

Form 3160-3
(October 2024)FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

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	7. If Unit or CA Agreement, Name and No.	
1b. Type of Well:	<input type="checkbox"/> Oil Well	<input checked="" type="checkbox"/> Gas Well	<input type="checkbox"/> Other	8. Lease Name and Well No.
1c. Type of Completion:	<input type="checkbox"/> Hydraulic Fracturing	<input checked="" type="checkbox"/> Single Zone	<input type="checkbox"/> Multiple Zone	BEER CAVE FED COM 211H
2. Name of Operator	TAP ROCK OPERATING LLC			9. API Well No. 30-015-57737
3a. Address	3b. Phone No. (include area code) 1700 LINCOLN ST SUITE 4700, DENVER, CO 80203 (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 SENE / 2359 FNL / 137 FEL / LAT 32.0870893 / LONG -104.3583523 At proposed prod. zone NWNW / 330 FNL / 5 FWL / LAT 32.0922791 / LONG -104.3922622			11. Sec., T. R. M. or Blk. and Survey or Area SEC 35/T25S/R25E/NMP
14. Distance in miles and direction from nearest town or post office*	7 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)	137 feet	16. No of acres in lease	17. Spacing Unit dedicated to this well 1280.0	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	25 feet	19. Proposed Depth	20. BLM/BIA Bond No. in file 8181 feet / 19092 feet FED: NMB105800930	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	3531 feet	22. Approximate date work will start*	23. Estimated duration 03/01/2026 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.	4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
2. A Drilling Plan.	5. Operator certification.
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).	6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature (Electronic Submission)	Name (Printed/Typed) CORY WALK / Ph: (720) 460-3316	Date 10/16/2025
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Title

Permitting Agent

Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) CODY LAYTON / Ph: (575) 234-5959	Date 12/08/2025
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Title

Assistant Field Manager Lands & Minerals

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

C-102	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION		Revised July 9, 2024
Submit Electronically Via OCD Permitting			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- 57737	Pool Code 98220	Pool Name PURPLE SAGE; WOLFCAMP (GAS)	
Property Code 338796	Property Name BEER CAVE FED COM		Well Number 211H
OGRID No. 372043	Operator Name TAP ROCK OPERATING, LLC		Ground Level Elevation 3531'
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. H	Section 35	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 2359' N	Feet from the E/W 137' E	Latitude N 32.0870893	Longitude W 104.3583523	County EDDY
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Bottom Hole Location

UL or lot no. D	Section 34	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 330' N	Feet from the E/W 5' W	Latitude N 32.0922791	Longitude W 104.3922622	County EDDY
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Dedicated Acres 1280	Infill or Defining Well Infill	Defining Well API 30-015-xxxxx (213H)	Overlapping Spacing Unit (Y/N) N	Consolidated Code C
Order Numbers will file NSP			Well Setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL or lot no. A	Section 35	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 330' N	Feet from the E/W 50' E	Latitude N 32.0926686	Longitude W 104.3581109	County EDDY
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First Take Point (FTP)

UL or lot no. A	Section 35	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 330' N	Feet from the E/W 330' E	Latitude N 32.0926665	Longitude W 104.3590151	County EDDY
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Last Take Point (LTP)

UL or lot no. D	Section 34	Township 25-S	Range 25-E	Lot Idn -	Feet from the N/S 330' N	Feet from the E/W 330' W	Latitude N 32.0923003	Longitude W 104.3912129	County EDDY
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Unitized Area or Area of Uniform Interest Y	Spacing Unity Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation 3531'
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OPERATOR CERTIFICATION 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. 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>Cory Walk</i> 10-10-2025					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.  9/3/2025 11:27:58 AM				
Signature Cory Walk					Signature and Seal of Professional Surveyor				
Date					Date				
Print Name cory@permitswest.com					Certificate Number		Date of Survey		
							08/14/2025		
E-mail Address									

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: _____ Tap Rock Operating LLC _____ **OGRID:** _____ 372043 _____ **Date:** 9/23/2025

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
Beer Cave Fed Com 202H		H, 35, 25S, 25E	2360' FNL, 112' FEL	940	3571	5149
Beer Cave Fed Com 204H		H, 35, 25S, 25E	2384' FNL, 137' FEL	940	3571	5149
Beer Cave Fed Com 211H		H, 35, 25S, 25E	2359' FNL, 137' FEL	940	3571	5149
Beer Cave Fed Com 213H		H, 35, 25S, 25E	2384' FNL, 112' FEL	940	3571	5149

IV. Central Delivery Point Name: _____ Beer Cave 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
Beer Cave Fed Com 202H		2/1/2026	3/1/2026	4/1/2026	5/1/2026	5/1/2026
Beer Cave Fed Com 204H		2/1/2026	3/1/2026	4/1/2026	5/1/2026	5/1/2026
Beer Cave Fed Com 211H		2/1/2026	3/1/2026	4/1/2026	5/1/2026	5/1/2026
Beer Cave Fed Com 213H		2/1/2026	3/1/2026	4/1/2026	5/1/2026	5/1/2026

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: 9/23/2025

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.



APD ID: 10400107810

Submission Date: 10/16/2025

Highlighted data
reflects the most
recent changes

Operator Name: TAP ROCK OPERATING LLC

Well Number: 211H

Well Name: BEER CAVE FED COM

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

[Show Final Text](#)

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formation
16951315	QUATERNARY	3531	0	0	OTHER : None	NONE	N
16951316	RUSTLER ANHYDRITE	3130	401	401	ANHYDRITE	NONE	N
16951317	TOP SALT	3049	482	482	SALT	OTHER : Salt	N
16951318	BASE OF SALT	1980	1551	1565	SALT	OTHER : Salt	N
16951319	DELAWARE	1778	1753	1777	OTHER, SANDSTONE : Mountain Group	NONE	N
16951320	LAMAR	1773	1758	1782	SANDSTONE	NATURAL GAS, OIL	N
16951321	BELL CANYON	1737	1794	1820	SANDSTONE	NATURAL GAS, OIL	N
16951322	RAMSEY SAND	1721	1810	1837	SANDSTONE	NATURAL GAS, OIL	N
16951323	CHERRY CANYON	874	2657	2730	LIMESTONE	NATURAL GAS, OIL	N
16951324	BRUSHY CANYON	-77	3608	3733	SANDSTONE	NATURAL GAS, OIL	N
16951325	BONE SPRING LIME	-1561	5092	5298	OTHER : Carbonate	NATURAL GAS, OIL	N
16951326	AVALON SAND	-1830	5361	5582	OTHER : Upper - Carbonate	NATURAL GAS	N
16951327	AVALON SAND	-2138	5669	5907	OTHER : Middle - Carbonate	NATURAL GAS, OIL	N
16951328	AVALON SAND	-2445	5976	6231	OTHER : Lower - Carbonate	NATURAL GAS, OIL	N
16951329	BONE SPRING 1ST	-2594	6125	6388	SANDSTONE	NATURAL GAS, OIL	N
16951330	BONE SPRING 2ND	-2878	6409	6687	OTHER : Carbonate	NATURAL GAS, OIL	N
16951331	BONE SPRING 2ND	-3501	7032	7336	SANDSTONE	NATURAL GAS, OIL	N

Operator Name: TAP ROCK OPERATING LLC**Well Name:** BEER CAVE FED COM**Well Number:** 211H

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formation
16951332	BONE SPRING 3RD	-3576	7107	7413	OTHER : Carbonate	NATURAL GAS, OIL	N
16951333	BONE SPRING 3RD	-4443	7974	8284	SANDSTONE	NATURAL GAS, OIL	N
16951334	BONE SPRING 3RD	-4683	8214	8545	OTHER, SANDSTONE : W	NATURAL GAS	N
16951335	WOLFCAMP	-4776	8307	8674	OTHER, SHALE : A	NATURAL GAS, OIL	N
16951336	WOLFCAMP	-4826	8357	8762	OTHER, SHALE : A Lower	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M**Rating Depth:** 20000

Equipment: At 119,091', 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.

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_20251013135747.pdf

BOP Diagram Attachment:

5M_BOP_Diagram_20251013135753.pdf

Operator Name: TAP ROCK OPERATING LLC

Well Name: BEER CAVE FED COM

Well Number: 211H

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	476	0	476	3531	3055	476	J-55	42	BUTT	1.13	1.15	DRY	1.6	DRY	1.6
2	INTERMEDIATE	11	8.625	NEW	API	N	0	1832	0	1808	3531	1723	1832	J-55	32	BUTT	1.13	1.15	DRY	1.6	DRY	1.6
3	PRODUCTION	7.875	5.5	NEW	NON API	N	0	19091	0	7904	3531	-4373	19091	P-110	20	OTHER - TPN	1.13	1.15	DRY	1.6	DRY	1.6

Casing Attachments

Casing ID: 1 String SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20251013135825.pdf

Operator Name: TAP ROCK OPERATING LLC**Well Name:** BEER CAVE FED COM**Well Number:** 211H**Casing Attachments****Casing ID:** 2 **String** INTERMEDIATE**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

Casing_Design_Assumptions_20251013135848.pdf

Casing ID: 3 **String** PRODUCTION**Inspection Document:****Spec Document:**

5.5in_TPN_Casing_Spec_20251013135917.pdf

Tapered String Spec:**Casing Design Assumptions and Worksheet(s):**

Casing_Design_Assumptions_20251013135926.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	476	310	1.33	14.8	413	100	Class C	5% NCI + LCM
INTERMEDIATE	Lead		0	1332	188	2.7	11	507	75	Class C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
INTERMEDIATE	Tail		1332	1832	124	1.33	14.8	165	30	Class C	5% NaCl + LCM
PRODUCTION	Lead		0	8214	494	3.35	10.5	1654	20	Class C	Fluid Loss + Dispersant +

Operator Name: TAP ROCK OPERATING LLC

Well Name: BEER CAVE FED COM

Well Number: 211H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											Retarder + LCM
PRODUCTION	Tail		8214	1909 1	1389	1.63	13.2	2265	20	Class H	Fluid Loss + Dispersant + Retarder + LCM

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. A closed loop system will be used.

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	476	OTHER : Fresh Water Spud Mud	8.4	8.4							
476	1832	SALT SATURATED	10	10							
1832	1909 1	OIL-BASED MUD	9	9							

Operator Name: TAP ROCK OPERATING LLC**Well Name:** BEER CAVE FED COM**Well Number:** 211H

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:

GAMMA RAY LOG, CEMENT BOND LOG, MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

No DSTs or cores are planned at this time.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3699**Anticipated Surface Pressure:** 1845**Anticipated Bottom Hole Temperature(F):** 170**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**

BC_H2S_Plan_20251013140150.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BC_211H_Directional_Plan_20251013140201.pdf

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

BC_211H_Drill_Plan_20251013140210.pdf

BC_211H_Anticollision_Report_20251013140218.pdf

Wellhead_Diagram_3T_20251013140232.pdf

CoFlex_Certs_20251013140233.pdf

BOP_Shell_Test_Procedure_20251013140244.pdf

BC_WMP_20251013140244.pdf

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

Operator Name: TAP ROCK OPERATING LLC

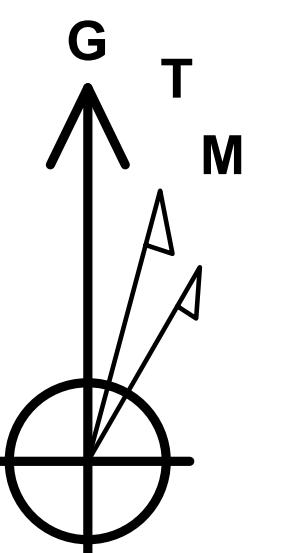
Well Name: BEER CAVE FED COM

Well Number: 211H



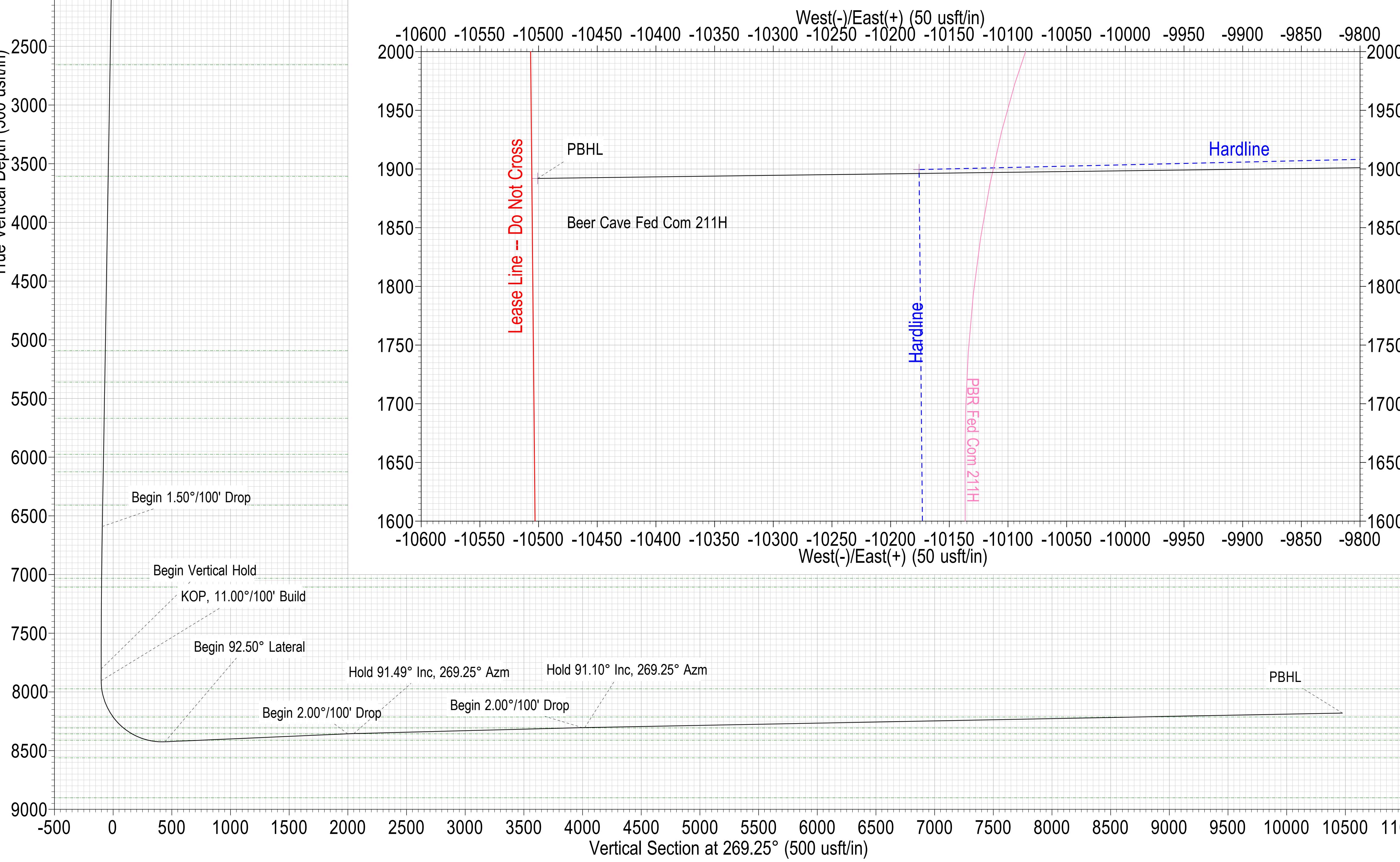
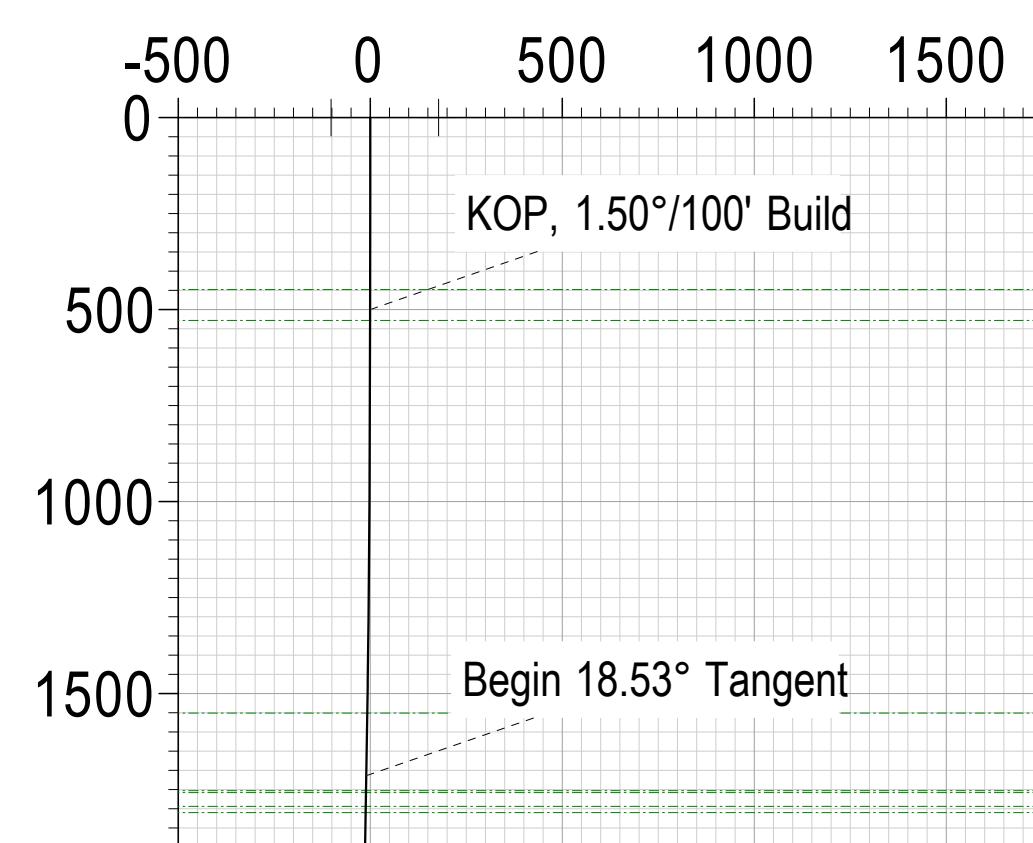
Company: Tap Rock Operating
Well: Beer Cave Fed Com 211H
County: Eddy County, New Mexico (NAD 83)
Rig: H&P 466
Wellbore: Wellbore #1
Design: Design #1
Date: 9:23, September 16 2025

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

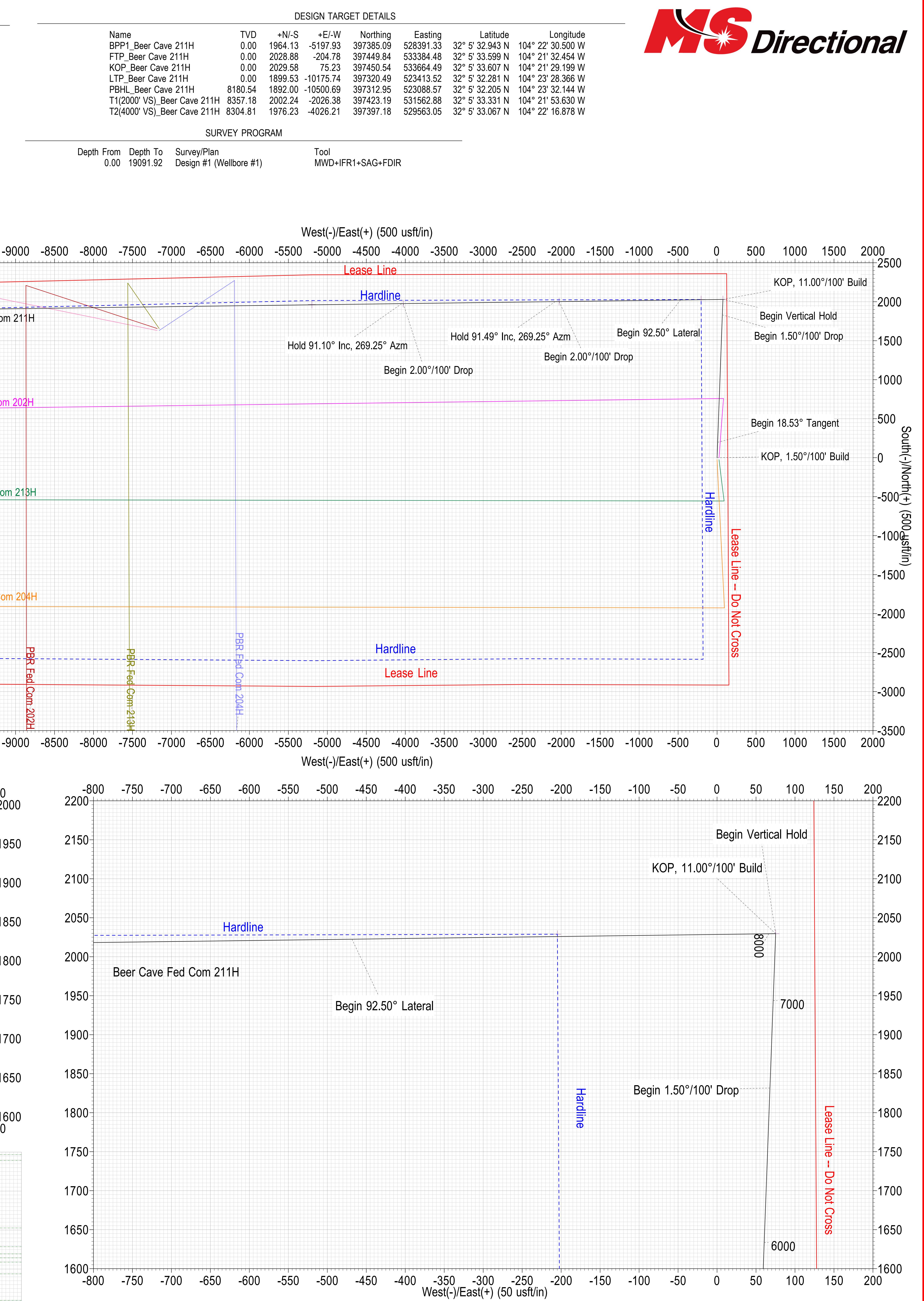


Azimuths to Grid North
True North: 0.01°
Magnetic North: 6.83°
Magnetic Field Strength: 47030.4nT
Dip Angle: 59.47°
Date: 9/15/2025
Model: HDGM2025

To convert a Magnetic Direction to a Grid Direction, Add 6.830°
To convert a Magnetic Direction to a True Direction, Add 6.817° East
To convert a True Direction to a Grid Direction, Add 0.013°



WELL DETAILS: Beer Cave Fed Com 211H											
				GL @ 3531.00		Well @ 3557.00usft (H&P 466)					
+N/S	+E/W	Northing	Easting	Latitude	Longitude						
0.00	0.00	395420.95	533589.26	32° 5' 13.521 N	104° 21' 30.068 W						
SECTION DETAILS											
MD	Inc	Azi	TVD	+N/S	+E/W	Ddeg	TFace	VSect	Annotation		
0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.00	KOP, 1.50°/100' Build		
500.00	0.00	0.00	500.00	0.00	0.00	0.000	0.000	0.00	Begin 18.53° Tangent		
1735.52	18.53	2.12	1714.09	197.95	7.34	1.50	2.123	-9.93	Begin 1.50°/100' Drop		
6878.91	18.53	2.12	6590.75	1831.64	67.89	0.00	0.000	-91.66	KOP, 11.00°/100' Build		
8114.43	0.00	0.00	7804.84	2029.58	75.23	1.50	180.00	-101.79	Begin Vertical Hold		
8214.42	0.00	0.00	7904.84	2029.58	75.23	0.00	0.000	-101.79	Hold 91.10° Inc, 269.25° Azm		
9035.33	92.50	269.25	8425.21	2022.51	-468.32	11.00	269.255	441.80	Begin 92.50° Lateral		
10615.01	92.50	269.25	8357.18	2002.24	-2026.38	0.00	0.000	2000.00	Begin 2.00°/100' Drop		
10665.65	91.49	269.25	8355.42	2001.58	-2076.99	2.00	179.985	2050.61	Hold 91.49° Inc, 269.25° Azm		
12615.70	91.49	269.25	8304.81	1976.23	-4026.21	0.00	0.000	4000.00	Begin 2.00°/100' Drop		
12635.11	91.10	269.25	8304.37	1975.98	-4045.62	2.00	179.967	4019.41	Hold 91.10° Inc, 269.25° Azm		
19091.92	91.10	269.25	8180.54	1892.00	-10500.69	0.00	0.000	10475.02	PBHL		





Tap Rock Operating

Eddy County, New Mexico (NAD 83)

Beer Cave Fed Com (202H, 204H, 211H, 213H)

Beer Cave Fed Com 211H

Wellbore #1

Plan: Design #1

Standard Planning Report

16 September, 2025





Planning Report



Database: Company: Project: Site: Well: Wellbore: Design:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H) Beer Cave Fed Com 211H Wellbore #1 Design #1	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid Minimum Curvature
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Project	Eddy County, New Mexico (NAD 83)		
Map System: Geo Datum: Map Zone:	US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone	System Datum:	Mean Sea Level

Site	Beer Cave Fed Com (202H, 204H, 211H, 213H)				
Site Position: From: Position Uncertainty:	Lat/Long 0.00 usft	Northing: Easting: Slot Radius:	395,420.87 usft 533,614.25 usft 13-3/16 "	Latitude: Longitude:	32° 5' 13.521 N 104° 21' 29.778 W

Well	Beer Cave Fed Com 211H				
Well Position	+N/-S +E/-W	0.00 usft 0.00 usft	Northing: Easting:	395,420.95 usfl 533,589.26 usfl	Latitude: Longitude:
Position Uncertainty		0.00 usft	Wellhead Elevation:	usfl	Ground Level:
Grid Convergence:		-0.013 °			3,531.00 usfl

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2025	9/15/2025	6.817	59.467	47,030.40

Design	Design #1									
Audit Notes:										
Version:										
	Phase:	PLAN		Tie On Depth:	0.00					
Vertical Section:	Depth From (TVD) (usft)	+N/-S 0.00	+E/-W 0.00	Direction (°)	269.25					

Plan Survey Tool Program	Date	9/15/2025
Depth From (usft)	Depth To (usft)	Survey (Wellbore)

1	0.00	19,091.92	Design #1 (Wellbore #1)	Tool Name	Remarks
				MWD+IFR1+SAG+FDIR OWSG MWD + IFR1 + Sag	



Planning Report



Database: Company: Project: Site: Well: Wellbore: Design:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H) Beer Cave Fed Com 211H Wellbore #1 Design #1	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid Minimum Curvature
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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	0.00	0.000
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,735.52	18.53	2.12	1,714.09	197.95	7.34	1.50	1.50	0.00	2.123	
6,878.91	18.53	2.12	6,590.76	1,831.64	67.89	0.00	0.00	0.00	0.000	
8,114.43	0.00	0.00	7,804.84	2,029.58	75.23	1.50	-1.50	0.00	180.000	
8,214.42	0.00	0.00	7,904.84	2,029.58	75.23	0.00	0.00	0.00	0.000	
9,055.33	92.50	269.25	8,425.21	2,022.51	-468.32	11.00	11.00	0.00	269.255	
10,615.01	92.50	269.25	8,357.18	2,002.24	-2,026.38	0.00	0.00	0.00	0.000	T1(2000' VS)_Beer
10,665.65	91.49	269.25	8,355.42	2,001.58	-2,076.99	2.00	-2.00	0.00	179.986	
12,615.70	91.49	269.25	8,304.81	1,976.23	-4,026.21	0.00	0.00	0.00	0.000	T2(4000' VS)_Beer
12,635.12	91.10	269.25	8,304.37	1,975.98	-4,045.62	2.00	-2.00	0.00	-179.967	
19,091.92	91.10	269.25	8,180.54	1,892.00	-10,500.69	0.00	0.00	0.00	0.000	PBHL_Beer Cave 2



Planning Report



Database: Company: Project: Site:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H)	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid
Well: Wellbore: Design:	Beer Cave Fed Com 211H Wellbore #1 Design #1	Survey Calculation Method:	Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
448.00	0.00	0.00	448.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.50°/100' Build									
529.00	0.44	2.12	529.00	0.11	0.00	-0.01	1.50	1.50	0.00
Top Salt									
600.00	1.50	2.12	599.99	1.31	0.05	-0.07	1.50	1.50	0.00
700.00	3.00	2.12	699.91	5.23	0.19	-0.26	1.50	1.50	0.00
800.00	4.50	2.12	799.69	11.77	0.44	-0.59	1.50	1.50	0.00
900.00	6.00	2.12	899.27	20.91	0.78	-1.05	1.50	1.50	0.00
1,000.00	7.50	2.12	998.57	32.66	1.21	-1.64	1.50	1.50	0.00
1,100.00	9.00	2.12	1,097.54	46.99	1.74	-2.36	1.50	1.50	0.00
1,200.00	10.50	2.12	1,196.09	63.92	2.37	-3.21	1.50	1.50	0.00
1,300.00	12.00	2.12	1,294.16	83.41	3.09	-4.18	1.50	1.50	0.00
1,400.00	13.50	2.12	1,391.70	105.47	3.91	-5.29	1.50	1.50	0.00
1,500.00	15.00	2.12	1,488.62	130.06	4.82	-6.52	1.50	1.50	0.00
1,564.73	15.97	2.12	1,551.00	147.34	5.46	-7.39	1.50	1.50	0.00
Base Salt									
1,600.00	16.50	2.12	1,584.86	157.19	5.83	-7.88	1.50	1.50	0.00
1,700.00	18.00	2.12	1,680.36	186.82	6.92	-9.37	1.50	1.50	0.00
1,735.52	18.53	2.12	1,714.09	197.95	7.34	-9.93	1.50	1.50	0.00
Begin 18.53° Tangent									
1,776.56	18.53	2.12	1,753.00	210.98	7.82	-10.58	0.00	0.00	0.00
Delaware Mountain Gp									
1,781.83	18.53	2.12	1,758.00	212.66	7.88	-10.67	0.00	0.00	0.00
Lamar									
1,800.00	18.53	2.12	1,775.22	218.43	8.10	-10.95	0.00	0.00	0.00
1,819.80	18.53	2.12	1,794.00	224.72	8.33	-11.27	0.00	0.00	0.00
Bell Canyon									
1,836.68	18.53	2.12	1,810.00	230.08	8.53	-11.54	0.00	0.00	0.00
Ramsey Sand									
1,900.00	18.53	2.12	1,870.04	250.19	9.27	-12.55	0.00	0.00	0.00
2,000.00	18.53	2.12	1,964.85	281.95	10.45	-14.14	0.00	0.00	0.00
2,100.00	18.53	2.12	2,059.67	313.72	11.63	-15.73	0.00	0.00	0.00
2,200.00	18.53	2.12	2,154.48	345.48	12.81	-17.33	0.00	0.00	0.00
2,300.00	18.53	2.12	2,249.30	377.24	13.98	-18.92	0.00	0.00	0.00
2,400.00	18.53	2.12	2,344.11	409.01	15.16	-20.51	0.00	0.00	0.00
2,500.00	18.53	2.12	2,438.92	440.77	16.34	-22.11	0.00	0.00	0.00
2,600.00	18.53	2.12	2,533.74	472.53	17.51	-23.70	0.00	0.00	0.00
2,700.00	18.53	2.12	2,628.55	504.29	18.69	-25.29	0.00	0.00	0.00
2,730.00	18.53	2.12	2,657.00	513.82	19.04	-25.77	0.00	0.00	0.00
Cherry Canyon									
2,800.00	18.53	2.12	2,723.37	536.06	19.87	-26.88	0.00	0.00	0.00
2,900.00	18.53	2.12	2,818.18	567.82	21.05	-28.48	0.00	0.00	0.00
3,000.00	18.53	2.12	2,912.99	599.58	22.22	-30.07	0.00	0.00	0.00
3,100.00	18.53	2.12	3,007.81	631.35	23.40	-31.66	0.00	0.00	0.00
3,200.00	18.53	2.12	3,102.62	663.11	24.58	-33.26	0.00	0.00	0.00



Planning Report



Database: Company: Project: Site:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H)	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid
Well: Wellbore: Design:	Beer Cave Fed Com 211H Wellbore #1 Design #1	Survey Calculation Method:	Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,300.00	18.53	2.12	3,197.44	694.87	25.76	-34.85	0.00	0.00	0.00
3,400.00	18.53	2.12	3,292.25	726.63	26.93	-36.44	0.00	0.00	0.00
3,500.00	18.53	2.12	3,387.07	758.40	28.11	-38.03	0.00	0.00	0.00
3,600.00	18.53	2.12	3,481.88	790.16	29.29	-39.63	0.00	0.00	0.00
3,700.00	18.53	2.12	3,576.69	821.92	30.46	-41.22	0.00	0.00	0.00
3,733.02	18.53	2.12	3,608.00	832.41	30.85	-41.75	0.00	0.00	0.00
Brushy Canyon									
3,800.00	18.53	2.12	3,671.51	853.69	31.64	-42.81	0.00	0.00	0.00
3,900.00	18.53	2.12	3,766.32	885.45	32.82	-44.41	0.00	0.00	0.00
4,000.00	18.53	2.12	3,861.14	917.21	34.00	-46.00	0.00	0.00	0.00
4,100.00	18.53	2.12	3,955.95	948.97	35.17	-47.59	0.00	0.00	0.00
4,200.00	18.53	2.12	4,050.77	980.74	36.35	-49.19	0.00	0.00	0.00
4,300.00	18.53	2.12	4,145.58	1,012.50	37.53	-50.78	0.00	0.00	0.00
4,400.00	18.53	2.12	4,240.39	1,044.26	38.71	-52.37	0.00	0.00	0.00
4,500.00	18.53	2.12	4,335.21	1,076.03	39.88	-53.96	0.00	0.00	0.00
4,600.00	18.53	2.12	4,430.02	1,107.79	41.06	-55.56	0.00	0.00	0.00
4,700.00	18.53	2.12	4,524.84	1,139.55	42.24	-57.15	0.00	0.00	0.00
4,800.00	18.53	2.12	4,619.65	1,171.31	43.41	-58.74	0.00	0.00	0.00
4,900.00	18.53	2.12	4,714.46	1,203.08	44.59	-60.34	0.00	0.00	0.00
5,000.00	18.53	2.12	4,809.28	1,234.84	45.77	-61.93	0.00	0.00	0.00
5,100.00	18.53	2.12	4,904.09	1,266.60	46.95	-63.52	0.00	0.00	0.00
5,200.00	18.53	2.12	4,998.91	1,298.37	48.12	-65.11	0.00	0.00	0.00
5,298.18	18.53	2.12	5,092.00	1,329.55	49.28	-66.68	0.00	0.00	0.00
Bone Spring Lime									
5,300.00	18.53	2.12	5,093.72	1,330.13	49.30	-66.71	0.00	0.00	0.00
5,400.00	18.53	2.12	5,188.54	1,361.89	50.48	-68.30	0.00	0.00	0.00
5,500.00	18.53	2.12	5,283.35	1,393.65	51.66	-69.89	0.00	0.00	0.00
5,581.90	18.53	2.12	5,361.00	1,419.67	52.62	-71.20	0.00	0.00	0.00
Upper Avalon									
5,600.00	18.53	2.12	5,378.16	1,425.42	52.83	-71.49	0.00	0.00	0.00
5,700.00	18.53	2.12	5,472.98	1,457.18	54.01	-73.08	0.00	0.00	0.00
5,800.00	18.53	2.12	5,567.79	1,488.94	55.19	-74.67	0.00	0.00	0.00
5,900.00	18.53	2.12	5,662.61	1,520.71	56.37	-76.27	0.00	0.00	0.00
5,906.74	18.53	2.12	5,669.00	1,522.85	56.44	-76.37	0.00	0.00	0.00
Middle Avalon									
6,000.00	18.53	2.12	5,757.42	1,552.47	57.54	-77.86	0.00	0.00	0.00
6,100.00	18.53	2.12	5,852.24	1,584.23	58.72	-79.45	0.00	0.00	0.00
6,200.00	18.53	2.12	5,947.05	1,615.99	59.90	-81.04	0.00	0.00	0.00
6,230.53	18.53	2.12	5,976.00	1,625.69	60.26	-81.53	0.00	0.00	0.00
Lower Avalon									
6,300.00	18.53	2.12	6,041.86	1,647.76	61.07	-82.64	0.00	0.00	0.00
6,387.68	18.53	2.12	6,125.00	1,675.61	62.11	-84.03	0.00	0.00	0.00
1st Bone Spring Sand									
6,400.00	18.53	2.12	6,136.68	1,679.52	62.25	-84.23	0.00	0.00	0.00
6,500.00	18.53	2.12	6,231.49	1,711.28	63.43	-85.82	0.00	0.00	0.00
6,600.00	18.53	2.12	6,326.31	1,743.05	64.61	-87.42	0.00	0.00	0.00
6,687.22	18.53	2.12	6,409.00	1,770.75	65.63	-88.81	0.00	0.00	0.00
2nd Bone Spring Carb									
6,700.00	18.53	2.12	6,421.12	1,774.81	65.78	-89.01	0.00	0.00	0.00
6,800.00	18.53	2.12	6,515.93	1,806.57	66.96	-90.60	0.00	0.00	0.00
6,878.91	18.53	2.12	6,590.76	1,831.64	67.89	-91.86	0.00	0.00	0.00
Begin 1.50°/100' Drop									



Planning Report



Database: Company: Project: Site:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H)	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid
Well: Wellbore: Design:	Beer Cave Fed Com 211H Wellbore #1 Design #1	Survey Calculation Method:	Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,900.00	18.22	2.12	6,610.77	1,838.28	68.14	-92.19	1.50	-1.50	0.00
7,000.00	16.72	2.12	6,706.15	1,868.27	69.25	-93.70	1.50	-1.50	0.00
7,100.00	15.22	2.12	6,802.29	1,895.76	70.27	-95.08	1.50	-1.50	0.00
7,200.00	13.72	2.12	6,899.12	1,920.72	71.19	-96.33	1.50	-1.50	0.00
7,300.00	12.22	2.12	6,996.57	1,943.15	72.02	-97.45	1.50	-1.50	0.00
7,336.22	11.67	2.12	7,032.00	1,950.64	72.30	-97.83	1.50	-1.50	0.00
2nd Bone Spring Sand									
7,400.00	10.72	2.12	7,094.57	1,963.01	72.76	-98.45	1.50	-1.50	0.00
7,412.65	10.53	2.12	7,107.00	1,965.34	72.85	-98.56	1.50	-1.50	0.00
3rd Bone Spring Carb									
7,500.00	9.22	2.12	7,193.06	1,980.31	73.40	-99.32	1.50	-1.50	0.00
7,600.00	7.72	2.12	7,291.96	1,995.02	73.95	-100.05	1.50	-1.50	0.00
7,700.00	6.22	2.12	7,391.22	2,007.14	74.39	-100.66	1.50	-1.50	0.00
7,800.00	4.72	2.12	7,490.77	2,016.66	74.75	-101.14	1.50	-1.50	0.00
7,900.00	3.22	2.12	7,590.52	2,023.57	75.00	-101.48	1.50	-1.50	0.00
8,000.00	1.72	2.12	7,690.43	2,027.87	75.16	-101.70	1.50	-1.50	0.00
8,100.00	0.22	2.12	7,790.41	2,029.56	75.23	-101.79	1.50	-1.50	0.00
8,114.43	0.00	0.00	7,804.84	2,029.58	75.23	-101.79	1.50	-1.50	0.00
Begin Vertical Hold									
8,200.00	0.00	0.00	7,890.41	2,029.58	75.23	-101.79	0.00	0.00	0.00
8,214.42	0.00	0.00	7,904.84	2,029.58	75.23	-101.79	0.00	0.00	0.00
KOP, 11.00°/100' Build									
8,250.00	3.91	269.25	7,940.38	2,029.57	74.01	-100.57	11.00	11.00	0.00
8,283.79	7.63	269.25	7,974.00	2,029.52	70.61	-97.17	11.00	11.00	0.00
3rd Bone Spring Sand									
8,300.00	9.41	269.25	7,990.03	2,029.49	68.21	-94.77	11.00	11.00	0.00
8,350.00	14.91	269.25	8,038.89	2,029.35	57.68	-84.24	11.00	11.00	0.00
8,400.00	20.41	269.25	8,086.51	2,029.16	42.52	-69.08	11.00	11.00	0.00
8,450.00	25.91	269.25	8,132.46	2,028.90	22.86	-49.42	11.00	11.00	0.00
8,500.00	31.41	269.25	8,176.32	2,028.59	-1.11	-25.44	11.00	11.00	0.00
8,545.42	36.41	269.25	8,214.00	2,028.26	-26.44	-0.11	11.00	11.00	0.00
3rd BS W Sand									
8,550.00	36.91	269.25	8,217.67	2,028.22	-29.18	2.62	11.00	11.00	0.00
8,600.00	42.41	269.25	8,256.15	2,027.81	-61.07	34.53	11.00	11.00	0.00
8,650.00	47.91	269.25	8,291.39	2,027.35	-96.51	69.97	11.00	11.00	0.00
8,673.91	50.54	269.25	8,307.00	2,027.11	-114.61	88.07	11.00	11.00	0.00
Wolfcamp A X Sand									
8,700.00	53.41	269.25	8,323.07	2,026.85	-135.17	108.63	11.00	11.00	0.00
8,750.00	58.91	269.25	8,350.90	2,026.31	-176.68	150.14	11.00	11.00	0.00
8,762.04	60.24	269.25	8,357.00	2,026.17	-187.06	160.52	11.00	11.00	0.00
Wolfcamp A Y Sand									
8,800.00	64.41	269.25	8,374.63	2,025.73	-220.67	194.13	11.00	11.00	0.00
8,850.00	69.91	269.25	8,394.02	2,025.13	-266.73	240.20	11.00	11.00	0.00
8,900.00	75.41	269.25	8,408.92	2,024.51	-314.43	287.91	11.00	11.00	0.00
8,912.85	76.83	269.25	8,412.00	2,024.35	-326.91	300.38	11.00	11.00	0.00
Wolfcamp A Lower									
8,950.00	80.91	269.25	8,419.17	2,023.88	-363.35	336.82	11.00	11.00	0.00
9,000.00	86.41	269.25	8,424.69	2,023.23	-413.02	386.50	11.00	11.00	0.00
9,050.00	91.91	269.25	8,425.42	2,022.58	-462.99	436.47	11.00	11.00	0.00
9,055.33	92.50	269.25	8,425.21	2,022.51	-468.32	441.80	11.00	11.00	0.00
Begin 92.50° Lateral									
9,100.00	92.50	269.25	8,423.26	2,021.93	-512.94	486.43	0.00	0.00	0.00



Planning Report



Database: Company: Project: Site:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H)	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid
Well: Wellbore: Design:	Beer Cave Fed Com 211H Wellbore #1 Design #1	Survey Calculation Method:	Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,200.00	92.50	269.25	8,418.90	2,020.63	-612.83	586.33	0.00	0.00	0.00
9,300.00	92.50	269.25	8,414.54	2,019.33	-712.73	686.24	0.00	0.00	0.00
9,400.00	92.50	269.25	8,410.18	2,018.03	-812.63	786.14	0.00	0.00	0.00
9,500.00	92.50	269.25	8,405.81	2,016.73	-912.52	886.05	0.00	0.00	0.00
9,600.00	92.50	269.25	8,401.45	2,015.43	-1,012.42	985.95	0.00	0.00	0.00
9,700.00	92.50	269.25	8,397.09	2,014.13	-1,112.32	1,085.86	0.00	0.00	0.00
9,800.00	92.50	269.25	8,392.73	2,012.83	-1,212.21	1,185.76	0.00	0.00	0.00
9,900.00	92.50	269.25	8,388.37	2,011.53	-1,312.11	1,285.67	0.00	0.00	0.00
10,000.00	92.50	269.25	8,384.00	2,010.23	-1,412.01	1,385.57	0.00	0.00	0.00
10,100.00	92.50	269.25	8,379.64	2,008.93	-1,511.90	1,485.48	0.00	0.00	0.00
10,200.00	92.50	269.25	8,375.28	2,007.63	-1,611.80	1,585.38	0.00	0.00	0.00
10,300.00	92.50	269.25	8,370.92	2,006.33	-1,711.69	1,685.29	0.00	0.00	0.00
10,400.00	92.50	269.25	8,366.56	2,005.03	-1,811.59	1,785.19	0.00	0.00	0.00
10,500.00	92.50	269.25	8,362.19	2,003.73	-1,911.49	1,885.10	0.00	0.00	0.00
10,600.00	92.50	269.25	8,357.83	2,002.44	-2,011.38	1,985.00	0.00	0.00	0.00
10,615.01	92.50	269.25	8,357.18	2,002.24	-2,026.38	2,000.00	0.00	0.00	0.00
Begin 2.00°/100' Drop									
10,665.65	91.49	269.25	8,355.42	2,001.58	-2,076.99	2,050.61	2.00	-2.00	0.00
Hold 91.49° Inc, 269.25° Azm									
10,700.00	91.49	269.25	8,354.53	2,001.14	-2,111.32	2,084.94	0.00	0.00	0.00
10,800.00	91.49	269.25	8,351.93	1,999.84	-2,211.28	2,184.91	0.00	0.00	0.00
10,900.00	91.49	269.25	8,349.33	1,998.54	-2,311.23	2,284.88	0.00	0.00	0.00
11,000.00	91.49	269.25	8,346.74	1,997.24	-2,411.19	2,384.84	0.00	0.00	0.00
11,100.00	91.49	269.25	8,344.14	1,995.93	-2,511.15	2,484.81	0.00	0.00	0.00
11,200.00	91.49	269.25	8,341.55	1,994.63	-2,611.11	2,584.77	0.00	0.00	0.00
11,300.00	91.49	269.25	8,338.95	1,993.33	-2,711.07	2,684.74	0.00	0.00	0.00
11,400.00	91.49	269.25	8,336.36	1,992.03	-2,811.02	2,784.71	0.00	0.00	0.00
11,500.00	91.49	269.25	8,333.76	1,990.73	-2,910.98	2,884.67	0.00	0.00	0.00
11,600.00	91.49	269.25	8,331.17	1,989.43	-3,010.94	2,984.64	0.00	0.00	0.00
11,700.00	91.49	269.25	8,328.57	1,988.13	-3,110.90	3,084.61	0.00	0.00	0.00
11,800.00	91.49	269.25	8,325.98	1,986.83	-3,210.85	3,184.57	0.00	0.00	0.00
11,900.00	91.49	269.25	8,323.38	1,985.53	-3,310.81	3,284.54	0.00	0.00	0.00
12,000.00	91.49	269.25	8,320.79	1,984.23	-3,410.77	3,384.51	0.00	0.00	0.00
12,100.00	91.49	269.25	8,318.19	1,982.93	-3,510.73	3,484.47	0.00	0.00	0.00
12,200.00	91.49	269.25	8,315.59	1,981.63	-3,610.69	3,584.44	0.00	0.00	0.00
12,300.00	91.49	269.25	8,313.00	1,980.33	-3,710.64	3,684.40	0.00	0.00	0.00
12,400.00	91.49	269.25	8,310.40	1,979.03	-3,810.60	3,784.37	0.00	0.00	0.00
12,500.00	91.49	269.25	8,307.81	1,977.73	-3,910.56	3,884.34	0.00	0.00	0.00
12,600.00	91.49	269.25	8,305.21	1,976.43	-4,010.52	3,984.30	0.00	0.00	0.00
12,615.70	91.49	269.25	8,304.81	1,976.23	-4,026.21	4,000.00	0.00	0.00	0.00
Begin 2.00°/100' Drop									
12,635.12	91.10	269.25	8,304.37	1,975.98	-4,045.62	4,019.41	2.00	-2.00	0.00
Hold 91.10° Inc, 269.25° Azm									
12,700.00	91.10	269.25	8,303.12	1,975.13	-4,110.49	4,084.28	0.00	0.00	0.00
12,800.00	91.10	269.25	8,301.21	1,973.83	-4,210.46	4,184.26	0.00	0.00	0.00
12,900.00	91.10	269.25	8,299.29	1,972.53	-4,310.43	4,284.24	0.00	0.00	0.00
13,000.00	91.10	269.25	8,297.37	1,971.23	-4,410.41	4,384.23	0.00	0.00	0.00
13,100.00	91.10	269.25	8,295.45	1,969.93	-4,510.38	4,484.21	0.00	0.00	0.00
13,200.00	91.10	269.25	8,293.53	1,968.63	-4,610.35	4,584.19	0.00	0.00	0.00
13,300.00	91.10	269.25	8,291.62	1,967.33	-4,710.33	4,684.17	0.00	0.00	0.00
13,400.00	91.10	269.25	8,289.70	1,966.03	-4,810.30	4,784.15	0.00	0.00	0.00
13,500.00	91.10	269.25	8,287.78	1,964.73	-4,910.27	4,884.13	0.00	0.00	0.00



Planning Report



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Well: Wellbore: Design:	Beer Cave Fed Com 211H Wellbore #1 Design #1	Survey Calculation Method:	Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,600.00	91.10	269.25	8,285.86	1,963.43	-5,010.25	4,984.12	0.00	0.00	0.00
13,700.00	91.10	269.25	8,283.95	1,962.13	-5,110.22	5,084.10	0.00	0.00	0.00
13,800.00	91.10	269.25	8,282.03	1,960.83	-5,210.19	5,184.08	0.00	0.00	0.00
13,900.00	91.10	269.25	8,280.11	1,959.53	-5,310.16	5,284.06	0.00	0.00	0.00
14,000.00	91.10	269.25	8,278.19	1,958.23	-5,410.14	5,384.04	0.00	0.00	0.00
14,100.00	91.10	269.25	8,276.27	1,956.92	-5,510.11	5,484.02	0.00	0.00	0.00
14,200.00	91.10	269.25	8,274.36	1,955.62	-5,610.08	5,584.01	0.00	0.00	0.00
14,300.00	91.10	269.25	8,272.44	1,954.32	-5,710.06	5,683.99	0.00	0.00	0.00
14,400.00	91.10	269.25	8,270.52	1,953.02	-5,810.03	5,783.97	0.00	0.00	0.00
14,500.00	91.10	269.25	8,268.60	1,951.72	-5,910.00	5,883.95	0.00	0.00	0.00
14,600.00	91.10	269.25	8,266.69	1,950.42	-6,009.98	5,983.93	0.00	0.00	0.00
14,700.00	91.10	269.25	8,264.77	1,949.12	-6,109.95	6,083.91	0.00	0.00	0.00
14,800.00	91.10	269.25	8,262.85	1,947.82	-6,209.92	6,183.89	0.00	0.00	0.00
14,900.00	91.10	269.25	8,260.93	1,946.52	-6,309.90	6,283.88	0.00	0.00	0.00
15,000.00	91.10	269.25	8,259.01	1,945.22	-6,409.87	6,383.86	0.00	0.00	0.00
15,100.00	91.10	269.25	8,257.10	1,943.92	-6,509.84	6,483.84	0.00	0.00	0.00
15,200.00	91.10	269.25	8,255.18	1,942.62	-6,609.82	6,583.82	0.00	0.00	0.00
15,300.00	91.10	269.25	8,253.26	1,941.32	-6,709.79	6,683.80	0.00	0.00	0.00
15,400.00	91.10	269.25	8,251.34	1,940.02	-6,809.76	6,783.78	0.00	0.00	0.00
15,500.00	91.10	269.25	8,249.43	1,938.72	-6,909.74	6,883.77	0.00	0.00	0.00
15,600.00	91.10	269.25	8,247.51	1,937.41	-7,009.71	6,983.75	0.00	0.00	0.00
15,700.00	91.10	269.25	8,245.59	1,936.11	-7,109.68	7,083.73	0.00	0.00	0.00
15,800.00	91.10	269.25	8,243.67	1,934.81	-7,209.65	7,183.71	0.00	0.00	0.00
15,900.00	91.10	269.25	8,241.75	1,933.51	-7,309.63	7,283.69	0.00	0.00	0.00
16,000.00	91.10	269.25	8,239.84	1,932.21	-7,409.60	7,383.67	0.00	0.00	0.00
16,100.00	91.10	269.25	8,237.92	1,930.91	-7,509.57	7,483.66	0.00	0.00	0.00
16,200.00	91.10	269.25	8,236.00	1,929.61	-7,609.55	7,583.64	0.00	0.00	0.00
16,300.00	91.10	269.25	8,234.08	1,928.31	-7,709.52	7,683.62	0.00	0.00	0.00
16,400.00	91.10	269.25	8,232.17	1,927.01	-7,809.49	7,783.60	0.00	0.00	0.00
16,500.00	91.10	269.25	8,230.25	1,925.71	-7,909.47	7,883.58	0.00	0.00	0.00
16,600.00	91.10	269.25	8,228.33	1,924.41	-8,009.44	7,983.56	0.00	0.00	0.00
16,700.00	91.10	269.25	8,226.41	1,923.11	-8,109.41	8,083.55	0.00	0.00	0.00
16,800.00	91.10	269.25	8,224.49	1,921.81	-8,209.39	8,183.53	0.00	0.00	0.00
16,900.00	91.10	269.25	8,222.58	1,920.51	-8,309.36	8,283.51	0.00	0.00	0.00
17,000.00	91.10	269.25	8,220.66	1,919.21	-8,409.33	8,383.49	0.00	0.00	0.00
17,100.00	91.10	269.25	8,218.74	1,917.91	-8,509.31	8,483.47	0.00	0.00	0.00
17,200.00	91.10	269.25	8,216.82	1,916.60	-8,609.28	8,583.45	0.00	0.00	0.00
17,300.00	91.10	269.25	8,214.91	1,915.30	-8,709.25	8,683.44	0.00	0.00	0.00
17,400.00	91.10	269.25	8,212.99	1,914.00	-8,809.23	8,783.42	0.00	0.00	0.00
17,500.00	91.10	269.25	8,211.07	1,912.70	-8,909.20	8,883.40	0.00	0.00	0.00
17,600.00	91.10	269.25	8,209.15	1,911.40	-9,009.17	8,983.38	0.00	0.00	0.00
17,700.00	91.10	269.25	8,207.23	1,910.10	-9,109.14	9,083.36	0.00	0.00	0.00
17,800.00	91.10	269.25	8,205.32	1,908.80	-9,209.12	9,183.34	0.00	0.00	0.00
17,900.00	91.10	269.25	8,203.40	1,907.50	-9,309.09	9,283.32	0.00	0.00	0.00
18,000.00	91.10	269.25	8,201.48	1,906.20	-9,409.06	9,383.31	0.00	0.00	0.00
18,100.00	91.10	269.25	8,199.56	1,904.90	-9,509.04	9,483.29	0.00	0.00	0.00
18,200.00	91.10	269.25	8,197.65	1,903.60	-9,609.01	9,583.27	0.00	0.00	0.00
18,300.00	91.10	269.25	8,195.73	1,902.30	-9,708.98	9,683.25	0.00	0.00	0.00
18,400.00	91.10	269.25	8,193.81	1,901.00	-9,808.96	9,783.23	0.00	0.00	0.00
18,500.00	91.10	269.25	8,191.89	1,899.70	-9,908.93	9,883.21	0.00	0.00	0.00
18,600.00	91.10	269.25	8,189.98	1,898.40	-10,008.90	9,983.20	0.00	0.00	0.00
18,700.00	91.10	269.25	8,188.06	1,897.09	-10,108.88	10,083.18	0.00	0.00	0.00
18,800.00	91.10	269.25	8,186.14	1,895.79	-10,208.85	10,183.16	0.00	0.00	0.00



Planning Report



Database: Company: Project: Site: Well: Wellbore: Design:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H) Beer Cave Fed Com 211H Wellbore #1 Design #1	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid Minimum Curvature
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Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
18,900.00	91.10	269.25	8,184.22	1,894.49	-10,308.82	10,283.14	0.00	0.00	0.00	
19,000.00	91.10	269.25	8,182.30	1,893.19	-10,408.80	10,383.12	0.00	0.00	0.00	
19,091.92	91.10	269.25	8,180.54	1,892.00	-10,500.69	10,475.02	0.00	0.00	0.00	
PBHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
LTP_Beer Cave 211H	0.00	360.00	0.00	1,899.53	-10,175.74	397,320.49	523,413.52	32° 5' 32.281 N	104° 23' 28.366 W	
- plan misses target center by 8185.27usft at 18923.84usft MD (8183.76 TVD, 1894.18 N, -10332.66 E)										
- Point										
BPP1_Beer Cave 211	0.00	360.00	0.00	1,964.13	-5,197.93	397,385.08	528,391.33	32° 5' 32.943 N	104° 22' 30.500 W	
- plan misses target center by 5556.64usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Point										
FTP_Beer Cave 211H	0.00	360.00	0.00	2,028.88	-204.78	397,449.84	533,384.48	32° 5' 33.599 N	104° 21' 32.454 W	
- plan misses target center by 2039.19usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Point										
KOP_Beer Cave 211H	0.00	360.00	0.00	2,029.58	75.23	397,450.54	533,664.49	32° 5' 33.607 N	104° 21' 29.199 W	
- plan misses target center by 2030.98usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Point										
PBHL_Beer Cave 211	0.00	360.00	8,180.54	1,892.00	-10,500.69	397,312.95	523,088.57	32° 5' 32.205 N	104° 23' 32.144 W	
- plan hits target center										
- Point										
T2(4000' VS)_Beer C:	0.00	360.00	8,304.81	1,976.23	-4,026.21	397,397.18	529,563.05	32° 5' 33.067 N	104° 22' 16.878 W	
- plan hits target center										
- Point										
T1(2000' VS) Beer C:	0.00	360.00	8,357.18	2,002.24	-2,026.38	397,423.19	531,562.88	32° 5' 33.331 N	104° 21' 53.630 W	
- plan hits target center										
- Point										



Planning Report



Database: Company: Project: Site: Well: Wellbore: Design:	TRG_EDMConroe Tap Rock Operating Eddy County, New Mexico (NAD 83) Beer Cave Fed Com (202H, 204H, 211H, 213H) Beer Cave Fed Com 211H Wellbore #1 Design #1	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well Beer Cave Fed Com 211H Well @ 3557.00usft (H&P 466) Well @ 3557.00usft (H&P 466) Grid Minimum Curvature
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Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
448.00	448.00	Rustler			
529.00	529.00	Top Salt			
1,564.73	1,551.00	Base Salt			
1,776.56	1,753.00	Delaware Mountain Gp			
1,781.83	1,758.00	Lamar			
1,819.80	1,794.00	Bell Canyon			
1,836.68	1,810.00	Ramsey Sand			
2,730.00	2,657.00	Cherry Canyon			
3,733.02	3,608.00	Brushy Canyon			
5,298.18	5,092.00	Bone Spring Lime			
5,581.90	5,361.00	Upper Avalon			
5,906.74	5,669.00	Middle Avalon			
6,230.53	5,976.00	Lower Avalon			
6,387.68	6,125.00	1st Bone Spring Sand			
6,687.22	6,409.00	2nd Bone Spring Carb			
7,336.22	7,032.00	2nd Bone Spring Sand			
7,412.65	7,107.00	3rd Bone Spring Carb			
8,283.79	7,974.00	3rd Bone Spring Sand			
8,545.42	8,214.00	3rd BS W Sand			
8,673.91	8,307.00	Wolfcamp A X Sand			
8,762.04	8,357.00	Wolfcamp A Y Sand			
8,912.85	8,412.00	Wolfcamp A Lower			

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, 1.50°/100' Build
1,735.52	1,714.09	197.95	7.34	Begin 18.53° Tangent
6,878.91	6,590.76	1,831.64	67.89	Begin 1.50°/100' Drop
8,114.43	7,804.84	2,029.58	75.23	Begin Vertical Hold
8,214.42	7,904.84	2,029.58	75.23	KOP, 11.00°/100' Build
9,055.33	8,425.21	2,022.51	-468.32	Begin 92.50° Lateral
10,615.01	8,357.18	2,002.24	-2,026.38	Begin 2.00°/100' Drop
10,665.65	8,355.42	2,001.58	-2,076.99	Hold 91.49° Inc, 269.25° Azm
12,615.70	8,304.81	1,976.23	-4,026.21	Begin 2.00°/100' Drop
12,635.12	8,304.37	1,975.98	-4,045.62	Hold 91.10° Inc, 269.25° Azm
19,091.92	8,180.54	1,892.00	-10,500.69	PBHL

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Tap Rock Operating LLC
WELL NAME & NO.:	Beer Cave Fed Com 211H
LOCATION:	Sec 35-25S-25E-NMP
COUNTY:	Eddy County, New Mexico

[Create COAs](#)

H₂S	Cave / Karst	Waste Prevention Rule
Not Reported	Critical	Waste Minimization Plan
Potash	R-111-Q Design	
None		
Wellhead <input type="checkbox"/> Multibowl <input checked="" type="checkbox"/> Flex Hose <input checked="" type="checkbox"/> Break Testing	Casing <div style="border: 1px solid black; padding: 2px; display: inline-block;">3-String Well</div> <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="checkbox"/> Liner <input type="checkbox"/> Fluid Filled <input type="checkbox"/> Casing Clearance </div>	
	Cementing <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="checkbox"/> DV Tool <input type="checkbox"/> Bradenhead <input type="checkbox"/> Echometer </div> <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="checkbox"/> Offline Cement <input type="checkbox"/> Open Annulus <input type="checkbox"/> Pilot Hole </div>	
	Special Requirements <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="checkbox"/> Capitan Reef <input type="checkbox"/> Water Disposal <input checked="" type="checkbox"/> COM <input type="checkbox"/> Unit </div>	

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 **475** feet (a minimum of **70'** 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 (including 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 1650' per 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 the presence of cave/karst, Capitan Reef, or potash features.

3. The minimum required fill of cement behind the **5-1/2** inch production casing 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 the presence of cave/karst, Capitan Reef, or potash features.

C. PRESSURE CONTROL

1. 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.
2. 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).
3. Break testing has been approved for this well ONLY on those 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.) If in the event break testing is not utilized, then a full BOPE test would be conducted.

- a. Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation. **BOPE Break Testing is NOT permitted to drill the production hole section.**
- b. While in transfer between wells, BOPE shall be secured by the hydraulic carrier or cradle.
- c. 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).
- d. As a minimum, a full BOPE test shall be performed at 21-day intervals.
- e. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**. 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.

D. SPECIAL REQUIREMENT(S)

Communityization Agreement:

- The operator will submit a Communityization 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 Communityization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communityization 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 Communityization Agreement number is known, it shall also be on the sign.

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 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible
- Windsock 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

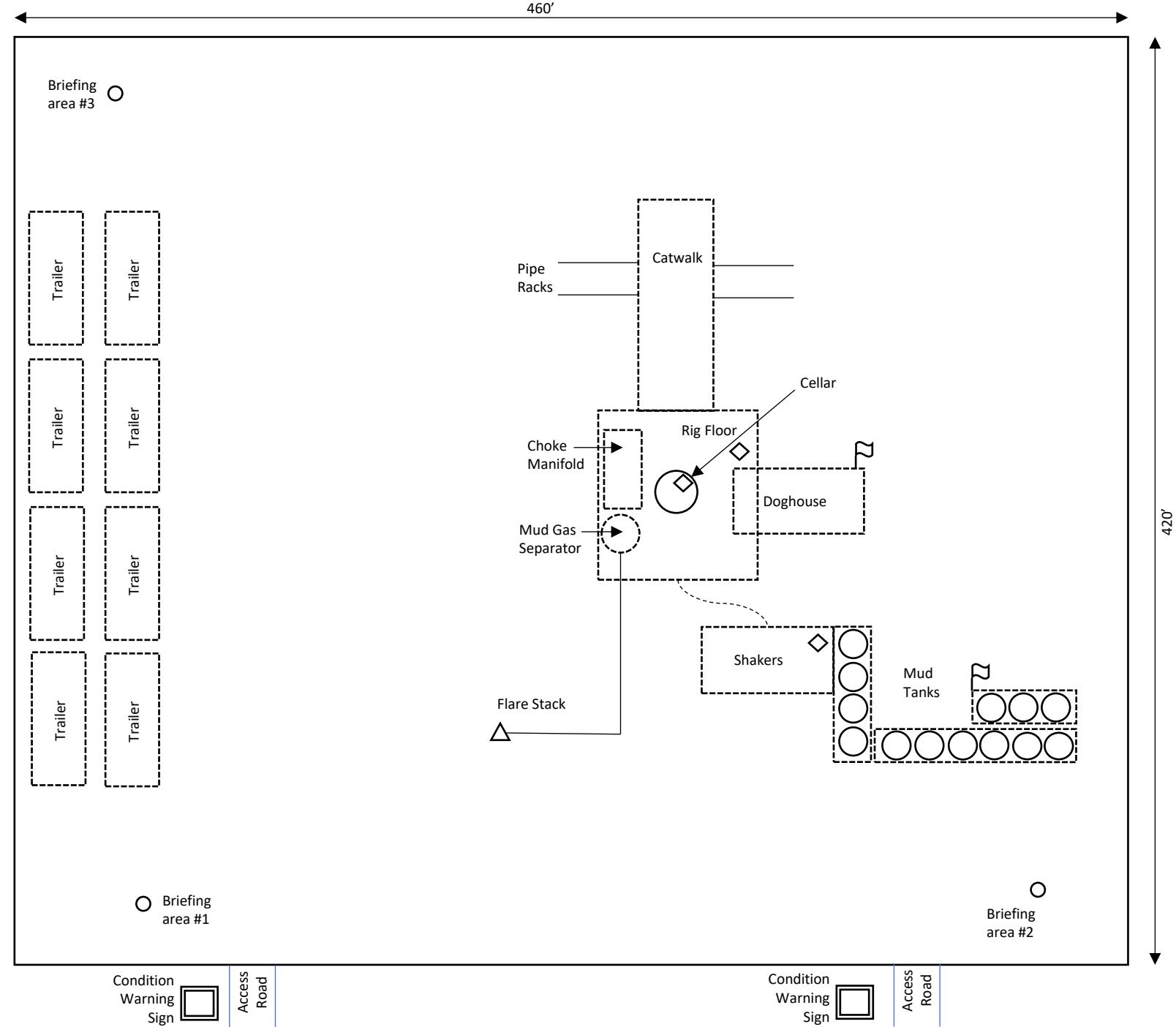
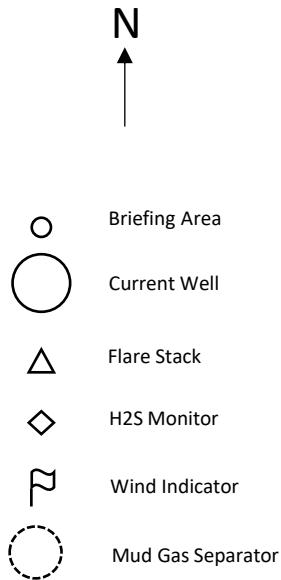
8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment

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 Sheriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sheriff	575.396.3611	911
Jal Police Department	575.395.2121	911
Jal Fire Department	575.395.2221	911
Tap Rock Resources	720.772.5090	

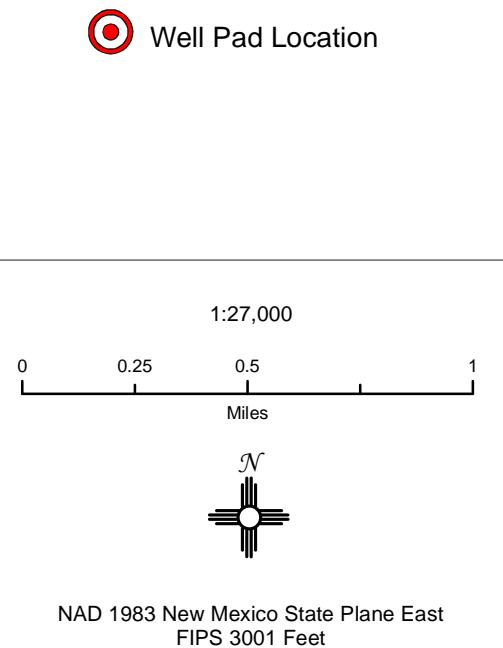
Rig Diagram
Beer Cave Fed Com
Tap Rock Operating, LLC
35-25S-25E
Eddy County, NM



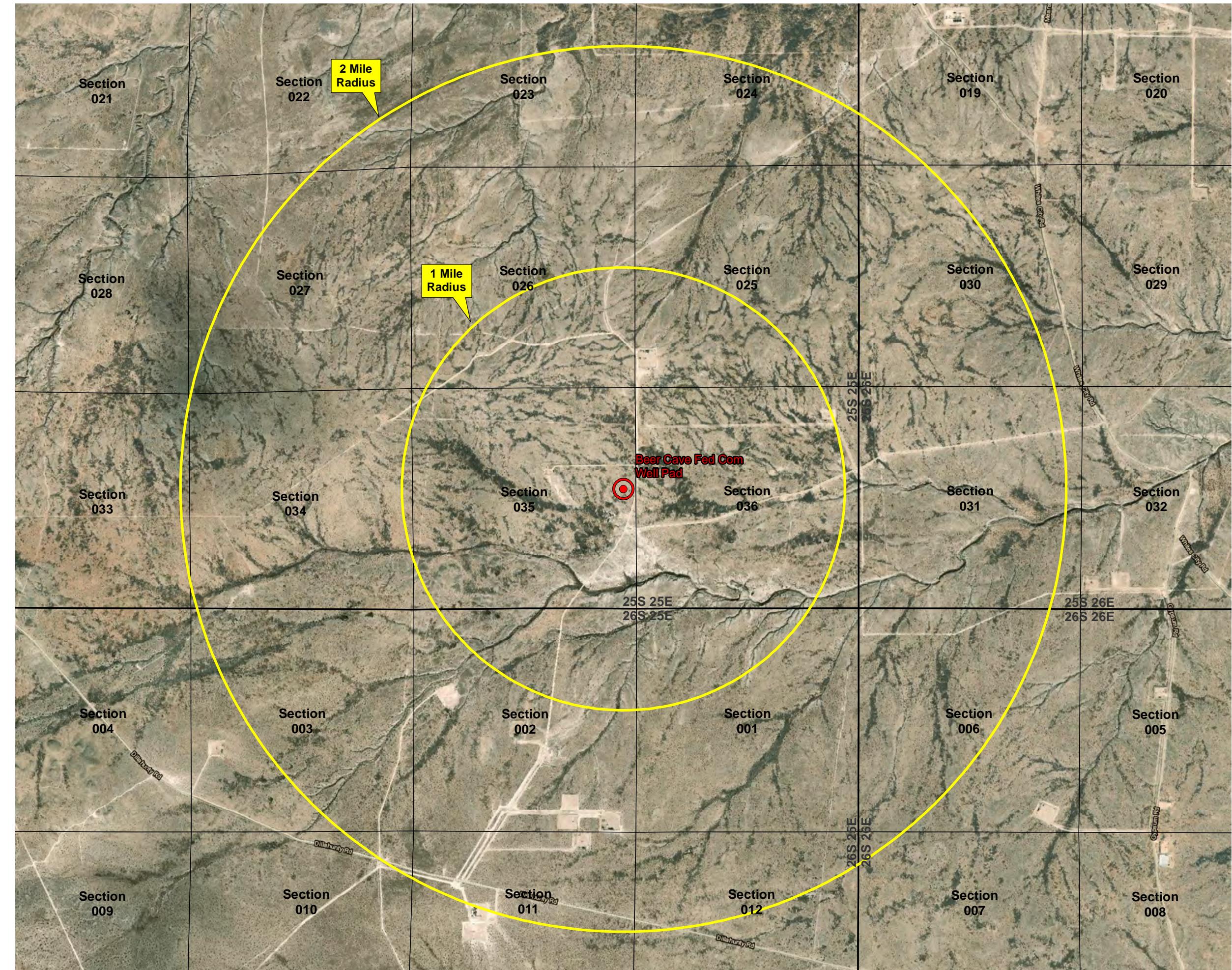
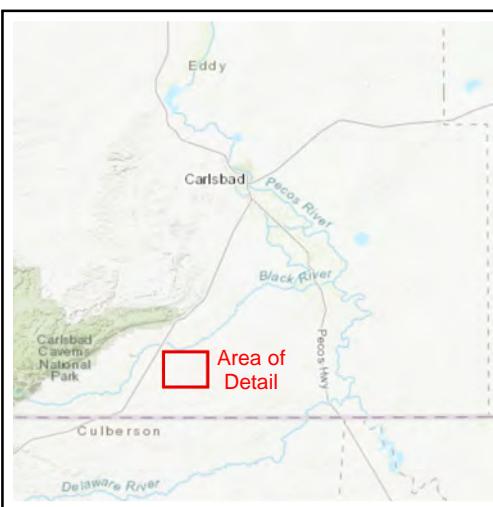
Tap Rock Operating LLC

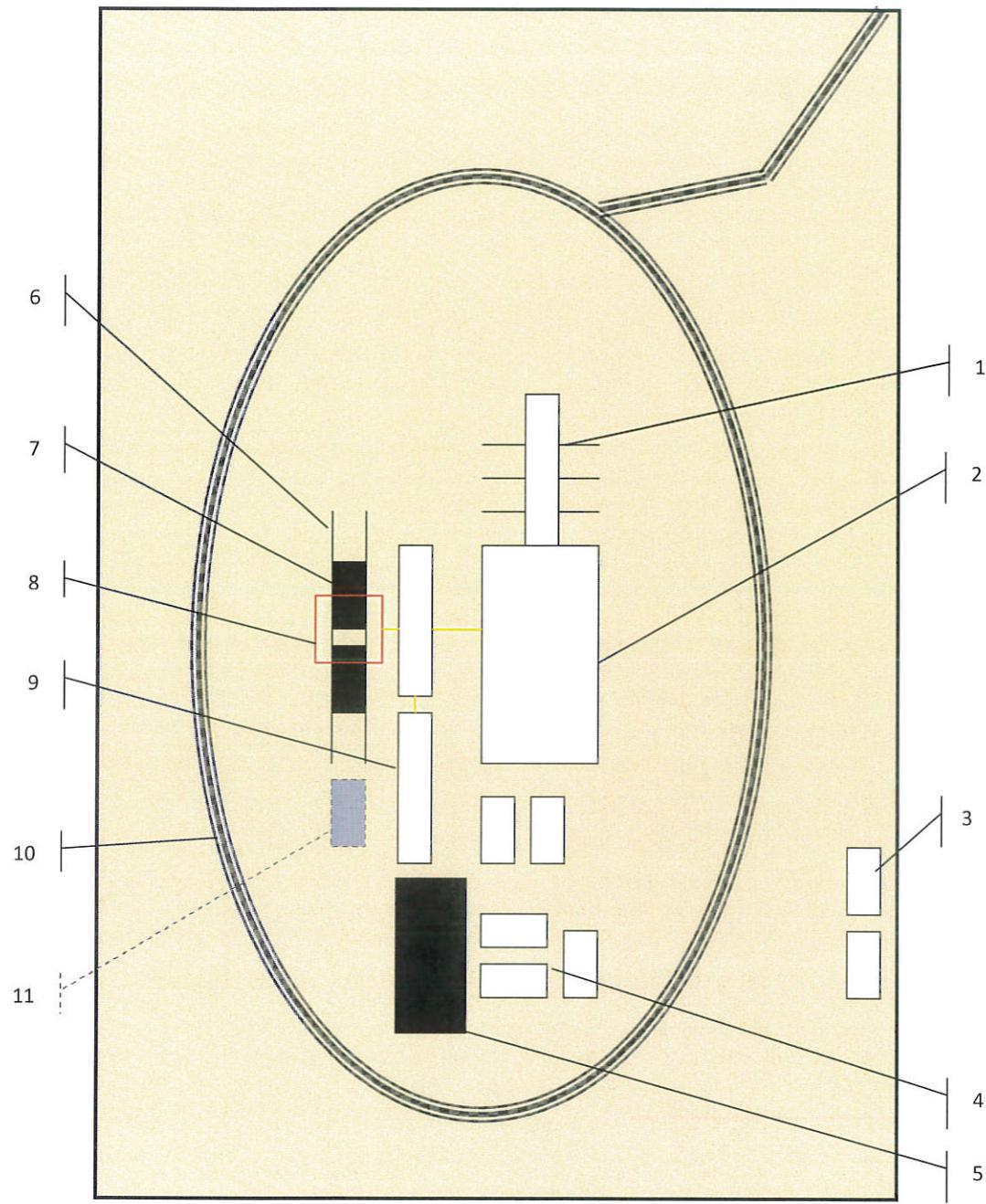
Beer Cave Fed Com Well Pad H2S Contingency Plan: 2 Mile Radius Map

Sec. 35, Township 25S, Range 25E
Eddy County, New Mexico



Prepared by Permits West, Inc., October 9, 2022
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

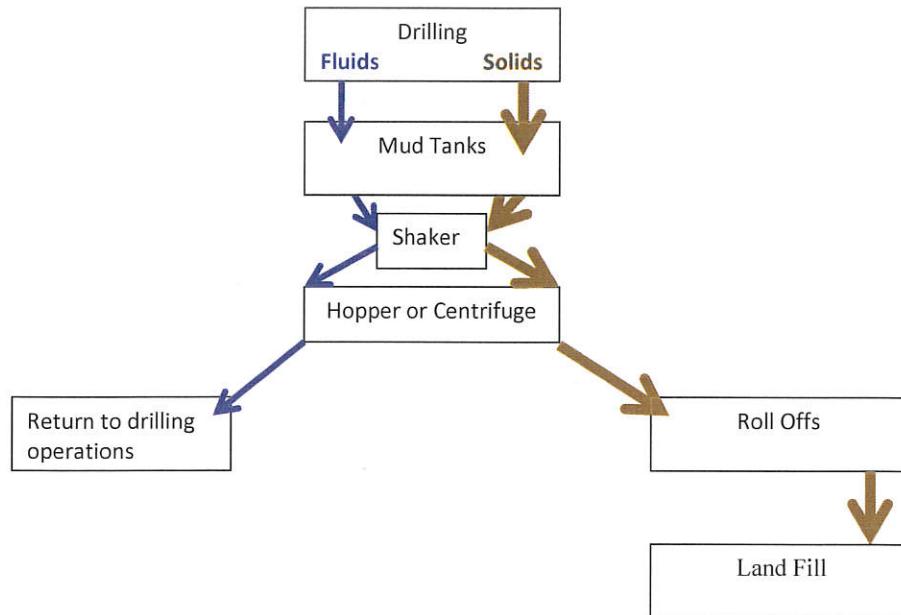


Above: Centrifugal Closed Loop System



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/ocd/contact-us>

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

ACKNOWLEDGMENTS

Action 533254

ACKNOWLEDGMENTS

Operator:	OGRID:
TAP ROCK OPERATING, LLC 1700 Lincoln St Denver, CO 80203	372043
	Action Number:
	533254

Action Type:
[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
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CONDITIONS

Action 533254

CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
permitsw	Cement is required to circulate on both surface and intermediate1 strings of casing.	12/9/2025
permitsw	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	12/9/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	1/28/2026
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	1/28/2026
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.	1/28/2026
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.	1/28/2026