

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 383880

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

1. Operator Name and Address RILEY PERMIAN OPERATING COMPANY, LLC 29 E Reno Avenue, Suite 500 Oklahoma City, OK 73104		2. OGRID Number 372290
		3. API Number 30-015-56839
4. Property Code 337356	5. Property Name Maude North 12 11	6. Well No. 002H

**7. Surface Location**

UL - Lot	M	Section	12	Township	18S	Range	26E	Lot Idn	M	Feet From	608	N/S Line	S	Feet From	1143	E/W Line	W	County	Eddy
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**8. Proposed Bottom Hole Location**

UL - Lot	M	Section	11	Township	18S	Range	26E	Lot Idn	M	Feet From	440	N/S Line	S	Feet From	10	E/W Line	W	County	Eddy
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**9. Pool Information**

RED LAKE:GLORIETA-YESO	51120
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3298
16. Multiple N	17. Proposed Depth 8410	18. Formation Yeso	19. Contractor	20. Spud Date 6/1/2025
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	12.25	9.625	36	1250	645	0
Prod	8.75	7	32	3150	200	0
Prod	8.75	5.5	20	8410	1575	2300

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	2000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.  Signature:	<b>OIL CONSERVATION DIVISION</b>
Printed Name: Electronically filed by Spence Laird	Approved By: Jeffrey Harrison
Title: EHSR	Title: Petroleum Specialist III
Email Address: spencelaIRD@rileypermian.com	Approved Date: 6/20/2025      Expiration Date: 6/20/2027
Date: 4/16/2025      Phone: 405-543-1411	Conditions of Approval Attached

C-102  Submit Electronically Via OCD Permitting	State of New Mexico  Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>	Revised July 9, 2024	
		Submittal Type:	<input checked="" type="checkbox"/> Initial Submittal
			<input type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	
Property Name and Well Number  <b>MAUDE NORTH 12 11 002H</b>			

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015- 56839</b>	Pool Code <b>51120</b>	Pool Name <b>RED LAKE; GLORIETA-YESO</b>
Property Code <b>337356</b>	Property Name <b>MAUDE NORTH 12 11</b>	Well Number <b>002H</b>
OGRID No. <b>372290</b>	Operator Name <b>RILEY PERMIAN OPERATING COMPANY LLC</b>	Ground Level Elevation <b>3298'</b>
Surface Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

## Surface Location

UL or Lot No.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
M	12	18 S	26 E		608 FSL	1143 FWL	N 32.756847°	W 104.340197°	EDDY

## Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
M	11	18 S	26 E		440 FSL	10 FWL	N 32.756447°	W 104.361087°	EDDY

Dedicated Acres <b>320</b>	Infill or Defining Well <b>Defining</b>	Defining Well API <b>N/A</b>	Overlapping Spacing Unit (Y/N) <b>N</b>	Consolidated Code <b>Pending</b>
Order Numbers <b>Pending</b>			Well Setbacks are under Common Ownership: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

## Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
M	12	18 S	26 E		480 FSL	669 FWL	N 32.756481°	W 104.341742°	EDDY

## First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	11	18 S	26 E		440 FSL	100 FEL	N 32.756354°	W 104.344245°	EDDY

## Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
M	11	18 S	26 E		440 FSL	100 FWL	N 32.756444°	W 104.360794°	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unity Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation <b>3323'</b>
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## OPERATOR CERTIFICATION

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

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

Spence Laird 04/09/2025  
Signature Date

Spence Laird  
Print Name

spencelaird@rileypermian.com  
E-mail Address

## SURVEYORS CERTIFICATION



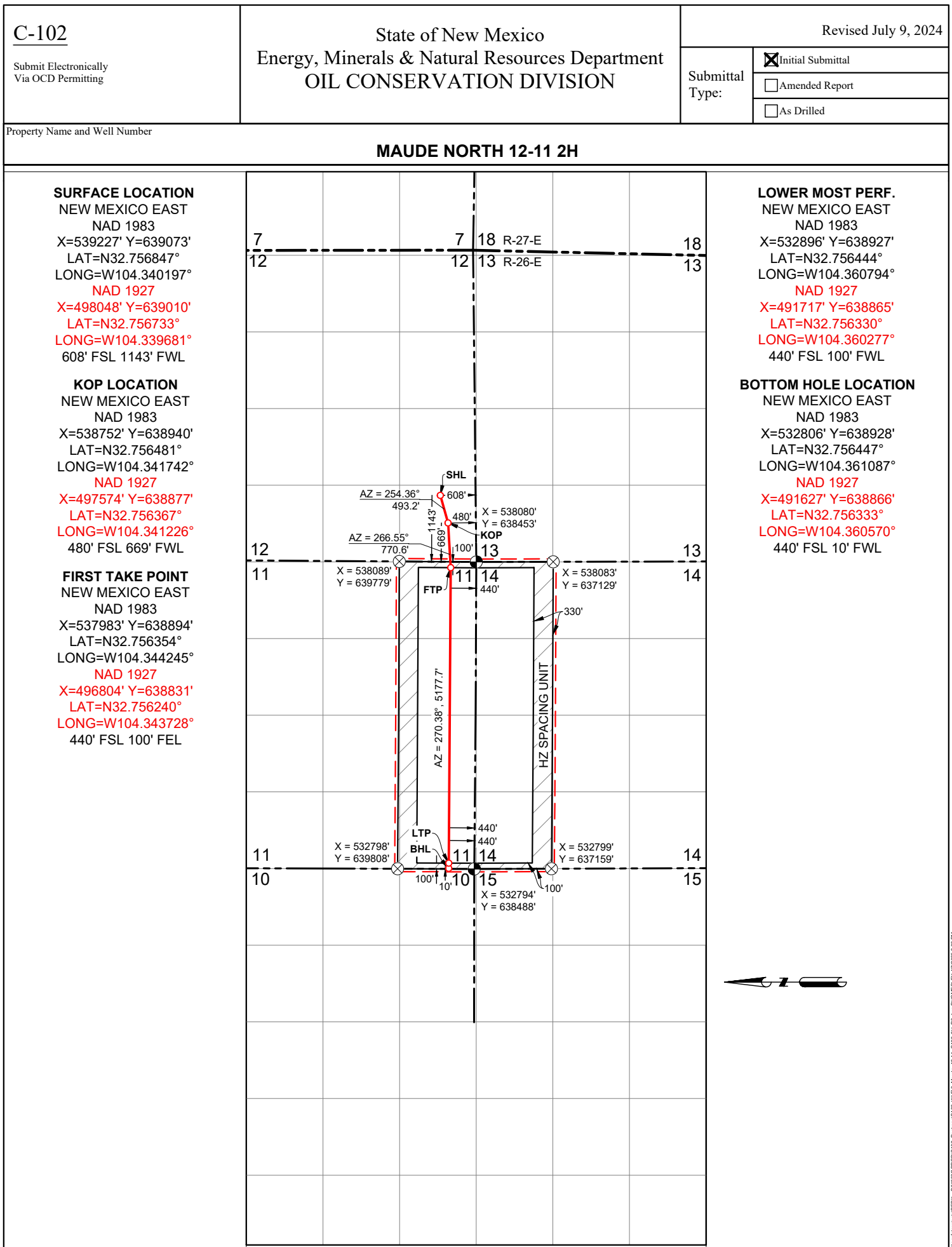
Signature and Seal of Professional Surveyor Date

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.

MITCHELL L. MCDONALD, N.M. P.L.S.

Certificate Number 29821 Date of Survey JANUARY 17, 2025

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.



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**Santa Fe, NM 87505**

Form APD Conditions

Permit 383880

## PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: RILEY PERMIAN OPERATING COMPANY, LLC [372290] 29 E Reno Avenue, Suite 500 Oklahoma City, OK 73104	API Number: 30-015-56839
	Well: Maude North 12 11 #002H

OCD Reviewer	Condition
jeffrey.harrison	Administrative order required for non-standard spacing unit prior to production.
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.
jeffrey.harrison	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.
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	Cement is required to circulate on both surface and production strings of casing.
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	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.
jeffrey.harrison	This well is in the Roswell Aquifer. Casing must be sat and cemented back to surface to protect the Roswell Aquifer.





Company: Riley Permian Operating Co., LLC

Well: Maude North 12-11 2H

County: Eddy County, New Mexico (NAD 83)

Rig: Akita 519

Wellbore: Wellbore #1

Design: Design #2

Date: 13:21, April 07 2025

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

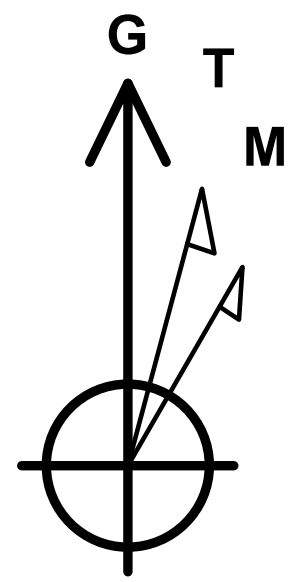
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

To convert a Magnetic Direction to a Grid Direction, Add 6.654°

To convert a Magnetic Direction to a True Direction, Add 6.650° East

To convert a True Direction to a Grid Direction, Add 0.004°



Azimuths to Grid North

True North: 0.00°

Magnetic North: 6.65°

Magnetic Field

Strength: 47348.5nT

Dip Angle: 60.30°

Date: 3/14/2025

Model: HDGM2025

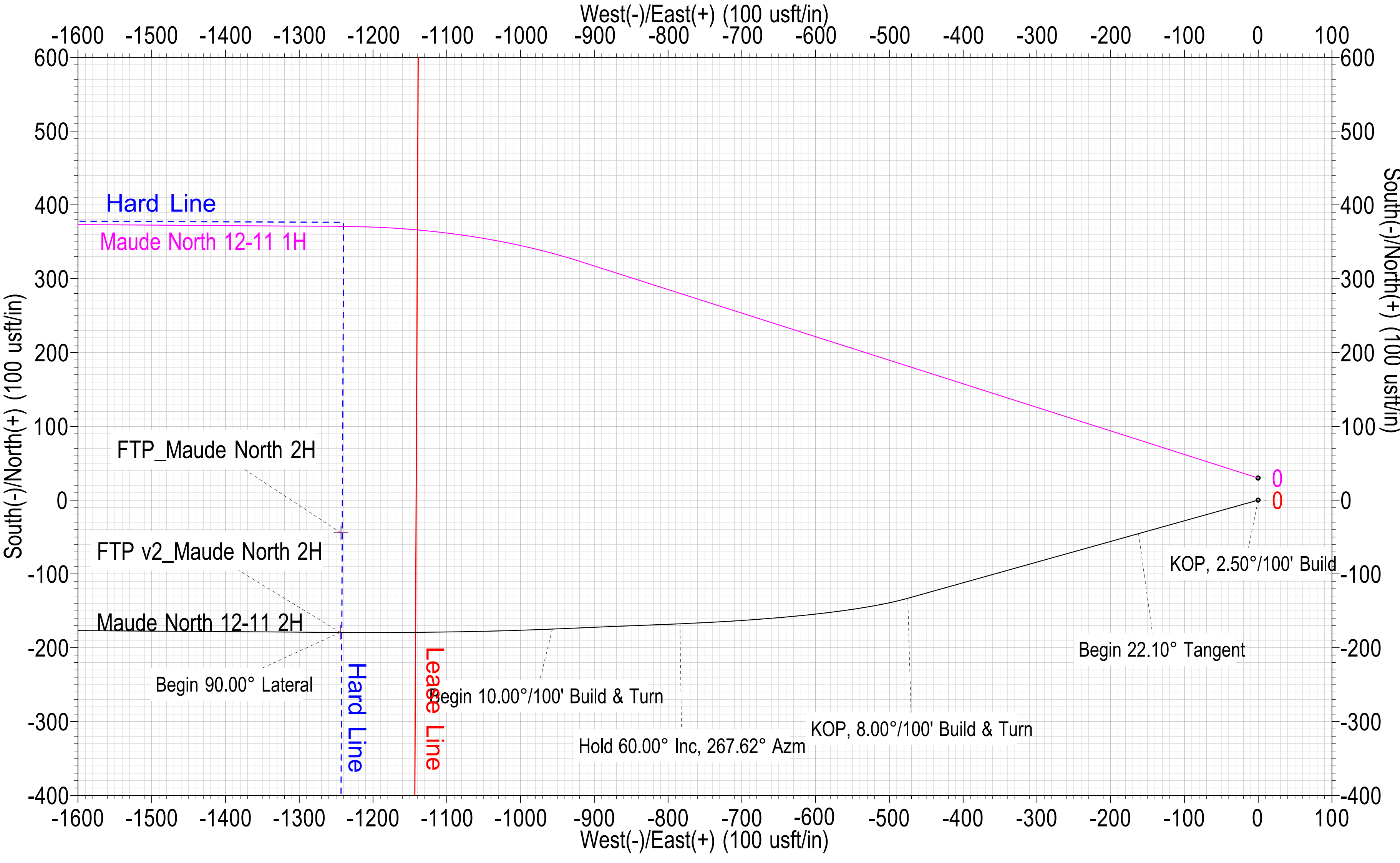
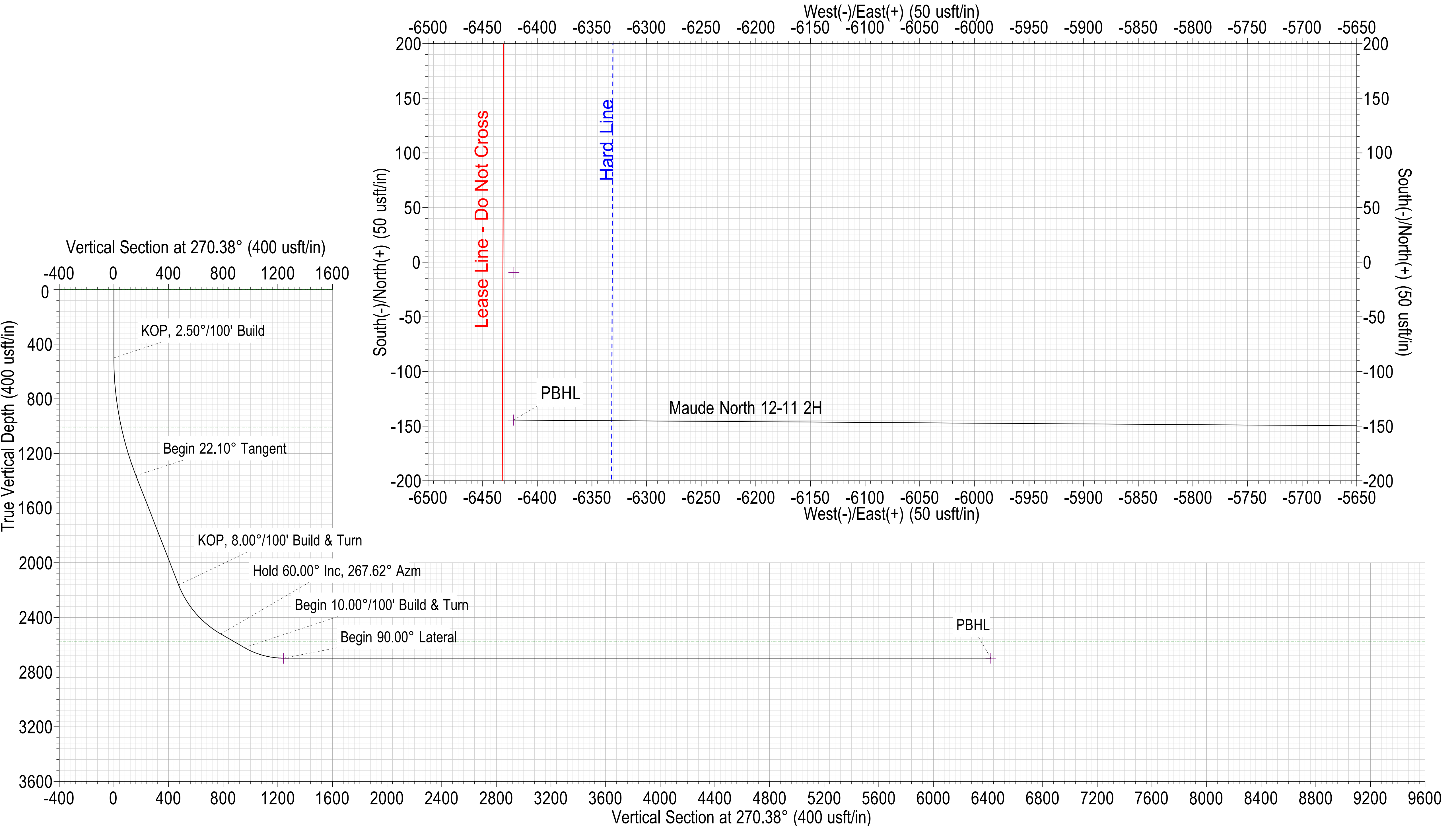
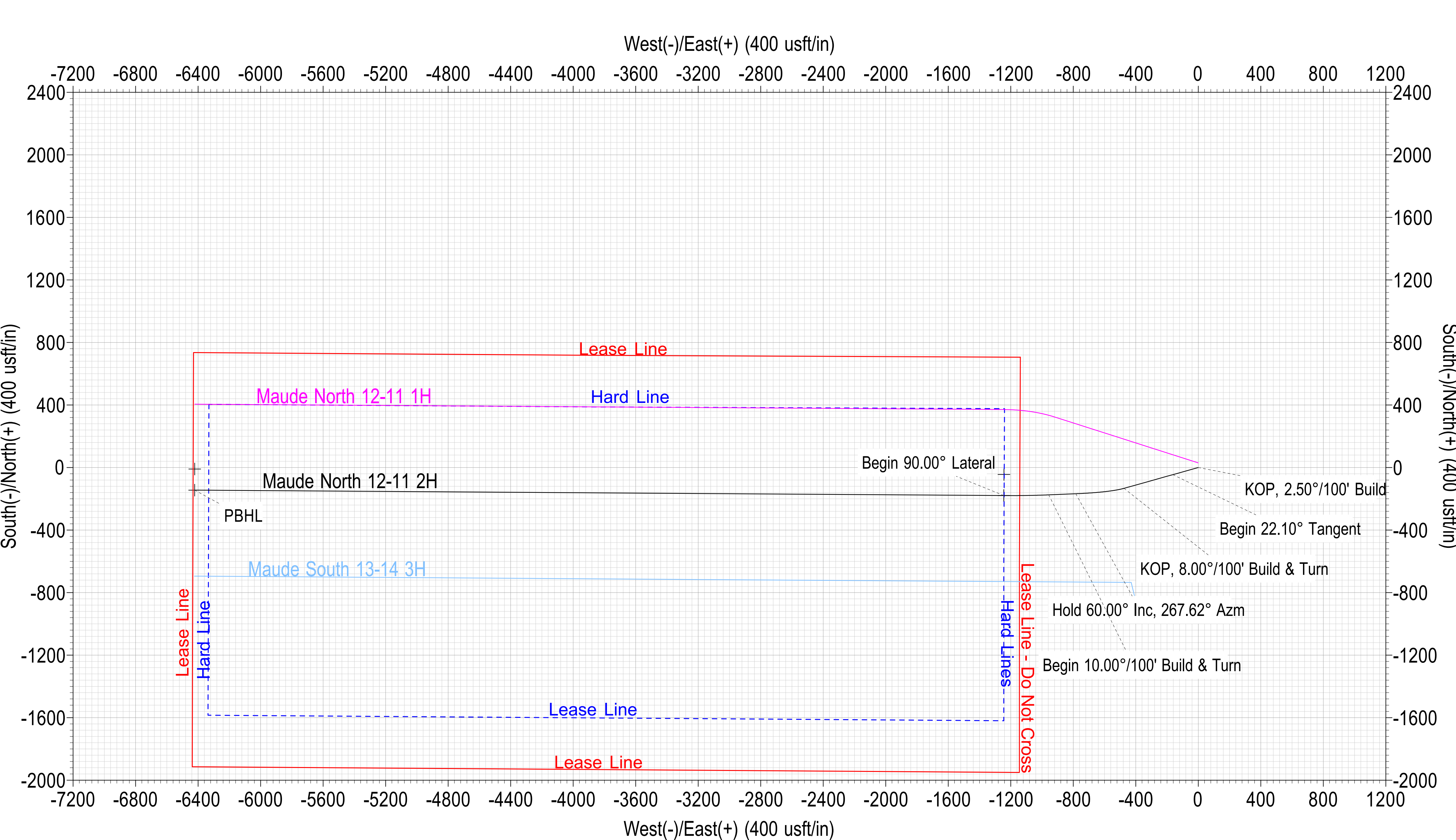
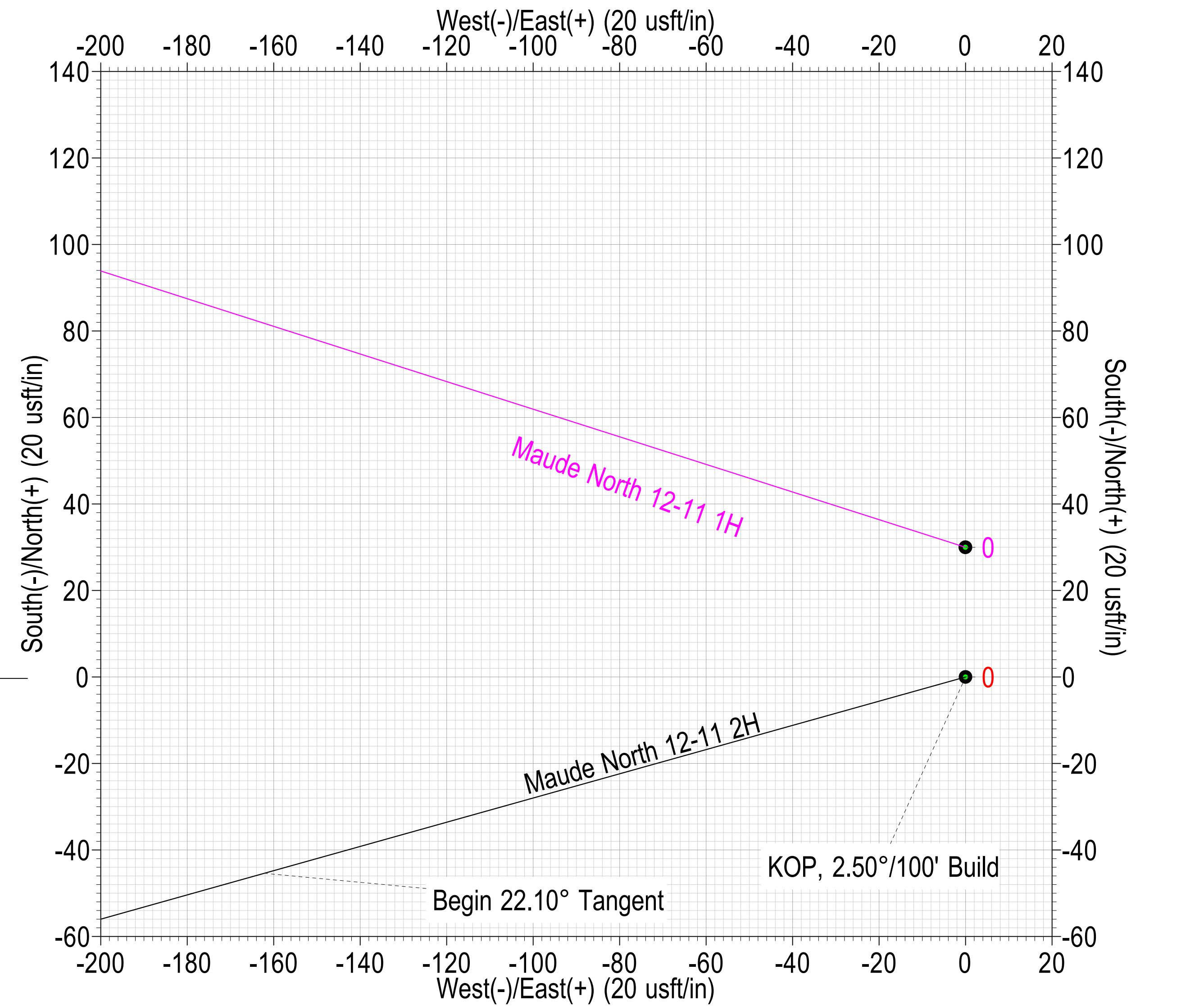
SURVEY PROGRAM

Depth From	Depth To	Survey/Plan	Tool
0.00	8409.86	Design #2 (Wellbore #1)	MWD+HRGM



SECTION DETAILS										WELL DETAILS: Maude North 12-11 2H					
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation	+N/-S	+E/-W	GL @ 3298.00 Northing	Well @ 3317.00usft (Akita 519) Easting	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00		0.00	0.00	639072.82	539227.36	32.756847	-104.340197
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.000	0.00	KOP, 2.50°/100' Build						
1384.05	22.10	254.36	1362.29	-45.39	-162.17	2.50	254.363	161.87	Begin 22.10° Tangent						
2247.33	22.10	254.36	2162.13	-132.94	-474.95	0.00	0.000	474.06	KOP, 8.00°/100' Build & Turn						
2731.09	60.00	267.62	2520.93	-167.49	-783.72	8.00	18.519	782.59	Hold 60.00° Inc, 267.62° Azm						
2931.09	60.00	267.62	2620.93	-174.68	-956.78	0.00	0.000	955.60	Begin 10.00°/100' Build & Turn						
3232.25	90.00	270.38	2698.00	-179.19	-1244.29	10.00	5.517	1243.07	Begin 90.00° Lateral						
8409.86	90.00	270.38	2698.00	-144.41	-6421.78	0.00	0.000	6420.68	PBHL						

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP_v2_Maude North 2H	2698.00	-179.19	-1244.29	638893.63	537983.07	32.756354	-104.344245
FTP_Maude North 2H	2698.00	-44.22	-1243.35	639028.60	537984.01	32.756725	-104.344242
PBHL_v2_Maude North 2H	2698.00	-144.41	-6421.78	638928.41	532805.58	32.756447	-104.361087
PBHL_Maude North 2H	2698.00	-9.44	-6421.44	639063.38	532805.92	32.756818	-104.361086







# **Riley Permian Operating Co., LLC**

**Eddy County, New Mexico (NAD 83)**

**Maude North 12-11 (1H, 2H)**

**Maude North 12-11 2H**

**Wellbore #1**

**Plan: Design #2**

## **Standard Planning Report**

**07 April, 2025**





## Planning Report



<b>Database:</b>	TRG_EDMConroe	<b>Local Co-ordinate Reference:</b>	Well Maude North 12-11 2H
<b>Company:</b>	Riley Permian Operating Co., LLC	<b>TVD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Site:</b>	Maude North 12-11 (1H, 2H)	<b>North Reference:</b>	Grid
<b>Well:</b>	Maude North 12-11 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

<b>Project</b>	Eddy County, New Mexico (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Maude North 12-11 (1H, 2H)		
<b>Site Position:</b>		<b>Northing:</b>	639,102.82 usft
<b>From:</b>	Map	<b>Easting:</b>	539,227.36 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32.756929
		<b>Longitude:</b>	-104.340198

<b>Well</b>	Maude North 12-11 2H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 639,072.82 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 539,227.36 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft
<b>Grid Convergence:</b>	-0.004 °	<b>Ground Level:</b>	3,298.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM2025	3/14/2025	6.650	60.300	47,348.500

<b>Design</b>	Design #2				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	270.38	

<b>Plan Survey Tool Program</b>	<b>Date</b>	4/7/2025			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	8,409.86	Design #2 (Wellbore #1)	MWD+HRGM	
				OWSG MWD + HRGM	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,384.05	22.10	254.36	1,362.29	-45.39	-162.17	2.50	2.50	0.00	254.363	
2,247.33	22.10	254.36	2,162.13	-132.94	-474.95	0.00	0.00	0.00	0.000	
2,731.09	60.00	267.62	2,520.93	-167.49	-783.72	8.00	7.83	2.74	18.519	
2,931.09	60.00	267.62	2,620.93	-174.68	-956.78	0.00	0.00	0.00	0.000	
3,232.25	90.00	270.38	2,698.00	-179.19	-1,244.29	10.00	9.96	0.92	5.517	
8,409.86	90.00	270.38	2,698.00	-144.41	-6,421.78	0.00	0.00	0.00	0.000	PBHL v2_Maude N



## Planning Report



<b>Database:</b>	TRG_EDMConroe	<b>Local Co-ordinate Reference:</b>	Well Maude North 12-11 2H
<b>Company:</b>	Riley Permian Operating Co., LLC	<b>TVD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Site:</b>	Maude North 12-11 (1H, 2H)	<b>North Reference:</b>	Grid
<b>Well:</b>	Maude North 12-11 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Quaternary</b>									
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
319.00	0.00	0.00	319.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Queen</b>									
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
<b>KOP, 2.50°/100' Build</b>									
600.00	2.50	254.36	599.97	-0.59	-2.10	2.10	2.50	2.50	0.00
700.00	5.00	254.36	699.75	-2.35	-8.40	8.38	2.50	2.50	0.00
765.59	6.64	254.36	765.00	-4.14	-14.80	14.78	2.50	2.50	0.00
<b>Grayburg</b>									
800.00	7.50	254.36	799.14	-5.28	-18.88	18.85	2.50	2.50	0.00
900.00	10.00	254.36	897.97	-9.38	-33.53	33.47	2.50	2.50	0.00
1,000.00	12.50	254.36	996.04	-14.64	-52.31	52.22	2.50	2.50	0.00
1,017.38	12.93	254.36	1,013.00	-15.67	-56.00	55.89	2.50	2.50	0.00
<b>San Andres</b>									
1,100.00	15.00	254.36	1,093.17	-21.05	-75.20	75.06	2.50	2.50	0.00
1,200.00	17.50	254.36	1,189.17	-28.59	-102.15	101.96	2.50	2.50	0.00
1,300.00	20.00	254.36	1,283.85	-37.25	-133.10	132.85	2.50	2.50	0.00
1,384.05	22.10	254.36	1,362.29	-45.39	-162.17	161.87	2.50	2.50	0.00
<b>Begin 22.10° Tangent</b>									
1,400.00	22.10	254.36	1,377.07	-47.01	-167.95	167.63	0.00	0.00	0.00
1,500.00	22.10	254.36	1,469.72	-57.15	-204.18	203.80	0.00	0.00	0.00
1,600.00	22.10	254.36	1,562.37	-67.29	-240.41	239.96	0.00	0.00	0.00
1,700.00	22.10	254.36	1,655.02	-77.43	-276.65	276.13	0.00	0.00	0.00
1,800.00	22.10	254.36	1,747.67	-87.57	-312.88	312.29	0.00	0.00	0.00
1,900.00	22.10	254.36	1,840.33	-97.71	-349.11	348.45	0.00	0.00	0.00
2,000.00	22.10	254.36	1,932.98	-107.86	-385.34	384.62	0.00	0.00	0.00
2,100.00	22.10	254.36	2,025.63	-118.00	-421.57	420.78	0.00	0.00	0.00
2,200.00	22.10	254.36	2,118.28	-128.14	-457.81	456.95	0.00	0.00	0.00
2,247.33	22.10	254.36	2,162.13	-132.94	-474.95	474.06	0.00	0.00	0.00
<b>KOP, 8.00°/100' Build &amp; Turn</b>									
2,250.00	22.30	254.54	2,164.61	-133.21	-475.93	475.03	8.00	7.59	6.69
2,300.00	26.13	257.40	2,210.20	-138.14	-495.83	494.90	8.00	7.65	5.72
2,350.00	30.00	259.57	2,254.31	-142.81	-518.87	517.91	8.00	7.74	4.34
2,400.00	33.89	261.28	2,296.73	-147.18	-544.96	543.97	8.00	7.79	3.43
2,450.00	37.81	262.68	2,337.25	-151.25	-573.95	572.93	8.00	7.83	2.79
2,470.15	39.39	263.18	2,353.00	-152.80	-586.42	585.40	8.00	7.85	2.46
<b>Glorieta</b>									
2,500.00	41.74	263.85	2,375.67	-154.99	-605.71	604.67	8.00	7.86	2.26
2,550.00	45.68	264.85	2,411.81	-158.38	-640.09	639.02	8.00	7.88	2.01
2,600.00	49.63	265.73	2,445.49	-161.40	-676.91	675.82	8.00	7.89	1.75
2,627.66	51.81	266.17	2,463.00	-162.91	-698.27	697.17	8.00	7.90	1.60
<b>Paddock</b>									
2,650.00	53.58	266.51	2,476.54	-164.04	-716.00	714.89	8.00	7.91	1.51
2,700.00	57.54	267.21	2,504.81	-166.29	-757.16	756.04	8.00	7.92	1.41
2,731.09	60.00	267.62	2,520.93	-167.49	-783.72	782.59	8.00	7.92	1.31
<b>Hold 60.00° Inc, 267.62° Azm</b>									
2,800.00	60.00	267.62	2,555.38	-169.97	-843.34	842.20	0.00	0.00	0.00
2,845.23	60.00	267.62	2,578.00	-171.59	-882.48	881.33	0.00	0.00	0.00





## Planning Report



<b>Database:</b>	TRG_EDMConroe	<b>Local Co-ordinate Reference:</b>	Well Maude North 12-11 2H
<b>Company:</b>	Riley Permian Operating Co., LLC	<b>TVD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Site:</b>	Maude North 12-11 (1H, 2H)	<b>North Reference:</b>	Grid
<b>Well:</b>	Maude North 12-11 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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)
<b>Lower Paddock</b>									
2,900.00	60.00	267.62	2,605.38	-173.56	-929.87	928.70	0.00	0.00	0.00
2,931.09	60.00	267.62	2,620.93	-174.68	-956.78	955.60	0.00	0.00	0.00
<b>Begin 10.00°/100' Build &amp; Turn</b>									
2,950.00	61.88	267.83	2,630.11	-175.34	-973.29	972.10	10.00	9.95	1.09
3,000.00	66.86	268.34	2,651.73	-176.84	-1,018.33	1,017.13	10.00	9.96	1.03
3,050.00	71.84	268.81	2,669.36	-178.00	-1,065.09	1,063.88	10.00	9.96	0.95
3,100.00	76.82	269.26	2,682.86	-178.81	-1,113.21	1,112.00	10.00	9.96	0.90
3,150.00	81.80	269.70	2,692.13	-179.25	-1,162.32	1,161.11	10.00	9.96	0.86
3,200.00	86.79	270.12	2,697.10	-179.33	-1,212.06	1,210.84	10.00	9.96	0.84
3,231.24	89.90	270.38	2,698.00	-179.20	-1,243.28	1,242.07	10.00	9.97	0.83
<b>Target</b>									
3,232.25	90.00	270.38	2,698.00	-179.19	-1,244.29	1,243.07	10.00	9.97	0.83
<b>Begin 90.00° Lateral</b>									
3,300.00	90.00	270.38	2,698.00	-178.74	-1,312.04	1,310.83	0.00	0.00	0.00
3,400.00	90.00	270.38	2,698.00	-178.06	-1,412.04	1,410.83	0.00	0.00	0.00
3,500.00	90.00	270.38	2,698.00	-177.39	-1,512.04	1,510.83	0.00	0.00	0.00
3,600.00	90.00	270.38	2,698.00	-176.72	-1,612.03	1,610.83	0.00	0.00	0.00
3,700.00	90.00	270.38	2,698.00	-176.05	-1,712.03	1,710.83	0.00	0.00	0.00
3,800.00	90.00	270.38	2,698.00	-175.38	-1,812.03	1,810.83	0.00	0.00	0.00
3,900.00	90.00	270.38	2,698.00	-174.71	-1,912.03	1,910.83	0.00	0.00	0.00
4,000.00	90.00	270.38	2,698.00	-174.03	-2,012.03	2,010.83	0.00	0.00	0.00
4,100.00	90.00	270.38	2,698.00	-173.36	-2,112.02	2,110.83	0.00	0.00	0.00
4,200.00	90.00	270.38	2,698.00	-172.69	-2,212.02	2,210.83	0.00	0.00	0.00
4,300.00	90.00	270.38	2,698.00	-172.02	-2,312.02	2,310.83	0.00	0.00	0.00
4,400.00	90.00	270.38	2,698.00	-171.35	-2,412.02	2,410.83	0.00	0.00	0.00
4,500.00	90.00	270.38	2,698.00	-170.67	-2,512.01	2,510.83	0.00	0.00	0.00
4,600.00	90.00	270.38	2,698.00	-170.00	-2,612.01	2,610.83	0.00	0.00	0.00
4,700.00	90.00	270.38	2,698.00	-169.33	-2,712.01	2,710.83	0.00	0.00	0.00
4,800.00	90.00	270.38	2,698.00	-168.66	-2,812.01	2,810.83	0.00	0.00	0.00
4,900.00	90.00	270.38	2,698.00	-167.99	-2,912.01	2,910.83	0.00	0.00	0.00
5,000.00	90.00	270.38	2,698.00	-167.32	-3,012.00	3,010.83	0.00	0.00	0.00
5,100.00	90.00	270.38	2,698.00	-166.64	-3,112.00	3,110.83	0.00	0.00	0.00
5,200.00	90.00	270.38	2,698.00	-165.97	-3,212.00	3,210.83	0.00	0.00	0.00
5,300.00	90.00	270.38	2,698.00	-165.30	-3,312.00	3,310.83	0.00	0.00	0.00
5,400.00	90.00	270.38	2,698.00	-164.63	-3,411.99	3,410.83	0.00	0.00	0.00
5,500.00	90.00	270.38	2,698.00	-163.96	-3,511.99	3,510.83	0.00	0.00	0.00
5,600.00	90.00	270.38	2,698.00	-163.29	-3,611.99	3,610.83	0.00	0.00	0.00
5,700.00	90.00	270.38	2,698.00	-162.61	-3,711.99	3,710.83	0.00	0.00	0.00
5,800.00	90.00	270.38	2,698.00	-161.94	-3,811.98	3,810.83	0.00	0.00	0.00
5,900.00	90.00	270.38	2,698.00	-161.27	-3,911.98	3,910.83	0.00	0.00	0.00
6,000.00	90.00	270.38	2,698.00	-160.60	-4,011.98	4,010.83	0.00	0.00	0.00
6,100.00	90.00	270.38	2,698.00	-159.93	-4,111.98	4,110.83	0.00	0.00	0.00
6,200.00	90.00	270.38	2,698.00	-159.26	-4,211.98	4,210.83	0.00	0.00	0.00
6,300.00	90.00	270.38	2,698.00	-158.58	-4,311.97	4,310.83	0.00	0.00	0.00
6,400.00	90.00	270.38	2,698.00	-157.91	-4,411.97	4,410.83	0.00	0.00	0.00
6,500.00	90.00	270.38	2,698.00	-157.24	-4,511.97	4,510.83	0.00	0.00	0.00
6,600.00	90.00	270.38	2,698.00	-156.57	-4,611.97	4,610.83	0.00	0.00	0.00
6,700.00	90.00	270.38	2,698.00	-155.90	-4,711.96	4,710.83	0.00	0.00	0.00
6,800.00	90.00	270.38	2,698.00	-155.23	-4,811.96	4,810.83	0.00	0.00	0.00
6,900.00	90.00	270.38	2,698.00	-154.55	-4,911.96	4,910.83	0.00	0.00	0.00
7,000.00	90.00	270.38	2,698.00	-153.88	-5,011.96	5,010.83	0.00	0.00	0.00
7,100.00	90.00	270.38	2,698.00	-153.21	-5,111.96	5,110.83	0.00	0.00	0.00



## Planning Report



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<b>Company:</b>	Riley Permian Operating Co., LLC	<b>TVD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Site:</b>	Maude North 12-11 (1H, 2H)	<b>North Reference:</b>	Grid
<b>Well:</b>	Maude North 12-11 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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)	
7,200.00	90.00	270.38	2,698.00	-152.54	-5,211.95	5,210.83	0.00	0.00	0.00	
7,300.00	90.00	270.38	2,698.00	-151.87	-5,311.95	5,310.83	0.00	0.00	0.00	
7,400.00	90.00	270.38	2,698.00	-151.19	-5,411.95	5,410.83	0.00	0.00	0.00	
7,500.00	90.00	270.38	2,698.00	-150.52	-5,511.95	5,510.83	0.00	0.00	0.00	
7,600.00	90.00	270.38	2,698.00	-149.85	-5,611.94	5,610.83	0.00	0.00	0.00	
7,700.00	90.00	270.38	2,698.00	-149.18	-5,711.94	5,710.83	0.00	0.00	0.00	
7,800.00	90.00	270.38	2,698.00	-148.51	-5,811.94	5,810.83	0.00	0.00	0.00	
7,900.00	90.00	270.38	2,698.00	-147.84	-5,911.94	5,910.83	0.00	0.00	0.00	
8,000.00	90.00	270.38	2,698.00	-147.16	-6,011.94	6,010.83	0.00	0.00	0.00	
8,100.00	90.00	270.38	2,698.00	-146.49	-6,111.93	6,110.83	0.00	0.00	0.00	
8,200.00	90.00	270.38	2,698.00	-145.82	-6,211.93	6,210.83	0.00	0.00	0.00	
8,300.00	90.00	270.38	2,698.00	-145.15	-6,311.93	6,310.83	0.00	0.00	0.00	
8,409.86	90.00	270.38	2,698.00	-144.41	-6,421.78	6,420.68	0.00	0.00	0.00	
PBHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL v2_Maude Nort - plan hits target center - Point	0.00	360.00	2,698.00	-144.41	-6,421.78	638,928.41	532,805.58	32.756447	-104.361087	
FTP_Maude North 2H - plan misses target center by 134.98usft at 3232.20usft MD (2698.00 TVD, -179.19 N, -1244.25 E) - Point	0.00	0.00	2,698.00	-44.22	-1,243.35	639,028.61	537,984.01	32.756725	-104.344242	
FTP v2_Maude North - plan hits target center - Point	0.00	0.00	2,698.00	-179.19	-1,244.29	638,893.63	537,983.08	32.756354	-104.344245	
PBHL Maude North 2 - plan misses target center by 134.97usft at 8409.86usft MD (2698.00 TVD, -144.41 N, -6421.78 E) - Point	0.00	360.00	2,698.00	-9.44	-6,421.44	639,063.39	532,805.92	32.756818	-104.361086	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
0.00	0.00	Quaternary				
319.00	319.00	Queen				
765.59	765.00	Grayburg				
1,017.38	1,013.00	San Andres				
2,470.15	2,353.00	Glorieta				
2,627.66	2,463.00	Paddock				
2,845.23	2,578.00	Lower Paddock				
3,231.24	2,698.00	Target				



## Planning Report



<b>Database:</b>	TRG_EDMConroe	<b>Local Co-ordinate Reference:</b>	Well Maude North 12-11 2H
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<b>Project:</b>	Eddy County, New Mexico (NAD 83)	<b>MD Reference:</b>	Well @ 3317.00usft (Akita 519)
<b>Site:</b>	Maude North 12-11 (1H, 2H)	<b>North Reference:</b>	Grid
<b>Well:</b>	Maude North 12-11 2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	KOP, 2.50°/100' Build
1,384.05	1,362.29	-45.39	-162.17	Begin 22.10° Tangent
2,247.33	2,162.13	-132.94	-474.95	KOP, 8.00°/100' Build & Turn
2,731.09	2,520.93	-167.49	-783.72	Hold 60.00° Inc, 267.62° Azm
2,931.09	2,620.93	-174.68	-956.78	Begin 10.00°/100' Build & Turn
3,232.25	2,698.00	-179.19	-1,244.29	Begin 90.00° Lateral
8,409.86	2,698.00	-144.41	-6,421.78	PBHL

DRILLING PROGRAM



Riley Exploration-Permian, LLC

Maude North 12-11 North Pad

Maude North 12-11 2H

Lot M Section 12, Township 18 South, Range 26 East, 6<sup>th</sup> P.M.

Eddy County, New Mexico

Owner: Bureau of Land Management

Land code: Exempt Agricultural Land

1. Geologic Name of Surface Formation

Quaternary

Estimated Tops of Important Geologic Markers:

Top	TC Thickness	Subsea	Top from KB	Lithology	Expected Fluids
Quaternary	318.5	3,318	0	Salt/Red beds	Usable Water
Queen	446	2,999	319	ANHY/Dolomite	None
Grayburg	248	2,553	765	ANHY/Dolomite	Natural Gas, Oil
San Andres	1340	2,305	1,013	ANHY/Dolomite	Natural Gas, Oil
Glorieta	110	965	2,353	ANHY/Dolomite	Natural Gas, Oil
Paddock	115	855	2,463	ANHY/Dolomite	Natural Gas, Oil
Lower Paddock	120	740	2,578	ANHY/Dolomite	Natural Gas, Oil
Target		620	2,698	ANHY/Dolomite	Natural Gas, Oil

Target @ 0' VS	TVD	INC
	2,698	90.00

2. Blowout Prevention

\*Variance Requested for flex hose\*

Riley Permian requests a variance to use a flex line from the BOP to the choke manifold. Documentation will be attached in the APD and be readily available. No external damage to the flex line. Flex line to be installed as straight as possible with no bends.

\*Riley Permian will be utilizing a 5M BOP\*

Condition	Specify what type and where?
BH Pressure at Deepest TVD	~1500 psi
Abnormal Temperature	No
BH Temperature at Deepest TVD	105-deg F



BOP/BOPE will be tested by an independent service company to 250 psi low and 70% of working pressure high unless otherwise required, as per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed with be functional and tested.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
	Y	Are anchors required by manufacturer?
	A conventional wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. See attached schematics.	

3. BOP Break Testing Request

Riley Exploration Permian LLC requests permission to adjust the BOP break testing requirements as follows:

BOP break test under the following conditions:

- After a full BOP test is conducted
- When skidding to drill the production section, where the surface casing point is shallower than the 3 Bone Spring or 10,000’ TVD
- When skidding to drill a production section that does not penetrate the 3<sup>rd</sup> Bone Spring or deeper

If the kill line is broken prior to skid, four tests will be performed:

- The void between the wellhead and the spool (one on each side for two tests)
- The spool between the kill lines and the choke manifold (consisting of two tests)

If the kill line is not broken prior to skid, two tests will be performed:

- The void between the wellhead and the pipe rams

4. Proposed Casing Program

All casing strings will be test in accordance with onshore oil and gas order #2 III.B.1.h.

Casing Formation Set Interval	Hole Size (in.)	Casing Interval		Casing Size (in.)	Weight (lbs.)	Grade	Conn.	SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
		From (ft.)	To (ft.)								
San Andres	12.25	0	1250	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
N/A	8.75	0	3150	7	32	HCL-80	BTC	1.125	1.2	1.4	1.4
Yeso	8.75	3150	8410	5.5	20	HCL-80	BTC	1.125	1.2	1.4	1.4
								SF Values will MEET or EXCEED			

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

5. Proposed Cement Program:

Casing String	Top (ft.)	Bottom (ft.)	% Excess
Surface (Lead)	0	950	100%
Surface (Tail)	950	1250	100%
Production (Lead)	0	2300	35%+
Production (Tail)	2300	8410	35%+

Casing String	# Sx	Wt. (lb./gal)	Yld (ft3/sk)	H2O (gal/sk)	500# Compressive Strength (hours)	Slurry Description
Surface (lead)	450	12.8	1.43	6.65	6:44	50/50 Poz C Premium Plus
Surface (tail)	195	14.8	1.33	6.32	8:05	Class C Premium Plus
Production (lead)	200	11.5	2.29	12.63	N/A	50/50 Poz C Premium Plus
Production (tail)	1575	13.7	1.31	5.61	N/A	35/65 Poz C Premium Plus

6. Types and Characteristics of the Proposed Mud System:

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Saltwater Clay, CACL2. Riley will utilize a closed mud system.

Depth		Type	Weight (ppg)	Viscosity (cp)	Water Loss
From (ft.)	To (ft.)				
0	1250	Water-Based Mud	8.6-8.9	32-36	N/C
1250	TD	Water-Based Mud	8.6-8.10	32-37	N/C

PVT/Pason/Visual Monitoring will be used to monitor the loss or gain of fluid.

7. Logging, Testing and Coring Program:

Logging, Coring and Testing.		
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.	
No	Logs are planned based on well control or offset log information.	
No	Drill stem test? If yes, explain	
No	Coring? If yes, explain	
Additional logs planned		Interval
No	Resistivity	
No	Density	
No	CBL	
Yes	Mud log	SCP - TD
No	PEX	

8. Drilling Conditions

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

Total estimated cuttings volume: 819 bbl

**NOTES REGARDING THE BLOWOUT PREVENTERS**

**Maude North 12-11 2H**

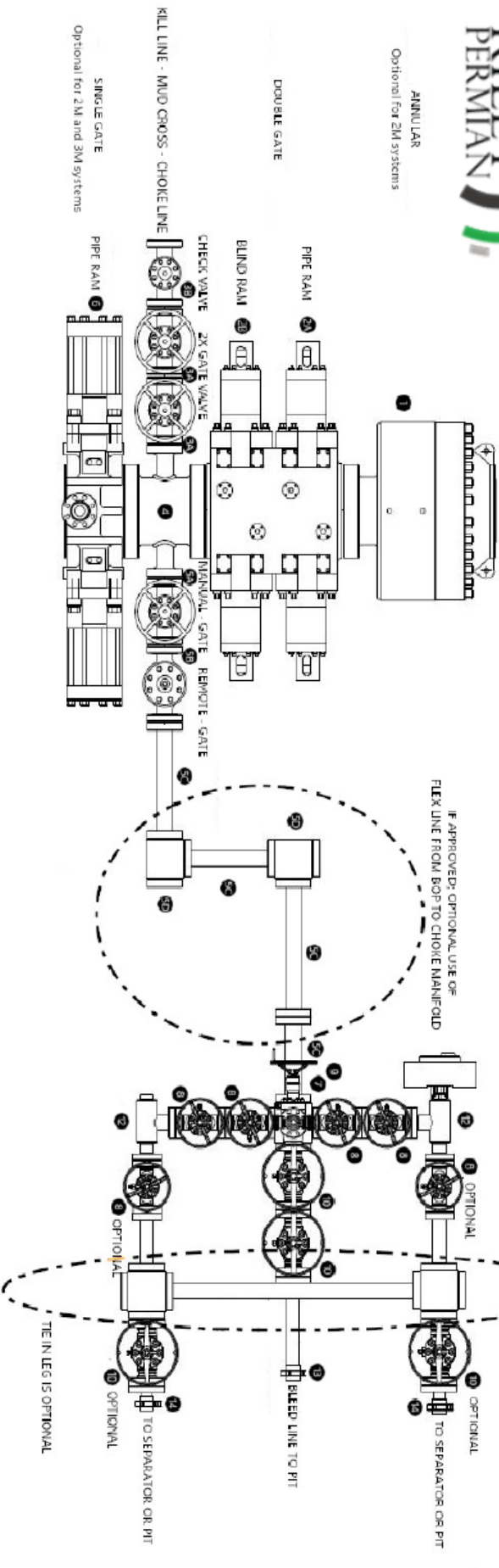
**Eddy County, New Mexico**

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition, 3000 psi WP minimum.
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 3000 psi WP minimum.
6. All choke and fill lines to be securely anchored especially ends of choke lines.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on Kelly.
9. Extension wrenches and hands wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications.





Riley Permian  
Exhibit 10  
Minimum BOP and Choke Requirements  
3M and 5M Systems



BOP - Minimum Requirements						
	Description	ID (in.)	Norm. OD (in.)	Optional	Note	
1	Annular			Yes - 2M		
2A		Pipe Ram				
2B		Double Gate Blind Ram	3 1/8	No		
3A		Gate				
3A		Gate	2			
3B		Check Valve		No		
		Line		2		
4		Mud Cross	2 1/16		No	Kill Line - 2" min. Choke Line - 3" min.
5A		Choke Line	Gate - Manual (2)	3 1/8	No	
5B			Gate - Remote (2)		No	
5C	Line			No		
5D	Targeted Tee		3	No		
6	Single Gate - Pipe Ram			Yes - 2M and 3M		

Choke Manifold - Minimum Requirements

Choke Manifold - Minimum Requirements									
		3000 MWHP			5000 MWHP			10000 MWHP	
	Description	ID (in.)	Nominal OD (in, unless otherwise noted)	Rating (psi)	ID (in.)	Nominal OD (in, unless otherwise noted)	Rating (psi)	ID (in.)	Nominal OD (in, unless otherwise noted)
7	Cross - 3" x 3" x 3" x 2"			3,000			5,000		
8	Valve Gate (2) Plug	2 1/16		3,000	2 1/16		5,000	3 1/8	
9	Pressure Gauge Gate (2)			3,000			5,000		
10	Valve Plug	3 1/8		3,000	3 1/8		5,000	3 1/8	
11	Remote Operated Adjustable Choke (3)	2 1/16		3,000			5,000		
12	Manual Adjustable Choke	2 1/16		3,000			5,000		
13	Line	3		3,000	3		5,000	3	
14	Line	2		3,000	2		5,000	2	
15	Gas Separator (4)	2' x 5'			2' x 5'			2' x 5'	

(1) Only one required in 2M system  
(2) Gate valves only to be used for 10M system  
(3) Remote chokes are required for 5M and 10M systems  
(4) Gas separator is optional for 2M and 3M systems

**Riley Permian Operating Company, LLC**  
**Onshore Order #6**  
**Hydrogen Sulfide Drilling Operation Plan**

## **I. HYDROGEN SULFIDE TRAINING**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H<sub>2</sub>S on metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H<sub>2</sub>S of wells in this area from surface to TD are low enough that a contingency plan is not required.**

## **II. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H<sub>2</sub>S.

### **1. Well Control Equipment:**

- A. Flare line.
- B. Choke manifold.
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

### **2. Protective equipment for essential personnel:**

- A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

**3. H2S detection and monitoring equipment:**

- A. 3x portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

**4. Visual warning systems:**

- A. Wind direction indicators as shown on well site diagram (Exhibit #8).
- B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

**5. Mud program:**

- A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

**6. Metallurgy:**

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- B. All elastomers used for packing and seals shall be H2S trim.

**7. Communication:**

- A. Radio communications in company vehicles including cellular telephone and 2-way radio.
- B. Land line (telephone) communication at Office.

**8. Well testing:**

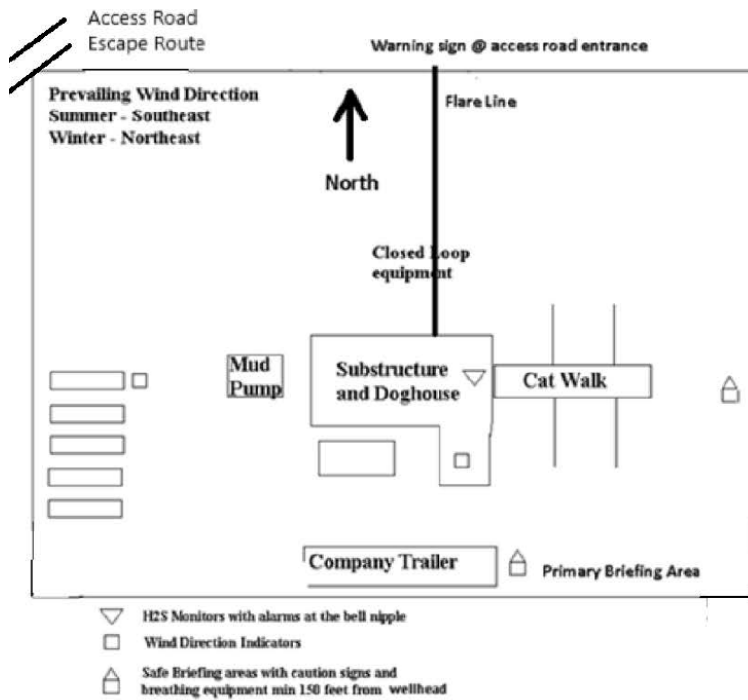
- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

# WARNING

**YOU ARE ENTERING AN H2S AREA  
AUTHORIZED PERSONNEL ONLY**

1. BEARDS OR CONTACT LENSES NOT ALLOWED
2. HARD HATS REQUIRED
3. SMOKING IN DESIGNATED AREAS ONLY
4. BE WIND CONSCIOUS AT ALL TIMES
5. CHECK WITH RILEY PERMIAN OPERATING COMPANY MAN AT OFFICE

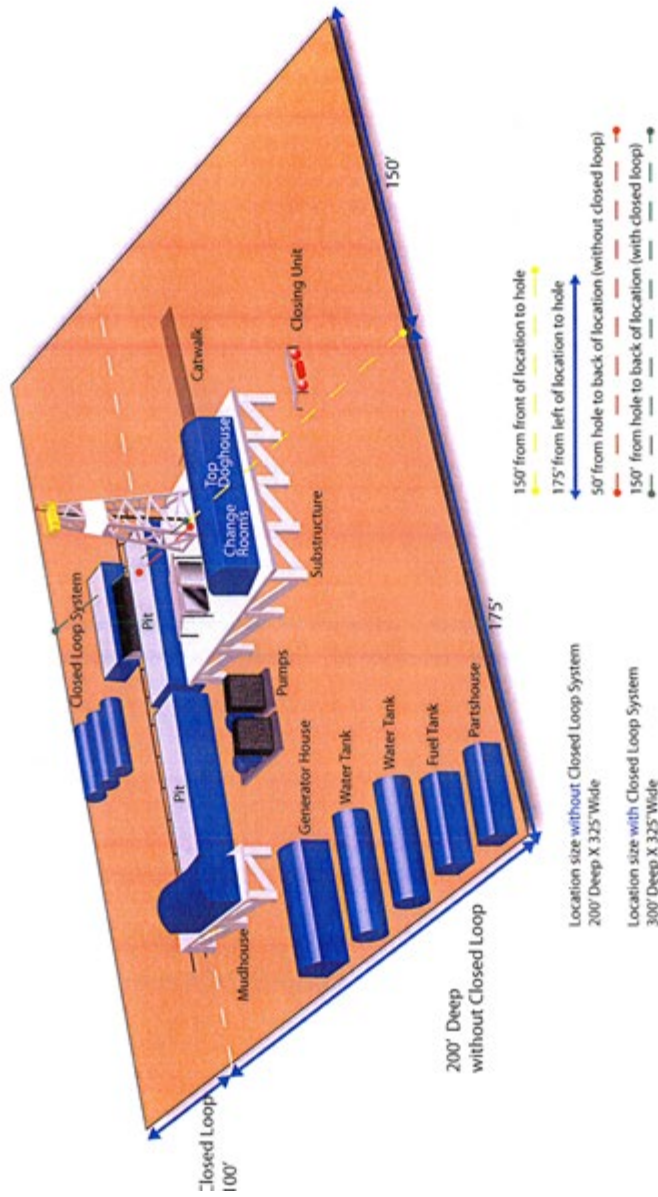
RILEY PERMIAN OPERATING COMPANY, LLC  
1-405-415-8699





**DRILLING LOCATION H2S SAFTY EQUIPMENT**  
**Exhibit # 8**

**Location Layout**



**EMERGENCY CONTACT LIST – EDDY COUNTY**

<b>Artesia</b>	<b>Cellular</b>	<b>Office</b>
Spence Laird.....	575-703-7382.....	405-420-8415
Steve Forister.....	505-400-4571.....	405-666-0113
Travis Kerr.....	713-823-6933	
Justing Sappington.....	361-550-0494	

**Agency Call List (575)****Artesia**

State Police.....	746-2703
City Police.....	746-2703
Sheriff's Office.....	746-9888
Ambulance.....	911
Fire Department.....	746-2701
LEPC (Local Emergency Planning Committee.....	746-2122
NMOCD.....	748-1283

**Carlsbad**

State Police.....	885-3137
City Police.....	885-2111
Sheriff's Office.....	887-7551
Ambulance.....	911
Fire Department.....	885-2111
LEPC (Local Emergency Planning Committee.....	887-3798
Bureau of Land Management.....	887-6544
New Mexico Emergency Response Commission.....	(505)476-9690
24 Hour.....	(505)827-9126

### Emergency Services

Boots & Coots IWC.....1-800-256-9688 or (281)931-8884  
Cudd pressure Control.....(915)699-0139 or (915)563-3356  
Halliburton.....746-2757  
Par Five.....748-9539  
  
Flight For Life-Lubbock, TX.....(806)743-9911  
Aerocare-Lubbock, TX.....(806)747-8923  
Med Flight Air Amb-Albuquerque, NM.....(505)842-4433  
Lifeguard Air Med Svc. Albuquerque, NM.....(505)272-3115

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

Submit Electronically  
Via E-permitting

## 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:** Riley Permian Operating Company LLC **OGRID:** 372290 **Date:** 04 / 04 / 2025

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

If Other, please describe: \_\_\_\_\_

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Maude North 12-11 2H	30-015-PENDING	M - 12 -18S-26E	608' FSL 1143' FWL	450	700	4,000
Maude North 12-11 1H	30-015-PENDING	M - 12 -18S-26E	638' FSL 1143' FWL	450	700	4,000

**IV. Central Delivery Point Name:** Maude South Pad CTB [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
Maude North 12-11 2H	30-015-PENDING	6/1/2025	6/8/2025	9/1/2025	10/1/2025	10/1/2025
Maude North 12-11 1H	30-015-PENDING	6/1/2025	6/8/2025	9/1/2025	10/1/2025	10/1/2025

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

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

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



**Section 2 – Enhanced Plan**  
**EFFECTIVE APRIL 1, 2022**

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

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

**IX. Anticipated Natural Gas Production:**

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

**X. Natural Gas Gathering System (NGGS):**

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

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

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

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

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

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

### **Section 3 - Certifications**

**Effective May 25, 2021**

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

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

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

*If Operator checks this box, Operator will select one of the following:*

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

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

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

### **Section 4 - Notices**


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

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

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

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

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

Signature:	
Printed Name:	Spence Laird
Title:	EHSR Manager
E-mail Address:	spence.laird@rileypermian.com
Date:	4/14/25
Phone:	405-543-1411
<b>OIL CONSERVATION DIVISION</b> (Only applicable when submitted as a standalone form)	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	



## Natural Gas Management Plan – Attachment

VI. Separation equipment will be sized by construction engineering staff based on anticipated daily production to ensure adequate capacity.

VII. Riley Permian Operating Company LLC (“Riley”) will take the following actions to comply with the regulations listed in 19.15.27.8:

- A. Riley will maximize the recovery of natural gas by minimizing waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. Spur will ensure that our wells will be connected to a natural gas gathering system with sufficient capacity to transport natural gas.
- B. All drilling operations will be equipped with a rig flare at least 100 feet from the nearest surface hole location. Rig flare will be utilized to combust any natural gas that is brought to surface during normal operations. In the case of emergency, flaring volumes will be reported appropriately.
- C. During completion operations any natural gas brought to surface will be flared. Immediately following completion operations, wells will flow to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. If natural gas does not meet gathering pipeline specifications, Riley will flare for 60 days or until natural gas meets the pipeline specifications. Riley will ensure flare is properly sized and is equipped with an automatic igniter or continuous pilot. Gas samples will be taken twice per week and natural gas will be routed into a gathering system as soon as the pipeline specifications are met.
- D. Natural gas will not be flared with the exception of 19.15.27.8(D)(1-4). If there is no adequate takeaway for the separator gas, wells will be shut-in until that natural gas gathering system is available with exception of emergency or malfunction situations. Volumes will be reported appropriately.
- E. Riley will comply with performance standards pursuant to 19.15.27.8(E)(1-8). All equipment will be designed and sized to handle maximum pressures to minimize waste. Storage tanks constructed after May 25, 2021 will be equipped with an automatic gauging system that reduces venting of natural gas. Flare stacks installed or replaced after May 25, 2021 will be equipped with an automatic ignitor or continuous pilot. Riley 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 or malfunctions will be resolved as quickly and safely as possible to minimize waste.
- F. The volume of natural gas that is vented or flared as the result of an emergency or malfunction during drilling and/or completion operations will be estimated and reported accordingly. The volume of natural gas that is vented, flared, or beneficially used during production operations will be measured and reported accordingly. Riley will install equipment to measure the volume of natural gas flared from existing piping or a flowline piped from equipment such as high-pressure separators, heater treaters, or VRUs associated with a well of facility associated with a well authorized by an APD after May 25, 2021 that has an average daily production of less than 60,000 cubic feet of natural gas.





If metering is not practicable due to circumstances such as low flow rate or low pressure venting or flaring, Riley will estimate the volume of flared or vented natural gas. Measuring equipment will conform to industry standards and will not be equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing equipment.

VIII. For maintenance activities involving production equipment and compression, venting be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production equipment, the associated producing wells will be shut-in to eliminate venting. For maintenance of VRUs, all natural gas normally routed to the VRU will be routed to flare.