

**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 275245

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

|                                                                                                     |  |                               |
|-----------------------------------------------------------------------------------------------------|--|-------------------------------|
| 1. Operator Name and Address<br>TAP ROCK OPERATING, LLC<br>602 Park Point Drive<br>Golden, CO 80401 |  | 2. OGRID Number<br>372043     |
| 4. Property Code<br>324989                                                                          |  | 3. API Number<br>30-015-46535 |
| 5. Property Name<br>MISO STATE                                                                      |  | 6. Well No.<br>163H           |

**7. Surface Location**

|               |              |                 |              |         |                  |               |                   |               |                |
|---------------|--------------|-----------------|--------------|---------|------------------|---------------|-------------------|---------------|----------------|
| UL - Lot<br>O | Section<br>2 | Township<br>26S | Range<br>25E | Lot Idn | Feet From<br>263 | N/S Line<br>S | Feet From<br>1471 | E/W Line<br>E | County<br>Eddy |
|---------------|--------------|-----------------|--------------|---------|------------------|---------------|-------------------|---------------|----------------|

**8. Proposed Bottom Hole Location**

|               |              |                 |              |              |                  |               |                   |               |                |
|---------------|--------------|-----------------|--------------|--------------|------------------|---------------|-------------------|---------------|----------------|
| UL - Lot<br>B | Section<br>2 | Township<br>26S | Range<br>25E | Lot Idn<br>B | Feet From<br>200 | N/S Line<br>N | Feet From<br>2310 | E/W Line<br>E | County<br>Eddy |
|---------------|--------------|-----------------|--------------|--------------|------------------|---------------|-------------------|---------------|----------------|

**9. Pool Information**

|                            |       |
|----------------------------|-------|
| PURPLE SAGE;WOLFCAMP (GAS) | 98220 |
|----------------------------|-------|

**Additional Well Information**

|                           |                             |                                        |                         |                                    |
|---------------------------|-----------------------------|----------------------------------------|-------------------------|------------------------------------|
| 11. Work Type<br>New Well | 12. Well Type<br>GAS        | 13. Cable/Rotary                       | 14. Lease Type<br>State | 15. Ground Level Elevation<br>3611 |
| 16. Multiple<br>N         | 17. Proposed Depth<br>13243 | 18. Formation<br>Wolfcamp              | 19. Contractor          | 20. Spud Date<br>2/1/2020          |
| 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             | 350           | 350             | 0             |
| Int1 | 12.25     | 9.625       | 40               | 1780          | 700             | 0             |
| Prod | 8.75      | 5.5         | 20               | 13243         | 2300            | 0             |

**Casing/Cement Program: Additional Comments**

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

**22. Proposed Blowout Prevention Program**

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

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

**OIL CONSERVATION DIVISION**

Signature:

|                                                       |                                 |
|-------------------------------------------------------|---------------------------------|
| Printed Name: Electronically filed by Christian Combs | Approved By: Raymond Podany     |
| Title: Regulatory Manager                             | Title: Geologist                |
| Email Address: ccombs@taprk.com                       | Approved Date: 12/26/2019       |
| Date: 12/18/2019                                      | Expiration Date: 12/26/2021     |
| Phone: 720-360-4028                                   | Conditions of Approval Attached |

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State of New Mexico  
Energy, Minerals & Natural Resources  
Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

FORM C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

|                            |  |                                                               |  |                        |                                         |
|----------------------------|--|---------------------------------------------------------------|--|------------------------|-----------------------------------------|
| <sup>1</sup> API Number    |  | <sup>2</sup> Pool Code                                        |  | <sup>3</sup> Pool Name |                                         |
| <sup>4</sup> Property Code |  | <sup>5</sup> Property Name<br><b>MISO STATE</b>               |  |                        | <sup>6</sup> Well Number<br><b>163H</b> |
| <sup>7</sup> OGRID No.     |  | <sup>8</sup> Operator Name<br><b>TAP ROCK OPERATING, LLC.</b> |  |                        | <sup>9</sup> Elevation<br><b>3611'</b>  |

## <sup>10</sup>Surface Location

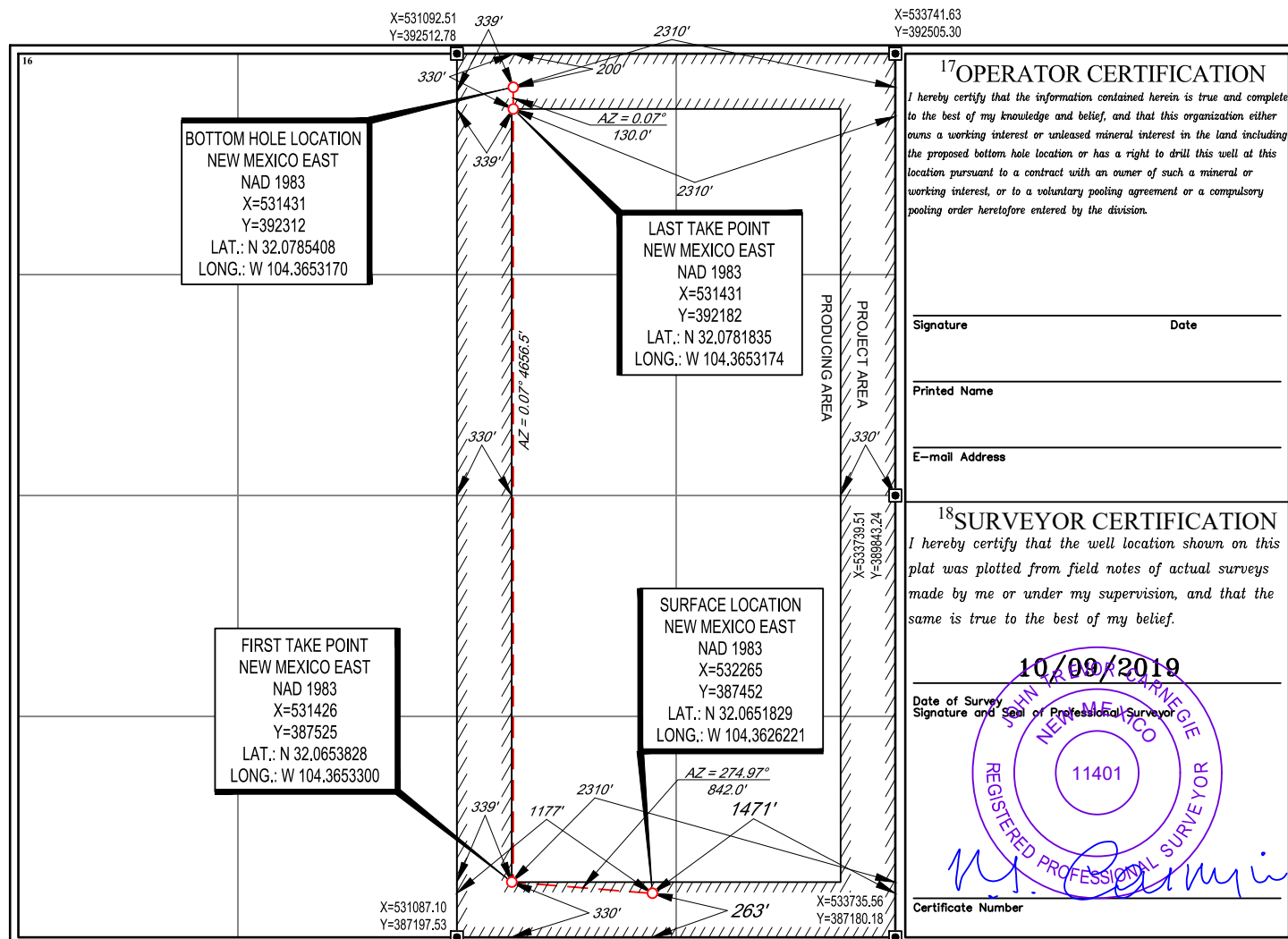
| UL or lot no. | Section  | Township    | Range       | Lot Idn  | Feet from the | North/South line | Feet from the | East/West line | County      |
|---------------|----------|-------------|-------------|----------|---------------|------------------|---------------|----------------|-------------|
| <b>0</b>      | <b>2</b> | <b>26-S</b> | <b>25-E</b> | <b>-</b> | <b>263'</b>   | <b>SOUTH</b>     | <b>1471'</b>  | <b>EAST</b>    | <b>EDDY</b> |

## <sup>11</sup>Bottom Hole Location If Different From Surface

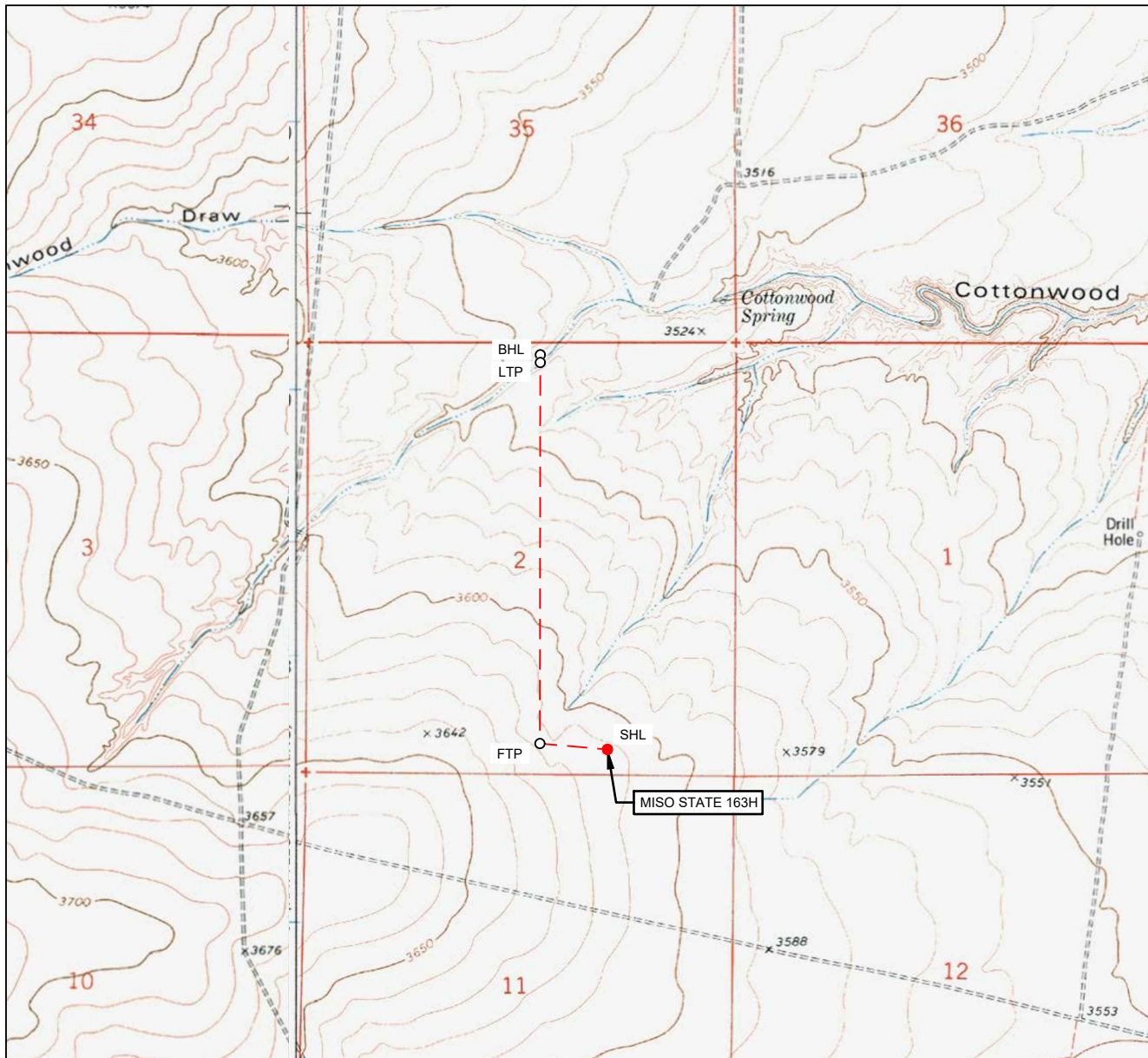
| UL or lot no. | Section  | Township    | Range       | Lot Idn  | Feet from the | North/South line | Feet from the | East/West line | County      |
|---------------|----------|-------------|-------------|----------|---------------|------------------|---------------|----------------|-------------|
| <b>B</b>      | <b>2</b> | <b>26-S</b> | <b>25-E</b> | <b>-</b> | <b>200'</b>   | <b>NORTH</b>     | <b>2310'</b>  | <b>EAST</b>    | <b>EDDY</b> |

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

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



## LOCATION &amp; ELEVATION VERIFICATION MAP

LEASE NAME & WELL NO.: MISO STATE 163H

SECTION 2 TWP 26-S RGE 25-E SURVEY N.M.P.M.  
 COUNTY EDDY STATE NM ELEVATION 3611'  
 DESCRIPTION 263' FSL & 1471' FEL

LATITUDE N 32.0651829 LONGITUDE W 104.3626221

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



FROM INT. OF CR 720 N. & US-180 E, GO SOUTHWEST ON US-180 E  
±12.0 MILES, THENCE EAST (LEFT) ON DILLAHUNTY RD. ±4.5 MILES,  
THENCE NORTH (LEFT) ON A LEASE RD. ±0.4 MILE, THENCE  
NORTHEAST (RIGHT) ON A PROPOSED RD. ±1185 FEET TO A POINT ±391  
FEET NORTHWEST OF THE LOCATION.



SCALE: 1" = 10000'



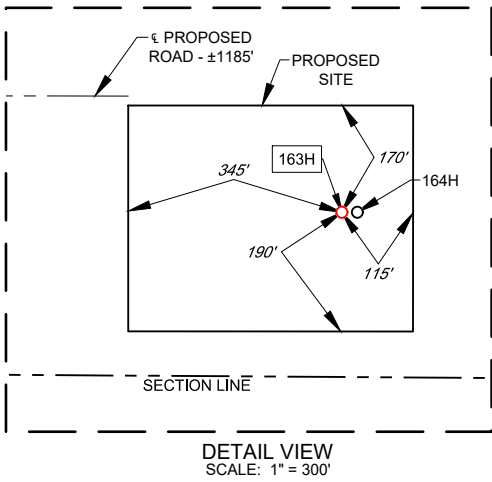
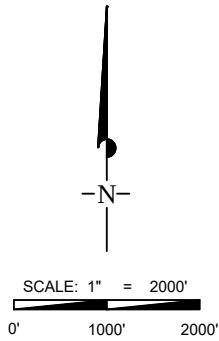
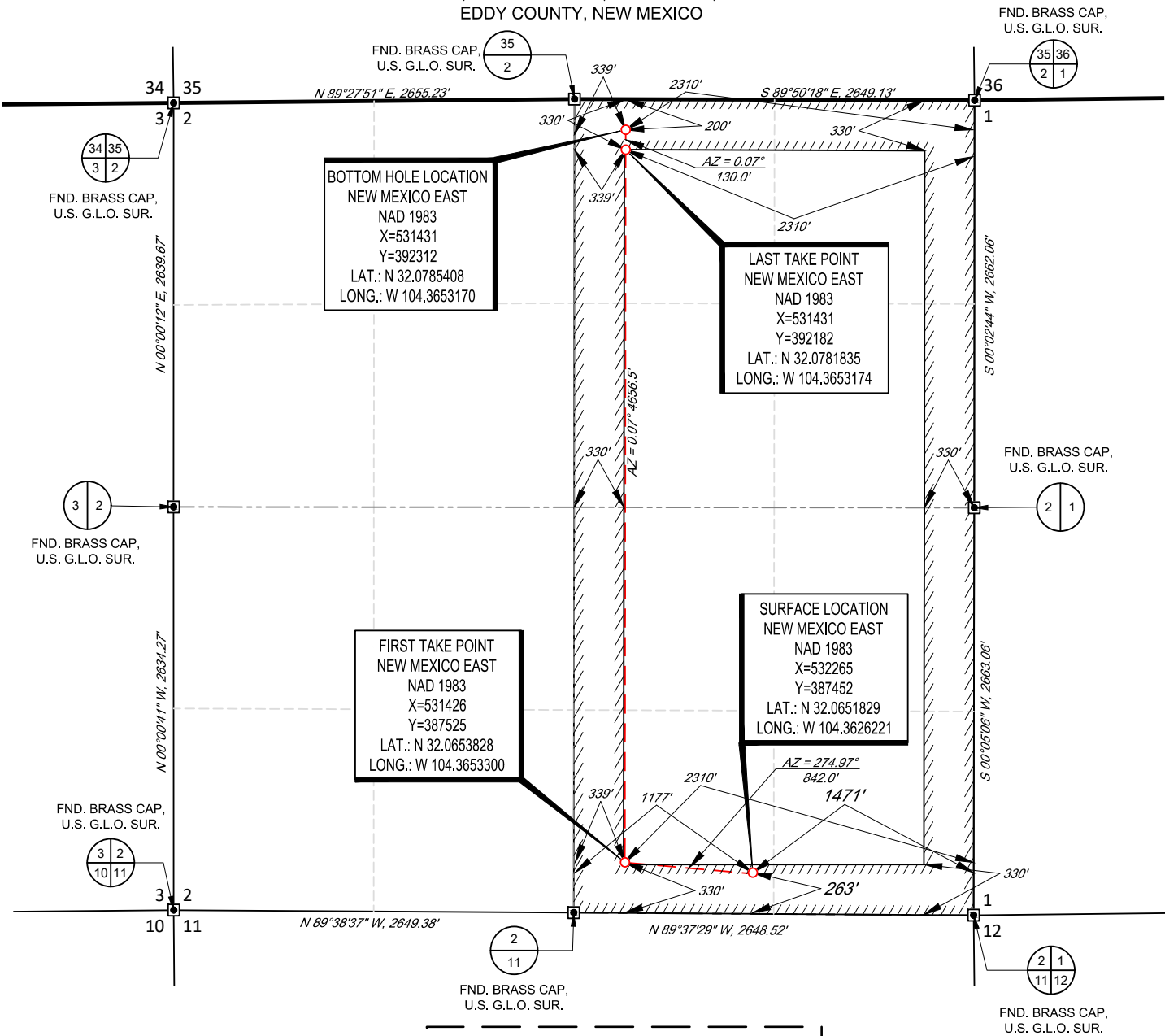
0' 5000' 10000'



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WWW.TOPOGRAPHIC.COM

TAP  
ROCK  
EXHIBIT 2A

SECTION 2, TOWNSHIP 26-S, RANGE 25-E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: MISO STATE 163H

SECTION 2 TWP 26-S RGE 25-E SURVEY N.M.P.M.  
COUNTY EDDY STATE NM  
DESCRIPTION 263' FSL & 1471' FWL

DISTANCE & DIRECTION  
FROM INT. OF CR 720 N. & US-180 E. GO SOUTHWEST ON US-180 E  
±12.0 MILES, THENCE EAST (LEFT) ON DILLAHUNTY RD. ±4.5 MILES,  
THENCE NORTH (LEFT) ON A LEASE RD. ±0.4 MILE, THENCE  
NORTHEAST (RIGHT) ON A PROPOSED RD. ±1185 FEET TO A POINT  
±391 FEET NORTHWEST OF THE LOCATION.

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

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



John Trevor Carnegie, P.S. No. 11401  
OCTOBER 21, 2019



LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140  
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
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TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
WWW.TOPOGRAPHIC.COM

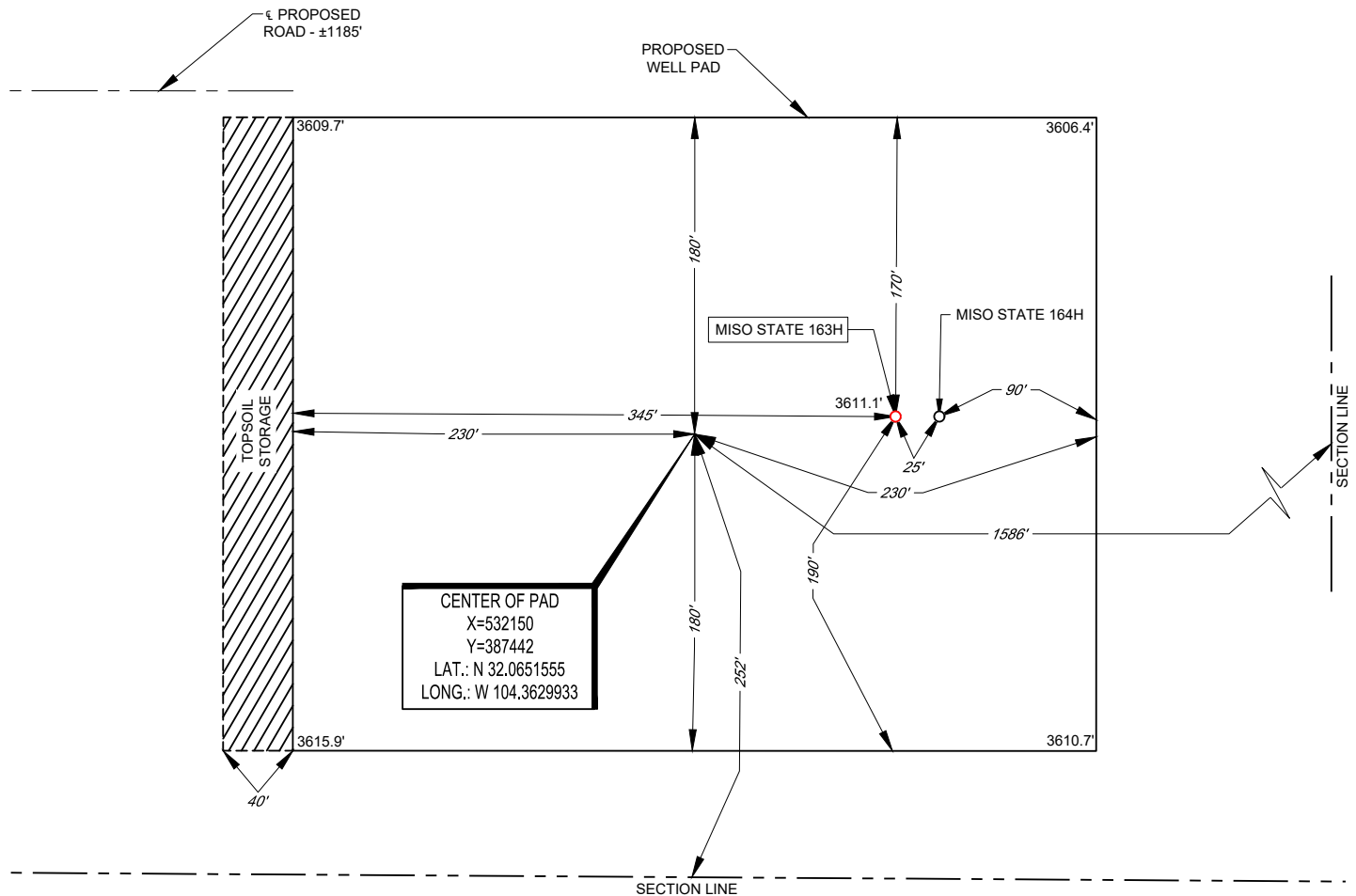


## EXHIBIT 2B



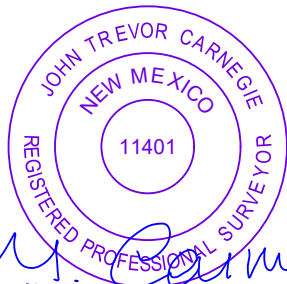
SECTION 2, TOWNSHIP 26-S, RANGE 25-E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO

DETAIL VIEW  
SCALE: 1" = 100'



LEASE NAME & WELL NO.: MISO STATE 163H  
163H LATITUDE N 32.0651829 163H LONGITUDE W 104.3626221

CENTER OF PAD IS 252' FSL & 1586' FEL



John Trevor Carnegie, P.S. No. 11401

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. 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: 12/26/2019

☒ 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, recomple 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|--------------|-----------------------|-------------|----------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MISO STATE #163H | 30-015-46535 | O-2-26S-25E           | 0263S 1471E | 2              | Flared           | 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 Salt Creek Midstream and will be connected to Salt Creek Midstream high pressure gathering system located in Eddy County, New Mexico. It will require ~500' of pipeline to connect the facility to high pressure gathering system. Tap Rock Operating, LLC provides (periodically) to Salt Creek Energy Group, LLC a |

### 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 ARM Midstream Management, LLC and will be connected to ARM Midstream Management, LLC High Pressure gathering system located in Eddy County, New Mexico. It will require 500' of pipeline to connect the facility to High Pressure gathering system. TAP ROCK OPERATING, LLC provides (periodically) to ARM Midstream Management, 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 ARM Midstream Management, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ARM Midstream Management, LLC Processing Plant located in Sec. 02, Twn. 26S, Rng. 25E, Eddy 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 ARM Midstream Management, 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**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Comments

Permit 275245

**PERMIT COMMENTS**

|                                                                                                            |  |                             |
|------------------------------------------------------------------------------------------------------------|--|-----------------------------|
| Operator Name and Address:<br>TAP ROCK OPERATING, LLC [372043]<br>602 Park Point Drive<br>Golden, CO 80401 |  | API Number:<br>30-015-46535 |
|                                                                                                            |  | Well:<br>MISO STATE #163H   |

| Created By | Comment                                                                                               | Comment Date |
|------------|-------------------------------------------------------------------------------------------------------|--------------|
| rpodany    | Two different BHL listed. Computer Form C102 no BHL listed.                                           | 12/11/2019   |
| csporich   | BHL not populated on NMOCD generated C-102. C-101 reflects BHL and C-102 attached to completions tab. | 12/16/2019   |
| rpodany    | Fee Cancellation - resubmit with fee                                                                  | 12/16/2019   |



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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Conditions

Permit 275245

**PERMIT CONDITIONS OF APPROVAL**

|                                                                                                            |  |                             |
|------------------------------------------------------------------------------------------------------------|--|-----------------------------|
| Operator Name and Address:<br>TAP ROCK OPERATING, LLC [372043]<br>602 Park Point Drive<br>Golden, CO 80401 |  | API Number:<br>30-015-46535 |
|                                                                                                            |  | Well:<br>MISO STATE #163H   |

|              |                                                                                     |
|--------------|-------------------------------------------------------------------------------------|
| OCD Reviewer | Condition                                                                           |
| rpodany      | Will require a directional survey with the C-104                                    |
| rpodany      | Cement is required to circulate on both surface and intermediate1 strings of casing |



# **Tap Rock Resources, LLC**

**Eddy County, NM (NAD 83 NME)  
(Miso State) Sec-2\_T-26-S\_R-25-E  
Miso State #163H**

**OWB**

**Plan: Plan #1**

## **Standard Planning Report**

**11 November, 2019**





# Intrepid Planning Report



|                  |                                  |                                     |                       |
|------------------|----------------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db       | <b>Local Co-ordinate Reference:</b> | Well Miso State #163H |
| <b>Company:</b>  | Tap Rock Resources, LLC          | <b>TVD Reference:</b>               | KB @ 3637.0usft       |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME)     | <b>MD Reference:</b>                | KB @ 3637.0usft       |
| <b>Site:</b>     | (Miso State) Sec-2_T-26-S_R-25-E | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | Miso State #163H                 | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OWB                              |                                     |                       |
| <b>Design:</b>   | Plan #1                          |                                     |                       |

|                    |                              |                      |                |
|--------------------|------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy 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      |                      |                |

|                       |          |                                  |                 |                   |                   |
|-----------------------|----------|----------------------------------|-----------------|-------------------|-------------------|
| Site                  |          | (Miso State) Sec-2_T-26-S_R-25-E |                 |                   |                   |
| Site Position:        |          | Northing:                        | 387,500.00 usft | Latitude:         | 32° 3' 55.133 N   |
| From:                 | Map      | Easting:                         | 533,218.00 usft | Longitude:        | 104° 21' 34.362 W |
| Position Uncertainty: | 0.0 usft | Slot Radius:                     | 13-3/16 "       | Grid Convergence: | -0.01 °           |

|                      |                  |                     |           |                 |              |                   |
|----------------------|------------------|---------------------|-----------|-----------------|--------------|-------------------|
| Well                 | Miso State #163H |                     |           |                 |              |                   |
| Well Position        | +N/-S            | -48.0 usft          | Northing: | 387,452.00 usft | Latitude:    | 32° 3' 54.655 N   |
|                      | +E/-W            | -953.0 usft         | Easting:  | 532,265.00 usft | Longitude:   | 104° 21' 45.437 W |
| Position Uncertainty | 0.0 usft         | Wellhead Elevation: |           | Ground Level:   | 3,611.0 usft |                   |

|                 |     |  |  |  |  |
|-----------------|-----|--|--|--|--|
| <b>Wellbore</b> | OWB |  |  |  |  |
|-----------------|-----|--|--|--|--|

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2015   | 11/11/19    | 7.05            | 59.76         | 47,511.89851187     |

|               |         |  |  |  |  |
|---------------|---------|--|--|--|--|
| <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                  | 350.26               |  |

| <b>Plan Survey Tool Program</b> | <b>Date</b>     | 11/11/19               |                     |         |  |
|---------------------------------|-----------------|------------------------|---------------------|---------|--|
| Depth From (usft)               | Depth To (usft) | Survey (Wellbore)      | Tool Name           | Remarks |  |
| 1                               | 0.0             | 13,243.1 Plan #1 (OWB) | MWD                 |         |  |
|                                 |                 |                        | OWSG MWD - Standard |         |  |

| <b>Plan Sections</b>  |                 |             |                       |              |              |                         |                        |                       |         |                    |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|--------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target             |
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.00                    | 0.00                   | 0.00                  | 0.00    |                    |
| 2,000.0               | 0.00            | 0.00        | 2,000.0               | 0.0          | 0.0          | 0.00                    | 0.00                   | 0.00                  | 0.00    |                    |
| 2,499.8               | 10.00           | 259.42      | 2,497.3               | -8.0         | -42.7        | 2.00                    | 2.00                   | 0.00                  | 259.42  |                    |
| 6,917.3               | 10.00           | 259.42      | 6,847.7               | -148.7       | -796.5       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                    |
| 7,417.1               | 0.00            | 360.00      | 7,345.0               | -156.7       | -839.2       | 2.00                    | -2.00                  | 0.00                  | 180.00  |                    |
| 7,899.2               | 0.00            | 360.00      | 7,827.1               | -156.7       | -839.2       | 0.00                    | 0.00                   | 0.00                  | 360.00  |                    |
| 8,793.4               | 89.42           | 0.06        | 8,400.0               | 410.5        | -838.6       | 10.00                   | 10.00                  | 0.01                  | 0.06    |                    |
| 13,243.2              | 89.42           | 0.06        | 8,445.0               | 4,860.0      | -834.0       | 0.00                    | 0.00                   | 0.00                  | 0.00    | PBHL (Miso State # |



# Intrepid Planning Report



|                  |                                  |                                     |                       |
|------------------|----------------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db       | <b>Local Co-ordinate Reference:</b> | Well Miso State #163H |
| <b>Company:</b>  | Tap Rock Resources, LLC          | <b>TVD Reference:</b>               | KB @ 3637.0usft       |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME)     | <b>MD Reference:</b>                | KB @ 3637.0usft       |
| <b>Site:</b>     | (Miso State) Sec-2_T-26-S_R-25-E | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | Miso State #163H                 | <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                  |
| 115.0                             | 0.00            | 0.00        | 115.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Rustler Anhydrite</b>          |                 |             |                       |              |              |                         |                         |                        |                       |
| 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                  |
| 490.0                             | 0.00            | 0.00        | 490.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Top Salt</b>                   |                 |             |                       |              |              |                         |                         |                        |                       |
| 500.0                             | 0.00            | 0.00        | 500.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 600.0                             | 0.00            | 0.00        | 600.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 700.0                             | 0.00            | 0.00        | 700.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 800.0                             | 0.00            | 0.00        | 800.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 900.0                             | 0.00            | 0.00        | 900.0                 | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,000.0                           | 0.00            | 0.00        | 1,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,100.0                           | 0.00            | 0.00        | 1,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,200.0                           | 0.00            | 0.00        | 1,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,300.0                           | 0.00            | 0.00        | 1,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,400.0                           | 0.00            | 0.00        | 1,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,500.0                           | 0.00            | 0.00        | 1,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,525.0                           | 0.00            | 0.00        | 1,525.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Base Salt</b>                  |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,600.0                           | 0.00            | 0.00        | 1,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,700.0                           | 0.00            | 0.00        | 1,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,730.0                           | 0.00            | 0.00        | 1,730.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Delaware Mountain Gp</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,735.0                           | 0.00            | 0.00        | 1,735.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Lamar</b>                      |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,765.0                           | 0.00            | 0.00        | 1,765.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Bell Canyon</b>                |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,800.0                           | 0.00            | 0.00        | 1,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 1,805.0                           | 0.00            | 0.00        | 1,805.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>Ramsey Sand</b>                |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,900.0                           | 0.00            | 0.00        | 1,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 2,000.0                           | 0.00            | 0.00        | 2,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| <b>NUDGE - Build 2.00</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,100.0                           | 2.00            | 259.42      | 2,100.0               | -0.3         | -1.7         | 0.0                     | 2.00                    | 2.00                   | 0.00                  |
| 2,200.0                           | 4.00            | 259.42      | 2,199.8               | -1.3         | -6.9         | -0.1                    | 2.00                    | 2.00                   | 0.00                  |
| 2,300.0                           | 6.00            | 259.42      | 2,299.5               | -2.9         | -15.4        | -0.2                    | 2.00                    | 2.00                   | 0.00                  |
| 2,400.0                           | 8.00            | 259.42      | 2,398.7               | -5.1         | -27.4        | -0.4                    | 2.00                    | 2.00                   | 0.00                  |
| 2,499.8                           | 10.00           | 259.42      | 2,497.3               | -8.0         | -42.7        | -0.6                    | 2.00                    | 2.00                   | 0.00                  |
| <b>HOLD - 4417.5 at 2499.8 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,600.0                           | 10.00           | 259.42      | 2,595.9               | -11.2        | -59.8        | -0.9                    | 0.00                    | 0.00                   | 0.00                  |
| 2,629.5                           | 10.00           | 259.42      | 2,625.0               | -12.1        | -64.9        | -1.0                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Cherry Canyon</b>              |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,700.0                           | 10.00           | 259.42      | 2,694.4               | -14.4        | -76.9        | -1.1                    | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0                           | 10.00           | 259.42      | 2,792.9               | -17.5        | -94.0        | -1.4                    | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0                           | 10.00           | 259.42      | 2,891.4               | -20.7        | -111.0       | -1.7                    | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0                           | 10.00           | 259.42      | 2,989.9               | -23.9        | -128.1       | -1.9                    | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0                           | 10.00           | 259.42      | 3,088.4               | -27.1        | -145.2       | -2.2                    | 0.00                    | 0.00                   | 0.00                  |
| 3,200.0                           | 10.00           | 259.42      | 3,186.8               | -30.3        | -162.2       | -2.4                    | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0                           | 10.00           | 259.42      | 3,285.3               | -33.5        | -179.3       | -2.7                    | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0                           | 10.00           | 259.42      | 3,383.8               | -36.7        | -196.3       | -2.9                    | 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 Miso State #163H |
| <b>Company:</b>  | Tap Rock Resources, LLC          | <b>TVD Reference:</b>               | KB @ 3637.0usft       |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME)     | <b>MD Reference:</b>                | KB @ 3637.0usft       |
| <b>Site:</b>     | (Miso State) Sec-2_T-26-S_R-25-E | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | Miso State #163H                 | <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) |
|-----------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 3,500.0                     | 10.00           | 259.42      | 3,482.3               | -39.8        | -213.4       | -3.2                    | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0                     | 10.00           | 259.42      | 3,580.8               | -43.0        | -230.5       | -3.4                    | 0.00                    | 0.00                   | 0.00                  |
| 3,634.8                     | 10.00           | 259.42      | 3,615.0               | -44.1        | -236.4       | -3.5                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Brushy Canyon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 3,700.0                     | 10.00           | 259.42      | 3,679.3               | -46.2        | -247.5       | -3.7                    | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0                     | 10.00           | 259.42      | 3,777.7               | -49.4        | -264.6       | -3.9                    | 0.00                    | 0.00                   | 0.00                  |
| 3,900.0                     | 10.00           | 259.42      | 3,876.2               | -52.6        | -281.7       | -4.2                    | 0.00                    | 0.00                   | 0.00                  |
| 4,000.0                     | 10.00           | 259.42      | 3,974.7               | -55.8        | -298.7       | -4.4                    | 0.00                    | 0.00                   | 0.00                  |
| 4,100.0                     | 10.00           | 259.42      | 4,073.2               | -59.0        | -315.8       | -4.7                    | 0.00                    | 0.00                   | 0.00                  |
| 4,200.0                     | 10.00           | 259.42      | 4,171.7               | -62.1        | -332.8       | -5.0                    | 0.00                    | 0.00                   | 0.00                  |
| 4,300.0                     | 10.00           | 259.42      | 4,270.1               | -65.3        | -349.9       | -5.2                    | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0                     | 10.00           | 259.42      | 4,368.6               | -68.5        | -367.0       | -5.5                    | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0                     | 10.00           | 259.42      | 4,467.1               | -71.7        | -384.0       | -5.7                    | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0                     | 10.00           | 259.42      | 4,565.6               | -74.9        | -401.1       | -6.0                    | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0                     | 10.00           | 259.42      | 4,664.1               | -78.1        | -418.2       | -6.2                    | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0                     | 10.00           | 259.42      | 4,762.6               | -81.3        | -435.2       | -6.5                    | 0.00                    | 0.00                   | 0.00                  |
| 4,900.0                     | 10.00           | 259.42      | 4,861.0               | -84.4        | -452.3       | -6.7                    | 0.00                    | 0.00                   | 0.00                  |
| 5,000.0                     | 10.00           | 259.42      | 4,959.5               | -87.6        | -469.3       | -7.0                    | 0.00                    | 0.00                   | 0.00                  |
| 5,100.0                     | 10.00           | 259.42      | 5,058.0               | -90.8        | -486.4       | -7.2                    | 0.00                    | 0.00                   | 0.00                  |
| 5,200.0                     | 10.00           | 259.42      | 5,156.5               | -94.0        | -503.5       | -7.5                    | 0.00                    | 0.00                   | 0.00                  |
| 5,279.7                     | 10.00           | 259.42      | 5,235.0               | -96.5        | -517.1       | -7.7                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Bone Spring Lime</b>     |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,300.0                     | 10.00           | 259.42      | 5,255.0               | -97.2        | -520.5       | -7.8                    | 0.00                    | 0.00                   | 0.00                  |
| 5,361.0                     | 10.00           | 259.42      | 5,315.0               | -99.1        | -530.9       | -7.9                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Upper Avalon</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,400.0                     | 10.00           | 259.42      | 5,353.4               | -100.4       | -537.6       | -8.0                    | 0.00                    | 0.00                   | 0.00                  |
| 5,500.0                     | 10.00           | 259.42      | 5,451.9               | -103.6       | -554.7       | -8.3                    | 0.00                    | 0.00                   | 0.00                  |
| 5,600.0                     | 10.00           | 259.42      | 5,550.4               | -106.8       | -571.7       | -8.5                    | 0.00                    | 0.00                   | 0.00                  |
| 5,700.0                     | 10.00           | 259.42      | 5,648.9               | -109.9       | -588.8       | -8.8                    | 0.00                    | 0.00                   | 0.00                  |
| 5,716.4                     | 10.00           | 259.42      | 5,665.0               | -110.5       | -591.6       | -8.8                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Middle Avalon</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,800.0                     | 10.00           | 259.42      | 5,747.4               | -113.1       | -605.8       | -9.0                    | 0.00                    | 0.00                   | 0.00                  |
| 5,900.0                     | 10.00           | 259.42      | 5,845.9               | -116.3       | -622.9       | -9.3                    | 0.00                    | 0.00                   | 0.00                  |
| 6,000.0                     | 10.00           | 259.42      | 5,944.3               | -119.5       | -640.0       | -9.5                    | 0.00                    | 0.00                   | 0.00                  |
| 6,041.3                     | 10.00           | 259.42      | 5,985.0               | -120.8       | -647.0       | -9.6                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Lower Avalon</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,100.0                     | 10.00           | 259.42      | 6,042.8               | -122.7       | -657.0       | -9.8                    | 0.00                    | 0.00                   | 0.00                  |
| 6,178.4                     | 10.00           | 259.42      | 6,120.0               | -125.2       | -670.4       | -10.0                   | 0.00                    | 0.00                   | 0.00                  |
| <b>1st Bone Spring Sand</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,200.0                     | 10.00           | 259.42      | 6,141.3               | -125.9       | -674.1       | -10.0                   | 0.00                    | 0.00                   | 0.00                  |
| 6,300.0                     | 10.00           | 259.42      | 6,239.8               | -129.1       | -691.2       | -10.3                   | 0.00                    | 0.00                   | 0.00                  |
| 6,386.5                     | 10.00           | 259.42      | 6,325.0               | -131.8       | -705.9       | -10.5                   | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Carb</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,400.0                     | 10.00           | 259.42      | 6,338.3               | -132.2       | -708.2       | -10.5                   | 0.00                    | 0.00                   | 0.00                  |
| 6,500.0                     | 10.00           | 259.42      | 6,436.7               | -135.4       | -725.3       | -10.8                   | 0.00                    | 0.00                   | 0.00                  |
| 6,600.0                     | 10.00           | 259.42      | 6,535.2               | -138.6       | -742.3       | -11.1                   | 0.00                    | 0.00                   | 0.00                  |
| 6,700.0                     | 10.00           | 259.42      | 6,633.7               | -141.8       | -759.4       | -11.3                   | 0.00                    | 0.00                   | 0.00                  |
| 6,767.3                     | 10.00           | 259.42      | 6,700.0               | -143.9       | -770.9       | -11.5                   | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Sand</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,800.0                     | 10.00           | 259.42      | 6,732.2               | -145.0       | -776.5       | -11.6                   | 0.00                    | 0.00                   | 0.00                  |
| 6,900.0                     | 10.00           | 259.42      | 6,830.7               | -148.2       | -793.5       | -11.8                   | 0.00                    | 0.00                   | 0.00                  |
| 6,917.3                     | 10.00           | 259.42      | 6,847.7               | -148.7       | -796.5       | -11.9                   | 0.00                    | 0.00                   | 0.00                  |
| <b>DROP - -2.00</b>         |                 |             |                       |              |              |                         |                         |                        |                       |



# Intrepid Planning Report



|                  |                                  |                                     |                       |
|------------------|----------------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db       | <b>Local Co-ordinate Reference:</b> | Well Miso State #163H |
| <b>Company:</b>  | Tap Rock Resources, LLC          | <b>TVD Reference:</b>               | KB @ 3637.0usft       |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME)     | <b>MD Reference:</b>                | KB @ 3637.0usft       |
| <b>Site:</b>     | (Miso State) Sec-2_T-26-S_R-25-E | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | Miso State #163H                 | <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) |
|---------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 7,000.0                               | 8.34            | 259.42      | 6,929.4               | -151.1       | -809.4       | -12.1                   | 2.00                    | -2.00                  | 0.00                  |
| 7,100.0                               | 6.34            | 259.42      | 7,028.5               | -153.5       | -822.0       | -12.2                   | 2.00                    | -2.00                  | 0.00                  |
| 7,200.0                               | 4.34            | 259.42      | 7,128.1               | -155.2       | -831.2       | -12.4                   | 2.00                    | -2.00                  | 0.00                  |
| 7,201.9                               | 4.30            | 259.42      | 7,130.0               | -155.2       | -831.3       | -12.4                   | 2.00                    | -2.00                  | 0.00                  |
| <b>3rd Bone Spring Carb</b>           |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,300.0                               | 2.34            | 259.42      | 7,227.9               | -156.3       | -836.9       | -12.5                   | 2.00                    | -2.00                  | 0.00                  |
| 7,400.0                               | 0.34            | 259.42      | 7,327.9               | -156.7       | -839.2       | -12.5                   | 2.00                    | -2.00                  | 0.00                  |
| 7,417.1                               | 0.00            | 360.00      | 7,345.0               | -156.7       | -839.2       | -12.5                   | 2.00                    | -2.00                  | 0.00                  |
| <b>HOLD - 482.1 at 7417.1 MD</b>      |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,500.0                               | 0.00            | 0.00        | 7,427.9               | -156.7       | -839.2       | -12.5                   | 0.00                    | 0.00                   | 0.00                  |
| 7,600.0                               | 0.00            | 0.00        | 7,527.9               | -156.7       | -839.2       | -12.5                   | 0.00                    | 0.00                   | 0.00                  |
| 7,700.0                               | 0.00            | 0.00        | 7,627.9               | -156.7       | -839.2       | -12.5                   | 0.00                    | 0.00                   | 0.00                  |
| 7,800.0                               | 0.00            | 0.00        | 7,727.9               | -156.7       | -839.2       | -12.5                   | 0.00                    | 0.00                   | 0.00                  |
| 7,899.2                               | 0.00            | 0.00        | 7,827.1               | -156.7       | -839.2       | -12.5                   | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP - DLS 10.00 TFO 0.06</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,950.0                               | 5.08            | 0.06        | 7,877.8               | -154.5       | -839.2       | -10.3                   | 10.00                   | 10.00                  | 0.00                  |
| 8,000.0                               | 10.08           | 0.06        | 7,927.4               | -147.9       | -839.2       | -3.8                    | 10.00                   | 10.00                  | 0.00                  |
| 8,023.1                               | 12.39           | 0.06        | 7,950.0               | -143.4       | -839.2       | 0.6                     | 10.00                   | 10.00                  | 0.00                  |
| <b>3rd Bone Spring Sand</b>           |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,050.0                               | 15.08           | 0.06        | 7,976.1               | -137.0       | -839.2       | 6.9                     | 10.00                   | 10.00                  | 0.00                  |
| 8,100.0                               | 20.08           | 0.06        | 8,023.8               | -121.9       | -839.2       | 21.8                    | 10.00                   | 10.00                  | 0.00                  |
| 8,150.0                               | 25.08           | 0.06        | 8,070.0               | -102.7       | -839.2       | 40.7                    | 10.00                   | 10.00                  | 0.00                  |
| 8,200.0                               | 30.08           | 0.06        | 8,114.3               | -79.5        | -839.2       | 63.5                    | 10.00                   | 10.00                  | 0.00                  |
| 8,250.0                               | 35.08           | 0.06        | 8,156.4               | -52.6        | -839.1       | 90.1                    | 10.00                   | 10.00                  | 0.00                  |
| 8,300.0                               | 40.08           | 0.06        | 8,196.0               | -22.2        | -839.1       | 120.1                   | 10.00                   | 10.00                  | 0.00                  |
| 8,318.6                               | 41.93           | 0.06        | 8,210.0               | -10.0        | -839.1       | 132.1                   | 10.00                   | 10.00                  | 0.00                  |
| <b>3rd BS W Sand</b>                  |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,350.0                               | 45.08           | 0.06        | 8,232.8               | 11.7         | -839.1       | 153.4                   | 10.00                   | 10.00                  | 0.00                  |
| 8,400.0                               | 50.08           | 0.06        | 8,266.5               | 48.6         | -839.0       | 189.8                   | 10.00                   | 10.00                  | 0.00                  |
| 8,446.7                               | 54.75           | 0.06        | 8,295.0               | 85.6         | -839.0       | 226.2                   | 10.00                   | 10.00                  | 0.00                  |
| <b>Wolfcamp A X Sand</b>              |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,450.0                               | 55.08           | 0.06        | 8,296.9               | 88.3         | -839.0       | 228.9                   | 10.00                   | 10.00                  | 0.00                  |
| 8,500.0                               | 60.08           | 0.06        | 8,323.7               | 130.5        | -838.9       | 270.5                   | 10.00                   | 10.00                  | 0.00                  |
| 8,550.0                               | 65.08           | 0.06        | 8,346.7               | 174.8        | -838.9       | 314.2                   | 10.00                   | 10.00                  | 0.00                  |
| 8,600.0                               | 70.08           | 0.06        | 8,365.8               | 221.0        | -838.8       | 359.7                   | 10.00                   | 10.00                  | 0.00                  |
| 8,647.2                               | 74.79           | 0.06        | 8,380.0               | 266.0        | -838.8       | 404.0                   | 10.00                   | 10.00                  | 0.00                  |
| <b>Wolfcamp A Y Sand</b>              |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,650.0                               | 75.08           | 0.06        | 8,380.7               | 268.7        | -838.8       | 406.7                   | 10.00                   | 10.00                  | 0.00                  |
| 8,700.0                               | 80.08           | 0.06        | 8,391.5               | 317.5        | -838.7       | 454.8                   | 10.00                   | 10.00                  | 0.00                  |
| 8,750.0                               | 85.08           | 0.06        | 8,397.9               | 367.1        | -838.7       | 503.7                   | 10.00                   | 10.00                  | 0.00                  |
| 8,793.4                               | 89.42           | 0.06        | 8,400.0               | 410.5        | -838.6       | 546.4                   | 10.00                   | 10.00                  | 0.00                  |
| <b>EOC - 4449.8 hold at 8793.4 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,800.0                               | 89.42           | 0.06        | 8,400.1               | 417.0        | -838.6       | 552.9                   | 0.00                    | 0.00                   | 0.00                  |
| 8,900.0                               | 89.42           | 0.06        | 8,401.1               | 517.0        | -838.5       | 651.4                   | 0.00                    | 0.00                   | 0.00                  |
| 9,000.0                               | 89.42           | 0.06        | 8,402.1               | 617.0        | -838.4       | 749.9                   | 0.00                    | 0.00                   | 0.00                  |
| 9,100.0                               | 89.42           | 0.06        | 8,403.1               | 717.0        | -838.3       | 848.5                   | 0.00                    | 0.00                   | 0.00                  |
| 9,200.0                               | 89.42           | 0.06        | 8,404.1               | 817.0        | -838.2       | 947.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,300.0                               | 89.42           | 0.06        | 8,405.1               | 917.0        | -838.1       | 1,045.6                 | 0.00                    | 0.00                   | 0.00                  |
| 9,400.0                               | 89.42           | 0.06        | 8,406.2               | 1,017.0      | -838.0       | 1,144.1                 | 0.00                    | 0.00                   | 0.00                  |
| 9,500.0                               | 89.42           | 0.06        | 8,407.2               | 1,117.0      | -837.9       | 1,242.6                 | 0.00                    | 0.00                   | 0.00                  |
| 9,600.0                               | 89.42           | 0.06        | 8,408.2               | 1,217.0      | -837.8       | 1,341.2                 | 0.00                    | 0.00                   | 0.00                  |
| 9,700.0                               | 89.42           | 0.06        | 8,409.2               | 1,317.0      | -837.7       | 1,439.7                 | 0.00                    | 0.00                   | 0.00                  |
| 9,800.0                               | 89.42           | 0.06        | 8,410.2               | 1,417.0      | -837.6       | 1,538.2                 | 0.00                    | 0.00                   | 0.00                  |





# Intrepid Planning Report



|                  |                                  |                                     |                       |
|------------------|----------------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db       | <b>Local Co-ordinate Reference:</b> | Well Miso State #163H |
| <b>Company:</b>  | Tap Rock Resources, LLC          | <b>TVD Reference:</b>               | KB @ 3637.0usft       |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME)     | <b>MD Reference:</b>                | KB @ 3637.0usft       |
| <b>Site:</b>     | (Miso State) Sec-2_T-26-S_R-25-E | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | Miso State #163H                 | <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) |
|-------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,900.0                 | 89.42           | 0.06        | 8,411.2               | 1,517.0      | -837.5       | 1,636.8                 | 0.00                    | 0.00                   | 0.00                  |
| 10,000.0                | 89.42           | 0.06        | 8,412.2               | 1,617.0      | -837.4       | 1,735.3                 | 0.00                    | 0.00                   | 0.00                  |
| 10,100.0                | 89.42           | 0.06        | 8,413.2               | 1,717.0      | -837.3       | 1,833.8                 | 0.00                    | 0.00                   | 0.00                  |
| 10,200.0                | 89.42           | 0.06        | 8,414.2               | 1,817.0      | -837.2       | 1,932.4                 | 0.00                    | 0.00                   | 0.00                  |
| 10,300.0                | 89.42           | 0.06        | 8,415.3               | 1,917.0      | -837.1       | 2,030.9                 | 0.00                    | 0.00                   | 0.00                  |
| 10,400.0                | 89.42           | 0.06        | 8,416.3               | 2,017.0      | -837.0       | 2,129.5                 | 0.00                    | 0.00                   | 0.00                  |
| 10,500.0                | 89.42           | 0.06        | 8,417.3               | 2,117.0      | -836.9       | 2,228.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,600.0                | 89.42           | 0.06        | 8,418.3               | 2,216.9      | -836.8       | 2,326.5                 | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0                | 89.42           | 0.06        | 8,419.3               | 2,316.9      | -836.7       | 2,425.1                 | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0                | 89.42           | 0.06        | 8,420.3               | 2,416.9      | -836.6       | 2,523.6                 | 0.00                    | 0.00                   | 0.00                  |
| 10,900.0                | 89.42           | 0.06        | 8,421.3               | 2,516.9      | -836.4       | 2,622.1                 | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0                | 89.42           | 0.06        | 8,422.3               | 2,616.9      | -836.3       | 2,720.7                 | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0                | 89.42           | 0.06        | 8,423.3               | 2,716.9      | -836.2       | 2,819.2                 | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0                | 89.42           | 0.06        | 8,424.4               | 2,816.9      | -836.1       | 2,917.8                 | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0                | 89.42           | 0.06        | 8,425.4               | 2,916.9      | -836.0       | 3,016.3                 | 0.00                    | 0.00                   | 0.00                  |
| 11,400.0                | 89.42           | 0.06        | 8,426.4               | 3,016.9      | -835.9       | 3,114.8                 | 0.00                    | 0.00                   | 0.00                  |
| 11,500.0                | 89.42           | 0.06        | 8,427.4               | 3,116.9      | -835.8       | 3,213.4                 | 0.00                    | 0.00                   | 0.00                  |
| 11,600.0                | 89.42           | 0.06        | 8,428.4               | 3,216.9      | -835.7       | 3,311.9                 | 0.00                    | 0.00                   | 0.00                  |
| 11,700.0                | 89.42           | 0.06        | 8,429.4               | 3,316.9      | -835.6       | 3,410.4                 | 0.00                    | 0.00                   | 0.00                  |
| 11,800.0                | 89.42           | 0.06        | 8,430.4               | 3,416.9      | -835.5       | 3,509.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,900.0                | 89.42           | 0.06        | 8,431.4               | 3,516.9      | -835.4       | 3,607.5                 | 0.00                    | 0.00                   | 0.00                  |
| 12,000.0                | 89.42           | 0.06        | 8,432.4               | 3,616.9      | -835.3       | 3,706.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,100.0                | 89.42           | 0.06        | 8,433.4               | 3,716.9      | -835.2       | 3,804.6                 | 0.00                    | 0.00                   | 0.00                  |
| 12,200.0                | 89.42           | 0.06        | 8,434.5               | 3,816.9      | -835.1       | 3,903.1                 | 0.00                    | 0.00                   | 0.00                  |
| 12,253.7                | 89.42           | 0.06        | 8,435.0               | 3,870.6      | -835.0       | 3,956.1                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Wolfcamp A Lower</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,300.0                | 89.42           | 0.06        | 8,435.5               | 3,916.9      | -835.0       | 4,001.7                 | 0.00                    | 0.00                   | 0.00                  |
| 12,400.0                | 89.42           | 0.06        | 8,436.5               | 4,016.9      | -834.9       | 4,100.2                 | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0                | 89.42           | 0.06        | 8,437.5               | 4,116.8      | -834.8       | 4,198.7                 | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0                | 89.42           | 0.06        | 8,438.5               | 4,216.8      | -834.7       | 4,297.3                 | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0                | 89.42           | 0.06        | 8,439.5               | 4,316.8      | -834.6       | 4,395.8                 | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0                | 89.42           | 0.06        | 8,440.5               | 4,416.8      | -834.5       | 4,494.3                 | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0                | 89.42           | 0.06        | 8,441.5               | 4,516.8      | -834.4       | 4,592.9                 | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0                | 89.42           | 0.06        | 8,442.5               | 4,616.8      | -834.3       | 4,691.4                 | 0.00                    | 0.00                   | 0.00                  |
| 13,100.0                | 89.42           | 0.06        | 8,443.6               | 4,716.8      | -834.1       | 4,789.9                 | 0.00                    | 0.00                   | 0.00                  |
| 13,200.0                | 89.42           | 0.06        | 8,444.6               | 4,816.8      | -834.0       | 4,888.5                 | 0.00                    | 0.00                   | 0.00                  |
| 13,243.2                | 89.42           | 0.06        | 8,445.0               | 4,860.0      | -834.0       | 4,931.0                 | 0.00                    | 0.00                   | 0.00                  |
| <b>TD at 13243.2</b>    |                 |             |                       |              |              |                         |                         |                        |                       |



# Intrepid Planning Report



|                  |                                  |                                     |                       |
|------------------|----------------------------------|-------------------------------------|-----------------------|
| <b>Database:</b> | EDM 5000.15 Single User Db       | <b>Local Co-ordinate Reference:</b> | Well Miso State #163H |
| <b>Company:</b>  | Tap Rock Resources, LLC          | <b>TVD Reference:</b>               | KB @ 3637.0usft       |
| <b>Project:</b>  | Eddy County, NM (NAD 83 NME)     | <b>MD Reference:</b>                | KB @ 3637.0usft       |
| <b>Site:</b>     | (Miso State) Sec-2_T-26-S_R-25-E | <b>North Reference:</b>             | Grid                  |
| <b>Well:</b>     | Miso State #163H                 | <b>Survey Calculation Method:</b>   | Minimum Curvature     |
| <b>Wellbore:</b> | OWB                              |                                     |                       |
| <b>Design:</b>   | Plan #1                          |                                     |                       |

## Design Targets

### Target Name

| - hit/miss target<br>- Shape                                                                                                 | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude        | Longitude         |
|------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------------|-------------------|
| FTP (Miso State #163<br>- plan misses target center by 94.9usft at 8492.4usft MD (8319.9 TVD, 123.9 N, -838.9 E)<br>- Point  | 0.00             | 0.00            | 8,400.0       | 73.0            | -839.0          | 387,525.00         | 531,426.00        | 32° 3' 55.375 N | 104° 21' 55.188 W |
| PBHL (Miso State #163<br>- plan hits target center<br>- Rectangle (sides W100.0 H4,787.0 D30.0)                              | 0.58             | 0.06            | 8,445.0       | 4,860.0         | -834.0          | 392,312.00         | 531,431.00        | 32° 4' 42.749 N | 104° 21' 55.146 W |
| LTP (Miso State #163<br>- plan misses target center by 1.3usft at 13113.2usft MD (8443.7 TVD, 4730.0 N, -834.1 E)<br>- Point | 0.00             | 0.00            | 8,445.0       | 4,730.0         | -834.0          | 392,182.00         | 531,431.00        | 32° 4' 41.462 N | 104° 21' 55.145 W |

## Formations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Name                 | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |
|-----------------------------|-----------------------------|----------------------|-----------|------------|-------------------------|
| 115.0                       | 115.0                       | Rustler Anhydrite    |           |            |                         |
| 490.0                       | 490.0                       | Top Salt             |           |            |                         |
| 1,525.0                     | 1,525.0                     | Base Salt            |           |            |                         |
| 1,730.0                     | 1,730.0                     | Delaware Mountain Gp |           |            |                         |
| 1,735.0                     | 1,735.0                     | Lamar                |           |            |                         |
| 1,765.0                     | 1,765.0                     | Bell Canyon          |           |            |                         |
| 1,805.0                     | 1,805.0                     | Ramsey Sand          |           |            |                         |
| 2,629.5                     | 2,625.0                     | Cherry Canyon        |           |            |                         |
| 3,634.8                     | 3,615.0                     | Brushy Canyon        |           |            |                         |
| 5,279.7                     | 5,235.0                     | Bone Spring Lime     |           |            |                         |
| 5,361.0                     | 5,315.0                     | Upper Avalon         |           |            |                         |
| 5,716.4                     | 5,665.0                     | Middle Avalon        |           |            |                         |
| 6,041.3                     | 5,985.0                     | Lower Avalon         |           |            |                         |
| 6,178.4                     | 6,120.0                     | 1st Bone Spring Sand |           |            |                         |
| 6,386.5                     | 6,325.0                     | 2nd Bone Spring Carb |           |            |                         |
| 6,767.3                     | 6,700.0                     | 2nd Bone Spring Sand |           |            |                         |
| 7,201.9                     | 7,130.0                     | 3rd Bone Spring Carb |           |            |                         |
| 8,023.1                     | 7,950.0                     | 3rd Bone Spring Sand |           |            |                         |
| 8,318.6                     | 8,210.0                     | 3rd BS W Sand        |           |            |                         |
| 8,446.7                     | 8,295.0                     | Wolfcamp A X Sand    |           |            |                         |
| 8,647.2                     | 8,380.0                     | Wolfcamp A Y Sand    |           |            |                         |
| 12,253.7                    | 8,435.0                     | Wolfcamp A Lower     |           |            |                         |

## Plan Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                        |
|-----------------------------|-----------------------------|-------------------|-----------------|--------------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                |
| 2,000.0                     | 2,000.0                     | 0.0               | 0.0             | NUDGE - Build 2.00             |
| 2,499.8                     | 2,497.3                     | -8.0              | -42.7           | HOLD - 4417.5 at 2499.8 MD     |
| 6,917.3                     | 6,847.7                     | -148.7            | -796.5          | DROP - -2.00                   |
| 7,417.1                     | 7,345.0                     | -156.7            | -839.2          | HOLD - 482.1 at 7417.1 MD      |
| 7,899.2                     | 7,827.1                     | -156.7            | -839.2          | KOP - DLS 10.00 TFO 0.06       |
| 8,793.4                     | 8,400.0                     | 410.5             | -838.6          | EOC - 4449.8 hold at 8793.4 MD |
| 13,243.2                    | 8,445.0                     | 4,860.0           | -834.0          | TD at 13243.2                  |