<u>District I</u> 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 341092

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

AFFLIO	AFFLICATION FOR FEMILIT TO BRIEF, RE-ENTER, BEEFEN, FEOGBACK, OR ADD A ZONE							
1. Operator Name and Address		2. OGRID Number						
TAP ROCK OPERATING, LLC	TAP ROCK OPERATING, LLC							
523 Park Point Drive		3. API Number						
Golden, CO 80401		30-025-51519						
4. Property Code	5. Property Name	6. Well No.						
334067	QUEEN KEELY STATE COM	195H						

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
С	21	21S	33E	С	971	N	2091	W	Lea

8. Proposed Bottom Hole Location

ſ	UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
	N	28	21S	33E	N	5	S	1650	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	3743
16. Multiple	17. Proposed Depth	18. Formation	19. Contractor	20. Spud Date
N	21120	2nd Bone Spring Sand		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	Type Hole Size Casing Size		e Hole Size Casing Siz		Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	Surf 14.75 11.75		42	1865	974	0		
Int1	11	8.625	32	5649	866	0		
Prod	7.875	5.5	20	21120	2348	5449		

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

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

knowledge and	belief. I have complied with 19.15.14.9 (A) I	true and complete to the best of my NMAC ⊠ and/or 19.15.14.9 (B) NMAC		OIL CONSERVATION DIVISION			
Printed Name:	Electronically filed by Christian C	ombs	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:	5/25/2023	Phone: 720-360-4028	Conditions of Appr	roval Attached			

District I
1625 N. French Dr., Hobbs, NM 88240
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1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025- 51519		² Pool Code 97895	³ Pool Name WC-025 G-08 S213304D;BONE SPRING			
⁴ Property Code		⁵ P1	operty Name	⁶ Well Number		
334067		QUEEN KE	EELY STATE COM 195H			
OGRID No.		⁸ O ₁	perator Name	⁹ Elevation		
372043 TAP ROCK (OPERATING, LLC.	3743'		
	•	10~				

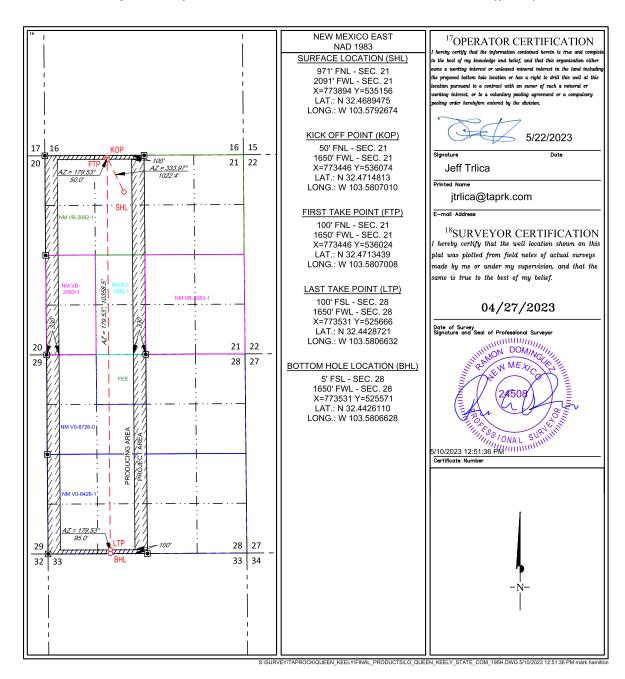
¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	21	21-S	33-E	_	971'	NORTH	2091'	WEST	LEA
11p H. L. V In Different Processor Conference									

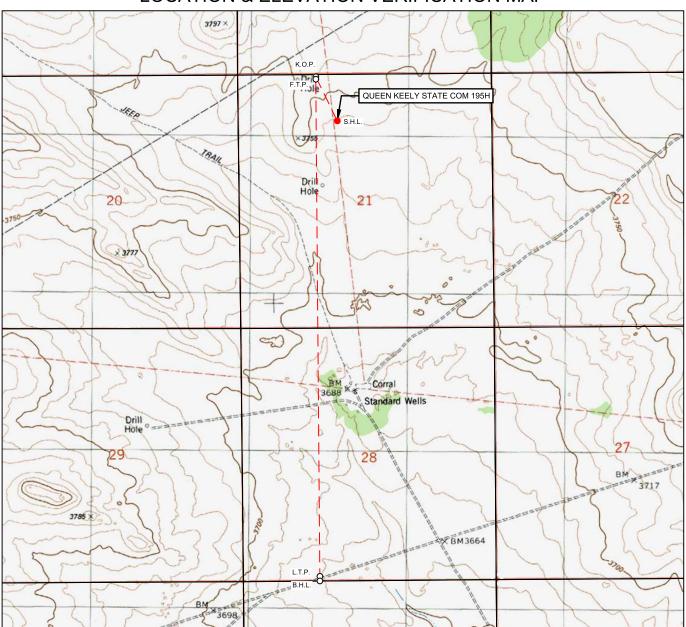
¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	28	21-S	33-E	-	5'	SOUTH	1650'	WEST	LEA
¹² Dedicated Acres 640	¹³ Joint or l	nfill 14Co	onsolidation Co	de ¹⁵ Ord	er 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 & ELEVATION VERIFICATION MAP





LEASE NAME & WELL NO.:

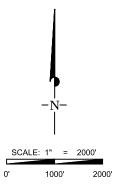
QUEEN KEELY STATE COM 195H

 SECTION
 21
 TWP
 21-S
 RGE
 33-E
 SURVEY
 N.M.P.M.

 COUNTY
 LEA
 STATE
 NM
 ELEVATION
 3743'

 DESCRIPTION
 971' FNL & 2091' FWL

LATITUDE _____ N 32.4689475 ____ LONGITUDE ____ W 103.5792674



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

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



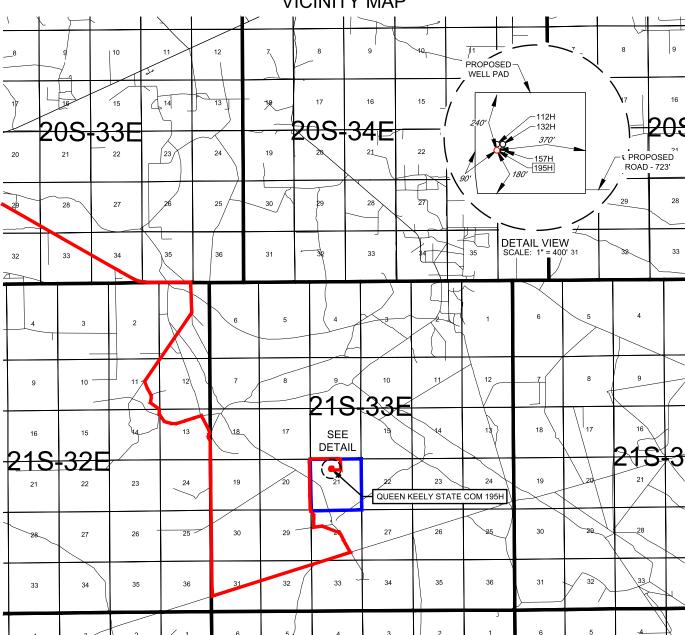
481 WINSCOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126

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

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LEASE NAME & WELL NO.:

QUEEN KEELY STATE COM 195H

 SECTION
 21
 TWP
 21-S
 RGE
 33-E
 SURVEY
 N.M.P.M.

 COUNTY
 LEA
 STATE
 NM

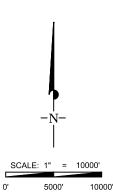
 DESCRIPTION
 971' FNL & 2091' FWL

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. ±3.0 MILES TO A POINT ±405 FEET SOUTHEAST 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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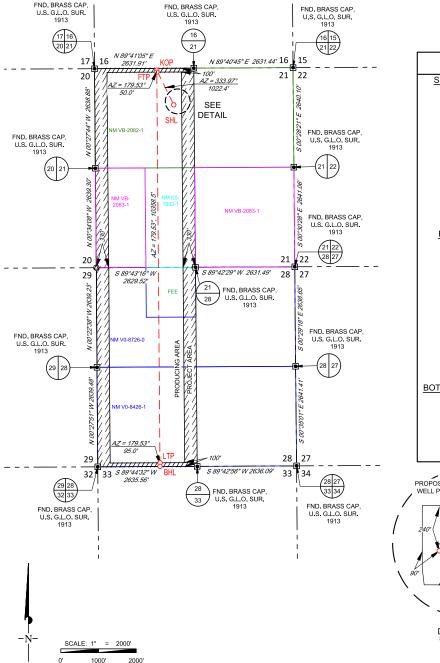
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705

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



NEW MEXICO EAST NAD 1983

SURFACE LOCATION (SHL)

971' FNL - SEC. 21 2091' FWL - SEC. 21 X=773894 Y=535156 LAT.: N 32.4689475 LONG.: W 103.5792674

KICK OFF POINT (KOP)

50' FNL - SEC. 21 1650' FWL - SEC. 21 X=773446 Y=536074 LAT.: N 32.4714813 LONG.: W 103.5807010

FIRST TAKE POINT (FTP)

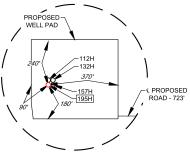
100' FNL - SEC. 21 1650' FWL - SEC. 21 X=773446 Y=536024 LAT.: N 32.4713439 LONG.: W 103.5807008

LAST TAKE POINT (LTP)

100' FSL - SEC. 28 1650' FWL - SEC. 28 X=773531 Y=525666 LAT.: N 32.4428721 LONG.: W 103.5806632

BOTTOM HOLE LOCATION (BHL)

5' FSL - SEC. 28 1650' FWL - SEC. 28 X=773531 Y=525571 LAT.: N 32.4426110 LONG.: W 103.5806628



DETAIL VIEW SCALE: 1" = 400'

 LEASE NAME & WELL NO.:
 QUEEN KEELY STATE COM 195H

 SECTION 21 TWP 21-S RGE 33-E COUNTY LEA STATE NM
 STATE NM

 DESCRIPTION 971' FNL & 2091' 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. ±3.0 MILES TO A POINT ±405 FEET SOUTHEAST 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 FLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



Ramon A Dominguez, P.S. No. 24508



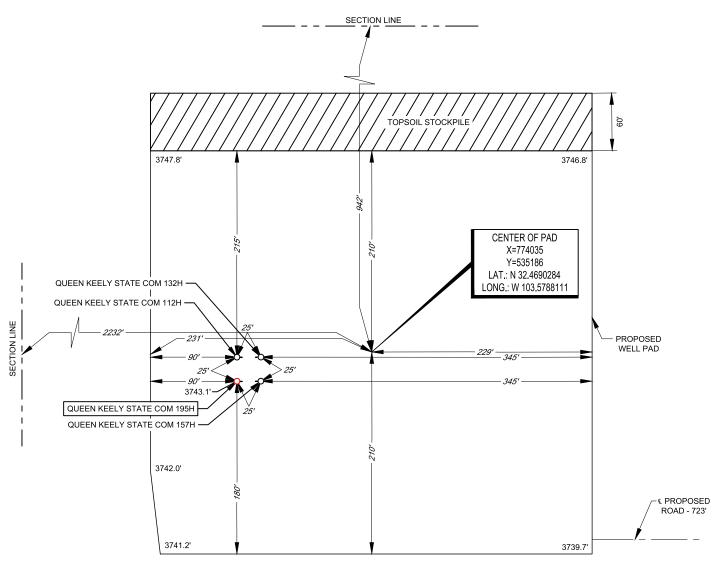
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743 WWW.TOPOGRAPHIC.COM **LEGEND**

SECTION LINE PROPOSED ROAD

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

EXHIBIT 2B

DETAIL VIEW SCALE: 1" = 100'



QUEEN KEELY STATE COM 195H LEASE NAME & WELL NO .: _ N 32.4689475 W 103.5792674 195H LATITUDE _ 195H LONGITUDE

CENTER OF PAD IS 942' FNL & 2232' FWL

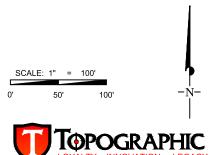
"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE."

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 TAR PROCK 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"





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Form APD Conditions

Permit 341092

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

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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**

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
TAP ROCK OPERATING, LLC [372043]	30-025-51519
523 Park Point Drive	Well:
Golden, CO 80401	QUEEN KEELY STATE COM #195H

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

		<u>E1</u>	Hective May 23	<u>5, 2021</u>			
I. Operator:Ta	ip Rock Oper	ating LLC	OGRID: _	372043_		_ Date: _5/25	5/23
II. Type: \square Original \square Amendment due to \square 19.15.27.9.D(6)(a) NMAC \square 19.15.27.9.D(6)(b) NMAC \square Other.							
If Other, please describe	»:						
III. Well(s): Provide the be recompleted from a s					of wells prop	oosed to be dri	lled or proposed to
Well Name A		ULSTR	I	Footages		ed Anticipa /D Gas MCF/	Produced
Queen Keely State #19	5H	Sec 21 T21S R33E	319 FNL	, 647 FEL	1099	1574	4587
V. Anticipated Schedul proposed to be recomple Well Name	le: Provide th	e following informa	tion for each ne	w or recompleted	l well or set o	of wells propo	osed to be drilled or First Production
Well Ivallie	All	Spud Date	Date	Commenceme		Back Date	Date
Queen Keely State #195H		7/04/23	9/20/23	11/13/23	12	2/10/23	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	Available Maximum Daily Capacity
			Start Date	of System Segment Tie-in

$XI.$ Map. \square 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 [\square will \square will not have	capacity to gather 100%	of the anticipated na	atural gas
production volume from the well prior to the date of first	t production.			

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

Attach Or	aaratar's	nlon to	monogo	production	in response	to the	ingrand	line proce	11140
Affach Or	nerator s	i nian to	manage.	production	in response	to the	increased	line press	anre

XIV. Confidentiality: \Box Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information pro-	ovided 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 into	formation
for which confidentiality is asserted and the basis for such assertion.	

Section 3 - Certifications Effective May 25, 2021

	<u>Effective May 25, 2021</u>					
Operator certifies that,	after reasonable inquiry and based on the available information at the time of submittal:					
one hundred percent of	e to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering					
hundred percent of the a into account the current	able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. box, Operator will select one of the following:					
Well Shut-In. □ Opera D of 19.15.27.9 NMAC	tor will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection c; or					
Venting and Flaring P	Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential					
	ses 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)	(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: Rang'
Printed Name: Bill Ramsey
Title: Environmental Specialist
E-mail Address: <u>bramsey@taprk.com</u>
Date: 5/25/2023
Phone: 720-238-2787
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 lowpressure 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 #195H

OWB

Plan: Plan #1

Standard Planning Report

24 May, 2023





Intrepid Planning Report



EDM 5000.15 Single User Db Database: Company: Tap Rock Resources, LLC Project: Lea County, NM (NAD 83 NME) (Queen Keely State Com) Site: Sec-21_T-21-S_R-33-E

Queen Keely State Com #195H

Wellbore: **OWB** Design: Plan #1 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

Minimum Curvature

Project Lea County, NM (NAD 83 NME)

Map System: US State Plane 1983 North American Datum 1983 Geo Datum:

Map Zone: New Mexico Eastern Zone System Datum:

Mean Sea Level

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 Мар Easting: 772,614.00 usft Longitude: 103° 35' 0.303 W From: **Position Uncertainty:** 0.0 usft **Slot Radius:** 13-3/16 " **Grid Convergence:** 0.40°

Well Queen Keely State Com #195H

Well Position +N/-S -35.0 usft Northing: 535,156.00 usft 32° 28' 8.215 N Latitude: +E/-W 1,280.0 usft Easting: 773,894.00 usft Longitude: 103° 34' 45.366 W

Wellhead Elevation: **Ground Level: Position Uncertainty** 0.0 usft 3,743.0 usft

OWB Wellbore Declination Magnetics Model Name Sample Date **Dip Angle** Field Strength (°) (°) (nT) IGRF2015 05/22/23 6.33 60.20 47,468.78074499

Design Plan #1 **Audit Notes:** Version: **PLAN** Tie On Depth: Phase: 0.0 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 179.53 0.0 0.0 0.0

Plan Survey Tool Program Date 05/24/23 **Depth From** Depth To (usft) (usft) Survey (Wellbore) **Tool Name** Remarks 0.0 21,119.6 Plan #1 (OWB) MWD 1 OWSG MWD - Standard

05/24/23 10:18:49AM COMPASS 5000.15 Build 88 Page 2



IntrepidPlanning Report



Database: Company: Project: Site:

Well:

EDM 5000.15 Single User Db 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 #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

Plan Sections	3									
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	
2,408.7	9.09	333.94	2,404.9	64.6	-31.6	1.00	1.00	0.00	333.94	
7,968.7	9.09	333.94	7,895.1	853.4	-417.4	0.00	0.00	0.00	0.00	
8,877.4	0.00	0.00	8,800.0	918.0	-449.0	1.00	-1.00	0.00	180.00	
10,287.9	0.00	0.00	10,210.5	918.0	-449.0	0.00	0.00	0.00	0.00	
11,185.9	89.80	179.53	10,783.5	347.1	-444.3	10.00	10.00	19.99	179.53	
13,536.6	89.80	179.53	10,791.7	-2,003.6	-425.1	0.00	0.00	0.00	0.00	2000'VS (Queen Ke
13,551.6	89.50	179.53	10,791.8	-2,018.6	-425.0	2.00	-2.00	0.00	180.00	
15,536.7	89.50	179.53	10,809.2	-4,003.5	-408.7	0.00	0.00	0.00	0.00	4000'VS (Queen Ke
15,561.8	89.00	179.53	10,809.5	-4,028.6	-408.5	2.00	-2.00	0.00	-180.00	
18,037.1	89.00	179.53	10,852.8	-6,503.4	-388.2	0.00	0.00	0.00	0.00	6500'VS (Queen Ke
18,061.9	88.50	179.53	10,853.4	-6,528.3	-388.0	2.00	-2.00	0.00	-179.90	
20,037.7	88.50	179.53	10,905.1	-8,503.3	-371.8	0.00	0.00	0.00	0.00	
20,062.9	89.00	179.53	10,905.6	-8,528.5	-371.6	2.00	2.00	0.01	0.28	
21,119.6	89.00	179.53	10,924.0	-9,585.0	-363.0	0.00	0.00	0.00	0.00	PBHL (Queen Keely



IntrepidPlanning Report



Database: EDM 5000.15 Single User Db Company: Tap Rock Resources, LLC Project: Lea County, NM (NAD 83 NME)
Site: (Queen Keely State Com)
Sec-21_T-21-S_R-33-E

Queen Keely State Com #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

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 NUDGE - E	0.00 Build 1.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	1.00	333.94	1,600.0	0.8	-0.4	-0.8	1.00	1.00	0.00
1,700.0	2.00	333.94	1,700.0	3.1	-1.5	-3.1	1.00	1.00	0.00
1,800.0	3.00	333.94	1,799.9	7.1	-3.5	-7.1	1.00	1.00	0.00
1,900.0	4.00	333.94	1,899.7	12.5	-6.1	-12.6	1.00	1.00	0.00
2,000.0	5.00	333.94	1,999.4	19.6	-9.6	-19.7	1.00	1.00	0.00
2,100.0	6.00	333.94	2,098.9	28.2	-13.8	-28.3	1.00	1.00	0.00
2,200.0	7.00	333.94	2,198.3	38.4	-18.8	-38.5	1.00	1.00	0.00
2,300.0	8.00	333.94	2,297.4	50.1	-24.5	-50.3	1.00	1.00	0.00
2,408.7 HOLD - 55	9.09 60.0 at 2408.7 l	333.94 MD	2,404.9	64.6	-31.6	-64.9	1.00	1.00	0.00
2,500.0	9.09	333.94	2,495.0	77.5	-37.9	-77.9	0.00	0.00	0.00
2,600.0	9.09	333.94	2,593.8	91.7	-44.9	-92.1	0.00	0.00	0.00
2,700.0	9.09	333.94	2,692.5	105.9	-51.8	-106.3	0.00	0.00	0.00
2,800.0	9.09	333.94	2,791.3	120.1	-58.7	-120.6	0.00	0.00	0.00
2,900.0	9.09	333.94	2,890.0	134.3	-65.7	-134.8	0.00	0.00	0.00
3,000.0	9.09	333.94	2,988.8	148.5	-72.6	-149.1	0.00	0.00	0.00
3,100.0	9.09	333.94	3,087.5	162.7	-79.6	-163.3	0.00	0.00	0.00
3,200.0	9.09	333.94	3,186.3	176.9	-86.5	-177.6	0.00	0.00	0.00
3,300.0	9.09	333.94	3,285.0	191.0	-93.4	-191.8	0.00	0.00	0.00
3,400.0	9.09	333.94	3,383.8	205.2	-100.4	-206.1	0.00	0.00	0.00
3,500.0	9.09	333.94	3,482.5	219.4	-107.3	-220.3	0.00	0.00	0.00
3,600.0	9.09	333.94	3,581.2	233.6	-114.3	-234.5	0.00	0.00	0.00
3,700.0	9.09	333.94	3,680.0	247.8	-121.2	-248.8	0.00	0.00	0.00
3,800.0	9.09	333.94	3,778.7	262.0	-128.1	-263.0	0.00	0.00	0.00
3,900.0	9.09	333.94	3,877.5	276.2	-135.1	-277.3	0.00	0.00	0.00
4,000.0 4,100.0 4,200.0 4,300.0 4,400.0	9.09 9.09 9.09 9.09 9.09	333.94 333.94 333.94 333.94	3,976.2 4,075.0 4,173.7 4,272.5 4,371.2	290.4 304.5 318.7 332.9 347.1	-142.0 -149.0 -155.9 -162.8 -169.8	-291.5 -305.8 -320.0 -334.2 -348.5	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
4,500.0	9.09	333.94	4,469.9	361.3	-176.7	-362.7	0.00	0.00	0.00
4,600.0	9.09	333.94	4,568.7	375.5	-183.7	-377.0	0.00	0.00	0.00
4,700.0	9.09	333.94	4,667.4	389.7	-190.6	-391.2	0.00	0.00	0.00
4,800.0	9.09	333.94	4,766.2	403.9	-197.5	-405.5	0.00	0.00	0.00
4,900.0	9.09	333.94	4,864.9	418.0	-204.5	-419.7	0.00	0.00	0.00
5,000.0	9.09	333.94	4,963.7	432.2	-211.4	-433.9	0.00	0.00	0.00



IntrepidPlanning Report



Database: EDM 5000.15 Single User Db Company: Tap Rock Resources, LLC Project: Lea County, NM (NAD 83 NME)
Site: (Queen Keely State Com)
Sec-21_T-21-S_R-33-E

Queen Keely State Com #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

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)
5,100.0 5,200.0 5,300.0 5,400.0	9.09 9.09 9.09 9.09	333.94 333.94 333.94 333.94	5,062.4 5,161.2 5,259.9 5,358.7	446.4 460.6 474.8 489.0	-218.3 -225.3 -232.2 -239.2	-448.2 -462.4 -476.7 -490.9	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
5,500.0 5,600.0 5,700.0 5,800.0	9.09 9.09 9.09 9.09	333.94 333.94 333.94 333.94	5,457.4 5,556.1 5,654.9 5,753.6	503.2 517.4 531.5 545.7	-246.1 -253.0 -260.0 -266.9	-505.2 -519.4 -533.7 -547.9	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
5,900.0 6,000.0 6,100.0 6,200.0	9.09 9.09 9.09 9.09	333.94 333.94 333.94 333.94	5,852.4 5,951.1 6,049.9 6,148.6	559.9 574.1 588.3 602.5	-273.9 -280.8 -287.7 -294.7	-562.1 -576.4 -590.6 -604.9	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
6,300.0 6,400.0 6,500.0	9.09 9.09 9.09	333.94 333.94 333.94	6,247.4 6,346.1 6,444.8	616.7 630.9 645.0	-301.6 -308.6 -315.5	-619.1 -633.4 -647.6	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
6,600.0 6,700.0 6,800.0 6,900.0	9.09 9.09 9.09 9.09	333.94 333.94 333.94 333.94	6,543.6 6,642.3 6,741.1 6,839.8	659.2 673.4 687.6 701.8	-322.4 -329.4 -336.3 -343.2	-661.8 -676.1 -690.3 -704.6	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
7,000.0 7,100.0 7,200.0 7,300.0 7,400.0	9.09 9.09 9.09 9.09 9.09	333.94 333.94 333.94 333.94	6,938.6 7,037.3 7,136.1 7,234.8 7,333.6	716.0 730.2 744.3 758.5 772.7	-350.2 -357.1 -364.1 -371.0 -377.9	-718.8 -733.1 -747.3 -761.6 -775.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
7,500.0 7,600.0 7,700.0 7,800.0	9.09 9.09 9.09 9.09	333.94 333.94 333.94 333.94	7,432.3 7,531.0 7,629.8 7,728.5	786.9 801.1 815.3 829.5	-384.9 -391.8 -398.8 -405.7	-790.0 -804.3 -818.5 -832.8	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
7,900.0 7,968.7	9.09	333.94 333.94	7,827.3 7,895.1	843.7 853.4	-412.6 -417.4	-847.0 -856.8	0.00	0.00	0.00 0.00
DROP1. 8,000.0 8,100.0 8,200.0 8,300.0	8.77 7.77 6.77 5.77	333.94 333.94 333.94 333.94	7,926.0 8,025.0 8,124.2 8,223.6	857.8 870.7 882.1 891.9	-419.5 -425.9 -431.4 -436.2	-861.2 -874.2 -885.6 -895.4	1.00 1.00 1.00 1.00	-1.00 -1.00 -1.00 -1.00	0.00 0.00 0.00 0.00
8,400.0 8,500.0 8,600.0 8,700.0 8,800.0	4.77 3.77 2.77 1.77 0.77	333.94 333.94 333.94 333.94	8,323.2 8,422.9 8,522.7 8,622.6 8,722.6	900.1 906.8 912.0 915.5 917.5	-440.3 -443.5 -446.1 -447.8 -448.8	-903.7 -910.4 -915.6 -919.2 -921.2	1.00 1.00 1.00 1.00 1.00	-1.00 -1.00 -1.00 -1.00 -1.00	0.00 0.00 0.00 0.00 0.00
8,877.4	0.00 10.5 at 8877.4 l	0.00	8,800.0	918.0	-449.0	-921.7	1.00	-1.00	0.00
8,900.0 9,000.0 9,100.0 9,200.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	8,822.6 8,922.6 9,022.6 9,122.6	918.0 918.0 918.0 918.0	-449.0 -449.0 -449.0 -449.0	-921.7 -921.7 -921.7 -921.7	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
9,300.0 9,400.0 9,500.0 9,600.0 9,700.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	9,222.6 9,322.6 9,422.6 9,522.6 9,622.6	918.0 918.0 918.0 918.0 918.0	-449.0 -449.0 -449.0 -449.0	-921.7 -921.7 -921.7 -921.7 -921.7	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
9,800.0 9,900.0	0.00 0.00	0.00 0.00	9,722.6 9,822.6	918.0 918.0	-449.0 -449.0	-921.7 -921.7	0.00 0.00	0.00 0.00	0.00 0.00



IntrepidPlanning Report



Database: EDM 5000.15 Single User Db Tap Rock Resources, LLC Project: Lea County, NM (NAD 83 NME)
Site: (Queen Keely State Com)

Sec-21_T-21-S_R-33-E Queen Keely State Com #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

anned Survey									
			V - 2 - 1			v		-	_
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	0.00	0.00	9,922.6	918.0	-449.0	-921.7	0.00	0.00	0.00
10,100.0 10,200.0	0.00 0.00	0.00 0.00	10,022.6 10,122.6	918.0 918.0	-449.0 -449.0	-921.7 -921.7	0.00 0.00	0.00 0.00	0.00 0.00
10,287.9	0.00	0.00	10,210.5	918.0	-449.0	-921.7	0.00	0.00	0.00
,	10.00 TFO 179		10,210.5	910.0	-449.0	-921.7	0.00	0.00	0.00
10,300.0	1.21	179.53	10,222.6	917.9	-449.0	-921.5	10.00	10.00	0.00
10,350.0	6.21	179.53	10,272.5	914.6	-449.0	-918.3	10.00	10.00	0.00
10,400.0	11.21	179.53	10,321.9	907.1	-448.9	-910.7	10.00	10.00	0.00
10,450.0	16.21	179.53	10,370.5	895.2	-448.8	-898.9	10.00	10.00	0.00
10,500.0	21.21	179.53	10,417.8	879.2	-448.7	-882.8	10.00	10.00	0.00
10,550.0 10,600.0	26.21 31.21	179.53 179.53	10,463.6 10,507.4	859.1 835.1	-448.5 -448.3	-862.7 -838.7	10.00 10.00	10.00 10.00	0.00 0.00
10,650.0	36.21	179.53	10,507.4	807.3	-448.3 -448.1	-836.7 -811.0	10.00	10.00	0.00
10,700.0	41.21	179.53	10,588.0	776.1	-447.8	-779.7	10.00	10.00	0.00
10,750.0	46.21	179.53	10.624.1	741.5	-447.6	-745.2	10.00	10.00	0.00
10,730.0	51.21	179.53	10,657.1	741.3	-447.0 -447.2	-743.2	10.00	10.00	0.00
10,850.0	56.21	179.53	10,686.7	663.7	-446.9	-667.3	10.00	10.00	0.00
10,900.0	61.21	179.53	10,712.6	621.0	-446.6	-624.6	10.00	10.00	0.00
10,950.0	66.21	179.53	10,734.8	576.2	-446.2	-579.8	10.00	10.00	0.00
11,000.0	71.21	179.53	10,752.9	529.6	-445.8	-533.2	10.00	10.00	0.00
11,050.0	76.21	179.53	10,766.9	481.6	-445.4	-485.3	10.00	10.00	0.00
11,100.0	81.21	179.53	10,776.7	432.6	-445.0	-436.2	10.00	10.00	0.00
11,150.0	86.21 89.80	179.53	10,782.2	382.9	-444.6	-386.6	10.00	10.00	0.00
11,185.9 FOC - 2350	09.00 0.8 hold at 111	179.53	10,783.5	347.1	-444.3	-350.7	10.00	10.00	0.00
			10 702 F	222.0	-444.2	-336.6	0.00	0.00	0.00
11,200.0 11,300.0	89.80 89.80	179.53 179.53	10,783.5 10,783.9	333.0 233.0	-444.2 -443.4	-336.6	0.00	0.00 0.00	0.00
11,400.0	89.80	179.53	10,784.2	133.0	-442.6	-136.6	0.00	0.00	0.00
11,500.0	89.80	179.53	10,784.6	33.0	-441.8	-36.6	0.00	0.00	0.00
11,600.0	89.80	179.53	10,784.9	-67.0	-440.9	63.4	0.00	0.00	0.00
11,700.0	89.80	179.53	10,785.3	-167.0	-440.1	163.4	0.00	0.00	0.00
11,800.0	89.80	179.53	10,785.6	-267.0	-439.3	263.4	0.00	0.00	0.00
11,900.0	89.80	179.53	10,786.0	-367.0	-438.5	363.4	0.00	0.00	0.00
12,000.0	89.80	179.53	10,786.3	-467.0	-437.7	463.4	0.00	0.00	0.00
12,100.0	89.80	179.53	10,786.7	-567.0	-436.8	563.4	0.00	0.00	0.00
12,200.0	89.80	179.53	10,787.0	-667.0	-436.0	663.4	0.00	0.00	0.00
12,300.0 12,400.0	89.80 89.80	179.53 179.53	10,787.4 10,787.7	-767.0 -867.0	-435.2 -434.4	763.4 863.4	0.00 0.00	0.00 0.00	0.00 0.00
12,500.0	89.80	179.53	10,787.7	-867.0 -967.0	-434.4 -433.6	963.4	0.00	0.00	0.00
12,600.0	89.80	179.53	10,788.4	-1,067.0	-432.7	1,063.4	0.00	0.00	0.00
12,700.0	89.80	179.53	10.788.8	-1.167.0	-431.9	1,163.4	0.00	0.00	0.00
12,800.0	89.80	179.53	10,789.1	-1,267.0	-431.1	1,263.4	0.00	0.00	0.00
12,900.0	89.80	179.53	10,789.5	-1,367.0	-430.3	1,363.4	0.00	0.00	0.00
13,000.0	89.80	179.53	10,789.8	-1,467.0	-429.5	1,463.4	0.00	0.00	0.00
13,100.0	89.80	179.53	10,790.2	-1,567.0	-428.7	1,563.4	0.00	0.00	0.00
13,200.0	89.80	179.53	10,790.5	-1,667.0	-427.8	1,663.4	0.00	0.00	0.00
13,300.0	89.80	179.53	10,790.9	-1,767.0	-427.0	1,763.4	0.00	0.00	0.00
13,400.0	89.80	179.53	10,791.3	-1,867.0	-426.2	1,863.4	0.00	0.00	0.00
13,500.0 13,536.6	89.80 89.80	179.53 179.53	10,791.6	-1,967.0 -2,003.6	-425.4 -425.1	1,963.4	0.00 0.00	0.00	0.00
	09.60 2.00 TFO 180.0	179.53 10	10,791.7	-2,003.6	-425.1	2,000.0	0.00	0.00	0.00
			40.704.0	0.040.0	405.0	0.045.0	0.00	0.00	0.00
13,551.6	89.50	179.53	10,791.8	-2,018.6	-425.0	2,015.0	2.00	-2.00	0.00



IntrepidPlanning Report



Database: EDM 5000.15 Single User Db Company: Tap Rock Resources, LLC Project: Lea County, NM (NAD 83 NME)
Site: (Queen Keely State Com)
Sec-21_T-21-S_R-33-E

Queen Keely State Com #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

Planned Survey									
Measured Depth (usft)	l Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start 19	85.1 hold at 1355	1.6 MD							
13,600 13,700 13,800 13,900	0 89.50 0 89.50 0 89.50	179.53 179.53 179.53 179.53	10,792.2 10,793.1 10,794.0 10,794.9	-2,067.0 -2,166.9 -2,266.9 -2,366.9	-424.6 -423.7 -422.9 -422.1	2,063.4 2,163.4 2,263.4 2,363.4	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
14,000 14,100 14,200 14,300 14,400	0 89.50 0 89.50 0 89.50 0 89.50	179.53 179.53 179.53 179.53 179.53	10,795.7 10,796.6 10,797.5 10,798.4 10,799.2	-2,466.9 -2,566.9 -2,666.9 -2,766.9 -2,866.9	-421.3 -420.5 -419.6 -418.8 -418.0	2,463.4 2,563.4 2,663.4 2,763.4 2,863.4	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
14,500 14,600 14,700 14,800 14,900	0 89.50 0 89.50 0 89.50	179.53 179.53 179.53 179.53 179.53	10,800.1 10,801.0 10,801.9 10,802.7 10,803.6	-2,966.9 -3,066.9 -3,166.9 -3,266.9 -3,366.9	-417.2 -416.4 -415.6 -414.7 -413.9	2,963.4 3,063.4 3,163.4 3,263.4 3,363.4	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
15,000 15,100 15,200 15,300 15,400	0 89.50 0 89.50 0 89.50	179.53 179.53 179.53 179.53 179.53	10,804.5 10,805.4 10,806.2 10,807.1 10,808.0	-3,466.9 -3,566.8 -3,666.8 -3,766.8 -3,866.8	-413.1 -412.3 -411.5 -410.6 -409.8	3,463.3 3,563.3 3,663.3 3,763.3 3,863.3	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
15,500 15,536	7 89.50	179.53 179.53	10,808.9 10,809.2	-3,966.8 -4,003.5	-409.0 -408.7	3,963.3 4,000.0	0.00 0.00	0.00 0.00	0.00 0.00
	S 2.00 TFO -180.		40,000 5	4.000.0	400.5	4.005.4	0.00	0.00	0.00
15,561		179.53	10,809.5	-4,028.6	-408.5	4,025.1	2.00	-2.00	0.00
15,600 15,700		179.53 179.53	10,810.2 10,811.9	-4,066.8 -4,166.8	-408.2 -407.4	4,063.3 4,163.3	0.00 0.00	0.00 0.00	0.00 0.00
15,800 15,900 16,000 16,100 16,200	0 89.00 0 89.00 0 89.00	179.53 179.53 179.53 179.53 179.53	10,813.7 10,815.4 10,817.2 10,818.9 10,820.7	-4,266.8 -4,366.7 -4,466.7 -4,566.7	-406.5 -405.7 -404.9 -404.1 -403.3	4,263.3 4,363.3 4,463.3 4,563.2 4,663.2	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
16,300 16,400 16,500 16,600 16,700	0 89.00 0 89.00 0 89.00	179.53 179.53 179.53 179.53 179.53	10,822.4 10,824.2 10,825.9 10,827.7 10,829.4	-4,766.7 -4,866.7 -4,966.6 -5,066.6 -5,166.6	-402.5 -401.6 -400.8 -400.0 -399.2	4,763.2 4,863.2 4,963.2 5,063.2 5,163.1	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
16,800 16,900 17,000 17,100 17,200	0 89.00 0 89.00 0 89.00 0 89.00	179.53 179.53 179.53 179.53 179.53	10,831.2 10,832.9 10,834.7 10,836.4 10,838.2	-5,266.6 -5,366.6 -5,466.5 -5,566.5 -5,666.5	-398.4 -397.5 -396.7 -395.9 -395.1	5,263.1 5,363.1 5,463.1 5,563.1 5,663.1	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
17,300 17,400 17,500 17,600 17,700	0 89.00 0 89.00 0 89.00	179.53 179.53 179.53 179.53 179.53	10,839.9 10,841.7 10,843.4 10,845.2 10,846.9	-5,766.5 -5,866.5 -5,966.4 -6,066.4 -6,166.4	-394.3 -393.4 -392.6 -391.8 -391.0	5,763.1 5,863.0 5,963.0 6,063.0 6,163.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
17,800. 17,900 18,000 18,037	0 89.00 0 89.00 0 89.00 1 89.00	179.53 179.53 179.53 179.53	10,848.7 10,850.4 10,852.2 10,852.8	-6,266.4 -6,366.4 -6,466.4 -6,503.4	-390.2 -389.4 -388.5 -388.2	6,263.0 6,363.0 6,463.0 6,500.0	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Start DL 18,061.	S 2.00 TFO -179. 9 88.50	90 179.53	10,853.4	-6,528.3	-388.0	6,524.9	2.00	-2.00	0.00



IntrepidPlanning Report



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

Queen Keely State Com #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

ned Surve	у								
Measurd Depth (usft)		Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start 1	975.8 hold at 1806	61.9 MD							
18,10 18,20 18,30 18,40 18,50	0.0 88.50 0.0 88.50 0.0 88.50	179.53 179.53 179.53 179.53 179.53	10,854.4 10,857.0 10,859.6 10,862.2 10,864.8	-6,566.3 -6,666.3 -6,766.3 -6,866.2 -6,966.2	-387.7 -386.9 -386.1 -385.3 -384.4	6,562.9 6,662.9 6,762.9 6,862.8 6,962.8	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
18,60 18,70 18,80 18,90 19,00	0.0 88.50 0.0 88.50 0.0 88.50	179.53 179.53 179.53 179.53 179.53	10,867.5 10,870.1 10,872.7 10,875.3 10,877.9	-7,066.1 -7,166.1 -7,266.1 -7,366.0 -7,466.0	-383.6 -382.8 -382.0 -381.2 -380.3	7,062.8 7,162.7 7,262.7 7,362.7 7,462.6	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
19,10 19,20 19,30 19,40 19,50	0.0 88.50 0.0 88.50 0.0 88.50	179.53 179.53 179.53 179.53 179.53	10,880.5 10,883.2 10,885.8 10,888.4 10,891.0	-7,566.0 -7,665.9 -7,765.9 -7,865.8 -7,965.8	-379.5 -378.7 -377.9 -377.1 -376.2	7,562.6 7,662.5 7,762.5 7,862.5 7,962.4	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
19,60 19,70 19,80 19,90 20,00	0.0 88.50 0.0 88.50 0.0 88.50	179.53 179.53 179.53 179.53 179.53	10,893.6 10,896.2 10,898.9 10,901.5 10,904.1	-8,065.8 -8,165.7 -8,265.7 -8,365.7 -8,465.6	-375.4 -374.6 -373.8 -373.0 -372.1	8,062.4 8,162.4 8,262.3 8,362.3 8,462.3	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
20,03	7.7 88.50	179.53	10,905.1	-8,503.3	-371.8	8,500.0	0.00	0.00	0.00
	LS 2.00 TFO 0.28								
20,06	2.9 89.00 056.7 hold at 200 6	179.53	10,905.6	-8,528.5	-371.6	8,525.2	2.00	2.00	0.01
20,10 20,20 20,30	0.0 89.00 0.0 89.00	179.53 179.53 179.53	10,906.3 10,908.0 10,909.8	-8,565.6 -8,665.6 -8,765.5	-371.3 -370.5 -369.7	8,562.3 8,662.2 8,762.2	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
20,40 20,50 20,60 20,70 20,80	0.0 89.00 0.0 89.00 0.0 89.00	179.53 179.53 179.53 179.53 179.53	10,911.5 10,913.2 10,915.0 10,916.7 10,918.4	-8,865.5 -8,965.5 -9,065.5 -9,165.5 -9,265.5	-368.9 -368.1 -367.2 -366.4 -365.6	8,862.2 8,962.2 9,062.2 9,162.2 9,262.1	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
20,90 21,00 21,10 21,11	0.0 89.00 0.0 89.00 9.6 89.00	179.53 179.53 179.53 179.53	10,920.2 10,921.9 10,923.7 10,924.0	-9,365.4 -9,465.4 -9,565.4 -9,585.0	-364.8 -364.0 -363.2 -363.0	9,362.1 9,462.1 9,562.1 9,581.7	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
TD at 2	21119.6								



IntrepidPlanning Report



Database: EDM 5000.15 Single User Db Company: Tap Rock Resources, LLC Lea County, NM (NAD 83 NME)
Site: (Queen Keely State Com)
Sec-21_T-21-S_R-33-E

Queen Keely State Com #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

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 - plan misses targ - Point			10,785.0 10761.1usft	868.0 MD (10631.7	-448.0 7 TVD, 733.4	536,024.00 N, -447.5 E)	773,446.00	32° 28′ 16.835 N	103° 34' 50.523 W
KOP (Queen Keely St - plan misses targ - Point			10,785.0 10744.4usft	918.0 MD (10620.2	-448.0 2 TVD, 745.6	536,074.00 N, -447.6 E)	773,446.00	32° 28′ 17.330 N	103° 34' 50.519 W
2000'VS (Queen Keel - plan hits target o - Rectangle (sides	enter		10,791.7))	-2,003.6	-425.1	533,152.40	773,468.92	32° 27' 48.420 N	103° 34' 50.492 W
4000'VS (Queen Keel - plan hits target o - Rectangle (sides	enter		10,809.2	-4,003.5	-408.7	531,152.50	773,485.30	32° 27' 28.630 N	103° 34' 50.466 W
6500'VS (Queen Keel - plan hits target o - Rectangle (sides	enter		10,852.8	-6,503.4	-388.2	528,652.60	773,505.76	32° 27′ 3.892 N	103° 34' 50.432 W
8500'VS (Queen Keel - plan misses targ - Rectangle (sides	et center by 0	.1usft at 20		-8,503.3 D (10905.1 T	-371.9 VD, -8503.3	526,652.70 N, -371.8 E)	773,522.14	32° 26′ 44.103 N	103° 34' 50.406 W
LTP (Queen Keely Sta - plan misses targ - Point			10,924.0 024.6usft MI	-9,490.0 D (10922.3 T	-363.0 VD, -9490.0	525,666.00 N, -363.8 E)	773,531.00	32° 26′ 34.339 N	103° 34' 50.384 W
PBHL (Queen Keely S - plan hits target o - Rectangle (sides	enter		10,924.0	-9,585.0	-363.0	525,571.00	773,531.00	32° 26′ 33.399 N	103° 34' 50.391 W

rmations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,840.2	1,840.0	Rustler			
	2,267.3	2,265.0	Top Salt			
	5,528.0	5,485.0	Base Salt			
	5,593.8	5,550.0	Delaware			
	5,598.8	5,555.0	Lamar			
	5,619.1	5,575.0	Bell			
	5,634.3	5,590.0	Ramsey			
	6,090.0	6,040.0	Cherry			
	7,112.8	7,050.0	Brushy			
	8,877.4	8,800.0	Bone Spring			
	9,062.4	8,985.0	Bone Spring Base			
	9,402.4	9,325.0	Avalon Middle			
	10,057.4	9,980.0	1st Bone Spring			
	10,434.0	10,355.0	2nd Bone Spring Carb			
	10,657.5	10,555.0	2nd Bone Spring Sand			



IntrepidPlanning Report



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Sec-21_T-21-S_R-33-E Queen Keely State Com #195H

Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Queen Keely State Com #195H

KB @ 3769.0usft KB @ 3769.0usft

Grid

Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coor +N/-S (usft)	dinates +E/-W (usft)	Comment
1,500.0	1,500.0	0.0	0.0	NUDGE - Build 1.00
2,408.7	2,404.9	64.6	-31.6	HOLD - 5560.0 at 2408.7 MD
7,968.7	7,895.1	853.4	-417.4	DROP1.00
8,877.4	8,800.0	918.0	-449.0	HOLD - 1410.5 at 8877.4 MD
10,287.9	10,210.5	918.0	-449.0	KOP - DLS 10.00 TFO 179.53
11,185.9	10,783.5	347.1	-444.3	EOC - 2350.8 hold at 11185.9 MD
13,536.6	10,791.7	-2,003.6	-425.1	Start DLS 2.00 TFO 180.00
13,551.6	10,791.8	-2,018.6	-425.0	Start 1985.1 hold at 13551.6 MD
15,536.7	10,809.2	-4,003.5	-408.7	Start DLS 2.00 TFO -180.00
15,561.8	10,809.5	-4,028.6	-408.5	Start 2475.3 hold at 15561.8 MD
18,037.1	10,852.8	-6,503.4	-388.2	Start DLS 2.00 TFO -179.90
18,061.9	10,853.4	-6,528.3	-388.0	Start 1975.8 hold at 18061.9 MD
20,037.7	10,905.1	-8,503.3	-371.8	Start DLS 2.00 TFO 0.28
20,062.9	10,905.6	-8,528.5	-371.6	Start 1056.7 hold at 20062.9 MD
21,119.6	10,924.0	-9,585.0	-363.0	TD at 21119.6