com #154H  
**TVD Reference:** KB @ 3570.0usft  
**MD Reference:** KB @ 3570.0usft  
**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) |
|-----------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,900.0                     | 10.00           | 163.81      | 4,853.9               | -533.8       | 155.0        | -534.9                  | 0.00                    | 0.00                   | 0.00                  |
| 4,951.9                     | 10.00           | 163.81      | 4,905.0               | -542.5       | 157.5        | -543.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Base Salt</b>            |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,000.0                     | 10.00           | 163.81      | 4,952.4               | -550.5       | 159.9        | -551.6                  | 0.00                    | 0.00                   | 0.00                  |
| 5,100.0                     | 10.00           | 163.81      | 5,050.9               | -567.2       | 164.7        | -568.3                  | 0.00                    | 0.00                   | 0.00                  |
| 5,174.2                     | 10.00           | 163.81      | 5,124.0               | -579.5       | 168.3        | -580.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Delaware Mountain Gp</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,195.6                     | 10.00           | 163.81      | 5,145.0               | -583.1       | 169.3        | -584.3                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Lamar</b>                |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,200.0                     | 10.00           | 163.81      | 5,149.4               | -583.8       | 169.5        | -585.0                  | 0.00                    | 0.00                   | 0.00                  |
| 5,237.2                     | 10.00           | 163.81      | 5,186.0               | -590.0       | 171.4        | -591.3                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Bell Canyon</b>          |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,269.7                     | 10.00           | 163.81      | 5,218.0               | -595.5       | 172.9        | -596.7                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Ramsey Sand</b>          |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,300.0                     | 10.00           | 163.81      | 5,247.8               | -600.5       | 174.4        | -601.7                  | 0.00                    | 0.00                   | 0.00                  |
| 5,400.0                     | 10.00           | 163.81      | 5,346.3               | -617.2       | 179.2        | -618.5                  | 0.00                    | 0.00                   | 0.00                  |
| 5,500.0                     | 10.00           | 163.81      | 5,444.8               | -633.9       | 184.1        | -635.2                  | 0.00                    | 0.00                   | 0.00                  |
| 5,600.0                     | 10.00           | 163.81      | 5,543.3               | -650.5       | 188.9        | -651.9                  | 0.00                    | 0.00                   | 0.00                  |
| 5,700.0                     | 10.00           | 163.81      | 5,641.8               | -667.2       | 193.8        | -668.6                  | 0.00                    | 0.00                   | 0.00                  |
| 5,800.0                     | 10.00           | 163.81      | 5,740.2               | -683.9       | 198.6        | -685.3                  | 0.00                    | 0.00                   | 0.00                  |
| 5,900.0                     | 10.00           | 163.81      | 5,838.7               | -700.6       | 203.4        | -702.0                  | 0.00                    | 0.00                   | 0.00                  |
| 5,947.1                     | 10.00           | 163.81      | 5,885.1               | -708.4       | 205.7        | -709.9                  | 0.00                    | 0.00                   | 0.00                  |
| 6,000.0                     | 9.47            | 163.81      | 5,937.2               | -717.0       | 208.2        | -718.5                  | 1.00                    | -1.00                  | 0.00                  |
| 6,100.0                     | 8.47            | 163.81      | 6,036.0               | -732.0       | 212.6        | -733.5                  | 1.00                    | -1.00                  | 0.00                  |
| 6,200.0                     | 7.47            | 163.81      | 6,135.1               | -745.3       | 216.4        | -746.8                  | 1.00                    | -1.00                  | 0.00                  |
| 6,235.2                     | 7.12            | 163.81      | 6,170.0               | -749.6       | 217.7        | -751.1                  | 1.00                    | -1.00                  | 0.00                  |
| <b>Cherry Canyon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,300.0                     | 6.47            | 163.81      | 6,234.3               | -756.9       | 219.8        | -758.5                  | 1.00                    | -1.00                  | 0.00                  |
| 6,400.0                     | 5.47            | 163.81      | 6,333.8               | -766.9       | 222.7        | -768.5                  | 1.00                    | -1.00                  | 0.00                  |
| 6,500.0                     | 4.47            | 163.81      | 6,433.4               | -775.3       | 225.1        | -776.9                  | 1.00                    | -1.00                  | 0.00                  |
| 6,600.0                     | 3.47            | 163.81      | 6,533.2               | -781.9       | 227.1        | -783.5                  | 1.00                    | -1.00                  | 0.00                  |
| 6,700.0                     | 2.47            | 163.81      | 6,633.0               | -786.9       | 228.5        | -788.5                  | 1.00                    | -1.00                  | 0.00                  |
| 6,800.0                     | 1.47            | 163.81      | 6,733.0               | -790.2       | 229.5        | -791.8                  | 1.00                    | -1.00                  | 0.00                  |
| 6,900.0                     | 0.47            | 163.81      | 6,832.9               | -791.8       | 229.9        | -793.4                  | 1.00                    | -1.00                  | 0.00                  |
| 6,947.1                     | 0.00            | 0.00        | 6,880.0               | -792.0       | 230.0        | -793.6                  | 1.00                    | -1.00                  | 0.00                  |
| 7,000.0                     | 0.00            | 0.00        | 6,932.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,100.0                     | 0.00            | 0.00        | 7,032.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,200.0                     | 0.00            | 0.00        | 7,132.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,300.0                     | 0.00            | 0.00        | 7,232.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,400.0                     | 0.00            | 0.00        | 7,332.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,500.0                     | 0.00            | 0.00        | 7,432.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,600.0                     | 0.00            | 0.00        | 7,532.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,700.0                     | 0.00            | 0.00        | 7,632.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,715.1                     | 0.00            | 0.00        | 7,648.0               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Brushy Canyon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,800.0                     | 0.00            | 0.00        | 7,732.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,900.0                     | 0.00            | 0.00        | 7,832.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,000.0                     | 0.00            | 0.00        | 7,932.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,100.0                     | 0.00            | 0.00        | 8,032.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,200.0                     | 0.00            | 0.00        | 8,132.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,300.0                     | 0.00            | 0.00        | 8,232.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,400.0                     | 0.00            | 0.00        | 8,332.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,500.0                     | 0.00            | 0.00        | 8,432.9               | -792.0       | 230.0        | -793.6                  | 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 #154H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3570.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3570.0usft             |
| <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 #154H                  | <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        | 8,532.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,700.0                     | 0.00            | 0.00        | 8,632.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,800.0                     | 0.00            | 0.00        | 8,732.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 8,900.0                     | 0.00            | 0.00        | 8,832.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,000.0                     | 0.00            | 0.00        | 8,932.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,100.0                     | 0.00            | 0.00        | 9,032.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,182.1                     | 0.00            | 0.00        | 9,115.0               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Bone Spring Lime</b>     |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,200.0                     | 0.00            | 0.00        | 9,132.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,286.1                     | 0.00            | 0.00        | 9,219.0               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Upper Avalon</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,300.0                     | 0.00            | 0.00        | 9,232.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,400.0                     | 0.00            | 0.00        | 9,332.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,500.0                     | 0.00            | 0.00        | 9,432.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,510.1                     | 0.00            | 0.00        | 9,443.0               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Middle Avalon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,600.0                     | 0.00            | 0.00        | 9,532.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,700.0                     | 0.00            | 0.00        | 9,632.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,800.0                     | 0.00            | 0.00        | 9,732.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 9,880.1                     | 0.00            | 0.00        | 9,813.0               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Lower Avalon</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,900.0                     | 0.00            | 0.00        | 9,832.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,000.0                    | 0.00            | 0.00        | 9,932.9               | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,100.0                    | 0.00            | 0.00        | 10,032.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,176.1                    | 0.00            | 0.00        | 10,109.0              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>1st Bone Spring Sand</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,200.0                    | 0.00            | 0.00        | 10,132.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,300.0                    | 0.00            | 0.00        | 10,232.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,400.0                    | 0.00            | 0.00        | 10,332.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,442.1                    | 0.00            | 0.00        | 10,375.0              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Carb</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,500.0                    | 0.00            | 0.00        | 10,432.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,600.0                    | 0.00            | 0.00        | 10,532.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0                    | 0.00            | 0.00        | 10,632.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0                    | 0.00            | 0.00        | 10,732.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 10,851.1                    | 0.00            | 0.00        | 10,784.0              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Sand</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,900.0                    | 0.00            | 0.00        | 10,832.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0                    | 0.00            | 0.00        | 10,932.9              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,058.1                    | 0.00            | 0.00        | 10,991.0              | -792.0       | 230.0        | -793.6                  | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0                    | 4.19            | 355.10      | 11,032.9              | -790.5       | 229.9        | -792.1                  | 10.00                   | 10.00                  | 0.00                  |
| 11,150.0                    | 9.19            | 355.10      | 11,082.5              | -784.7       | 229.4        | -786.3                  | 10.00                   | 10.00                  | 0.00                  |
| 11,200.0                    | 14.19           | 355.10      | 11,131.5              | -774.6       | 228.5        | -776.2                  | 10.00                   | 10.00                  | 0.00                  |
| 11,250.0                    | 19.19           | 355.10      | 11,179.4              | -760.3       | 227.3        | -761.9                  | 10.00                   | 10.00                  | 0.00                  |
| 11,300.0                    | 24.19           | 355.10      | 11,225.8              | -741.9       | 225.7        | -743.5                  | 10.00                   | 10.00                  | 0.00                  |
| 11,350.0                    | 29.19           | 355.10      | 11,270.5              | -719.5       | 223.8        | -721.1                  | 10.00                   | 10.00                  | 0.00                  |
| 11,400.0                    | 34.19           | 355.10      | 11,313.0              | -693.3       | 221.5        | -694.9                  | 10.00                   | 10.00                  | 0.00                  |
| 11,408.5                    | 35.04           | 355.10      | 11,320.0              | -688.5       | 221.1        | -690.1                  | 10.00                   | 10.00                  | 0.00                  |
| <b>3rd Bone Spring Carb</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,450.0                    | 39.19           | 355.10      | 11,353.1              | -663.6       | 219.0        | -665.1                  | 10.00                   | 10.00                  | 0.00                  |
| 11,500.0                    | 44.19           | 355.10      | 11,390.4              | -630.4       | 216.1        | -632.0                  | 10.00                   | 10.00                  | 0.00                  |
| 11,550.0                    | 49.19           | 355.10      | 11,424.7              | -594.2       | 213.0        | -595.7                  | 10.00                   | 10.00                  | 0.00                  |
| 11,600.0                    | 54.19           | 355.10      | 11,455.7              | -555.1       | 209.7        | -556.6                  | 10.00                   | 10.00                  | 0.00                  |



# Intrepid Planning Report



|                  |                                         |                                     |                             |
|------------------|-----------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db              | <b>Local Co-ordinate Reference:</b> | Well Apollo State Com #154H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3570.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3570.0usft             |
| <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 #154H                  | <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) |
| 11,650.0              | 59.19           | 355.10      | 11,483.1              | -513.5       | 206.1        | -515.0                  | 10.00                   | 10.00                  | 0.00                  |
| 11,700.0              | 64.19           | 355.10      | 11,506.8              | -469.6       | 202.4        | -471.1                  | 10.00                   | 10.00                  | 0.00                  |
| 11,750.0              | 69.19           | 355.10      | 11,526.6              | -423.9       | 198.4        | -425.3                  | 10.00                   | 10.00                  | 0.00                  |
| 11,800.0              | 74.19           | 355.10      | 11,542.3              | -376.6       | 194.4        | -378.0                  | 10.00                   | 10.00                  | 0.00                  |
| 11,850.0              | 79.19           | 355.10      | 11,553.8              | -328.2       | 190.2        | -329.5                  | 10.00                   | 10.00                  | 0.00                  |
| 11,900.0              | 84.19           | 355.10      | 11,561.0              | -278.9       | 186.0        | -280.2                  | 10.00                   | 10.00                  | 0.00                  |
| 11,950.0              | 89.19           | 355.10      | 11,563.9              | -229.2       | 181.7        | -230.5                  | 10.00                   | 10.00                  | 0.00                  |
| 11,958.1              | 90.00           | 355.10      | 11,564.0              | -221.1       | 181.1        | -222.4                  | 10.00                   | 10.00                  | 0.00                  |
| 12,000.0              | 90.00           | 355.94      | 11,564.0              | -179.3       | 177.8        | -180.6                  | 2.00                    | 0.00                   | 2.00                  |
| 12,100.0              | 90.00           | 357.94      | 11,564.0              | -79.5        | 172.4        | -80.7                   | 2.00                    | 0.00                   | 2.00                  |
| 12,182.7              | 90.00           | 359.59      | 11,564.0              | 3.3          | 170.7        | 2.0                     | 2.00                    | 0.00                   | 2.00                  |
| 12,200.0              | 90.00           | 359.59      | 11,564.0              | 20.5         | 170.5        | 19.3                    | 0.00                    | 0.00                   | 0.00                  |
| 12,300.0              | 90.00           | 359.59      | 11,564.0              | 120.5        | 169.8        | 119.3                   | 0.00                    | 0.00                   | 0.00                  |
| 12,400.0              | 90.00           | 359.59      | 11,564.0              | 220.5        | 169.1        | 219.3                   | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0              | 90.00           | 359.59      | 11,564.0              | 320.5        | 168.4        | 319.3                   | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0              | 90.00           | 359.59      | 11,564.0              | 420.5        | 167.7        | 419.3                   | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0              | 90.00           | 359.59      | 11,564.0              | 520.5        | 167.0        | 519.3                   | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0              | 90.00           | 359.59      | 11,564.0              | 620.5        | 166.3        | 619.3                   | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0              | 90.00           | 359.59      | 11,564.0              | 720.5        | 165.6        | 719.3                   | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0              | 90.00           | 359.59      | 11,564.0              | 820.5        | 164.9        | 819.3                   | 0.00                    | 0.00                   | 0.00                  |
| 13,100.0              | 90.00           | 359.59      | 11,564.0              | 920.5        | 164.2        | 919.3                   | 0.00                    | 0.00                   | 0.00                  |
| 13,200.0              | 90.00           | 359.59      | 11,564.0              | 1,020.5      | 163.4        | 1,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,300.0              | 90.00           | 359.59      | 11,564.0              | 1,120.5      | 162.7        | 1,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,400.0              | 90.00           | 359.59      | 11,564.0              | 1,220.5      | 162.0        | 1,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,500.0              | 90.00           | 359.59      | 11,564.0              | 1,320.5      | 161.3        | 1,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0              | 90.00           | 359.59      | 11,564.0              | 1,420.5      | 160.6        | 1,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0              | 90.00           | 359.59      | 11,564.0              | 1,520.5      | 159.9        | 1,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0              | 90.00           | 359.59      | 11,564.0              | 1,620.5      | 159.2        | 1,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0              | 90.00           | 359.59      | 11,564.0              | 1,720.5      | 158.5        | 1,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0              | 90.00           | 359.59      | 11,564.0              | 1,820.5      | 157.8        | 1,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0              | 90.00           | 359.59      | 11,564.0              | 1,920.5      | 157.1        | 1,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0              | 90.00           | 359.59      | 11,564.0              | 2,020.5      | 156.4        | 2,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0              | 90.00           | 359.59      | 11,564.0              | 2,120.5      | 155.6        | 2,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0              | 90.00           | 359.59      | 11,564.0              | 2,220.5      | 154.9        | 2,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,500.0              | 90.00           | 359.59      | 11,564.0              | 2,320.4      | 154.2        | 2,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0              | 90.00           | 359.59      | 11,564.0              | 2,420.4      | 153.5        | 2,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0              | 90.00           | 359.59      | 11,564.0              | 2,520.4      | 152.8        | 2,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0              | 90.00           | 359.59      | 11,564.0              | 2,620.4      | 152.1        | 2,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,900.0              | 90.00           | 359.59      | 11,564.0              | 2,720.4      | 151.4        | 2,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,000.0              | 90.00           | 359.59      | 11,564.0              | 2,820.4      | 150.7        | 2,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,100.0              | 90.00           | 359.59      | 11,564.0              | 2,920.4      | 150.0        | 2,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,200.0              | 90.00           | 359.59      | 11,564.0              | 3,020.4      | 149.3        | 3,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,300.0              | 90.00           | 359.59      | 11,564.0              | 3,120.4      | 148.6        | 3,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,400.0              | 90.00           | 359.59      | 11,564.0              | 3,220.4      | 147.8        | 3,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,500.0              | 90.00           | 359.59      | 11,564.0              | 3,320.4      | 147.1        | 3,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,600.0              | 90.00           | 359.59      | 11,564.0              | 3,420.4      | 146.4        | 3,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,700.0              | 90.00           | 359.59      | 11,564.0              | 3,520.4      | 145.7        | 3,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,800.0              | 90.00           | 359.59      | 11,564.0              | 3,620.4      | 145.0        | 3,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,900.0              | 90.00           | 359.59      | 11,564.0              | 3,720.4      | 144.3        | 3,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,000.0              | 90.00           | 359.59      | 11,564.0              | 3,820.4      | 143.6        | 3,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,100.0              | 90.00           | 359.59      | 11,564.0              | 3,920.4      | 142.9        | 3,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,200.0              | 90.00           | 359.59      | 11,564.0              | 4,020.4      | 142.2        | 4,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,300.0              | 90.00           | 359.59      | 11,564.0              | 4,120.4      | 141.5        | 4,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,400.0              | 90.00           | 359.59      | 11,564.0              | 4,220.4      | 140.8        | 4,219.3                 | 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 #154H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3570.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3570.0usft             |
| <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 #154H                  | <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) |
| 16,500.0              | 90.00           | 359.59      | 11,564.0              | 4,320.4      | 140.0        | 4,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,600.0              | 90.00           | 359.59      | 11,564.0              | 4,420.4      | 139.3        | 4,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,700.0              | 90.00           | 359.59      | 11,564.0              | 4,520.4      | 138.6        | 4,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,800.0              | 90.00           | 359.59      | 11,564.0              | 4,620.4      | 137.9        | 4,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,900.0              | 90.00           | 359.59      | 11,564.0              | 4,720.4      | 137.2        | 4,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,000.0              | 90.00           | 359.59      | 11,564.0              | 4,820.4      | 136.5        | 4,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,100.0              | 90.00           | 359.59      | 11,564.0              | 4,920.4      | 135.8        | 4,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,200.0              | 90.00           | 359.59      | 11,564.0              | 5,020.4      | 135.1        | 5,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,300.0              | 90.00           | 359.59      | 11,564.0              | 5,120.4      | 134.4        | 5,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,400.0              | 90.00           | 359.59      | 11,564.0              | 5,220.4      | 133.7        | 5,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,500.0              | 90.00           | 359.59      | 11,564.0              | 5,320.4      | 133.0        | 5,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,600.0              | 90.00           | 359.59      | 11,564.0              | 5,420.4      | 132.2        | 5,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,700.0              | 90.00           | 359.59      | 11,564.0              | 5,520.4      | 131.5        | 5,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,800.0              | 90.00           | 359.59      | 11,564.0              | 5,620.4      | 130.8        | 5,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,900.0              | 90.00           | 359.59      | 11,564.0              | 5,720.4      | 130.1        | 5,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,000.0              | 90.00           | 359.59      | 11,564.0              | 5,820.4      | 129.4        | 5,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,100.0              | 90.00           | 359.59      | 11,564.0              | 5,920.4      | 128.7        | 5,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,200.0              | 90.00           | 359.59      | 11,564.0              | 6,020.4      | 128.0        | 6,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,300.0              | 90.00           | 359.59      | 11,564.0              | 6,120.4      | 127.3        | 6,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,400.0              | 90.00           | 359.59      | 11,564.0              | 6,220.4      | 126.6        | 6,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,500.0              | 90.00           | 359.59      | 11,564.0              | 6,320.3      | 125.9        | 6,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,600.0              | 90.00           | 359.59      | 11,564.0              | 6,420.3      | 125.2        | 6,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,700.0              | 90.00           | 359.59      | 11,564.0              | 6,520.3      | 124.4        | 6,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,800.0              | 90.00           | 359.59      | 11,564.0              | 6,620.3      | 123.7        | 6,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 18,900.0              | 90.00           | 359.59      | 11,564.0              | 6,720.3      | 123.0        | 6,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,000.0              | 90.00           | 359.59      | 11,564.0              | 6,820.3      | 122.3        | 6,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,100.0              | 90.00           | 359.59      | 11,564.0              | 6,920.3      | 121.6        | 6,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,200.0              | 90.00           | 359.59      | 11,564.0              | 7,020.3      | 120.9        | 7,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,300.0              | 90.00           | 359.59      | 11,564.0              | 7,120.3      | 120.2        | 7,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,400.0              | 90.00           | 359.59      | 11,564.0              | 7,220.3      | 119.5        | 7,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,500.0              | 90.00           | 359.59      | 11,564.0              | 7,320.3      | 118.8        | 7,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,600.0              | 90.00           | 359.59      | 11,564.0              | 7,420.3      | 118.1        | 7,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,700.0              | 90.00           | 359.59      | 11,564.0              | 7,520.3      | 117.4        | 7,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,800.0              | 90.00           | 359.59      | 11,564.0              | 7,620.3      | 116.6        | 7,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 19,900.0              | 90.00           | 359.59      | 11,564.0              | 7,720.3      | 115.9        | 7,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,000.0              | 90.00           | 359.59      | 11,564.0              | 7,820.3      | 115.2        | 7,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,100.0              | 90.00           | 359.59      | 11,564.0              | 7,920.3      | 114.5        | 7,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,200.0              | 90.00           | 359.59      | 11,564.0              | 8,020.3      | 113.8        | 8,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,300.0              | 90.00           | 359.59      | 11,564.0              | 8,120.3      | 113.1        | 8,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,400.0              | 90.00           | 359.59      | 11,564.0              | 8,220.3      | 112.4        | 8,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,500.0              | 90.00           | 359.59      | 11,564.0              | 8,320.3      | 111.7        | 8,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,600.0              | 90.00           | 359.59      | 11,564.0              | 8,420.3      | 111.0        | 8,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,700.0              | 90.00           | 359.59      | 11,564.0              | 8,520.3      | 110.3        | 8,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,800.0              | 90.00           | 359.59      | 11,564.0              | 8,620.3      | 109.6        | 8,619.3                 | 0.00                    | 0.00                   | 0.00                  |
| 20,900.0              | 90.00           | 359.59      | 11,564.0              | 8,720.3      | 108.8        | 8,719.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,000.0              | 90.00           | 359.59      | 11,564.0              | 8,820.3      | 108.1        | 8,819.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,100.0              | 90.00           | 359.59      | 11,564.0              | 8,920.3      | 107.4        | 8,919.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,200.0              | 90.00           | 359.59      | 11,564.0              | 9,020.3      | 106.7        | 9,019.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,300.0              | 90.00           | 359.59      | 11,564.0              | 9,120.3      | 106.0        | 9,119.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,400.0              | 90.00           | 359.59      | 11,564.0              | 9,220.3      | 105.3        | 9,219.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,500.0              | 90.00           | 359.59      | 11,564.0              | 9,320.3      | 104.6        | 9,319.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,600.0              | 90.00           | 359.59      | 11,564.0              | 9,420.3      | 103.9        | 9,419.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,700.0              | 90.00           | 359.59      | 11,564.0              | 9,520.3      | 103.2        | 9,519.3                 | 0.00                    | 0.00                   | 0.00                  |
| 21,800.0              | 90.00           | 359.59      | 11,564.0              | 9,620.3      | 102.5        | 9,619.3                 | 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 #154H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3570.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3570.0usft             |
| <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 #154H                  | <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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 21,865.7              | 90.00           | 359.59      | 11,564.0              | 9,686.0      | 102.0        | 9,685.0                 | 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 21795.7usft MD (11564.0 TVD, 9616.0 N, 102.5 E)<br>- Point   | 0.00          | 0.00         | 11,564.0   | 9,616.0      | 103.0        | 446,285.00      | 777,453.00     | 32° 13' 28.587 N | 103° 34' 11.221 W |
| PBHL (Apollo State C<br>- plan hits target center<br>- Rectangle (sides W100.0 H10,428.0 D30.0)                                 | 0.00          | 359.59       | 11,564.0   | 9,686.0      | 102.0        | 446,355.00      | 777,452.00     | 32° 13' 29.280 N | 103° 34' 11.227 W |
| FTP (Apollo State Cor<br>- plan misses target center by 205.9usft at 11540.7usft MD (11418.5 TVD, -601.2 N, 213.6 E)<br>- Point | 0.00          | 0.00         | 11,564.0   | -742.0       | 176.0        | 435,927.00      | 777,526.00     | 32° 11' 46.087 N | 103° 34' 11.228 W |

## Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name                 | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------|-----------------------|----------------------|-----------|---------|-------------------|
| 1,159.0               | 1,159.0               | Rustler Anhydrite    |           |         |                   |
| 1,650.5               | 1,650.0               | Top Salt             |           |         |                   |
| 4,951.9               | 4,905.0               | Base Salt            |           |         |                   |
| 5,174.2               | 5,124.0               | Delaware Mountain Gp |           |         |                   |
| 5,195.6               | 5,145.0               | Lamar                |           |         |                   |
| 5,237.2               | 5,186.0               | Bell Canyon          |           |         |                   |
| 5,269.7               | 5,218.0               | Ramsey Sand          |           |         |                   |
| 6,235.2               | 6,170.0               | Cherry Canyon        |           |         |                   |
| 7,715.1               | 7,648.0               | Brushy Canyon        |           |         |                   |
| 9,182.1               | 9,115.0               | Bone Spring Lime     |           |         |                   |
| 9,286.1               | 9,219.0               | Upper Avalon         |           |         |                   |
| 9,510.1               | 9,443.0               | Middle Avalon        |           |         |                   |
| 9,880.1               | 9,813.0               | Lower Avalon         |           |         |                   |
| 10,176.1              | 10,109.0              | 1st Bone Spring Sand |           |         |                   |
| 10,442.1              | 10,375.0              | 2nd Bone Spring Carb |           |         |                   |
| 10,851.1              | 10,784.0              | 2nd Bone Spring Sand |           |         |                   |
| 11,408.5              | 11,320.0              | 3rd Bone Spring Carb |           |         |                   |



# Intrepid Planning Report



|                  |                                         |                                     |                             |
|------------------|-----------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db              | <b>Local Co-ordinate Reference:</b> | Well Apollo State Com #154H |
| <b>Company:</b>  | Tap Rock Resources, LLC                 | <b>TVD Reference:</b>               | KB @ 3570.0usft             |
| <b>Project:</b>  | Lea County, NM (NAD 83 NME)             | <b>MD Reference:</b>                | KB @ 3570.0usft             |
| <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 #154H                  | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Wellbore:</b> | OWB                                     |                                     |                             |
| <b>Design:</b>   | Plan #1                                 |                                     |                             |

| 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              |
| 2,199.9               | 2,194.9               | -83.6             | 24.3         | HOLD - 3747.2 at 2199.9 MD      |
| 5,947.1               | 5,885.1               | -708.4            | 205.7        | DROP - -1.00                    |
| 6,947.1               | 6,880.0               | -792.0            | 230.0        | HOLD - 4111.0 at 6947.1 MD      |
| 11,058.1              | 10,991.0              | -792.0            | 230.0        | KOP - Build 10.00               |
| 11,958.1              | 11,564.0              | -221.1            | 181.1        | EOC/TRN - DLS 2.00 TFO 90.00    |
| 12,182.7              | 11,564.0              | 3.3               | 170.7        | Start 9683.0 hold at 12182.7 MD |
| 21,865.7              | 11,564.0              | 9,686.0           | 102.0        | TD at 21865.7                   |