

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		5. Lease Serial No. NMNM104664 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. PBR FED COM 202H
2. Name of Operator TAP ROCK OPERATING LLC		9. API Well No. 30-015-57041
3a. Address 1700 LINCOLN ST SUITE 4700, DENVER, CO 80203	3b. Phone No. (include area code) (720) 460-3316	10. Field and Pool, or Exploratory PURPLE SAGE/(WOLFCAMP) GAS
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNE / 642 FNL / 1987 FEL / LAT 32.0916374 / LONG -104.3815464 At proposed prod. zone SESW / 5 FSL / 1601 FWL / LAT 32.049892 / LONG -104.387274		11. Sec., T. R. M. or Blk. and Survey or Area SEC 34/T25S/R25E/NMP
14. Distance in miles and direction from nearest town or post office* 6 miles		12. County or Parish EDDY
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 642 feet		16. No of acres in lease 17. Spacing Unit dedicated to this well 1920.0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 25 feet		19. Proposed Depth 8116 feet / 24067 feet
20. BLM/BIA Bond No. in file FED: NMB105800930		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3671 feet
22. Approximate date work will start* 08/15/2025		23. Estimated duration 60 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature (Electronic Submission) Title Permitting Agent	Name (Printed/Typed) BRIAN WOOD / Ph: (720) 460-3316	Date 02/24/2025
Approved by (Signature) (Electronic Submission) Title Assistant Field Manager Lands & Minerals	Name (Printed/Typed) CODY LAYTON / Ph: (575) 234-5959	Date 06/20/2025
Office Carlsbad Field Office		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
 Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 06/20/2025

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	<input checked="" type="checkbox"/> Initial Submittal
			<input type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015- 57041	Pool Code 98220	Pool Name PURPLE SAGE; WOLFCAMP (GAS)
Property Code 337485	Property Name PBR FED COM	Well Number 202H
OGRID No. 372043	Operator Name TAPROCK OPERATING, LLC.	Ground Level Elevation 3671'
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

Surface Location

UL or lot no. B	Section 34	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 642' N	Feet from the E/W 1987' E	Latitude N 32.0916374	Longitude W 104.3815464	County EDDY
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Bottom Hole Location

UL or lot no. N	Section 10	Township 26-S	Range 25-E	Lot Idn -	Feet from the N/S 5' S	Feet from the E/W 1601' W	Latitude N 32.0498920	Longitude W 104.3872740	County EDDY
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Dedicated Acres 1920	Infill or Defining Well Infill	Defining Well API 213H (30-015-xxxxx)	Overlapping Spacing Unit (Y/N) N	Consolidated Code C
Order Numbers N/A			Well Setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL or lot no. C	Section 34	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 50' N	Feet from the E/W 1642' W	Latitude N 32.0931554	Longitude W 104.3869871	County EDDY
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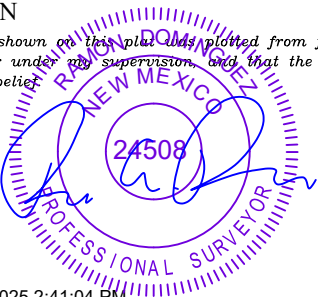
First Take Point (FTP)

UL or lot no. C	Section 34	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 330' N	Feet from the E/W 1639' W	Latitude N 32.0923855	Longitude W 104.3869854	County EDDY
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Last Take Point (LTP)

UL or lot no. N	Section 10	Township 26-S	Range 25-E	Lot Idn -	Feet from the N/S 330' S	Feet from the E/W 1601' W	Latitude N 32.0507858	Longitude W 104.3872525	County EDDY
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Unitized Area or Area of Uniform Intrest -	Spacing Unity Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation
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OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief; and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>If this well is a horizontal well, I further certify that this organization has received The consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i>  02-20-25		SURVEYORS CERTIFICATION <i>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 and correct to the best of my belief.</i>  2/10/2025 2:41:04 PM	
Signature Cory Walk		Signature and Seal of Professional Surveyor	
Date		Date	
Print Name cory@permitswest.com		Certificate Number	Date of Survey 11/18/2024
E-mail Address			

C-102

Submit Electronically
Via OCD PermittingState of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal
Type:

- ☒ Initial Submittal
- ☐ Amended Report
- ☐ As Drilled

Property Name and Well Number

PBR FED COM 202H

SURFACE LOCATION (SHL)

NEW MEXICO EAST
NAD 1983
X=526407 Y=397078
LAT.: N 32.0916374
LONG.: W 104.3815464
NAD 1927
X=485224 Y=397022
LAT.: N 32.0915192
LONG.: W 104.3810458
642' FNL 1987' FWL

KICK OFF POINT (KOP)

NEW MEXICO EAST
NAD 1983
X=524722 Y=397631
LAT.: N 32.0931554
LONG.: W 104.3869871
NAD 1927
X=483540 Y=397575
LAT.: N 32.0930374
LONG.: W 104.3864862
50' FNL 1642' FWL

FIRST TAKE POINT (FTP)

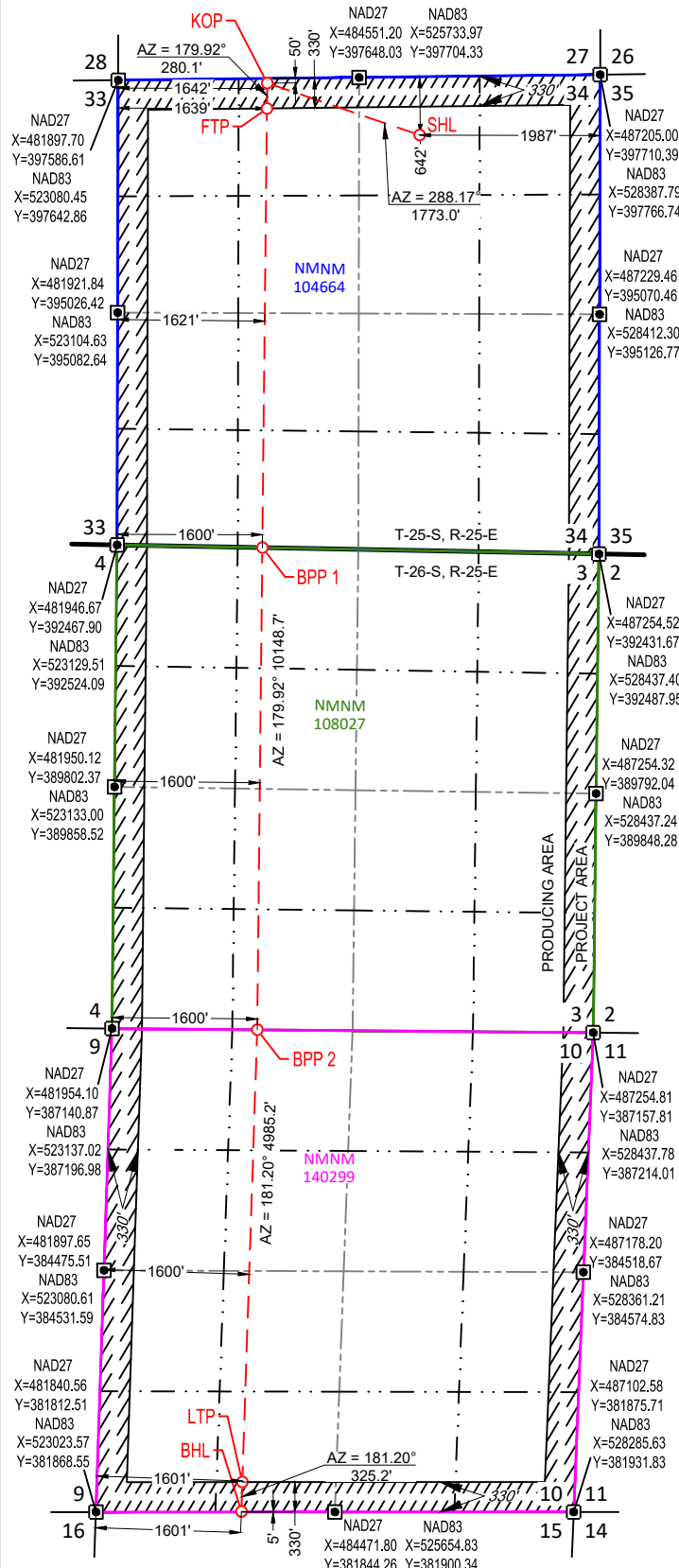
NEW MEXICO EAST
NAD 1983
X=524723 Y=397351
LAT.: N 32.0923855
LONG.: W 104.3869854
NAD 1927
X=483540 Y=397295
LAT.: N 32.0922675
LONG.: W 104.3864845
330' FNL 1639' FWL

BLM PERF. POINT (BPP1)

NEW MEXICO EAST
NAD 1983
X=524730 Y=392513
LAT.: N 32.0790874
LONG.: W 104.3869556
NAD 1927
X=483547 Y=392457
LAT.: N 32.0789691
LONG.: W 104.3864551
0' FNL 1600 FWL

BLM PERF. POINT (BPP2)

NEW MEXICO EAST
NAD 1983
X=524737 Y=387202
LAT.: N 32.0644871
LONG.: W 104.3869229
NAD 1927
X=483554 Y=387146
LAT.: N 32.0643685
LONG.: W 104.3864227
0' FNL 1600 FWL



LAST TAKE POINT (LTP)

NEW MEXICO EAST
NAD 1983
X=524632 Y=382218
LAT.: N 32.0507858
LONG.: W 104.3872525
NAD 1927
X=483449 Y=382162
LAT.: N 32.0506669
LONG.: W 104.3867527
330' FSL 1601' FWL

BOTTOM HOLE LOCATION (BHL)

NEW MEXICO EAST
NAD 1983
X=524626 Y=381893
LAT.: N 32.0498920
LONG.: W 104.3872740
NAD 1927
X=483443 Y=381837
LAT.: N 32.0497732
LONG.: W 104.3867742
5' FSL 1601' FWL

SURVEYORS CERTIFICATION

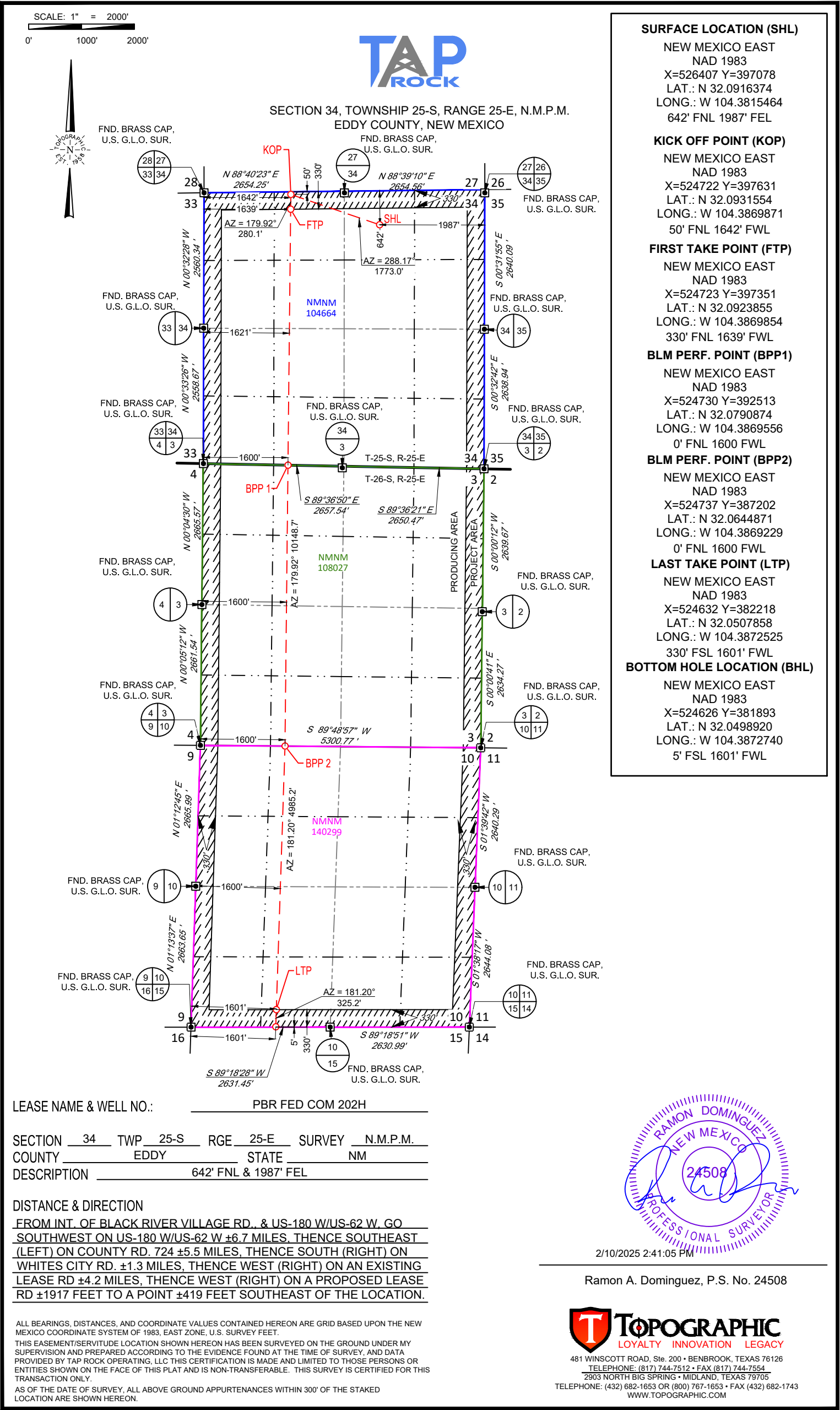
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
11/18/2024

Date of Survey

Signature and Seal of Professional Surveyor:



2/10/2025 2:41:05 PM



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

Submit Electronically
Via E-permitting

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:** _____ 2/20/2025

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 BBL/D
PBR Fed Com 202H		B, 34, 25S, 25E	642 FNL, 1987 FEL	1251	4759	6962
PBR Fed Com 204H		B, 34, 25S, 25E	668 FNL, 1963 FEL	1251	4759	6962
PBR Fed Com 211H		B, 34, 25S, 25E	667 FNL, 1988 FEL	1251	4759	6962
PBR Fed Com 213H		B, 34, 25S, 25E	643 FNL, 1962 FEL	1251	4759	6962

IV. Central Delivery Point Name: _____ PBR Fed Com 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
PBR Fed Com 202H		9/1/2025	11/20/2025	12/1/2025	1/15/2026	1/15/2026
PBR Fed Com 204H		9/1/2025	11/20/2025	12/1/2025	1/15/2026	1/15/2026
PBR Fed Com 211H		9/1/2025	11/20/2025	12/1/2025	1/15/2026	1/15/2026
PBR Fed Com 213H		9/1/2025	11/20/2025	12/1/2025	1/15/2026	1/15/2026

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: Bill Ramsey
Title: Sr. Environmental and Regulatory Specialist
E-mail Address: brmasey@taprk.com
Date: 2/20/2025
Phone: 720-238-2787
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



Tap Rock Operating Natural Gas Management Plan

VI. Separation Equipment:

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:

- 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 emergencies as mentioned in the BLM Waste Prevention Rule.



- 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:

- 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.



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

06/20/2025

APD ID: 10400103796

Submission Date: 02/24/2025

Highlighted data
reflects the most
recent changes

Operator Name: TAP ROCK OPERATING LLC

Well Name: PBR FED COM

Well Number: 202H

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
15894440	QUATERNARY	3671	0	0	OTHER : None	NONE	N
15894441	RUSTLER ANHYDRITE	3664	7	7	ANHYDRITE	NONE	N
15894442	TOP OF SALT	3306	365	365	SALT	OTHER : Salt	N
15894443	BASE OF SALT	2258	1413	1417	SALT	OTHER : Salt	N
15894444	DELAWARE	2064	1607	1614	SANDSTONE	NONE	N
15894445	LAMAR	2056	1615	1622	SANDSTONE	NATURAL GAS, OIL	N
15894446	BELL CANYON	2019	1652	1660	SANDSTONE	NATURAL GAS, OIL	N
15894447	RAMSEY SAND	1970	1701	1710	SANDSTONE	NATURAL GAS, OIL	N
15894448	CHERRY CANYON	1187	2484	2525	LIMESTONE	NATURAL GAS, OIL	N
15894449	BRUSHY CANYON	186	3485	3580	SANDSTONE	NATURAL GAS, OIL	N
15894450	BONE SPRING LIME	-1441	5112	5296	OTHER : Carbonate	NATURAL GAS, OIL	N
15894451	AVALON SAND	-1540	5211	5400	OTHER : Upper Carbonate	NATURAL GAS, OIL	N
15894452	AVALON SAND	-1794	5465	5668	OTHER, SANDSTONE : Middle Carbonate	NATURAL GAS, OIL	N
15894453	BONE SPRING 1ST	-2303	5974	6204	SANDSTONE	NATURAL GAS, OIL	N
15894454	BONE SPRING 2ND	-2616	6287	6529	OTHER : Carbonate	NATURAL GAS, OIL	N
15894455	BONE SPRING 2ND	-3048	6719	6970	SANDSTONE	NATURAL GAS, OIL	N
15894456	BONE SPRING 3RD	-3142	6813	7066	SANDSTONE	NATURAL GAS, OIL	N

Operator Name: TAP ROCK OPERATING LLC**Well Name:** PBR FED COM**Well Number:** 202H

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
15894457	WOLFCAMP	-4522	8193	8517	OTHER, SHALE : A	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M**Rating Depth:** 25000

Equipment: At 24,066', a 5M pressure control system is required. The BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of 43 CFR 3172 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in 43 CFR 3172. A top drive check valve and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. The wellhead will be a multi-bowl speed head.

Requesting Variance? YES

Variance request: Tap Rock requests a variance to run a multi bowl speed head for setting the Intermediate and Production Strings. Tap Rock requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Tap Rock requests a variance to have the option of batch drilling this well with other wells on the same pad. If this well is batch drilled, after cementing a casing string, a 5M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. Tap Rock Operating requests to only test BOP connection breaks after rig walks per the procedures and stipulations set forth in the BOP Shell Test Procedure document emailed to the BLM on 8/11/22. speed head.

Testing Procedure: After surface casing is set and the BOP is nipped up, the BOP pressure tests will be made with a third party tester to 250 psi low, 5000 psi high, and the annular preventer will be tested to 250 psi low, 2500 psi high.

Choke Diagram Attachment:

5M_Choke_Diagram_20250221114543.pdf

BOP Diagram Attachment:

5M_BOP_Diagram_20250221114553.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	14.75	11.75	NEW	API	N	0	340	0	340	3671	3331	340	J-55	42	BUTT	1.13	1.15	DRY	1.6	DRY	1.6
2	INTERMEDIATE	11	8.625	NEW	API	N	0	1672	0	1665	3671	2006	1672	J-55	32	BUTT	1.13	1.15	DRY	1.6	DRY	1.6

Operator Name: TAP ROCK OPERATING LLC

Well Name: PBR FED COM

Well Number: 202H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
3	PRODUCTI ON	7.87 5	5.5	NEW	NON API	N	0	24066	0	8116	3671	-4445	24066	P- 110	20	OTHER - TXP	1.13	1.15	DRY	1.6	DRY	1.6

Casing Attachments

Casing ID: 1StringSURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20250221115755.pdf

Casing ID: 2StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20250221115857.pdf

Operator Name: TAP ROCK OPERATING LLC

Well Name: PBR FED COM

Well Number: 202H

Casing Attachments

Casing ID: 3StringPRODUCTION

Inspection Document:

Spec Document:
5.5in_TXP_Casing_Spec_20250221115954.PDF

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):
Casing_Design_Assumptions_20250221120021.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	0	0	0	0	0	0	None	None
SURFACE	Tail		0	340	222	1.33	14.8	295	100	Class C	5% NCI + LCM
INTERMEDIATE	Lead		0	1172	169	2.7	11	457	75	Class C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
INTERMEDIATE	Tail		1172	1672	124	1.33	14.8	165	30	Class C	5% NaCl + LCM
PRODUCTION	Lead		1472	8029	406	3.35	10.5	1359	20	Class C	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Tail		8029	24066	2860	1.63	13.2	4662	20	Class H	Fluid Loss + Dispersant + Retarder + LCM

Operator Name: TAP ROCK OPERATING LLC**Well Name:** PBR FED COM**Well Number:** 202H

Section 5 - Circulating Medium

Mud System Type: Closed**Will an air or gas system be Used?** NO**Description of the equipment for the circulating system in accordance with 43 CFR 3172:****Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:****Describe what will be on location to control well or mitigate other conditions:** All necessary mud products (i.e., barite, pac) for weight addition and fluid loss control will always be on site. Mud program is subject to change due to hole conditions.**Describe the mud monitoring system utilized:** Electronic Pason mud monitor system complying with 43 CFR 3172 will be used.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	340	OTHER : Fresh Water Spud Mud	8.4	8.4							
340	1672	OTHER : Salt-saturated Mud	10	10							
1672	2406 6	OTHER : FW/Cut Brine	9	9							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Electric Logging Program: No open-hole logs are planned at this time. GR will be collected while drilling through the MWD tools from KOP to TD. A 2-person mud logging program will be used from KOP to TD. CBL w/ CCL from as far as gravity will let it fall to TOC.

List of open and cased hole logs run in the well:

MUD LOG/GEOLOGICAL LITHOLOGY LOG, CEMENT BOND LOG,

Coring operation description for the well:

No DSTs or cores are planned at this time.

Operator Name: TAP ROCK OPERATING LLC**Well Name:** PBR FED COM**Well Number:** 202H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3798**Anticipated Surface Pressure:** 1973**Anticipated Bottom Hole Temperature(F):** 160**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO**Describe:****Contingency Plans geohazards description:****Contingency Plans geohazards****Hydrogen Sulfide drilling operations plan required?** YES**Hydrogen sulfide drilling operations**

PBR_H2S_Plan_20250221120824.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

PBR_202H_Directional_Plan_20250221120837.pdf

Other proposed operations facets description:**Other proposed operations facets attachment:**

CoFlex_Certs_20250221120858.pdf

PBR_202H_Anticollision_Report_20250221120908.pdf

Wellhead_Diagram_3T_20250221120920.pdf

PBR_WMP_20250221120920.pdf

BOP_Shell_Test_Procedure_20250221120940.pdf

PBR_202H_Drill_Plan_20250223133842.pdf

Other Variance request(s)?: N**Other Variance attachment:**



Company: Tap Rock Operating
Well: PBR Fed Com 202H
County: Eddy County, New Mexico (NAD 83)
Rig: H&P 466
Wellbore: Wellbore #1
Design: Design #1
Date: 10:06, February 17 2025

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: PBR Fed Com 202H

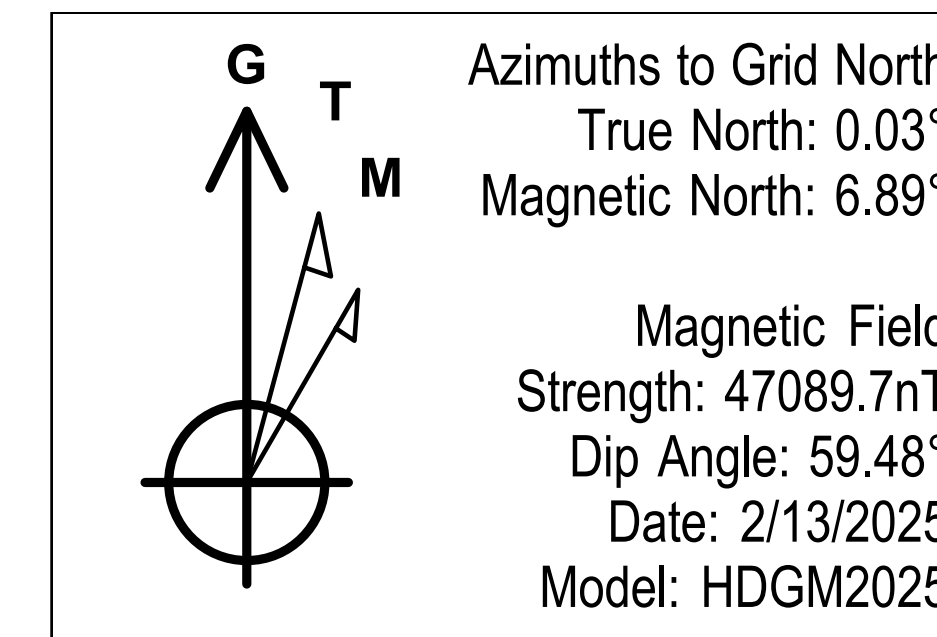
SURVEY PROGRAM

+N/-S	+E/-W	GL @ 3671.00	Well @ 3697.00usft (H&P 466)	Longitude
0.00	0.00	Northing 397077.87	Easting 526406.90	Latitude 32° 5' 29.895 N Longitude 104° 22' 53.567 W

Depth From	Depth To	Survey/Plan	Tool
0.00	24066.55	Design #1 (Wellbore #1)	MWD+IFR1+SAG+FDIR

DESIGN TARGET DETAILS

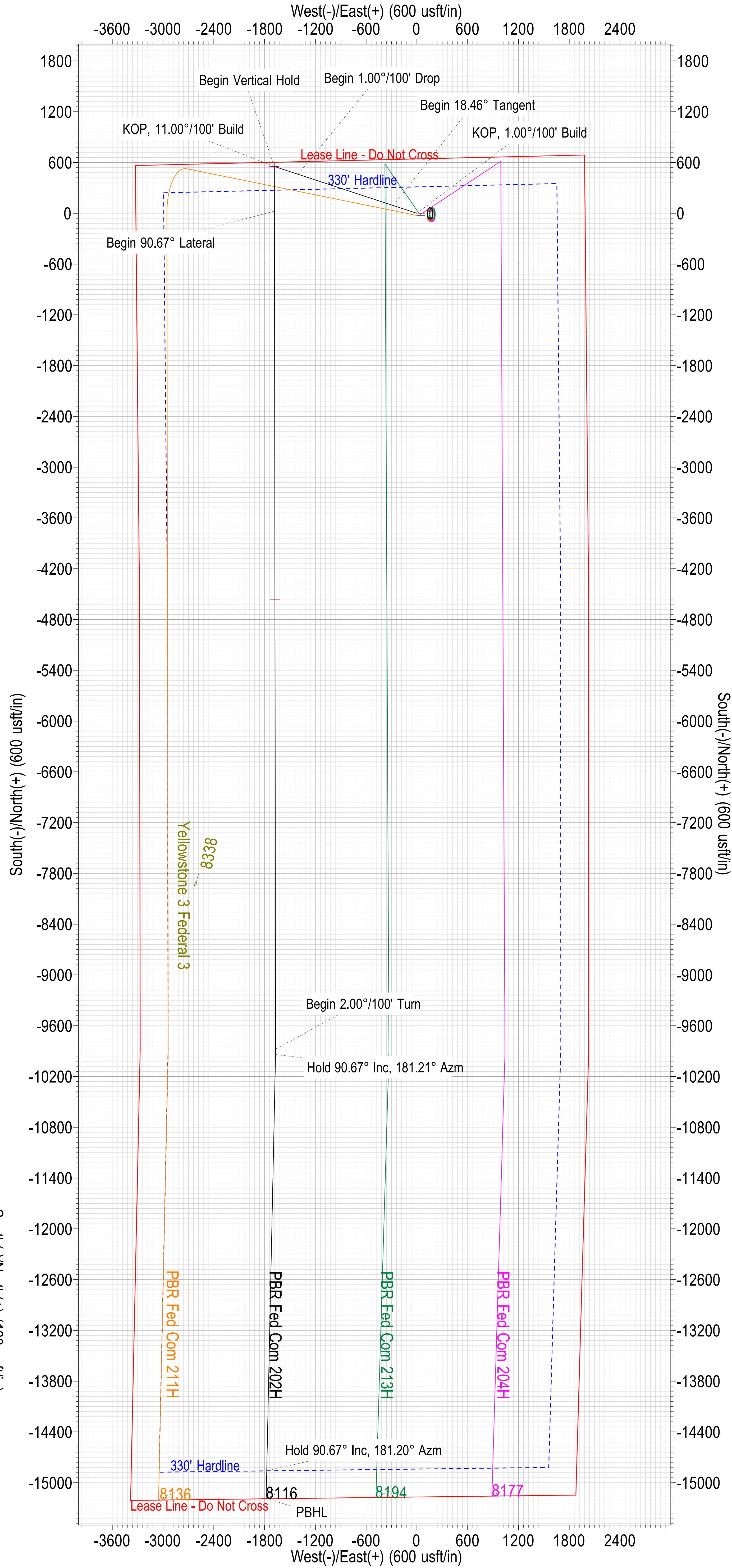
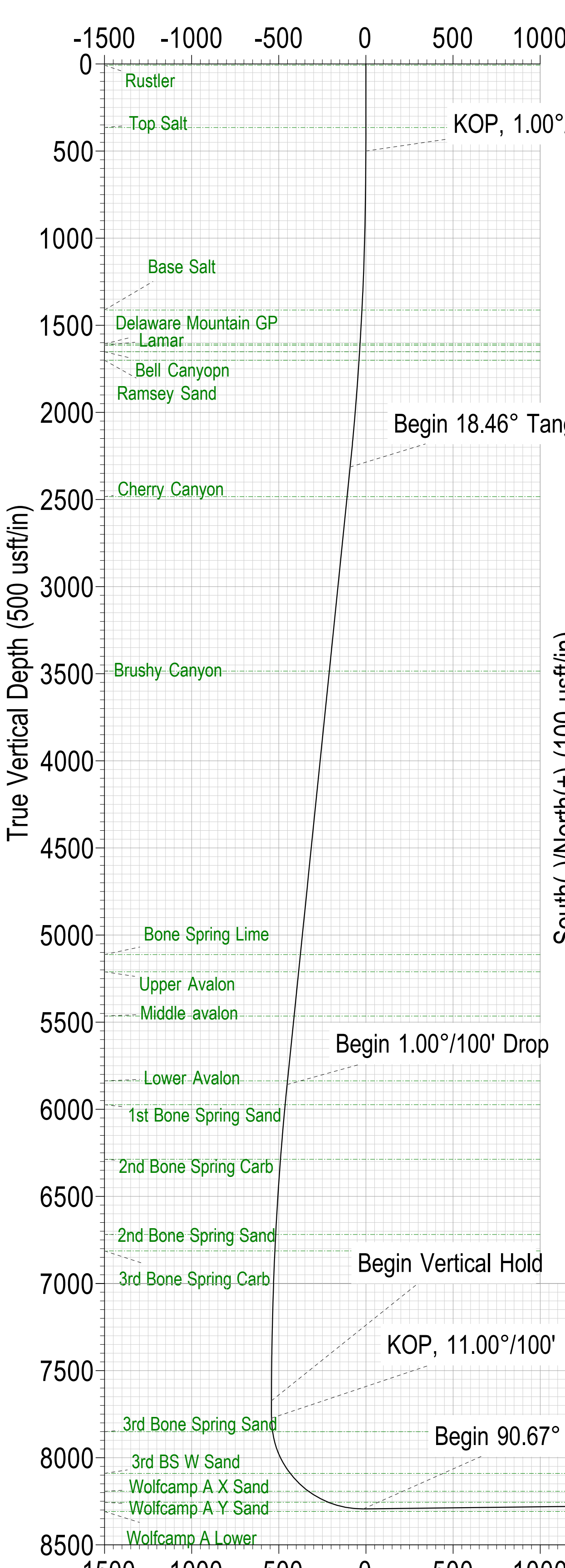
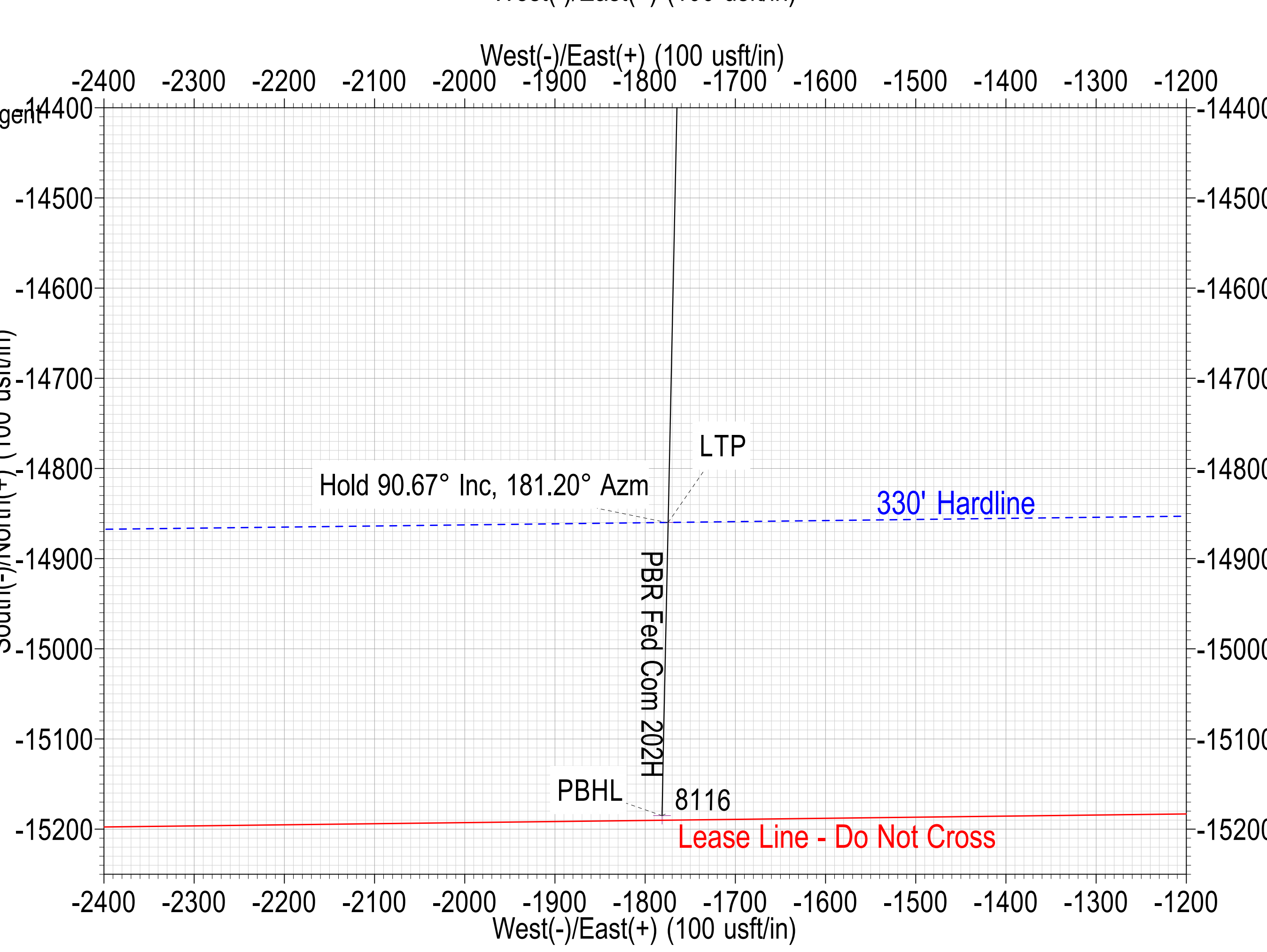
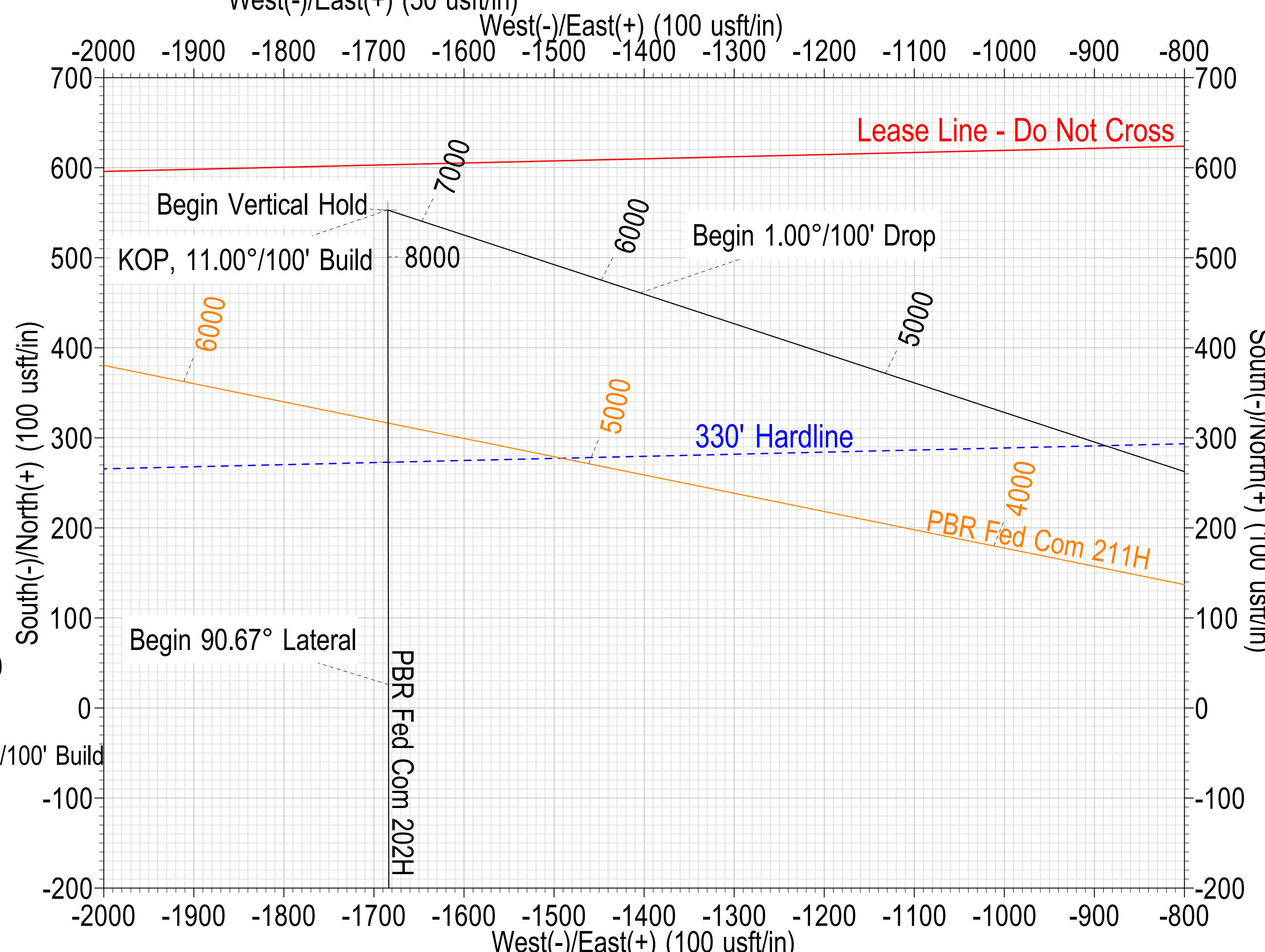
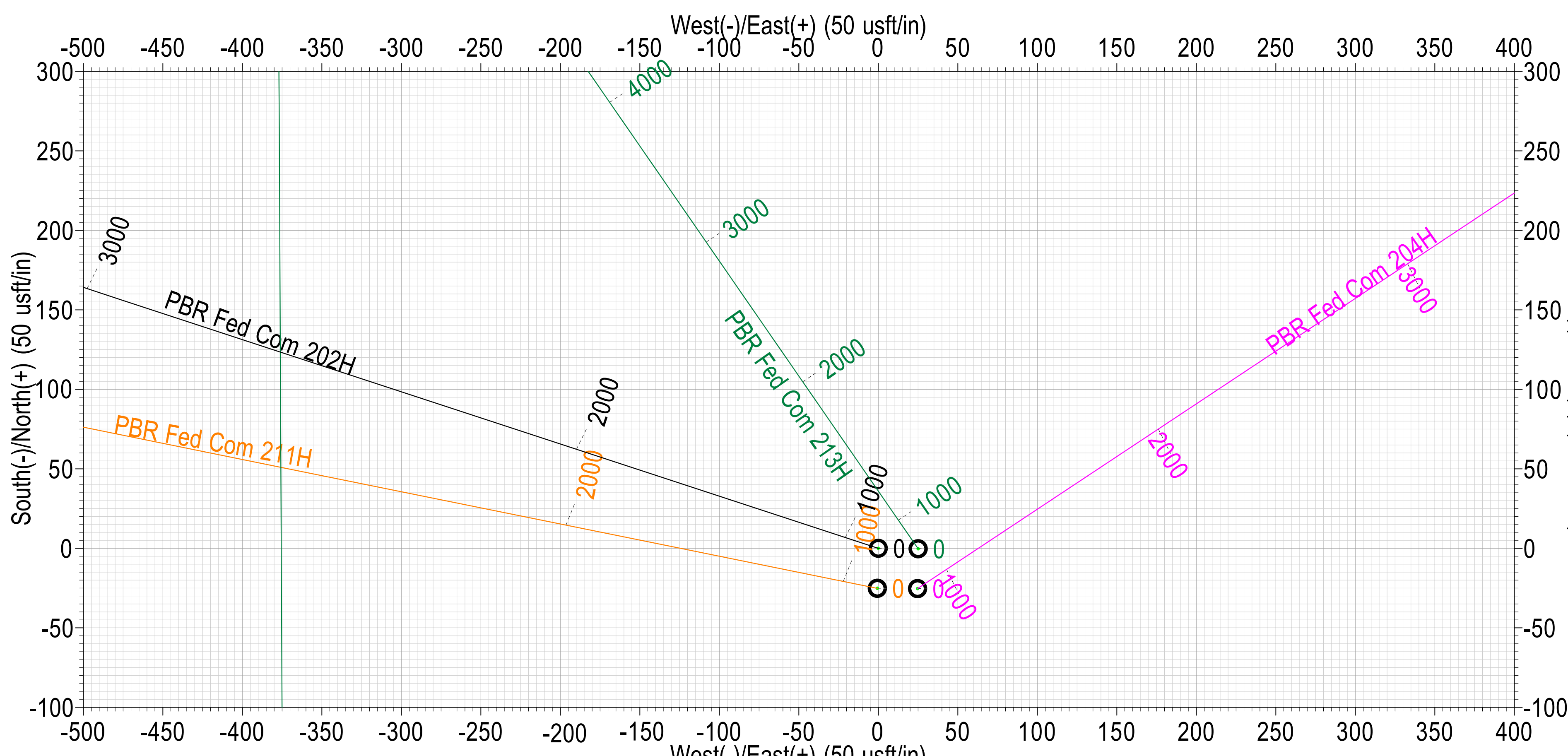
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BPP1_PBR 202H	8240.28	-4564.56	-1677.38	392513.31	524729.52	32° 4' 44.715 N	104° 23' 13.040 W
BPP2_PBR 202H	8178.13	-9875.75	-1669.89	387202.12	524737.01	32° 3' 52.154 N	104° 23' 12.922 W
FTP_PBR 202H	0.00	272.94	-1684.20	397350.80	524722.70	32° 5' 32.588 N	104° 23' 13.147 W
KOP_PBR 202H	0.00	553.01	-1684.59	397630.87	524722.31	32° 5' 35.359 N	104° 23' 13.154 W
LTP_PBR 202H	8119.80	-14859.84	-1774.48	382218.03	524632.42	32° 3' 2.829 N	104° 23' 14.109 W
PBHL_PBR 202H	8116.00	-15184.97	-1781.30	381892.89	524625.60	32° 2' 59.611 N	104° 23' 14.186 W



To convert a Magnetic Direction to a Grid Direction, Add 6.892°
To convert a Magnetic Direction to a True Direction, Add 6.867° East
To convert a True Direction to a Grid Direction, Add 0.026°

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.000	0.00	KOP, 1.00°/100' Build
2346.16	18.46	288.17	2314.38	91.97	-280.16	1.00	288.174	-90.11	Begin 18.46° Tangent
6082.86	18.46	288.17	5858.78	461.04	-1404.43	0.00	0.000	-451.71	Begin 1.00°/100' Drop
7929.03	0.00	0.00	7673.16	553.01	-1684.59	1.00	180.000	-541.82	Begin Vertical Hold
8029.03	0.00	0.00	7773.16	553.01	-1684.59	0.00	0.000	-541.82	KOP, 11.00°/100' Build
8853.31	90.67	179.92	8294.00	26.04	-1683.84	11.00	179.919	-14.87	Begin 90.67° Lateral
18755.78	90.67	179.92	8178.13	-9875.75	-1669.89	0.00	0.000	9886.61	Begin 2.00°/100' Turn
18820.34	90.67	181.21	8177.37	-9940.30	-1670.52	2.00	89.996	9951.16	Hold 90.67° Inc, 181.21° Azm
23741.32	90.67	181.21	8119.80	-14859.84	-1774.48	0.00	0.000	14871.28	Hold 90.67° Inc, 181.20° Azm
23741.73	90.67	181.20	8119.80	-14860.25	-1774.48	2.00	-96.245	14871.70	Hold 90.67° Inc, 181.20° Azm
24066.55	90.67	181.20	8116.00	-15184.97	-1781.30	0.00	0.000	15196.45	PBHL





Tap Rock Operating

Eddy County, New Mexico (NAD 83)

PBR Fed Com (202H, 204H, 211H, 213H)

PBR Fed Com 202H

Wellbore #1

Plan: Design #1

Standard Planning Report

17 February, 2025





Planning Report



Database:	TRG_EDMConroe	Local Co-ordinate Reference:	Well PBR Fed Com 202H
Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Eddy County, New Mexico (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	PBR Fed Com (202H, 204H, 211H, 213H)		
Site Position:		Northing:	397,077.87 usft
From:	Map	Easting:	526,406.90 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 29.895 N
		Longitude:	104° 22' 53.567 W

Well	PBR Fed Com 202H		
Well Position	+N/-S	0.00 usft	Northing: 397,077.87 usft
	+E/-W	0.00 usft	Easting: 526,406.90 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
Grid Convergence:	-0.026 °	Ground Level:	3,671.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2025	2/13/2025	6.867	59.483	47,089.70

Design	Design #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	180.38	

Plan Survey Tool Program	Date	2/17/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	24,066.55	Design #1 (Wellbore #1)	MWD+IFR1+SAG+FDIR	
				OWSG MWD + IFR1 + Sag	



Planning Report



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Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.000	
2,346.16	18.46	288.17	2,314.38	91.97	-280.16	1.00	1.00	0.00	288.174	
6,082.86	18.46	288.17	5,858.78	461.04	-1,404.43	0.00	0.00	0.00	0.000	
7,929.03	0.00	0.00	7,673.16	553.01	-1,684.59	1.00	-1.00	0.00	180.000	
8,029.03	0.00	0.00	7,773.17	553.01	-1,684.59	0.00	0.00	0.00	0.000	
8,853.31	90.67	179.92	8,294.00	26.04	-1,683.84	11.00	11.00	0.00	179.919	
18,755.79	90.67	179.92	8,178.13	-9,875.75	-1,669.89	0.00	0.00	0.00	0.000	BPP2_PBR 202H
18,820.35	90.67	181.21	8,177.37	-9,940.30	-1,670.52	2.00	0.00	2.00	89.996	
23,741.32	90.67	181.21	8,119.80	-14,859.84	-1,774.48	0.00	0.00	0.00	0.000	LTP_PBR 202H
23,741.74	90.67	181.20	8,119.80	-14,860.25	-1,774.48	2.00	-0.22	-1.99	-96.245	
24,066.55	90.67	181.20	8,116.00	-15,184.97	-1,781.30	0.00	0.00	0.00	0.000	PBHL_PBR 202H



Planning Report



Database:	TRG_EDMConroe	Local Co-ordinate Reference:	Well PBR Fed Com 202H
Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.00	0.00	0.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
365.00	0.00	0.00	365.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.00°/100' Build									
600.00	1.00	288.17	599.99	0.27	-0.83	-0.27	1.00	1.00	0.00
700.00	2.00	288.17	699.96	1.09	-3.32	-1.07	1.00	1.00	0.00
800.00	3.00	288.17	799.86	2.45	-7.46	-2.40	1.00	1.00	0.00
900.00	4.00	288.17	899.68	4.35	-13.26	-4.27	1.00	1.00	0.00
1,000.00	5.00	288.17	999.37	6.80	-20.72	-6.66	1.00	1.00	0.00
1,100.00	6.00	288.17	1,098.90	9.79	-29.82	-9.59	1.00	1.00	0.00
1,200.00	7.00	288.17	1,198.26	13.32	-40.58	-13.05	1.00	1.00	0.00
1,300.00	8.00	288.17	1,297.40	17.39	-52.98	-17.04	1.00	1.00	0.00
1,400.00	9.00	288.17	1,396.30	22.00	-67.02	-21.56	1.00	1.00	0.00
1,416.91	9.17	288.17	1,413.00	22.83	-69.56	-22.37	1.00	1.00	0.00
Base Salt									
1,500.00	10.00	288.17	1,494.93	27.15	-82.70	-26.60	1.00	1.00	0.00
1,600.00	11.00	288.17	1,593.26	32.83	-100.02	-32.17	1.00	1.00	0.00
1,614.01	11.14	288.17	1,607.00	33.67	-102.57	-32.99	1.00	1.00	0.00
Delaware Mountain GP									
1,622.16	11.22	288.17	1,615.00	34.16	-104.07	-33.47	1.00	1.00	0.00
Lamar									
1,659.91	11.60	288.17	1,652.00	36.49	-111.17	-35.76	1.00	1.00	0.00
Bell Canyon									
1,700.00	12.00	288.17	1,691.25	39.05	-118.96	-38.26	1.00	1.00	0.00
1,709.97	12.10	288.17	1,701.00	39.70	-120.94	-38.90	1.00	1.00	0.00
Ramsey Sand									
1,800.00	13.00	288.17	1,788.87	45.80	-139.52	-44.88	1.00	1.00	0.00
1,900.00	14.00	288.17	1,886.11	53.08	-161.70	-52.01	1.00	1.00	0.00
2,000.00	15.00	288.17	1,982.92	60.89	-185.49	-59.66	1.00	1.00	0.00
2,100.00	16.00	288.17	2,079.29	69.23	-210.88	-67.83	1.00	1.00	0.00
2,200.00	17.00	288.17	2,175.17	78.09	-237.87	-76.51	1.00	1.00	0.00
2,300.00	18.00	288.17	2,270.54	87.46	-266.44	-85.70	1.00	1.00	0.00
2,346.16	18.46	288.17	2,314.38	91.97	-280.16	-90.11	1.00	1.00	0.00
Begin 18.46° Tangent									
2,400.00	18.46	288.17	2,365.45	97.29	-296.36	-95.32	0.00	0.00	0.00
2,500.00	18.46	288.17	2,460.30	107.16	-326.44	-105.00	0.00	0.00	0.00
2,524.98	18.46	288.17	2,484.00	109.63	-333.96	-107.41	0.00	0.00	0.00
Cherry Canyon									
2,600.00	18.46	288.17	2,555.16	117.04	-356.53	-114.67	0.00	0.00	0.00
2,700.00	18.46	288.17	2,650.01	126.92	-386.62	-124.35	0.00	0.00	0.00
2,800.00	18.46	288.17	2,744.86	136.79	-416.71	-134.03	0.00	0.00	0.00
2,900.00	18.46	288.17	2,839.72	146.67	-446.79	-143.70	0.00	0.00	0.00
3,000.00	18.46	288.17	2,934.57	156.55	-476.88	-153.38	0.00	0.00	0.00
3,100.00	18.46	288.17	3,029.42	166.42	-506.97	-163.06	0.00	0.00	0.00
3,200.00	18.46	288.17	3,124.28	176.30	-537.05	-172.74	0.00	0.00	0.00
3,300.00	18.46	288.17	3,219.13	186.18	-567.14	-182.41	0.00	0.00	0.00



Planning Report



Database:	TRG_EDMConroe	Local Co-ordinate Reference:	Well PBR Fed Com 202H
Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,400.00	18.46	288.17	3,313.99	196.05	-597.23	-192.09	0.00	0.00	0.00
3,500.00	18.46	288.17	3,408.84	205.93	-627.32	-201.77	0.00	0.00	0.00
3,580.29	18.46	288.17	3,485.00	213.86	-651.47	-209.54	0.00	0.00	0.00
Brushy Canyon									
3,600.00	18.46	288.17	3,503.69	215.81	-657.40	-211.44	0.00	0.00	0.00
3,700.00	18.46	288.17	3,598.55	225.69	-687.49	-221.12	0.00	0.00	0.00
3,800.00	18.46	288.17	3,693.40	235.56	-717.58	-230.80	0.00	0.00	0.00
3,900.00	18.46	288.17	3,788.25	245.44	-747.66	-240.47	0.00	0.00	0.00
4,000.00	18.46	288.17	3,883.11	255.32	-777.75	-250.15	0.00	0.00	0.00
4,100.00	18.46	288.17	3,977.96	265.19	-807.84	-259.83	0.00	0.00	0.00
4,200.00	18.46	288.17	4,072.81	275.07	-837.93	-269.51	0.00	0.00	0.00
4,300.00	18.46	288.17	4,167.67	284.95	-868.01	-279.18	0.00	0.00	0.00
4,400.00	18.46	288.17	4,262.52	294.82	-898.10	-288.86	0.00	0.00	0.00
4,500.00	18.46	288.17	4,357.37	304.70	-928.19	-298.54	0.00	0.00	0.00
4,600.00	18.46	288.17	4,452.23	314.58	-958.28	-308.21	0.00	0.00	0.00
4,700.00	18.46	288.17	4,547.08	324.45	-988.36	-317.89	0.00	0.00	0.00
4,800.00	18.46	288.17	4,641.94	334.33	-1,018.45	-327.57	0.00	0.00	0.00
4,900.00	18.46	288.17	4,736.79	344.21	-1,048.54	-337.25	0.00	0.00	0.00
5,000.00	18.46	288.17	4,831.64	354.08	-1,078.62	-346.92	0.00	0.00	0.00
5,100.00	18.46	288.17	4,926.50	363.96	-1,108.71	-356.60	0.00	0.00	0.00
5,200.00	18.46	288.17	5,021.35	373.84	-1,138.80	-366.28	0.00	0.00	0.00
5,295.57	18.46	288.17	5,112.00	383.28	-1,167.55	-375.53	0.00	0.00	0.00
Bone Spring Lime									
5,300.00	18.46	288.17	5,116.20	383.71	-1,168.89	-375.95	0.00	0.00	0.00
5,399.94	18.46	288.17	5,211.00	393.59	-1,198.96	-385.63	0.00	0.00	0.00
Upper Avalon									
5,400.00	18.46	288.17	5,211.06	393.59	-1,198.97	-385.63	0.00	0.00	0.00
5,500.00	18.46	288.17	5,305.91	403.47	-1,229.06	-395.31	0.00	0.00	0.00
5,600.00	18.46	288.17	5,400.76	413.35	-1,259.15	-404.99	0.00	0.00	0.00
5,667.72	18.46	288.17	5,465.00	420.03	-1,279.52	-411.54	0.00	0.00	0.00
Middle avalon									
5,700.00	18.46	288.17	5,495.62	423.22	-1,289.24	-414.66	0.00	0.00	0.00
5,800.00	18.46	288.17	5,590.47	433.10	-1,319.32	-424.34	0.00	0.00	0.00
5,900.00	18.46	288.17	5,685.33	442.98	-1,349.41	-434.02	0.00	0.00	0.00
6,000.00	18.46	288.17	5,780.18	452.85	-1,379.50	-443.69	0.00	0.00	0.00
6,059.90	18.46	288.17	5,837.00	458.77	-1,397.52	-449.49	0.00	0.00	0.00
Lower Avalon									
6,082.86	18.46	288.17	5,858.78	461.04	-1,404.43	-451.71	0.00	0.00	0.00
Begin 1.00°/100' Drop									
6,100.00	18.29	288.17	5,875.04	462.72	-1,409.56	-453.36	1.00	-1.00	0.00
6,200.00	17.29	288.17	5,970.26	472.25	-1,438.59	-462.70	1.00	-1.00	0.00
6,203.92	17.25	288.17	5,974.00	472.61	-1,439.70	-463.06	1.00	-1.00	0.00
1st Bone Spring Sand									
6,300.00	16.29	288.17	6,065.99	481.26	-1,466.04	-471.53	1.00	-1.00	0.00
6,400.00	15.29	288.17	6,162.22	489.75	-1,491.89	-479.84	1.00	-1.00	0.00
6,500.00	14.29	288.17	6,258.90	497.71	-1,516.14	-487.64	1.00	-1.00	0.00
6,528.98	14.00	288.17	6,287.00	499.92	-1,522.87	-489.81	1.00	-1.00	0.00
2nd Bone Spring Carb									
6,600.00	13.29	288.17	6,356.02	505.15	-1,538.79	-494.93	1.00	-1.00	0.00
6,700.00	12.29	288.17	6,453.54	512.05	-1,559.83	-501.69	1.00	-1.00	0.00
6,800.00	11.29	288.17	6,551.43	518.42	-1,579.24	-507.94	1.00	-1.00	0.00
6,900.00	10.29	288.17	6,649.66	524.26	-1,597.03	-513.66	1.00	-1.00	0.00
6,970.40	9.59	288.17	6,719.00	528.05	-1,608.57	-517.37	1.00	-1.00	0.00



Planning Report



Database:	TRG_EDMConroe	Local Co-ordinate Reference:	Well PBR Fed Com 202H
Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
2nd Bone Spring Sand									
7,000.00	9.29	288.17	6,748.20	529.57	-1,613.18	-518.85	1.00	-1.00	0.00
7,065.60	8.63	288.17	6,813.00	532.75	-1,622.89	-521.98	1.00	-1.00	0.00
3rd Bone Spring Carb									
7,100.00	8.29	288.17	6,847.02	534.33	-1,627.70	-523.52	1.00	-1.00	0.00
7,200.00	7.29	288.17	6,946.10	538.56	-1,640.58	-527.67	1.00	-1.00	0.00
7,300.00	6.29	288.17	7,045.40	542.25	-1,651.81	-531.28	1.00	-1.00	0.00
7,400.00	5.29	288.17	7,144.89	545.39	-1,661.40	-534.36	1.00	-1.00	0.00
7,500.00	4.29	288.17	7,244.53	548.00	-1,669.33	-536.91	1.00	-1.00	0.00
7,600.00	3.29	288.17	7,344.31	550.06	-1,675.61	-538.93	1.00	-1.00	0.00
7,700.00	2.29	288.17	7,444.19	551.58	-1,680.24	-540.42	1.00	-1.00	0.00
7,800.00	1.29	288.17	7,544.14	552.55	-1,683.21	-541.38	1.00	-1.00	0.00
7,900.00	0.29	288.17	7,644.13	552.98	-1,684.52	-541.80	1.00	-1.00	0.00
7,929.03	0.00	0.00	7,673.16	553.01	-1,684.59	-541.82	1.00	-1.00	247.45
Begin Vertical Hold									
8,000.00	0.00	0.00	7,744.13	553.01	-1,684.59	-541.82	0.00	0.00	0.00
8,029.03	0.00	0.00	7,773.17	553.01	-1,684.59	-541.82	0.00	0.00	0.00
KOP, 11.00°/100' Build									
8,050.00	2.31	179.92	7,794.13	552.58	-1,684.59	-541.40	11.00	11.00	0.00
8,100.00	7.81	179.92	7,843.91	548.18	-1,684.58	-536.99	11.00	11.00	0.00
8,107.16	8.59	179.92	7,851.00	547.16	-1,684.58	-535.97	11.00	11.00	0.00
3rd Bone Spring Sand									
8,150.00	13.31	179.92	7,893.05	539.02	-1,684.57	-527.84	11.00	11.00	0.00
8,200.00	18.81	179.92	7,941.08	525.20	-1,684.55	-514.01	11.00	11.00	0.00
8,250.00	24.31	179.92	7,987.57	506.83	-1,684.52	-495.65	11.00	11.00	0.00
8,300.00	29.81	179.92	8,032.08	484.10	-1,684.49	-472.92	11.00	11.00	0.00
8,350.00	35.31	179.92	8,074.20	457.20	-1,684.45	-446.02	11.00	11.00	0.00
8,369.62	37.47	179.92	8,090.00	445.56	-1,684.44	-434.38	11.00	11.00	0.00
3rd BS W Sand									
8,400.00	40.81	179.92	8,113.56	426.39	-1,684.41	-415.21	11.00	11.00	0.00
8,450.00	46.31	179.92	8,149.78	391.95	-1,684.36	-380.77	11.00	11.00	0.00
8,500.00	51.81	179.92	8,182.53	354.20	-1,684.31	-343.02	11.00	11.00	0.00
8,517.30	53.71	179.92	8,193.00	340.43	-1,684.29	-329.25	11.00	11.00	0.00
Wolfcamp A X Sand									
8,550.00	57.31	179.92	8,211.52	313.48	-1,684.25	-302.30	11.00	11.00	0.00
8,600.00	62.81	179.92	8,236.46	270.17	-1,684.19	-259.00	11.00	11.00	0.00
8,646.93	67.97	179.92	8,256.00	227.52	-1,684.13	-216.35	11.00	11.00	0.00
Wolfcamp A Y Sand									
8,650.00	68.31	179.92	8,257.15	224.67	-1,684.12	-213.50	11.00	11.00	0.00
8,700.00	73.81	179.92	8,273.37	177.40	-1,684.06	-166.22	11.00	11.00	0.00
8,750.00	79.31	179.92	8,284.99	128.79	-1,683.99	-117.61	11.00	11.00	0.00
8,800.00	84.81	179.92	8,291.90	79.28	-1,683.92	-68.11	11.00	11.00	0.00
8,853.31	90.67	179.92	8,294.00	26.04	-1,683.84	-14.87	11.00	11.00	0.00
Begin 90.67° Lateral									
8,900.00	90.67	179.92	8,293.45	-20.65	-1,683.78	31.81	0.00	0.00	0.00
9,000.00	90.67	179.92	8,292.28	-120.64	-1,683.64	131.80	0.00	0.00	0.00
9,100.00	90.67	179.92	8,291.11	-220.63	-1,683.50	231.79	0.00	0.00	0.00
9,200.00	90.67	179.92	8,289.94	-320.63	-1,683.36	331.78	0.00	0.00	0.00
9,300.00	90.67	179.92	8,288.77	-420.62	-1,683.21	431.77	0.00	0.00	0.00
9,400.00	90.67	179.92	8,287.60	-520.61	-1,683.07	531.76	0.00	0.00	0.00
9,500.00	90.67	179.92	8,286.43	-620.61	-1,682.93	631.75	0.00	0.00	0.00
9,600.00	90.67	179.92	8,285.26	-720.60	-1,682.79	731.74	0.00	0.00	0.00
9,700.00	90.67	179.92	8,284.09	-820.59	-1,682.65	831.73	0.00	0.00	0.00



Planning Report



Database:	TRG_EDMConroe	Local Co-ordinate Reference:	Well PBR Fed Com 202H
Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
9,800.00	90.67	179.92	8,282.92	-920.59	-1,682.51	931.72	0.00	0.00	0.00
9,900.00	90.67	179.92	8,281.75	-1,020.58	-1,682.37	1,031.71	0.00	0.00	0.00
10,000.00	90.67	179.92	8,280.58	-1,120.57	-1,682.23	1,131.70	0.00	0.00	0.00
10,100.00	90.67	179.92	8,279.41	-1,220.56	-1,682.09	1,231.69	0.00	0.00	0.00
10,200.00	90.67	179.92	8,278.24	-1,320.56	-1,681.95	1,331.68	0.00	0.00	0.00
10,300.00	90.67	179.92	8,277.07	-1,420.55	-1,681.80	1,431.67	0.00	0.00	0.00
10,400.00	90.67	179.92	8,275.90	-1,520.54	-1,681.66	1,531.66	0.00	0.00	0.00
10,500.00	90.67	179.92	8,274.73	-1,620.54	-1,681.52	1,631.65	0.00	0.00	0.00
10,600.00	90.67	179.92	8,273.56	-1,720.53	-1,681.38	1,731.64	0.00	0.00	0.00
10,700.00	90.67	179.92	8,272.39	-1,820.52	-1,681.24	1,831.63	0.00	0.00	0.00
10,800.00	90.67	179.92	8,271.22	-1,920.52	-1,681.10	1,931.62	0.00	0.00	0.00
10,900.00	90.67	179.92	8,270.05	-2,020.51	-1,680.96	2,031.61	0.00	0.00	0.00
11,000.00	90.67	179.92	8,268.88	-2,120.50	-1,680.82	2,131.60	0.00	0.00	0.00
11,100.00	90.67	179.92	8,267.71	-2,220.50	-1,680.68	2,231.59	0.00	0.00	0.00
11,200.00	90.67	179.92	8,266.54	-2,320.49	-1,680.54	2,331.58	0.00	0.00	0.00
11,300.00	90.67	179.92	8,265.37	-2,420.48	-1,680.40	2,431.57	0.00	0.00	0.00
11,400.00	90.67	179.92	8,264.20	-2,520.47	-1,680.25	2,531.56	0.00	0.00	0.00
11,500.00	90.67	179.92	8,263.03	-2,620.47	-1,680.11	2,631.55	0.00	0.00	0.00
11,600.00	90.67	179.92	8,261.86	-2,720.46	-1,679.97	2,731.54	0.00	0.00	0.00
11,700.00	90.67	179.92	8,260.69	-2,820.45	-1,679.83	2,831.53	0.00	0.00	0.00
11,800.00	90.67	179.92	8,259.52	-2,920.45	-1,679.69	2,931.52	0.00	0.00	0.00
11,900.00	90.67	179.92	8,258.35	-3,020.44	-1,679.55	3,031.51	0.00	0.00	0.00
12,000.00	90.67	179.92	8,257.18	-3,120.43	-1,679.41	3,131.50	0.00	0.00	0.00
12,100.00	90.67	179.92	8,256.01	-3,220.43	-1,679.27	3,231.49	0.00	0.00	0.00
12,200.00	90.67	179.92	8,254.84	-3,320.42	-1,679.13	3,331.48	0.00	0.00	0.00
12,300.00	90.67	179.92	8,253.67	-3,420.41	-1,678.99	3,431.47	0.00	0.00	0.00
12,400.00	90.67	179.92	8,252.50	-3,520.40	-1,678.84	3,531.46	0.00	0.00	0.00
12,500.00	90.67	179.92	8,251.33	-3,620.40	-1,678.70	3,631.45	0.00	0.00	0.00
12,600.00	90.67	179.92	8,250.16	-3,720.39	-1,678.56	3,731.44	0.00	0.00	0.00
12,700.00	90.67	179.92	8,248.99	-3,820.38	-1,678.42	3,831.43	0.00	0.00	0.00
12,800.00	90.67	179.92	8,247.82	-3,920.38	-1,678.28	3,931.42	0.00	0.00	0.00
12,900.00	90.67	179.92	8,246.65	-4,020.37	-1,678.14	4,031.41	0.00	0.00	0.00
13,000.00	90.67	179.92	8,245.48	-4,120.36	-1,678.00	4,131.40	0.00	0.00	0.00
13,100.00	90.67	179.92	8,244.31	-4,220.36	-1,677.86	4,231.39	0.00	0.00	0.00
13,200.00	90.67	179.92	8,243.14	-4,320.35	-1,677.72	4,331.38	0.00	0.00	0.00
13,300.00	90.67	179.92	8,241.97	-4,420.34	-1,677.58	4,431.37	0.00	0.00	0.00
13,400.00	90.67	179.92	8,240.80	-4,520.34	-1,677.44	4,531.36	0.00	0.00	0.00
13,500.00	90.67	179.92	8,239.63	-4,620.33	-1,677.29	4,631.35	0.00	0.00	0.00
13,600.00	90.67	179.92	8,238.46	-4,720.32	-1,677.15	4,731.34	0.00	0.00	0.00
13,700.00	90.67	179.92	8,237.29	-4,820.31	-1,677.01	4,831.33	0.00	0.00	0.00
13,800.00	90.67	179.92	8,236.12	-4,920.31	-1,676.87	4,931.32	0.00	0.00	0.00
13,900.00	90.67	179.92	8,234.95	-5,020.30	-1,676.73	5,031.31	0.00	0.00	0.00
14,000.00	90.67	179.92	8,233.78	-5,120.29	-1,676.59	5,131.30	0.00	0.00	0.00
14,100.00	90.67	179.92	8,232.61	-5,220.29	-1,676.45	5,231.29	0.00	0.00	0.00
14,200.00	90.67	179.92	8,231.44	-5,320.28	-1,676.31	5,331.28	0.00	0.00	0.00
14,300.00	90.67	179.92	8,230.27	-5,420.27	-1,676.17	5,431.27	0.00	0.00	0.00
14,400.00	90.67	179.92	8,229.10	-5,520.27	-1,676.03	5,531.26	0.00	0.00	0.00
14,500.00	90.67	179.92	8,227.93	-5,620.26	-1,675.88	5,631.25	0.00	0.00	0.00
14,600.00	90.67	179.92	8,226.76	-5,720.25	-1,675.74	5,731.24	0.00	0.00	0.00
14,700.00	90.67	179.92	8,225.59	-5,820.25	-1,675.60	5,831.23	0.00	0.00	0.00
14,800.00	90.67	179.92	8,224.42	-5,920.24	-1,675.46	5,931.22	0.00	0.00	0.00
14,900.00	90.67	179.92	8,223.25	-6,020.23	-1,675.32	6,031.21	0.00	0.00	0.00
15,000.00	90.67	179.92	8,222.08	-6,120.22	-1,675.18	6,131.20	0.00	0.00	0.00
15,100.00	90.67	179.92	8,220.91	-6,220.22	-1,675.04	6,231.19	0.00	0.00	0.00



Planning Report



Database:	TRG_EDMConroe	Local Co-ordinate Reference:	Well PBR Fed Com 202H
Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,200.00	90.67	179.92	8,219.74	-6,320.21	-1,674.90	6,331.18	0.00	0.00	0.00	
15,300.00	90.67	179.92	8,218.57	-6,420.20	-1,674.76	6,431.17	0.00	0.00	0.00	
15,400.00	90.67	179.92	8,217.40	-6,520.20	-1,674.62	6,531.16	0.00	0.00	0.00	
15,500.00	90.67	179.92	8,216.23	-6,620.19	-1,674.47	6,631.15	0.00	0.00	0.00	
15,600.00	90.67	179.92	8,215.06	-6,720.18	-1,674.33	6,731.14	0.00	0.00	0.00	
15,700.00	90.67	179.92	8,213.89	-6,820.18	-1,674.19	6,831.13	0.00	0.00	0.00	
15,800.00	90.67	179.92	8,212.72	-6,920.17	-1,674.05	6,931.12	0.00	0.00	0.00	
15,900.00	90.67	179.92	8,211.55	-7,020.16	-1,673.91	7,031.11	0.00	0.00	0.00	
16,000.00	90.67	179.92	8,210.38	-7,120.15	-1,673.77	7,131.10	0.00	0.00	0.00	
16,100.00	90.67	179.92	8,209.21	-7,220.15	-1,673.63	7,231.09	0.00	0.00	0.00	
16,200.00	90.67	179.92	8,208.04	-7,320.14	-1,673.49	7,331.08	0.00	0.00	0.00	
16,300.00	90.67	179.92	8,206.87	-7,420.13	-1,673.35	7,431.07	0.00	0.00	0.00	
16,400.00	90.67	179.92	8,205.70	-7,520.13	-1,673.21	7,531.06	0.00	0.00	0.00	
16,500.00	90.67	179.92	8,204.53	-7,620.12	-1,673.07	7,631.05	0.00	0.00	0.00	
16,600.00	90.67	179.92	8,203.36	-7,720.11	-1,672.92	7,731.04	0.00	0.00	0.00	
16,700.00	90.67	179.92	8,202.19	-7,820.11	-1,672.78	7,831.03	0.00	0.00	0.00	
16,800.00	90.67	179.92	8,201.02	-7,920.10	-1,672.64	7,931.02	0.00	0.00	0.00	
16,900.00	90.67	179.92	8,199.84	-8,020.09	-1,672.50	8,031.01	0.00	0.00	0.00	
17,000.00	90.67	179.92	8,198.67	-8,120.09	-1,672.36	8,131.00	0.00	0.00	0.00	
17,100.00	90.67	179.92	8,197.50	-8,220.08	-1,672.22	8,230.99	0.00	0.00	0.00	
17,200.00	90.67	179.92	8,196.33	-8,320.07	-1,672.08	8,330.98	0.00	0.00	0.00	
17,300.00	90.67	179.92	8,195.16	-8,420.06	-1,671.94	8,430.97	0.00	0.00	0.00	
17,400.00	90.67	179.92	8,193.99	-8,520.06	-1,671.80	8,530.96	0.00	0.00	0.00	
17,500.00	90.67	179.92	8,192.82	-8,620.05	-1,671.66	8,630.95	0.00	0.00	0.00	
17,600.00	90.67	179.92	8,191.65	-8,720.04	-1,671.51	8,730.94	0.00	0.00	0.00	
17,700.00	90.67	179.92	8,190.48	-8,820.04	-1,671.37	8,830.93	0.00	0.00	0.00	
17,800.00	90.67	179.92	8,189.31	-8,920.03	-1,671.23	8,930.92	0.00	0.00	0.00	
17,900.00	90.67	179.92	8,188.14	-9,020.02	-1,671.09	9,030.91	0.00	0.00	0.00	
18,000.00	90.67	179.92	8,186.97	-9,120.02	-1,670.95	9,130.90	0.00	0.00	0.00	
18,100.00	90.67	179.92	8,185.80	-9,220.01	-1,670.81	9,230.89	0.00	0.00	0.00	
18,200.00	90.67	179.92	8,184.63	-9,320.00	-1,670.67	9,330.88	0.00	0.00	0.00	
18,300.00	90.67	179.92	8,183.46	-9,420.00	-1,670.53	9,430.87	0.00	0.00	0.00	
18,400.00	90.67	179.92	8,182.29	-9,519.99	-1,670.39	9,530.86	0.00	0.00	0.00	
18,500.00	90.67	179.92	8,181.12	-9,619.98	-1,670.25	9,630.85	0.00	0.00	0.00	
18,600.00	90.67	179.92	8,179.95	-9,719.97	-1,670.11	9,730.84	0.00	0.00	0.00	
18,700.00	90.67	179.92	8,178.78	-9,819.97	-1,669.96	9,830.83	0.00	0.00	0.00	
18,755.79	90.67	179.92	8,178.13	-9,875.75	-1,669.89	9,886.61	0.00	0.00	0.00	
Begin 2.00°/100' Turn										
18,800.00	90.67	180.80	8,177.61	-9,919.96	-1,670.16	9,930.82	2.00	0.00	2.00	
18,820.35	90.67	181.21	8,177.37	-9,940.30	-1,670.52	9,951.16	2.00	0.00	2.00	
Hold 90.67° Inc, 181.21° Azm										
18,900.00	90.67	181.21	8,176.44	-10,019.93	-1,672.20	10,030.80	0.00	0.00	0.00	
19,000.00	90.67	181.21	8,175.27	-10,119.90	-1,674.32	10,130.78	0.00	0.00	0.00	
19,100.00	90.67	181.21	8,174.10	-10,219.87	-1,676.43	10,230.77	0.00	0.00	0.00	
19,200.00	90.67	181.21	8,172.93	-10,319.84	-1,678.54	10,330.75	0.00	0.00	0.00	
19,300.00	90.67	181.21	8,171.76	-10,419.81	-1,680.65	10,430.73	0.00	0.00	0.00	
19,400.00	90.67	181.21	8,170.59	-10,519.79	-1,682.77	10,530.71	0.00	0.00	0.00	
19,500.00	90.67	181.21	8,169.42	-10,619.76	-1,684.88	10,630.70	0.00	0.00	0.00	
19,600.00	90.67	181.21	8,168.25	-10,719.73	-1,686.99	10,730.68	0.00	0.00	0.00	
19,700.00	90.67	181.21	8,167.08	-10,819.70	-1,689.10	10,830.66	0.00	0.00	0.00	
19,800.00	90.67	181.21	8,165.91	-10,919.67	-1,691.22	10,930.65	0.00	0.00	0.00	
19,900.00	90.67	181.21	8,164.74	-11,019.64	-1,693.33	11,030.63	0.00	0.00	0.00	
20,000.00	90.67	181.21	8,163.57	-11,119.61	-1,695.44	11,130.61	0.00	0.00	0.00	
20,100.00	90.67	181.21	8,162.40	-11,219.58	-1,697.55	11,230.59	0.00	0.00	0.00	



Planning Report



Database:	TRG_EDMConroe	Local Co-ordinate Reference:	Well PBR Fed Com 202H
Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)	
20,200.00	90.67	181.21	8,161.23	-11,319.55	-1,699.67	11,330.58	0.00	0.00	0.00	
20,300.00	90.67	181.21	8,160.06	-11,419.52	-1,701.78	11,430.56	0.00	0.00	0.00	
20,400.00	90.67	181.21	8,158.89	-11,519.49	-1,703.89	11,530.54	0.00	0.00	0.00	
20,500.00	90.67	181.21	8,157.72	-11,619.46	-1,706.00	11,630.52	0.00	0.00	0.00	
20,600.00	90.67	181.21	8,156.55	-11,719.44	-1,708.12	11,730.51	0.00	0.00	0.00	
20,700.00	90.67	181.21	8,155.38	-11,819.41	-1,710.23	11,830.49	0.00	0.00	0.00	
20,800.00	90.67	181.21	8,154.21	-11,919.38	-1,712.34	11,930.47	0.00	0.00	0.00	
20,900.00	90.67	181.21	8,153.04	-12,019.35	-1,714.45	12,030.45	0.00	0.00	0.00	
21,000.00	90.67	181.21	8,151.87	-12,119.32	-1,716.57	12,130.44	0.00	0.00	0.00	
21,100.00	90.67	181.21	8,150.70	-12,219.29	-1,718.68	12,230.42	0.00	0.00	0.00	
21,200.00	90.67	181.21	8,149.53	-12,319.26	-1,720.79	12,330.40	0.00	0.00	0.00	
21,300.00	90.67	181.21	8,148.36	-12,419.23	-1,722.90	12,430.39	0.00	0.00	0.00	
21,400.00	90.67	181.21	8,147.19	-12,519.20	-1,725.02	12,530.37	0.00	0.00	0.00	
21,500.00	90.67	181.21	8,146.02	-12,619.17	-1,727.13	12,630.35	0.00	0.00	0.00	
21,600.00	90.67	181.21	8,144.85	-12,719.14	-1,729.24	12,730.33	0.00	0.00	0.00	
21,700.00	90.67	181.21	8,143.68	-12,819.11	-1,731.35	12,830.32	0.00	0.00	0.00	
21,800.00	90.67	181.21	8,142.51	-12,919.09	-1,733.47	12,930.30	0.00	0.00	0.00	
21,900.00	90.67	181.21	8,141.34	-13,019.06	-1,735.58	13,030.28	0.00	0.00	0.00	
22,000.00	90.67	181.21	8,140.17	-13,119.03	-1,737.69	13,130.26	0.00	0.00	0.00	
22,100.00	90.67	181.21	8,139.00	-13,219.00	-1,739.80	13,230.25	0.00	0.00	0.00	
22,200.00	90.67	181.21	8,137.83	-13,318.97	-1,741.92	13,330.23	0.00	0.00	0.00	
22,300.00	90.67	181.21	8,136.66	-13,418.94	-1,744.03	13,430.21	0.00	0.00	0.00	
22,400.00	90.67	181.21	8,135.49	-13,518.91	-1,746.14	13,530.19	0.00	0.00	0.00	
22,500.00	90.67	181.21	8,134.32	-13,618.88	-1,748.25	13,630.18	0.00	0.00	0.00	
22,600.00	90.67	181.21	8,133.15	-13,718.85	-1,750.37	13,730.16	0.00	0.00	0.00	
22,700.00	90.67	181.21	8,131.98	-13,818.82	-1,752.48	13,830.14	0.00	0.00	0.00	
22,800.00	90.67	181.21	8,130.81	-13,918.79	-1,754.59	13,930.12	0.00	0.00	0.00	
22,900.00	90.67	181.21	8,129.64	-14,018.77	-1,756.70	14,030.11	0.00	0.00	0.00	
23,000.00	90.67	181.21	8,128.47	-14,118.74	-1,758.82	14,130.09	0.00	0.00	0.00	
23,100.00	90.67	181.21	8,127.30	-14,218.71	-1,760.93	14,230.07	0.00	0.00	0.00	
23,200.00	90.67	181.21	8,126.13	-14,318.68	-1,763.04	14,330.06	0.00	0.00	0.00	
23,300.00	90.67	181.21	8,124.96	-14,418.65	-1,765.15	14,430.04	0.00	0.00	0.00	
23,400.00	90.67	181.21	8,123.79	-14,518.62	-1,767.27	14,530.02	0.00	0.00	0.00	
23,500.00	90.67	181.21	8,122.62	-14,618.59	-1,769.38	14,630.00	0.00	0.00	0.00	
23,600.00	90.67	181.21	8,121.45	-14,718.56	-1,771.49	14,729.99	0.00	0.00	0.00	
23,700.00	90.67	181.21	8,120.28	-14,818.53	-1,773.60	14,829.97	0.00	0.00	0.00	
23,741.32	90.67	181.21	8,119.80	-14,859.84	-1,774.48	14,871.28	0.00	0.00	0.00	
23,741.74	90.67	181.20	8,119.80	-14,860.25	-1,774.48	14,871.70	2.00	-0.22	-1.99	
Hold 90.67° Inc, 181.20° Azm										
23,800.00	90.67	181.20	8,119.11	-14,918.50	-1,775.71	14,929.95	0.00	0.00	0.00	
23,900.00	90.67	181.20	8,117.95	-15,018.47	-1,777.81	15,029.93	0.00	0.00	0.00	
24,000.00	90.67	181.20	8,116.78	-15,118.45	-1,779.90	15,129.92	0.00	0.00	0.00	
24,066.55	90.67	181.20	8,116.00	-15,184.97	-1,781.30	15,196.45	0.00	0.00	0.00	
PBHL										



Planning Report



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Company:	Tap Rock Operating	TVD Reference:	Well @ 3697.00usft (H&P 466)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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
KOP_PBR 202H - plan misses target center by 1773.03usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	553.01	-1,684.59	397,630.87	524,722.31	32° 5' 35.359 N	104° 23' 13.154 W
FTP_PBR 202H - plan misses target center by 1706.17usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	360.00	0.00	272.94	-1,684.20	397,350.80	524,722.70	32° 5' 32.588 N	104° 23' 13.147 W
PBHL_PBR 202H - plan hits target center - Point	0.00	0.00	8,116.00	-15,184.97	-1,781.30	381,892.89	524,625.60	32° 2' 59.611 N	104° 23' 14.186 W
LTP_PBR 202H - plan hits target center - Point	0.00	0.00	8,119.80	-14,859.84	-1,774.48	382,218.03	524,632.42	32° 3' 2.829 N	104° 23' 14.109 W
BPP2_PBR 202H - plan hits target center - Point	0.00	360.00	8,178.13	-9,875.75	-1,669.89	387,202.12	524,737.01	32° 3' 52.154 N	104° 23' 12.922 W
BPP1_PBR 202H - plan hits target center - Point	0.00	0.00	8,240.28	-4,564.56	-1,677.38	392,513.31	524,729.52	32° 4' 44.715 N	104° 23' 13.040 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7.00	7.00	Rustler			
365.00	365.00	Top Salt			
1,416.91	1,413.00	Base Salt			
1,614.01	1,607.00	Delaware Mountain GP			
1,622.16	1,615.00	Lamar			
1,659.91	1,652.00	Bell Canyon			
1,709.97	1,701.00	Ramsey Sand			
2,524.98	2,484.00	Cherry Canyon			
3,580.29	3,485.00	Brushy Canyon			
5,295.57	5,112.00	Bone Spring Lime			
5,399.94	5,211.00	Upper Avalon			
5,667.72	5,465.00	Middle avalon			
6,059.90	5,837.00	Lower Avalon			
6,203.92	5,974.00	1st Bone Spring Sand			
6,528.98	6,287.00	2nd Bone Spring Carb			
6,970.40	6,719.00	2nd Bone Spring Sand			
7,065.60	6,813.00	3rd Bone Spring Carb			
8,107.16	7,851.00	3rd Bone Spring Sand			
8,369.62	8,090.00	3rd BS W Sand			
8,517.30	8,193.00	Wolfcamp A X Sand			
8,646.93	8,256.00	Wolfcamp A Y Sand			



Planning Report



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Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	Well @ 3697.00usft (H&P 466)
Site:	PBR Fed Com (202H, 204H, 211H, 213H)	North Reference:	Grid
Well:	PBR Fed Com 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	KOP, 1.00°/100' Build
2,346.16	2,314.38	91.97	-280.16	Begin 18.46° Tangent
6,082.86	5,858.78	461.04	-1,404.43	Begin 1.00°/100' Drop
7,929.03	7,673.16	553.01	-1,684.59	Begin Vertical Hold
8,029.03	7,773.17	553.01	-1,684.59	KOP, 11.00°/100' Build
8,853.31	8,294.00	26.04	-1,683.84	Begin 90.67° Lateral
18,755.79	8,178.13	-9,875.75	-1,669.89	Begin 2.00°/100' Turn
18,820.35	8,177.37	-9,940.30	-1,670.52	Hold 90.67° Inc, 181.21° Azm
23,741.74	8,119.80	-14,860.25	-1,774.48	Hold 90.67° Inc, 181.20° Azm
24,066.55	8,116.00	-15,184.97	-1,781.30	PBHL

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Tap Rock Operating LLC
WELL NAME & NO.:	PBR Fed Com 202H
LOCATION:	Sec 34-25S-25E-NMP
COUNTY:	Eddy County, New Mexico ▼

COA

H ₂ S	<input checked="" type="radio"/> No		<input type="radio"/> Yes	
Potash / WIPP	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-Q	<input type="checkbox"/> Open Annulus <input type="checkbox"/> WIPP
Cave / Karst	<input type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High	<input checked="" type="radio"/> Critical
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both	<input type="radio"/> Diverter
Cementing	<input type="checkbox"/> Primary Squeeze	<input type="checkbox"/> Cont. Squeeze	<input type="checkbox"/> EchoMeter	<input type="checkbox"/> DV Tool
Special Req	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Waste Prev.	<input type="radio"/> Self-Certification	<input checked="" type="radio"/> Waste Min. Plan	<input type="radio"/> APD Submitted prior to 06/10/2024	
Additional Language	<input checked="" type="checkbox"/> Flex Hose	<input type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole	<input checked="" type="checkbox"/> Break Testing
	<input type="checkbox"/> Four-String	<input type="checkbox"/> Offline Cementing	<input type="checkbox"/> Fluid-Filled	

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **11-3/4** inch surface casing shall be set at approximately **340** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing (**set at 1645'** per **BLM geologist**) is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
- ❖ In Critical Cave/Karst Areas cement must come to surface on the first three casing strings.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and

lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. (**Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.**)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Contact Eddy County Petroleum Engineering Inspection Staff:

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220;

BLM NM CFO DrillingNotifications@BLM.GOV; (575) 361-2822

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following

- conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
 8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.
 - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.



Hydrogen Sulfide Drilling

Operations Plan

Tap Rock Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windssocks and / Wind Streamers:

- Windssocks at mud pit area should be high enough to be visible
- Windssock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
 - Green Flag – Normal Safe Operation Condition
 - Yellow Flag – Potential Pressure and Danger
 - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See Drilling Operations Plan Schematics

6 Communication:

- While working under masks chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.



7 Drilling Stem Testing:

- No DST cores are planned at this time

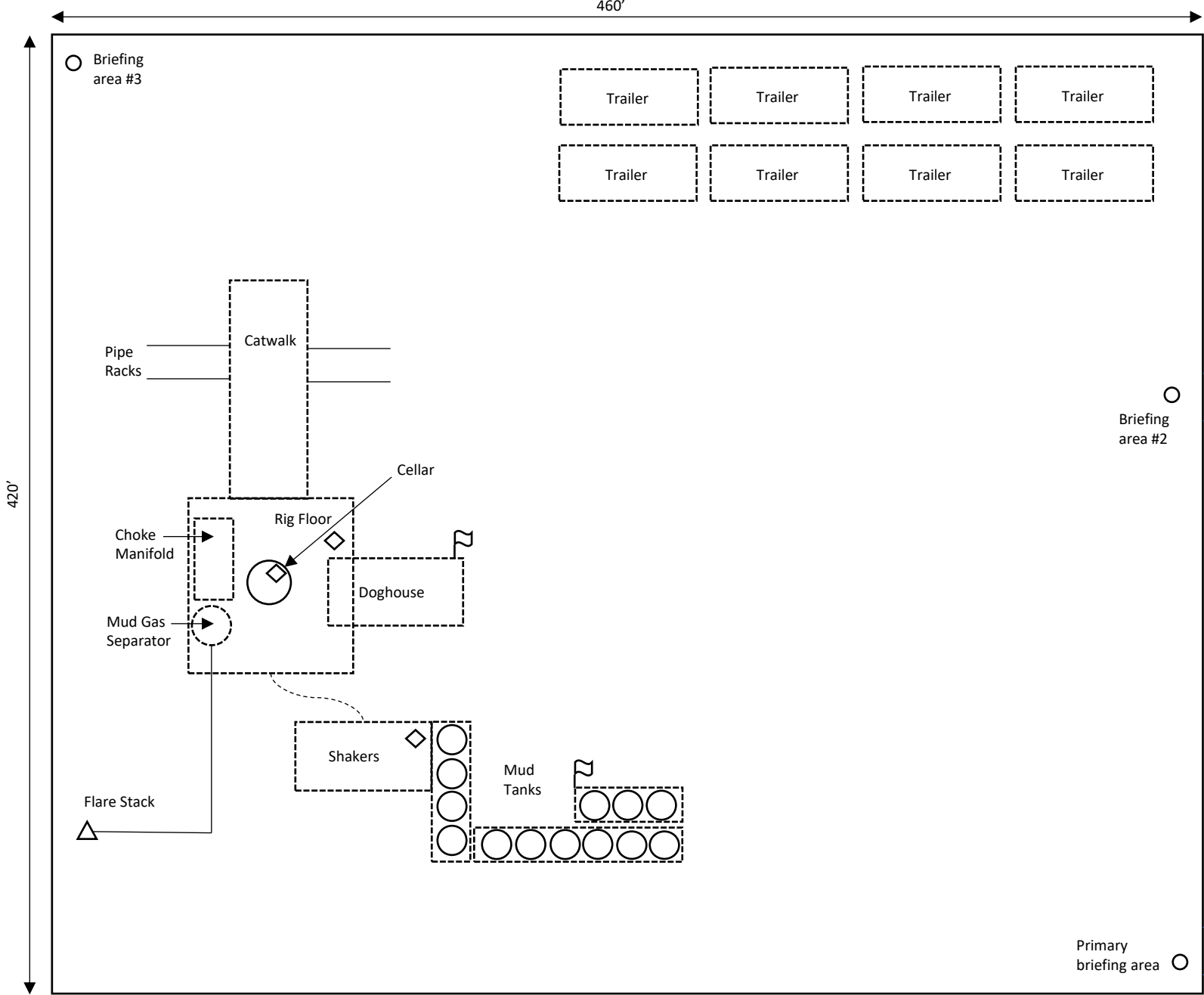
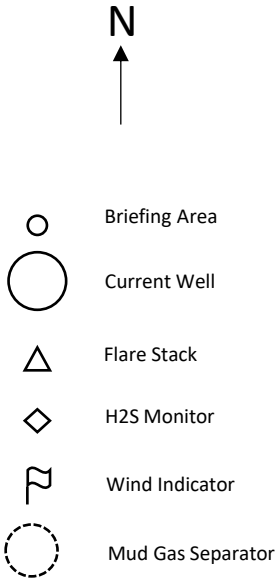
8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubulars good and other mechanical equipment

9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary

11 Emergency Contacts

Emergency Contacts		
Carlsbad Police Department	575.887.7551	911
Carlsbad Medical Center	575.887.4100	911
Eddy County Fire Service	575.628.5450	911
Eddy County Sherriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sherriff	575.396.3611	911
Jal Police Department	575.395.2121	911
Jal Fire Department	575.395.2221	911
Tap Rock Resources	720.772.5090	

Rig Diagram
PBR
Tap Rock Operating, LLC
34-25S-25E
Eddy County, NM

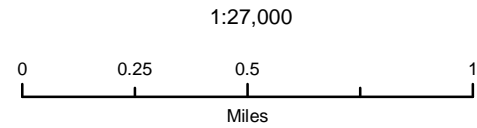


Tap Rock Operating LLC

PBR Fed Com Well Pad
H2S Contingency Plan:
2 Mile Radius Map

Sec. 34, Township 25S, Range 25E
Eddy County, New Mexico

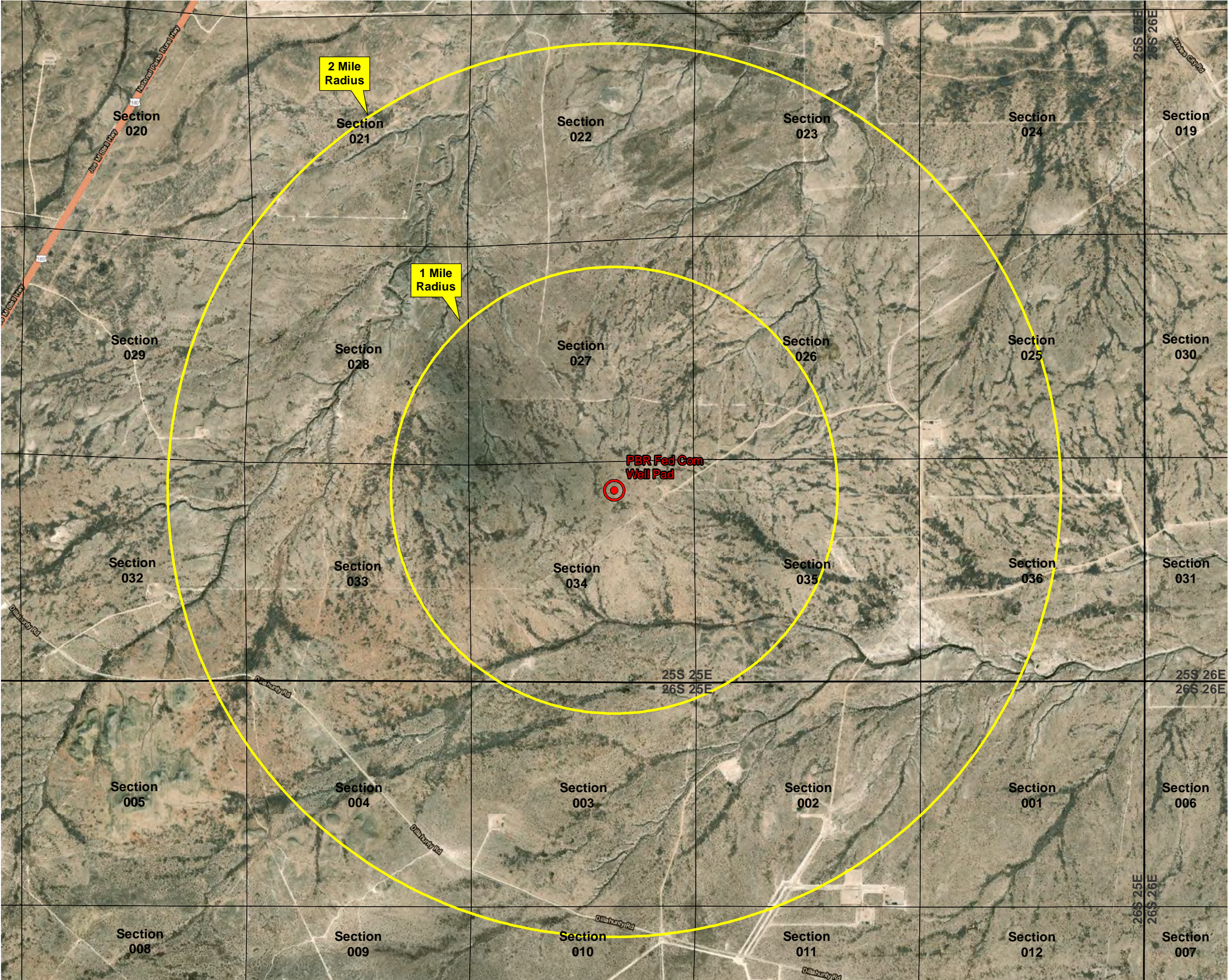
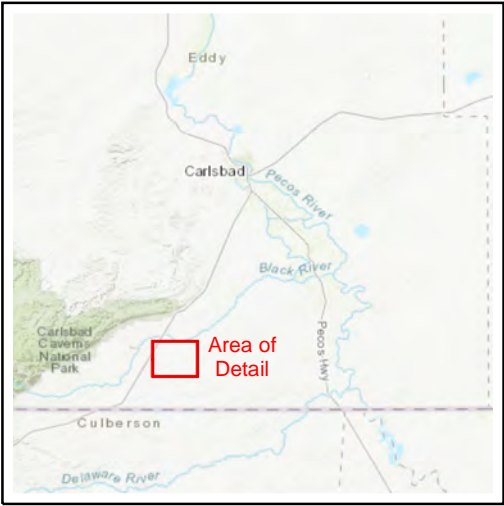
 Well Pad Location

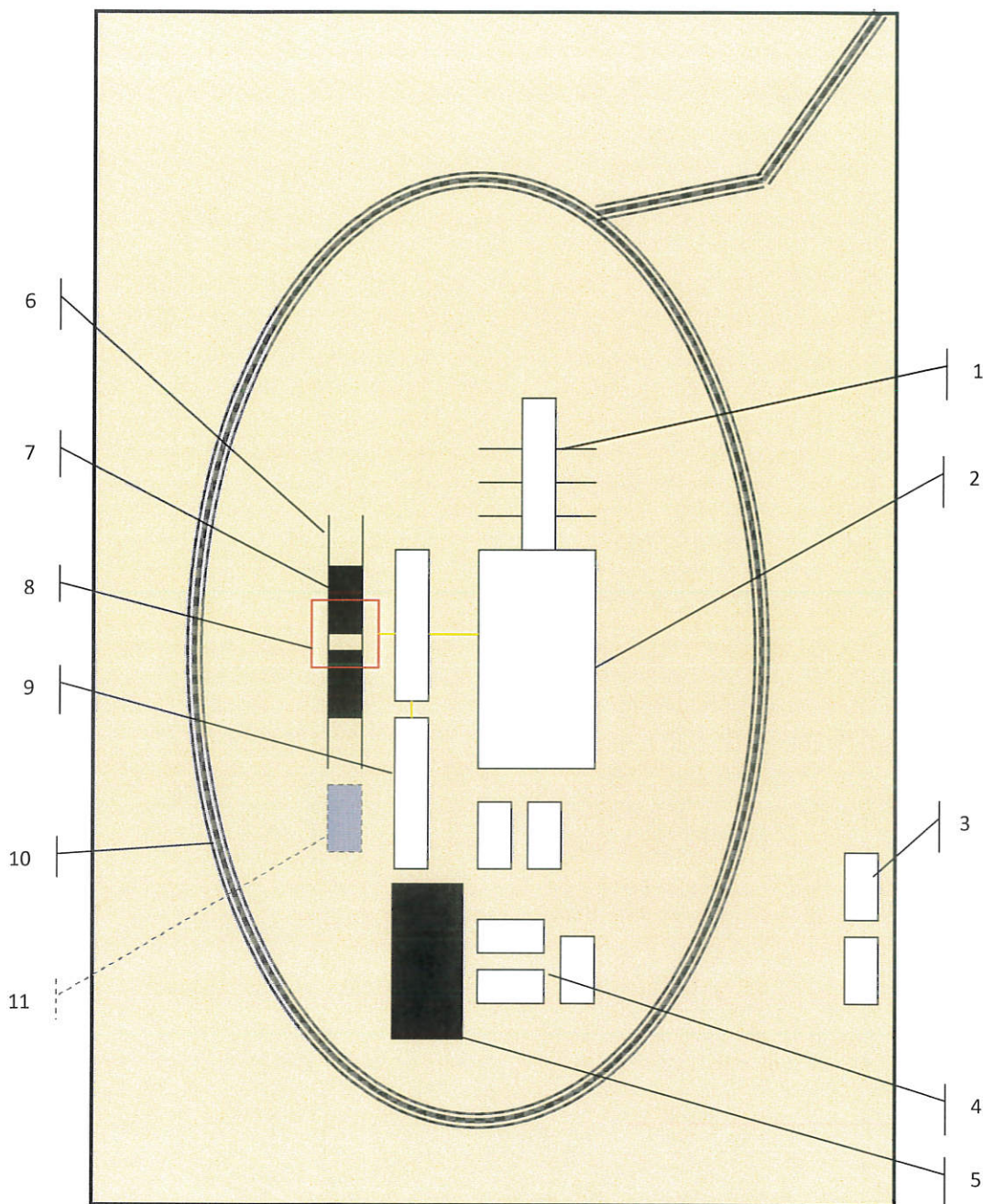


NAD 1983 New Mexico State Plane East
FIPS 3001 Feet



Prepared by Permits West, Inc., February 20, 2025
for Tap Rock Operating, LLC





Schematic Closed Loop Drilling Rig*

1. Pipe Rack
2. Drill Rig
3. House Trailers/ Offices
4. Generator/Fuel/Storage
5. Overflow-Frac Tank
6. Skids
7. Roll Offs
8. Hopper or Centrifuge
9. Mud Tanks
10. Loop Drive
11. Generator (only for use with centrifuge)

*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available

PERMITS WEST, INC.
 PROVIDING PERMITS for LAND USERS
 37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

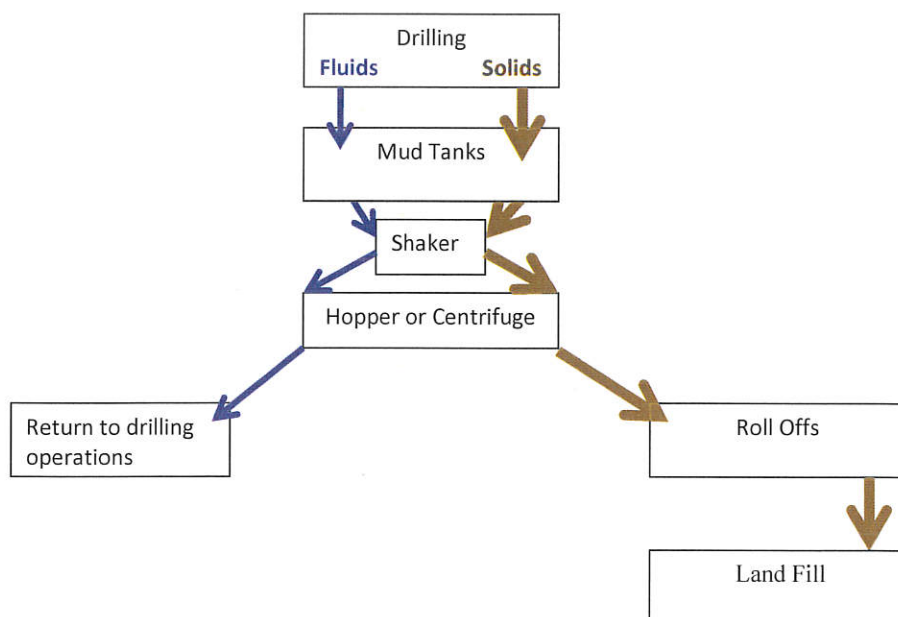


Above: Centrifugal Closed Loop System



Closed Loop Drilling System: Mud tanks to right (1)
 Hopper in air to settle out solids (2)
 Water return pipe (3)
 Shaker between hopper and mud tanks (4)
 Roll offs on skids (5)

Flow Chart for Drilling Fluids and Solids



Photos Courtesy of Gandy Corporation Oil
 Field Service

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

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

CONDITIONS

Action 477532

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 1700 Lincoln St Denver, CO 80203	OGRID: 372043
	Action Number: 477532
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
bwood	Cement is required to circulate on both surface and intermediate1 strings of casing.	6/21/2025
bwood	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	6/21/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	7/24/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	7/24/2025
ward.rikala	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.	7/24/2025
ward.rikala	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.	7/24/2025