

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

OCD - HOBBS
06/17/2020
RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM138893
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator TAP ROCK OPERATING LLC [372043]		8. Lease Name and Well No. MULVA FED COM 111H [328302]
3a. Address 602 Park Point Drive Suite 200, Golden, CO 80401	3b. Phone No. (include area code) (720) 460-3316	9. API Well No. 30-025-47341
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSW / 13 FSL / 760 FWL / LAT 32.1812779 / LONG -103.361465 At proposed prod. zone SWNW / 2638 FSL / 658 FWL / LAT 32.1593982 / LONG -103.361786		10. Field and Pool, or Exploratory XXXXXXXXXXXXXXXXXXXX [98294]
14. Distance in miles and direction from nearest town or post office* 10 miles		12. County or Parish LEA
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 560 feet		13. State NM
16. No of acres in lease 240		17. Spacing Unit dedicated to this well 240.81
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 25 feet		20. BLM/BIA Bond No. in file FED: NMB001443
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3279 feet	22. Approximate date work will start* 03/01/2020	23. Estimated duration 30 days
24. Attachments		

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) BRIAN WOOD / Ph: (720) 460-3316	Date 10/23/2019
Title President		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959	Date 02/27/2020
Title 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 06/17/2020

SL

(Continued on page 2)

APPROVED WITH CONDITIONS
Approval Date: 02/27/2020

KZ
06/29/2020

*(Instructions on page 2)

- 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



Hydrogen Sulfide Drilling

Operations Plan

Tap Rock Resources

1 H2S safety instructions to the following:

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

2 H2S Detection and Alarm Systems:

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

3 Windssocks and / Wind Streamers:

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

4 Condition Flags and Signs:

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

5 Well Control Equipment:

- See Drilling Operations Plan Schematics

6 Communication:

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



7 Drilling Stem Testing:

- No DST cores are planned at this time

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

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

11 Emergency Contacts

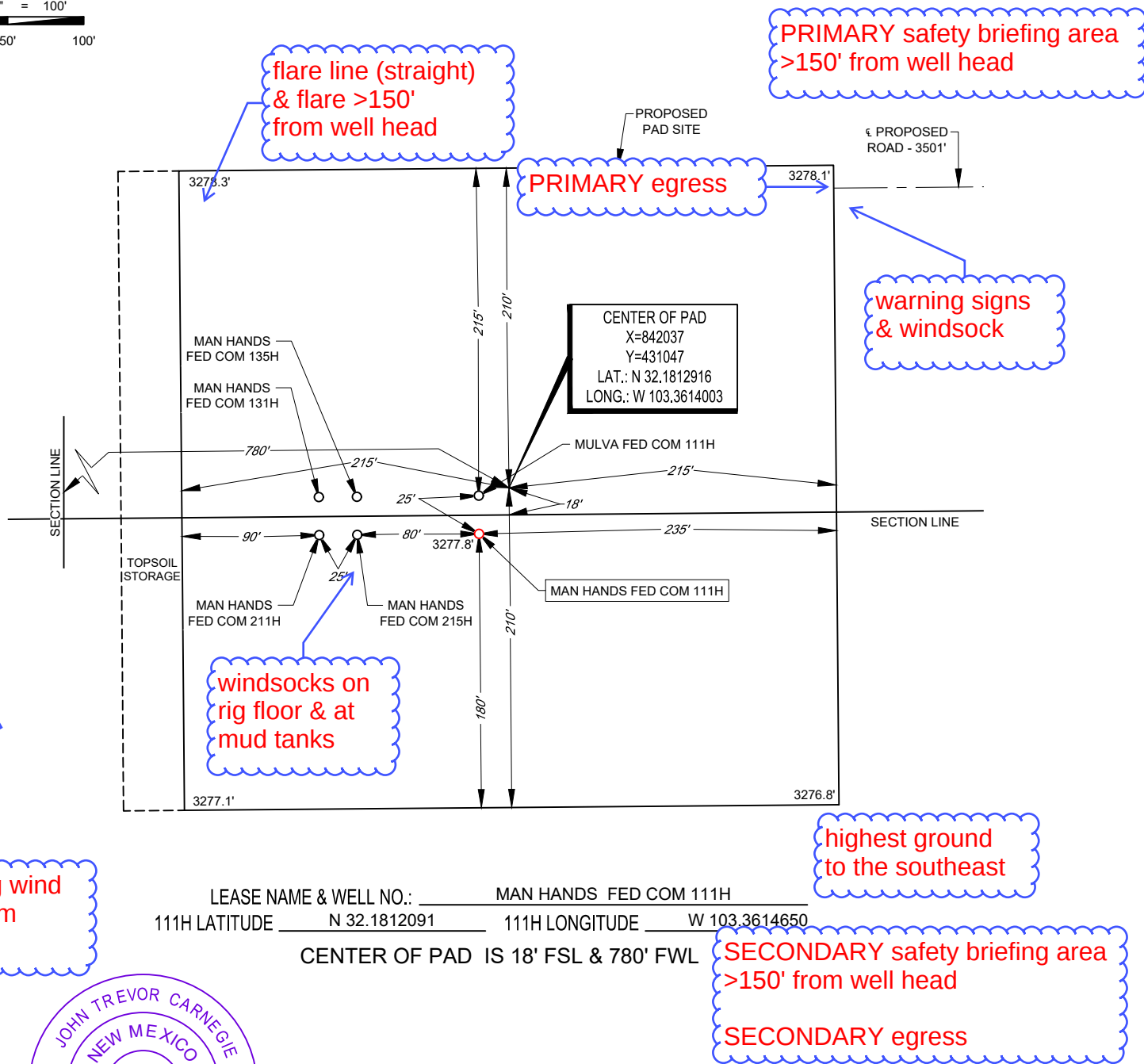
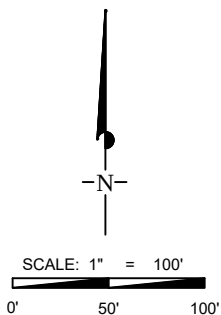
Emergency Contacts		
Carlsbad Police Department	575.887.7551	911
Carlsbad Medical Center	575.887.4100	911
Eddy County Fire Service	575.628.5450	911
Eddy County Sherriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sherriff	575.396.3611	911
Jal Police Department	575.395.2121	911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

EXHIBIT 2B



SECTION 34, TOWNSHIP 24-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



prevailing wind blows from South



John Trevor Carnegie, P.S. No. 11401

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. 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"



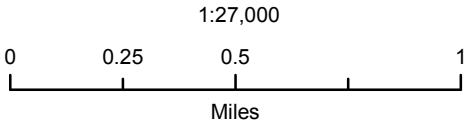
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

Tap Rock Operating, LLC

Man Hands W2 Pad
H2S Contingency Plan:
Radius Map

Section 27, Township 24S, Range 35E
Lea County, New Mexico

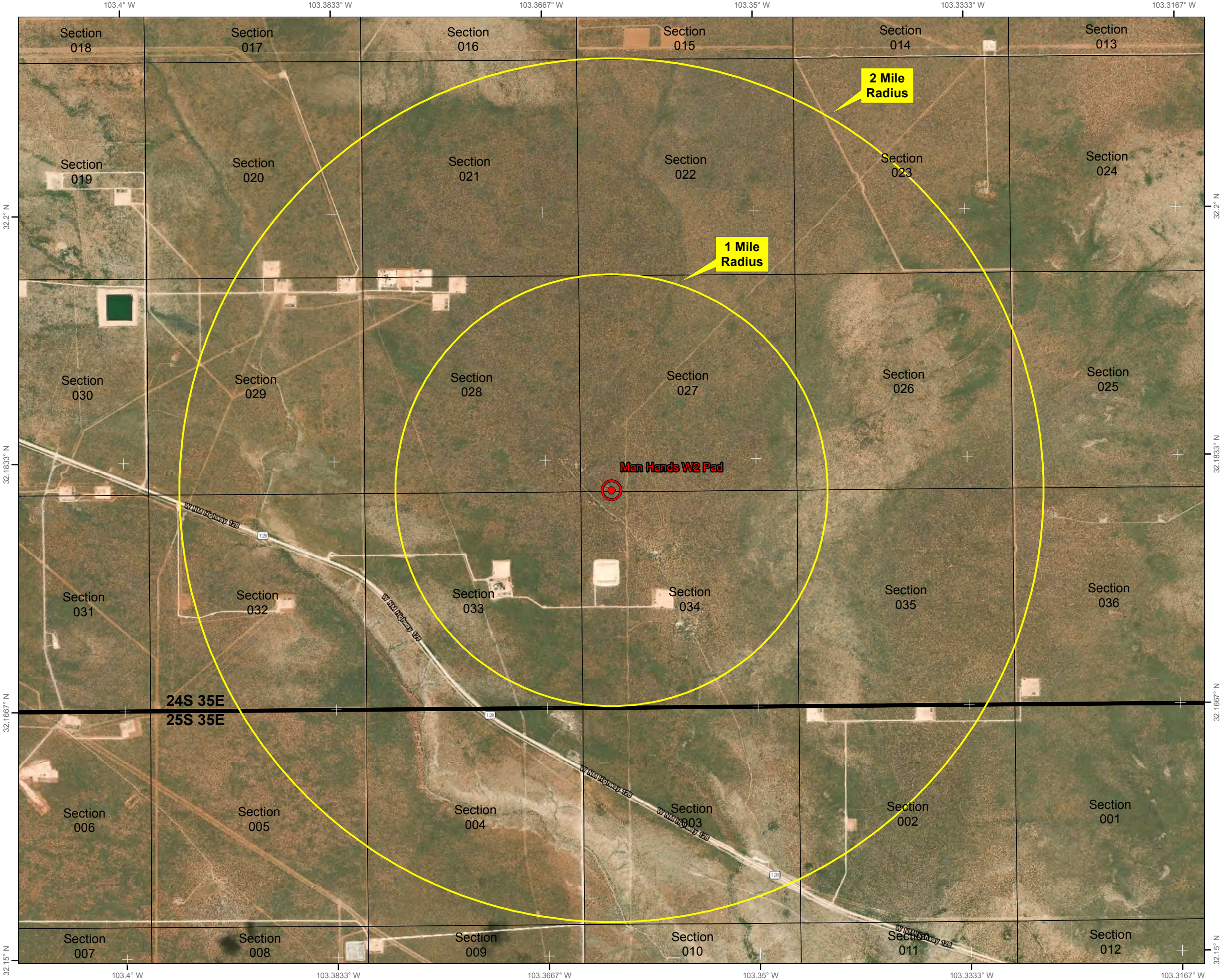
 Surface Hole Location



NAD 1983 New Mexico State Plane East
FIPS 3001 Feet



Prepared by Permits West, Inc., October 14, 2019
for Catena Resources Operating, LLC





Tap Rock Resources, LLC

**Lea County, NM (NAD 83 NME)
(Mulva Fed) Sec-27_T-24-S_R-35-E
Mulva Fed Com #111H**

OWB

Plan: Plan #2

Standard Planning Report

18 September, 2019



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Mulva Fed Com #111H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3305.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3305.0usft
Site:	(Mulva Fed) Sec-27_T-24-S_R-35-E	North Reference:	Grid
Well:	Mulva Fed Com #111H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #2		

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	(Mulva Fed) Sec-27_T-24-S_R-35-E		
Site Position:		Northing:	431,446.00 usft
From:	Map	Easting:	841,909.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 56.609 N
		Longitude:	103° 21' 42.490 W
		Grid Convergence:	0.52 °

Well	Mulva Fed Com #111H		
Well Position	+N/-S	-404.0 usft	Northing: 431,042.00 usft
	+E/-W	108.0 usft	Easting: 842,017.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32° 10' 52.602 N
			Longitude: 103° 21' 41.275 W
			Ground Level: 3,279.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	08/26/19	6.61	60.03	47,710.13735656

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	179.48

Plan Survey Tool Program	Date	09/18/19		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,077.7	Plan #2 (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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,097.5	1.95	11.31	1,097.5	1.6	0.3	2.00	2.00	0.00	11.31	
2,498.3	1.95	11.31	2,497.5	48.4	9.7	0.00	0.00	0.00	0.00	
2,595.8	0.00	0.00	2,595.0	50.0	10.0	2.00	-2.00	0.00	180.00	
9,732.9	0.00	0.00	9,732.1	50.0	10.0	0.00	0.00	0.00	0.00	
10,628.8	89.59	187.65	10,305.0	-513.8	-65.7	10.00	10.00	0.00	187.65	
11,037.4	89.59	179.48	10,308.0	-921.2	-91.1	2.00	0.00	-2.00	-90.01	
18,077.7	89.59	179.48	10,358.0	-7,961.0	-27.0	0.00	0.00	0.00	0.00	PBHL (Mulva Fed C

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Site:	(Mulva Fed) Sec-27_T-24-S_R-35-E	North Reference:	Grid
Well:	Mulva Fed Com #111H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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
466.0	0.00	0.00	466.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler Anhydrite									
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
886.0	0.00	0.00	886.0	0.0	0.0	0.0	0.00	0.00	0.00
Top Salt									
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
NUDGE - Build 2.00									
1,097.5	1.95	11.31	1,097.5	1.6	0.3	-1.6	2.00	2.00	0.00
HOLD - 1400.8 at 1097.5 MD									
1,100.0	1.95	11.31	1,100.0	1.7	0.3	-1.7	0.00	0.00	0.00
1,200.0	1.95	11.31	1,199.9	5.0	1.0	-5.0	0.00	0.00	0.00
1,300.0	1.95	11.31	1,299.9	8.4	1.7	-8.4	0.00	0.00	0.00
1,400.0	1.95	11.31	1,399.8	11.7	2.3	-11.7	0.00	0.00	0.00
1,500.0	1.95	11.31	1,499.7	15.1	3.0	-15.0	0.00	0.00	0.00
1,600.0	1.95	11.31	1,599.7	18.4	3.7	-18.4	0.00	0.00	0.00
1,700.0	1.95	11.31	1,699.6	21.7	4.3	-21.7	0.00	0.00	0.00
1,800.0	1.95	11.31	1,799.6	25.1	5.0	-25.0	0.00	0.00	0.00
1,900.0	1.95	11.31	1,899.5	28.4	5.7	-28.4	0.00	0.00	0.00
2,000.0	1.95	11.31	1,999.5	31.7	6.3	-31.7	0.00	0.00	0.00
2,100.0	1.95	11.31	2,099.4	35.1	7.0	-35.0	0.00	0.00	0.00
2,200.0	1.95	11.31	2,199.3	38.4	7.7	-38.3	0.00	0.00	0.00
2,300.0	1.95	11.31	2,299.3	41.8	8.4	-41.7	0.00	0.00	0.00
2,400.0	1.95	11.31	2,399.2	45.1	9.0	-45.0	0.00	0.00	0.00
2,498.3	1.95	11.31	2,497.5	48.4	9.7	-48.3	0.00	0.00	0.00
DROP - -2.00									
2,500.0	1.92	11.31	2,499.2	48.4	9.7	-48.3	2.00	-2.00	0.00
2,595.8	0.00	0.00	2,595.0	50.0	10.0	-49.9	2.00	-2.00	0.00
HOLD - 7137.1 at 2595.8 MD									
2,600.0	0.00	0.00	2,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
2,700.0	0.00	0.00	2,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
2,800.0	0.00	0.00	2,799.2	50.0	10.0	-49.9	0.00	0.00	0.00
2,900.0	0.00	0.00	2,899.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,000.0	0.00	0.00	2,999.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,100.0	0.00	0.00	3,099.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,200.0	0.00	0.00	3,199.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,300.0	0.00	0.00	3,299.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,400.0	0.00	0.00	3,399.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,500.0	0.00	0.00	3,499.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,600.0	0.00	0.00	3,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,700.0	0.00	0.00	3,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,800.0	0.00	0.00	3,799.2	50.0	10.0	-49.9	0.00	0.00	0.00
3,900.0	0.00	0.00	3,899.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,000.0	0.00	0.00	3,999.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,100.0	0.00	0.00	4,099.2	50.0	10.0	-49.9	0.00	0.00	0.00

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Wellbore:	OWB		
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)
4,200.0	0.00	0.00	4,199.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,300.0	0.00	0.00	4,299.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,400.0	0.00	0.00	4,399.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,500.0	0.00	0.00	4,499.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,600.0	0.00	0.00	4,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,700.0	0.00	0.00	4,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,800.0	0.00	0.00	4,799.2	50.0	10.0	-49.9	0.00	0.00	0.00
4,806.8	0.00	0.00	4,806.0	50.0	10.0	-49.9	0.00	0.00	0.00
Base Salt									
4,900.0	0.00	0.00	4,899.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,000.0	0.00	0.00	4,999.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,100.0	0.00	0.00	5,099.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,199.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,246.8	0.00	0.00	5,246.0	50.0	10.0	-49.9	0.00	0.00	0.00
Delaware Mountain Gp - Lamar									
5,276.8	0.00	0.00	5,276.0	50.0	10.0	-49.9	0.00	0.00	0.00
Bell Canyon									
5,300.0	0.00	0.00	5,299.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,306.8	0.00	0.00	5,306.0	50.0	10.0	-49.9	0.00	0.00	0.00
Ramsey Sand									
5,400.0	0.00	0.00	5,399.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,499.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,799.2	50.0	10.0	-49.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,899.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,999.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,100.0	0.00	0.00	6,099.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,199.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,206.8	0.00	0.00	6,206.0	50.0	10.0	-49.9	0.00	0.00	0.00
Cherry Canyon									
6,300.0	0.00	0.00	6,299.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,399.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,500.0	0.00	0.00	6,499.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,700.0	0.00	0.00	6,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,799.2	50.0	10.0	-49.9	0.00	0.00	0.00
6,900.0	0.00	0.00	6,899.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,999.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,100.0	0.00	0.00	7,099.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,200.0	0.00	0.00	7,199.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,300.0	0.00	0.00	7,299.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,400.0	0.00	0.00	7,399.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,500.0	0.00	0.00	7,499.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,600.0	0.00	0.00	7,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,696.8	0.00	0.00	7,696.0	50.0	10.0	-49.9	0.00	0.00	0.00
Brushy Canyon									
7,700.0	0.00	0.00	7,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,800.0	0.00	0.00	7,799.2	50.0	10.0	-49.9	0.00	0.00	0.00
7,900.0	0.00	0.00	7,899.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,000.0	0.00	0.00	7,999.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,100.0	0.00	0.00	8,099.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,200.0	0.00	0.00	8,199.2	50.0	10.0	-49.9	0.00	0.00	0.00

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Mulva Fed Com #111H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3305.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3305.0usft
Site:	(Mulva Fed) Sec-27_T-24-S-R-35-E	North Reference:	Grid
Well:	Mulva Fed Com #111H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
8,300.0	0.00	0.00	8,299.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,400.0	0.00	0.00	8,399.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,500.0	0.00	0.00	8,499.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,600.0	0.00	0.00	8,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,700.0	0.00	0.00	8,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,800.0	0.00	0.00	8,799.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,900.0	0.00	0.00	8,899.2	50.0	10.0	-49.9	0.00	0.00	0.00
8,976.8	0.00	0.00	8,976.0	50.0	10.0	-49.9	0.00	0.00	0.00
Bone Spring Lime									
9,000.0	0.00	0.00	8,999.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,006.8	0.00	0.00	9,006.0	50.0	10.0	-49.9	0.00	0.00	0.00
Upper Avalon									
9,100.0	0.00	0.00	9,099.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,200.0	0.00	0.00	9,199.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,256.8	0.00	0.00	9,256.0	50.0	10.0	-49.9	0.00	0.00	0.00
Middle Avalon									
9,300.0	0.00	0.00	9,299.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,400.0	0.00	0.00	9,399.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,500.0	0.00	0.00	9,499.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,600.0	0.00	0.00	9,599.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,676.8	0.00	0.00	9,676.0	50.0	10.0	-49.9	0.00	0.00	0.00
Lower Avalon									
9,700.0	0.00	0.00	9,699.2	50.0	10.0	-49.9	0.00	0.00	0.00
9,732.9	0.00	0.00	9,732.1	50.0	10.0	-49.9	0.00	0.00	0.00
KOP - Build 10.00									
9,750.0	1.71	187.65	9,749.1	49.7	10.0	-49.7	10.00	10.00	0.00
9,800.0	6.71	187.65	9,799.0	46.1	9.5	-46.0	10.00	10.00	0.00
9,850.0	11.71	187.65	9,848.3	38.2	8.4	-38.1	10.00	10.00	0.00
9,900.0	16.71	187.65	9,896.8	26.0	6.8	-26.0	10.00	10.00	0.00
9,950.0	21.71	187.65	9,944.0	9.7	4.6	-9.7	10.00	10.00	0.00
10,000.0	26.71	187.65	9,989.6	-10.6	1.9	10.6	10.00	10.00	0.00
10,050.0	31.71	187.65	10,033.2	-34.7	-1.4	34.7	10.00	10.00	0.00
10,100.0	36.71	187.65	10,074.6	-62.6	-5.1	62.5	10.00	10.00	0.00
10,150.0	41.71	187.65	10,113.3	-93.9	-9.3	93.8	10.00	10.00	0.00
10,167.3	43.43	187.65	10,126.0	-105.5	-10.9	105.4	10.00	10.00	0.00
1st Bone Spring Sand									
10,200.0	46.71	187.65	10,149.1	-128.4	-14.0	128.3	10.00	10.00	0.00
10,250.0	51.71	187.65	10,181.8	-166.0	-19.0	165.8	10.00	10.00	0.00
10,300.0	56.71	187.65	10,211.0	-206.1	-24.4	205.9	10.00	10.00	0.00
10,350.0	61.71	187.65	10,236.6	-248.7	-30.1	248.4	10.00	10.00	0.00
10,400.0	66.71	187.65	10,258.4	-293.3	-36.1	293.0	10.00	10.00	0.00
10,450.0	71.71	187.65	10,276.1	-339.6	-42.3	339.2	10.00	10.00	0.00
10,500.0	76.71	187.65	10,289.7	-387.3	-48.7	386.8	10.00	10.00	0.00
10,550.0	81.71	187.65	10,299.1	-435.9	-55.3	435.4	10.00	10.00	0.00
10,600.0	86.71	187.65	10,304.1	-485.2	-61.9	484.6	10.00	10.00	0.00
10,628.8	89.59	187.65	10,305.0	-513.8	-65.7	513.2	10.00	10.00	0.00
EOC/TRN - DLS 2.00 TFO -90.01									
10,700.0	89.59	186.23	10,305.6	-584.4	-74.3	583.7	2.00	0.00	-2.00
10,800.0	89.59	184.23	10,306.3	-684.0	-83.4	683.2	2.00	0.00	-2.00
10,900.0	89.59	182.23	10,307.0	-783.8	-89.1	783.0	2.00	0.00	-2.00
11,000.0	89.59	180.23	10,307.7	-883.8	-91.2	882.9	2.00	0.00	-2.00
11,037.4	89.59	179.48	10,308.0	-921.2	-91.1	920.4	2.00	0.00	-2.00
Start 7040.2 hold at 11037.4 MD									



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Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3305.0usft
Site:	(Mulva Fed) Sec-27_T-24-S-R-35-E	North Reference:	Grid
Well:	Mulva Fed Com #111H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
11,100.0	89.59	179.48	10,308.4	-983.8	-90.5	982.9	0.00	0.00	0.00
11,200.0	89.59	179.48	10,309.1	-1,083.8	-89.6	1,082.9	0.00	0.00	0.00
11,300.0	89.59	179.48	10,309.8	-1,183.8	-88.7	1,182.9	0.00	0.00	0.00
11,400.0	89.59	179.48	10,310.5	-1,283.8	-87.8	1,282.9	0.00	0.00	0.00
11,500.0	89.59	179.48	10,311.2	-1,383.8	-86.9	1,382.9	0.00	0.00	0.00
11,600.0	89.59	179.48	10,312.0	-1,483.8	-86.0	1,482.9	0.00	0.00	0.00
11,700.0	89.59	179.48	10,312.7	-1,583.8	-85.1	1,582.9	0.00	0.00	0.00
11,800.0	89.59	179.48	10,313.4	-1,683.7	-84.2	1,682.9	0.00	0.00	0.00
11,900.0	89.59	179.48	10,314.1	-1,783.7	-83.3	1,782.9	0.00	0.00	0.00
12,000.0	89.59	179.48	10,314.8	-1,883.7	-82.3	1,882.9	0.00	0.00	0.00
12,100.0	89.59	179.48	10,315.5	-1,983.7	-81.4	1,982.9	0.00	0.00	0.00
12,200.0	89.59	179.48	10,316.2	-2,083.7	-80.5	2,082.9	0.00	0.00	0.00
12,300.0	89.59	179.48	10,316.9	-2,183.7	-79.6	2,182.9	0.00	0.00	0.00
12,400.0	89.59	179.48	10,317.6	-2,283.7	-78.7	2,282.9	0.00	0.00	0.00
12,500.0	89.59	179.48	10,318.4	-2,383.7	-77.8	2,382.9	0.00	0.00	0.00
12,600.0	89.59	179.48	10,319.1	-2,483.7	-76.9	2,482.9	0.00	0.00	0.00
12,700.0	89.59	179.48	10,319.8	-2,583.7	-76.0	2,582.9	0.00	0.00	0.00
12,800.0	89.59	179.48	10,320.5	-2,683.7	-75.1	2,682.9	0.00	0.00	0.00
12,900.0	89.59	179.48	10,321.2	-2,783.7	-74.1	2,782.9	0.00	0.00	0.00
13,000.0	89.59	179.48	10,321.9	-2,883.7	-73.2	2,882.9	0.00	0.00	0.00
13,100.0	89.59	179.48	10,322.6	-2,983.7	-72.3	2,982.9	0.00	0.00	0.00
13,200.0	89.59	179.48	10,323.3	-3,083.7	-71.4	3,082.9	0.00	0.00	0.00
13,300.0	89.59	179.48	10,324.0	-3,183.6	-70.5	3,182.9	0.00	0.00	0.00
13,400.0	89.59	179.48	10,324.8	-3,283.6	-69.6	3,282.9	0.00	0.00	0.00
13,500.0	89.59	179.48	10,325.5	-3,383.6	-68.7	3,382.9	0.00	0.00	0.00
13,600.0	89.59	179.48	10,326.2	-3,483.6	-67.8	3,482.9	0.00	0.00	0.00
13,700.0	89.59	179.48	10,326.9	-3,583.6	-66.9	3,582.9	0.00	0.00	0.00
13,800.0	89.59	179.48	10,327.6	-3,683.6	-65.9	3,682.9	0.00	0.00	0.00
13,900.0	89.59	179.48	10,328.3	-3,783.6	-65.0	3,782.9	0.00	0.00	0.00
14,000.0	89.59	179.48	10,329.0	-3,883.6	-64.1	3,882.9	0.00	0.00	0.00
14,100.0	89.59	179.48	10,329.7	-3,983.6	-63.2	3,982.9	0.00	0.00	0.00
14,200.0	89.59	179.48	10,330.4	-4,083.6	-62.3	4,082.9	0.00	0.00	0.00
14,300.0	89.59	179.48	10,331.2	-4,183.6	-61.4	4,182.9	0.00	0.00	0.00
14,400.0	89.59	179.48	10,331.9	-4,283.6	-60.5	4,282.8	0.00	0.00	0.00
14,500.0	89.59	179.48	10,332.6	-4,383.6	-59.6	4,382.8	0.00	0.00	0.00
14,600.0	89.59	179.48	10,333.3	-4,483.6	-58.7	4,482.8	0.00	0.00	0.00
14,700.0	89.59	179.48	10,334.0	-4,583.6	-57.8	4,582.8	0.00	0.00	0.00
14,800.0	89.59	179.48	10,334.7	-4,683.5	-56.8	4,682.8	0.00	0.00	0.00
14,900.0	89.59	179.48	10,335.4	-4,783.5	-55.9	4,782.8	0.00	0.00	0.00
15,000.0	89.59	179.48	10,336.1	-4,883.5	-55.0	4,882.8	0.00	0.00	0.00
15,100.0	89.59	179.48	10,336.8	-4,983.5	-54.1	4,982.8	0.00	0.00	0.00
15,200.0	89.59	179.48	10,337.5	-5,083.5	-53.2	5,082.8	0.00	0.00	0.00
15,300.0	89.59	179.48	10,338.3	-5,183.5	-52.3	5,182.8	0.00	0.00	0.00
15,400.0	89.59	179.48	10,339.0	-5,283.5	-51.4	5,282.8	0.00	0.00	0.00
15,500.0	89.59	179.48	10,339.7	-5,383.5	-50.5	5,382.8	0.00	0.00	0.00
15,600.0	89.59	179.48	10,340.4	-5,483.5	-49.6	5,482.8	0.00	0.00	0.00
15,700.0	89.59	179.48	10,341.1	-5,583.5	-48.6	5,582.8	0.00	0.00	0.00
15,800.0	89.59	179.48	10,341.8	-5,683.5	-47.7	5,682.8	0.00	0.00	0.00
15,900.0	89.59	179.48	10,342.5	-5,783.5	-46.8	5,782.8	0.00	0.00	0.00
16,000.0	89.59	179.48	10,343.2	-5,883.5	-45.9	5,882.8	0.00	0.00	0.00
16,100.0	89.59	179.48	10,343.9	-5,983.5	-45.0	5,982.8	0.00	0.00	0.00
16,200.0	89.59	179.48	10,344.7	-6,083.5	-44.1	6,082.8	0.00	0.00	0.00
16,300.0	89.59	179.48	10,345.4	-6,183.4	-43.2	6,182.8	0.00	0.00	0.00
16,400.0	89.59	179.48	10,346.1	-6,283.4	-42.3	6,282.8	0.00	0.00	0.00

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Mulva Fed Com #111H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3305.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3305.0usft
Site:	(Mulva Fed) Sec-27_T-24-S_R-35-E	North Reference:	Grid
Well:	Mulva Fed Com #111H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)	
16,500.0	89.59	179.48	10,346.8	-6,383.4	-41.4	6,382.8	0.00	0.00	0.00	
16,600.0	89.59	179.48	10,347.5	-6,483.4	-40.5	6,482.8	0.00	0.00	0.00	
16,700.0	89.59	179.48	10,348.2	-6,583.4	-39.5	6,582.8	0.00	0.00	0.00	
16,800.0	89.59	179.48	10,348.9	-6,683.4	-38.6	6,682.8	0.00	0.00	0.00	
16,900.0	89.59	179.48	10,349.6	-6,783.4	-37.7	6,782.8	0.00	0.00	0.00	
17,000.0	89.59	179.48	10,350.3	-6,883.4	-36.8	6,882.8	0.00	0.00	0.00	
17,100.0	89.59	179.48	10,351.1	-6,983.4	-35.9	6,982.8	0.00	0.00	0.00	
17,200.0	89.59	179.48	10,351.8	-7,083.4	-35.0	7,082.8	0.00	0.00	0.00	
17,300.0	89.59	179.48	10,352.5	-7,183.4	-34.1	7,182.8	0.00	0.00	0.00	
17,400.0	89.59	179.48	10,353.2	-7,283.4	-33.2	7,282.8	0.00	0.00	0.00	
17,500.0	89.59	179.48	10,353.9	-7,383.4	-32.3	7,382.8	0.00	0.00	0.00	
17,600.0	89.59	179.48	10,354.6	-7,483.4	-31.3	7,482.8	0.00	0.00	0.00	
17,700.0	89.59	179.48	10,355.3	-7,583.4	-30.4	7,582.8	0.00	0.00	0.00	
17,796.3	89.59	179.48	10,356.0	-7,679.6	-29.6	7,679.0	0.00	0.00	0.00	
2nd Bone Spring Carb										
17,800.0	89.59	179.48	10,356.0	-7,683.3	-29.5	7,682.8	0.00	0.00	0.00	
17,900.0	89.59	179.48	10,356.7	-7,783.3	-28.6	7,782.8	0.00	0.00	0.00	
18,000.0	89.59	179.48	10,357.4	-7,883.3	-27.7	7,882.8	0.00	0.00	0.00	
18,077.7	89.59	179.48	10,358.0	-7,961.0	-27.0	7,960.4	0.00	0.00	0.00	
TD at 18077.7										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
FTP (Mulva Fed Com - hit/miss target - Shape - Point)	0.00	0.00	10,305.0	-114.0	-99.0	430,928.00	841,918.00	32° 10' 51.483 N	103° 21' 42.439 W	- plan misses target center by 150.6usft at 10289.0usft MD (10204.9 TVD, -197.0 N, -23.2 E)
PBHL (Mulva Fed Cor - plan hits target center - Rectangle (sides W100.0 H10,481.0 D30.0))	0.40	179.48	10,358.0	-7,961.0	-27.0	423,081.00	841,990.00	32° 9' 33.832 N	103° 21' 42.426 W	
LTP (Mulva Fed Com - plan misses target center by 17.7usft at 17982.8usft MD (10357.3 TVD, -7866.1 N, -27.9 E) - Point)	0.00	0.00	10,375.0	-7,866.0	-28.0	423,176.00	841,989.00	32° 9' 34.773 N	103° 21' 42.428 W	

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Site:	(Mulva Fed) Sec-27_T-24-S_R-35-E	North Reference:	Grid
Well:	Mulva Fed Com #111H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
466.0	466.0	Rustler Anhydrite			
886.0	886.0	Top Salt			
4,806.8	4,806.0	Base Salt			
5,246.8	5,246.0	Delaware Mountain Gp			
5,246.8	5,246.0	Lamar			
5,276.8	5,276.0	Bell Canyon			
5,306.8	5,306.0	Ramsey Sand			
6,206.8	6,206.0	Cherry Canyon			
7,696.8	7,696.0	Brushy Canyon			
8,976.8	8,976.0	Bone Spring Lime			
9,006.8	9,006.0	Upper Avalon			
9,256.8	9,256.0	Middle Avalon			
9,676.8	9,676.0	Lower Avalon			
10,167.3	10,126.0	1st Bone Spring Sand			
17,796.3	10,356.0	2nd Bone Spring Carb			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	NUDGE - Build 2.00
1,097.5	1,097.5	1.6	0.3	HOLD - 1400.8 at 1097.5 MD
2,498.3	2,497.5	48.4	9.7	DROP - -2.00
2,595.8	2,595.0	50.0	10.0	HOLD - 7137.1 at 2595.8 MD
9,732.9	9,732.1	50.0	10.0	KOP - Build 10.00
10,628.8	10,305.0	-513.8	-65.7	EOC/TRN - DLS 2.00 TFO -90.01
11,037.4	10,308.0	-921.2	-91.1	Start 7040.2 hold at 11037.4 MD
18,077.7	10,358.0	-7,961.0	-27.0	TD at 18077.7



Drilling Operations Plan
Mulva Fed Com #111H
Tap Rock Operating, LLC
SHL 13' FSL & 760' FWL, Sec. 27
BHL 2638' FSL & 658' FWL, Sec. 3
T. 24S., R. 35E Lea County, NM

Elevation above Sea Level: 3279'

DRILLING PROGRAM

1. Estimated Tops

Formation	TVD	MD	Lithologies	Bearing
Quaternary Deposits	0	0	Surface	None
Rustler Anhydrite	466	466		Salt
Salado	886	886	Salt	Salt
Base Salt	4806	4806		Salt
Lamar	5246	5246	Limestone	None
Bell Canyon	5276	5276	Sandstone	Hydrocarbons
Cherry Canyon	6206	6206	Sandstone	Hydrocarbons
Brushy Canyon	7696	7696	Sandstone	Hydrocarbons
Bone Spring	8976	8976	Limestone	Hydrocarbons
KOP	9732	9732	Sandstone	Hydrocarbons
1st Bone Spring	10126	10167	Sandstone	Hydrocarbons
TD	10358	18075	Shale	Hydrocarbons

2. Notable Zones

1st Bone Spring Sand is the target formation.

3. Pressure Control

Pressure Control Equipment (See Schematics):

A 15,000', 5,000 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.

BOP Test procedure will be as follows:

After surface casing is set and the BOP is nipped up, the BOP pressure tests will be made with a third party tester to 250 psi low, 5000 psi high, and the annular preventer will be tested to 2,500 psi. The BOP will be tested in this manner after nipple-up if any break of the stack occurs.



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Variance Requests:

Tap Rock requests a variance to run a multi-bowl speed head for setting the Intermediate 1, 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 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.

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	550	0	550	J-55	54.5	BUTT	1.13	1.15	1.6
1st Intermediate	12 1/4	9 5/8	API	No	0	5300	0	5300	J-55	40	BUTT	1.13	1.15	1.6
Production	8 3/4	5 1/2	NON API	No	0	18075	0	10358	P-110	20	TXP	1.13	1.15	1.6

Name	Type	Top MD	Sacks	Yield	Cu. Ft	Weight	Excess	Cement	Additives
Surface	Tail	0	566	1.35	764	14.8	100%	C	5% NCI + LCM
1st Intermediate	Lead	0	1005	2.18	2191	12.7	65%	C	Bentonite + 1% CaCL ₂ + 8% NaCl + LCM
	Tail	4300	412	1.33	548	14.8	65%	C	5% NaCl + LCM
Production	Tail	4800	2454	1.71	4196	14.2	25%	H	Fluid Loss + Dispersant + Retarder + LCM



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5. Mud Program

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.

Name	Top	Bottom	Type	Mud Weight	Visc	Fluid Loss
Surface	0	550	FW Spud Mud	8.30	28	NC
Intermediate	550	5300	Brine Water	10.00	30-32	NC
Production	5300	18075	Cut Brine	9.00	15-20	<10

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.

7. Down Hole Conditions

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is $\approx 4,840$ psi. Expected bottom hole temperature is $\approx 160^{\circ}$ 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 Conditions

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.

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

OCD - HOBBS
06/17/2020
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025 -47341		² Pool Code 98098	³ Pool Name WC-025 G-09 S243532M; WOLFBONE
⁴ Property Code 328302	⁵ Property Name MULVA FED COM		⁶ Well Number 111H
⁷ OGRID No. 372043	⁸ Operator Name TAP ROCK OPERATING, LLC.		⁹ Elevation 3279'

¹⁰Surface Location

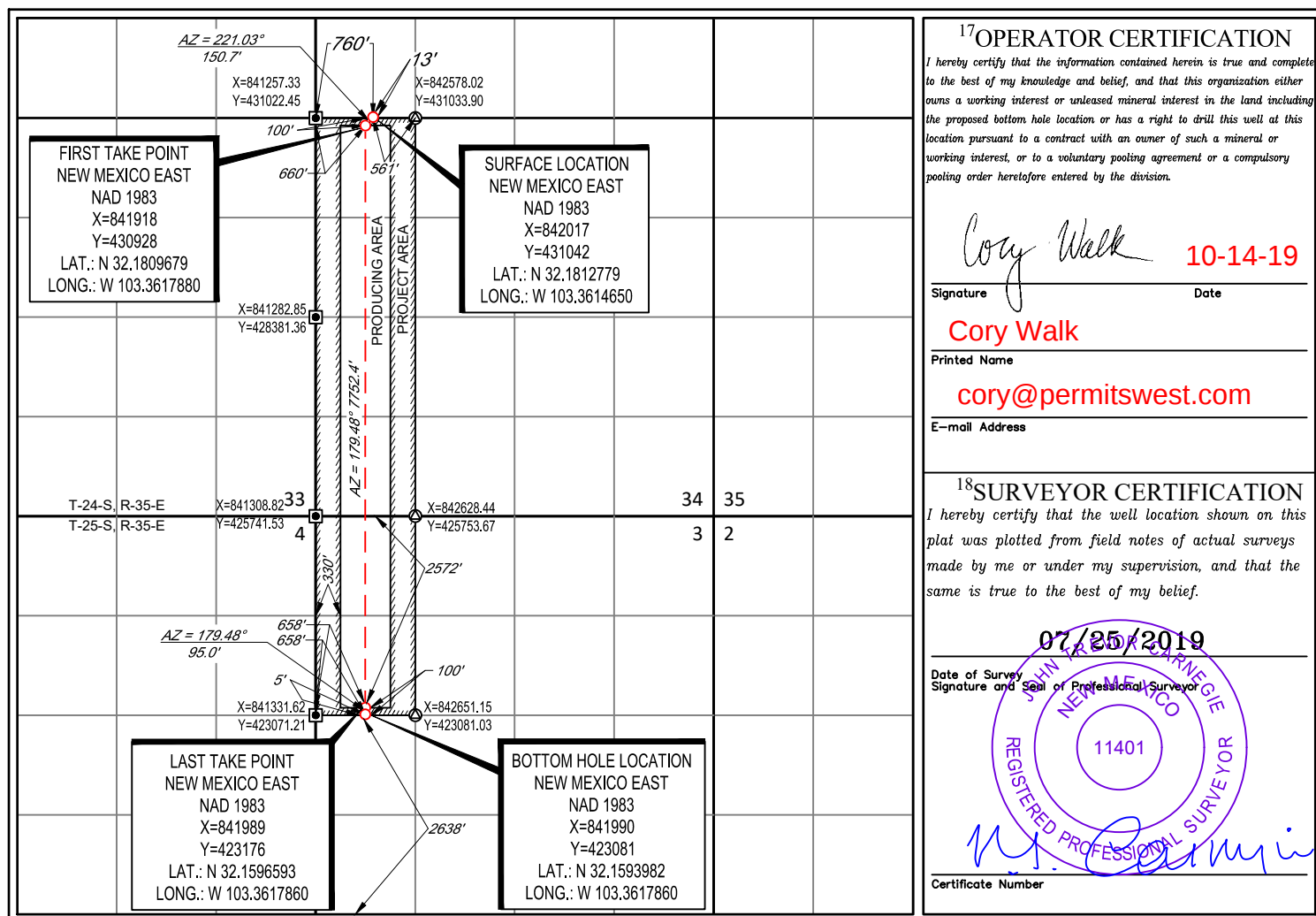
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	27	24-S	35-E	-	13'	SOUTH	760'	WEST	LEA

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
E	3	25-S	35-E	-	2638'	SOUTH	658'	WEST	LEA

¹² Dedicated Acres 240.81	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.

Cory Walk **10-14-19**
Signature Date

Cory Walk

Printed Name

cory@permitswest.com

E-mail Address

¹⁸SURVEYOR 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.

07/25/2019
Date of Survey
Signature and Seal of Professional Surveyor
[Signature]
Certificate Number
11401

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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

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GAS CAPTURE PLAN

Date: 9/25/2019

☒ 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, recomple 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
Mulva Fed Com #111H	30-025-47341	M S27 T24-S R-35E	13' FSL 760' FWL	+/- 1,500	21 days	Gas will be flared for ~21 days on flowback before turning into 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 Lucid Energy Group, LLC and will be connected to Lucid Energy Group, LLC low/high pressure gathering system located in Eddy County, New Mexico. It will require ~10,500' of pipeline to connect the facility to low/high pressure gathering system. Tap Rock Operating, LLC provides (periodically) to Lucid Energy Group, LLC 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 Lucid Energy Group, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Lucid Energy Group, LLC's Red Hills Processing Plant located in Lea County, New Mexico. 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 the midstream side at that time. Based on current information, it is Tap Rock'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