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

5. Lease Serial No.: NMNM0448921A

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.:

8. Lease Name and Well No.: TALCO STATE FED COM [329955] 201H

2. Name of Operator: TAP ROCK OPERATING LLC [372043]

9. API Well No.: 30-025-48607

3a. Address: 602 PARK POINT DRIVE SUITE 200, GOLDEN, CO 8040

3b. Phone No. *(include area code)*: (720) 460-3316

10. Field and Pool, or Exploratory [98117]: WC-025 G-09 S263504N/WOLFCAMP

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NENW / 306 FNL / 1340 FWL / LAT 32.0497052 / LONG -103.3766176

At proposed prod. zone: SWSW / 5 FSL / 726 FWL / LAT 32.0215156 / LONG -103.3785674

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 16/T26S/R35E/NMP

14. Distance in miles and direction from nearest town or post office*: 11.5 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 306 feet

16. No of acres in lease:

17. Spacing Unit dedicated to this well: 640.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 25 feet

19. Proposed Depth: 12561 feet / 22915 feet

20. BLM/BIA Bond No. in file: FED: NMB001443

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3200 feet

22. Approximate date work will start*: 01/04/2021

23. Estimated duration: 90 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	Name *(Printed/Typed)*	Date
(Electronic Submission)	BRIAN WOOD / Ph: (720) 460-3316	06/02/2020

Title: President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575) 234-5959	04/01/2021

Title	Office
Assistant Field Manager Lands & Minerals	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.

GCP Rec 04/05/2021

SL

APPROVED WITH CONDITIONS

KZ

04/08/2021

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/01/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30-025-48607	98117	WC-025 G-09 S263504N; WOLFCAMP

[4]Property Code	[5]Property Name	[6]Well Number
329955	TALCO STATE FED COM	201H

[7]OGRID No.	[8]Operator Name	[9]Elevation
372043	TAP ROCK OPERATING, LLC.	3200'

[10]Surface Location

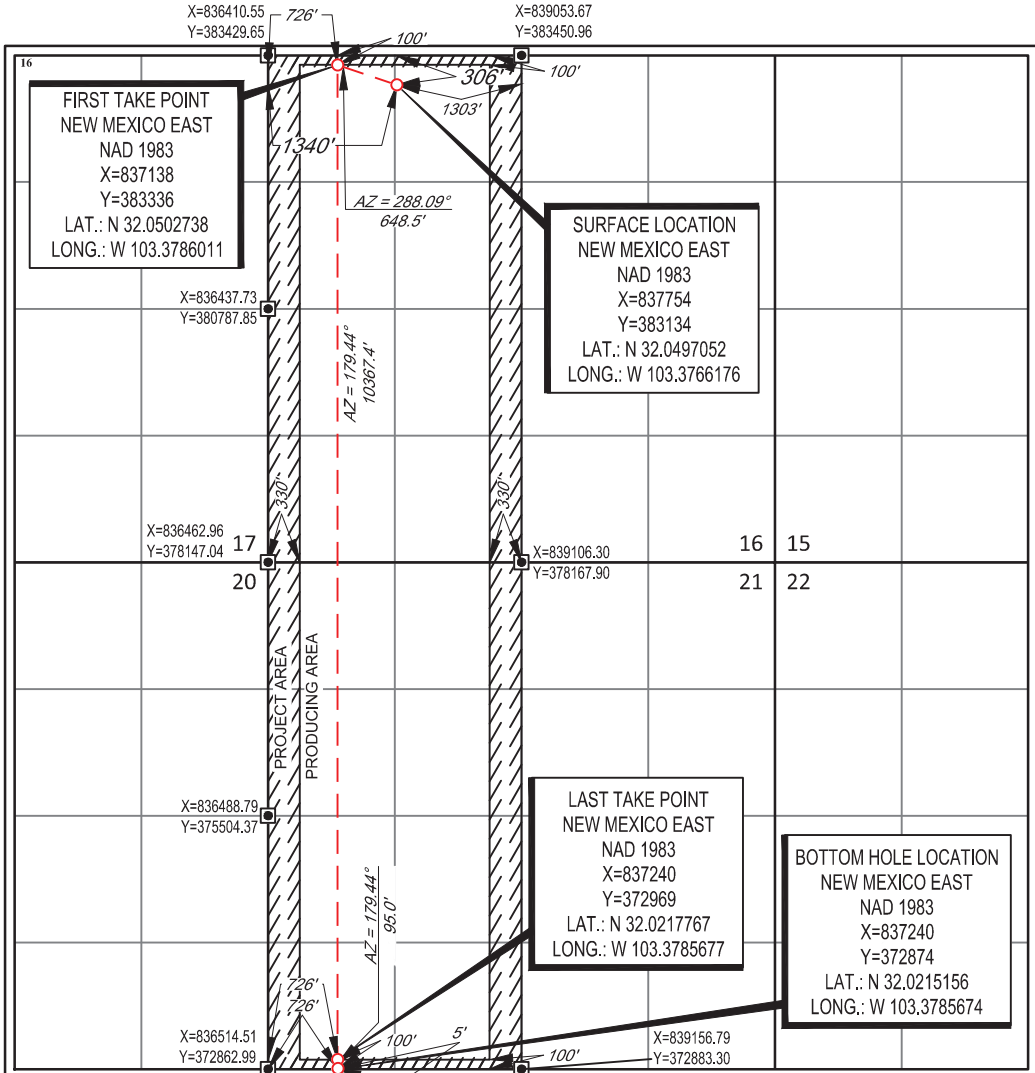
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	16	26-S	35-E	-	306'	NORTH	1340'	WEST	LEA

[11]Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	21	26-S	35-E	-	5'	SOUTH	726'	WEST	LEA

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

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



[17]OPERATOR CERTIFICATION

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

Cory Walk — 05-12-20
Signature — Date

Cory Walk
Printed Name

cory@permitswest.com
E-mail Address

[18]SURVEYOR CERTIFICATION

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

12/02/2019
Date of Survey
Signature and Seal of Professional Surveyor

JOHN A. CARNEGIE
NEW MEXICO
11401
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number

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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original to Appropriate District Office

GAS CAPTURE PLAN

Date: 3/17/2020

☒ Original Operator & OGRID No.: 372043
☐ Amended - Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
TALCO STATE FED COM #201H **30-025-48607**		C Sec 16 T.26S. R.35E	306' FNL 1340' FWL	+/- 1,600	21 days	Gas will be flared for ~21 days during flowback before being turned to the TB. Time est. depends on sales connect and well cleanup.

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Salt Creek Midstream and will be connected to Salt Creek Midstream low/high pressure gathering system located in Eddy County, New Mexico. It will require ~15,000' of pipeline to connect the facility to low/high pressure gathering system. Tap Rock Operating, LLC provides (periodically) to Salt Creek Midstream a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Tap Rock Operating, LLC and Salt Creek Midstream have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Salt Creek Midstream Processing Plant located in Reeves County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Salt Creek Midstream's system at that time. Based on current information, it is . Tap Rock Operating, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease

- Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

Drilling Operations Plan
Talco State Fed Com 201H
Tap Rock Operating, LLC
SHL 306' FNL & 1340' FWL, Sec. 16
BHL 5' FSL & 726' FWL, Sec. 21
T. 26S, R. 35E Lea County, NM

Elevation above Sea Level: 3200'

DRILLING PROGRAM

1. Estimated Tops

Formation	TVD	MD	Lithologies	Bearing
Quaternary Deposits	0	0	Surface	None
Rustler Anhydrite	1025	1025		Salt
Salado	1595	1597	Salt	Salt
Base Salt	4940	4955		Salt
Lamar	5340	5357	Limestone	None
Bell Canyon	5360	5377	Sandstone	Hydrocarbons
Cherry Canyon	6560	6582	Sandstone	Hydrocarbons
Brushy Canyon	7795	7816	Sandstone	Hydrocarbons
Bone Spring	9240	9264	Limestone	Hydrocarbons
1st Bone Spring	10505	10526	Sandstone	Hydrocarbons
2nd Bone Spring	10670	10694	Sandstone	Hydrocarbons
3rd Bone Spring	11505	11529	Sandstone	Hydrocarbons
KOP	11997	12018	Sandstone	Hydrocarbons
Wolfcamp A	12460	12557	Shale	Hydrocarbons
TD	12561	22915	Shale	Hydrocarbons

2. Notable Zones

Wolfcamp is the formation target.

3. Pressure Control

Pressure Control Equipment (See Schematics):
A 15,000', 10,000 psi 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 Onshore Order #2 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 Onshore Order #2. 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.

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BOP Test procedure will be as follows:
After surface casing is set and the BOP is nippled 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 2,500 psi. The BOP will be tested in this manner after nipple-up if any break of the stack occurs. Before drilling out from 7.625" casing shoe, the BOP pressure tests will be made with a third party tester to 250 psi low, 10,000 psi high, and the annular preventer will be tested to 5,000 psi. The BOP will be tested in this manner if passage of allotted time occurs.

Variance Requests:
Tap Rock requests a variance to run a multi-bowl speed head for setting the Intermediate 1, Intermediate 2, 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. In the event that this well is batch drilled, after drilling surface, 1st intermediate, and 2nd intermediate hole sections and cementing 2nd intermediate casing, a 10M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test. Tap Rock requests a variance to run 7-5/8" BTC casing inside 9-5/8" BTC casing will be less than the 0.422" stand off regulation. Through conversations with BLM representatives, Tap Rock has received approval for this design as long as the 7-5/8" flush casing was run throughout the entire 300' cement tie back section between 9-5/8" and 7-5/8" casing. Tap Rock requests a variance to use a 5000 psi annular BOP on a 10M BOP stack. The annular will be tested to 250 psi low and 5000 psi high.

Tap Rock requests approval to possibly utilize a spudder rig to drill and set casing for the surface interval on this well. The spudder rig will be possibly utilized in order to reduce cost and save time. The wellhead will be installed and tested as soon as the surface casing is cut off per the existing COAs. A blind flange with the same pressure rating as the wellhead will be installed on the well. Once the spudder rig is removed, Tap Rock will secure the wellhead area by placing a guard rail around the cellar. Pressure will be monitored and a means for intervention will be maintained while the drilling rig is not over the well. Spudder rig operations are expected to take 2-3 days per well. Three wells on the pad will have surface casing set by the spudder rig as a part of this operation. The BLM will be notified 24 hours prior to commencing spudder rig operations. Within 90 days of the departure of the spudder rig, drilling operations will recommence on these wells. This rig will have a BOP stack equal or greater to the pressure rating required in the COAs. The BLM will be notified 24 hours before the larger rig moves on the pre-set wells. Tap Rock will have supervision on the spudder rig to ensure compliance with all BLM and NMOCD regulations.

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4. Casing & Cement

All Casing will be new.

Name	Hole Size	Casing Size	Standard	Tapered	Top MD	Bottom MD	Top TVD	BTM TVD	Grade	Weight	Thread	Collapse	Burst	Tension
Surface	17 1/2	13 3/8	API	No	0	1100	0	1100	J-55	54.5	BUTT	1.13	1.15	1.6
1st Intermediate	12 1/4	9 5/8	API	No	0	5377	0	5360	J-55	40	BUTT	1.13	1.15	1.6
2nd Intermediate	8 3/4	7 5/8	API	No	0	5077	0	5060	P-110	29.7	BUTT	1.13	1.15	1.6
2nd Intermediate	8 3/4	7 5/8	NON API	Yes	5077	11918	5060	11897	P-110	29.7	W-513	1.13	1.15	1.6
Production	6 3/4	5 1/2	NON API	No	0	11718	0	11697	P-110	20	TXP	1.13	1.15	1.6
Production	6 3/4	5	NON API	Yes	11718	22915	11697	12561	P-110	18	W-521	1.13	1.15	1.6

Name	Type	Top MD	Sacks	Yield	Cu. Ft	Weight	Excess	Cement	Additives
Surface	Tail	0	1132	1.35	1528	14.8	100%	C	5% NCl + LCM
1st Intermediate	Lead	0	1020	2.18	2223	12.7	65%	C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	4302	418	1.33	556	14.8	65%	C	5% NaCl + LCM
2nd Intermediate	Lead	5077	357	2.22	792	11.5	35%	TXI	Fluid Loss + Dispersant + Retarder + LCM
	Tail	10918	99	1.37	136	13.2	35%	H	Fluid Loss + Dispersant + Retarder + LCM
Production	Tail	11218	1378	1.19	1640	15.8	25%	H	Fluid Loss + Dispersant + Retarder + LCM

5. Mud Program

Name	Top	Bottom	Type	Mud Weight	Visc	Fluid Loss
Surface	0	1100	FW Spud Mud	8.30	28	NC
Intermediate	1100	5377	Brine Water	10.00	30-32	NC
Intermediate 2	5377	11918	FW/Cut Brine	9.00	30-32	NC
Production	11918	22915	Oil Base Mud	11.50	50-70	<10

Electronic Pason mud monitor system complying with Onshore Order 1 will be used. All necessary mud products (e. g., barite, cedar bark) 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.

6. Cores, Tests, & Logs

- Electric Logging Program: No open-hole logs are planned at this time for the pilot hole.
- GR will be collected while drilling through the MWD tools from 9.625" casing shoe to TD.
- A 2-person mud logging program will be used from 9.625" casing shoe to TD.
- No DSTs or cores are planned at this time.
- CBL w/ CCL from as far as gravity will let it fall to TOC.

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7. Down Hole Conditions

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈7,517 psi. Expected bottom hole temperature is ≈170˚ F.

Tap Rock does not anticipate that there will be enough H2S from the surface to the Wolfcamp formations to meet the BLM's Onshore Order 6 requirements for the submission of an "H2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Tap Rock has an H2S safety package on all wells and an "H2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be safely flared. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. Other Information

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 30 days. If production casing is run an additional 60 days will be required to complete and construct surface facilities.

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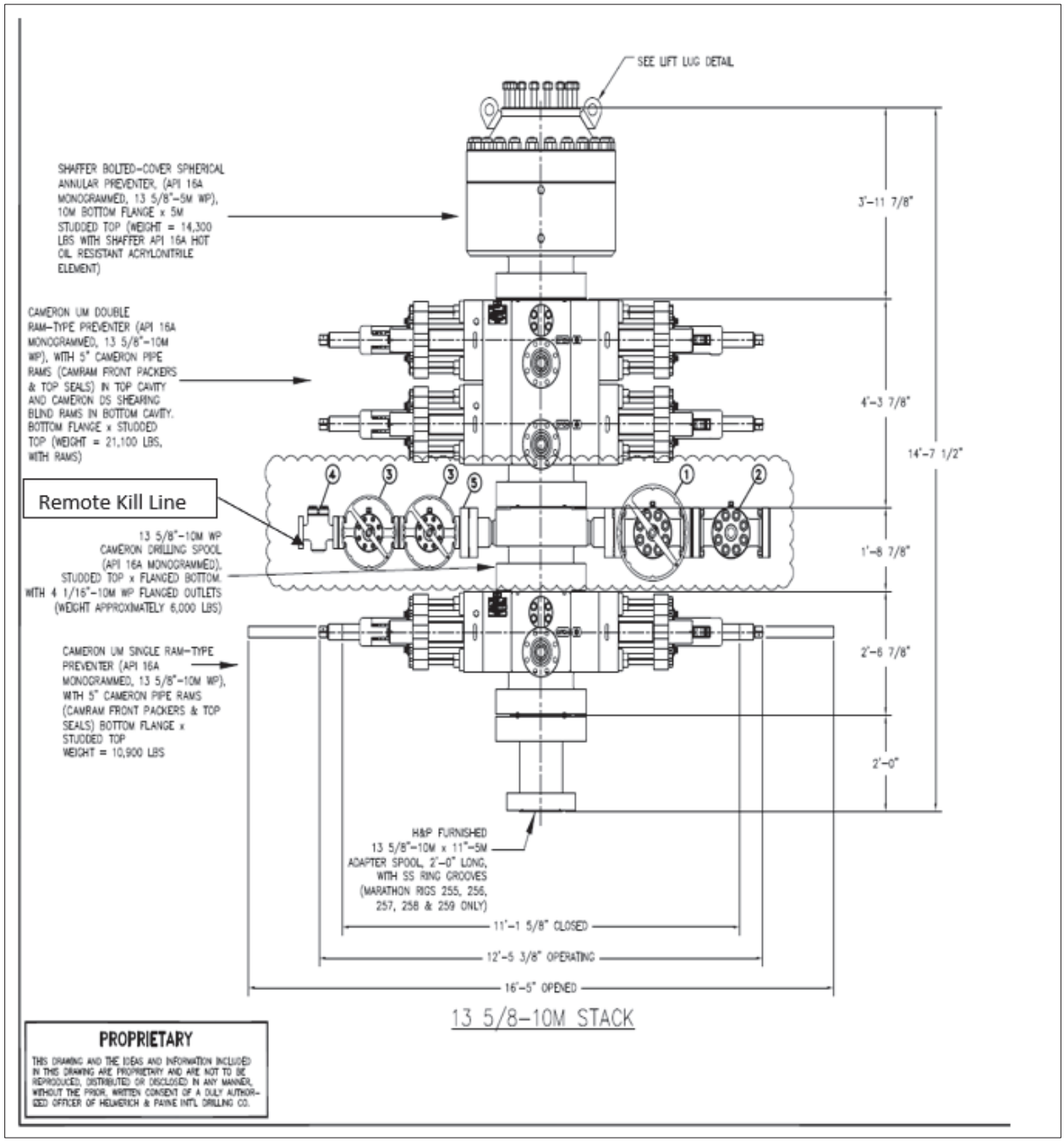
10,000 psi BOP Stack



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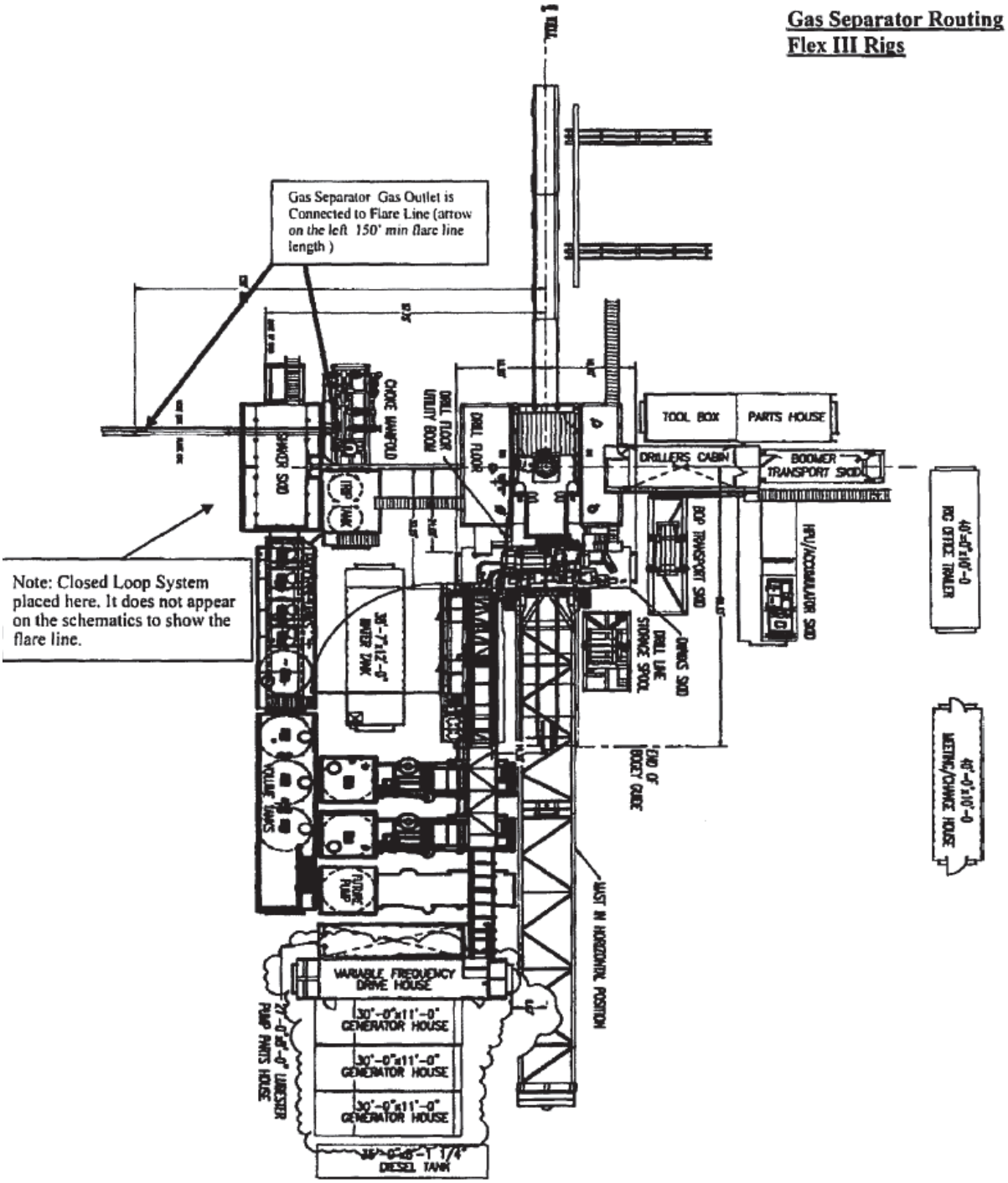
Gas Separator Routing
Flex III Rigs



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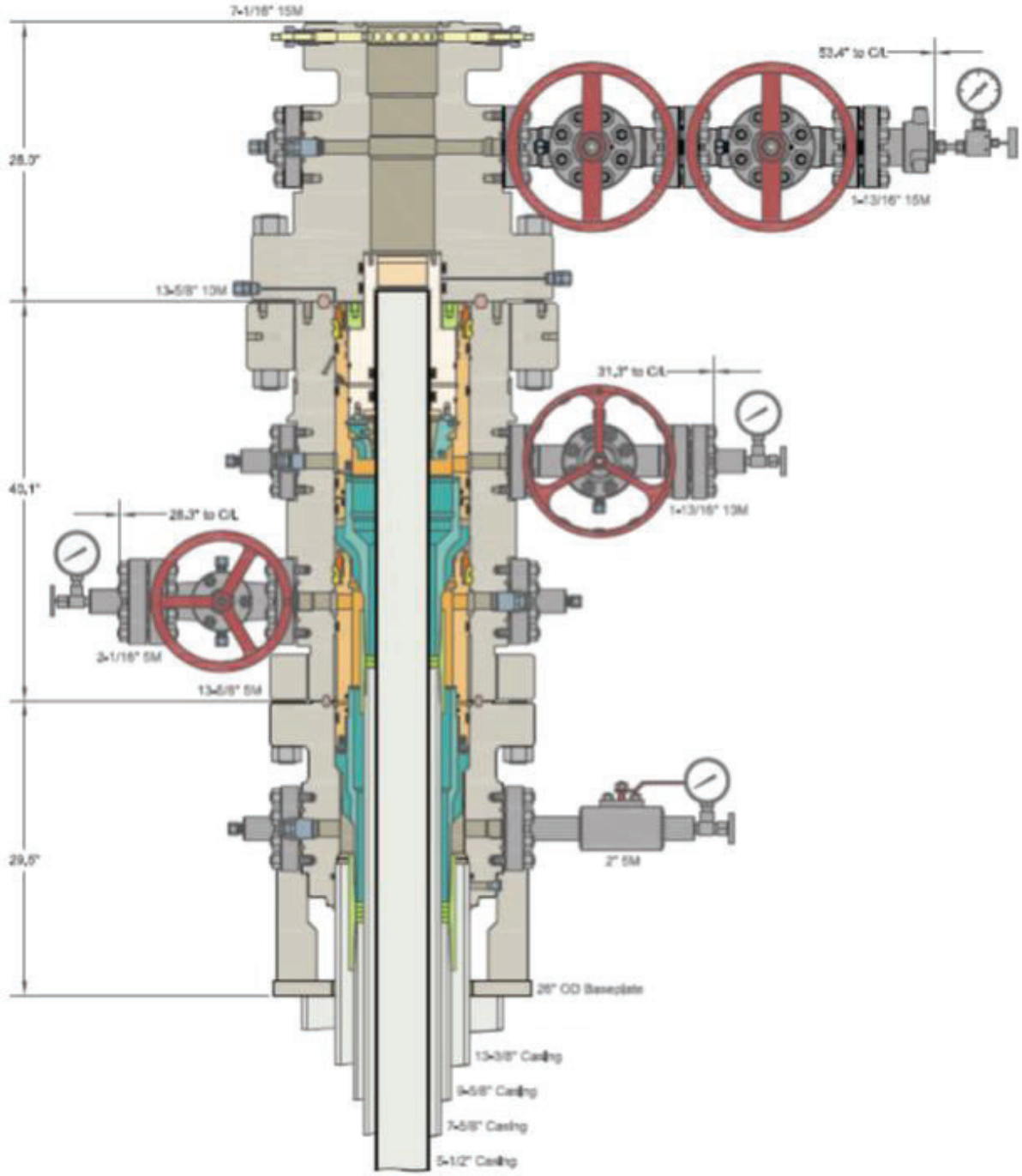
Multi-bowl Wellhead



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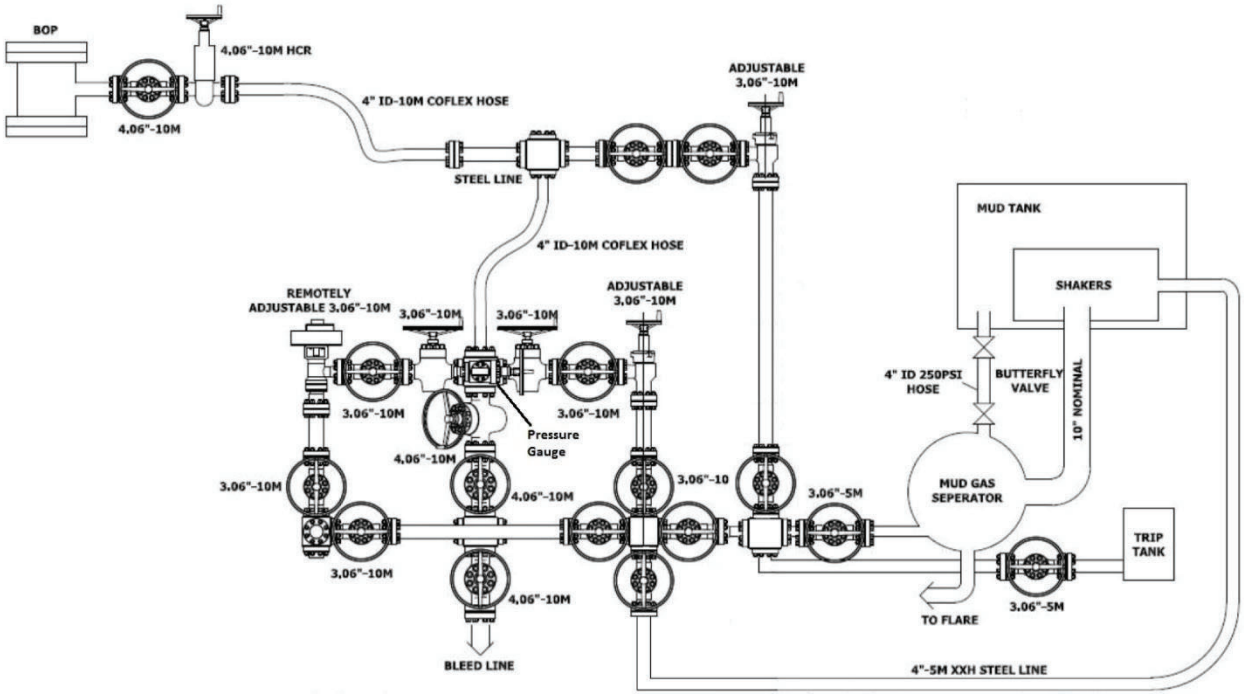
10M Choke Layout



Tap Rock Operating, LLC.

Lea County, NM (NAD83)
Talco State Fed Com
201H

OH

Plan: Plan #2

Standard Planning Report

11 March, 2020

Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	Tap Rock Operating, LLC.	**TVD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Project:	Lea County, NM (NAD83)	**MD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project Lea County, NM (NAD83)

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

Site Talco State Fed Com

Site Position:		**Northing:**	383,109.10 usft	**Latitude:**	32° 2' 58.680 N
From:	Lat/Long	**Easting:**	837,883.91 usft	**Longitude:**	103° 22' 34.316 W
Position Uncertainty:	2.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.51 °

Well 201H

Well Position	**+N/-S**	25.0 usft	**Northing:**	383,134.08 usft	**Latitude:**	32° 2' 58.939 N
	+E/-W	-130.0 usft	**Easting:**	837,753.92 usft	**Longitude:**	103° 22' 35.823 W
Position Uncertainty		2.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,200.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/28/2020	6.56	59.90	47,579.05609183

Design Plan #2

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.44

Plan Survey Tool Program **Date** 3/11/2020

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,915.2	Plan #2 (OH)	MWD	
				MWD - Standard	

Planning Report

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Project:	Lea County, NM (NAD83)	**MD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,033.3	5.00	305.00	1,032.9	8.3	-11.9	1.50	1.50	0.00	305.00	
6,383.3	5.00	305.00	6,362.6	275.8	-393.9	0.00	0.00	0.00	0.00	
6,716.7	0.00	0.00	6,695.5	284.1	-405.8	1.50	-1.50	0.00	180.00	
12,018.2	0.00	0.00	11,997.0	284.1	-405.8	0.00	0.00	0.00	0.00	
12,918.8	90.05	195.30	12,570.0	-269.1	-557.1	10.00	10.00	0.00	195.30	
13,315.3	90.05	179.44	12,569.6	-661.1	-607.8	4.00	0.00	-4.00	-89.99	
22,820.2	90.05	179.44	12,561.0	-10,165.5	-514.4	0.00	0.00	0.00	0.00	LTP_T201H
22,915.2	90.05	179.44	12,560.9	-10,260.5	-513.5	0.00	0.00	0.00	0.00	PBHL_T201H

Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	Tap Rock Operating, LLC.	**TVD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Project:	Lea County, NM (NAD83)	**MD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 1.50									
800.0	1.50	305.00	800.0	0.8	-1.1	-0.8	1.50	1.50	0.00
900.0	3.00	305.00	899.9	3.0	-4.3	-3.0	1.50	1.50	0.00
1,000.0	4.50	305.00	999.7	6.8	-9.6	-6.8	1.50	1.50	0.00
1,025.4	4.88	305.00	1,025.0	7.9	-11.3	-8.1	1.50	1.50	0.00
Rustler Anhydrite									
1,033.3	5.00	305.00	1,032.9	8.3	-11.9	-8.5	1.50	1.50	0.00
Start 5350.0 hold at 1033.3 MD									
1,100.0	5.00	305.00	1,099.3	11.7	-16.7	-11.8	0.00	0.00	0.00
1,200.0	5.00	305.00	1,198.9	16.7	-23.8	-16.9	0.00	0.00	0.00
1,300.0	5.00	305.00	1,298.6	21.7	-30.9	-22.0	0.00	0.00	0.00
1,400.0	5.00	305.00	1,398.2	26.7	-38.1	-27.0	0.00	0.00	0.00
1,500.0	5.00	305.00	1,497.8	31.7	-45.2	-32.1	0.00	0.00	0.00
1,597.6	5.00	305.00	1,595.0	36.5	-52.2	-37.1	0.00	0.00	0.00
Top Salt									
1,600.0	5.00	305.00	1,597.4	36.7	-52.4	-37.2	0.00	0.00	0.00
1,700.0	5.00	305.00	1,697.0	41.7	-59.5	-42.2	0.00	0.00	0.00
1,800.0	5.00	305.00	1,796.7	46.7	-66.6	-47.3	0.00	0.00	0.00
1,900.0	5.00	305.00	1,896.3	51.7	-73.8	-52.4	0.00	0.00	0.00
2,000.0	5.00	305.00	1,995.9	56.7	-80.9	-57.4	0.00	0.00	0.00
2,100.0	5.00	305.00	2,095.5	61.7	-88.1	-62.5	0.00	0.00	0.00
2,200.0	5.00	305.00	2,195.1	66.7	-95.2	-67.6	0.00	0.00	0.00
2,300.0	5.00	305.00	2,294.8	71.7	-102.3	-72.7	0.00	0.00	0.00
2,400.0	5.00	305.00	2,394.4	76.7	-109.5	-77.7	0.00	0.00	0.00
2,500.0	5.00	305.00	2,494.0	81.7	-116.6	-82.8	0.00	0.00	0.00
2,600.0	5.00	305.00	2,593.6	86.7	-123.8	-87.9	0.00	0.00	0.00
2,700.0	5.00	305.00	2,693.2	91.7	-130.9	-92.9	0.00	0.00	0.00
2,800.0	5.00	305.00	2,792.9	96.7	-138.0	-98.0	0.00	0.00	0.00
2,900.0	5.00	305.00	2,892.5	101.7	-145.2	-103.1	0.00	0.00	0.00
3,000.0	5.00	305.00	2,992.1	106.7	-152.3	-108.1	0.00	0.00	0.00
3,100.0	5.00	305.00	3,091.7	111.7	-159.5	-113.2	0.00	0.00	0.00
3,200.0	5.00	305.00	3,191.3	116.6	-166.6	-118.3	0.00	0.00	0.00
3,300.0	5.00	305.00	3,291.0	121.6	-173.7	-123.3	0.00	0.00	0.00
3,400.0	5.00	305.00	3,390.6	126.6	-180.9	-128.4	0.00	0.00	0.00
3,500.0	5.00	305.00	3,490.2	131.6	-188.0	-133.5	0.00	0.00	0.00
3,600.0	5.00	305.00	3,589.8	136.6	-195.2	-138.5	0.00	0.00	0.00
3,700.0	5.00	305.00	3,689.4	141.6	-202.3	-143.6	0.00	0.00	0.00
3,800.0	5.00	305.00	3,789.0	146.6	-209.4	-148.7	0.00	0.00	0.00
3,900.0	5.00	305.00	3,888.7	151.6	-216.6	-153.8	0.00	0.00	0.00
4,000.0	5.00	305.00	3,988.3	156.6	-223.7	-158.8	0.00	0.00	0.00
4,100.0	5.00	305.00	4,087.9	161.6	-230.8	-163.9	0.00	0.00	0.00
4,200.0	5.00	305.00	4,187.5	166.6	-238.0	-169.0	0.00	0.00	0.00
4,300.0	5.00	305.00	4,287.1	171.6	-245.1	-174.0	0.00	0.00	0.00
4,400.0	5.00	305.00	4,386.8	176.6	-252.3	-179.1	0.00	0.00	0.00
4,500.0	5.00	305.00	4,486.4	181.6	-259.4	-184.2	0.00	0.00	0.00
4,600.0	5.00	305.00	4,586.0	186.6	-266.5	-189.2	0.00	0.00	0.00

Planning Report

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Project:	Lea County, NM (NAD83)	**MD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
4,700.0	5.00	305.00	4,685.6	191.6	-273.7	-194.3	0.00	0.00	0.00
4,800.0	5.00	305.00	4,785.2	196.6	-280.8	-199.4	0.00	0.00	0.00
4,900.0	5.00	305.00	4,884.9	201.6	-288.0	-204.4	0.00	0.00	0.00
4,955.3	5.00	305.00	4,940.0	204.4	-291.9	-207.2	0.00	0.00	0.00
Base Salt									
5,000.0	5.00	305.00	4,984.5	206.6	-295.1	-209.5	0.00	0.00	0.00
5,100.0	5.00	305.00	5,084.1	211.6	-302.2	-214.6	0.00	0.00	0.00
5,200.0	5.00	305.00	5,183.7	216.6	-309.4	-219.6	0.00	0.00	0.00
5,300.0	5.00	305.00	5,283.3	221.6	-316.5	-224.7	0.00	0.00	0.00
5,341.8	5.00	305.00	5,325.0	223.7	-319.5	-226.8	0.00	0.00	0.00
Delaware Mountain Gp									
5,356.9	5.00	305.00	5,340.0	224.5	-320.6	-227.6	0.00	0.00	0.00
Lamar									
5,377.0	5.00	305.00	5,360.0	225.5	-322.0	-228.6	0.00	0.00	0.00
Bell Canyon									
5,400.0	5.00	305.00	5,383.0	226.6	-323.7	-229.8	0.00	0.00	0.00
5,402.0	5.00	305.00	5,385.0	226.7	-323.8	-229.9	0.00	0.00	0.00
Ramsey Sand									
5,500.0	5.00	305.00	5,482.6	231.6	-330.8	-234.8	0.00	0.00	0.00
5,600.0	5.00	305.00	5,582.2	236.6	-337.9	-239.9	0.00	0.00	0.00
5,700.0	5.00	305.00	5,681.8	241.6	-345.1	-245.0	0.00	0.00	0.00
5,800.0	5.00	305.00	5,781.4	246.6	-352.2	-250.1	0.00	0.00	0.00
5,900.0	5.00	305.00	5,881.1	251.6	-359.4	-255.1	0.00	0.00	0.00
6,000.0	5.00	305.00	5,980.7	256.6	-366.5	-260.2	0.00	0.00	0.00
6,100.0	5.00	305.00	6,080.3	261.6	-373.6	-265.3	0.00	0.00	0.00
6,200.0	5.00	305.00	6,179.9	266.6	-380.8	-270.3	0.00	0.00	0.00
6,300.0	5.00	305.00	6,279.5	271.6	-387.9	-275.4	0.00	0.00	0.00
6,383.3	5.00	305.00	6,362.6	275.8	-393.9	-279.6	0.00	0.00	0.00
Start Drop -1.50									
6,400.0	4.75	305.00	6,379.2	276.6	-395.0	-280.4	1.50	-1.50	0.00
6,500.0	3.25	305.00	6,478.9	280.6	-400.7	-284.5	1.50	-1.50	0.00
6,581.2	2.03	305.00	6,560.0	282.7	-403.8	-286.7	1.50	-1.50	0.00
Cherry Canyon									
6,600.0	1.75	305.00	6,578.8	283.1	-404.3	-287.0	1.50	-1.50	0.00
6,700.0	0.25	305.00	6,678.8	284.1	-405.7	-288.1	1.50	-1.50	0.00
6,716.7	0.00	0.00	6,695.5	284.1	-405.8	-288.1	1.50	-1.50	0.00
Start 5301.5 hold at 6716.7 MD									
6,800.0	0.00	0.00	6,778.8	284.1	-405.8	-288.1	0.00	0.00	0.00
6,900.0	0.00	0.00	6,878.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,000.0	0.00	0.00	6,978.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,100.0	0.00	0.00	7,078.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,200.0	0.00	0.00	7,178.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,300.0	0.00	0.00	7,278.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,378.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,500.0	0.00	0.00	7,478.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,578.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,700.0	0.00	0.00	7,678.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,778.8	284.1	-405.8	-288.1	0.00	0.00	0.00
7,816.2	0.00	0.00	7,795.0	284.1	-405.8	-288.1	0.00	0.00	0.00
Brushy Canyon									
7,900.0	0.00	0.00	7,878.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,978.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,100.0	0.00	0.00	8,078.8	284.1	-405.8	-288.1	0.00	0.00	0.00

Planning Report

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Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
8,200.0	0.00	0.00	8,178.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,278.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,378.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,478.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,600.0	0.00	0.00	8,578.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,678.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,778.8	284.1	-405.8	-288.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,878.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,978.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,100.0	0.00	0.00	9,078.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,200.0	0.00	0.00	9,178.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,261.2	0.00	0.00	9,240.0	284.1	-405.8	-288.1	0.00	0.00	0.00
Bone Spring Lime									
9,291.2	0.00	0.00	9,270.0	284.1	-405.8	-288.1	0.00	0.00	0.00
Upper Avalon									
9,300.0	0.00	0.00	9,278.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,378.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,478.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,600.0	0.00	0.00	9,578.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,686.2	0.00	0.00	9,665.0	284.1	-405.8	-288.1	0.00	0.00	0.00
Middle Avalon									
9,700.0	0.00	0.00	9,678.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,800.0	0.00	0.00	9,778.8	284.1	-405.8	-288.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,878.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,000.0	0.00	0.00	9,978.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,016.2	0.00	0.00	9,995.0	284.1	-405.8	-288.1	0.00	0.00	0.00
Lower Avalon									
10,100.0	0.00	0.00	10,078.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,200.0	0.00	0.00	10,178.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,278.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,400.0	0.00	0.00	10,378.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,500.0	0.00	0.00	10,478.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,526.2	0.00	0.00	10,505.0	284.1	-405.8	-288.1	0.00	0.00	0.00
1st Bone Spring Sand									
10,600.0	0.00	0.00	10,578.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,691.2	0.00	0.00	10,670.0	284.1	-405.8	-288.1	0.00	0.00	0.00
2nd Bone Spring Carb									
10,700.0	0.00	0.00	10,678.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,800.0	0.00	0.00	10,778.8	284.1	-405.8	-288.1	0.00	0.00	0.00
10,900.0	0.00	0.00	10,878.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,000.0	0.00	0.00	10,978.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,041.2	0.00	0.00	11,020.0	284.1	-405.8	-288.1	0.00	0.00	0.00
2nd Bone Spring Sand									
11,100.0	0.00	0.00	11,078.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,200.0	0.00	0.00	11,178.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,300.0	0.00	0.00	11,278.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,400.0	0.00	0.00	11,378.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,500.0	0.00	0.00	11,478.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,526.2	0.00	0.00	11,505.0	284.1	-405.8	-288.1	0.00	0.00	0.00
3rd Bone Spring Carb									
11,600.0	0.00	0.00	11,578.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,700.0	0.00	0.00	11,678.8	284.1	-405.8	-288.1	0.00	0.00	0.00
11,800.0	0.00	0.00	11,778.8	284.1	-405.8	-288.1	0.00	0.00	0.00

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11,900.0	0.00	0.00	11,878.8	284.1	-405.8	-288.1	0.00	0.00	0.00
12,000.0	0.00	0.00	11,978.8	284.1	-405.8	-288.1	0.00	0.00	0.00
12,018.2	0.00	0.00	11,997.0	284.1	-405.8	-288.1	0.00	0.00	0.00
Start Build 10.00									
12,050.0	3.18	195.30	12,028.8	283.3	-406.0	-287.2	10.00	10.00	0.00
12,100.0	8.18	195.30	12,078.5	278.5	-407.3	-282.5	10.00	10.00	0.00
12,150.0	13.18	195.30	12,127.6	269.6	-409.8	-273.6	10.00	10.00	0.00
12,167.9	14.97	195.30	12,145.0	265.4	-410.9	-269.4	10.00	10.00	0.00
3rd Bone Spring Sand									
12,200.0	18.18	195.30	12,175.8	256.5	-413.3	-260.6	10.00	10.00	0.00
12,250.0	23.18	195.30	12,222.5	239.5	-418.0	-243.6	10.00	10.00	0.00
12,300.0	28.18	195.30	12,267.6	218.6	-423.7	-222.8	10.00	10.00	0.00
12,350.0	33.18	195.30	12,310.6	194.0	-430.4	-198.2	10.00	10.00	0.00
12,400.0	38.18	195.30	12,351.2	165.9	-438.1	-170.2	10.00	10.00	0.00
12,450.0	43.18	195.30	12,389.1	134.5	-446.7	-138.8	10.00	10.00	0.00
12,465.2	44.69	195.30	12,400.0	124.3	-449.5	-128.7	10.00	10.00	0.00
3rd BS W Sand									
12,500.0	48.18	195.30	12,424.0	100.0	-456.1	-104.4	10.00	10.00	0.00
12,549.6	53.13	195.30	12,455.4	63.0	-466.3	-67.6	10.00	10.00	0.00
FTP_T201H									
12,550.0	53.18	195.30	12,455.7	62.7	-466.3	-67.2	10.00	10.00	0.00
12,557.3	53.90	195.30	12,460.0	57.0	-467.9	-61.6	10.00	10.00	0.00
Wolfcamp A X Sand									
12,600.0	58.18	195.30	12,483.9	22.9	-477.2	-27.5	10.00	10.00	0.00
12,650.0	63.17	195.30	12,508.3	-19.2	-488.7	14.4	10.00	10.00	0.00
12,700.0	68.17	195.30	12,528.9	-63.1	-500.8	58.2	10.00	10.00	0.00
12,717.0	69.87	195.30	12,535.0	-78.4	-504.9	73.4	10.00	10.00	0.00
Wolfcamp A Y Sand									
12,750.0	73.17	195.30	12,545.5	-108.6	-513.2	103.6	10.00	10.00	0.00
12,800.0	78.17	195.30	12,557.8	-155.3	-526.0	150.1	10.00	10.00	0.00
12,850.0	83.17	195.30	12,565.9	-202.9	-539.0	197.6	10.00	10.00	0.00
12,900.0	88.17	195.30	12,569.7	-250.9	-552.1	245.5	10.00	10.00	0.00
12,918.8	90.05	195.30	12,570.0	-269.1	-557.1	263.6	10.00	10.00	0.00
Start DLS 4.00 TFO -89.99									
13,000.0	90.05	192.05	12,569.9	-348.0	-576.3	342.3	4.00	0.00	-4.00
13,100.0	90.05	188.05	12,569.8	-446.4	-593.8	440.6	4.00	0.00	-4.00
13,200.0	90.05	184.05	12,569.7	-545.8	-604.3	539.9	4.00	0.00	-4.00
13,300.0	90.05	180.05	12,569.7	-645.8	-607.9	639.8	4.00	0.00	-4.00
13,315.3	90.05	179.44	12,569.6	-661.1	-607.8	655.1	4.00	0.00	-4.00
Start 9504.9 hold at 13315.3 MD									
13,400.0	90.05	179.44	12,569.6	-745.7	-607.0	739.8	0.00	0.00	0.00
13,500.0	90.05	179.44	12,569.5	-845.7	-606.0	839.8	0.00	0.00	0.00
13,600.0	90.05	179.44	12,569.4	-945.7	-605.0	939.8	0.00	0.00	0.00
13,700.0	90.05	179.44	12,569.3	-1,045.7	-604.0	1,039.8	0.00	0.00	0.00
13,800.0	90.05	179.44	12,569.2	-1,145.7	-603.0	1,139.8	0.00	0.00	0.00
13,900.0	90.05	179.44	12,569.1	-1,245.7	-602.1	1,239.8	0.00	0.00	0.00
14,000.0	90.05	179.44	12,569.0	-1,345.7	-601.1	1,339.8	0.00	0.00	0.00
14,100.0	90.05	179.44	12,568.9	-1,445.7	-600.1	1,439.8	0.00	0.00	0.00
14,200.0	90.05	179.44	12,568.8	-1,545.7	-599.1	1,539.8	0.00	0.00	0.00
14,300.0	90.05	179.44	12,568.7	-1,645.7	-598.1	1,639.8	0.00	0.00	0.00
14,400.0	90.05	179.44	12,568.7	-1,745.7	-597.1	1,739.8	0.00	0.00	0.00
14,500.0	90.05	179.44	12,568.6	-1,845.7	-596.2	1,839.8	0.00	0.00	0.00
14,600.0	90.05	179.44	12,568.5	-1,945.7	-595.2	1,939.8	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	Tap Rock Operating, LLC.	**TVD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Project:	Lea County, NM (NAD83)	**MD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
14,700.0	90.05	179.44	12,568.4	-2,045.7	-594.2	2,039.8	0.00	0.00	0.00
14,800.0	90.05	179.44	12,568.3	-2,145.7	-593.2	2,139.8	0.00	0.00	0.00
14,900.0	90.05	179.44	12,568.2	-2,245.7	-592.2	2,239.8	0.00	0.00	0.00
15,000.0	90.05	179.44	12,568.1	-2,345.7	-591.2	2,339.8	0.00	0.00	0.00
15,100.0	90.05	179.44	12,568.0	-2,445.7	-590.3	2,439.8	0.00	0.00	0.00
15,200.0	90.05	179.44	12,567.9	-2,545.7	-589.3	2,539.8	0.00	0.00	0.00
15,300.0	90.05	179.44	12,567.8	-2,645.7	-588.3	2,639.8	0.00	0.00	0.00
15,400.0	90.05	179.44	12,567.7	-2,745.6	-587.3	2,739.8	0.00	0.00	0.00
15,500.0	90.05	179.44	12,567.7	-2,845.6	-586.3	2,839.8	0.00	0.00	0.00
15,600.0	90.05	179.44	12,567.6	-2,945.6	-585.3	2,939.8	0.00	0.00	0.00
15,700.0	90.05	179.44	12,567.5	-3,045.6	-584.4	3,039.8	0.00	0.00	0.00
15,800.0	90.05	179.44	12,567.4	-3,145.6	-583.4	3,139.8	0.00	0.00	0.00
15,900.0	90.05	179.44	12,567.3	-3,245.6	-582.4	3,239.8	0.00	0.00	0.00
16,000.0	90.05	179.44	12,567.2	-3,345.6	-581.4	3,339.8	0.00	0.00	0.00
16,100.0	90.05	179.44	12,567.1	-3,445.6	-580.4	3,439.8	0.00	0.00	0.00
16,200.0	90.05	179.44	12,567.0	-3,545.6	-579.5	3,539.8	0.00	0.00	0.00
16,300.0	90.05	179.44	12,566.9	-3,645.6	-578.5	3,639.8	0.00	0.00	0.00
16,400.0	90.05	179.44	12,566.8	-3,745.6	-577.5	3,739.8	0.00	0.00	0.00
16,500.0	90.05	179.44	12,566.7	-3,845.6	-576.5	3,839.8	0.00	0.00	0.00
16,600.0	90.05	179.44	12,566.7	-3,945.6	-575.5	3,939.8	0.00	0.00	0.00
16,700.0	90.05	179.44	12,566.6	-4,045.6	-574.5	4,039.8	0.00	0.00	0.00
16,800.0	90.05	179.44	12,566.5	-4,145.6	-573.6	4,139.8	0.00	0.00	0.00
16,900.0	90.05	179.44	12,566.4	-4,245.6	-572.6	4,239.8	0.00	0.00	0.00
17,000.0	90.05	179.44	12,566.3	-4,345.6	-571.6	4,339.8	0.00	0.00	0.00
17,100.0	90.05	179.44	12,566.2	-4,445.6	-570.6	4,439.8	0.00	0.00	0.00
17,200.0	90.05	179.44	12,566.1	-4,545.6	-569.6	4,539.8	0.00	0.00	0.00
17,300.0	90.05	179.44	12,566.0	-4,645.6	-568.6	4,639.8	0.00	0.00	0.00
17,400.0	90.05	179.44	12,565.9	-4,745.6	-567.7	4,739.8	0.00	0.00	0.00
17,500.0	90.05	179.44	12,565.8	-4,845.5	-566.7	4,839.8	0.00	0.00	0.00
17,600.0	90.05	179.44	12,565.7	-4,945.5	-565.7	4,939.8	0.00	0.00	0.00
17,700.0	90.05	179.44	12,565.7	-5,045.5	-564.7	5,039.8	0.00	0.00	0.00
17,800.0	90.05	179.44	12,565.6	-5,145.5	-563.7	5,139.8	0.00	0.00	0.00
17,900.0	90.05	179.44	12,565.5	-5,245.5	-562.7	5,239.8	0.00	0.00	0.00
18,000.0	90.05	179.44	12,565.4	-5,345.5	-561.8	5,339.8	0.00	0.00	0.00
18,100.0	90.05	179.44	12,565.3	-5,445.5	-560.8	5,439.8	0.00	0.00	0.00
18,200.0	90.05	179.44	12,565.2	-5,545.5	-559.8	5,539.8	0.00	0.00	0.00
18,300.0	90.05	179.44	12,565.1	-5,645.5	-558.8	5,639.8	0.00	0.00	0.00
18,400.0	90.05	179.44	12,565.0	-5,745.5	-557.8	5,739.8	0.00	0.00	0.00
18,500.0	90.05	179.44	12,564.9	-5,845.5	-556.9	5,839.8	0.00	0.00	0.00
18,600.0	90.05	179.44	12,564.8	-5,945.5	-555.9	5,939.8	0.00	0.00	0.00
18,700.0	90.05	179.44	12,564.7	-6,045.5	-554.9	6,039.8	0.00	0.00	0.00
18,800.0	90.05	179.44	12,564.7	-6,145.5	-553.9	6,139.8	0.00	0.00	0.00
18,900.0	90.05	179.44	12,564.6	-6,245.5	-552.9	6,239.8	0.00	0.00	0.00
19,000.0	90.05	179.44	12,564.5	-6,345.5	-551.9	6,339.8	0.00	0.00	0.00
19,100.0	90.05	179.44	12,564.4	-6,445.5	-551.0	6,439.8	0.00	0.00	0.00
19,200.0	90.05	179.44	12,564.3	-6,545.5	-550.0	6,539.8	0.00	0.00	0.00
19,300.0	90.05	179.44	12,564.2	-6,645.5	-549.0	6,639.8	0.00	0.00	0.00
19,400.0	90.05	179.44	12,564.1	-6,745.5	-548.0	6,739.8	0.00	0.00	0.00
19,500.0	90.05	179.44	12,564.0	-6,845.4	-547.0	6,839.8	0.00	0.00	0.00
19,600.0	90.05	179.44	12,563.9	-6,945.4	-546.0	6,939.8	0.00	0.00	0.00
19,700.0	90.05	179.44	12,563.8	-7,045.4	-545.1	7,039.8	0.00	0.00	0.00
19,800.0	90.05	179.44	12,563.7	-7,145.4	-544.1	7,139.8	0.00	0.00	0.00
19,900.0	90.05	179.44	12,563.7	-7,245.4	-543.1	7,239.8	0.00	0.00	0.00
20,000.0	90.05	179.44	12,563.6	-7,345.4	-542.1	7,339.8	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	Tap Rock Operating, LLC.	**TVD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Project:	Lea County, NM (NAD83)	**MD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
20,100.0	90.05	179.44	12,563.5	-7,445.4	-541.1	7,439.8	0.00	0.00	0.00
20,200.0	90.05	179.44	12,563.4	-7,545.4	-540.1	7,539.8	0.00	0.00	0.00
20,300.0	90.05	179.44	12,563.3	-7,645.4	-539.2	7,639.8	0.00	0.00	0.00
20,400.0	90.05	179.44	12,563.2	-7,745.4	-538.2	7,739.8	0.00	0.00	0.00
20,500.0	90.05	179.44	12,563.1	-7,845.4	-537.2	7,839.8	0.00	0.00	0.00
20,600.0	90.05	179.44	12,563.0	-7,945.4	-536.2	7,939.8	0.00	0.00	0.00
20,700.0	90.05	179.44	12,562.9	-8,045.4	-535.2	8,039.8	0.00	0.00	0.00
20,800.0	90.05	179.44	12,562.8	-8,145.4	-534.3	8,139.8	0.00	0.00	0.00
20,900.0	90.05	179.44	12,562.7	-8,245.4	-533.3	8,239.8	0.00	0.00	0.00
21,000.0	90.05	179.44	12,562.7	-8,345.4	-532.3	8,339.8	0.00	0.00	0.00
21,100.0	90.05	179.44	12,562.6	-8,445.4	-531.3	8,439.8	0.00	0.00	0.00
21,200.0	90.05	179.44	12,562.5	-8,545.4	-530.3	8,539.8	0.00	0.00	0.00
21,300.0	90.05	179.44	12,562.4	-8,645.4	-529.3	8,639.8	0.00	0.00	0.00
21,400.0	90.05	179.44	12,562.3	-8,745.4	-528.4	8,739.8	0.00	0.00	0.00
21,500.0	90.05	179.44	12,562.2	-8,845.4	-527.4	8,839.8	0.00	0.00	0.00
21,600.0	90.05	179.44	12,562.1	-8,945.3	-526.4	8,939.8	0.00	0.00	0.00
21,700.0	90.05	179.44	12,562.0	-9,045.3	-525.4	9,039.8	0.00	0.00	0.00
21,800.0	90.05	179.44	12,561.9	-9,145.3	-524.4	9,139.8	0.00	0.00	0.00
21,900.0	90.05	179.44	12,561.8	-9,245.3	-523.4	9,239.8	0.00	0.00	0.00
22,000.0	90.05	179.44	12,561.7	-9,345.3	-522.5	9,339.8	0.00	0.00	0.00
22,100.0	90.05	179.44	12,561.7	-9,445.3	-521.5	9,439.8	0.00	0.00	0.00
22,200.0	90.05	179.44	12,561.6	-9,545.3	-520.5	9,539.8	0.00	0.00	0.00
22,300.0	90.05	179.44	12,561.5	-9,645.3	-519.5	9,639.8	0.00	0.00	0.00
22,400.0	90.05	179.44	12,561.4	-9,745.3	-518.5	9,739.8	0.00	0.00	0.00
22,500.0	90.05	179.44	12,561.3	-9,845.3	-517.5	9,839.8	0.00	0.00	0.00
22,600.0	90.05	179.44	12,561.2	-9,945.3	-516.6	9,939.8	0.00	0.00	0.00
22,700.0	90.05	179.44	12,561.1	-10,045.3	-515.6	10,039.8	0.00	0.00	0.00
22,800.0	90.05	179.44	12,561.0	-10,145.3	-514.6	10,139.8	0.00	0.00	0.00
22,820.2	90.05	179.44	12,561.0	-10,165.5	-514.4	10,160.0	0.00	0.00	0.00
Start 95.0 hold at 22820.2 MD - LTP_T201H									
22,900.0	90.05	179.44	12,560.9	-10,245.3	-513.6	10,239.8	0.00	0.00	0.00
22,915.2	90.05	179.44	12,560.9	-10,260.5	-513.5	10,255.0	0.00	0.00	0.00
TD at 22915.2 - PBHL_T201H									

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
PBHL_T201H - plan hits target center - Point	0.00	0.00	12,560.9	-10,260.5	-513.5	372,873.57	837,240.45	32° 1' 17.456 N	103° 22' 42.843 W
LTP_T201H - plan hits target center - Point	0.00	0.00	12,561.0	-10,165.5	-514.4	372,968.56	837,239.52	32° 1' 18.396 N	103° 22' 42.844 W
FTP_T201H - plan misses target center by 234.1usft at 12549.6usft MD (12455.4 TVD, 63.0 N, -466.3 E) - Point	0.00	0.00	12,570.0	201.4	-616.4	383,335.49	837,137.52	32° 3' 0.986 N	103° 22' 42.964 W

Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well 201H
Company:	Tap Rock Operating, LLC.	**TVD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Project:	Lea County, NM (NAD83)	**MD Reference:**	WELL @ 3226.0usft (Original Well Elev)
Site:	Talco State Fed Com	**North Reference:**	Grid
Well:	201H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,025.4	1,025.0	Rustler Anhydrite			
1,597.6	1,595.0	Top Salt			
4,955.3	4,940.0	Base Salt			
5,341.8	5,325.0	Delaware Mountain Gp			
5,356.9	5,340.0	Lamar			
5,377.0	5,360.0	Bell Canyon			
5,402.0	5,385.0	Ramsey Sand			
6,581.2	6,560.0	Cherry Canyon			
7,816.2	7,795.0	Brushy Canyon			
9,261.2	9,240.0	Bone Spring Lime			
9,291.2	9,270.0	Upper Avalon			
9,686.2	9,665.0	Middle Avalon			
10,016.2	9,995.0	Lower Avalon			
10,526.2	10,505.0	1st Bone Spring Sand			
10,691.2	10,670.0	2nd Bone Spring Carb			
11,041.2	11,020.0	2nd Bone Spring Sand			
11,526.2	11,505.0	3rd Bone Spring Carb			
12,167.9	12,145.0	3rd Bone Spring Sand			
12,465.2	12,400.0	3rd BS W Sand			
12,557.3	12,460.0	Wolfcamp A X Sand			
12,717.0	12,535.0	Wolfcamp A Y Sand			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
700.0	700.0	0.0	0.0	Start Build 1.50
1,033.3	1,032.9	8.3	-11.9	Start 5350.0 hold at 1033.3 MD
6,383.3	6,362.6	275.8	-393.9	Start Drop -1.50
6,716.7	6,695.5	284.1	-405.8	Start 5301.5 hold at 6716.7 MD
12,018.2	11,997.0	284.1	-405.8	Start Build 10.00
12,918.8	12,570.0	-269.1	-557.1	Start DLS 4.00 TFO -89.99
13,315.3	12,569.6	-661.1	-607.8	Start 9504.9 hold at 13315.3 MD
22,820.2	12,561.0	-10,165.5	-514.4	Start 95.0 hold at 22820.2 MD
22,915.2	12,560.9	-10,260.5	-513.5	TD at 22915.2

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Tap Rock Operating LLC
WELL NAME & NO.:	Talco State Fed Com 201H
LOCATION:	Section 16, T.26 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

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 Onshore Order 6 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 **13-3/8** inch surface casing shall be set at approximately 1100 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) 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,

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whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   - Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

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. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. Variance is approved to use a **10,000 (10M)** psi annual which shall be tested to **5,000 (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 OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by

Approval Date: 04/01/2021

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.

- 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.

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)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

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
      - Notify the BLM when moving in and removing the Spudder Rig.
      - 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.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 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. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity 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 intergrity 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-P 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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

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:

    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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

e. 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.

a. 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 when specified), 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).

b. 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. 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.

e. The results of the test shall be reported to the appropriate BLM office.

f. 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.

g. 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.

h. 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 Onshore Order No. 2.

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:

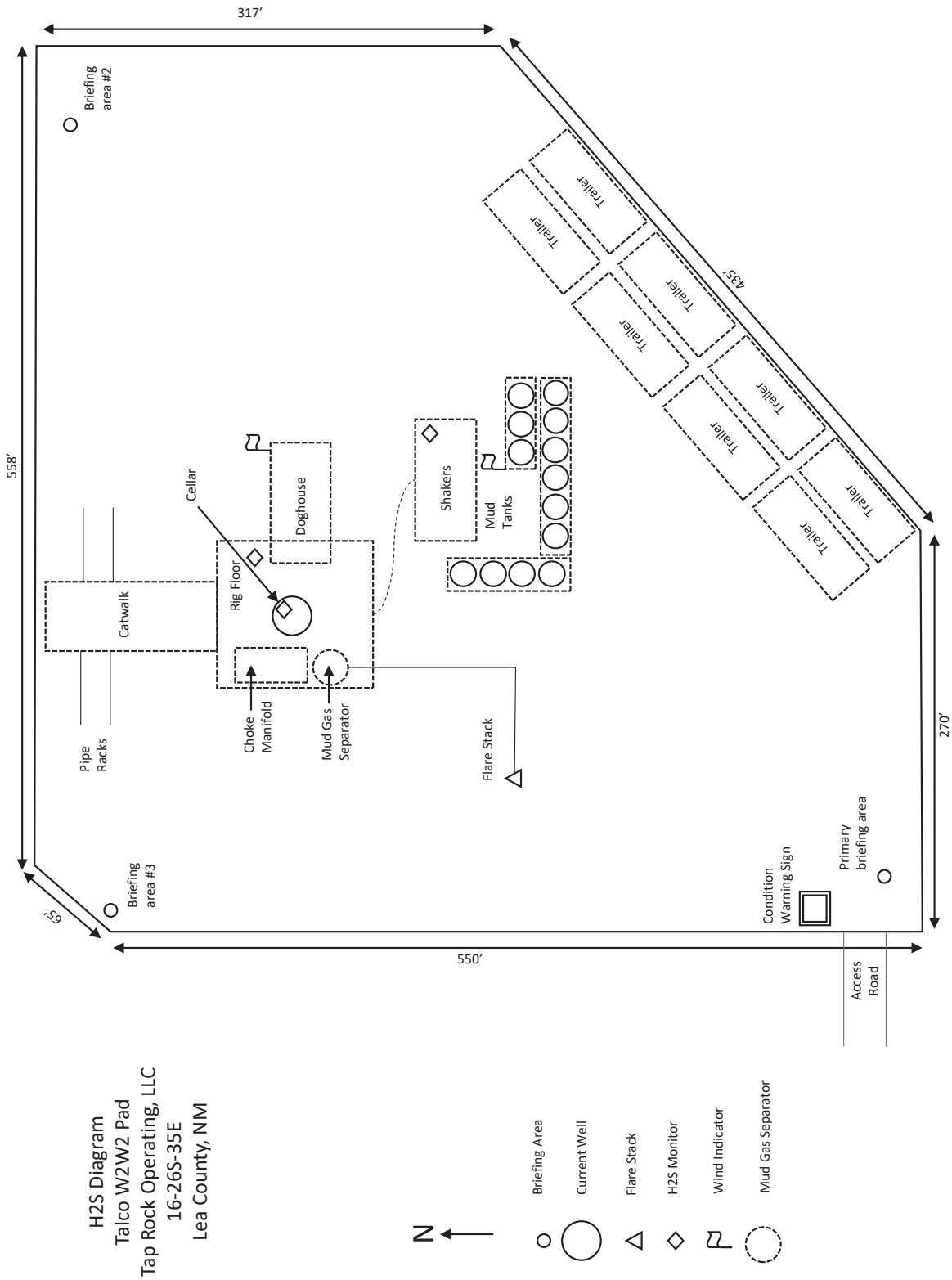
- No DST cores are planned at this time

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 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	

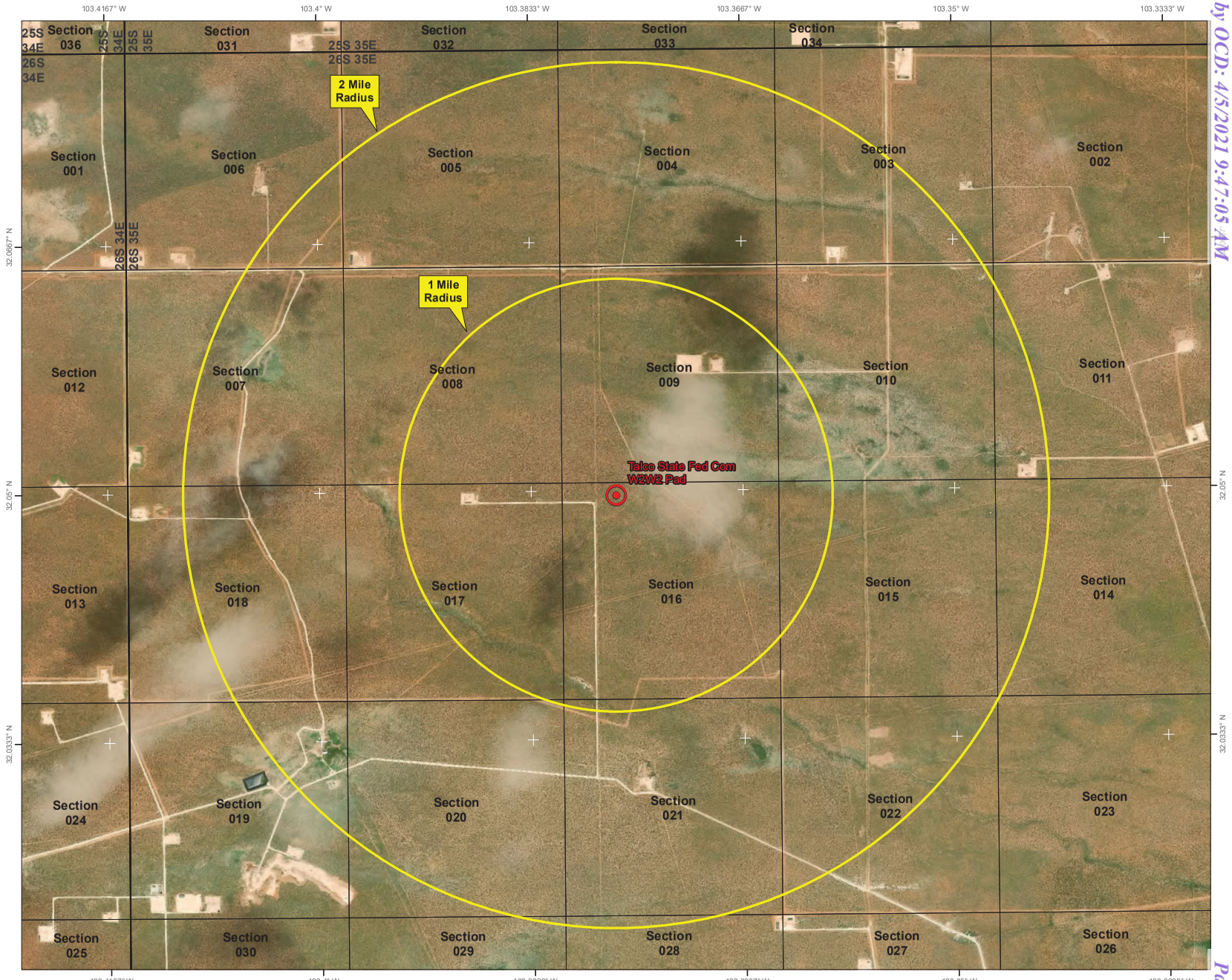


H2S Diagram
Talco W2W2 Pad
Tap Rock Operating, LLC
16-26S-35E
Lea County, NM

Tap Rock Operating LLC

Talco State Fed Com W2W2 Pad
H2S Contingency Plan:
2 Mile Radius Map

Sec. 16, Township 26S, Range 35E
Lea County, New Mexico



Well Pad Location

1:27,000

0 0.25 0.5 1
Miles

N

NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., May 11, 2020
for Tap Rock Operating, LLC

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 22795

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
TAP ROCK OPERATING, LLC 523 Park Point Drive Suite 200 Golden, CO80401	372043	22795	FORM 3160-3

OCD Reviewer	Condition
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string