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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

Form C-101
August 1, 2011

Permit 395648

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
3R Operating, LLC 20405 State Highway 249 Houston, TX 77070	331569
	3. API Number 30-015-57282

4. Property Code	5. Property Name	6. Well No.
337768	MAD RIVER 13 U STATE COM	401H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
I	13	24S	27E	I	2287	S	161	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	13	24S	27E	P	660	S	100	E	Eddy

9. Pool Information

WILLOW LAKE;BONE SPRING	64450

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3088
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	6960	1st Bone Spring Sand		10/1/2025
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	750	735	0
Int1	12.25	9.625	40	2450	723	0
Prod	8.75	5.5	20	6960	2770	0

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	10000	5000	Atlas
Annular	5000	3500	Atlas

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

OIL CONSERVATION DIVISION

Printed Name:	Electronically filed by Austin Tramell	Approved By:	Jeffrey Harrison
Title:	Director of environmental and regulatory	Title:	Petroleum Specialist III
Email Address:	atramell@3roperating.com	Approved Date:	9/24/2025 Expiration Date: 9/24/2027
Date:	8/20/2025 Phone: 832-810-1037	Conditions of Approval Attached	

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☑ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-015-57282	96415 ~~64450~~	~~WILLOW LAKE; BONE SPRING~~ WILLOW LAKE;BONE SPRING, WEST
Property Code	Property Name	Well Number
	MAD RIVER 13 U STATE COM	401H
OGRID No.	Operator Name	Ground Level Elevation
331569	3R OPERATING, LLC	3,088'

Surface Owner: ☐ State ☑ Fee ☐ Tribal ☐ Federal | Mineral Owner: ☑ State ☐ Fee ☐ Tribal ☐ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	13	24 S	27 E		2,287' FSL	161' FEL	32.216661°	-104.136020°	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	13	24 S	27 E		660' FSL	100' FEL	32.212191°	-104.135824°	EDDY

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
320	Defining Well	Pending	Y	C

Order Numbers: Pending | Well setbacks are under Common Ownership: ☑ Yes ☐ No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	13	24 S	27 E		2,287' FSL	161' FEL	32.216661°	-104.136020°	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	13	24 S	27 E		1,980' FSL	100' FEL	32.215821°	-104.135824°	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	13	24 S	27 E		660' FSL	100' FEL	32.212191°	-104.135824°	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unit Type	Ground Floor Elevation:
Comm Agreement	☑ Horizontal ☐ Vertical	

OPERATOR CERTIFICATIONS

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

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Austin Tramell 08/20/2025

Signature Date

Austin Tramell

Printed Name

atramell@3roperating.com

Email Address

SURVEYOR CERTIFICATIONS

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

MARK J. MURRAY NEW MEXICO 12177 REGISTERED PROFESSIONAL SURVEYOR

Date: 8/20/2025

Signature and Seal of Professional Surveyor

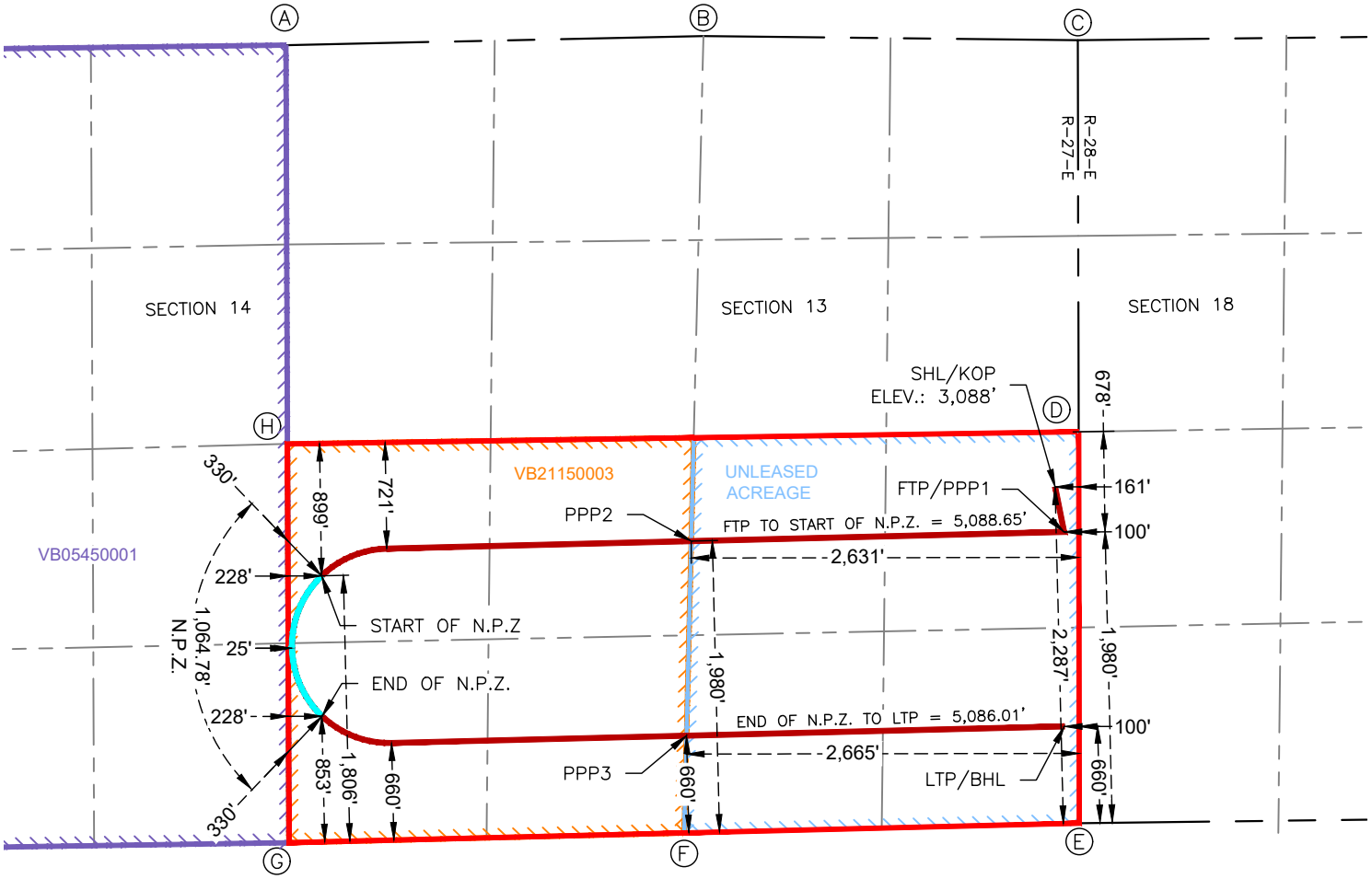
Certificate Number	Date of Survey	Revision Number
12177	8/20/2025	0

Note: 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.

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



MAD RIVER 13 U STATE COM 401H

SURFACE HOLE LOCATION & KICK-OFF POINT
2,287' FSL & 161' FEL
ELEV. = 3,088'
NAD 83 X = 602,358.06'
NAD 83 Y = 442,611.25'
NAD 83 LAT = 32.216661°
NAD 83 LONG = -104.136020°
NAD 27 X = 561,174.94'
NAD 27 Y = 442,552.91'
NAD 27 LAT = 32.216540°
NAD 27 LONG = -104.135525°

FIRST TAKE POINT & PENETRATION POINT 1
1,980' FSL & 100' FEL
NAD 83 X = 602,419.19'
NAD 83 Y = 442,305.73'
NAD 83 LAT = 32.215821°
NAD 83 LONG = -104.135824°
NAD 27 X = 561,236.06'
NAD 27 Y = 442,247.40'
NAD 27 LAT = 32.215700°
NAD 27 LONG = -104.135330°

PENETRATION POINT 2
1,980' FSL & 2,631' FEL
NAD 83 X = 599,888.74'
NAD 83 Y = 442,243.33'
NAD 83 LAT = 32.215662°
NAD 83 LONG = -104.144007°
NAD 27 X = 558,705.66'
NAD 27 Y = 442,185.03'
NAD 27 LAT = 32.215541°
NAD 27 LONG = -104.143512°

START OF N.P.Z.
1,806' FSL & 228' FWL
NAD 83 X = 597,380.30'
NAD 83 Y = 442,007.35'
NAD 83 LAT = 32.215025°
NAD 83 LONG = -104.152119°
NAD 27 X = 556,197.26'
NAD 27 Y = 441,949.09'
NAD 27 LAT = 32.214905°
NAD 27 LONG = -104.151624°

END OF N.P.Z.
853' FSL & 228' FWL
NAD 83 X = 597,383.89'
NAD 83 Y = 441,054.35'
NAD 83 LAT = 32.212405°
NAD 83 LONG = -104.152113°
NAD 27 X = 556,200.84'
NAD 27 Y = 440,996.10'
NAD 27 LAT = 32.212285°
NAD 27 LONG = -104.151617°

PENETRATION POINT 3
660' FSL & 2,665' FEL
NAD 83 X = 599,856.75'
NAD 83 Y = 440,922.14'
NAD 83 LAT = 32.212030°
NAD 83 LONG = -104.144118°
NAD 27 X = 558,673.64'
NAD 27 Y = 440,863.86'
NAD 27 LAT = 32.211910°
NAD 27 LONG = -104.143623°

LAST TAKE POINT & BOTTOM HOLE LOCATION
660' FSL & 100' FEL
NAD 83 X = 602,421.53'
NAD 83 Y = 440,985.39'
NAD 83 LAT = 32.212191°
NAD 83 LONG = -104.135824°
NAD 27 X = 561,238.38'
NAD 27 Y = 440,927.08'
NAD 27 LAT = 32.212071°
NAD 27 LONG = -104.135330°

CORNER COORDINATES NEW MEXICO EAST - NAD 83	
POINT	NORTHING/EASTING
A	N:445,611.24' E:597,138.37'
B	N:445,673.08' E:599,971.81'
C	N:445,644.88' E:602,511.85'
D	N:442,985.73' E:602,517.98'
E	N:440,327.68' E:602,522.70'
F	N:440,261.54' E:599,840.75'
G	N:440,195.40' E:597,158.80'
H	N:442,903.32' E:597,148.58'

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1220 S. St Francis Dr.
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Form APD Comments

Permit 395648

PERMIT COMMENTS

Operator Name and Address:	API Number:
3R Operating, LLC [331569] 20405 State Highway 249 Houston, TX 77070	30-015-57282
	Well: MAD RIVER 13 U STATE COM #401H

Created By	Comment	Comment Date
jeffrey.harrison	Submitted as defining well for spacing unit.	9/24/2025

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Phone: (505) 476-3441

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

Form APD Conditions

Permit 395648

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
3R Operating, LLC [331569] 20405 State Highway 249 Houston, TX 77070	30-015-57282
	Well: MAD RIVER 13 U STATE COM #401H

OCD Reviewer	Condition
jeffrey.harrison	Name change may be required if proposed well is part of same property/property code as Mad River 13 State Com (337250). Please review OCD and SLO naming requirements to determine if this is necessary.
jeffrey.harrison	Cement is required to circulate on both surface and intermediate1 strings of casing.
jeffrey.harrison	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.
jeffrey.harrison	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.
jeffrey.harrison	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.
jeffrey.harrison	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
jeffrey.harrison	NSL may be required if any portion of the wellbore is completed within 330 feet (perpendicular to the wellbore) of the spacing unit boundary.

3R Operating, LLC

Company: 3R Operating, LLC
Field: Eddy County, NM (NAD83)
Location: Mad River 13 U State Com
Well: Mad River 13 U State Com 401H OH
Plan: Plan 1
3088 + 27' KB @ 3115.00usft

RIG: TBD

Azimuths to Grid North
True North: -0.11°
Magnetic North: 6.39°

Magnetic Field
Strength: 46946.7nT
Dip Angle: 59.66°
Date: 8/12/2025
Model: IGRF2025

To convert a Magnetic Direction to a Grid Direction, Add 6.39°

LEGACY DIRECTIONAL

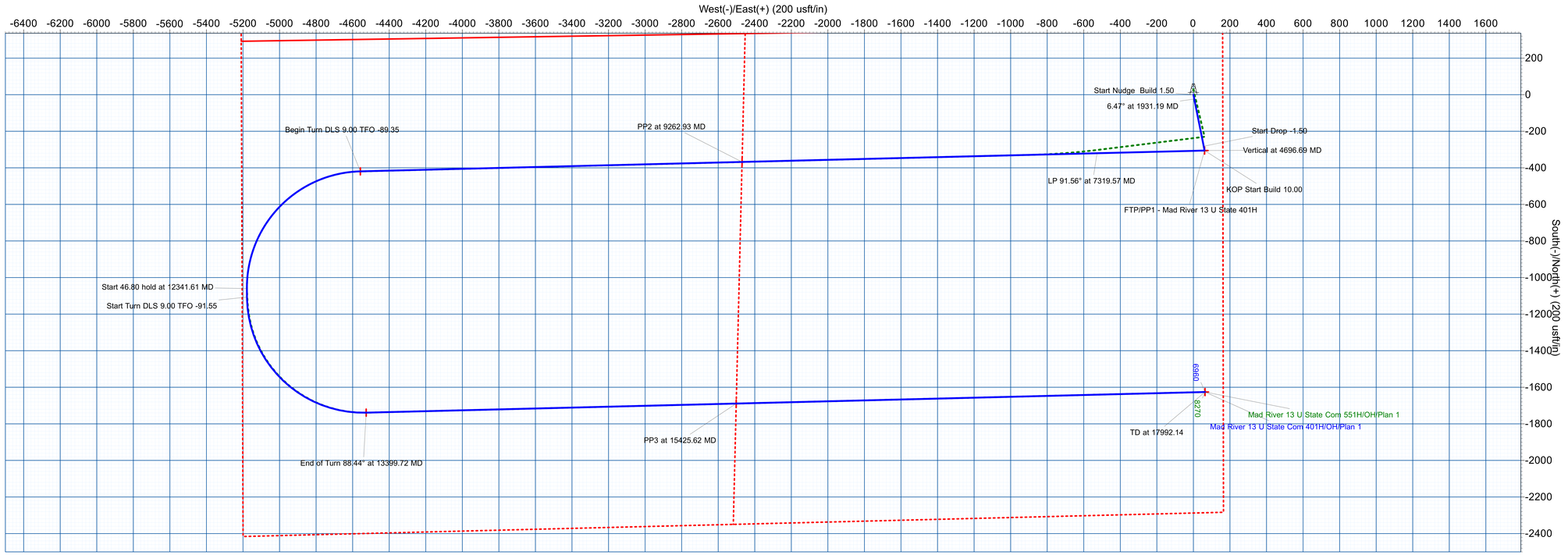
WELL DETAILS: Mad River 13 U State Com 401H

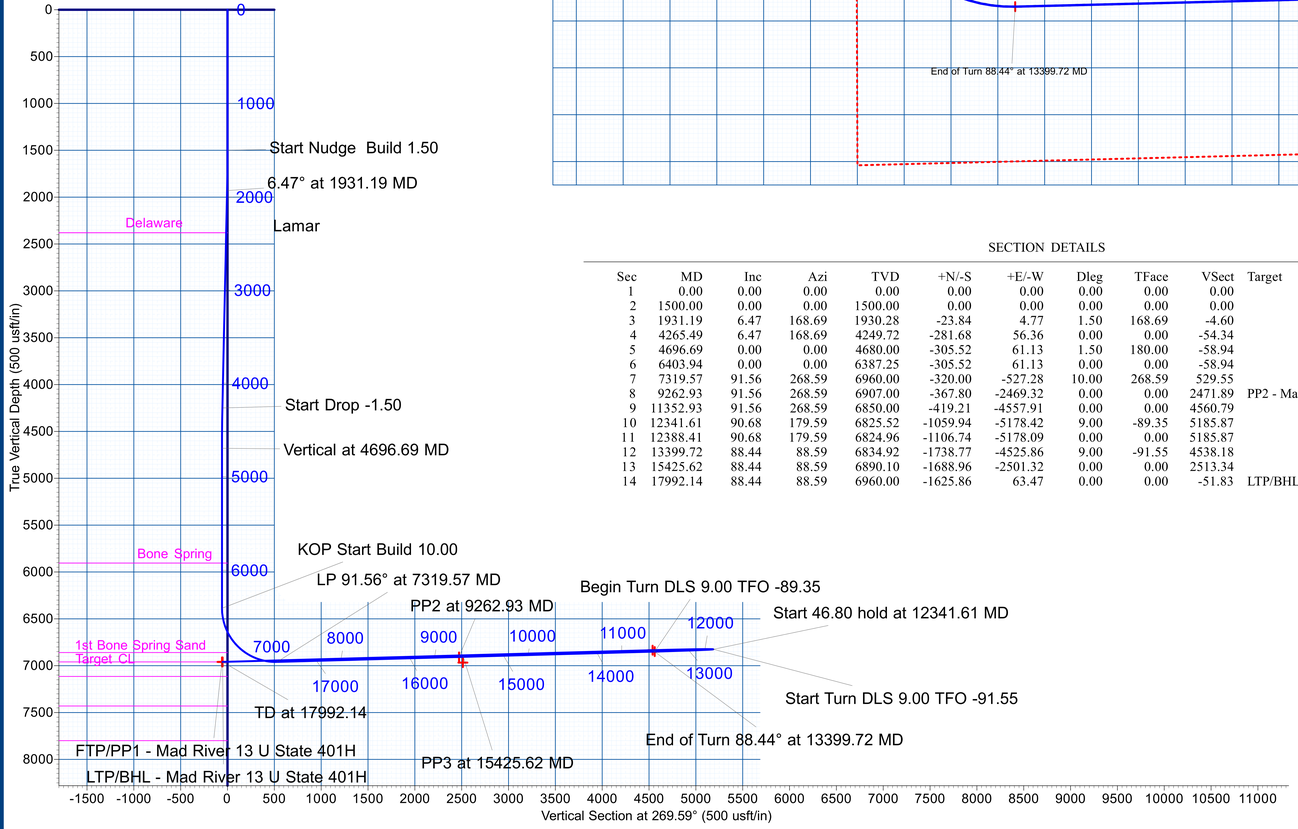
3088 + 27' KB @ 3115.00usft 3088.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	442611.25	602358.06	32.216661	-104.136020	

PROJECT DETAILS: Eddy County, NM (NAD83)

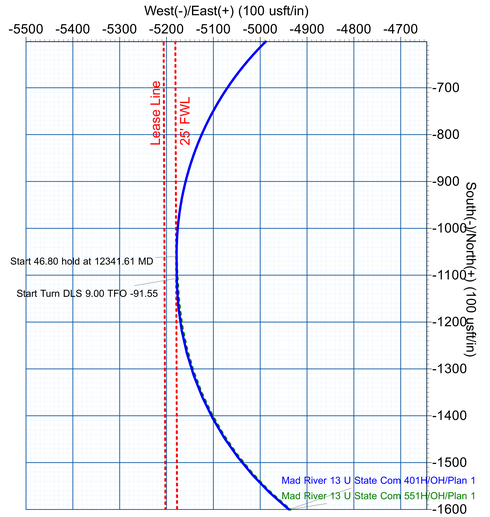
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

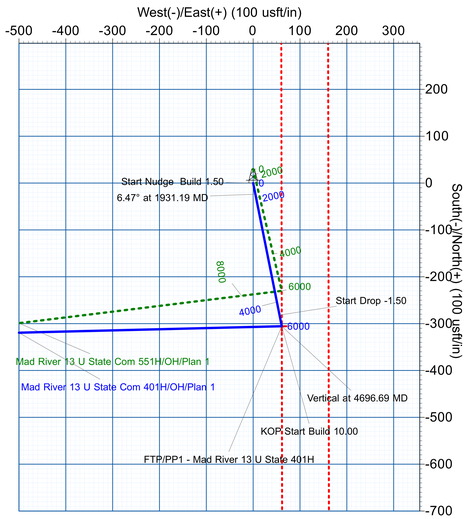




SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
3	1931.19	6.47	168.69	1930.28	-23.84	4.77	1.50	168.69	-4.60	
4	4265.49	6.47	168.69	4249.72	-281.68	56.36	0.00	0.00	-54.34	
5	4696.69	0.00	0.00	4680.00	-305.52	61.13	1.50	180.00	-58.94	
6	6403.94	0.00	0.00	6387.25	-305.52	61.13	0.00	0.00	-58.94	
7	7319.57	91.56	268.59	6960.00	-320.00	-527.28	10.00	268.59	529.55	
8	9262.93	91.56	268.59	6907.00	-367.80	-2469.32	0.00	0.00	2471.89	PP2 - Mad River 13 U State 401H
9	11352.93	91.56	268.59	6850.00	-419.21	-4557.91	0.00	0.00	4560.79	
10	12341.61	90.68	179.59	6825.52	-1059.94	-5178.42	9.00	-89.35	5185.87	
11	12388.41	90.68	179.59	6824.96	-1106.74	-5178.09	0.00	0.00	5185.87	
12	13399.72	88.44	88.59	6834.92	-1738.77	-4525.86	9.00	-91.55	4538.18	
13	15425.62	88.44	88.59	6890.10	-1688.96	-2501.32	0.00	0.00	2513.34	
14	17992.14	88.44	88.59	6960.00	-1625.86	63.47	0.00	0.00	-51.83	LTP/BHL - Mad River 13 U State 401H





Plan: Plan 1 (Mad River 13 U State Com 401H/OH)
Created By: Jenise Kirkpatrick Date: 11:34, August 19 2025

3R Operating, LLC

Eddy County, NM (NAD83)
Mad River 13 U State Com
Mad River 13 U State Com 401H

OH

Plan: Plan 1

Standard Planning Report

19 August, 2025

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Mad River 13 U State Com 401H
Company:	3R Operating, LLC	**TVD Reference:**	3088 + 27' KB @ 3115.00usft
Project:	Eddy County, NM (NAD83)	**MD Reference:**	3088 + 27' KB @ 3115.00usft
Site:	Mad River 13 U State Com	**North Reference:**	Grid
Well:	Mad River 13 U State Com 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Project Eddy 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 Mad River 13 U State Com

Site Position:		**Northing:**	442,641.25 usft	**Latitude:**	32.216744
From:	Map	**Easting:**	602,357.91 usft	**Longitude:**	-104.136021
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Mad River 13 U State Com 401H

Well Position	**+N/-S**	0.00 usft	**Northing:**	442,611.25 usft	**Latitude:**	32.216661
	+E/-W	0.00 usft	**Easting:**	602,358.06 usft	**Longitude:**	-104.136020
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,088.00 usft
Grid Convergence:		0.11 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2025	8/12/2025	6.50	59.66	46,946.69595163

Design Plan 1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.59

Plan Survey Tool Program **Date** 8/13/2025

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,992.14	Plan 1 (OH)	MWD	
				OWSG MWD - Standard	

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Mad River 13 U State Com 401H
Company:	3R Operating, LLC	**TVD Reference:**	3088 + 27' KB @ 3115.00usft
Project:	Eddy County, NM (NAD83)	**MD Reference:**	3088 + 27' KB @ 3115.00usft
Site:	Mad River 13 U State Com	**North Reference:**	Grid
Well:	Mad River 13 U State Com 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,931.19	6.47	168.69	1,930.28	-23.84	4.77	1.50	1.50	0.00	168.69	
4,265.49	6.47	168.69	4,249.72	-281.68	56.36	0.00	0.00	0.00	0.00	
4,696.69	0.00	0.01	4,680.00	-305.52	61.13	1.50	-1.50	0.00	180.00	
6,403.94	0.00	0.01	6,387.25	-305.52	61.13	0.00	0.00	0.00	0.01	
7,319.57	91.56	268.59	6,960.00	-320.00	-527.28	10.00	10.00	0.00	268.59	
9,262.93	91.56	268.59	6,907.00	-367.80	-2,469.32	0.00	0.00	0.00	0.00	PP2 - Mad River 13 U
11,352.93	91.56	268.59	6,850.00	-419.21	-4,557.91	0.00	0.00	0.00	0.00	
12,341.61	90.68	179.59	6,825.52	-1,059.94	-5,178.42	9.00	-0.09	-9.00	-89.35	
12,388.41	90.68	179.59	6,824.97	-1,106.74	-5,178.09	0.00	0.00	0.00	0.00	
13,399.72	88.44	88.59	6,834.92	-1,738.77	-4,525.86	9.00	-0.22	-9.00	-91.55	
15,425.62	88.44	88.59	6,890.10	-1,688.96	-2,501.32	0.00	0.00	0.00	0.00	
17,992.14	88.44	88.59	6,960.00	-1,625.86	63.47	0.00	0.00	0.00	0.00	LTP/BHL - Mad River

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Mad River 13 U State Com 401H
Company:	3R Operating, LLC	**TVD Reference:**	3088 + 27' KB @ 3115.00usft
Project:	Eddy County, NM (NAD83)	**MD Reference:**	3088 + 27' KB @ 3115.00usft
Site:	Mad River 13 U State Com	**North Reference:**	Grid
Well:	Mad River 13 U State Com 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Nudge Build 1.50									
1,600.00	1.50	168.69	1,599.99	-1.28	0.26	-0.25	1.50	1.50	0.00
1,700.00	3.00	168.69	1,699.91	-5.13	1.03	-0.99	1.50	1.50	0.00
1,800.00	4.50	168.69	1,799.69	-11.55	2.31	-2.23	1.50	1.50	0.00
1,900.00	6.00	168.69	1,899.27	-20.52	4.11	-3.96	1.50	1.50	0.00
1,931.19	6.47	168.69	1,930.28	-23.84	4.77	-4.60	1.50	1.50	0.00
6.47° at 1931.19 MD									
2,000.00	6.47	168.69	1,998.65	-31.44	6.29	-6.07	0.00	0.00	0.00
2,100.00	6.47	168.69	2,098.01	-42.49	8.50	-8.20	0.00	0.00	0.00
2,200.00	6.47	168.69	2,197.37	-53.53	10.71	-10.33	0.00	0.00	0.00
2,300.00	6.47	168.69	2,296.74	-64.58	12.92	-12.46	0.00	0.00	0.00
2,383.80	6.47	168.69	2,380.00	-73.83	14.77	-14.24	0.00	0.00	0.00
Lamar - Delaware									
2,400.00	6.47	168.69	2,396.10	-75.62	15.13	-14.59	0.00	0.00	0.00
2,500.00	6.47	168.69	2,495.46	-86.67	17.34	-16.72	0.00	0.00	0.00
2,600.00	6.47	168.69	2,594.83	-97.71	19.55	-18.85	0.00	0.00	0.00
2,700.00	6.47	168.69	2,694.19	-108.76	21.76	-20.98	0.00	0.00	0.00
2,800.00	6.47	168.69	2,793.55	-119.81	23.97	-23.11	0.00	0.00	0.00
2,900.00	6.47	168.69	2,892.92	-130.85	26.18	-25.24	0.00	0.00	0.00
3,000.00	6.47	168.69	2,992.28	-141.90	28.39	-27.38	0.00	0.00	0.00
3,100.00	6.47	168.69	3,091.65	-152.94	30.60	-29.51	0.00	0.00	0.00
3,200.00	6.47	168.69	3,191.01	-163.99	32.81	-31.64	0.00	0.00	0.00
3,300.00	6.47	168.69	3,290.37	-175.03	35.02	-33.77	0.00	0.00	0.00
3,400.00	6.47	168.69	3,389.74	-186.08	37.23	-35.90	0.00	0.00	0.00
3,500.00	6.47	168.69	3,489.10	-197.13	39.44	-38.03	0.00	0.00	0.00
3,600.00	6.47	168.69	3,588.46	-208.17	41.65	-40.16	0.00	0.00	0.00
3,700.00	6.47	168.69	3,687.83	-219.22	43.86	-42.29	0.00	0.00	0.00
3,800.00	6.47	168.69	3,787.19	-230.26	46.07	-44.42	0.00	0.00	0.00
3,900.00	6.47	168.69	3,886.55	-241.31	48.28	-46.55	0.00	0.00	0.00
4,000.00	6.47	168.69	3,985.92	-252.35	50.49	-48.69	0.00	0.00	0.00
4,100.00	6.47	168.69	4,085.28	-263.40	52.70	-50.82	0.00	0.00	0.00
4,200.00	6.47	168.69	4,184.64	-274.45	54.91	-52.95	0.00	0.00	0.00
4,265.49	6.47	168.69	4,249.72	-281.68	56.36	-54.34	0.00	0.00	0.00
Start Drop -1.50									
4,300.00	5.95	168.69	4,284.02	-285.34	57.09	-55.05	1.50	-1.50	0.00
4,400.00	4.45	168.69	4,383.61	-294.23	58.87	-56.76	1.50	-1.50	0.00
4,500.00	2.95	168.69	4,483.40	-300.56	60.14	-57.98	1.50	-1.50	0.00
4,600.00	1.45	168.69	4,583.32	-304.32	60.89	-58.71	1.50	-1.50	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Mad River 13 U State Com 401H
Company:	3R Operating, LLC	**TVD Reference:**	3088 + 27' KB @ 3115.00usft
Project:	Eddy County, NM (NAD83)	**MD Reference:**	3088 + 27' KB @ 3115.00usft
Site:	Mad River 13 U State Com	**North Reference:**	Grid
Well:	Mad River 13 U State Com 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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)
4,696.69	0.00	0.01	4,680.00	-305.52	61.13	-58.94	1.50	-1.50	0.00
Vertical at 4696.69 MD									
4,700.00	0.00	0.00	4,683.31	-305.52	61.13	-58.94	0.00	0.00	0.00
4,800.00	0.00	0.00	4,783.31	-305.52	61.13	-58.94	0.00	0.00	0.00
4,900.00	0.00	0.00	4,883.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,000.00	0.00	0.00	4,983.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,100.00	0.00	0.00	5,083.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,200.00	0.00	0.00	5,183.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,300.00	0.00	0.00	5,283.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,400.00	0.00	0.00	5,383.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,500.00	0.00	0.00	5,483.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,600.00	0.00	0.00	5,583.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,700.00	0.00	0.00	5,683.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,800.00	0.00	0.00	5,783.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,900.00	0.00	0.00	5,883.31	-305.52	61.13	-58.94	0.00	0.00	0.00
5,921.69	0.00	0.00	5,905.00	-305.52	61.13	-58.94	0.00	0.00	0.00
Bone Spring									
6,000.00	0.00	0.00	5,983.31	-305.52	61.13	-58.94	0.00	0.00	0.00
6,100.00	0.00	0.00	6,083.31	-305.52	61.13	-58.94	0.00	0.00	0.00
6,200.00	0.00	0.00	6,183.31	-305.52	61.13	-58.94	0.00	0.00	0.00
6,300.00	0.00	0.00	6,283.31	-305.52	61.13	-58.94	0.00	0.00	0.00
6,403.94	0.00	0.00	6,387.25	-305.52	61.13	-58.94	0.00	0.00	0.00
KOP Start Build 10.00									
6,450.00	4.61	268.59	6,433.26	-305.57	59.28	-57.09	10.00	10.00	0.00
6,500.00	9.61	268.59	6,482.86	-305.72	53.10	-50.91	10.00	10.00	0.00
6,550.00	14.61	268.59	6,531.74	-305.98	42.62	-40.43	10.00	10.00	0.00
6,600.00	19.61	268.59	6,579.51	-306.34	27.92	-25.73	10.00	10.00	0.00
6,650.00	24.61	268.59	6,625.82	-306.80	9.12	-6.92	10.00	10.00	0.00
6,700.00	29.61	268.59	6,670.31	-307.36	-13.65	15.85	10.00	10.00	0.00
6,750.00	34.61	268.59	6,712.65	-308.01	-40.21	42.41	10.00	10.00	0.00
6,800.00	39.61	268.59	6,752.52	-308.76	-70.35	72.56	10.00	10.00	0.00
6,850.00	44.61	268.59	6,789.60	-309.58	-103.86	106.07	10.00	10.00	0.00
6,900.00	49.61	268.59	6,823.62	-310.48	-140.47	142.68	10.00	10.00	0.00
6,950.00	54.61	268.59	6,854.32	-311.45	-179.90	182.12	10.00	10.00	0.00
6,959.93	55.60	268.59	6,860.00	-311.65	-188.04	190.26	10.00	10.00	0.00
1st Bone Spring Sand									
7,000.00	59.61	268.59	6,881.47	-312.49	-221.86	224.09	10.00	10.00	0.00
7,050.00	64.61	268.59	6,904.85	-313.57	-266.02	268.26	10.00	10.00	0.00
7,100.00	69.61	268.59	6,924.30	-314.71	-312.05	314.30	10.00	10.00	0.00
7,150.00	74.61	268.59	6,939.66	-315.88	-359.60	361.85	10.00	10.00	0.00
7,200.00	79.61	268.59	6,950.81	-317.07	-408.31	410.57	10.00	10.00	0.00
7,250.00	84.61	268.59	6,957.68	-318.29	-457.81	460.07	10.00	10.00	0.00
7,288.34	88.44	268.59	6,960.00	-319.23	-496.06	498.33	10.00	10.00	0.00
Target CL									
7,300.00	89.61	268.59	6,960.20	-319.52	-507.71	509.99	10.00	10.00	0.00
7,319.57	91.56	268.59	6,960.00	-320.00	-527.28	529.55	10.00	10.00	0.00
LP 91.56° at 7319.57 MD									
7,400.00	91.56	268.59	6,957.81	-321.98	-607.65	609.94	0.00	0.00	0.00
7,500.00	91.56	268.59	6,955.08	-324.44	-707.58	709.89	0.00	0.00	0.00
7,600.00	91.56	268.59	6,952.35	-326.90	-807.52	809.83	0.00	0.00	0.00
7,700.00	91.56	268.59	6,949.62	-329.36	-907.45	909.78	0.00	0.00	0.00
7,800.00	91.56	268.59	6,946.90	-331.82	-1,007.38	1,009.73	0.00	0.00	0.00
7,900.00	91.56	268.59	6,944.17	-334.28	-1,107.31	1,109.68	0.00	0.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Mad River 13 U State Com 401H
Company:	3R Operating, LLC	**TVD Reference:**	3088 + 27' KB @ 3115.00usft
Project:	Eddy County, NM (NAD83)	**MD Reference:**	3088 + 27' KB @ 3115.00usft
Site:	Mad River 13 U State Com	**North Reference:**	Grid
Well:	Mad River 13 U State Com 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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)
8,000.00	91.56	268.59	6,941.44	-336.74	-1,207.25	1,209.62	0.00	0.00	0.00
8,100.00	91.56	268.59	6,938.72	-339.20	-1,307.18	1,309.57	0.00	0.00	0.00
8,200.00	91.56	268.59	6,935.99	-341.66	-1,407.11	1,409.52	0.00	0.00	0.00
8,300.00	91.56	268.59	6,933.26	-344.12	-1,507.04	1,509.47	0.00	0.00	0.00
8,400.00	91.56	268.59	6,930.53	-346.58	-1,606.98	1,609.42	0.00	0.00	0.00
8,500.00	91.56	268.59	6,927.81	-349.04	-1,706.91	1,709.36	0.00	0.00	0.00
8,600.00	91.56	268.59	6,925.08	-351.50	-1,806.84	1,809.31	0.00	0.00	0.00
8,700.00	91.56	268.59	6,922.35	-353.96	-1,906.77	1,909.26	0.00	0.00	0.00
8,800.00	91.56	268.59	6,919.62	-356.42	-2,006.71	2,009.21	0.00	0.00	0.00
8,900.00	91.56	268.59	6,916.90	-358.88	-2,106.64	2,109.15	0.00	0.00	0.00
9,000.00	91.56	268.59	6,914.17	-361.34	-2,206.57	2,209.10	0.00	0.00	0.00
9,100.00	91.56	268.59	6,911.44	-363.80	-2,306.50	2,309.05	0.00	0.00	0.00
9,200.00	91.56	268.59	6,908.72	-366.26	-2,406.44	2,409.00	0.00	0.00	0.00
9,262.93	91.56	268.59	6,907.00	-367.80	-2,469.32	2,471.89	0.00	0.00	0.00
PP2 at 9262.93 MD									
9,300.00	91.56	268.59	6,905.99	-368.72	-2,506.37	2,508.94	0.00	0.00	0.00
9,400.00	91.56	268.59	6,903.26	-371.18	-2,606.30	2,608.89	0.00	0.00	0.00
9,500.00	91.56	268.59	6,900.53	-373.64	-2,706.23	2,708.84	0.00	0.00	0.00
9,600.00	91.56	268.59	6,897.81	-376.10	-2,806.17	2,808.79	0.00	0.00	0.00
9,700.00	91.56	268.59	6,895.08	-378.56	-2,906.10	2,908.73	0.00	0.00	0.00
9,800.00	91.56	268.59	6,892.35	-381.02	-3,006.03	3,008.68	0.00	0.00	0.00
9,900.00	91.56	268.59	6,889.62	-383.48	-3,105.96	3,108.63	0.00	0.00	0.00
10,000.00	91.56	268.59	6,886.90	-385.93	-3,205.90	3,208.58	0.00	0.00	0.00
10,100.00	91.56	268.59	6,884.17	-388.39	-3,305.83	3,308.52	0.00	0.00	0.00
10,200.00	91.56	268.59	6,881.44	-390.85	-3,405.76	3,408.47	0.00	0.00	0.00
10,300.00	91.56	268.59	6,878.72	-393.31	-3,505.69	3,508.42	0.00	0.00	0.00
10,400.00	91.56	268.59	6,875.99	-395.77	-3,605.63	3,608.37	0.00	0.00	0.00
10,500.00	91.56	268.59	6,873.26	-398.23	-3,705.56	3,708.31	0.00	0.00	0.00
10,600.00	91.56	268.59	6,870.53	-400.69	-3,805.49	3,808.26	0.00	0.00	0.00
10,700.00	91.56	268.59	6,867.81	-403.15	-3,905.42	3,908.21	0.00	0.00	0.00
10,800.00	91.56	268.59	6,865.08	-405.61	-4,005.36	4,008.16	0.00	0.00	0.00
10,900.00	91.56	268.59	6,862.35	-408.07	-4,105.29	4,108.10	0.00	0.00	0.00
11,000.00	91.56	268.59	6,859.62	-410.53	-4,205.22	4,208.05	0.00	0.00	0.00
11,100.00	91.56	268.59	6,856.90	-412.99	-4,305.15	4,308.00	0.00	0.00	0.00
11,200.00	91.56	268.59	6,854.17	-415.45	-4,405.09	4,407.95	0.00	0.00	0.00
11,300.00	91.56	268.59	6,851.44	-417.91	-4,505.02	4,507.89	0.00	0.00	0.00
11,352.93	91.56	268.59	6,850.00	-419.21	-4,557.91	4,560.79	0.00	0.00	0.00
Begin Turn DLS 9.00 TFO -89.35									
11,400.00	91.61	264.35	6,848.70	-422.11	-4,604.87	4,607.77	9.00	0.09	-9.00
11,450.00	91.64	259.85	6,847.28	-428.98	-4,654.36	4,657.31	9.00	0.07	-9.00
11,500.00	91.67	255.35	6,845.83	-439.71	-4,703.16	4,706.19	9.00	0.05	-9.00
11,550.00	91.69	250.85	6,844.37	-454.23	-4,750.97	4,754.10	9.00	0.03	-9.00
11,600.00	91.69	246.34	6,842.89	-472.47	-4,797.49	4,800.74	9.00	0.01	-9.00
11,650.00	91.69	241.84	6,841.41	-494.30	-4,842.43	4,845.84	9.00	-0.01	-9.00
11,700.00	91.67	237.34	6,839.94	-519.59	-4,885.52	4,889.12	9.00	-0.03	-9.00
11,750.00	91.65	232.84	6,838.49	-548.18	-4,926.50	4,930.29	9.00	-0.05	-9.00
11,800.00	91.61	228.34	6,837.07	-579.91	-4,965.10	4,969.12	9.00	-0.07	-9.00
11,850.00	91.57	223.84	6,835.68	-614.56	-5,001.10	5,005.37	9.00	-0.09	-9.00
11,900.00	91.51	219.33	6,834.33	-651.94	-5,034.26	5,038.80	9.00	-0.11	-9.00
11,950.00	91.45	214.83	6,833.04	-691.80	-5,064.40	5,069.22	9.00	-0.13	-9.00
12,000.00	91.38	210.33	6,831.80	-733.91	-5,091.31	5,096.43	9.00	-0.15	-9.00
12,050.00	91.30	205.83	6,830.64	-778.00	-5,114.83	5,120.27	9.00	-0.16	-9.00
12,100.00	91.21	201.33	6,829.55	-823.80	-5,134.82	5,140.59	9.00	-0.18	-9.00
12,150.00	91.11	196.83	6,828.53	-871.03	-5,151.16	5,157.26	9.00	-0.19	-9.00

Legacy Directional Drilling

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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)
12,200.00	91.01	192.33	6,827.61	-919.40	-5,163.75	5,170.19	9.00	-0.21	-9.00
12,250.00	90.90	187.83	6,826.78	-968.61	-5,172.50	5,179.29	9.00	-0.22	-9.00
12,300.00	90.78	183.33	6,826.05	-1,018.35	-5,177.36	5,184.51	9.00	-0.23	-9.00
12,341.61	90.68	179.59	6,825.52	-1,059.94	-5,178.42	5,185.87	9.00	-0.24	-9.00
Start 46.80 hold at 12341.61 MD									
12,388.41	90.68	179.59	6,824.97	-1,106.74	-5,178.09	5,185.87	0.00	0.00	0.00
Start Turn DLS 9.00 TFO -91.55									
12,400.00	90.65	178.55	6,824.83	-1,118.32	-5,177.90	5,185.77	9.00	-0.24	-9.00
12,450.00	90.53	174.05	6,824.32	-1,168.20	-5,174.67	5,182.90	9.00	-0.25	-9.00
12,500.00	90.40	169.55	6,823.91	-1,217.68	-5,167.54	5,176.12	9.00	-0.26	-9.00
12,550.00	90.27	165.05	6,823.62	-1,266.44	-5,156.55	5,165.48	9.00	-0.26	-9.00
12,600.00	90.14	160.55	6,823.44	-1,314.19	-5,141.77	5,151.05	9.00	-0.26	-9.00
12,650.00	90.00	156.06	6,823.38	-1,360.64	-5,123.30	5,132.90	9.00	-0.27	-9.00
12,700.00	89.87	151.56	6,823.43	-1,405.49	-5,101.23	5,111.16	9.00	-0.27	-9.00
12,750.00	89.74	147.06	6,823.60	-1,448.48	-5,075.72	5,085.95	9.00	-0.26	-9.00
12,800.00	89.61	142.56	6,823.89	-1,489.33	-5,046.91	5,057.44	9.00	-0.26	-9.00
12,850.00	89.48	138.06	6,824.28	-1,527.80	-5,014.99	5,025.80	9.00	-0.26	-9.00
12,900.00	89.36	133.57	6,824.79	-1,563.64	-4,980.15	4,991.22	9.00	-0.25	-9.00
12,950.00	89.24	129.07	6,825.40	-1,596.64	-4,942.61	4,953.91	9.00	-0.24	-9.00
13,000.00	89.12	124.57	6,826.12	-1,626.59	-4,902.60	4,914.11	9.00	-0.23	-9.00
13,050.00	89.01	120.07	6,826.94	-1,653.31	-4,860.36	4,872.07	9.00	-0.22	-9.00
13,100.00	88.91	115.57	6,827.85	-1,676.64	-4,816.16	4,828.03	9.00	-0.21	-9.00
13,150.00	88.81	111.07	6,828.85	-1,696.42	-4,770.26	4,782.28	9.00	-0.20	-9.00
13,200.00	88.72	106.57	6,829.93	-1,712.54	-4,722.96	4,735.09	9.00	-0.18	-9.00
13,250.00	88.63	102.07	6,831.08	-1,724.90	-4,674.54	4,686.76	9.00	-0.17	-9.00
13,300.00	88.56	97.57	6,832.31	-1,733.42	-4,625.30	4,637.58	9.00	-0.15	-9.00
13,350.00	88.50	93.07	6,833.59	-1,738.05	-4,575.54	4,587.86	9.00	-0.13	-9.00
13,399.72	88.44	88.59	6,834.92	-1,738.77	-4,525.86	4,538.19	9.00	-0.11	-9.00
End of Turn 88.44° at 13399.72 MD									
13,500.00	88.44	88.59	6,837.65	-1,736.31	-4,425.65	4,437.96	0.00	0.00	0.00
13,600.00	88.44	88.59	6,840.38	-1,733.85	-4,325.71	4,338.01	0.00	0.00	0.00
13,700.00	88.44	88.59	6,843.10	-1,731.39	-4,225.78	4,238.06	0.00	0.00	0.00
13,800.00	88.44	88.59	6,845.83	-1,728.93	-4,125.85	4,138.11	0.00	0.00	0.00
13,900.00	88.44	88.59	6,848.55	-1,726.47	-4,025.92	4,038.17	0.00	0.00	0.00
14,000.00	88.44	88.59	6,851.27	-1,724.01	-3,925.98	3,938.22	0.00	0.00	0.00
14,100.00	88.44	88.59	6,854.00	-1,721.55	-3,826.05	3,838.27	0.00	0.00	0.00
14,200.00	88.44	88.59	6,856.72	-1,719.09	-3,726.12	3,738.32	0.00	0.00	0.00
14,300.00	88.44	88.59	6,859.44	-1,716.64	-3,626.19	3,638.38	0.00	0.00	0.00
14,400.00	88.44	88.59	6,862.17	-1,714.18	-3,526.25	3,538.43	0.00	0.00	0.00
14,500.00	88.44	88.59	6,864.89	-1,711.72	-3,426.32	3,438.48	0.00	0.00	0.00
14,600.00	88.44	88.59	6,867.61	-1,709.26	-3,326.39	3,338.53	0.00	0.00	0.00
14,700.00	88.44	88.59	6,870.34	-1,706.80	-3,226.45	3,238.59	0.00	0.00	0.00
14,800.00	88.44	88.59	6,873.06	-1,704.34	-3,126.52	3,138.64	0.00	0.00	0.00
14,900.00	88.44	88.59	6,875.78	-1,701.88	-3,026.59	3,038.69	0.00	0.00	0.00
15,000.00	88.44	88.59	6,878.51	-1,699.42	-2,926.66	2,938.74	0.00	0.00	0.00
15,100.00	88.44	88.59	6,881.23	-1,696.97	-2,826.72	2,838.79	0.00	0.00	0.00
15,200.00	88.44	88.59	6,883.95	-1,694.51	-2,726.79	2,738.85	0.00	0.00	0.00
15,300.00	88.44	88.59	6,886.68	-1,692.05	-2,626.86	2,638.90	0.00	0.00	0.00
15,400.00	88.44	88.59	6,889.40	-1,689.59	-2,526.93	2,538.95	0.00	0.00	0.00
15,425.62	88.44	88.59	6,890.10	-1,688.96	-2,501.32	2,513.34	0.00	0.00	0.00
PP3 at 15425.62 MD									
15,500.00	88.44	88.59	6,892.13	-1,687.13	-2,426.99	2,439.00	0.00	0.00	0.00
15,600.00	88.44	88.59	6,894.85	-1,684.67	-2,327.06	2,339.06	0.00	0.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Mad River 13 U State Com 401H
Company:	3R Operating, LLC	**TVD Reference:**	3088 + 27' KB @ 3115.00usft
Project:	Eddy County, NM (NAD83)	**MD Reference:**	3088 + 27' KB @ 3115.00usft
Site:	Mad River 13 U State Com	**North Reference:**	Grid
Well:	Mad River 13 U State Com 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
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)
15,700.00	88.44	88.59	6,897.57	-1,682.21	-2,227.13	2,239.11	0.00	0.00	0.00
15,800.00	88.44	88.59	6,900.30	-1,679.75	-2,127.20	2,139.16	0.00	0.00	0.00
15,900.00	88.44	88.59	6,903.02	-1,677.30	-2,027.26	2,039.21	0.00	0.00	0.00
16,000.00	88.44	88.59	6,905.74	-1,674.84	-1,927.33	1,939.27	0.00	0.00	0.00
16,100.00	88.44	88.59	6,908.47	-1,672.38	-1,827.40	1,839.32	0.00	0.00	0.00
16,200.00	88.44	88.59	6,911.19	-1,669.92	-1,727.46	1,739.37	0.00	0.00	0.00
16,300.00	88.44	88.59	6,913.91	-1,667.46	-1,627.53	1,639.42	0.00	0.00	0.00
16,400.00	88.44	88.59	6,916.64	-1,665.00	-1,527.60	1,539.47	0.00	0.00	0.00
16,500.00	88.44	88.59	6,919.36	-1,662.54	-1,427.67	1,439.53	0.00	0.00	0.00
16,600.00	88.44	88.59	6,922.08	-1,660.08	-1,327.73	1,339.58	0.00	0.00	0.00
16,700.00	88.44	88.59	6,924.81	-1,657.63	-1,227.80	1,239.63	0.00	0.00	0.00
16,800.00	88.44	88.59	6,927.53	-1,655.17	-1,127.87	1,139.68	0.00	0.00	0.00
16,900.00	88.44	88.59	6,930.26	-1,652.71	-1,027.94	1,039.74	0.00	0.00	0.00
17,000.00	88.44	88.59	6,932.98	-1,650.25	-928.00	939.79	0.00	0.00	0.00
17,100.00	88.44	88.59	6,935.70	-1,647.79	-828.07	839.84	0.00	0.00	0.00
17,200.00	88.44	88.59	6,938.43	-1,645.33	-728.14	739.89	0.00	0.00	0.00
17,300.00	88.44	88.59	6,941.15	-1,642.87	-628.21	639.95	0.00	0.00	0.00
17,400.00	88.44	88.59	6,943.87	-1,640.41	-528.27	540.00	0.00	0.00	0.00
17,500.00	88.44	88.59	6,946.60	-1,637.96	-428.34	440.05	0.00	0.00	0.00
17,600.00	88.44	88.59	6,949.32	-1,635.50	-328.41	340.10	0.00	0.00	0.00
17,700.00	88.44	88.59	6,952.04	-1,633.04	-228.47	240.15	0.00	0.00	0.00
17,800.00	88.44	88.59	6,954.77	-1,630.58	-128.54	140.21	0.00	0.00	0.00
17,900.00	88.44	88.59	6,957.49	-1,628.12	-28.61	40.26	0.00	0.00	0.00
17,992.14	88.44	88.59	6,960.00	-1,625.86	63.47	-51.83	0.00	0.00	0.00
TD at 17992.14									

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
End Turn Mad River 13 - plan hits target center - Point	0.00	0.00	6,834.92	-1,738.77	-4,525.86	440,872.48	597,832.20	32.211903	-104.150664
Begin Turn Mad River 13 - plan hits target center - Point	0.00	0.00	6,850.00	-419.21	-4,557.91	442,192.04	597,800.15	32.215531	-104.150761
PP2 - Mad River 13 U St - plan misses target center by 0.12usft at 9262.93usft MD (6907.00 TVD, -367.80 N, -2469.32 E) - Point	0.00	0.00	6,907.00	-367.92	-2,469.32	442,243.33	599,888.74	32.215662	-104.144007
LTP/BHL - Mad River 13 - plan hits target center - Point	0.00	0.01	6,960.00	-1,625.86	63.47	440,985.39	602,421.53	32.212191	-104.135825
FTP/PP1 - Mad River 13 - plan misses target center by 237.22usft at 6850.00usft MD (6789.60 TVD, -309.58 N, -103.86 E) - Point	0.00	0.00	6,960.00	-305.52	61.13	442,305.73	602,419.19	32.215821	-104.135824
PP3 - Mad River 13 U St - plan misses target center by 76.89usft at 15427.72usft MD (6890.16 TVD, -1688.91 N, -2499.22 E) - Point	0.00	0.00	6,967.02	-1,689.11	-2,501.31	440,922.14	599,856.75	32.212030	-104.144118

Legacy Directional Drilling
Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Mad River 13 U State Com 401H
Company:	3R Operating, LLC	**TVD Reference:**	3088 + 27' KB @ 3115.00usft
Project:	Eddy County, NM (NAD83)	**MD Reference:**	3088 + 27' KB @ 3115.00usft
Site:	Mad River 13 U State Com	**North Reference:**	Grid
Well:	Mad River 13 U State Com 401H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,383.80	2,380.00	Lamar			
2,383.80	2,380.00	Delaware			
5,921.69	5,905.00	Bone Spring			
6,959.93	6,860.00	1st Bone Spring Sand			
7,288.34	6,960.00	Target CL			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.00	1,500.00	0.00	0.00	Start Nudge Build 1.50
1,931.19	1,930.28	-23.84	4.77	6.47° at 1931.19 MD
4,265.49	4,249.72	-281.68	56.36	Start Drop -1.50
4,696.69	4,680.00	-305.52	61.13	Vertical at 4696.69 MD
6,403.94	6,387.25	-305.52	61.13	KOP Start Build 10.00
7,319.57	6,960.00	-320.00	-527.28	LP 91.56° at 7319.57 MD
9,262.93	6,907.00	-367.80	-2,469.32	PP2 at 9262.93 MD
11,352.93	6,850.00	-419.21	-4,557.91	Begin Turn DLS 9.00 TFO -89.35
12,341.61	6,825.52	-1,059.94	-5,178.42	Start 46.80 hold at 12341.61 MD
12,388.41	6,824.97	-1,106.74	-5,178.09	Start Turn DLS 9.00 TFO -91.55
13,399.72	6,834.92	-1,738.77	-4,525.86	End of Turn 88.44° at 13399.72 MD
15,425.62	6,890.10	-1,688.96	-2,501.32	PP3 at 15425.62 MD
17,992.14	6,960.00	-1,625.86	63.47	TD at 17992.14

Casing Program: **RRR - 13/8" x 9 5/8" x 5 1/2"**

Open Hole Size (Inches)	Casing Depth; From (ft)	Casing Setting Depth (ft) MD	Casing Setting Depth (ft) TVD	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	Anticipated Mud Weight (ppg)	Burst (psi)	Burst SF (1.125)	Collapse (psi)	Collapse SF (1.125)	Tension Joint (klbs)	Air Weight (lbs)	Tension Joint SF (1.8)	Tension Body (klbs)	Air Weight (lbs)	Tension Body SF (1.8)
Surface																			
17.5"	0'	750'	750'	13 3/8"	54.5	J-55	BTC	New	8.6	2,730	8.14	1,130	3.37	1,025,000	40,875	25.08	962,000	40,875	23.54
Intermediate																			
12.25"	0'	2,450'	2,450'	9 5/8"	40	J-55	BTC	New	8.6	3,950	3.61	2,570	4.69	714,000	98,000	7.29	630,000	98,000	6.43
Production																			
8.75"	0'	17,992'	6,960'	5 1/2"	20	P-110	BTC	New	9.6	12,640	3.64	11,080	3.19	667,000	139,200	4.79	641,000	139,200	4.60

KOP	6,404

Casing Design Criteria and Casing Loading Assumptions:

Surface

Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:	8.6 ppg
Collapse	A 1.125 design factor with full internal evacuation and collapse force equal to a mud gradient of:	8.6 ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:	8.6 ppg

Intermediate

Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:	8.6 ppg
Collapse	A 1.125 design factor with 1/2 TVD internal evacuation and collapse force equal to a mud gradient of:	8.6 ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:	8.6 ppg

Production

Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:	9.6 ppg
Collapse	A 1.125 design factor with full internal evacuation and collapse force equal to a mud gradient of:	9.6 ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:	9.6 ppg

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: 3R Operating LLC **OGRID:** 331569 **Date:** 08 / 19 / 25

II. Type: ☑ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
See Attached						

IV. Central Delivery Point Name: Mad River 13 Production Facility [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
See attached						

VI. Separation Equipment: ☐ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☐ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☐ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☑ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☑ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☑ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Austin Tramell
Printed Name:	Austin Tramell
Title:	Director Environmental & Regulatory
E-mail Address:	atramell@3roperating.com
Date:	08/19/2025
Phone:	832-810-1037

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

VI. Separation Equipment

Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing modeling software to ensure adequate capacity for anticipated production volumes and conditions. Production composition and the volumes will be utilized as inputs to a process model which predicts relative amounts of gas, oil and water throughout the process. The high-volume case will be used to size equipment, piping and instrumentation.

Each well has a dedicated 3-phase separator and gas from that separator is taken directly to gas sales. Facility piping and pipeline will be sized to allow peak volumes to flow with minimal pressure loss and deliver to the midstream gatherer at an acceptable pressure. Water will be conveyed directly to tankage. Oil from 3-phase separators will be conveyed to a heated separator for enhanced liquid-liquid separation and degassing. Vapors from the heater treater are routed to flare. Oil and water storage tanks vapor outlets utilize a closed vent vapor system to ensure all working & breathing and flashing losses are routed to the flare which is sized to accommodate peak expected production volume. Flash volumes are estimated using the high-volume case.

VII. Operational Practices

The operator will ensure pipeline connectivity before producing hydrocarbons and will operate a closed vent vapor capture system that is designed to capture all associated and evolved gas during normal operation. Venting will only occur during maintenance activities or equipment failure. The operator may utilize the following from Section 3 for its operations to minimize flaring:

A. The operator will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. The operator will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, compression will be added to deliver volumes that are produced. Well production may also be curtailed to manage the flow of gas and not overrun compression.

B. All drilling operations will be equipped with a rig flare located at least 100' from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations.

C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flowback will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards; however, if natural gas does not meet gathering pipeline quality specifications, the operator will flare the natural gas for up to 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. The operator will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will be analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.

D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(l) through (4). If there is no adequate takeaway for the separator gas, well(s) will be curtailed until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be measured using a total flow meter and reported appropriately.

E. The operator will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(l) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs to minimize the waste. Production storage tanks constructed after May 25, 2021, will be equipped with automatic gauging system. Flares constructed after May 25, 2021, will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. The operator will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.

F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared, or beneficially used during production operations, will be measured, or estimated. The operator will install equipment to measure the volume of natural gas flared from existing process piping, or a flowline piped from equipment such as high-

pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021, that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, the operator will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

VIII. Best Management Practices

The operator utilizes automated engineering controls included in facility design to minimize venting and flaring. Additionally, operator's SOP support the minimization of flare and venting.

If the main gas outlet becomes unavailable and pressure increases on the outlet sales line, produced gas will be routed directly to the facility flare. The facility control system will alert personnel to the need for maintenance and appropriate response to the temporary flaring event. The facility design includes a closed vent vapor capture system to route flash from the heater treater and tanks to the flare. For maintenance activities, the operator will utilize the facility flare to blowdown equipment and piping whenever practical to minimize venting.