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 340933

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

1. Operator Name and Address	2. OGRID Number
TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	372043
	3. API Number 30-025-51517

4. Property Code	5. Property Name	6. Well No.
334067	QUEEN KEELY STATE COM	151H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	21	21S	33E	D	929	N	731	W	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	28	21S	33E	M	5	S	334	W	Lea

9. Pool Information

WC-025 G-08 S213304D;BONE SPRING	97895

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3735
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	21716	3rd Bone Spring Carbonate		6/20/2023
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	11.75	42	1825	955	0
Int1	11	8.625	32	5616	863	0
Prod	7.875	5.5	20	21716	2466	5416

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

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

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**		
Printed Name:	Electronically filed by Christian Combs	Approved By:	Paul F Kautz	
Title:	Regulatory Manager	Title:	Geologist	
Email Address:	ccombs@taprk.com	Approved Date:	5/25/2023	Expiration Date: 5/25/2025
Date:	5/22/2023 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

[1]API Number	[2]Pool Code	[3]Pool Name
30-025- 51517	97895	WC-025 G-08 S213304D;BONE SPRING

[4]Property Code	[5]Property Name	[6]Well Number
334067	QUEEN KEELY STATE COM	151H

[7]OGRID No.	[8]Operator Name	[9]Elevation
372043	TAP ROCK OPERATING, LLC.	3735'

[10]Surface Location

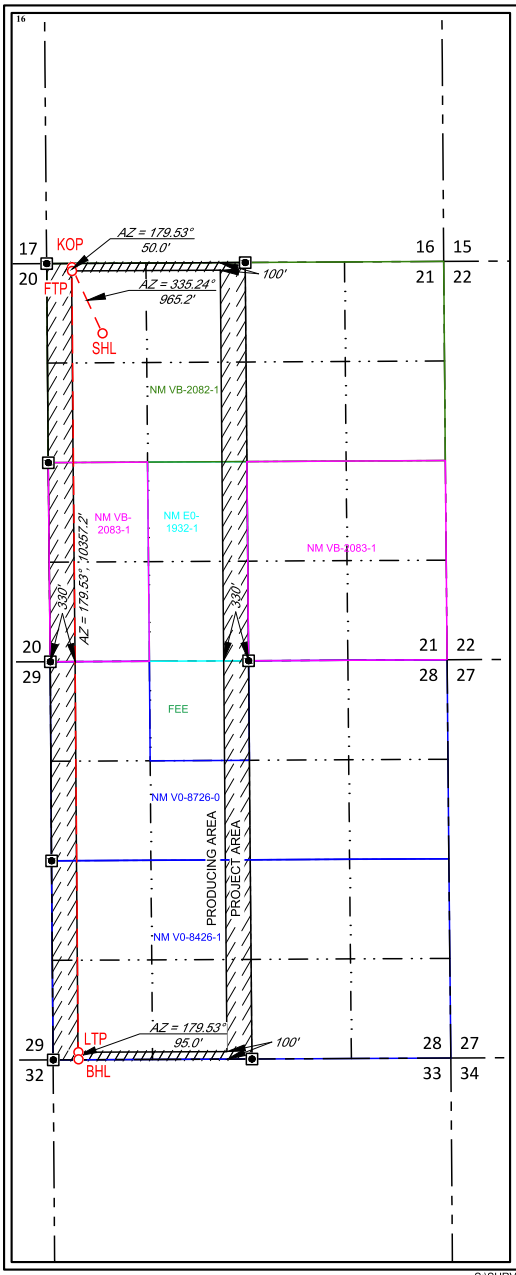
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	21	21-S	33-E	–	929'	NORTH	731'	WEST	LEA

[11]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
M	28	21-S	33-E	–	5'	SOUTH	334'	WEST	LEA

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
640			

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



NEW MEXICO EAST
NAD 1983

SURFACE LOCATION (SHL)
929' FNL - SEC. 21
731' FWL - SEC. 21
X=772534 Y=535191
LAT.: N 32.4690700
LONG.: W 103.5836776

KICK OFF POINT (KOP)
50' FNL - SEC. 21
334' FWL - SEC. 21
X=772130 Y=536067
LAT.: N 32.4714868
LONG.: W 103.5849680

FIRST TAKE POINT (FTP)
100' FNL - SEC. 21
334' FWL - SEC. 21
X=772130 Y=536017
LAT.: N 32.4713494
LONG.: W 103.5849678

LAST TAKE POINT (LTP)
100' FSL - SEC. 28
334' FWL - SEC. 28
X=772215 Y=525660
LAT.: N 32.4428812
LONG.: W 103.5849289

BOTTOM HOLE LOCATION (BHL)
5' FSL - SEC. 28
334' FWL - SEC. 28
X=772215 Y=525565
LAT.: N 32.4426201
LONG.: W 103.5849285

[17]OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

5/22/2023
Signature Date

Printed Name

E-mail Address

[18]SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

04/27/2023
Date of Survey
Jeff Trlica
Signature and Seal of Professional Surveyor

jtrlica@taprk.com

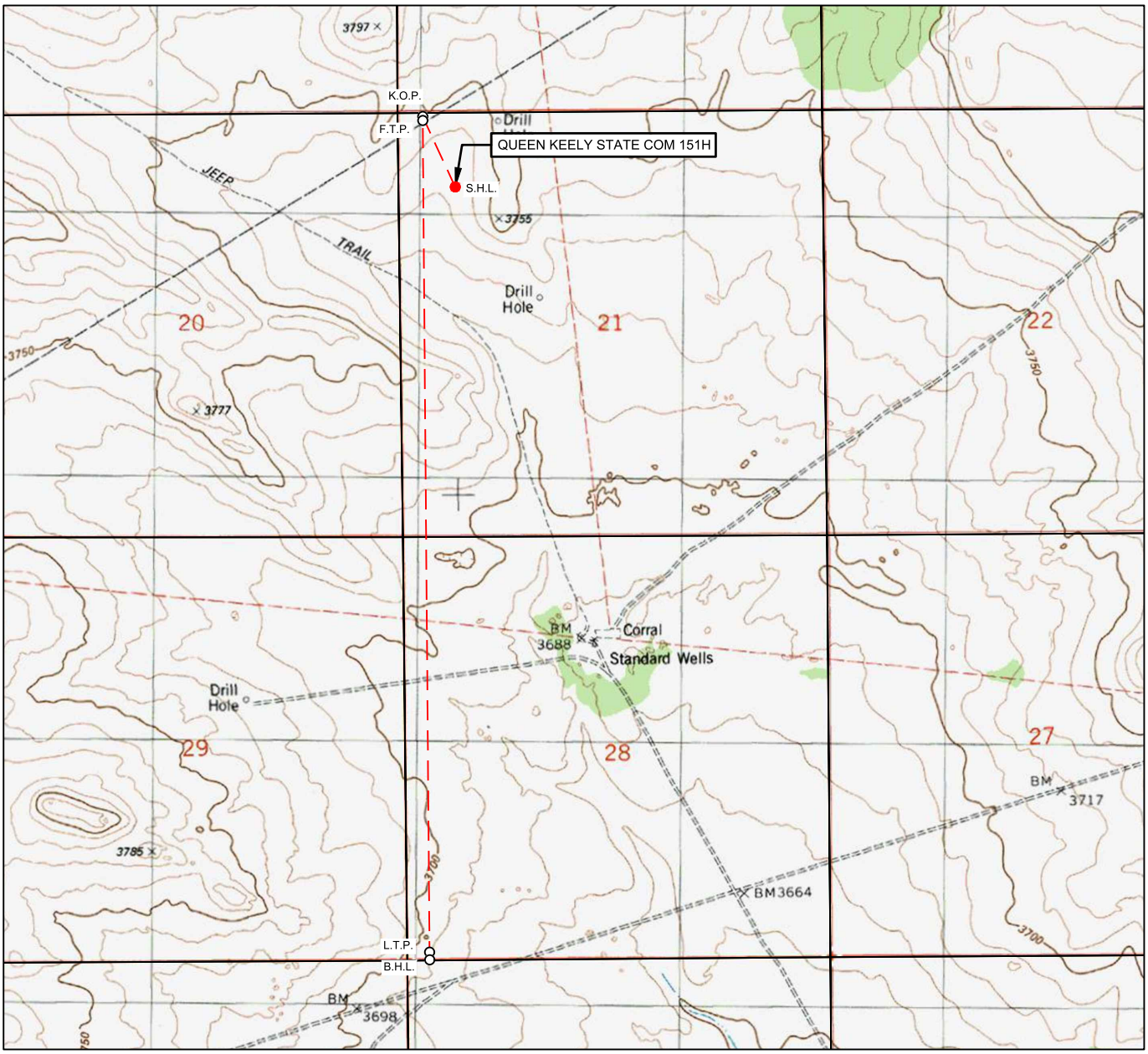
RAMON DOMINGUEZ
NEW MEXICO
24508
PROFESSIONAL SURVEYOR

5/10/2023 12:39:49 PM
Certificate Number

-N-

S:\SURVEY\TAPROCK\QUEEN_KEELY\FINAL_PRODUCTS\LO_QUEEN_KEELY_STATE_COM_151H.DWG 5/10/2023 12:39:49 PM mark.hamilton

LOCATION & ELEVATION VERIFICATION MAP

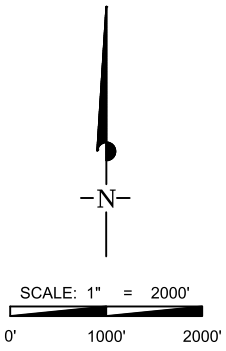


TAP ROCK

LEASE NAME & WELL NO.: QUEEN KEELY STATE COM 151H

SECTION 21 TWP 21-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3735'
DESCRIPTION 929' FNL & 731' FWL

LATITUDE N 32.4690700 LONGITUDE W 103.5836776



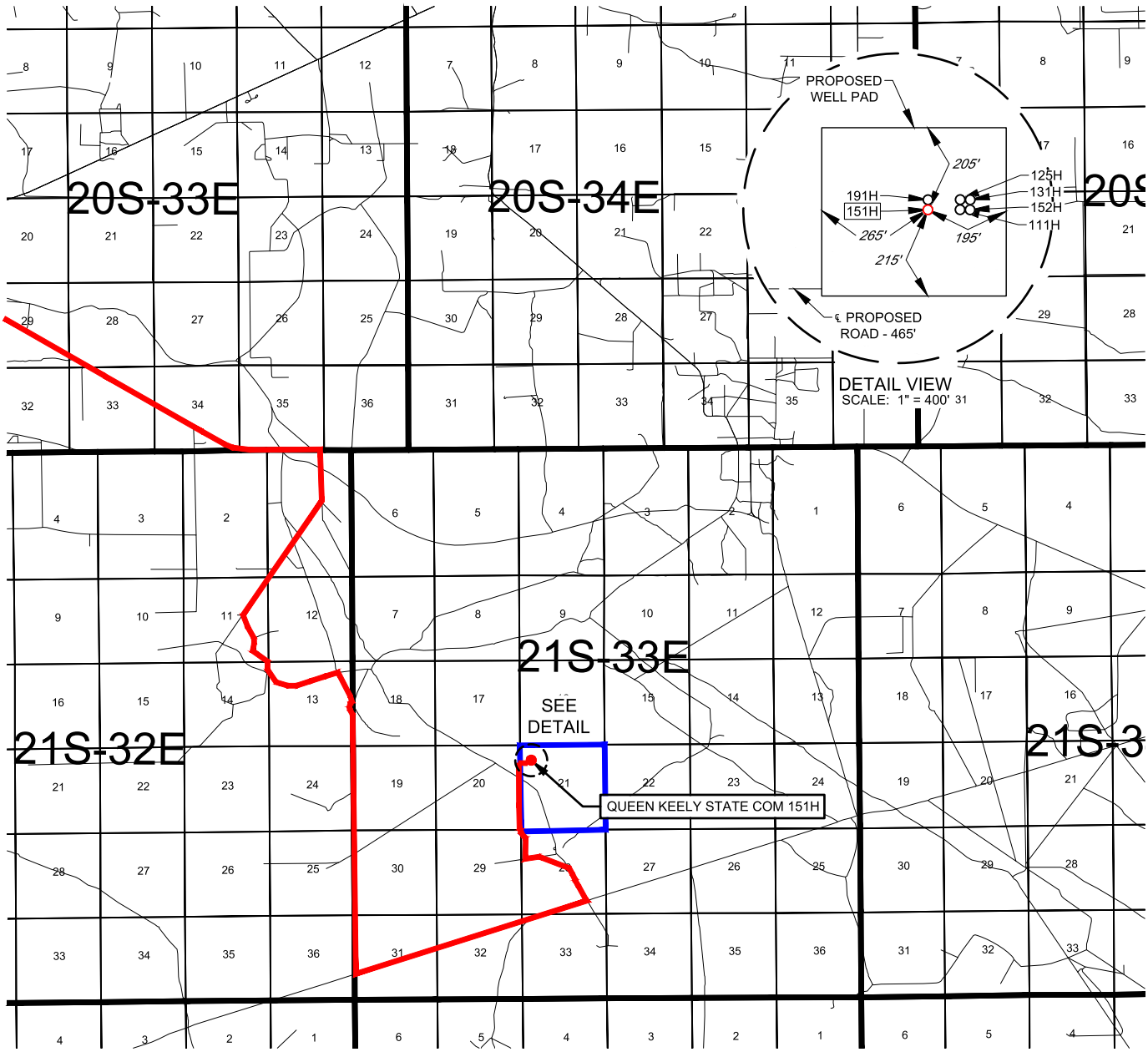
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF 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
481 WINSCOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

EXHIBIT 2

VICINITY MAP



TAP ROCK

LEASE NAME & WELL NO.: QUEEN KEELY STATE COM 151H

SECTION 21 TWP 21-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 929' FNL & 731' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-176 E. & COUNTY RD 28, GO SOUTH ON NM-176 E ±6.4 MILES, THENCE SOUTH (RIGHT) ON A LEASE RD ±2.2 MILES, THENCE SOUTH (LEFT) ON A LEASE RD ±0.8 MILES, THENCE EAST (LEFT) ON DELAWARE BASIN RD. ±4.5 MILES, THENCE NORTHEAST (RIGHT) ON A LEASE RD. ±2.9 MILES, THENCE NORTH (LEFT) ON A LEASE RD. ±2.0 MILES TO A POINT ±330 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 ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

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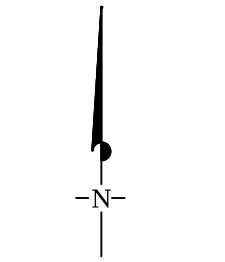

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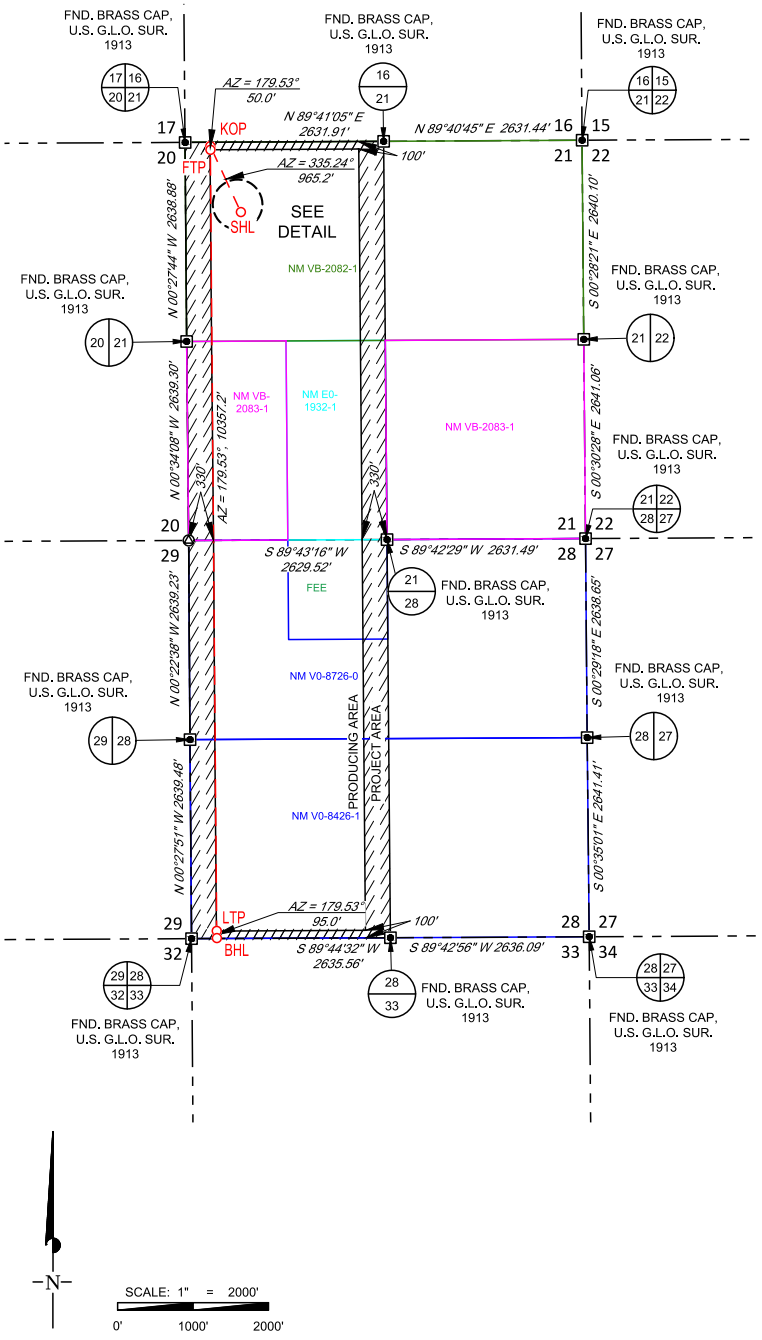
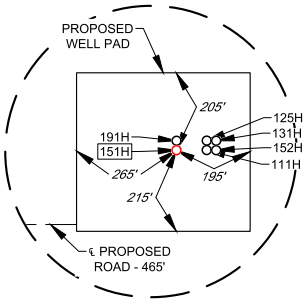
WWW.TOPOGRAPHIC.COM

EXHIBIT 2A

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



NEW MEXICO EAST NAD 1983
SURFACE LOCATION (SHL)
929' FNL - SEC. 21
731' FWL - SEC. 21
X=772534 Y=535191
LAT.: N 32.4690700
LONG.: W 103.5836776
KICK OFF POINT (KOP)
50' FNL - SEC. 21
334' FWL - SEC. 21
X=772130 Y=536067
LAT.: N 32.4714868
LONG.: W 103.5849680
FIRST TAKE POINT (FTP)
100' FNL - SEC. 21
334' FWL - SEC. 21
X=772130 Y=536017
LAT.: N 32.4713494
LONG.: W 103.5849678
LAST TAKE POINT (LTP)
100' FSL - SEC. 28
334' FWL - SEC. 28
X=772215 Y=525660
LAT.: N 32.4428812
LONG.: W 103.5849289
BOTTOM HOLE LOCATION (BHL)
5' FSL - SEC. 28
334' FWL - SEC. 28
X=772215 Y=525565
LAT.: N 32.4426201
LONG.: W 103.5849285



DETAIL VIEW
SCALE: 1" = 400'

N

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

LEASE NAME & WELL NO.: QUEEN KEELY STATE COM 151H

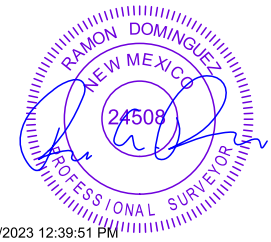
SECTION 21 TWP 21-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 929' FNL & 731' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-176 E. & COUNTY RD 28, GO SOUTH ON NM-176 E ±6.4 MILES, THENCE SOUTH (RIGHT) ON A LEASE RD ±2.2 MILES, THENCE SOUTH (LEFT) ON A LEASE RD ±0.8 MILES, THENCE EAST (LEFT) ON DELAWARE BASIN RD. ±4.5 MILES, THENCE NORTHEAST (RIGHT) ON A LEASE RD. ±2.9 MILES, THENCE NORTH (LEFT) ON A LEASE RD. ±2.0 MILES TO A POINT ±330 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.



5/10/2023 12:39:51 PM

Ramon A Dominguez, P.S. No. 24508

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
481 WINSCOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126
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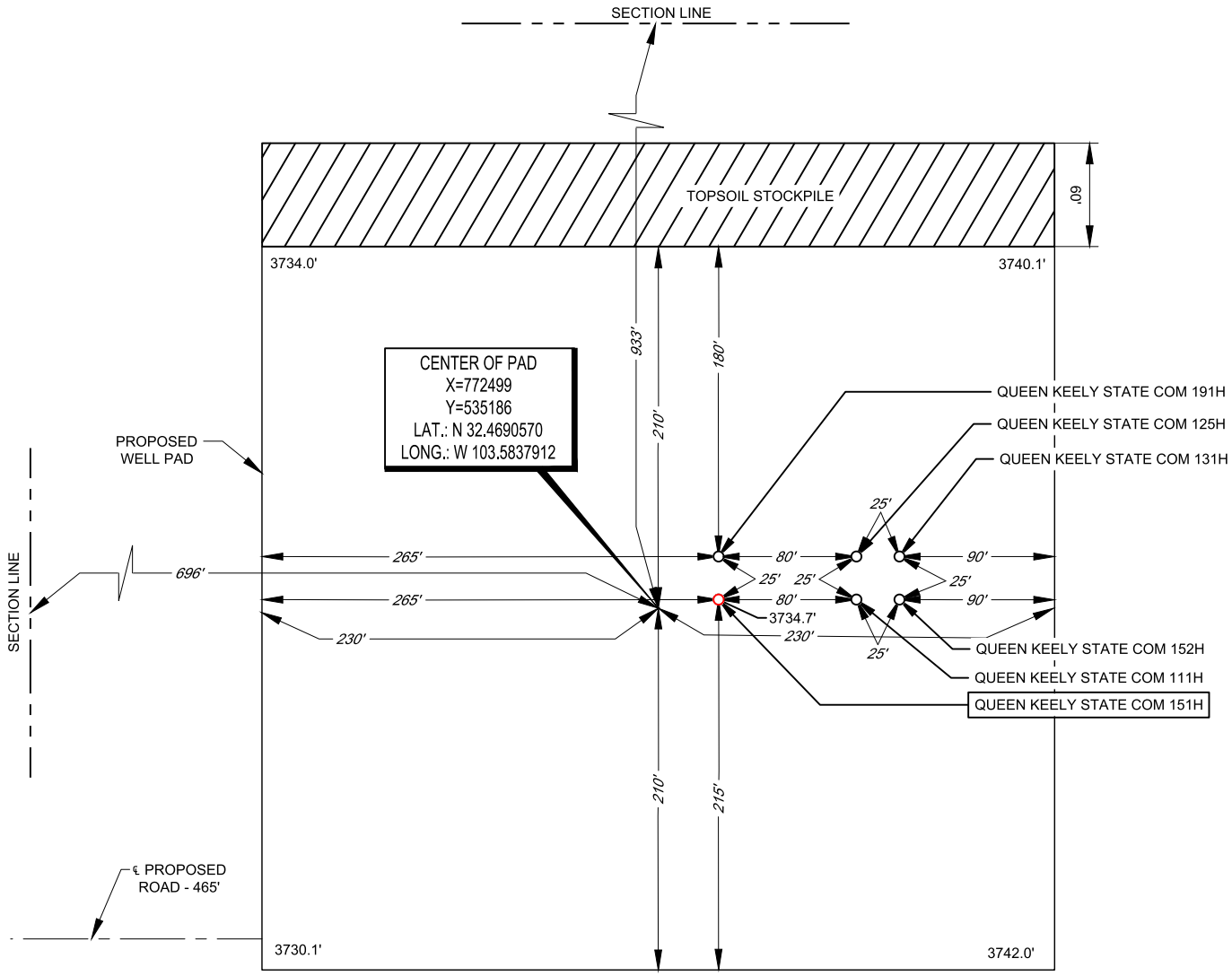
EXHIBIT 2B

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

LEGEND

SECTION LINE
PROPOSED ROAD

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: QUEEN KEELY STATE COM 151H

151H LATITUDE N 32.4690700 151H LONGITUDE W 103.5836776

CENTER OF PAD IS 933' FNL & 696' FWL

SCALE: 1" = 100'

0' 50' 100'

N

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

Ramon A Dominguez, P.S. No. 24508

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

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
481 WINSCOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
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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 Conditions

Permit 340933

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
TAP ROCK OPERATING, LLC [372043] 523 Park Point Drive Golden, CO 80401	30-025-51517
	Well: QUEEN KEELY STATE COM #151H

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	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: _____Tap Rock Operating LLC_____ **OGRID:** _____372043_____ **Date:** _5/22/23

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water
Queen Keely State #151H		Sec 21 T21S R33E	929 FNL, 731 FWL	1970	2600	4639

IV. Central Delivery Point Name: ___Queen Keely CDP_____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Queen Keely State #118H		8/15/23	9/20/23	11/13/23	12/10/23	12/10/23

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

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 
Printed Name: Jeff Trlica
Title: Regulatory Analyst
E-mail Address: jtrlica@taprk.com
Date: 5/22/2023
Phone: 720-772-5910

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

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

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

VII. **Operational Practices:** Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC. ← See attached reg for requirements.

- During drilling operations- Gas meters will be installed at the shakers and Volume Totalizers will be installed on the pits. In the event that elevated gas levels, or a pit gain are observed, returns will be diverted to a gas buster. Gas coming off the gas buster will be combusted at the flare stack. A 10’ or taller flare will be located at least 100’ from the SHL.

- During completions operations, including stimulation and frac plug drill out operations, hydrocarbon production to surface is minimized. When gas production does occur, gas will be combusted at a flare stack. A 10’ or taller flare will be located at least 100’ from the SHL.

- During production operations, all process vessels (separators, heater treaters, VRTs, Tanks) will recompress (where necessary) and route gas outlets into the natural gas gathering pipeline. Gas will preferentially be routed to natural gas gathering pipeline and the flare system will be used only during emergency, malfunction, or if the gas does not meet pipeline specifications. In the event of flaring off-specification gas, operations will pull gas samples twice a week and will also route gas back to pipeline as soon as the gas meets specification. Exceptions to this will include only those qualified exceptions per the regulation 19.15.27.8 Subsection D.

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

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

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

Tap Rock Resources, LLC

Lea County, NM (NAD 83 NME)
(Queen Keely State Com) Sec-21_T-21-S_R-33-E
Queen Keely State Com #151H

OWB

Plan: Plan #1

Standard Planning Report

22 May, 2023

Intrepid
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Queen Keely State Com #151H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3761.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3761.0usft
Site:	(Queen Keely State Com) Sec-21_T-21-S_R-33-E	**North Reference:**	Grid
Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Project Lea County, NM (NAD 83 NME)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site (Queen Keely State Com) Sec-21_T-21-S_R-33-E

Site Position:		**Northing:**	535,191.00 usft	**Latitude:**	32° 28' 8.651 N
From:	Map	**Easting:**	772,614.00 usft	**Longitude:**	103° 35' 0.303 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.40 °

Well Queen Keely State Com #151H

Well Position	**+N/-S**	0.0 usft	**Northing:**	535,191.00 usft	**Latitude:**	32° 28' 8.656 N
	+E/-W	-80.0 usft	**Easting:**	772,534.00 usft	**Longitude:**	103° 35' 1.237 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,735.0 usft

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	05/19/23	6.33	60.20	47,469.31457028

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.53

Plan Survey Tool Program **Date** 05/22/23

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,716.4	Plan #1 (OWB)	MWD	
				OWSG MWD - Standard	

Intrepid
Planning Report

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Site:	(Queen Keely State Com) Sec-21_T-21-S_R-33-E	**North Reference:**	Grid
Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,494.5	9.95	335.21	2,489.5	78.2	-36.1	1.00	1.00	0.00	335.21	
7,084.4	9.95	335.21	7,010.5	797.8	-368.4	0.00	0.00	0.00	0.00	
8,078.9	0.00	0.01	8,000.0	876.0	-404.5	1.00	-1.00	0.00	180.00	
10,885.9	0.00	0.01	10,807.0	876.0	-404.5	0.00	0.00	0.00	0.01	
11,776.9	89.10	179.53	11,379.9	312.1	-399.9	10.00	10.00	20.15	179.53	
15,092.7	89.10	179.53	11,432.1	-3,003.2	-372.9	0.00	0.00	0.00	0.00	3000'VS (Queen Ke
15,097.9	89.20	179.53	11,432.2	-3,008.4	-372.9	2.00	2.00	0.00	0.00	
21,716.4	89.20	179.53	11,524.6	-9,626.0	-319.0	0.00	0.00	0.00	0.00	PBHL (Queen Keely

Intrepid
Planning Report

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Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
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
NUDGE - Build 1.00									
1,600.0	1.00	335.21	1,600.0	0.8	-0.4	-0.8	1.00	1.00	0.00
1,700.0	2.00	335.21	1,700.0	3.2	-1.5	-3.2	1.00	1.00	0.00
1,800.0	3.00	335.21	1,799.9	7.1	-3.3	-7.2	1.00	1.00	0.00
1,900.0	4.00	335.21	1,899.7	12.7	-5.9	-12.7	1.00	1.00	0.00
2,000.0	5.00	335.21	1,999.4	19.8	-9.1	-19.9	1.00	1.00	0.00
2,100.0	6.00	335.21	2,098.9	28.5	-13.2	-28.6	1.00	1.00	0.00
2,200.0	7.00	335.21	2,198.3	38.8	-17.9	-38.9	1.00	1.00	0.00
2,300.0	8.00	335.21	2,297.4	50.6	-23.4	-50.8	1.00	1.00	0.00
2,400.0	9.00	335.21	2,396.3	64.0	-29.6	-64.3	1.00	1.00	0.00
2,494.5	9.95	335.21	2,489.5	78.2	-36.1	-78.5	1.00	1.00	0.00
HOLD - 4589.9 at 2494.5 MD									
2,500.0	9.95	335.21	2,494.9	79.0	-36.5	-79.3	0.00	0.00	0.00
2,600.0	9.95	335.21	2,593.4	94.7	-43.7	-95.1	0.00	0.00	0.00
2,700.0	9.95	335.21	2,691.9	110.4	-51.0	-110.8	0.00	0.00	0.00
2,800.0	9.95	335.21	2,790.4	126.1	-58.2	-126.5	0.00	0.00	0.00
2,900.0	9.95	335.21	2,888.9	141.7	-65.5	-142.3	0.00	0.00	0.00
3,000.0	9.95	335.21	2,987.4	157.4	-72.7	-158.0	0.00	0.00	0.00
3,100.0	9.95	335.21	3,085.9	173.1	-79.9	-173.8	0.00	0.00	0.00
3,200.0	9.95	335.21	3,184.4	188.8	-87.2	-189.5	0.00	0.00	0.00
3,300.0	9.95	335.21	3,282.9	204.5	-94.4	-205.2	0.00	0.00	0.00
3,400.0	9.95	335.21	3,381.4	220.1	-101.7	-221.0	0.00	0.00	0.00
3,500.0	9.95	335.21	3,479.9	235.8	-108.9	-236.7	0.00	0.00	0.00
3,600.0	9.95	335.21	3,578.4	251.5	-116.1	-252.4	0.00	0.00	0.00
3,700.0	9.95	335.21	3,676.9	267.2	-123.4	-268.2	0.00	0.00	0.00
3,800.0	9.95	335.21	3,775.4	282.9	-130.6	-283.9	0.00	0.00	0.00
3,900.0	9.95	335.21	3,873.9	298.5	-137.9	-299.7	0.00	0.00	0.00
4,000.0	9.95	335.21	3,972.4	314.2	-145.1	-315.4	0.00	0.00	0.00
4,100.0	9.95	335.21	4,070.9	329.9	-152.3	-331.1	0.00	0.00	0.00
4,200.0	9.95	335.21	4,169.4	345.6	-159.6	-346.9	0.00	0.00	0.00
4,300.0	9.95	335.21	4,267.9	361.3	-166.8	-362.6	0.00	0.00	0.00
4,400.0	9.95	335.21	4,366.4	376.9	-174.1	-378.3	0.00	0.00	0.00
4,500.0	9.95	335.21	4,464.9	392.6	-181.3	-394.1	0.00	0.00	0.00
4,600.0	9.95	335.21	4,563.4	408.3	-188.5	-409.8	0.00	0.00	0.00
4,700.0	9.95	335.21	4,661.9	424.0	-195.8	-425.6	0.00	0.00	0.00
4,800.0	9.95	335.21	4,760.4	439.7	-203.0	-441.3	0.00	0.00	0.00
4,900.0	9.95	335.21	4,858.9	455.3	-210.3	-457.0	0.00	0.00	0.00

Intrepid
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Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	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)
5,000.0	9.95	335.21	4,957.4	471.0	-217.5	-472.8	0.00	0.00	0.00
5,100.0	9.95	335.21	5,055.9	486.7	-224.7	-488.5	0.00	0.00	0.00
5,200.0	9.95	335.21	5,154.4	502.4	-232.0	-504.3	0.00	0.00	0.00
5,300.0	9.95	335.21	5,252.9	518.0	-239.2	-520.0	0.00	0.00	0.00
5,400.0	9.95	335.21	5,351.4	533.7	-246.5	-535.7	0.00	0.00	0.00
5,500.0	9.95	335.21	5,449.9	549.4	-253.7	-551.5	0.00	0.00	0.00
5,600.0	9.95	335.21	5,548.4	565.1	-260.9	-567.2	0.00	0.00	0.00
5,700.0	9.95	335.21	5,646.8	580.8	-268.2	-582.9	0.00	0.00	0.00
5,800.0	9.95	335.21	5,745.3	596.4	-275.4	-598.7	0.00	0.00	0.00
5,900.0	9.95	335.21	5,843.8	612.1	-282.7	-614.4	0.00	0.00	0.00
6,000.0	9.95	335.21	5,942.3	627.8	-289.9	-630.2	0.00	0.00	0.00
6,100.0	9.95	335.21	6,040.8	643.5	-297.1	-645.9	0.00	0.00	0.00
6,200.0	9.95	335.21	6,139.3	659.2	-304.4	-661.6	0.00	0.00	0.00
6,300.0	9.95	335.21	6,237.8	674.8	-311.6	-677.4	0.00	0.00	0.00
6,400.0	9.95	335.21	6,336.3	690.5	-318.9	-693.1	0.00	0.00	0.00
6,500.0	9.95	335.21	6,434.8	706.2	-326.1	-708.9	0.00	0.00	0.00
6,600.0	9.95	335.21	6,533.3	721.9	-333.3	-724.6	0.00	0.00	0.00
6,700.0	9.95	335.21	6,631.8	737.6	-340.6	-740.3	0.00	0.00	0.00
6,800.0	9.95	335.21	6,730.3	753.2	-347.8	-756.1	0.00	0.00	0.00
6,900.0	9.95	335.21	6,828.8	768.9	-355.1	-771.8	0.00	0.00	0.00
7,000.0	9.95	335.21	6,927.3	784.6	-362.3	-787.5	0.00	0.00	0.00
7,084.4	9.95	335.21	7,010.5	797.8	-368.4	-800.8	0.00	0.00	0.00
DROP - -1.00									
7,100.0	9.79	335.21	7,025.8	800.3	-369.5	-803.3	1.00	-1.00	0.00
7,200.0	8.79	335.21	7,124.5	814.9	-376.3	-818.0	1.00	-1.00	0.00
7,300.0	7.79	335.21	7,223.5	828.0	-382.3	-831.1	1.00	-1.00	0.00
7,400.0	6.79	335.21	7,322.6	839.5	-387.7	-842.7	1.00	-1.00	0.00
7,500.0	5.79	335.21	7,422.0	849.5	-392.2	-852.7	1.00	-1.00	0.00
7,600.0	4.79	335.21	7,521.6	857.8	-396.1	-861.1	1.00	-1.00	0.00
7,700.0	3.79	335.21	7,621.3	864.6	-399.2	-867.9	1.00	-1.00	0.00
7,800.0	2.79	335.21	7,721.2	869.8	-401.7	-873.1	1.00	-1.00	0.00
7,900.0	1.79	335.21	7,821.1	873.5	-403.3	-876.7	1.00	-1.00	0.00
8,000.0	0.79	335.21	7,921.1	875.5	-404.3	-878.8	1.00	-1.00	0.00
8,078.9	0.00	0.00	8,000.0	876.0	-404.5	-879.3	1.00	-1.00	31.40
HOLD - 2807.0 at 8078.9 MD									
8,100.0	0.00	0.00	8,021.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,200.0	0.00	0.00	8,121.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,300.0	0.00	0.00	8,221.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,400.0	0.00	0.00	8,321.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,500.0	0.00	0.00	8,421.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,600.0	0.00	0.00	8,521.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,700.0	0.00	0.00	8,621.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,800.0	0.00	0.00	8,721.1	876.0	-404.5	-879.3	0.00	0.00	0.00
8,900.0	0.00	0.00	8,821.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,000.0	0.00	0.00	8,921.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,100.0	0.00	0.00	9,021.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,200.0	0.00	0.00	9,121.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,300.0	0.00	0.00	9,221.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,400.0	0.00	0.00	9,321.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,500.0	0.00	0.00	9,421.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,600.0	0.00	0.00	9,521.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,700.0	0.00	0.00	9,621.1	876.0	-404.5	-879.3	0.00	0.00	0.00
9,800.0	0.00	0.00	9,721.1	876.0	-404.5	-879.3	0.00	0.00	0.00

Intrepid
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Queen Keely State Com #151H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3761.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3761.0usft
Site:	(Queen Keely State Com) Sec-21_T-21-S_R-33-E	**North Reference:**	Grid
Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	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	0.00	0.00	9,821.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,000.0	0.00	0.00	9,921.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,100.0	0.00	0.00	10,021.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,200.0	0.00	0.00	10,121.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,300.0	0.00	0.00	10,221.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,400.0	0.00	0.00	10,321.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,500.0	0.00	0.00	10,421.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,600.0	0.00	0.00	10,521.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,700.0	0.00	0.00	10,621.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,800.0	0.00	0.00	10,721.1	876.0	-404.5	-879.3	0.00	0.00	0.00
10,885.9	0.00	0.00	10,807.0	876.0	-404.5	-879.3	0.00	0.00	0.00
KOP - DLS 10.00 TFO 179.53									
10,900.0	1.41	179.53	10,821.1	875.8	-404.5	-879.1	10.00	10.00	0.00
10,950.0	6.41	179.53	10,870.9	872.4	-404.5	-875.7	10.00	10.00	0.00
11,000.0	11.41	179.53	10,920.3	864.7	-404.4	-868.0	10.00	10.00	0.00
11,050.0	16.41	179.53	10,968.8	852.7	-404.3	-856.0	10.00	10.00	0.00
11,100.0	21.41	179.53	11,016.1	836.5	-404.2	-839.8	10.00	10.00	0.00
11,150.0	26.41	179.53	11,061.8	816.2	-404.0	-819.5	10.00	10.00	0.00
11,200.0	31.41	179.53	11,105.6	792.1	-403.8	-795.3	10.00	10.00	0.00
11,250.0	36.41	179.53	11,147.1	764.2	-403.6	-767.5	10.00	10.00	0.00
11,300.0	41.41	179.53	11,185.9	732.8	-403.3	-736.1	10.00	10.00	0.00
11,350.0	46.41	179.53	11,222.0	698.1	-403.1	-701.4	10.00	10.00	0.00
11,400.0	51.41	179.53	11,254.8	660.5	-402.7	-663.7	10.00	10.00	0.00
11,450.0	56.41	179.53	11,284.3	620.1	-402.4	-623.4	10.00	10.00	0.00
11,500.0	61.41	179.53	11,310.1	577.3	-402.1	-580.5	10.00	10.00	0.00
11,550.0	66.41	179.53	11,332.1	532.4	-401.7	-535.7	10.00	10.00	0.00
11,600.0	71.41	179.53	11,350.0	485.7	-401.3	-489.0	10.00	10.00	0.00
11,650.0	76.41	179.53	11,363.9	437.7	-400.9	-441.0	10.00	10.00	0.00
11,700.0	81.41	179.53	11,373.5	388.7	-400.5	-391.9	10.00	10.00	0.00
11,750.0	86.41	179.53	11,378.8	339.0	-400.1	-342.2	10.00	10.00	0.00
11,776.9	89.10	179.53	11,379.9	312.1	-399.9	-315.4	10.00	10.00	0.00
EOC - 3315.8 hold at 11776.9 MD									
11,800.0	89.10	179.53	11,380.3	289.0	-399.7	-292.3	0.00	0.00	0.00
11,900.0	89.10	179.53	11,381.8	189.0	-398.9	-192.3	0.00	0.00	0.00
12,000.0	89.10	179.53	11,383.4	89.0	-398.1	-92.3	0.00	0.00	0.00
12,100.0	89.10	179.53	11,385.0	-10.9	-397.3	7.7	0.00	0.00	0.00
12,200.0	89.10	179.53	11,386.6	-110.9	-396.5	107.7	0.00	0.00	0.00
12,300.0	89.10	179.53	11,388.1	-210.9	-395.7	207.7	0.00	0.00	0.00
12,400.0	89.10	179.53	11,389.7	-310.9	-394.8	307.7	0.00	0.00	0.00
12,500.0	89.10	179.53	11,391.3	-410.9	-394.0	407.6	0.00	0.00	0.00
12,600.0	89.10	179.53	11,392.9	-510.9	-393.2	507.6	0.00	0.00	0.00
12,700.0	89.10	179.53	11,394.4	-610.9	-392.4	607.6	0.00	0.00	0.00
12,800.0	89.10	179.53	11,396.0	-710.8	-391.6	707.6	0.00	0.00	0.00
12,900.0	89.10	179.53	11,397.6	-810.8	-390.8	807.6	0.00	0.00	0.00
13,000.0	89.10	179.53	11,399.2	-910.8	-390.0	907.6	0.00	0.00	0.00
13,100.0	89.10	179.53	11,400.7	-1,010.8	-389.1	1,007.6	0.00	0.00	0.00
13,200.0	89.10	179.53	11,402.3	-1,110.8	-388.3	1,107.6	0.00	0.00	0.00
13,300.0	89.10	179.53	11,403.9	-1,210.8	-387.5	1,207.5	0.00	0.00	0.00
13,400.0	89.10	179.53	11,405.5	-1,310.7	-386.7	1,307.5	0.00	0.00	0.00
13,500.0	89.10	179.53	11,407.0	-1,410.7	-385.9	1,407.5	0.00	0.00	0.00
13,600.0	89.10	179.53	11,408.6	-1,510.7	-385.1	1,507.5	0.00	0.00	0.00
13,700.0	89.10	179.53	11,410.2	-1,610.7	-384.3	1,607.5	0.00	0.00	0.00
13,800.0	89.10	179.53	11,411.8	-1,710.7	-383.4	1,707.5	0.00	0.00	0.00

Intrepid
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Queen Keely State Com #151H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3761.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3761.0usft
Site:	(Queen Keely State Com) Sec-21_T-21-S_R-33-E	**North Reference:**	Grid
Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,900.0	89.10	179.53	11,413.3	-1,810.7	-382.6	1,807.5	0.00	0.00	0.00
14,000.0	89.10	179.53	11,414.9	-1,910.6	-381.8	1,907.5	0.00	0.00	0.00
14,100.0	89.10	179.53	11,416.5	-2,010.6	-381.0	2,007.4	0.00	0.00	0.00
14,200.0	89.10	179.53	11,418.1	-2,110.6	-380.2	2,107.4	0.00	0.00	0.00
14,300.0	89.10	179.53	11,419.6	-2,210.6	-379.4	2,207.4	0.00	0.00	0.00
14,400.0	89.10	179.53	11,421.2	-2,310.6	-378.6	2,307.4	0.00	0.00	0.00
14,500.0	89.10	179.53	11,422.8	-2,410.6	-377.7	2,407.4	0.00	0.00	0.00
14,600.0	89.10	179.53	11,424.4	-2,510.6	-376.9	2,507.4	0.00	0.00	0.00
14,700.0	89.10	179.53	11,425.9	-2,610.5	-376.1	2,607.4	0.00	0.00	0.00
14,800.0	89.10	179.53	11,427.5	-2,710.5	-375.3	2,707.4	0.00	0.00	0.00
14,900.0	89.10	179.53	11,429.1	-2,810.5	-374.5	2,807.3	0.00	0.00	0.00
15,000.0	89.10	179.53	11,430.7	-2,910.5	-373.7	2,907.3	0.00	0.00	0.00
15,092.7	89.10	179.53	11,432.1	-3,003.2	-372.9	3,000.0	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00									
15,097.9	89.20	179.53	11,432.2	-3,008.4	-372.9	3,005.2	2.00	2.00	0.00
Start 6618.5 hold at 15097.9 MD									
15,100.0	89.20	179.53	11,432.2	-3,010.5	-372.9	3,007.3	0.00	0.00	0.00
15,200.0	89.20	179.53	11,433.6	-3,110.5	-372.0	3,107.3	0.00	0.00	0.00
15,300.0	89.20	179.53	11,435.0	-3,210.4	-371.2	3,207.3	0.00	0.00	0.00
15,400.0	89.20	179.53	11,436.4	-3,310.4	-370.4	3,307.3	0.00	0.00	0.00
15,500.0	89.20	179.53	11,437.8	-3,410.4	-369.6	3,407.3	0.00	0.00	0.00
15,600.0	89.20	179.53	11,439.2	-3,510.4	-368.8	3,507.3	0.00	0.00	0.00
15,700.0	89.20	179.53	11,440.6	-3,610.4	-368.0	3,607.3	0.00	0.00	0.00
15,800.0	89.20	179.53	11,442.0	-3,710.4	-367.2	3,707.2	0.00	0.00	0.00
15,900.0	89.20	179.53	11,443.4	-3,810.4	-366.3	3,807.2	0.00	0.00	0.00
16,000.0	89.20	179.53	11,444.8	-3,910.4	-365.5	3,907.2	0.00	0.00	0.00
16,100.0	89.20	179.53	11,446.2	-4,010.3	-364.7	4,007.2	0.00	0.00	0.00
16,200.0	89.20	179.53	11,447.6	-4,110.3	-363.9	4,107.2	0.00	0.00	0.00
16,300.0	89.20	179.53	11,449.0	-4,210.3	-363.1	4,207.2	0.00	0.00	0.00
16,400.0	89.20	179.53	11,450.4	-4,310.3	-362.3	4,307.2	0.00	0.00	0.00
16,500.0	89.20	179.53	11,451.8	-4,410.3	-361.5	4,407.2	0.00	0.00	0.00
16,600.0	89.20	179.53	11,453.2	-4,510.3	-360.6	4,507.2	0.00	0.00	0.00
16,700.0	89.20	179.53	11,454.6	-4,610.3	-359.8	4,607.2	0.00	0.00	0.00
16,800.0	89.20	179.53	11,456.0	-4,710.3	-359.0	4,707.2	0.00	0.00	0.00
16,900.0	89.20	179.53	11,457.4	-4,810.2	-358.2	4,807.1	0.00	0.00	0.00
17,000.0	89.20	179.53	11,458.8	-4,910.2	-357.4	4,907.1	0.00	0.00	0.00
17,100.0	89.20	179.53	11,460.1	-5,010.2	-356.6	5,007.1	0.00	0.00	0.00
17,200.0	89.20	179.53	11,461.5	-5,110.2	-355.8	5,107.1	0.00	0.00	0.00
17,300.0	89.20	179.53	11,462.9	-5,210.2	-355.0	5,207.1	0.00	0.00	0.00
17,400.0	89.20	179.53	11,464.3	-5,310.2	-354.1	5,307.1	0.00	0.00	0.00
17,500.0	89.20	179.53	11,465.7	-5,410.2	-353.3	5,407.1	0.00	0.00	0.00
17,600.0	89.20	179.53	11,467.1	-5,510.1	-352.5	5,507.1	0.00	0.00	0.00
17,700.0	89.20	179.53	11,468.5	-5,610.1	-351.7	5,607.1	0.00	0.00	0.00
17,800.0	89.20	179.53	11,469.9	-5,710.1	-350.9	5,707.1	0.00	0.00	0.00
17,900.0	89.20	179.53	11,471.3	-5,810.1	-350.1	5,807.0	0.00	0.00	0.00
18,000.0	89.20	179.53	11,472.7	-5,910.1	-349.3	5,907.0	0.00	0.00	0.00
18,100.0	89.20	179.53	11,474.1	-6,010.1	-348.4	6,007.0	0.00	0.00	0.00
18,200.0	89.20	179.53	11,475.5	-6,110.1	-347.6	6,107.0	0.00	0.00	0.00
18,300.0	89.20	179.53	11,476.9	-6,210.1	-346.8	6,207.0	0.00	0.00	0.00
18,400.0	89.20	179.53	11,478.3	-6,310.0	-346.0	6,307.0	0.00	0.00	0.00
18,500.0	89.20	179.53	11,479.7	-6,410.0	-345.2	6,407.0	0.00	0.00	0.00
18,600.0	89.20	179.53	11,481.1	-6,510.0	-344.4	6,507.0	0.00	0.00	0.00
18,700.0	89.20	179.53	11,482.5	-6,610.0	-343.6	6,607.0	0.00	0.00	0.00

Intrepid
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Queen Keely State Com #151H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3761.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3761.0usft
Site:	(Queen Keely State Com) Sec-21_T-21-S_R-33-E	**North Reference:**	Grid
Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,800.0	89.20	179.53	11,483.9	-6,710.0	-342.7	6,707.0	0.00	0.00	0.00
18,900.0	89.20	179.53	11,485.3	-6,810.0	-341.9	6,806.9	0.00	0.00	0.00
19,000.0	89.20	179.53	11,486.7	-6,910.0	-341.1	6,906.9	0.00	0.00	0.00
19,100.0	89.20	179.53	11,488.1	-7,010.0	-340.3	7,006.9	0.00	0.00	0.00
19,200.0	89.20	179.53	11,489.5	-7,109.9	-339.5	7,106.9	0.00	0.00	0.00
19,300.0	89.20	179.53	11,490.9	-7,209.9	-338.7	7,206.9	0.00	0.00	0.00
19,400.0	89.20	179.53	11,492.2	-7,309.9	-337.9	7,306.9	0.00	0.00	0.00
19,500.0	89.20	179.53	11,493.6	-7,409.9	-337.0	7,406.9	0.00	0.00	0.00
19,600.0	89.20	179.53	11,495.0	-7,509.9	-336.2	7,506.9	0.00	0.00	0.00
19,700.0	89.20	179.53	11,496.4	-7,609.9	-335.4	7,606.9	0.00	0.00	0.00
19,800.0	89.20	179.53	11,497.8	-7,709.9	-334.6	7,706.9	0.00	0.00	0.00
19,900.0	89.20	179.53	11,499.2	-7,809.8	-333.8	7,806.8	0.00	0.00	0.00
20,000.0	89.20	179.53	11,500.6	-7,909.8	-333.0	7,906.8	0.00	0.00	0.00
20,100.0	89.20	179.53	11,502.0	-8,009.8	-332.2	8,006.8	0.00	0.00	0.00
20,200.0	89.20	179.53	11,503.4	-8,109.8	-331.3	8,106.8	0.00	0.00	0.00
20,300.0	89.20	179.53	11,504.8	-8,209.8	-330.5	8,206.8	0.00	0.00	0.00
20,400.0	89.20	179.53	11,506.2	-8,309.8	-329.7	8,306.8	0.00	0.00	0.00
20,500.0	89.20	179.53	11,507.6	-8,409.8	-328.9	8,406.8	0.00	0.00	0.00
20,600.0	89.20	179.53	11,509.0	-8,509.8	-328.1	8,506.8	0.00	0.00	0.00
20,700.0	89.20	179.53	11,510.4	-8,609.7	-327.3	8,606.8	0.00	0.00	0.00
20,800.0	89.20	179.53	11,511.8	-8,709.7	-326.5	8,706.8	0.00	0.00	0.00
20,900.0	89.20	179.53	11,513.2	-8,809.7	-325.6	8,806.8	0.00	0.00	0.00
21,000.0	89.20	179.53	11,514.6	-8,909.7	-324.8	8,906.7	0.00	0.00	0.00
21,100.0	89.20	179.53	11,516.0	-9,009.7	-324.0	9,006.7	0.00	0.00	0.00
21,200.0	89.20	179.53	11,517.4	-9,109.7	-323.2	9,106.7	0.00	0.00	0.00
21,300.0	89.20	179.53	11,518.8	-9,209.7	-322.4	9,206.7	0.00	0.00	0.00
21,400.0	89.20	179.53	11,520.2	-9,309.7	-321.6	9,306.7	0.00	0.00	0.00
21,500.0	89.20	179.53	11,521.6	-9,409.6	-320.8	9,406.7	0.00	0.00	0.00
21,600.0	89.20	179.53	11,523.0	-9,509.6	-319.9	9,506.7	0.00	0.00	0.00
21,700.0	89.20	179.53	11,524.4	-9,609.6	-319.1	9,606.7	0.00	0.00	0.00
21,716.4	89.20	179.53	11,524.6	-9,626.0	-319.0	9,623.1	0.00	0.00	0.00
TD at 21716.4									

Intrepid
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Queen Keely State Com #151H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3761.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3761.0usft
Site:	(Queen Keely State Com) Sec-21_T-21-S_R-33-E	**North Reference:**	Grid
Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Queen Keely Sta	0.00	0.00	11,385.0	826.0	-404.0	536,017.00	772,130.00	32° 28' 16.858 N	103° 35' 5.885 W
- plan misses target center by 206.6usft at 11360.8usft MD (11229.3 TVD, 690.2 N, -403.0 E)									
- Point									
KOP (Queen Keely Sta	0.00	0.00	11,385.0	876.0	-404.0	536,067.00	772,130.00	32° 28' 17.352 N	103° 35' 5.881 W
- plan misses target center by 241.0usft at 11344.1usft MD (11217.9 TVD, 702.4 N, -403.1 E)									
- Point									
3000'VS (Queen Keely	0.90	179.53	11,432.1	-3,003.2	-372.9	532,187.80	772,161.08	32° 27' 38.966 N	103° 35' 5.835 W
- plan hits target center									
- Rectangle (sides W100.0 H3,829.0 D30.0)									
PBHL (Queen Keely St	0.80	179.53	11,524.6	-9,626.0	-319.0	525,565.00	772,215.00	32° 26' 33.431 N	103° 35' 5.748 W
- plan hits target center									
- Rectangle (sides W100.0 H6,626.0 D30.0)									
LTP (Queen Keely Sta	0.00	0.01	11,524.6	-9,531.0	-319.0	525,660.00	772,215.00	32° 26' 34.371 N	103° 35' 5.740 W
- plan misses target center by 1.6usft at 21621.4usft MD (11523.3 TVD, -9531.0 N, -319.8 E)									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,800.1	1,800.0	Rustler			
2,226.9	2,225.0	Top Salt			
5,495.1	5,445.0	Base Salt			
5,561.1	5,510.0	Delaware			
5,566.1	5,515.0	Lamar			
5,586.4	5,535.0	Bell			
5,596.6	5,545.0	Ramsey			
6,053.5	5,995.0	Cherry			
7,083.9	7,010.0	Brushy			
8,833.9	8,755.0	Bone Spring			
9,023.9	8,945.0	Bone Spring Base			
9,358.9	9,280.0	Avalon Middle			
10,018.9	9,940.0	1st Bone Spring			
10,388.9	10,310.0	2nd Bone Spring Carb			
10,588.9	10,510.0	2nd Bone Spring Sand			
11,181.9	11,090.0	3rd Bone Spring Carb			

Intrepid
Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Queen Keely State Com #151H
Company:	Tap Rock Resources, LLC	**TVD Reference:**	KB @ 3761.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB @ 3761.0usft
Site:	(Queen Keely State Com) Sec-21_T-21-S_R-33-E	**North Reference:**	Grid
Well:	Queen Keely State Com #151H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.0	1,500.0	0.0	0.0	NUDGE - Build 1.00
2,494.5	2,489.5	78.2	-36.1	HOLD - 4589.9 at 2494.5 MD
7,084.4	7,010.5	797.8	-368.4	DROP - -1.00
8,078.9	8,000.0	876.0	-404.5	HOLD - 2807.0 at 8078.9 MD
10,885.9	10,807.0	876.0	-404.5	KOP - DLS 10.00 TFO 179.53
11,776.9	11,379.9	312.1	-399.9	EOC - 3315.8 hold at 11776.9 MD
15,092.7	11,432.1	-3,003.2	-372.9	Start DLS 2.00 TFO 0.00
15,097.9	11,432.2	-3,008.4	-372.9	Start 6618.5 hold at 15097.9 MD
21,716.4	11,524.6	-9,626.0	-319.0	TD at 21716.4