

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 362404

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

1. Operator Name and Address MARSHALL & WINSTON INC P.O. Box 50880 Midland, TX 79710		2. OGRID Number 14187
		3. API Number 30-025-52724
4. Property Code 335629	5. Property Name MEAT PIE 9 STATE COM	6. Well No. 501H

7. Surface Location

UL - Lot C	Section 9	Township 19S	Range 35E	Lot Idn C	Feet From 200	N/S Line N	Feet From 1960	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot N	Section 16	Township 19S	Range 35E	Lot Idn N	Feet From 20	N/S Line S	Feet From 1650	E/W Line W	County Lea
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9. Pool Information

SCHARB;BONE SPRING	55610
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3861
16. Multiple N	17. Proposed Depth 20407	18. Formation Bone Spring	19. Contractor	20. Spud Date 10/15/2024
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	1900	1500	0
Int1	12.25	9.625	40	4066	1200	0
Prod	8.75	5.5	20	20407	3100	0

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	10000	Cameron

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 ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Sherry Roberts	Approved By: Paul F Kautz	
Title: Operations Secretary	Title: Geologist	
Email Address: sroberts@mar-win.com	Approved Date: 4/3/2024	Expiration Date: 4/3/2026
Date: 3/26/2024	Phone: 432-684-6373	Conditions of Approval Attached

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
611 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name MEAT PIE 9 STATE COM	Well Number 501H
OGRID No. 14187	Operator Name MARSHALL & WINSTON, INC.	Elevation 3861.2'

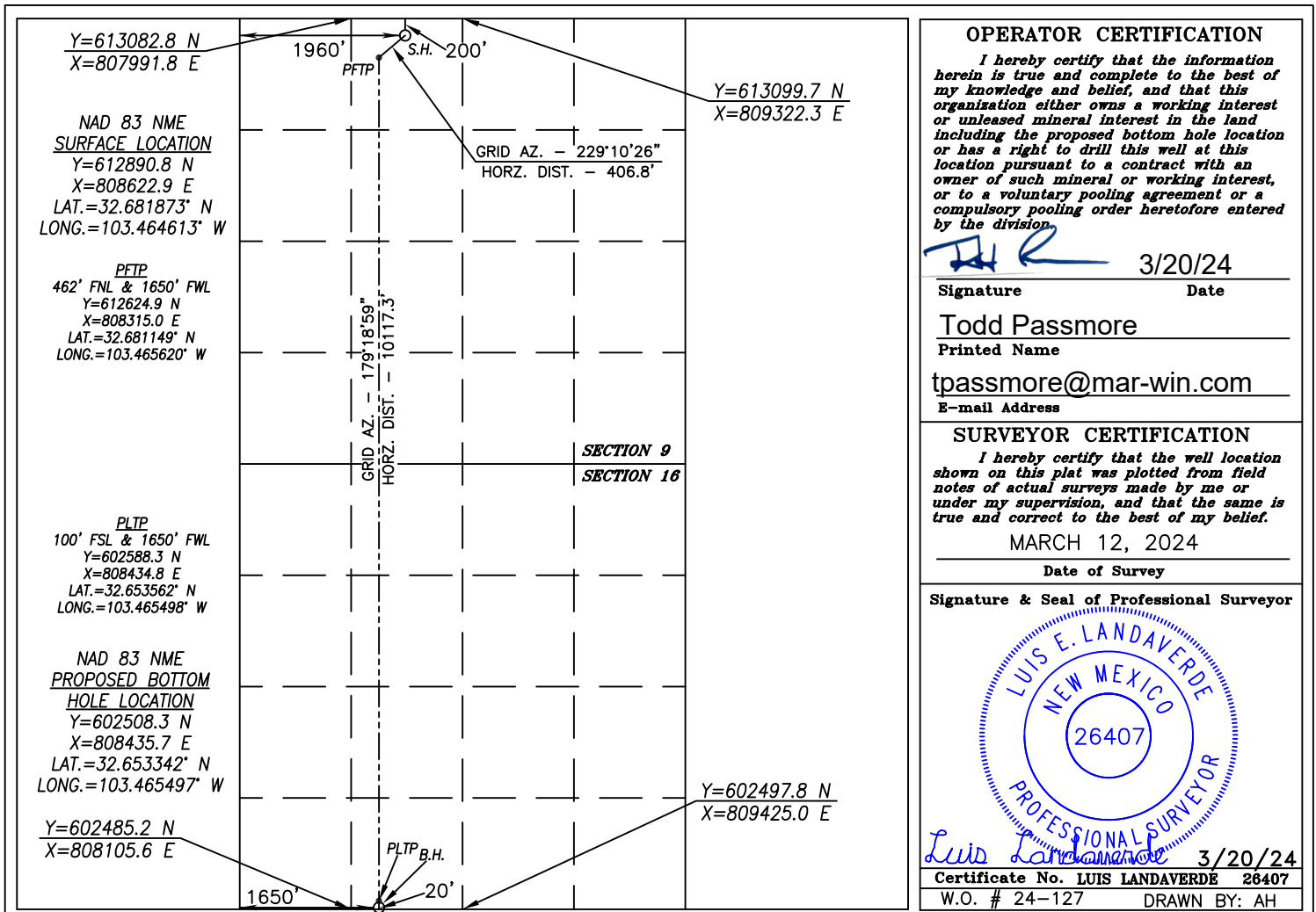
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	9	19-S	35-E		200	NORTH	1960	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	19-S	35-E		20	SOUTH	1650	WEST	LEA
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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

Form APD Conditions
Permit 362404

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MARSHALL & WINSTON INC [14187] P.O. Box 50880 Midland, TX 79710	API Number: 30-025-52724
	Well: MEAT PIE 9 STATE COM #501H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	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
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

☒☐

Intent

As Drilled

Operator Name: MARSHALL & WINSTON, INC.	Property Name: Meat Pie 9 State Com	Well Number 501H
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Kick Off Point (KOP)

UL C	Section 9	Township 19-S	Range 35-E	Lot	Feet 20	From N/S NORTH	Feet 1650	From E/W WEST	County LEA
Latitude 32.68236					Longitude -103.46563			NAD NAD 83 NME	

First Take Point (FTP)

UL C	Section 9	Township 19-S	Range 35-E	Lot	Feet 462	From N/S NORTH	Feet 1650	From E/W WEST	County LEA
Latitude 32.681149					Longitude -103.465620			NAD NAD 83 NME	

Last Take Point (LTP)

UL N	Section 16	Township 19-S	Range 35-E	Lot	Feet 100	From N/S SOUTH	Feet 1650	From E/W WEST	County LEA
Latitude 32.653562					Longitude -103.465498			NAD NAD 83 NME	

Is this well the defining well for the Horizontal Spacing Unit?

Is this well an infill well?

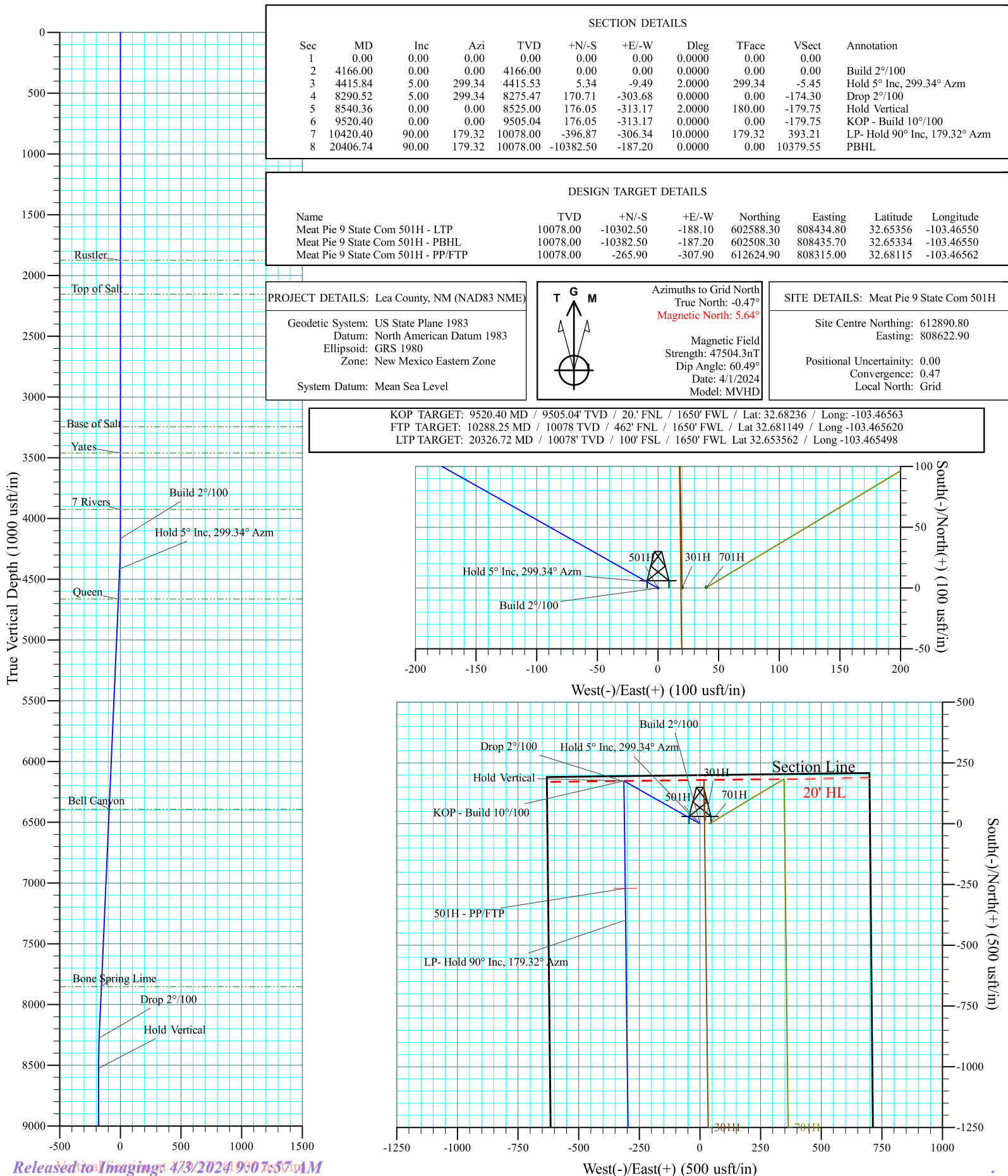
If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

Operator Name:	Property Name:	Well Number
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KZ 06/29/2018



501H
Lea County, NM (NAD83 NME)
Job No. WT-23-193
Lateral 1r0





Marshall & Winston Inc

501H
Lea County, NM (NAD83 NME)
Job No. WT-23-193
Lateral 1r0



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.00		
2	4166.00	0.00	0.00	4166.00	0.00	0.00	0.0000	0.00	0.00		Build 2°/100
3	4415.84	5.00	299.34	4415.53	5.34	-9.49	2.0000	299.34	-5.45		Hold 5° Inc, 299.34° Azm
4	8290.52	5.00	299.34	8275.47	170.71	-303.68	0.0000	0.00	-174.30		Drop 2°/100
5	8540.36	0.00	0.00	8525.00	176.05	-313.17	2.0000	180.00	-179.75		Hold Vertical
6	9520.40	0.00	0.00	9505.04	176.05	-313.17	0.0000	0.00	-179.75		KOP - Build 10°/100
7	10420.40	90.00	179.32	10078.00	-396.87	-306.34	10.0000	179.32	393.21		LP- Hold 90° Inc, 179.32° Azm
8	20406.74	90.00	179.32	10078.00	-10382.50	-187.20	0.0000	0.00	10379.55	Meat Pie 9 State Com 501H - PBHL	PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Meat Pie 9 State Com 501H - LTP	10078.00	-10302.50	-188.10	602588.30	808434.80	32.65356	-103.46550
Meat Pie 9 State Com 501H - PBHL	10078.00	-10382.50	-187.20	602508.30	808435.70	32.65334	-103.46550
Meat Pie 9 State Com 501H - PP/FTP	10078.00	-265.90	-307.90	612624.90	808315.00	32.68115	-103.46562

KOP TARGET: 9022.59' MD / 9015.04' TVD / 20' FNL / 1980' FWL / Lat: 32.68237 / Long: -103.46455
FTP TARGET: 9790.42' MD / 9588' TVD / 462' FNL / 1980' FWL / Lat 32.681153 / Long -103.464548
LTP TARGET: 19829.90' MD / 9588' TVD / 100' FSL / 1980' FWL / Lat 32.653563 / Long -103.464425

PROJECT DETAILS: Lea County, NM (NAD83 NME)

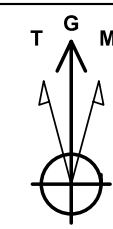
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

SITE DETAILS: Meat Pie 9 State Com 501H

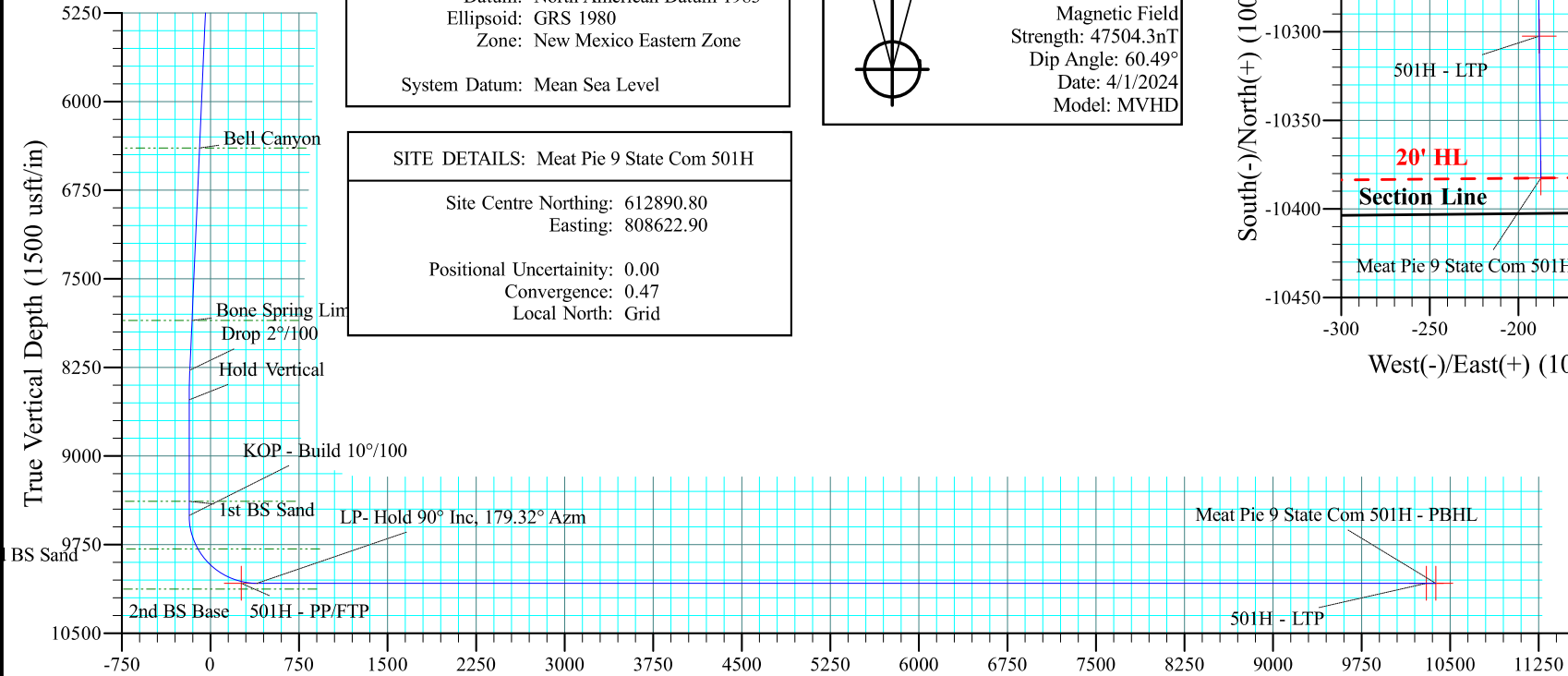
Site Centre Northing: 612890.80
Easting: 808622.90

Positional Uncertainty: 0.00
Convergence: 0.47
Local North: Grid

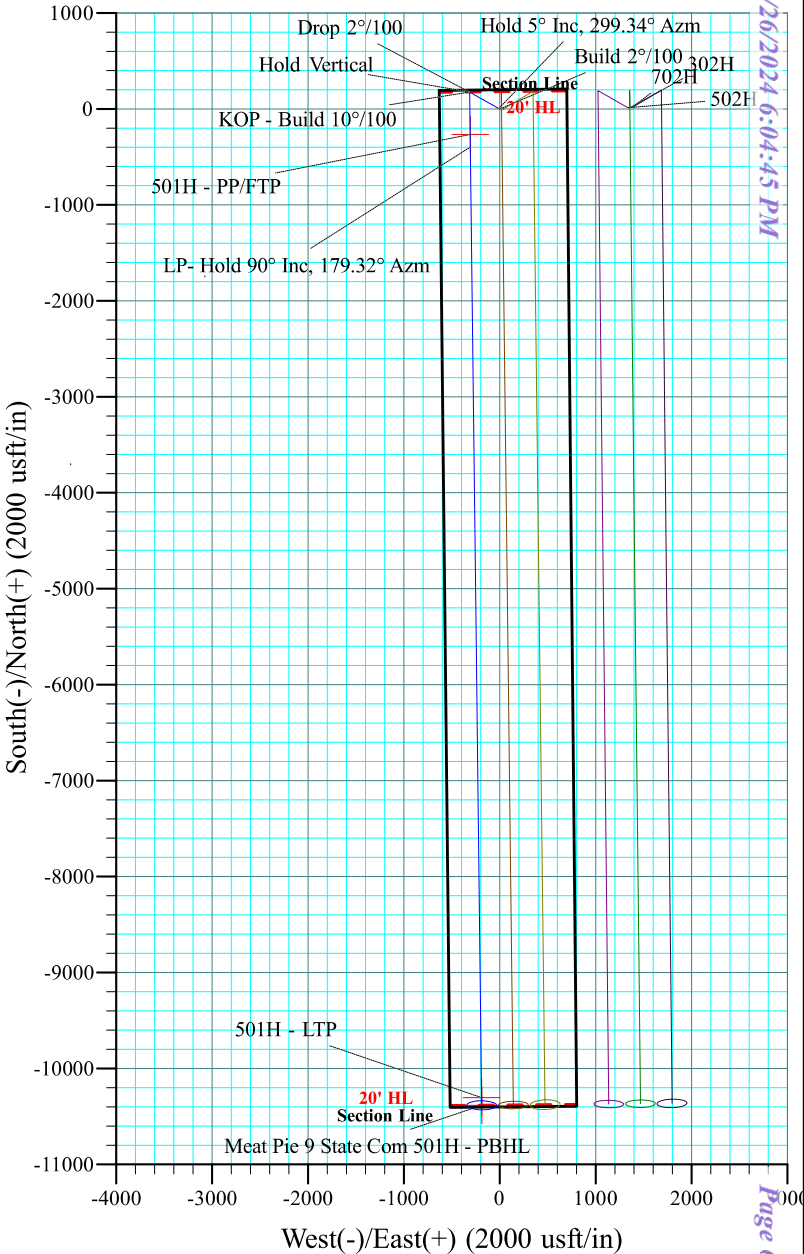
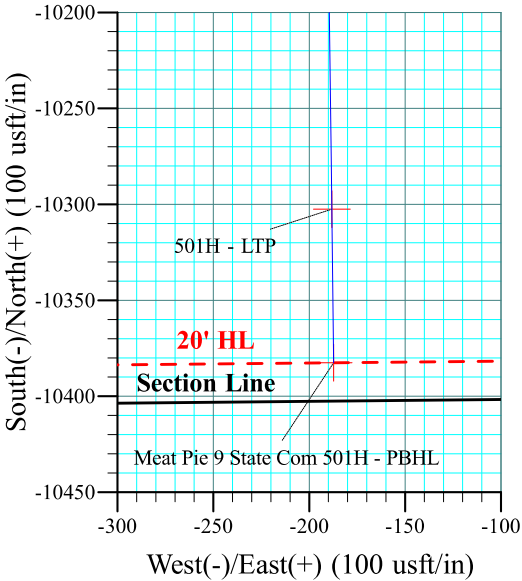


Azimuths to Grid North
True North: -0.47°
Magnetic North: 5.64°

Magnetic Field
Strength: 47504.3nT
Dip Angle: 60.49°
Date: 4/1/2024
Model: MVHD



Vertical Section at 179.32° (1500 usft/in)





Marshall & Winston, Inc.

Lea County, NM (NAD83 NME)

Meat Pie 9 State Com 501H

501H

OH

Plan: Lateral 1r0

Standard Planning Report

22 March, 2024



Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	Local Co-ordinate Reference:	Well 501H
Company:	Marshall & Winston, Inc.	TVD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	MD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Site:	Meat Pie 9 State Com 501H	North Reference:	Grid
Well:	501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1r0		

Project	Lea County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Meat Pie 9 State Com 501H			
Site Position:		Northing:	612,890.80 usft	Latitude: 32.68187
From:	Map	Easting:	808,622.90 usft	Longitude: -103.46462
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	

Well	501H			
Well Position	+N/-S	0.00 usft	Northing:	612,890.80 usft
	+E/-W	0.00 usft	Easting:	808,622.90 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft
Grid Convergence:		0.47 °	Ground Level:	3,861.20 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	4/1/2024	6.11	60.49	47,504.28409946

Design	Lateral 1r0			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.32

Plan Survey Tool Program	Date	3/22/2024		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,406.05 Lateral 1r0 (OH)	B001Mb_MWD+HRGM	
			OWSG MWD + HRGM	

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	0.0000	0.0000	0.0000	0.00	
4,166.00	0.00	0.00	4,166.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	
4,415.84	5.00	299.34	4,415.53	5.34	-9.49	2.0000	2.0000	0.0000	299.34	
8,290.52	5.00	299.34	8,275.47	170.71	-303.68	0.0000	0.0000	0.0000	0.00	
8,540.36	0.00	0.00	8,525.00	176.05	-313.17	2.0000	-2.0000	0.0000	180.00	
9,520.40	0.00	0.00	9,505.04	176.05	-313.17	0.0000	0.0000	0.0000	0.00	
10,420.40	90.00	179.32	10,078.00	-396.87	-306.34	10.0000	0.0000	0.0000	179.32	
20,406.74	90.00	179.32	10,078.00	-10,382.50	-187.20	0.0000	0.0000	0.0000	0.00	Meat Pie 9 State Corr



Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	Local Co-ordinate Reference:	Well 501H
Company:	Marshall & Winston, Inc.	TVD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	MD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Site:	Meat Pie 9 State Com 501H	North Reference:	Grid
Well:	501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1r0		

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	0.0000	0.0000	0.0000
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,875.00	0.00	0.00	1,875.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
Rustler									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
13-3/8" Surface Casing									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,154.00	0.00	0.00	2,154.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
Top of Salt									
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,245.00	0.00	0.00	3,245.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
Base of Salt									
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,461.00	0.00	0.00	3,461.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
Yates									
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
3,926.00	0.00	0.00	3,926.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
7 Rivers									
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
4,066.00	0.00	0.00	4,066.00	0.00	0.00	0.00	0.0000	0.0000	0.0000



Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	Local Co-ordinate Reference:	Well 501H
Company:	Marshall & Winston, Inc.	TVD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	MD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Site:	Meat Pie 9 State Com 501H	North Reference:	Grid
Well:	501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1r0		

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)
1-1/8" Intermediate Casing									
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
4,166.00	0.00	0.00	4,166.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
Build 2°/100									
4,200.00	0.68	299.34	4,200.00	0.10	-0.18	-0.10	2.0000	2.0000	0.0000
4,300.00	2.68	299.34	4,299.95	1.54	-2.73	-1.57	2.0000	2.0000	0.0000
4,400.00	4.68	299.34	4,399.74	4.68	-8.33	-4.78	2.0000	2.0000	0.0000
4,415.84	5.00	299.34	4,415.52	5.34	-9.49	-5.45	2.0000	2.0000	0.0000
Hold 5° Inc, 299.34° Azm									
4,500.00	5.00	299.34	4,499.36	8.93	-15.88	-9.11	0.0000	0.0000	0.0000
4,600.00	5.00	299.34	4,598.98	13.20	-23.47	-13.47	0.0000	0.0000	0.0000
4,664.26	5.00	299.34	4,663.00	15.94	-28.35	-16.27	0.0000	0.0000	0.0000
Queen									
4,700.00	5.00	299.34	4,698.60	17.46	-31.07	-17.83	0.0000	0.0000	0.0000
4,800.00	5.00	299.34	4,798.22	21.73	-38.66	-22.19	0.0000	0.0000	0.0000
4,900.00	5.00	299.34	4,897.84	26.00	-46.25	-26.55	0.0000	0.0000	0.0000
5,000.00	5.00	299.34	4,997.46	30.27	-53.84	-30.90	0.0000	0.0000	0.0000
5,100.00	5.00	299.34	5,097.08	34.54	-61.44	-35.26	0.0000	0.0000	0.0000
5,200.00	5.00	299.34	5,196.70	38.80	-69.03	-39.62	0.0000	0.0000	0.0000
5,300.00	5.00	299.34	5,296.32	43.07	-76.62	-43.98	0.0000	0.0000	0.0000
5,400.00	5.00	299.34	5,395.94	47.34	-84.21	-48.34	0.0000	0.0000	0.0000
5,500.00	5.00	299.34	5,495.56	51.61	-91.81	-52.69	0.0000	0.0000	0.0000
5,600.00	5.00	299.34	5,595.18	55.88	-99.40	-57.05	0.0000	0.0000	0.0000
5,700.00	5.00	299.34	5,694.80	60.14	-106.99	-61.41	0.0000	0.0000	0.0000
5,800.00	5.00	299.34	5,794.42	64.41	-114.59	-65.77	0.0000	0.0000	0.0000
5,900.00	5.00	299.34	5,894.04	68.68	-122.18	-70.13	0.0000	0.0000	0.0000
6,000.00	5.00	299.34	5,993.66	72.95	-129.77	-74.48	0.0000	0.0000	0.0000
6,100.00	5.00	299.34	6,093.28	77.22	-137.36	-78.84	0.0000	0.0000	0.0000
6,200.00	5.00	299.34	6,192.90	81.49	-144.96	-83.20	0.0000	0.0000	0.0000
6,300.00	5.00	299.34	6,292.52	85.75	-152.55	-87.56	0.0000	0.0000	0.0000
6,400.00	5.00	299.34	6,392.14	90.02	-160.14	-91.92	0.0000	0.0000	0.0000
6,400.86	5.00	299.34	6,393.00	90.06	-160.21	-91.95	0.0000	0.0000	0.0000
Bell Canyon									
6,500.00	5.00	299.34	6,491.76	94.29	-167.73	-96.27	0.0000	0.0000	0.0000
6,600.00	5.00	299.34	6,591.38	98.56	-175.33	-100.63	0.0000	0.0000	0.0000
6,700.00	5.00	299.34	6,691.00	102.83	-182.92	-104.99	0.0000	0.0000	0.0000
6,800.00	5.00	299.34	6,790.62	107.09	-190.51	-109.35	0.0000	0.0000	0.0000
6,900.00	5.00	299.34	6,890.24	111.36	-198.10	-113.71	0.0000	0.0000	0.0000
7,000.00	5.00	299.34	6,989.86	115.63	-205.70	-118.06	0.0000	0.0000	0.0000
7,100.00	5.00	299.34	7,089.48	119.90	-213.29	-122.42	0.0000	0.0000	0.0000
7,200.00	5.00	299.34	7,189.10	124.17	-220.88	-126.78	0.0000	0.0000	0.0000
7,300.00	5.00	299.34	7,288.72	128.43	-228.48	-131.14	0.0000	0.0000	0.0000
7,400.00	5.00	299.34	7,388.34	132.70	-236.07	-135.50	0.0000	0.0000	0.0000
7,500.00	5.00	299.34	7,487.96	136.97	-243.66	-139.85	0.0000	0.0000	0.0000
7,600.00	5.00	299.34	7,587.58	141.24	-251.25	-144.21	0.0000	0.0000	0.0000
7,700.00	5.00	299.34	7,687.20	145.51	-258.85	-148.57	0.0000	0.0000	0.0000
7,800.00	5.00	299.34	7,786.82	149.78	-266.44	-152.93	0.0000	0.0000	0.0000
7,866.43	5.00	299.34	7,853.00	152.61	-271.48	-155.82	0.0000	0.0000	0.0000
Bone Spring Lime									
7,900.00	5.00	299.34	7,886.44	154.04	-274.03	-157.28	0.0000	0.0000	0.0000
8,000.00	5.00	299.34	7,986.06	158.31	-281.62	-161.64	0.0000	0.0000	0.0000
8,100.00	5.00	299.34	8,085.68	162.58	-289.22	-166.00	0.0000	0.0000	0.0000
8,200.00	5.00	299.34	8,185.30	166.85	-296.81	-170.36	0.0000	0.0000	0.0000



Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	Local Co-ordinate Reference:	Well 501H
Company:	Marshall & Winston, Inc.	TVD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	MD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Site:	Meat Pie 9 State Com 501H	North Reference:	Grid
Well:	501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1r0		

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)	
8,290.52	5.00	299.34	8,275.48	170.71	-303.68	-174.30	0.0000	0.0000	0.0000	
Drop 2°/100										
8,300.00	4.81	299.34	8,284.92	171.11	-304.39	-174.71	2.0007	-2.0007	0.0000	
8,400.00	2.81	299.34	8,384.70	174.36	-310.18	-178.03	2.0000	-2.0000	0.0000	
8,500.00	0.81	299.34	8,484.64	175.91	-312.93	-179.61	2.0000	-2.0000	0.0000	
8,540.36	0.00	0.00	8,525.00	176.05	-313.17	-179.75	1.9999	-1.9999	0.0000	
Hold Vertical										
8,600.00	0.00	0.00	8,584.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
8,700.00	0.00	0.00	8,684.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
8,800.00	0.00	0.00	8,784.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
8,900.00	0.00	0.00	8,884.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
9,000.00	0.00	0.00	8,984.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
9,100.00	0.00	0.00	9,084.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
9,200.00	0.00	0.00	9,184.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
9,300.00	0.00	0.00	9,284.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
9,399.36	0.00	0.00	9,384.00	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
1st BS Sand										
9,400.00	0.00	0.00	9,384.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
9,500.00	0.00	0.00	9,484.64	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
9,520.40	0.00	0.00	9,505.04	176.05	-313.17	-179.75	0.0000	0.0000	0.0000	
KOP - Build 10°/100										
9,550.00	2.96	179.32	9,534.63	175.28	-313.16	-178.99	9.9996	9.9996	0.0000	
9,600.00	7.96	179.32	9,584.39	170.53	-313.11	-174.23	10.0000	10.0000	0.0000	
9,650.00	12.96	179.32	9,633.54	161.45	-313.00	-165.16	10.0000	10.0000	0.0000	
9,700.00	17.96	179.32	9,681.71	148.13	-312.84	-151.83	10.0000	10.0000	0.0000	
9,750.00	22.96	179.32	9,728.55	130.66	-312.63	-134.36	10.0000	10.0000	0.0000	
9,800.00	27.96	179.32	9,773.68	109.17	-312.37	-112.87	10.0000	10.0000	0.0000	
9,814.05	29.36	179.32	9,786.00	102.44	-312.29	-106.14	10.0000	10.0000	0.0000	
2nd BS Sand										
9,850.00	32.96	179.32	9,816.76	83.84	-312.07	-87.53	10.0000	10.0000	0.0000	
9,900.00	37.96	179.32	9,857.47	54.84	-311.73	-58.54	10.0000	10.0000	0.0000	
9,950.00	42.96	179.32	9,895.51	22.41	-311.34	-26.10	10.0000	10.0000	0.0000	
10,000.00	47.96	179.32	9,930.56	-13.22	-310.91	9.53	10.0000	10.0000	0.0000	
10,050.00	52.96	179.32	9,962.39	-51.76	-310.45	48.07	10.0000	10.0000	0.0000	
10,100.00	57.96	179.32	9,990.73	-92.93	-309.96	89.25	10.0000	10.0000	0.0000	
10,150.00	62.96	179.32	10,015.37	-136.41	-309.44	132.73	10.0000	10.0000	0.0000	
10,200.00	67.96	179.32	10,036.13	-181.88	-308.90	178.20	10.0000	10.0000	0.0000	
10,250.00	72.96	179.32	10,052.85	-228.98	-308.34	225.31	10.0000	10.0000	0.0000	
10,292.07	77.17	179.32	10,063.69	-269.61	-307.86	265.94	10.0000	10.0000	0.0000	
Meat Pie 9 State Com 501H - PP/FTP										
10,300.00	77.96	179.32	10,065.40	-277.36	-307.76	273.69	10.0000	10.0000	0.0000	
10,350.00	82.96	179.32	10,073.68	-326.65	-307.18	322.98	10.0000	10.0000	0.0000	
10,400.00	87.96	179.32	10,077.64	-376.48	-306.58	372.81	10.0000	10.0000	0.0000	
10,420.40	90.00	179.32	10,078.00	-396.87	-306.34	393.21	10.0000	10.0000	0.0000	
LP- Hold 90° Inc, 179.32° Azm										
10,500.00	90.00	179.32	10,078.00	-476.46	-305.39	472.81	0.0001	0.0001	0.0000	
10,600.00	90.00	179.32	10,078.00	-576.46	-304.19	572.81	0.0000	0.0000	0.0000	
10,700.00	90.00	179.32	10,078.00	-676.45	-303.00	672.81	0.0000	0.0000	0.0000	
10,800.00	90.00	179.32	10,078.00	-776.44	-301.81	772.81	0.0000	0.0000	0.0000	
10,900.00	90.00	179.32	10,078.00	-876.44	-300.62	872.81	0.0000	0.0000	0.0000	
11,000.00	90.00	179.32	10,078.00	-976.43	-299.42	972.81	0.0000	0.0000	0.0000	
11,100.00	90.00	179.32	10,078.00	-1,076.42	-298.23	1,072.81	0.0000	0.0000	0.0000	
11,200.00	90.00	179.32	10,078.00	-1,176.41	-297.04	1,172.81	0.0000	0.0000	0.0000	



Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	Local Co-ordinate Reference:	Well 501H
Company:	Marshall & Winston, Inc.	TVD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	MD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Site:	Meat Pie 9 State Com 501H	North Reference:	Grid
Well:	501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1r0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,300.00	90.00	179.32	10,078.00	-1,276.41	-295.84	1,272.81	0.0000	0.0000	0.0000
11,400.00	90.00	179.32	10,078.00	-1,376.40	-294.65	1,372.81	0.0000	0.0000	0.0000
11,500.00	90.00	179.32	10,078.00	-1,476.39	-293.46	1,472.81	0.0000	0.0000	0.0000
11,600.00	90.00	179.32	10,078.00	-1,576.39	-292.26	1,572.81	0.0000	0.0000	0.0000
11,700.00	90.00	179.32	10,078.00	-1,676.38	-291.07	1,672.81	0.0000	0.0000	0.0000
11,800.00	90.00	179.32	10,078.00	-1,776.37	-289.88	1,772.81	0.0000	0.0000	0.0000
11,900.00	90.00	179.32	10,078.00	-1,876.36	-288.69	1,872.81	0.0000	0.0000	0.0000
12,000.00	90.00	179.32	10,078.00	-1,976.36	-287.49	1,972.81	0.0000	0.0000	0.0000
12,100.00	90.00	179.32	10,078.00	-2,076.35	-286.30	2,072.81	0.0000	0.0000	0.0000
12,200.00	90.00	179.32	10,078.00	-2,176.34	-285.11	2,172.81	0.0000	0.0000	0.0000
12,300.00	90.00	179.32	10,078.00	-2,276.34	-283.91	2,272.81	0.0000	0.0000	0.0000
12,400.00	90.00	179.32	10,078.00	-2,376.33	-282.72	2,372.81	0.0000	0.0000	0.0000
12,500.00	90.00	179.32	10,078.00	-2,476.32	-281.53	2,472.81	0.0000	0.0000	0.0000
12,600.00	90.00	179.32	10,078.00	-2,576.31	-280.33	2,572.81	0.0000	0.0000	0.0000
12,700.00	90.00	179.32	10,078.00	-2,676.31	-279.14	2,672.81	0.0000	0.0000	0.0000
12,800.00	90.00	179.32	10,078.00	-2,776.30	-277.95	2,772.81	0.0000	0.0000	0.0000
12,900.00	90.00	179.32	10,078.00	-2,876.29	-276.76	2,872.81	0.0000	0.0000	0.0000
13,000.00	90.00	179.32	10,078.00	-2,976.29	-275.56	2,972.81	0.0000	0.0000	0.0000
13,100.00	90.00	179.32	10,078.00	-3,076.28	-274.37	3,072.81	0.0000	0.0000	0.0000
13,200.00	90.00	179.32	10,078.00	-3,176.27	-273.18	3,172.81	0.0000	0.0000	0.0000
13,300.00	90.00	179.32	10,078.00	-3,276.26	-271.98	3,272.81	0.0000	0.0000	0.0000
13,400.00	90.00	179.32	10,078.00	-3,376.26	-270.79	3,372.81	0.0000	0.0000	0.0000
13,500.00	90.00	179.32	10,078.00	-3,476.25	-269.60	3,472.81	0.0000	0.0000	0.0000
13,600.00	90.00	179.32	10,078.00	-3,576.24	-268.40	3,572.81	0.0000	0.0000	0.0000
13,700.00	90.00	179.32	10,078.00	-3,676.24	-267.21	3,672.81	0.0000	0.0000	0.0000
13,800.00	90.00	179.32	10,078.00	-3,776.23	-266.02	3,772.81	0.0000	0.0000	0.0000
13,900.00	90.00	179.32	10,078.00	-3,876.22	-264.83	3,872.81	0.0000	0.0000	0.0000
14,000.00	90.00	179.32	10,078.00	-3,976.21	-263.63	3,972.81	0.0000	0.0000	0.0000
14,100.00	90.00	179.32	10,078.00	-4,076.21	-262.44	4,072.81	0.0000	0.0000	0.0000
14,200.00	90.00	179.32	10,078.00	-4,176.20	-261.25	4,172.81	0.0000	0.0000	0.0000
14,300.00	90.00	179.32	10,078.00	-4,276.19	-260.05	4,272.81	0.0000	0.0000	0.0000
14,400.00	90.00	179.32	10,078.00	-4,376.19	-258.86	4,372.81	0.0000	0.0000	0.0000
14,500.00	90.00	179.32	10,078.00	-4,476.18	-257.67	4,472.81	0.0000	0.0000	0.0000
14,600.00	90.00	179.32	10,078.00	-4,576.17	-256.47	4,572.81	0.0000	0.0000	0.0000
14,700.00	90.00	179.32	10,078.00	-4,676.17	-255.28	4,672.81	0.0000	0.0000	0.0000
14,800.00	90.00	179.32	10,078.00	-4,776.16	-254.09	4,772.81	0.0000	0.0000	0.0000
14,900.00	90.00	179.32	10,078.00	-4,876.15	-252.90	4,872.81	0.0000	0.0000	0.0000
15,000.00	90.00	179.32	10,078.00	-4,976.14	-251.70	4,972.81	0.0000	0.0000	0.0000
15,100.00	90.00	179.32	10,078.00	-5,076.14	-250.51	5,072.81	0.0000	0.0000	0.0000
15,200.00	90.00	179.32	10,078.00	-5,176.13	-249.32	5,172.81	0.0000	0.0000	0.0000
15,300.00	90.00	179.32	10,078.00	-5,276.12	-248.12	5,272.81	0.0000	0.0000	0.0000
15,400.00	90.00	179.32	10,078.00	-5,376.12	-246.93	5,372.81	0.0000	0.0000	0.0000
15,500.00	90.00	179.32	10,078.00	-5,476.11	-245.74	5,472.81	0.0000	0.0000	0.0000
15,600.00	90.00	179.32	10,078.00	-5,576.10	-244.54	5,572.81	0.0000	0.0000	0.0000
15,700.00	90.00	179.32	10,078.00	-5,676.09	-243.35	5,672.81	0.0000	0.0000	0.0000
15,800.00	90.00	179.32	10,078.00	-5,776.09	-242.16	5,772.81	0.0000	0.0000	0.0000
15,900.00	90.00	179.32	10,078.00	-5,876.08	-240.97	5,872.81	0.0000	0.0000	0.0000
16,000.00	90.00	179.32	10,078.00	-5,976.07	-239.77	5,972.81	0.0000	0.0000	0.0000
16,100.00	90.00	179.32	10,078.00	-6,076.07	-238.58	6,072.81	0.0000	0.0000	0.0000
16,200.00	90.00	179.32	10,078.00	-6,176.06	-237.39	6,172.81	0.0000	0.0000	0.0000
16,300.00	90.00	179.32	10,078.00	-6,276.05	-236.19	6,272.81	0.0000	0.0000	0.0000
16,400.00	90.00	179.32	10,078.00	-6,376.04	-235.00	6,372.81	0.0000	0.0000	0.0000
16,500.00	90.00	179.32	10,078.00	-6,476.04	-233.81	6,472.81	0.0000	0.0000	0.0000
16,600.00	90.00	179.32	10,078.00	-6,576.03	-232.61	6,572.81	0.0000	0.0000	0.0000



Aim Directional Services

Planning Report

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Project:	Lea County, NM (NAD83 NME)	MD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Site:	Meat Pie 9 State Com 501H	North Reference:	Grid
Well:	501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1r0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,700.00	90.00	179.32	10,078.00	-6,676.02	-231.42	6,672.81	0.0000	0.0000	0.0000	
16,800.00	90.00	179.32	10,078.00	-6,776.02	-230.23	6,772.81	0.0000	0.0000	0.0000	
16,900.00	90.00	179.32	10,078.00	-6,876.01	-229.04	6,872.81	0.0000	0.0000	0.0000	
17,000.00	90.00	179.32	10,078.00	-6,976.00	-227.84	6,972.81	0.0000	0.0000	0.0000	
17,100.00	90.00	179.32	10,078.00	-7,075.99	-226.65	7,072.81	0.0000	0.0000	0.0000	
17,200.00	90.00	179.32	10,078.00	-7,175.99	-225.46	7,172.81	0.0000	0.0000	0.0000	
17,300.00	90.00	179.32	10,078.00	-7,275.98	-224.26	7,272.81	0.0000	0.0000	0.0000	
17,400.00	90.00	179.32	10,078.00	-7,375.97	-223.07	7,372.81	0.0000	0.0000	0.0000	
17,500.00	90.00	179.32	10,078.00	-7,475.97	-221.88	7,472.81	0.0000	0.0000	0.0000	
17,600.00	90.00	179.32	10,078.00	-7,575.96	-220.68	7,572.81	0.0000	0.0000	0.0000	
17,700.00	90.00	179.32	10,078.00	-7,675.95	-219.49	7,672.81	0.0000	0.0000	0.0000	
17,800.00	90.00	179.32	10,078.00	-7,775.94	-218.30	7,772.81	0.0000	0.0000	0.0000	
17,900.00	90.00	179.32	10,078.00	-7,875.94	-217.11	7,872.81	0.0000	0.0000	0.0000	
18,000.00	90.00	179.32	10,078.00	-7,975.93	-215.91	7,972.81	0.0000	0.0000	0.0000	
18,100.00	90.00	179.32	10,078.00	-8,075.92	-214.72	8,072.81	0.0000	0.0000	0.0000	
18,200.00	90.00	179.32	10,078.00	-8,175.92	-213.53	8,172.81	0.0000	0.0000	0.0000	
18,300.00	90.00	179.32	10,078.00	-8,275.91	-212.33	8,272.81	0.0000	0.0000	0.0000	
18,400.00	90.00	179.32	10,078.00	-8,375.90	-211.14	8,372.81	0.0000	0.0000	0.0000	
18,500.00	90.00	179.32	10,078.00	-8,475.89	-209.95	8,472.81	0.0000	0.0000	0.0000	
18,600.00	90.00	179.32	10,078.00	-8,575.89	-208.75	8,572.81	0.0000	0.0000	0.0000	
18,700.00	90.00	179.32	10,078.00	-8,675.88	-207.56	8,672.81	0.0000	0.0000	0.0000	
18,800.00	90.00	179.32	10,078.00	-8,775.87	-206.37	8,772.81	0.0000	0.0000	0.0000	
18,900.00	90.00	179.32	10,078.00	-8,875.87	-205.18	8,872.81	0.0000	0.0000	0.0000	
19,000.00	90.00	179.32	10,078.00	-8,975.86	-203.98	8,972.81	0.0000	0.0000	0.0000	
19,100.00	90.00	179.32	10,078.00	-9,075.85	-202.79	9,072.81	0.0000	0.0000	0.0000	
19,200.00	90.00	179.32	10,078.00	-9,175.85	-201.60	9,172.81	0.0000	0.0000	0.0000	
19,300.00	90.00	179.32	10,078.00	-9,275.84	-200.40	9,272.81	0.0000	0.0000	0.0000	
19,400.00	90.00	179.32	10,078.00	-9,375.83	-199.21	9,372.81	0.0000	0.0000	0.0000	
19,500.00	90.00	179.32	10,078.00	-9,475.82	-198.02	9,472.81	0.0000	0.0000	0.0000	
19,600.00	90.00	179.32	10,078.00	-9,575.82	-196.82	9,572.81	0.0000	0.0000	0.0000	
19,700.00	90.00	179.32	10,078.00	-9,675.81	-195.63	9,672.81	0.0000	0.0000	0.0000	
19,800.00	90.00	179.32	10,078.00	-9,775.80	-194.44	9,772.81	0.0000	0.0000	0.0000	
19,900.00	90.00	179.32	10,078.00	-9,875.80	-193.25	9,872.81	0.0000	0.0000	0.0000	
20,000.00	90.00	179.32	10,078.00	-9,975.79	-192.05	9,972.81	0.0000	0.0000	0.0000	
20,100.00	90.00	179.32	10,078.00	-10,075.78	-190.86	10,072.81	0.0000	0.0000	0.0000	
20,200.00	90.00	179.32	10,078.00	-10,175.77	-189.67	10,172.81	0.0000	0.0000	0.0000	
20,300.00	90.00	179.32	10,078.00	-10,275.77	-188.47	10,272.81	0.0000	0.0000	0.0000	
Meat Pie 9 State Com 501H - LTP										
20,406.74	90.00	179.32	10,078.00	-10,382.50	-187.20	10,379.55	0.0000	0.0000	0.0000	
PBHL - Meat Pie 9 State Com 501H - PBHL										



Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	Local Co-ordinate Reference:	Well 501H
Company:	Marshall & Winston, Inc.	TVD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	MD Reference:	Well @ 3886.20usft ((KB @ 25'ft))
Site:	Meat Pie 9 State Com 501H	North Reference:	Grid
Well:	501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1r0		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Meat Pie 9 State Com 5i	0.00	0.00	10,078.00	-265.90	-307.90	612,624.90	808,315.00	32.68115	-103.46562
- plan misses target center by 14.79usft at 10292.07usft MD (10063.69 TVD, -269.61 N, -307.86 E)									
- Point									
Meat Pie 9 State Com 5i	0.00	0.00	10,078.00	-10,302.50	-188.10	602,588.30	808,434.80	32.65356	-103.46550
- plan misses target center by 26.74usft at 20300.00usft MD (10078.00 TVD, -10275.77 N, -188.47 E)									
- Point									
Meat Pie 9 State Com 5i	0.00	0.00	10,078.00	-10,382.50	-187.20	602,508.30	808,435.70	32.65334	-103.46550
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,900.00	1,900.00	13-3/8" Surface Casing	13-3/8	13-3/8
	4,066.00	4,066.00	1-1/8" Intermediate Casing	1-1/8	1-1/8

Formations					
	Measured Depth	Vertical Depth		Dip	Dip Direction
	(usft)	(usft)	Name	(°)	(°)
	1,875.00	1,875.00	Rustler	0.00	179.32
	2,154.00	2,154.00	Top of Salt	0.00	179.32
	3,245.00	3,245.00	Base of Salt	0.00	179.32
	3,461.00	3,461.00	Yates	0.00	179.32
	3,926.00	3,926.00	7 Rivers	0.00	179.32
	4,664.26	4,663.00	Queen	0.00	179.32
	6,400.86	6,393.00	Bell Canyon	0.00	179.32
	7,866.43	7,853.00	Bone Spring Lime	0.00	179.32
	9,399.36	9,384.00	1st BS Sand	0.00	179.32
	9,814.05	9,786.00	2nd BS Sand	0.00	179.32

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(usft)	(usft)	+N/-S	+E/-W	Comment
	4,166.00	4,166.00	0.00	0.00	Build 2°/100
	4,415.84	4,415.52	5.34	-9.49	Hold 5° Inc, 299.34° Azm
	8,290.52	8,275.48	170.71	-303.68	Drop 2°/100
	8,540.36	8,525.00	176.05	-313.17	Hold Vertical
	9,520.40	9,505.04	176.05	-313.17	KOP - Build 10°/100
	10,420.40	10,078.00	-396.87	-306.34	LP- Hold 90° Inc, 179.32° Azm
	20,406.74	10,078.00	-10,382.50	-187.20	PBHL

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: Marshall & Winston, Inc. **OGRID:** 14187 **Date:** 03 / 25 / 2024

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
Meat Pie 9 State Com #501H		UL C, Sec 9	200 FNL	750	750	1000
		T19S, R35E	1980 FWL			

IV. Central Delivery Point Name: Targa Resources TIP [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
Meat Pie 9 State Com #501H		<u>10/15/2024</u>	<u>12/15/2024</u>	<u>11/10/2024</u>	<u>12/01/2024</u>	<u>12/15/2024</u>
						<u>Estimated</u>

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.

Marshall & Winston, Inc.

Natural Gas Management Plan ~ Attachment

- VI. Marshall & Winston, Inc. (M&W) engineering staff will utilize separation equipment based on capacities suggested by the manufacturer in conjunction with anticipated daily production rates. Engineered design of the VRU system along with pipe sizing will be verified by COMM Engineering Services to ensure maximum efficiency for anticipated volumes.
- VII. M&W will take the following actions to comply with the regulations listed in 19.15.28.8:
- A. M&W plans to efficiently recover natural gas by minimizing waste gas as defined in 19.15.2 NMAC. M&W will ensure each new well drilled and completed is connected to a natural gas gathering system before the well is on line. If the natural gas gathering infrastructure is not in place the well will be delayed or shut in until the gathering system is available.
 - B. Drilling operations are equipped with a flare located at least 100 ft from the nearest wellbore. The flare will be used to combust any gas the is circulated to surface during drilling operations. Estimated volumes will be reported appropriately.
 - C. During completion operations and natural gas brought to surface will be flared. Following completion operations all fluids and gases flowed/pumped from the well will be directed to designed separation equipment at the central tank battery. All natural gas will be sent directly to the sales line. If the initial gas production does not meet gathering sales line specifications it will be flared for no more than 60 days. Gas analysis will be ran twice a week and once gas meets sales specifications the gas will be sent to the sales line. Flared volumes will be reported accordingly.
 - D. M&W will not flare natural gas unless it follows the provisions and exceptions list in 19.15.27.8. If the gas gathering system is unavailable each well(s) will be shut in the gathering system is back in service. Only during an emergency or malfunction of equipment will gas be flared. Appropriate estimated volumes will be reported.
 - E. M&W will comply with required standards listed in 19.5.27.8 A-F.
 - F. The volume of natural gas that is vented or flared as a result of a malfunction or emergency during operations will be estimated and reported accordingly. The volume of natural gas that is vented, flared or used beneficially during production operations will measured or estimated. M&W will install meters to measure the volume of natural gas flared from the facility. Measuring devices will conform to industry stands as well as NMOCD regulations.
- VIII. During maintenance operations that involve separation equipment venting will controlled by shutting in well(s). During VRU maintenance operations natural gas will be diverted to the flare to avoid venting the natural gas.

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: Todd Passmore
Title: Operations Manager
E-mail Address: tpassmore@mar-win.com
Date: 03/25/2024
Phone: 432-684-6373
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval: