

Office
 District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM
 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-025-48631
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Apollo State Com
8. Well Number 204H
9. OGRID Number 372043
10. Pool name or Wildcat WC-025 G-09 S243310P; UPPER WOLFCAMP

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator TAP ROCK OPERATING, LLC	
3. Address of Operator 523 PARK POINT DR, SUITE 200, GOLDEN, CO 80401	
4. Well Location Unit Letter <u>P</u> , <u>868</u> feet from the <u>SOUTH</u> line and <u>502</u> feet from the <u>East</u> line Section <u>21</u> Township <u>24S</u> Range <u>33E</u> NMPM County <u>LEA</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3544 GR	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: BHL/Surface Casing/Depth Change ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Tap Rock Operating LLC is requesting permission to alter the Bottom Hole Location, Depth, and Surface Hole/Casing in the Apollo State Com 204H. Please see below for detail:

Previously Approved Bottom Hole Location: 30' FNL, 525' FEL, Section 16, Township 24S, Range 33E.
 Requested Bottom Hole Location: 30' FNL, 331' FEL, Section 16, Township 24S, Range 33E.

This Bottom Hole Change will also alter the depth.

The previously approved surface hole of 13.5 inch will be increased to 17.5 inches and the Surface casing will be altered from 10.75 inch 45.5 lb surface casing to 13.375 inch 54.5 lb J-55 surface casing.

Please see the updated Plat, Drill Plan, and Casing spec for more detail.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Ramsey TITLE Regulatory Analyst DATE 5/20/2021

Type or print name Bill Ramsey E-mail address: bramsey@taprk.com PHONE: 720-238-2787

For State Use Only

APPROVED BY: P. Kautz TITLE _____ DATE 05/27/2021
 Conditions of Approval (if any) _____

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Phone: (505) 476-3460 Fax: (505) 476-3462

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

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-48631	² Pool Code 98135	³ Pool Name WC-025 G-09 S243310P:UPPER WOLFCAMP
⁴ Property Code 328891	⁵ Property Name APOLLO STATE COM	
⁷ OGRID No. #372043	⁸ Operator Name TAP ROCK OPERATING, LLC.	⁶ Well Number 204H ⁹ Elevation 3544'

¹⁰Surface Location

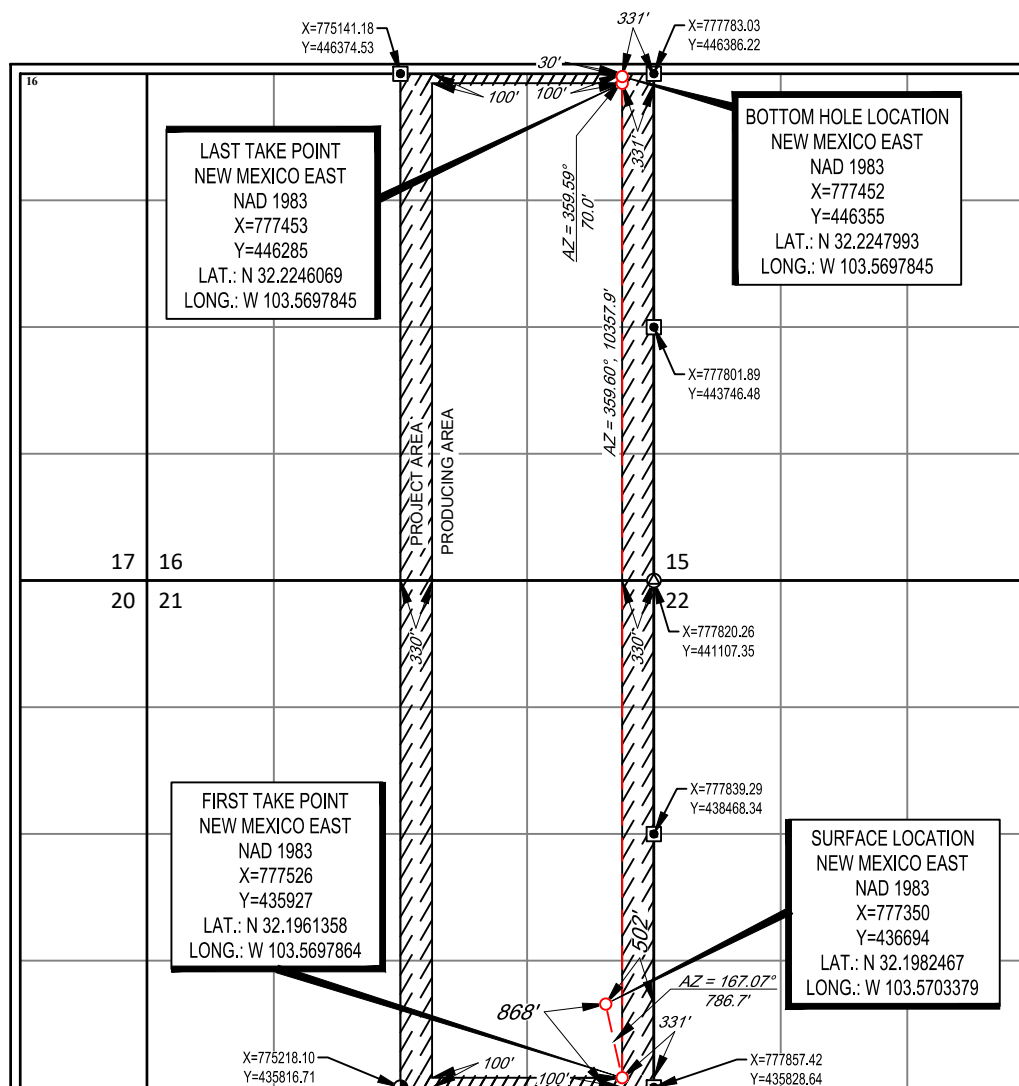
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	21	24-S	33-E	—	868'	SOUTH	502'	EAST	LEA

¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	16	24-S	33-E	—	30'	NORTH	331'	EAST	LEA

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



¹⁷OPERATOR 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.

Randy

5/17/2021

Signature _____

Date _____

Bill Ramsey

Printed Name _____

bramsey@taprk.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.

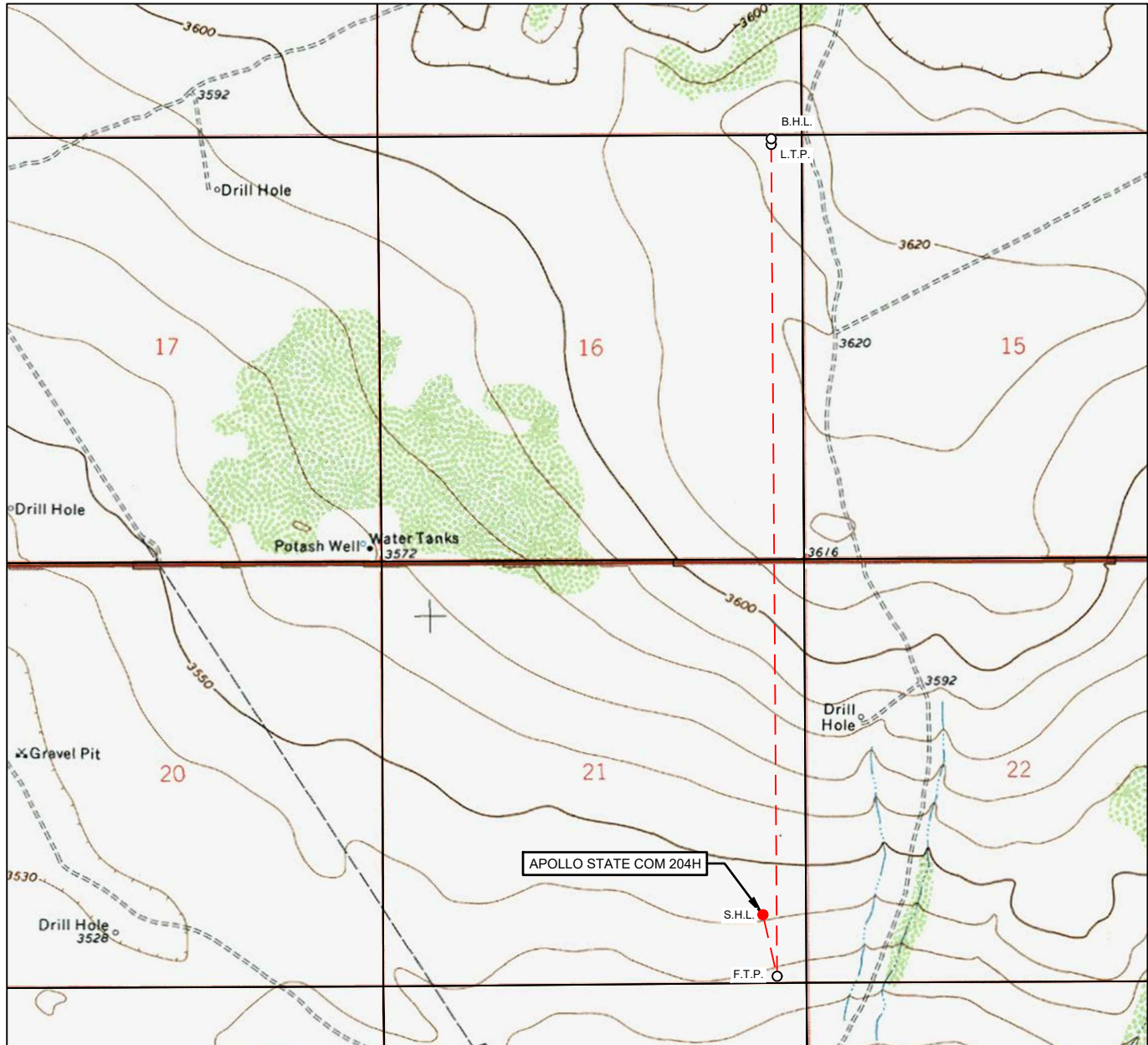
03/08/2021

Date of Survey

Date of Survey
Signature and Seal of Professional Surveyor

Certificate Number

LOCATION & ELEVATION VERIFICATION MAP

LEASE NAME & WELL NO.: APOLLO STATE COM 204H

SECTION 21 TWP 24-S RGE 33-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3544'
 DESCRIPTION 868' FSL & 502' FEL

LATITUDE N 32.1982467 LONGITUDE W 103.5703379

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

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

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



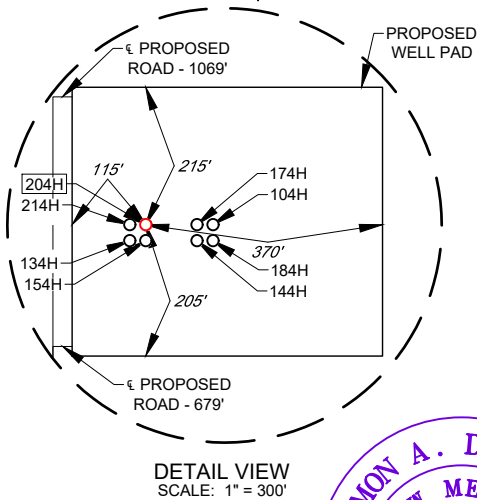
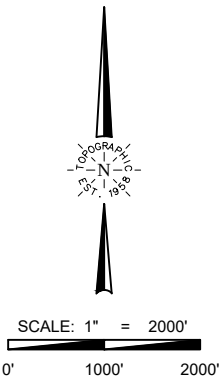
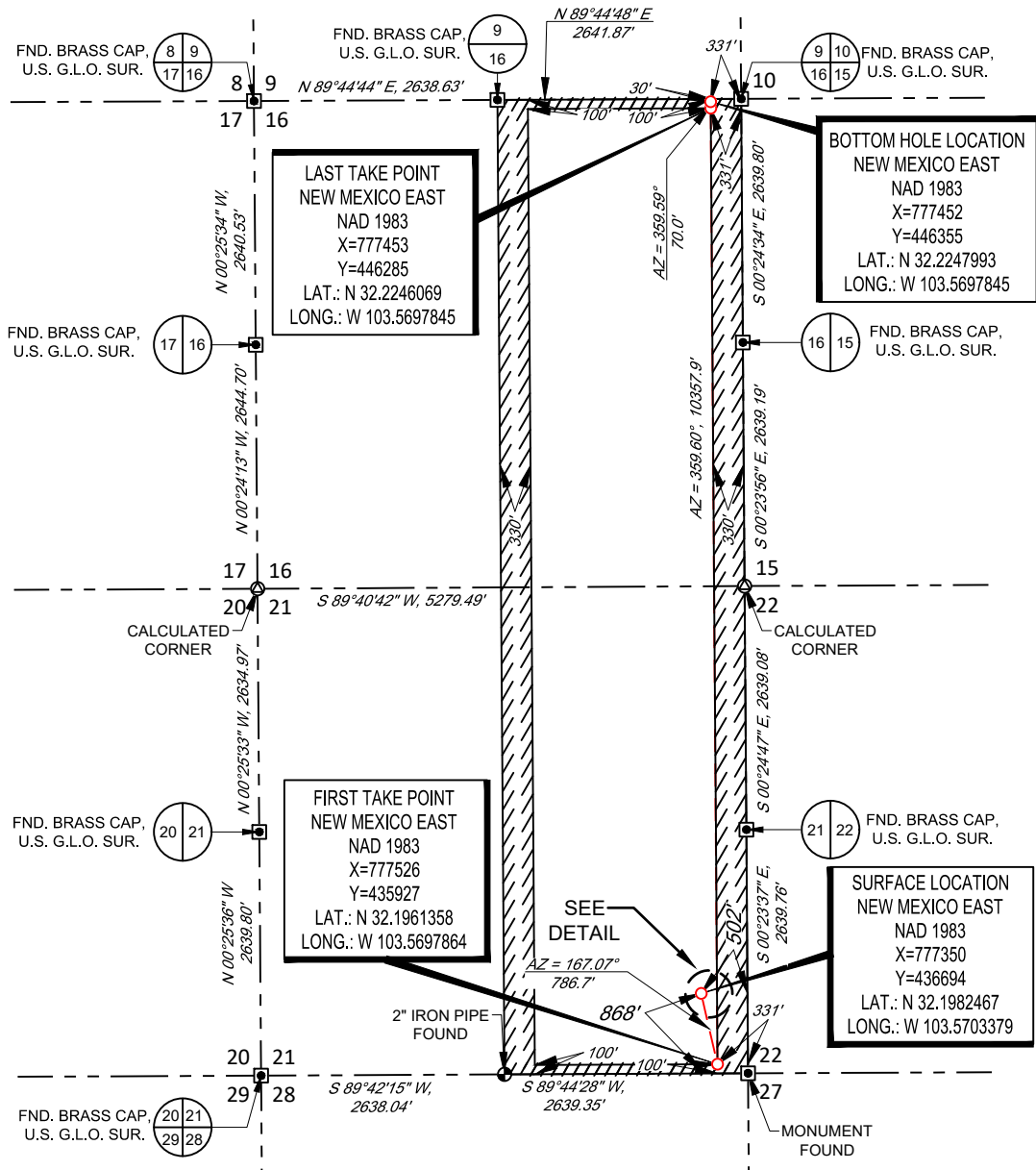
TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
 WWW.TOPOGRAPHIC.COM



TAP
ROCK
EXHIBIT 2A

SECTION 21, TOWNSHIP 24-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

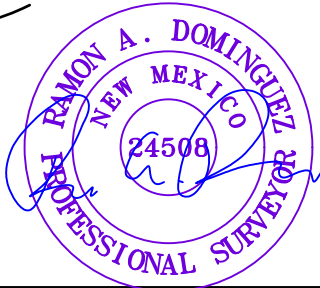


LEASE NAME & WELL NO.: APOLLO STATE COM 204H

SECTION 21 TWP 24-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 868' FSL & 502' FEL

DISTANCE & DIRECTION
FROM INT. OF NM-128, & DELAWARE BASIN RD., GO WEST ON NM-128
±3.3 MILES, THENCE SOUTH (LEFT) ON DIAMOND RD./J-2 ±1.1 MILES,
THENCE WEST (RIGHT) ON A LEASE RD. ±0.7 MILES, THENCE
NORTHWEST (RIGHT) ON A PROPOSED RD. ±1069 FEET TO A POINT
±231 FEET NORTHWEST OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID
BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY
FEET.
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND
UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF
SURVEY, AND DATA PROVIDED BY TAP ROCK OPERATING, LLC THIS CERTIFICATION IS MADE AND
LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS
NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



Ramon A. Dominguez, P.S. No. 24508
May 13, 2021

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
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WWW.TOPOGRAPHIC.COM

EXHIBIT 2B

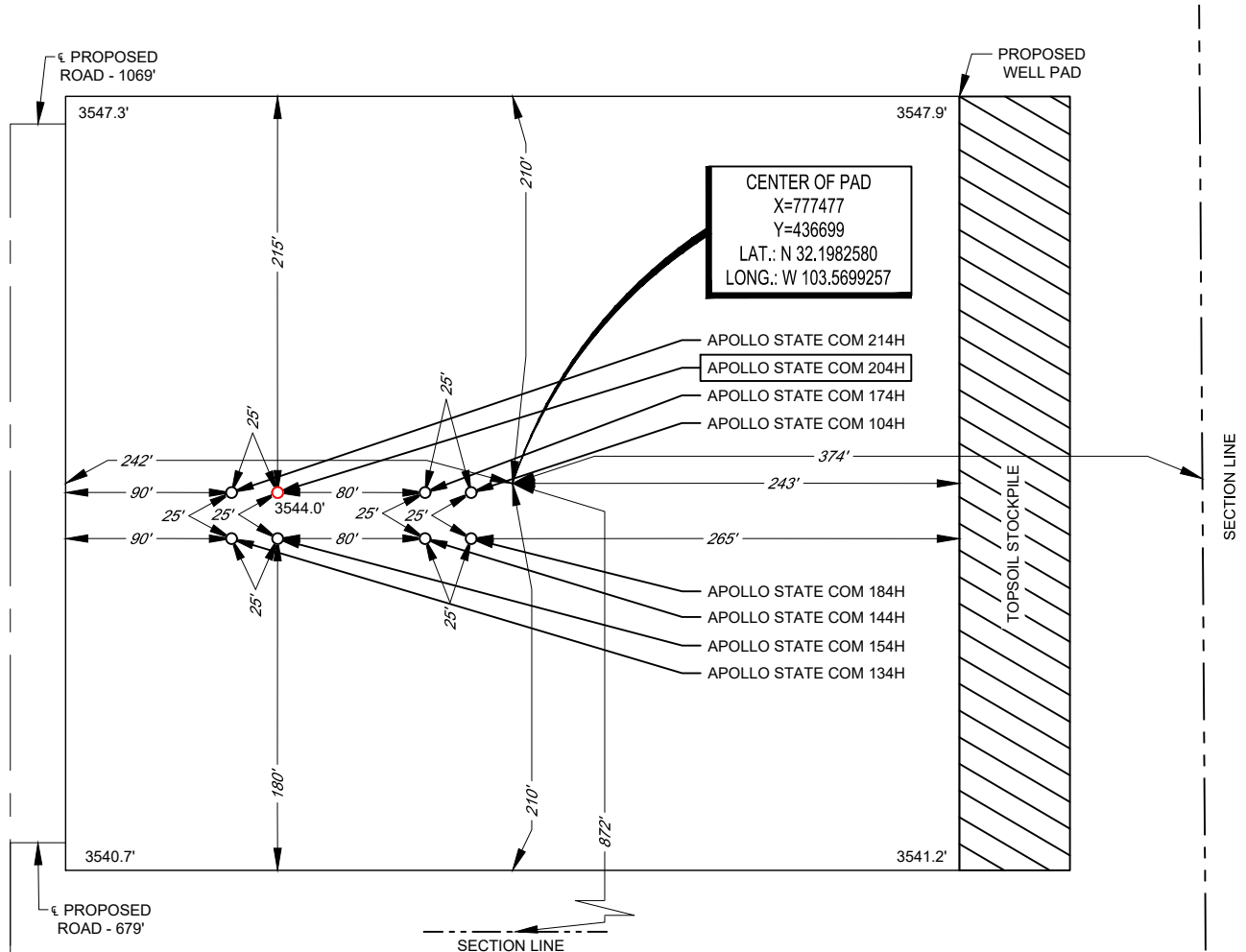


SECTION 21, TOWNSHIP 24-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'

LEGEND

----- SECTION LINE
----- PROPOSED ROAD



LEASE NAME & WELL NO.: APOLLO STATE COM 204H
204H LATITUDE N 32.1982467 204H LONGITUDE W 103.5703379

CENTER OF PAD IS 872' FSL & 374' FEL



Ramon A. Dominguez, P.S. No. 24508

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

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"



SCALE: 1" = 100'
0' 50' 100'



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APOLLO STATE COM 204H

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC	Mud
Surf	17.5	13.375	54.5	1220	1280	0	Fresh Water
Int 1	9.875	7.625	29.7	9000	2557	0	Diesel Brine
	8.75	7.625	29.7	11842			Diesel Brine
Prod	6.75	5.5	20	22641	700	11642	OBM

Intermediate mud system will be the direct brine emulsion fluid (brine based with diesel emulsified in it). Tap Rock requests the option of switching to a two stage cement job on the 7-5/8" intermediate casing string with the first stage lead and tail being pumped conventionally with the calculated top of cement to surface. If necessary, the second stage will be performed as a bradenhead squeeze with planned cement from the Brushy Canyon (anticipated loss zone) to surface if cement is not circulated to surface during the first stage. Additionally, a top out consisting of Class C cement will be executed as needed after the first two stages. Tap Rock also requests the option to run a DV tool, the depth will be adjusted depending on current hole conditions. Cement volumes will be adjusted accordingly. The DV tool will be set a minimum of 50' below the previous casing shoe and a maximum of 200' above the current casing shoe. If cement is not circulated to surface on the 1st stage job, the 2nd stage will be pumped as planned. The DVT set depth will be between 5,000-6,000'.



Tap Rock Resources, LLC

**Lea County, NM (NAD 83 NME)
(Apollo State Com) Sec-21_T-24-S_R-33-E
Apollo State Com #204H**

OWB

Plan: Plan #1

Standard Planning Report

19 May, 2021





Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Apollo State Com #204H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3570.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3570.0usft
Site:	(Apollo State Com) Sec-21_T-24-S_R-33-E	North Reference:	Grid
Well:	Apollo State Com #204H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

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

Site	(Apollo State Com) Sec-21_T-24-S_R-33-E		
Site Position:		Northing:	436,694.00 usft
From:	Map	Easting:	776,122.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 53.775 N
		Longitude:	103° 34' 27.504 W
		Grid Convergence:	0.40 °

Well	Apollo State Com #204H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	1,228.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	04/05/21	6.54	59.99	47,531.58292550

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.59

Plan Survey Tool Program	Date	05/19/21		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,651.6 Plan #1 (OWB)	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.1	7.00	163.37	2,198.3	-40.9	12.2	1.00	1.00	0.00	163.37	
7,664.1	7.00	163.37	7,621.7	-679.1	202.8	0.00	0.00	0.00	0.00	
8,364.2	0.00	0.00	8,320.0	-720.0	215.0	1.00	-1.00	0.00	180.00	
11,942.2	0.00	0.00	11,898.0	-720.0	215.0	0.00	0.00	0.00	0.00	
12,842.2	90.00	356.20	12,471.0	-148.3	177.0	10.00	10.00	0.00	356.20	
13,011.8	90.00	359.59	12,471.0	21.1	170.8	2.00	0.00	2.00	90.00	
22,651.9	90.00	359.59	12,471.0	9,661.0	102.0	0.00	0.00	0.00	0.00	PBHL (Apollo State



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Apollo State Com #204H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3570.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3570.0usft
Site:	(Apollo State Com) Sec-21_T-24-S_R-33-E	North Reference:	Grid
Well:	Apollo State Com #204H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,168.0	0.00	0.00	1,168.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler Anhydrite									
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	1.00	163.37	1,600.0	-0.8	0.2	-0.8	1.00	1.00	0.00
1,660.0	1.60	163.37	1,660.0	-2.1	0.6	-2.1	1.00	1.00	0.00
Top Salt									
1,700.0	2.00	163.37	1,700.0	-3.3	1.0	-3.4	1.00	1.00	0.00
1,800.0	3.00	163.37	1,799.9	-7.5	2.2	-7.5	1.00	1.00	0.00
1,900.0	4.00	163.37	1,899.7	-13.4	4.0	-13.4	1.00	1.00	0.00
2,000.0	5.00	163.37	1,999.4	-20.9	6.2	-20.9	1.00	1.00	0.00
2,100.0	6.00	163.37	2,098.9	-30.1	9.0	-30.1	1.00	1.00	0.00
2,200.1	7.00	163.37	2,198.3	-40.9	12.2	-41.0	1.00	1.00	0.00
2,300.0	7.00	163.37	2,297.5	-52.6	15.7	-52.7	0.00	0.00	0.00
2,400.0	7.00	163.37	2,396.8	-64.3	19.2	-64.4	0.00	0.00	0.00
2,500.0	7.00	163.37	2,496.0	-76.0	22.7	-76.1	0.00	0.00	0.00
2,600.0	7.00	163.37	2,595.3	-87.6	26.2	-87.8	0.00	0.00	0.00
2,700.0	7.00	163.37	2,694.5	-99.3	29.7	-99.5	0.00	0.00	0.00
2,800.0	7.00	163.37	2,793.8	-111.0	33.1	-111.2	0.00	0.00	0.00
2,900.0	7.00	163.37	2,893.0	-122.7	36.6	-122.9	0.00	0.00	0.00
3,000.0	7.00	163.37	2,992.3	-134.4	40.1	-134.6	0.00	0.00	0.00
3,100.0	7.00	163.37	3,091.5	-146.0	43.6	-146.3	0.00	0.00	0.00
3,200.0	7.00	163.37	3,190.8	-157.7	47.1	-158.0	0.00	0.00	0.00
3,300.0	7.00	163.37	3,290.1	-169.4	50.6	-169.7	0.00	0.00	0.00
3,400.0	7.00	163.37	3,389.3	-181.1	54.1	-181.4	0.00	0.00	0.00
3,500.0	7.00	163.37	3,488.6	-192.7	57.6	-193.2	0.00	0.00	0.00
3,600.0	7.00	163.37	3,587.8	-204.4	61.0	-204.9	0.00	0.00	0.00
3,700.0	7.00	163.37	3,687.1	-216.1	64.5	-216.6	0.00	0.00	0.00
3,800.0	7.00	163.37	3,786.3	-227.8	68.0	-228.3	0.00	0.00	0.00
3,900.0	7.00	163.37	3,885.6	-239.5	71.5	-240.0	0.00	0.00	0.00
4,000.0	7.00	163.37	3,984.8	-251.1	75.0	-251.7	0.00	0.00	0.00
4,100.0	7.00	163.37	4,084.1	-262.8	78.5	-263.4	0.00	0.00	0.00
4,200.0	7.00	163.37	4,183.3	-274.5	82.0	-275.1	0.00	0.00	0.00
4,300.0	7.00	163.37	4,282.6	-286.2	85.5	-286.8	0.00	0.00	0.00
4,400.0	7.00	163.37	4,381.9	-297.9	88.9	-298.5	0.00	0.00	0.00
4,500.0	7.00	163.37	4,481.1	-309.5	92.4	-310.2	0.00	0.00	0.00
4,600.0	7.00	163.37	4,580.4	-321.2	95.9	-321.9	0.00	0.00	0.00
4,700.0	7.00	163.37	4,679.6	-332.9	99.4	-333.6	0.00	0.00	0.00
4,800.0	7.00	163.37	4,778.9	-344.6	102.9	-345.3	0.00	0.00	0.00



Intrepid Planning Report



Database: EDM 5000.15 Single User Db
Company: Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Apollo State Com) Sec-21_T-24-S_R-33-E
Well: Apollo State Com #204H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Apollo State Com #204H
TVD Reference: KB @ 3570.0usft
MD Reference: KB @ 3570.0usft
North Reference: Grid
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)
4,900.0	7.00	163.37	4,878.1	-356.2	106.4	-357.0	0.00	0.00	0.00
4,929.1	7.00	163.37	4,907.0	-359.6	107.4	-360.4	0.00	0.00	0.00
Base Salt									
5,000.0	7.00	163.37	4,977.4	-367.9	109.9	-368.7	0.00	0.00	0.00
5,100.0	7.00	163.37	5,076.6	-379.6	113.4	-380.4	0.00	0.00	0.00
5,145.7	7.00	163.37	5,122.0	-384.9	114.9	-385.8	0.00	0.00	0.00
Delaware Mountain Gp									
5,166.9	7.00	163.37	5,143.0	-387.4	115.7	-388.2	0.00	0.00	0.00
Lamar									
5,200.0	7.00	163.37	5,175.9	-391.3	116.8	-392.1	0.00	0.00	0.00
5,208.2	7.00	163.37	5,184.0	-392.2	117.1	-393.1	0.00	0.00	0.00
Bell Canyon									
5,230.3	7.00	163.37	5,206.0	-394.8	117.9	-395.7	0.00	0.00	0.00
Ramsey Sand									
5,300.0	7.00	163.37	5,275.1	-403.0	120.3	-403.8	0.00	0.00	0.00
5,400.0	7.00	163.37	5,374.4	-414.6	123.8	-415.5	0.00	0.00	0.00
5,500.0	7.00	163.37	5,473.7	-426.3	127.3	-427.2	0.00	0.00	0.00
5,600.0	7.00	163.37	5,572.9	-438.0	130.8	-438.9	0.00	0.00	0.00
5,700.0	7.00	163.37	5,672.2	-449.7	134.3	-450.6	0.00	0.00	0.00
5,800.0	7.00	163.37	5,771.4	-461.4	137.8	-462.3	0.00	0.00	0.00
5,900.0	7.00	163.37	5,870.7	-473.0	141.3	-474.0	0.00	0.00	0.00
6,000.0	7.00	163.37	5,969.9	-484.7	144.7	-485.7	0.00	0.00	0.00
6,100.0	7.00	163.37	6,069.2	-496.4	148.2	-497.4	0.00	0.00	0.00
6,187.5	7.00	163.37	6,156.0	-506.6	151.3	-507.7	0.00	0.00	0.00
Cherry Canyon									
6,200.0	7.00	163.37	6,168.4	-508.1	151.7	-509.1	0.00	0.00	0.00
6,300.0	7.00	163.37	6,267.7	-519.8	155.2	-520.9	0.00	0.00	0.00
6,400.0	7.00	163.37	6,366.9	-531.4	158.7	-532.6	0.00	0.00	0.00
6,500.0	7.00	163.37	6,466.2	-543.1	162.2	-544.3	0.00	0.00	0.00
6,600.0	7.00	163.37	6,565.5	-554.8	165.7	-556.0	0.00	0.00	0.00
6,700.0	7.00	163.37	6,664.7	-566.5	169.2	-567.7	0.00	0.00	0.00
6,800.0	7.00	163.37	6,764.0	-578.1	172.6	-579.4	0.00	0.00	0.00
6,900.0	7.00	163.37	6,863.2	-589.8	176.1	-591.1	0.00	0.00	0.00
7,000.0	7.00	163.37	6,962.5	-601.5	179.6	-602.8	0.00	0.00	0.00
7,100.0	7.00	163.37	7,061.7	-613.2	183.1	-614.5	0.00	0.00	0.00
7,200.0	7.00	163.37	7,161.0	-624.9	186.6	-626.2	0.00	0.00	0.00
7,300.0	7.00	163.37	7,260.2	-636.5	190.1	-637.9	0.00	0.00	0.00
7,400.0	7.00	163.37	7,359.5	-648.2	193.6	-649.6	0.00	0.00	0.00
7,500.0	7.00	163.37	7,458.7	-659.9	197.1	-661.3	0.00	0.00	0.00
7,600.0	7.00	163.37	7,558.0	-671.6	200.5	-673.0	0.00	0.00	0.00
7,664.1	7.00	163.37	7,621.7	-679.1	202.8	-680.5	0.00	0.00	0.00
7,700.0	6.64	163.37	7,657.3	-683.2	204.0	-684.6	1.00	-1.00	0.00
7,722.9	6.41	163.37	7,680.0	-685.6	204.7	-687.1	1.00	-1.00	0.00
Brushy Canyon									
7,800.0	5.64	163.37	7,756.7	-693.4	207.1	-694.9	1.00	-1.00	0.00
7,900.0	4.64	163.37	7,856.3	-702.0	209.6	-703.5	1.00	-1.00	0.00
8,000.0	3.64	163.37	7,956.0	-708.9	211.7	-710.4	1.00	-1.00	0.00
8,100.0	2.64	163.37	8,055.9	-714.2	213.3	-715.7	1.00	-1.00	0.00
8,200.0	1.64	163.37	8,155.8	-717.7	214.3	-719.3	1.00	-1.00	0.00
8,300.0	0.64	163.37	8,255.8	-719.7	214.9	-721.2	1.00	-1.00	0.00
8,364.2	0.00	0.00	8,320.0	-720.0	215.0	-721.5	1.00	-1.00	0.00
8,400.0	0.00	0.00	8,355.8	-720.0	215.0	-721.5	0.00	0.00	0.00
8,500.0	0.00	0.00	8,455.8	-720.0	215.0	-721.5	0.00	0.00	0.00



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Apollo State Com #204H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3570.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3570.0usft
Site:	(Apollo State Com) Sec-21_T-24-S_R-33-E	North Reference:	Grid
Well:	Apollo State Com #204H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,600.0	0.00	0.00	8,555.8	-720.0	215.0	-721.5	0.00	0.00	0.00
8,700.0	0.00	0.00	8,655.8	-720.0	215.0	-721.5	0.00	0.00	0.00
8,800.0	0.00	0.00	8,755.8	-720.0	215.0	-721.5	0.00	0.00	0.00
8,900.0	0.00	0.00	8,855.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,000.0	0.00	0.00	8,955.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,100.0	0.00	0.00	9,055.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,143.2	0.00	0.00	9,099.0	-720.0	215.0	-721.5	0.00	0.00	0.00
Bone Spring Lime									
9,200.0	0.00	0.00	9,155.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,244.2	0.00	0.00	9,200.0	-720.0	215.0	-721.5	0.00	0.00	0.00
Upper Avalon									
9,300.0	0.00	0.00	9,255.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,400.0	0.00	0.00	9,355.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,487.2	0.00	0.00	9,443.0	-720.0	215.0	-721.5	0.00	0.00	0.00
Middle Avalon									
9,500.0	0.00	0.00	9,455.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,600.0	0.00	0.00	9,555.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,700.0	0.00	0.00	9,655.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,800.0	0.00	0.00	9,755.8	-720.0	215.0	-721.5	0.00	0.00	0.00
9,852.2	0.00	0.00	9,808.0	-720.0	215.0	-721.5	0.00	0.00	0.00
Lower Avalon									
9,900.0	0.00	0.00	9,855.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,000.0	0.00	0.00	9,955.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,100.0	0.00	0.00	10,055.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,155.2	0.00	0.00	10,111.0	-720.0	215.0	-721.5	0.00	0.00	0.00
1st Bone Spring Sand									
10,200.0	0.00	0.00	10,155.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,300.0	0.00	0.00	10,255.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,400.0	0.00	0.00	10,355.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,500.0	0.00	0.00	10,455.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,554.2	0.00	0.00	10,510.0	-720.0	215.0	-721.5	0.00	0.00	0.00
2nd Bone Spring Carb									
10,600.0	0.00	0.00	10,555.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,700.0	0.00	0.00	10,655.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,800.0	0.00	0.00	10,755.8	-720.0	215.0	-721.5	0.00	0.00	0.00
10,830.2	0.00	0.00	10,786.0	-720.0	215.0	-721.5	0.00	0.00	0.00
2nd Bone Spring Sand									
10,900.0	0.00	0.00	10,855.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,000.0	0.00	0.00	10,955.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,100.0	0.00	0.00	11,055.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,200.0	0.00	0.00	11,155.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,300.0	0.00	0.00	11,255.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,365.2	0.00	0.00	11,321.0	-720.0	215.0	-721.5	0.00	0.00	0.00
3rd Bone Spring Carb									
11,400.0	0.00	0.00	11,355.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,500.0	0.00	0.00	11,455.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,600.0	0.00	0.00	11,555.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,700.0	0.00	0.00	11,655.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,800.0	0.00	0.00	11,755.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,900.0	0.00	0.00	11,855.8	-720.0	215.0	-721.5	0.00	0.00	0.00
11,942.2	0.00	0.00	11,898.0	-720.0	215.0	-721.5	0.00	0.00	0.00
11,950.0	0.78	356.20	11,905.8	-719.9	215.0	-721.5	10.00	10.00	0.00
11,951.2	0.90	356.20	11,907.0	-719.9	215.0	-721.4	10.00	10.00	0.00



Intrepid Planning Report



Database: EDM 5000.15 Single User Db
Company: Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Apollo State Com) Sec-21_T-24-S_R-33-E
Well: Apollo State Com #204H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Apollo State Com #204H
TVD Reference: KB @ 3570.0usft
MD Reference: KB @ 3570.0usft
North Reference: Grid
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)
3rd Bone Spring Sand									
12,000.0	5.78	356.20	11,955.7	-717.1	214.8	-718.6	10.00	10.00	0.00
12,050.0	10.78	356.20	12,005.1	-709.9	214.3	-711.4	10.00	10.00	0.00
12,100.0	15.78	356.20	12,053.8	-698.5	213.6	-700.0	10.00	10.00	0.00
12,150.0	20.78	356.20	12,101.3	-682.8	212.5	-684.3	10.00	10.00	0.00
12,200.0	25.78	356.20	12,147.2	-663.1	211.2	-664.6	10.00	10.00	0.00
12,250.0	30.78	356.20	12,191.2	-639.5	209.7	-641.0	10.00	10.00	0.00
12,263.8	32.16	356.20	12,203.0	-632.3	209.2	-633.7	10.00	10.00	0.00
3rd BS W Sand									
12,300.0	35.78	356.20	12,233.0	-612.1	207.8	-613.6	10.00	10.00	0.00
12,311.2	36.90	356.20	12,242.0	-605.5	207.4	-607.0	10.00	10.00	0.00
Wolfcamp A X Sand									
12,350.0	40.78	356.20	12,272.2	-581.2	205.8	-582.7	10.00	10.00	0.00
12,400.0	45.78	356.20	12,308.6	-547.0	203.5	-548.5	10.00	10.00	0.00
12,450.0	50.78	356.20	12,341.9	-509.8	201.0	-511.2	10.00	10.00	0.00
12,500.0	55.78	356.20	12,371.8	-469.8	198.4	-471.2	10.00	10.00	0.00
12,530.1	58.78	356.20	12,388.0	-444.6	196.7	-446.0	10.00	10.00	0.00
Wolfcamp A Y Sand									
12,550.0	60.78	356.20	12,398.0	-427.4	195.6	-428.8	10.00	10.00	0.00
12,600.0	65.78	356.20	12,420.5	-382.9	192.6	-384.2	10.00	10.00	0.00
12,650.0	70.78	356.20	12,439.0	-336.5	189.5	-337.9	10.00	10.00	0.00
12,700.0	75.78	356.20	12,453.4	-288.8	186.4	-290.1	10.00	10.00	0.00
12,750.0	80.78	356.20	12,463.6	-239.9	183.1	-241.2	10.00	10.00	0.00
12,800.0	85.78	356.20	12,469.4	-190.4	179.8	-191.7	10.00	10.00	0.00
12,842.2	90.00	356.20	12,471.0	-148.3	177.0	-149.6	10.00	10.00	0.00
12,900.0	90.00	357.36	12,471.0	-90.6	173.8	-91.9	2.00	0.00	2.00
13,000.0	90.00	359.36	12,471.0	9.3	170.9	8.1	2.00	0.00	2.00
13,011.8	90.00	359.59	12,471.0	21.1	170.8	19.9	2.00	0.00	2.00
13,100.0	90.00	359.59	12,471.0	109.3	170.2	108.1	0.00	0.00	0.00
13,200.0	90.00	359.59	12,471.0	209.3	169.5	208.1	0.00	0.00	0.00
13,300.0	90.00	359.59	12,471.0	309.3	168.7	308.1	0.00	0.00	0.00
13,400.0	90.00	359.59	12,471.0	409.3	168.0	408.1	0.00	0.00	0.00
13,500.0	90.00	359.59	12,471.0	509.3	167.3	508.1	0.00	0.00	0.00
13,600.0	90.00	359.59	12,471.0	609.3	166.6	608.1	0.00	0.00	0.00
13,700.0	90.00	359.59	12,471.0	709.3	165.9	708.1	0.00	0.00	0.00
13,800.0	90.00	359.59	12,471.0	809.3	165.2	808.1	0.00	0.00	0.00
13,900.0	90.00	359.59	12,471.0	909.3	164.5	908.1	0.00	0.00	0.00
14,000.0	90.00	359.59	12,471.0	1,009.3	163.7	1,008.1	0.00	0.00	0.00
14,100.0	90.00	359.59	12,471.0	1,109.3	163.0	1,108.1	0.00	0.00	0.00
14,200.0	90.00	359.59	12,471.0	1,209.3	162.3	1,208.1	0.00	0.00	0.00
14,300.0	90.00	359.59	12,471.0	1,309.3	161.6	1,308.1	0.00	0.00	0.00
14,400.0	90.00	359.59	12,471.0	1,409.3	160.9	1,408.1	0.00	0.00	0.00
14,500.0	90.00	359.59	12,471.0	1,509.3	160.2	1,508.1	0.00	0.00	0.00
14,600.0	90.00	359.59	12,471.0	1,609.3	159.5	1,608.1	0.00	0.00	0.00
14,700.0	90.00	359.59	12,471.0	1,709.3	158.8	1,708.1	0.00	0.00	0.00
14,800.0	90.00	359.59	12,471.0	1,809.3	158.0	1,808.1	0.00	0.00	0.00
14,900.0	90.00	359.59	12,471.0	1,909.3	157.3	1,908.1	0.00	0.00	0.00
15,000.0	90.00	359.59	12,471.0	2,009.3	156.6	2,008.1	0.00	0.00	0.00
15,100.0	90.00	359.59	12,471.0	2,109.3	155.9	2,108.1	0.00	0.00	0.00
15,200.0	90.00	359.59	12,471.0	2,209.3	155.2	2,208.1	0.00	0.00	0.00
15,300.0	90.00	359.59	12,471.0	2,309.3	154.5	2,308.1	0.00	0.00	0.00
15,400.0	90.00	359.59	12,471.0	2,409.3	153.8	2,408.1	0.00	0.00	0.00
15,500.0	90.00	359.59	12,471.0	2,509.3	153.0	2,508.1	0.00	0.00	0.00



Intrepid Planning Report



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Well:	Apollo State Com #204H	Survey Calculation Method:	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)
15,600.0	90.00	359.59	12,471.0	2,609.3	152.3	2,608.1	0.00	0.00	0.00
15,700.0	90.00	359.59	12,471.0	2,709.3	151.6	2,708.1	0.00	0.00	0.00
15,800.0	90.00	359.59	12,471.0	2,809.3	150.9	2,808.1	0.00	0.00	0.00
15,900.0	90.00	359.59	12,471.0	2,909.3	150.2	2,908.1	0.00	0.00	0.00
16,000.0	90.00	359.59	12,471.0	3,009.3	149.5	3,008.1	0.00	0.00	0.00
16,100.0	90.00	359.59	12,471.0	3,109.3	148.8	3,108.1	0.00	0.00	0.00
16,200.0	90.00	359.59	12,471.0	3,209.3	148.0	3,208.1	0.00	0.00	0.00
16,300.0	90.00	359.59	12,471.0	3,309.3	147.3	3,308.1	0.00	0.00	0.00
16,400.0	90.00	359.59	12,471.0	3,409.3	146.6	3,408.1	0.00	0.00	0.00
16,500.0	90.00	359.59	12,471.0	3,509.3	145.9	3,508.1	0.00	0.00	0.00
16,600.0	90.00	359.59	12,471.0	3,609.2	145.2	3,608.1	0.00	0.00	0.00
16,700.0	90.00	359.59	12,471.0	3,709.2	144.5	3,708.1	0.00	0.00	0.00
16,800.0	90.00	359.59	12,471.0	3,809.2	143.8	3,808.1	0.00	0.00	0.00
16,900.0	90.00	359.59	12,471.0	3,909.2	143.1	3,908.1	0.00	0.00	0.00
17,000.0	90.00	359.59	12,471.0	4,009.2	142.3	4,008.1	0.00	0.00	0.00
17,100.0	90.00	359.59	12,471.0	4,109.2	141.6	4,108.1	0.00	0.00	0.00
17,200.0	90.00	359.59	12,471.0	4,209.2	140.9	4,208.1	0.00	0.00	0.00
17,300.0	90.00	359.59	12,471.0	4,309.2	140.2	4,308.1	0.00	0.00	0.00
17,400.0	90.00	359.59	12,471.0	4,409.2	139.5	4,408.1	0.00	0.00	0.00
17,500.0	90.00	359.59	12,471.0	4,509.2	138.8	4,508.1	0.00	0.00	0.00
17,600.0	90.00	359.59	12,471.0	4,609.2	138.1	4,608.1	0.00	0.00	0.00
17,700.0	90.00	359.59	12,471.0	4,709.2	137.3	4,708.1	0.00	0.00	0.00
17,800.0	90.00	359.59	12,471.0	4,809.2	136.6	4,808.1	0.00	0.00	0.00
17,900.0	90.00	359.59	12,471.0	4,909.2	135.9	4,908.1	0.00	0.00	0.00
18,000.0	90.00	359.59	12,471.0	5,009.2	135.2	5,008.1	0.00	0.00	0.00
18,100.0	90.00	359.59	12,471.0	5,109.2	134.5	5,108.1	0.00	0.00	0.00
18,200.0	90.00	359.59	12,471.0	5,209.2	133.8	5,208.1	0.00	0.00	0.00
18,300.0	90.00	359.59	12,471.0	5,309.2	133.1	5,308.1	0.00	0.00	0.00
18,400.0	90.00	359.59	12,471.0	5,409.2	132.3	5,408.1	0.00	0.00	0.00
18,500.0	90.00	359.59	12,471.0	5,509.2	131.6	5,508.1	0.00	0.00	0.00
18,600.0	90.00	359.59	12,471.0	5,609.2	130.9	5,608.1	0.00	0.00	0.00
18,700.0	90.00	359.59	12,471.0	5,709.2	130.2	5,708.1	0.00	0.00	0.00
18,800.0	90.00	359.59	12,471.0	5,809.2	129.5	5,808.1	0.00	0.00	0.00
18,900.0	90.00	359.59	12,471.0	5,909.2	128.8	5,908.1	0.00	0.00	0.00
19,000.0	90.00	359.59	12,471.0	6,009.2	128.1	6,008.1	0.00	0.00	0.00
19,100.0	90.00	359.59	12,471.0	6,109.2	127.4	6,108.1	0.00	0.00	0.00
19,200.0	90.00	359.59	12,471.0	6,209.2	126.6	6,208.1	0.00	0.00	0.00
19,300.0	90.00	359.59	12,471.0	6,309.2	125.9	6,308.1	0.00	0.00	0.00
19,400.0	90.00	359.59	12,471.0	6,409.2	125.2	6,408.1	0.00	0.00	0.00
19,500.0	90.00	359.59	12,471.0	6,509.2	124.5	6,508.1	0.00	0.00	0.00
19,600.0	90.00	359.59	12,471.0	6,609.2	123.8	6,608.1	0.00	0.00	0.00
19,700.0	90.00	359.59	12,471.0	6,709.2	123.1	6,708.1	0.00	0.00	0.00
19,800.0	90.00	359.59	12,471.0	6,809.2	122.4	6,808.1	0.00	0.00	0.00
19,900.0	90.00	359.59	12,471.0	6,909.2	121.6	6,908.1	0.00	0.00	0.00
20,000.0	90.00	359.59	12,471.0	7,009.2	120.9	7,008.1	0.00	0.00	0.00
20,100.0	90.00	359.59	12,471.0	7,109.2	120.2	7,108.1	0.00	0.00	0.00
20,200.0	90.00	359.59	12,471.0	7,209.2	119.5	7,208.1	0.00	0.00	0.00
20,300.0	90.00	359.59	12,471.0	7,309.2	118.8	7,308.1	0.00	0.00	0.00
20,400.0	90.00	359.59	12,471.0	7,409.2	118.1	7,408.1	0.00	0.00	0.00
20,500.0	90.00	359.59	12,471.0	7,509.1	117.4	7,508.1	0.00	0.00	0.00
20,600.0	90.00	359.59	12,471.0	7,609.1	116.6	7,608.1	0.00	0.00	0.00
20,700.0	90.00	359.59	12,471.0	7,709.1	115.9	7,708.1	0.00	0.00	0.00
20,800.0	90.00	359.59	12,471.0	7,809.1	115.2	7,808.1	0.00	0.00	0.00
20,900.0	90.00	359.59	12,471.0	7,909.1	114.5	7,908.1	0.00	0.00	0.00



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Apollo State Com #204H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3570.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3570.0usft
Site:	(Apollo State Com) Sec-21_T-24-S_R-33-E	North Reference:	Grid
Well:	Apollo State Com #204H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
21,000.0	90.00	359.59	12,471.0	8,009.1	113.8	8,008.1	0.00	0.00	0.00	
21,100.0	90.00	359.59	12,471.0	8,109.1	113.1	8,108.1	0.00	0.00	0.00	
21,200.0	90.00	359.59	12,471.0	8,209.1	112.4	8,208.1	0.00	0.00	0.00	
21,300.0	90.00	359.59	12,471.0	8,309.1	111.6	8,308.1	0.00	0.00	0.00	
21,400.0	90.00	359.59	12,471.0	8,409.1	110.9	8,408.1	0.00	0.00	0.00	
21,500.0	90.00	359.59	12,471.0	8,509.1	110.2	8,508.1	0.00	0.00	0.00	
21,600.0	90.00	359.59	12,471.0	8,609.1	109.5	8,608.1	0.00	0.00	0.00	
21,700.0	90.00	359.59	12,471.0	8,709.1	108.8	8,708.1	0.00	0.00	0.00	
21,800.0	90.00	359.59	12,471.0	8,809.1	108.1	8,808.1	0.00	0.00	0.00	
21,900.0	90.00	359.59	12,471.0	8,909.1	107.4	8,908.1	0.00	0.00	0.00	
22,000.0	90.00	359.59	12,471.0	9,009.1	106.7	9,008.1	0.00	0.00	0.00	
22,100.0	90.00	359.59	12,471.0	9,109.1	105.9	9,108.1	0.00	0.00	0.00	
22,200.0	90.00	359.59	12,471.0	9,209.1	105.2	9,208.1	0.00	0.00	0.00	
22,300.0	90.00	359.59	12,471.0	9,309.1	104.5	9,308.1	0.00	0.00	0.00	
22,400.0	90.00	359.59	12,471.0	9,409.1	103.8	9,408.1	0.00	0.00	0.00	
22,500.0	90.00	359.59	12,471.0	9,509.1	103.1	9,508.1	0.00	0.00	0.00	
22,600.0	90.00	359.59	12,471.0	9,609.1	102.4	9,608.1	0.00	0.00	0.00	
22,651.9	90.00	359.59	12,471.0	9,661.0	102.0	9,660.0	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL (Apollo State C - hit/miss target - Shape - Rectangle (sides W100.0 H10,428.0 D30.0)	0.00	359.59	12,471.0	9,661.0	102.0	446,355.00	777,452.00	32° 13' 29.280 N	103° 34' 11.227 W	
LTP (Apollo State Cor - plan misses target center by 0.5usft at 22581.9usft MD (12471.0 TVD, 9591.0 N, 102.5 E) - Point	0.00	0.00	12,471.0	9,591.0	103.0	446,285.00	777,453.00	32° 13' 28.587 N	103° 34' 11.221 W	
FTP (Apollo State Cor - plan misses target center by 272.5usft at 12369.0usft MD (12286.4 TVD, -568.6 N, 204.9 E) - Point	0.00	0.00	12,471.0	-767.0	176.0	435,927.00	777,526.00	32° 11' 46.087 N	103° 34' 11.228 W	



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Apollo State Com #204H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3570.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3570.0usft
Site:	(Apollo State Com) Sec-21_T-24-S_R-33-E	North Reference:	Grid
Well:	Apollo State Com #204H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,168.0	1,168.0	Rustler Anhydrite			
1,660.0	1,660.0	Top Salt			
4,929.1	4,907.0	Base Salt			
5,145.7	5,122.0	Delaware Mountain Gp			
5,166.9	5,143.0	Lamar			
5,208.2	5,184.0	Bell Canyon			
5,230.3	5,206.0	Ramsey Sand			
6,187.5	6,156.0	Cherry Canyon			
7,722.9	7,680.0	Brushy Canyon			
9,143.2	9,099.0	Bone Spring Lime			
9,244.2	9,200.0	Upper Avalon			
9,487.2	9,443.0	Middle Avalon			
9,852.2	9,808.0	Lower Avalon			
10,155.2	10,111.0	1st Bone Spring Sand			
10,554.2	10,510.0	2nd Bone Spring Carb			
10,830.2	10,786.0	2nd Bone Spring Sand			
11,365.2	11,321.0	3rd Bone Spring Carb			
11,951.2	11,907.0	3rd Bone Spring Sand			
12,263.8	12,203.0	3rd BS W Sand			
12,311.2	12,242.0	Wolfcamp A X Sand			
12,530.1	12,388.0	Wolfcamp A Y Sand			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.0	1,500.0	0.0	0.0	NUDGE - Build 1.00
2,200.1	2,198.3	-40.9	12.2	HOLD - 5464.1 at 2200.1 MD
7,664.1	7,621.7	-679.1	202.8	DROP - -1.00
8,364.2	8,320.0	-720.0	215.0	HOLD - 3578.0 at 8364.2 MD
11,942.2	11,898.0	-720.0	215.0	KOP - Build 10.00
12,842.2	12,471.0	-148.3	177.0	EOC/TRN - DLS 2.00 TFO 90.00
13,011.8	12,471.0	21.1	170.8	Start 9640.1 hold at 13011.8 MD
22,651.9	12,471.0	9,661.0	102.0	TD at 22651.9



Casing and Tubing Performance Data

PIPE BODY DATA

GEOMETRY

Outside Diameter	13.375 in	Wall Thickness	0.380 in	API Drift Diameter	12.459 in
Nominal Weight	54.50 lbs/ft	Nominal ID	12.615 in	Alternative Drift Diameter	n.a.
Plain End Weight	52.79 lbs/ft	Nominal cross section	15.513 in		

PERFORMANCE

Steel Grade	J55	Minimum Yield	55,000 psi	Minimum Ultimate	75,000 psi
Tension Yield	853,000 in	Internal Pressure Yield	2,730 psi	Collapse Pressure	1,130 psi
Available Seamless	Yes	Available Welded	Yes		

CONNECTION DATA

TYPE: BTC

GEOMETRY

Coupling Reg OD	14.375 in	Threads per in	5	Thread turns make up	1
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PERFORMANCE

Steel Grade	J55	Coupling Min Yield	55,000 psi	Coupling Min Ultimate	75,000 psi
Joint Strength	909,000 lbs			Internal Pressure Resistance	2,730 psi

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 28900

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 28900
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	5/27/2021