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 361706

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

1. Operator Name and Address	2. OGRID Number
MARSHALL & WINSTON INC P.O. Box 50880 Midland, TX 79710	14187
	3. API Number 30-025-52646

4. Property Code	5. Property Name	6. Well No.
335611	BLUEBERRY PIE 16 STATE COM	502H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
O	16	18S	35E	O	200	S	2630	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
B	16	18S	35E	B	20	N	2160	E	Lea

9. Pool Information

WC-025 G-06 S183518A;BONE SPRING	97930

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3922
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	13487	Bone Spring		11/1/2024
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	1791	1000	0
Int1	12.25	9.625	40	4802	1050	0
Prod	8.75	5.5	20	13487	2650	0

Casing/Cement Program: Additional Comments

10 ppg brine water will be used to drill the intermediate hole. 9.6 ppg cut brine will be used to drill the intermediate hole from intermediate casing depth to KOP. From (KOP) to TD 9.8-10.5 ppg oil based mud will be used.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	5000	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.** Signature:		**OIL CONSERVATION DIVISION**	
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:	3/14/2024 Expiration Date: 3/14/2026
Date:	3/12/2024 Phone: 432-684-6373	Conditions of Approval Attached	

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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	Well Number
	BLUEBERRY PIE 16 STATE COM	502H
OGRID No.	**Operator Name**	**Elevation**
	MARSHALL & WINSTON, INC.	3922.4'

Surface Location

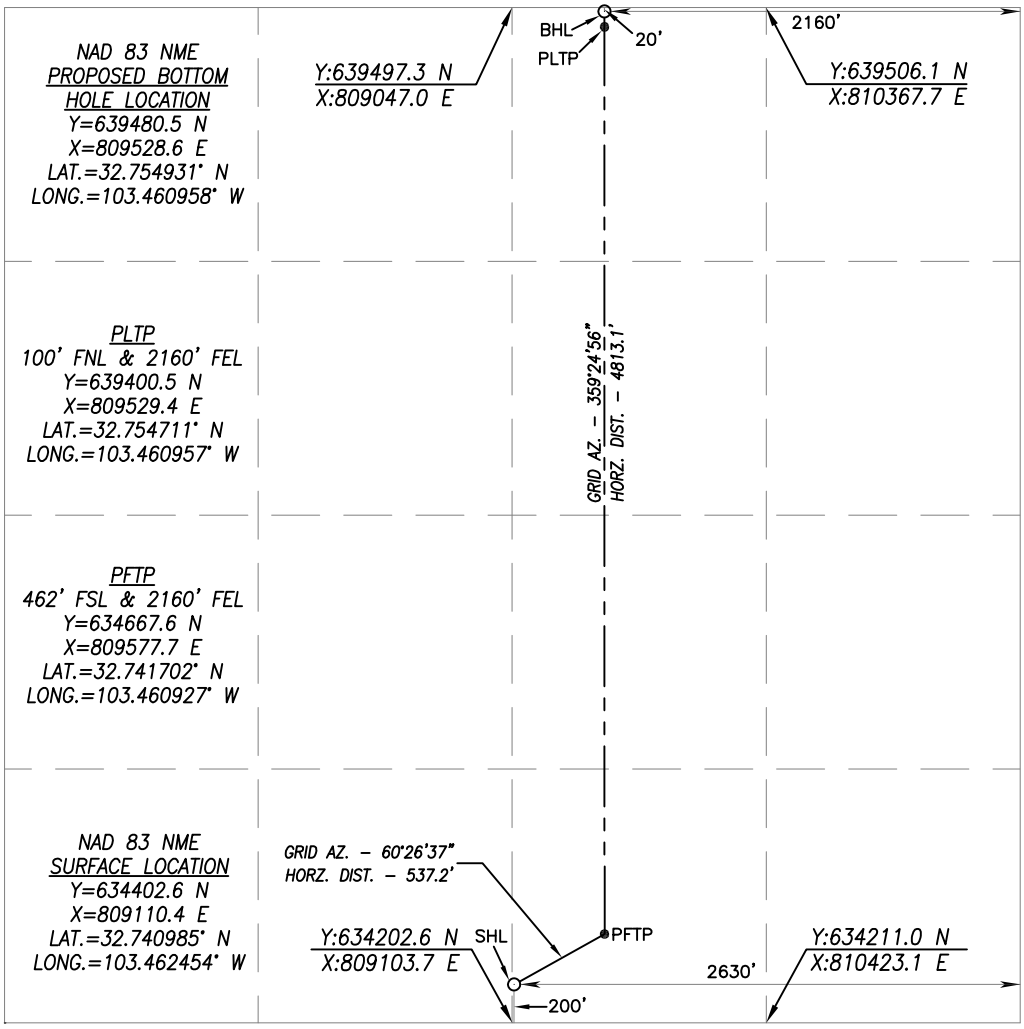
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	16	18-S	35-E		200	SOUTH	2630	EAST	LEA

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
B	16	18-S	35-E		20	NORTH	2160	EAST	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



OPERATOR CERTIFICATION

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

3/11/24
Signature Date

Todd Passmore
Printed Name

tpassmore@mar-win.com
E-mail Address

SURVEYOR CERTIFICATION

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

FEBRUARY 13, 2024
Date of Survey

Signature & Seal of Professional Surveyor

LUIS E. LANDAVERDE
NEW MEXICO
26407
PROFESSIONAL SURVEYOR

3/8/24
Certificate No. LUIS LANDAVERDE 26407
W.O. # 24-068 DRAWN BY: SP

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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 361706

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
MARSHALL & WINSTON INC [14187] P.O. Box 50880 Midland, TX 79710	30-025-52646
	Well: BLUEBERRY PIE 16 STATE COM #502H

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
pkautz	If using a pit for drilling and completion operations, must have an approved pit from prior to spudding the well
pkautz	Pit construction and closure must satisfy all requirements of your approved plan

X	
Intent	As Drilled

Operator Name: MARSHALL & WINSTON, INC.	Property Name: Blueberry Pie 16 State Com	Well Number 502H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	16	18-S	35-E		19.67	SOUTH	840.69	EAST	LEA

Latitude	Longitude	NAD
32.74049	-103.46092	NAD 83 NME

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	16	18-S	35-E		462	SOUTH	2160	EAST	LEA

Latitude	Longitude	NAD
32.741702	-103.4609	NAD 83 NME

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	16	18-S	35-E		100	NORTH	2160	WEST	LEA

Latitude	Longitude	NAD
32.754711	-103.460957	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.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

Marshall & Winston, Inc.

Lea County, NM (NAD83 NME)
Blueberry Pie State Com 502H
502H

OH
Lateral 1.1

Anticollision Report

06 March, 2024

Aim Directional Services

Anticollision Report

Company:	Marshall & Winston, Inc.	**Local Co-ordinate Reference:**	Well 502H
Project:	Lea County, NM (NAD83 NME)	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Reference Site:	Blueberry Pie State Com 502H	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.17-Aim-DB
Reference Design:	Lateral 1.1	**Offset TVD Reference:**	Offset Datum

Reference	Lateral 1.1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,551.24usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 3/6/2024

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,486.44	Lateral 1.1 (OH)	B001Mb_MWD+HRGM	OWSG MWD + HRGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Blueberry Pie State Com 501H						
501H - OH - Lateral 1.1	1,900.00	1,900.00	16.50	3.06	1.227	Level 2, CC, ES, SF

Offset Design: Blueberry Pie State Com 501H - 501H - OH - Lateral 1.1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-B001Mb_MWD+HRGM — **Offset Well Error:** 0.00 usft

Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.35	-0.10	-16.50	16.50				
100.00	100.00	100.00	100.00	0.27	0.27	-90.35	-0.10	-16.50	16.50	15.96	0.54	30.686	
200.00	200.00	200.00	200.00	0.63	0.63	-90.35	-0.10	-16.50	16.50	15.25	1.25	13.151	
300.00	300.00	300.00	300.00	0.99	0.99	-90.35	-0.10	-16.50	16.50	14.53	1.97	8.369	
400.00	400.00	400.00	400.00	1.34	1.34	-90.35	-0.10	-16.50	16.50	13.81	2.69	6.137	
500.00	500.00	500.00	500.00	1.70	1.70	-90.35	-0.10	-16.50	16.50	13.09	3.41	4.845	
600.00	600.00	600.00	600.00	2.06	2.06	-90.35	-0.10	-16.50	16.50	12.38	4.12	4.003	
700.00	700.00	700.00	700.00	2.42	2.42	-90.35	-0.10	-16.50	16.50	11.66	4.84	3.410	
800.00	800.00	800.00	800.00	2.78	2.78	-90.35	-0.10	-16.50	16.50	10.94	5.56	2.970	
900.00	900.00	900.00	900.00	3.14	3.14	-90.35	-0.10	-16.50	16.50	10.23	6.27	2.630	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.50	-90.35	-0.10	-16.50	16.50	9.51	6.99	2.360	
1,100.00	1,100.00	1,100.00	1,100.00	3.85	3.85	-90.35	-0.10	-16.50	16.50	8.79	7.71	2.141	
1,200.00	1,200.00	1,200.00	1,200.00	4.21	4.21	-90.35	-0.10	-16.50	16.50	8.08	8.42	1.959	
1,300.00	1,300.00	1,300.00	1,300.00	4.57	4.57	-90.35	-0.10	-16.50	16.50	7.36	9.14	1.805	
1,400.00	1,400.00	1,400.00	1,400.00	4.93	4.93	-90.35	-0.10	-16.50	16.50	6.64	9.86	1.674	
1,500.00	1,500.00	1,500.00	1,500.00	5.29	5.29	-90.35	-0.10	-16.50	16.50	5.93	10.57	1.560	
1,600.00	1,600.00	1,600.00	1,600.00	5.65	5.65	-90.35	-0.10	-16.50	16.50	5.21	11.29	1.461	Level 3
1,700.00	1,700.00	1,700.00	1,700.00	6.00	6.00	-90.35	-0.10	-16.50	16.50	4.49	12.01	1.374	Level 3
1,800.00	1,800.00	1,800.00	1,800.00	6.36	6.36	-90.35	-0.10	-16.50	16.50	3.77	12.73	1.297	Level 3
1,900.00	1,900.00	1,900.00	1,900.00	6.72	6.72	-90.35	-0.10	-16.50	16.50	3.06	13.44	1.227	Level 2, CC, ES, SF
2,000.00	1,999.98	1,999.34	1,999.32	7.07	7.07	159.50	-0.57	-18.16	19.80	5.67	14.13	1.402	Level 3
2,100.00	2,099.84	2,098.03	2,097.87	7.41	7.40	160.22	-1.96	-23.08	29.69	14.91	14.78	2.009	
2,200.05	2,199.51	2,195.50	2,194.97	7.75	7.73	160.71	-4.24	-31.15	46.09	30.68	15.41	2.991	
2,300.00	2,298.90	2,291.37	2,290.15	8.09	8.07	160.62	-7.36	-42.19	67.26	51.23	16.02	4.197	
2,400.00	2,398.36	2,388.49	2,386.33	8.44	8.41	160.21	-11.03	-55.18	90.27	73.58	16.68	5.410	
2,500.00	2,497.81	2,485.80	2,482.70	8.79	8.76	159.96	-14.71	-68.21	113.29	95.93	17.36	6.527	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Aim Directional Services

Anticollision Report

Company:	Marshall & Winston, Inc.	**Local Co-ordinate Reference:**	Well 502H
Project:	Lea County, NM (NAD83 NME)	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Reference Site:	Blueberry Pie State Com 502H	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.17-Aim-DB
Reference Design:	Lateral 1.1	**Offset TVD Reference:**	Offset Datum

Offset Design: Blueberry Pie State Com 501H - 501H - OH - Lateral 1.1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-B001Mb_MWD+HRGM — **Rule Assigned:** — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,600.00	2,597.26	2,583.12	2,579.06	9.15	9.11	159.80	-18.40	-81.24	136.31	118.28	18.03	7.559	
2,700.00	2,696.71	2,680.43	2,675.43	9.51	9.47	159.68	-22.08	-94.27	159.33	140.62	18.71	8.515	
2,800.00	2,796.16	2,777.74	2,771.80	9.87	9.83	159.60	-25.76	-107.30	182.36	162.96	19.39	9.403	
2,900.00	2,895.62	2,875.06	2,868.16	10.23	10.19	159.53	-29.45	-120.34	205.38	185.30	20.08	10.228	
3,000.00	2,995.07	2,972.37	2,964.53	10.59	10.55	159.48	-33.13	-133.37	228.41	207.64	20.77	10.997	
3,100.00	3,094.52	3,069.68	3,060.90	10.96	10.92	159.43	-36.81	-146.40	251.43	229.97	21.46	11.716	
3,200.00	3,193.97	3,167.00	3,157.26	11.33	11.29	159.39	-40.50	-159.43	274.46	252.30	22.15	12.388	
3,300.00	3,293.42	3,264.31	3,253.63	11.69	11.66	159.36	-44.18	-172.46	297.48	274.63	22.85	13.019	
3,400.00	3,392.88	3,361.62	3,349.99	12.06	12.03	159.34	-47.86	-185.49	320.51	296.96	23.55	13.611	
3,500.00	3,492.33	3,458.93	3,446.36	12.43	12.41	159.31	-51.54	-198.52	343.53	319.28	24.25	14.167	
3,600.00	3,591.78	3,556.25	3,542.73	12.81	12.78	159.29	-55.23	-211.55	366.56	341.61	24.95	14.692	
3,700.00	3,691.23	3,653.56	3,639.09	13.18	13.16	159.28	-58.91	-224.59	389.58	363.93	25.65	15.187	
3,800.00	3,790.68	3,750.87	3,735.46	13.55	13.54	159.26	-62.59	-237.62	412.61	386.25	26.36	15.655	
3,900.00	3,890.14	3,848.19	3,831.83	13.93	13.92	159.25	-66.28	-250.65	435.63	408.57	27.06	16.098	
4,000.00	3,989.59	3,945.50	3,928.19	14.30	14.30	159.23	-69.96	-263.68	458.66	430.89	27.77	16.518	
4,100.00	4,089.04	4,042.81	4,024.56	14.68	14.68	159.22	-73.64	-276.71	481.68	453.21	28.48	16.916	
4,200.00	4,188.49	4,140.13	4,120.92	15.05	15.06	159.21	-77.33	-289.74	504.71	475.52	29.18	17.294	
4,300.00	4,287.94	4,237.44	4,217.29	15.43	15.45	159.20	-81.01	-302.77	527.73	497.84	29.89	17.654	
4,400.00	4,387.40	4,334.75	4,313.66	15.81	15.83	159.19	-84.69	-315.80	550.76	520.15	30.60	17.996	
4,500.00	4,486.85	4,432.07	4,410.02	16.18	16.21	159.19	-88.38	-328.84	573.78	542.47	31.32	18.323	
4,600.00	4,586.30	4,529.38	4,506.39	16.56	16.60	159.18	-92.06	-341.87	596.81	564.78	32.03	18.634	
4,700.00	4,685.75	4,626.69	4,602.76	16.94	16.99	159.17	-95.74	-354.90	619.83	587.09	32.74	18.932	
4,800.00	4,785.20	4,724.00	4,699.12	17.32	17.37	159.17	-99.42	-367.93	642.86	609.41	33.45	19.216	
4,900.00	4,884.66	4,821.32	4,795.49	17.70	17.76	159.16	-103.11	-380.96	665.88	631.72	34.17	19.488	
5,000.00	4,984.11	4,918.63	4,891.85	18.08	18.15	159.15	-106.79	-393.99	688.91	654.03	34.88	19.749	
5,100.00	5,083.56	5,015.94	4,988.22	18.46	18.53	159.15	-110.47	-407.02	711.94	676.34	35.60	19.999	
5,200.00	5,183.01	5,113.26	5,084.59	18.84	18.92	159.14	-114.16	-420.05	734.96	698.65	36.31	20.239	
5,300.00	5,282.46	5,210.57	5,180.95	19.22	19.31	159.14	-117.84	-433.09	757.99	720.96	37.03	20.469	
5,400.00	5,381.92	5,307.88	5,277.32	19.60	19.70	159.14	-121.52	-446.12	781.01	743.26	37.75	20.690	
5,500.00	5,481.37	5,405.20	5,373.68	19.98	20.09	159.13	-125.21	-459.15	804.04	765.57	38.47	20.903	
5,600.00	5,580.82	5,502.51	5,470.05	20.36	20.48	159.13	-128.89	-472.18	827.06	787.88	39.18	21.108	
5,700.00	5,680.27	5,599.82	5,566.42	20.74	20.87	159.12	-132.57	-485.21	850.09	810.19	39.90	21.305	
5,800.00	5,779.72	5,697.13	5,662.78	21.13	21.26	159.12	-136.25	-498.24	873.11	832.49	40.62	21.495	
5,900.00	5,879.18	5,794.45	5,759.15	21.51	21.65	159.12	-139.94	-511.27	896.14	854.80	41.34	21.678	
6,000.00	5,978.63	5,891.76	5,855.52	21.89	22.04	159.11	-143.62	-524.31	919.16	877.10	42.06	21.854	
6,100.00	6,078.08	5,989.07	5,951.88	22.27	22.43	159.11	-147.30	-537.34	942.19	899.41	42.78	22.025	
6,200.00	6,177.53	6,086.39	6,048.25	22.66	22.82	159.11	-150.99	-550.37	965.21	921.72	43.50	22.190	
6,300.00	6,276.98	6,183.70	6,144.61	23.04	23.22	159.11	-154.67	-563.40	988.24	944.02	44.22	22.349	
6,400.00	6,376.44	6,281.01	6,240.98	23.42	23.61	159.10	-158.35	-576.43	1,011.26	966.32	44.94	22.502	
6,500.00	6,475.89	6,378.33	6,337.35	23.80	24.00	159.10	-162.04	-589.46	1,034.29	988.63	45.66	22.651	
6,600.00	6,575.34	6,475.64	6,433.71	24.19	24.39	159.10	-165.72	-602.49	1,057.32	1,010.93	46.38	22.795	
6,700.00	6,674.79	6,572.95	6,530.08	24.57	24.79	159.10	-169.40	-615.52	1,080.34	1,033.24	47.10	22.935	
6,800.00	6,774.35	6,670.49	6,626.67	24.95	25.18	159.20	-173.09	-628.59	1,102.37	1,054.54	47.83	23.050	
6,900.00	6,874.17	6,788.55	6,743.64	25.32	25.65	159.23	-177.43	-643.93	1,120.98	1,072.28	48.70	23.019	
7,000.00	6,974.13	6,948.50	6,902.87	25.67	26.26	159.18	-181.48	-658.27	1,132.26	1,082.46	49.80	22.737	
7,100.00	7,074.13	7,110.07	7,064.32	26.00	26.83	-90.29	-183.11	-664.04	1,135.91	1,085.15	50.76	22.378	
7,200.00	7,174.13	7,219.88	7,174.13	26.33	27.19	-90.29	-183.15	-664.15	1,135.98	1,084.51	51.47	22.072	
7,300.00	7,274.13	7,319.88	7,274.13	26.67	27.51	-90.29	-183.15	-664.15	1,135.98	1,083.84	52.14	21.786	
7,400.00	7,374.13	7,419.88	7,374.13	27.00	27.84	-90.29	-183.15	-664.15	1,135.98	1,083.16	52.82	21.506	
7,500.00	7,474.13	7,519.88	7,474.13	27.34	28.16	-90.29	-183.15	-664.15	1,135.98	1,082.48	53.50	21.233	
7,600.00	7,574.13	7,619.88	7,574.13	27.67	28.49	-90.29	-183.15	-664.15	1,135.98	1,081.80	54.18	20.967	
7,700.00	7,674.13	7,719.88	7,674.13	28.01	28.82	-90.29	-183.15	-664.15	1,135.98	1,081.12	54.86	20.707	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Aim Directional Services

Anticollision Report

Company:	Marshall & Winston, Inc.	**Local Co-ordinate Reference:**	Well 502H
Project:	Lea County, NM (NAD83 NME)	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Reference Site:	Blueberry Pie State Com 502H	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.17-Aim-DB
Reference Design:	Lateral 1.1	**Offset TVD Reference:**	Offset Datum

Offset Design: Blueberry Pie State Com 501H - 501H - OH - Lateral 1.1

Offset Site Error: 0.00 usft

Survey Program: 0-B001Mb_MWD+HRGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,800.00	7,774.13	7,819.88	7,774.13	28.35	29.15	-90.29	-183.15	-664.15	1,135.98	1,080.44	55.54	20.453	
7,900.00	7,874.13	7,919.88	7,874.13	28.68	29.47	-90.29	-183.15	-664.15	1,135.98	1,079.76	56.22	20.205	
8,000.00	7,973.68	8,018.71	7,972.52	29.01	29.79	-89.71	-175.30	-664.24	1,135.99	1,079.11	56.88	19.970	
8,100.00	8,070.32	8,117.51	8,068.09	29.32	30.08	-89.73	-150.71	-664.52	1,136.02	1,078.52	57.50	19.757	
8,200.00	8,161.13	8,216.39	8,158.08	29.58	30.34	-89.75	-110.05	-664.99	1,136.07	1,078.00	58.07	19.564	
8,300.00	8,243.33	8,315.37	8,239.84	29.80	30.55	-89.78	-54.48	-665.62	1,136.13	1,077.53	58.60	19.387	
8,400.00	8,314.43	8,414.48	8,310.91	29.96	30.71	-89.81	14.42	-666.41	1,136.22	1,077.10	59.11	19.221	
8,500.00	8,372.27	8,513.76	8,369.14	30.07	30.82	-89.85	94.66	-667.33	1,136.31	1,076.69	59.62	19.059	
8,600.00	8,415.10	8,613.21	8,412.73	30.13	30.89	-89.90	183.91	-668.35	1,136.42	1,076.28	60.14	18.897	
8,700.00	8,441.60	8,712.87	8,440.30	30.31	30.98	-89.95	279.55	-669.44	1,136.54	1,075.85	60.68	18.729	
8,800.00	8,450.99	8,812.74	8,450.89	30.63	31.14	-90.00	378.72	-670.57	1,136.66	1,075.41	61.25	18.557	
8,900.00	8,451.00	8,912.74	8,451.00	30.98	31.42	-90.00	478.71	-671.72	1,136.78	1,074.88	61.90	18.366	
9,000.00	8,451.00	9,012.74	8,451.00	31.39	31.79	-90.00	578.70	-672.86	1,136.90	1,074.23	62.67	18.142	
9,100.00	8,451.00	9,112.74	8,451.00	31.86	32.24	-90.00	678.69	-674.00	1,137.02	1,073.46	63.56	17.888	
9,200.00	8,451.00	9,212.74	8,451.00	32.39	32.74	-90.00	778.69	-675.15	1,137.15	1,072.57	64.58	17.610	
9,300.00	8,451.00	9,312.74	8,451.00	32.96	33.31	-90.00	878.68	-676.29	1,137.27	1,071.57	65.70	17.310	
9,400.00	8,451.00	9,412.74	8,451.00	33.59	33.92	-90.00	978.67	-677.43	1,137.39	1,070.46	66.93	16.993	
9,500.00	8,451.00	9,512.74	8,451.00	34.27	34.59	-90.00	1,078.67	-678.57	1,137.51	1,069.25	68.27	16.663	
9,600.00	8,451.00	9,612.74	8,451.00	34.99	35.30	-90.00	1,178.66	-679.72	1,137.64	1,067.94	69.70	16.323	
9,700.00	8,451.00	9,712.74	8,451.00	35.76	36.06	-90.00	1,278.65	-680.86	1,137.76	1,066.54	71.22	15.976	
9,800.00	8,451.00	9,812.74	8,451.00	36.56	36.86	-90.00	1,378.65	-682.00	1,137.88	1,065.06	72.82	15.626	
9,900.00	8,451.00	9,912.74	8,451.00	37.41	37.69	-90.00	1,478.64	-683.14	1,138.00	1,063.50	74.50	15.275	
10,000.00	8,451.00	10,012.74	8,451.00	38.29	38.56	-90.00	1,578.63	-684.29	1,138.13	1,061.87	76.26	14.925	
10,100.00	8,451.00	10,112.74	8,451.00	39.20	39.47	-90.00	1,678.63	-685.43	1,138.25	1,060.17	78.08	14.578	
10,200.00	8,451.00	10,212.73	8,451.00	40.15	40.40	-90.00	1,778.62	-686.57	1,138.37	1,058.40	79.97	14.235	
10,300.00	8,451.00	10,312.73	8,451.00	41.12	41.37	-90.00	1,878.61	-687.72	1,138.50	1,056.58	81.92	13.898	
10,400.00	8,451.00	10,412.73	8,451.00	42.13	42.36	-90.00	1,978.61	-688.86	1,138.62	1,054.70	83.92	13.568	
10,500.00	8,451.00	10,512.73	8,451.00	43.15	43.38	-90.00	2,078.60	-690.00	1,138.74	1,052.77	85.97	13.245	
10,600.00	8,451.00	10,612.73	8,451.00	44.20	44.42	-90.00	2,178.60	-691.14	1,138.86	1,050.79	88.07	12.931	
10,700.00	8,451.00	10,712.73	8,451.00	45.28	45.49	-90.00	2,278.59	-692.29	1,138.99	1,048.77	90.22	12.625	
10,800.00	8,451.00	10,812.73	8,451.00	46.37	46.57	-90.00	2,378.58	-693.43	1,139.11	1,046.70	92.41	12.327	
10,900.00	8,451.00	10,912.73	8,451.00	47.48	47.68	-90.00	2,478.58	-694.57	1,139.23	1,044.60	94.63	12.038	
11,000.00	8,451.00	11,012.73	8,451.00	48.61	48.80	-90.00	2,578.57	-695.71	1,139.35	1,042.46	96.90	11.759	
11,100.00	8,451.00	11,112.73	8,451.00	49.76	49.94	-90.00	2,678.56	-696.86	1,139.48	1,040.28	99.19	11.488	
11,200.00	8,451.00	11,212.73	8,451.00	50.92	51.10	-90.00	2,778.56	-698.00	1,139.60	1,038.08	101.52	11.226	
11,300.00	8,451.00	11,312.73	8,451.00	52.10	52.27	-90.00	2,878.55	-699.14	1,139.72	1,035.85	103.87	10.972	
11,400.00	8,451.00	11,412.73	8,451.00	53.29	53.45	-90.00	2,978.54	-700.28	1,139.84	1,033.59	106.26	10.727	
11,500.00	8,451.00	11,512.73	8,451.00	54.49	54.65	-90.00	3,078.54	-701.43	1,139.97	1,031.30	108.66	10.491	
11,600.00	8,451.00	11,612.73	8,451.00	55.71	55.86	-90.00	3,178.53	-702.57	1,140.09	1,028.99	111.09	10.262	
11,700.00	8,451.00	11,712.73	8,451.00	56.93	57.08	-90.00	3,278.52	-703.71	1,140.21	1,026.66	113.55	10.042	
11,800.00	8,451.00	11,812.73	8,451.00	58.17	58.31	-90.00	3,378.52	-704.86	1,140.33	1,024.31	116.02	9.829	
11,900.00	8,451.00	11,912.73	8,451.00	59.42	59.55	-90.00	3,478.51	-706.00	1,140.46	1,021.94	118.52	9.623	
12,000.00	8,451.00	12,012.73	8,451.00	60.67	60.80	-90.00	3,578.50	-707.14	1,140.58	1,019.55	121.03	9.424	
12,100.00	8,451.00	12,112.73	8,451.00	61.93	62.06	-90.00	3,678.50	-708.28	1,140.70	1,017.14	123.56	9.232	
12,200.00	8,451.00	12,212.73	8,451.00	63.21	63.32	-90.00	3,778.49	-709.43	1,140.82	1,014.72	126.10	9.047	
12,300.00	8,451.00	12,312.73	8,451.00	64.48	64.60	-90.00	3,878.48	-710.57	1,140.95	1,012.28	128.66	8.868	
12,400.00	8,451.00	12,412.73	8,451.00	65.77	65.88	-90.00	3,978.48	-711.71	1,141.07	1,009.83	131.24	8.695	
12,500.00	8,451.00	12,512.73	8,451.00	67.06	67.17	-90.00	4,078.47	-712.85	1,141.19	1,007.36	133.83	8.527	
12,600.00	8,451.00	12,612.73	8,451.00	68.36	68.46	-90.00	4,178.46	-714.00	1,141.31	1,004.89	136.43	8.366	
12,700.00	8,451.00	12,712.73	8,451.00	69.67	69.76	-90.00	4,278.46	-715.14	1,141.44	1,002.40	139.04	8.209	
12,800.00	8,451.00	12,812.73	8,451.00	70.98	71.07	-90.00	4,378.45	-716.28	1,141.56	999.89	141.67	8.058	
12,900.00	8,451.00	12,912.73	8,451.00	72.30	72.38	-90.00	4,478.44	-717.43	1,141.68	997.38	144.30	7.912	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Aim Directional Services

Anticollision Report

Company:	Marshall & Winston, Inc.	**Local Co-ordinate Reference:**	Well 502H
Project:	Lea County, NM (NAD83 NME)	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Reference Site:	Blueberry Pie State Com 502H	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.17-Aim-DB
Reference Design:	Lateral 1.1	**Offset TVD Reference:**	Offset Datum

Offset Design: Blueberry Pie State Com 501H - 501H - OH - Lateral 1.1

Offset Site Error: 0.00 usft

Survey Program: 0-B001Mb_MWD+HRGM

Rule Assigned:

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,000.00	8,451.00	13,012.73	8,451.00	73.62	73.70	-90.00	4,578.44	-718.57	1,141.80	994.86	146.95	7.770	
13,100.00	8,451.00	13,112.73	8,451.00	74.94	75.02	-90.00	4,678.43	-719.71	1,141.93	992.33	149.60	7.633	
13,200.00	8,451.00	13,212.73	8,451.00	76.27	76.35	-90.00	4,778.42	-720.85	1,142.05	989.79	152.26	7.500	
13,300.00	8,451.00	13,312.73	8,451.00	77.61	77.68	-90.00	4,878.42	-722.00	1,142.17	987.24	154.94	7.372	
13,400.00	8,451.00	13,412.73	8,451.00	78.95	79.02	-90.00	4,978.41	-723.14	1,142.29	984.68	157.62	7.247	
13,486.44	8,451.00	13,499.17	8,451.00	80.11	80.18	-90.00	5,064.85	-724.13	1,142.40	982.46	159.94	7.143	

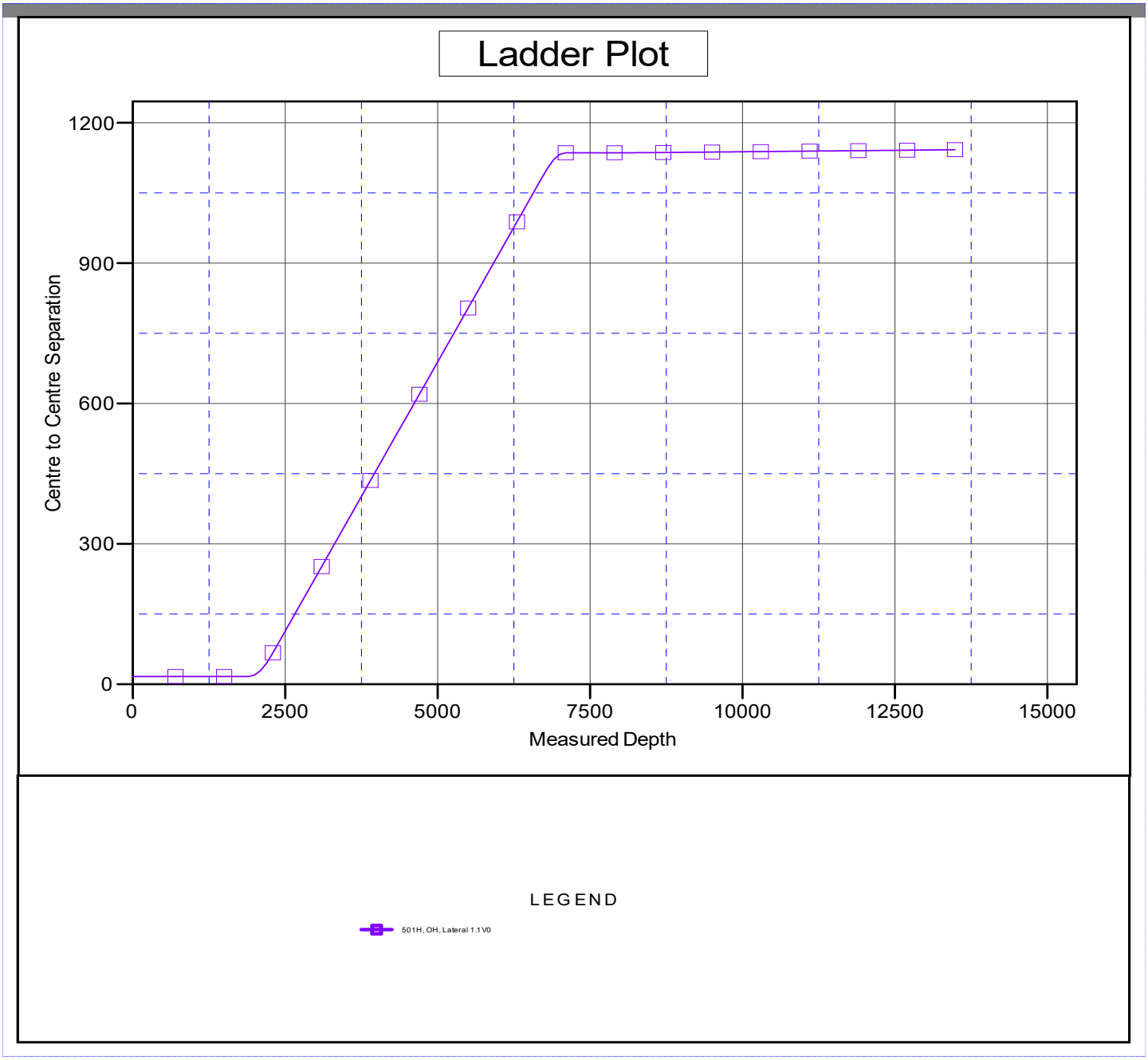
Aim Directional Services

Anticollision Report

Company:	Marshall & Winston, Inc.	**Local Co-ordinate Reference:**	Well 502H
Project:	Lea County, NM (NAD83 NME)	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Reference Site:	Blueberry Pie State Com 502H	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.17-Aim-DB
Reference Design:	Lateral 1.1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3947.40usft ((KB @ 25'ft))
Offset Depths are relative to Offset Datum
Central Meridian is -104.33334

Coordinates are relative to: 502H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.47°

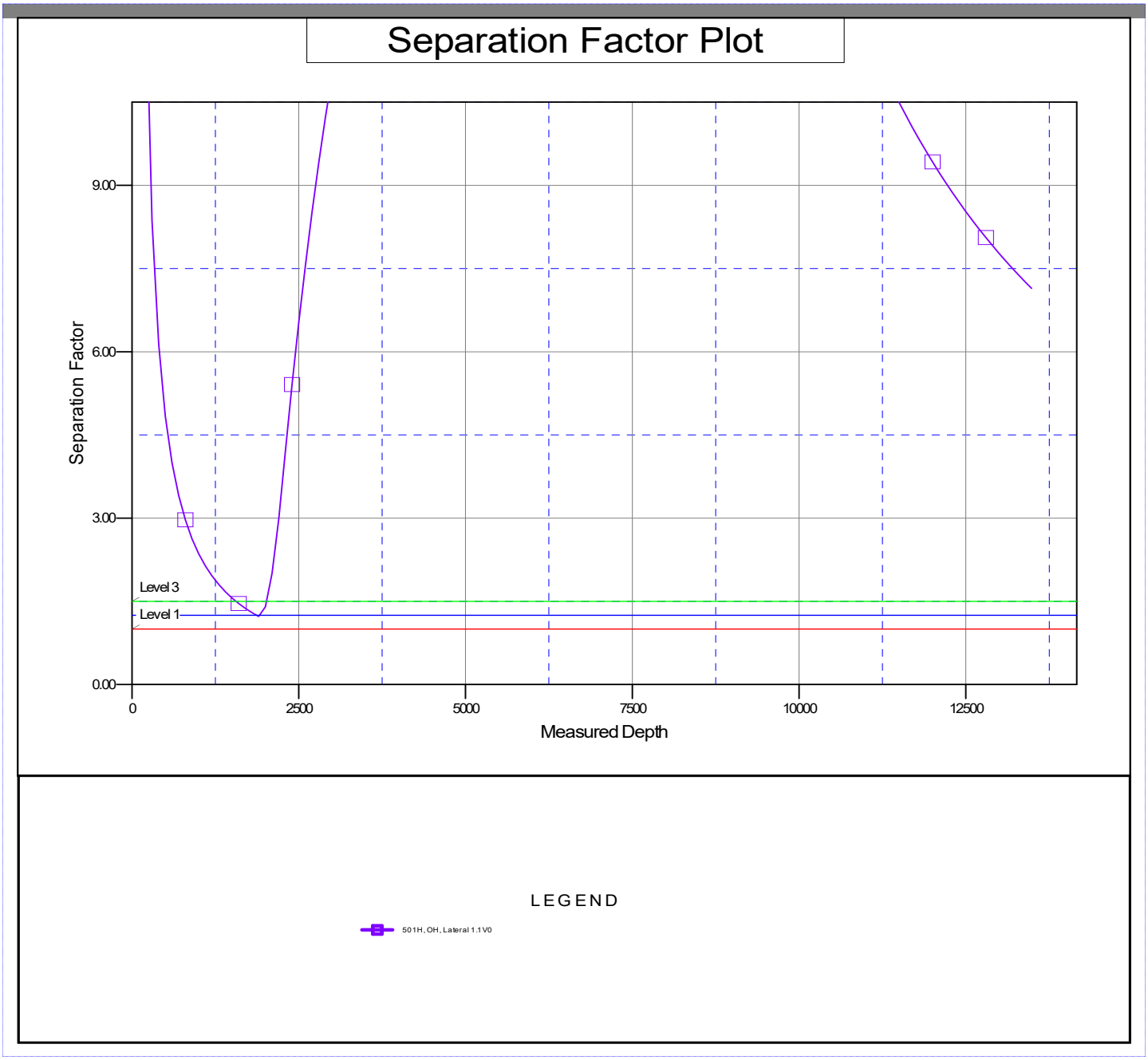


Aim Directional Services

Anticollision Report

Company:	Marshall & Winston, Inc.	**Local Co-ordinate Reference:**	Well 502H
Project:	Lea County, NM (NAD83 NME)	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Reference Site:	Blueberry Pie State Com 502H	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.17-Aim-DB
Reference Design:	Lateral 1.1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3947.40usft ((KB @ 25'ft))	Coordinates are relative to: 502H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is -104.33334	Grid Convergence at Surface is: 0.47°



Marshall & Winston, Inc.

Lea County, NM (NAD83 NME)
Blueberry Pie State Com 502H
502H

OH

Plan: Lateral 1.1

Standard Planning Report

06 March, 2024

Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	**Local Co-ordinate Reference:**	Well 502H
Company:	Marshall & Winston, Inc.	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site:	Blueberry Pie State Com 502H	**North Reference:**	Grid
Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1.1		

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	Blueberry Pie State Com 502H				
Site Position:		**Northing:**	634,402.60 usft	**Latitude:**	32.74099
From:	Map	**Easting:**	809,110.40 usft	**Longitude:**	-103.46246
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well	502H						
Well Position	**+N/-S**	0.00 usft	**Northing:**	634,402.60 usft	**Latitude:**	32.74099
	+E/-W	0.00 usft	**Easting:**	809,110.40 usft	**Longitude:**	-103.46246
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,922.40 usft
Grid Convergence:		0.47 °				

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	MVHD	4/1/2024	6.08	60.51	47,479.64710279

Design	Lateral 1.1			
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	359.42

Plan Survey Tool Program **Date** 3/6/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,486.44	Lateral 1.1 (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	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	
2,200.05	6.00	110.60	2,199.51	-5.52	14.70	2.0000	2.0000	0.0000	110.60	
6,720.82	6.00	110.60	6,695.50	-171.79	457.12	0.0000	0.0000	0.0000	0.00	
7,020.87	0.00	0.00	6,995.00	-177.31	471.81	2.0000	-2.0000	0.0000	180.00	
7,903.91	0.00	0.00	7,878.04	-177.31	471.81	0.0000	0.0000	0.0000	0.00	
8,803.91	90.00	359.42	8,451.00	395.61	465.97	10.0000	0.0000	0.0000	359.42	
13,486.44	90.00	359.42	8,451.00	5,077.90	418.20	0.0000	0.0000	0.0000	0.00	Blueberry Pie State C

Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	**Local Co-ordinate Reference:**	Well 502H
Company:	Marshall & Winston, Inc.	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site:	Blueberry Pie State Com 502H	**North Reference:**	Grid
Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	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
1,791.00	0.00	0.00	1,791.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
13-3/8" Conductor Casing									
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.0000	0.0000	0.0000
Build 2°/100									
2,000.00	2.00	110.60	1,999.98	-0.61	1.63	-0.63	2.0000	2.0000	0.0000
2,100.00	4.00	110.60	2,099.84	-2.45	6.53	-2.52	2.0000	2.0000	0.0000
2,142.29	4.85	110.60	2,142.00	-3.60	9.59	-3.70	2.0000	2.0000	0.0000
Top of Salt									
2,200.05	6.00	110.60	2,199.50	-5.52	14.70	-5.67	2.0000	2.0000	0.0000
Hold 6° Inc, 110.60° Azm									
2,300.00	6.00	110.60	2,298.90	-9.20	24.48	-9.45	0.0001	0.0001	0.0000
2,400.00	6.00	110.60	2,398.36	-12.88	34.26	-13.22	0.0000	0.0000	0.0000
2,500.00	6.00	110.60	2,497.81	-16.55	44.05	-17.00	0.0000	0.0000	0.0000
2,600.00	6.00	110.60	2,597.26	-20.23	53.84	-20.78	0.0000	0.0000	0.0000
2,700.00	6.00	110.60	2,696.71	-23.91	63.62	-24.55	0.0000	0.0000	0.0000
2,800.00	6.00	110.60	2,796.16	-27.59	73.41	-28.33	0.0000	0.0000	0.0000
2,900.00	6.00	110.60	2,895.62	-31.27	83.20	-32.11	0.0000	0.0000	0.0000
3,000.00	6.00	110.60	2,995.07	-34.94	92.98	-35.88	0.0000	0.0000	0.0000
3,100.00	6.00	110.60	3,094.52	-38.62	102.77	-39.66	0.0000	0.0000	0.0000
3,200.00	6.00	110.60	3,193.97	-42.30	112.55	-43.44	0.0000	0.0000	0.0000
3,300.00	6.00	110.60	3,293.42	-45.98	122.34	-47.21	0.0000	0.0000	0.0000
3,312.65	6.00	110.60	3,306.00	-46.44	123.58	-47.69	0.0000	0.0000	0.0000
Yates									
3,400.00	6.00	110.60	3,392.88	-49.66	132.13	-50.99	0.0000	0.0000	0.0000
3,500.00	6.00	110.60	3,492.33	-53.33	141.91	-54.77	0.0000	0.0000	0.0000
3,600.00	6.00	110.60	3,591.78	-57.01	151.70	-58.54	0.0000	0.0000	0.0000
3,700.00	6.00	110.60	3,691.23	-60.69	161.49	-62.32	0.0000	0.0000	0.0000
3,729.93	6.00	110.60	3,721.00	-61.79	164.42	-63.45	0.0000	0.0000	0.0000
7 Rivers									
3,793.28	6.00	110.60	3,784.00	-64.12	170.62	-65.84	0.0000	0.0000	0.0000
Base of Salt									
3,800.00	6.00	110.60	3,790.68	-64.37	171.27	-66.10	0.0000	0.0000	0.0000
3,900.00	6.00	110.60	3,890.14	-68.04	181.06	-69.87	0.0000	0.0000	0.0000
4,000.00	6.00	110.60	3,989.59	-71.72	190.85	-73.65	0.0000	0.0000	0.0000

Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	**Local Co-ordinate Reference:**	Well 502H
Company:	Marshall & Winston, Inc.	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site:	Blueberry Pie State Com 502H	**North Reference:**	Grid
Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.00	6.00	110.60	4,089.04	-75.40	200.63	-77.43	0.0000	0.0000	0.0000
4,200.00	6.00	110.60	4,188.49	-79.08	210.42	-81.20	0.0000	0.0000	0.0000
4,300.00	6.00	110.60	4,287.94	-82.76	220.21	-84.98	0.0000	0.0000	0.0000
4,400.00	6.00	110.60	4,387.40	-86.43	229.99	-88.76	0.0000	0.0000	0.0000
4,472.00	6.00	110.60	4,459.00	-89.08	237.04	-91.48	0.0000	0.0000	0.0000
Queen									
4,500.00	6.00	110.60	4,486.85	-90.11	239.78	-92.53	0.0000	0.0000	0.0000
4,600.00	6.00	110.60	4,586.30	-93.79	249.56	-96.31	0.0000	0.0000	0.0000
4,700.00	6.00	110.60	4,685.75	-97.47	259.35	-100.09	0.0000	0.0000	0.0000
4,800.00	6.00	110.60	4,785.20	-101.15	269.14	-103.86	0.0000	0.0000	0.0000
4,816.89	6.00	110.60	4,802.00	-101.77	270.79	-104.50	0.0000	0.0000	0.0000
9-5/8" Conductor Casing									
4,900.00	6.00	110.60	4,884.66	-104.82	278.92	-107.64	0.0000	0.0000	0.0000
5,000.00	6.00	110.60	4,984.11	-108.50	288.71	-111.42	0.0000	0.0000	0.0000
5,100.00	6.00	110.60	5,083.56	-112.18	298.50	-115.19	0.0000	0.0000	0.0000
5,200.00	6.00	110.60	5,183.01	-115.86	308.28	-118.97	0.0000	0.0000	0.0000
5,300.00	6.00	110.60	5,282.46	-119.53	318.07	-122.75	0.0000	0.0000	0.0000
5,400.00	6.00	110.60	5,381.92	-123.21	327.86	-126.52	0.0000	0.0000	0.0000
5,489.58	6.00	110.60	5,471.00	-126.51	336.62	-129.91	0.0000	0.0000	0.0000
Bell Canyon									
5,500.00	6.00	110.60	5,481.37	-126.89	337.64	-130.30	0.0000	0.0000	0.0000
5,600.00	6.00	110.60	5,580.82	-130.57	347.43	-134.08	0.0000	0.0000	0.0000
5,700.00	6.00	110.60	5,680.27	-134.25	357.22	-137.86	0.0000	0.0000	0.0000
5,800.00	6.00	110.60	5,779.72	-137.92	367.00	-141.63	0.0000	0.0000	0.0000
5,900.00	6.00	110.60	5,879.18	-141.60	376.79	-145.41	0.0000	0.0000	0.0000
6,000.00	6.00	110.60	5,978.63	-145.28	386.57	-149.19	0.0000	0.0000	0.0000
6,100.00	6.00	110.60	6,078.08	-148.96	396.36	-152.96	0.0000	0.0000	0.0000
6,200.00	6.00	110.60	6,177.53	-152.64	406.15	-156.74	0.0000	0.0000	0.0000
6,300.00	6.00	110.60	6,276.98	-156.31	415.93	-160.52	0.0000	0.0000	0.0000
6,400.00	6.00	110.60	6,376.44	-159.99	425.72	-164.29	0.0000	0.0000	0.0000
6,500.00	6.00	110.60	6,475.89	-163.67	435.51	-168.07	0.0000	0.0000	0.0000
6,600.00	6.00	110.60	6,575.34	-167.35	445.29	-171.85	0.0000	0.0000	0.0000
6,700.00	6.00	110.60	6,674.79	-171.02	455.08	-175.62	0.0000	0.0000	0.0000
6,720.82	6.00	110.60	6,695.50	-171.79	457.12	-176.41	0.0000	0.0000	0.0000
Drop 2°/100									
6,736.40	5.69	110.60	6,711.00	-172.35	458.60	-176.98	2.0003	-2.0003	0.0000
Bone Spring Lime									
6,800.00	4.42	110.60	6,774.35	-174.32	463.85	-179.01	2.0000	-2.0000	0.0000
6,900.00	2.42	110.60	6,874.17	-176.42	469.43	-181.16	2.0000	-2.0000	0.0000
7,000.00	0.42	110.60	6,974.13	-177.29	471.74	-182.05	2.0000	-2.0000	0.0000
7,020.87	0.00	0.00	6,995.00	-177.31	471.81	-182.08	2.0001	-2.0000	-529.9322
Hold Vertical									
7,100.00	0.00	0.00	7,074.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,200.00	0.00	0.00	7,174.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,300.00	0.00	0.00	7,274.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,400.00	0.00	0.00	7,374.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,500.00	0.00	0.00	7,474.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,600.00	0.00	0.00	7,574.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,700.00	0.00	0.00	7,674.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,800.00	0.00	0.00	7,774.13	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
7,903.91	0.00	0.00	7,878.04	-177.31	471.81	-182.08	0.0000	0.0000	0.0000
KOP - Build 10°/100									
7,950.00	4.61	359.42	7,924.08	-175.46	471.79	-180.23	9.9994	9.9994	0.0000

Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	**Local Co-ordinate Reference:**	Well 502H
Company:	Marshall & Winston, Inc.	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site:	Blueberry Pie State Com 502H	**North Reference:**	Grid
Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,000.00	9.61	359.42	7,973.68	-169.28	471.73	-174.04	10.0000	10.0000	0.0000
8,050.00	14.61	359.42	8,022.55	-158.79	471.62	-163.56	10.0000	10.0000	0.0000
8,100.00	19.61	359.42	8,070.32	-144.09	471.47	-148.85	10.0000	10.0000	0.0000
8,150.00	24.61	359.42	8,116.63	-125.28	471.28	-130.04	10.0000	10.0000	0.0000
8,200.00	29.61	359.42	8,161.13	-102.50	471.05	-107.26	10.0000	10.0000	0.0000
8,220.78	31.69	359.42	8,179.00	-91.91	470.94	-96.67	10.0000	10.0000	0.0000
1st BS Sand									
8,250.00	34.61	359.42	8,203.46	-75.93	470.78	-80.70	10.0000	10.0000	0.0000
8,300.00	39.61	359.42	8,243.33	-45.78	470.47	-50.54	10.0000	10.0000	0.0000
8,350.00	44.61	359.42	8,280.41	-12.26	470.13	-17.02	10.0000	10.0000	0.0000
8,400.00	49.61	359.42	8,314.43	24.36	469.76	19.60	10.0000	10.0000	0.0000
8,450.00	54.61	359.42	8,345.13	63.80	469.35	59.05	10.0000	10.0000	0.0000
8,500.00	59.61	359.42	8,372.27	105.77	468.92	101.02	10.0000	10.0000	0.0000
8,550.00	64.61	359.42	8,395.65	149.94	468.47	145.19	10.0000	10.0000	0.0000
8,600.00	69.61	359.42	8,415.10	195.99	468.00	191.24	10.0000	10.0000	0.0000
8,650.00	74.61	359.42	8,430.45	243.55	467.52	238.81	10.0000	10.0000	0.0000
8,675.50	77.16	359.42	8,436.67	268.28	467.27	263.54	10.0000	10.0000	0.0000
Blueberry Pie State Com 502H - PP/FTP									
8,700.00	79.61	359.42	8,441.60	292.28	467.02	287.53	10.0000	10.0000	0.0000
8,750.00	84.61	359.42	8,448.47	341.78	466.52	337.04	10.0000	10.0000	0.0000
8,803.91	90.00	359.42	8,451.00	395.61	465.97	390.88	10.0000	10.0000	0.0000
LP - Hold 90° Inc, 359.42° Azm									
8,900.00	90.00	359.42	8,451.00	491.70	464.99	486.97	0.0003	0.0003	0.0000
9,000.00	90.00	359.42	8,451.00	591.69	463.97	586.97	0.0000	0.0000	0.0000
9,100.00	90.00	359.42	8,451.00	691.69	462.95	686.97	0.0000	0.0000	0.0000
9,200.00	90.00	359.42	8,451.00	791.68	461.93	786.97	0.0000	0.0000	0.0000
9,300.00	90.00	359.42	8,451.00	891.68	460.91	886.97	0.0000	0.0000	0.0000
9,400.00	90.00	359.42	8,451.00	991.67	459.89	986.97	0.0000	0.0000	0.0000
9,500.00	90.00	359.42	8,451.00	1,091.67	458.87	1,086.97	0.0000	0.0000	0.0000
9,600.00	90.00	359.42	8,451.00	1,191.66	457.85	1,186.97	0.0000	0.0000	0.0000
9,700.00	90.00	359.42	8,451.00	1,291.66	456.83	1,286.97	0.0000	0.0000	0.0000
9,800.00	90.00	359.42	8,451.00	1,391.65	455.81	1,386.97	0.0000	0.0000	0.0000
9,900.00	90.00	359.42	8,451.00	1,491.65	454.79	1,486.97	0.0000	0.0000	0.0000
10,000.00	90.00	359.42	8,451.00	1,591.64	453.77	1,586.97	0.0000	0.0000	0.0000
10,100.00	90.00	359.42	8,451.00	1,691.63	452.75	1,686.97	0.0000	0.0000	0.0000
10,200.00	90.00	359.42	8,451.00	1,791.63	451.73	1,786.97	0.0000	0.0000	0.0000
10,300.00	90.00	359.42	8,451.00	1,891.62	450.71	1,886.97	0.0000	0.0000	0.0000
10,400.00	90.00	359.42	8,451.00	1,991.62	449.69	1,986.97	0.0000	0.0000	0.0000
10,500.00	90.00	359.42	8,451.00	2,091.61	448.67	2,086.97	0.0000	0.0000	0.0000
10,600.00	90.00	359.42	8,451.00	2,191.61	447.65	2,186.97	0.0000	0.0000	0.0000
10,700.00	90.00	359.42	8,451.00	2,291.60	446.63	2,286.97	0.0000	0.0000	0.0000
10,800.00	90.00	359.42	8,451.00	2,391.60	445.60	2,386.97	0.0000	0.0000	0.0000
10,900.00	90.00	359.42	8,451.00	2,491.59	444.58	2,486.97	0.0000	0.0000	0.0000
11,000.00	90.00	359.42	8,451.00	2,591.59	443.56	2,586.97	0.0000	0.0000	0.0000
11,100.00	90.00	359.42	8,451.00	2,691.58	442.54	2,686.97	0.0000	0.0000	0.0000
11,200.00	90.00	359.42	8,451.00	2,791.58	441.52	2,786.97	0.0000	0.0000	0.0000
11,300.00	90.00	359.42	8,451.00	2,891.57	440.50	2,886.97	0.0000	0.0000	0.0000
11,400.00	90.00	359.42	8,451.00	2,991.57	439.48	2,986.97	0.0000	0.0000	0.0000
11,500.00	90.00	359.42	8,451.00	3,091.56	438.46	3,086.97	0.0000	0.0000	0.0000
11,600.00	90.00	359.42	8,451.00	3,191.56	437.44	3,186.97	0.0000	0.0000	0.0000
11,700.00	90.00	359.42	8,451.00	3,291.55	436.42	3,286.97	0.0000	0.0000	0.0000
11,800.00	90.00	359.42	8,451.00	3,391.55	435.40	3,386.97	0.0000	0.0000	0.0000
11,900.00	90.00	359.42	8,451.00	3,491.54	434.38	3,486.97	0.0000	0.0000	0.0000

Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	**Local Co-ordinate Reference:**	Well 502H
Company:	Marshall & Winston, Inc.	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site:	Blueberry Pie State Com 502H	**North Reference:**	Grid
Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,000.00	90.00	359.42	8,451.00	3,591.54	433.36	3,586.97	0.0000	0.0000	0.0000
12,100.00	90.00	359.42	8,451.00	3,691.53	432.34	3,686.97	0.0000	0.0000	0.0000
12,200.00	90.00	359.42	8,451.00	3,791.53	431.32	3,786.97	0.0000	0.0000	0.0000
12,300.00	90.00	359.42	8,451.00	3,891.52	430.30	3,886.97	0.0000	0.0000	0.0000
12,400.00	90.00	359.42	8,451.00	3,991.52	429.28	3,986.97	0.0000	0.0000	0.0000
12,500.00	90.00	359.42	8,451.00	4,091.51	428.26	4,086.97	0.0000	0.0000	0.0000
12,600.00	90.00	359.42	8,451.00	4,191.50	427.24	4,186.97	0.0000	0.0000	0.0000
12,700.00	90.00	359.42	8,451.00	4,291.50	426.22	4,286.97	0.0000	0.0000	0.0000
12,800.00	90.00	359.42	8,451.00	4,391.49	425.20	4,386.97	0.0000	0.0000	0.0000
12,900.00	90.00	359.42	8,451.00	4,491.49	424.18	4,486.97	0.0000	0.0000	0.0000
13,000.00	90.00	359.42	8,451.00	4,591.48	423.16	4,586.97	0.0000	0.0000	0.0000
13,100.00	90.00	359.42	8,451.00	4,691.48	422.14	4,686.97	0.0000	0.0000	0.0000
13,200.00	90.00	359.42	8,451.00	4,791.47	421.12	4,786.97	0.0000	0.0000	0.0000
13,300.00	90.00	359.42	8,451.00	4,891.47	420.10	4,886.97	0.0000	0.0000	0.0000
13,400.00	90.00	359.42	8,451.00	4,991.46	419.08	4,986.97	0.0000	0.0000	0.0000
Blueberry Pie State Com 502H- LTP									
13,486.44	90.00	359.42	8,451.00	5,077.90	418.20	5,073.41	0.0000	0.0000	0.0000
PBHL - Blueberry Pie State Com 502H- PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Blueberry Pie State Com - plan misses target center by 6.44usft at 13400.00usft MD (8451.00 TVD, 4991.46 N, 419.08 E) - Point	0.00	0.00	8,451.00	4,997.90	419.00	639,400.50	809,529.40	32.75471	-103.46096
Blueberry Pie State Com - plan misses target center by 14.70usft at 8675.50usft MD (8436.67 TVD, 268.28 N, 467.27 E) - Point	0.00	0.00	8,451.00	265.00	467.30	634,667.60	809,577.70	32.74170	-103.46093
Blueberry Pie State Com - plan hits target center - Point	0.00	0.00	8,451.00	5,077.90	418.20	639,480.50	809,528.60	32.75493	-103.46096

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,791.00	1,791.00	13-3/8" Conductor Casing	13-3/8	13-3/8
4,816.89	4,802.00	9-5/8" Conductor Casing	9-5/8	9-5/8

Aim Directional Services

Planning Report

Database:	EDM 5000.17-Aim-DB	**Local Co-ordinate Reference:**	Well 502H
Company:	Marshall & Winston, Inc.	**TVD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Project:	Lea County, NM (NAD83 NME)	**MD Reference:**	WELL @ 3947.40usft ((KB @ 25'ft))
Site:	Blueberry Pie State Com 502H	**North Reference:**	Grid
Well:	502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Lateral 1.1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,142.29	2,142.00	Top of Salt		0.00	359.42
3,312.65	3,306.00	Yates		0.00	359.42
3,729.93	3,721.00	7 Rivers		0.00	359.42
3,793.28	3,784.00	Base of Salt		0.00	359.42
4,472.00	4,459.00	Queen		0.00	359.42
5,489.58	5,471.00	Bell Canyon		0.00	359.42
6,736.40	6,711.00	Bone Spring Lime		0.00	359.42
8,220.78	8,179.00	1st BS Sand		0.00	359.42

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,900.00	1,900.00	0.00	0.00	Build 2°/100
2,200.05	2,199.50	-5.52	14.70	Hold 6° Inc, 110.60° Azm
6,720.82	6,695.50	-171.79	457.12	Drop 2°/100
7,020.87	6,995.00	-177.31	471.81	Hold Vertical
7,903.91	7,878.04	-177.31	471.81	KOP - Build 10°/100
8,803.91	8,451.00	395.61	465.97	LP - Hold 90° Inc, 359.42° Azm
13,486.44	8,451.00	5,077.90	418.20	PBHL

Marshall & Winston, Inc.

502H
Lea County, NM (NAD83 NME)
Job No. WT-23-193
Lateral 1.1

Aim Directional Services

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.00	
2	1900.00	0.00	0.00	1900.00	0.00	0.00	0.0000	0.00	0.00	Build 2°/100
3	2200.05	6.00	110.60	2199.51	-5.52	14.70	2.0000	110.60	-5.67	Hold 6° Inc, 110.60° Azm
4	6720.82	6.00	110.60	6695.49	-171.79	457.12	0.0000	0.00	-176.41	Drop 2°/100
5	7020.87	0.00	0.00	6995.00	-177.31	471.81	2.0000	180.00	-182.08	Hold Vertical
6	7903.91	0.00	0.00	7878.04	-177.31	471.81	0.0000	0.00	-182.08	KOP - Build 10°/100
7	8803.91	90.00	359.42	8451.00	395.61	465.97	10.0000	359.42	390.88	LP - Hold 90° Inc, 359.42° Azm
8	13486.44	90.00	359.42	8451.00	5077.90	418.20	0.0000	0.00	5073.41	PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Blueberry Pie State Com 502H - PP/FTP	8451.00	265.00	467.30	634667.60	809577.70	32.74170	-103.46093
Blueberry Pie State Com 502H- LTP	8451.00	4997.90	419.00	639400.50	809529.40	32.75471	-103.46096
Blueberry Pie State Com 502H- PBHL	8451.00	5077.90	418.20	639480.50	809528.60	32.75493	-103.46096

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

T G M

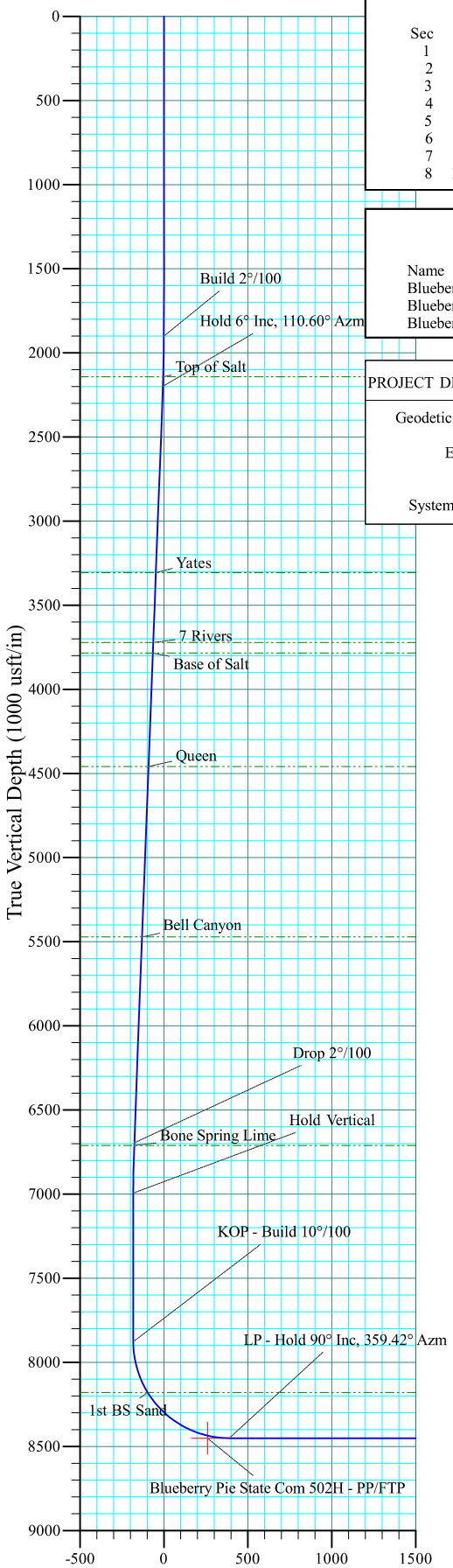
Azimuths to Grid North
True North: -0.47°
Magnetic North: 5.60°

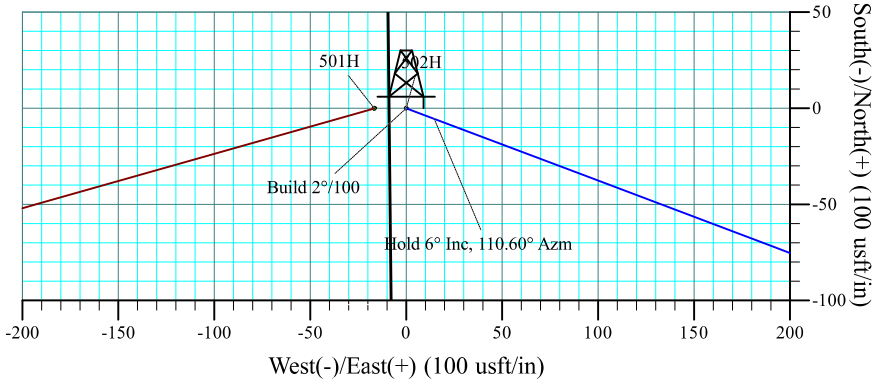
Magnetic Field
Strength: 47479.6nT
Dip Angle: 60.51°
Date: 4/1/2024
Model: MVHD

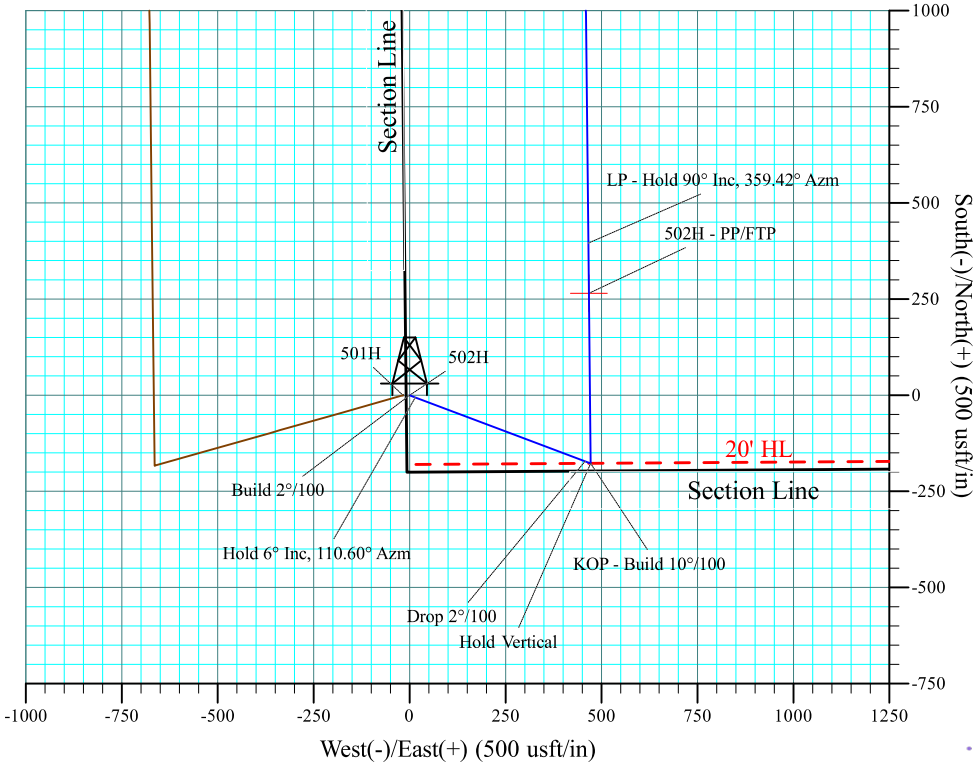
SITE DETAILS: Blueberry Pie State Com 502H

Site Centre Northing: 634402.60
Easting: 809110.40

Positional Uncertainity: 0.00
Convergence: 0.47
Local North: Grid







Marshall & Winston Inc

502H
Lea County, NM (NAD83 NME)
Job No. WT-23-193
Lateral 1.1

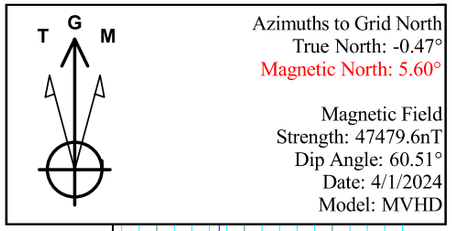
Aim Directional Service

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.00		
2	1900.00	0.00	0.00	1900.00	0.00	0.00	0.0000	0.00	0.00		Build 2°/100
3	2200.05	6.00	110.60	2199.51	-5.52	14.70	2.0000	110.60	-5.67		Hold 6° Inc, 110.60° Azm
4	6720.82	6.00	110.60	6695.49	-171.79	457.12	0.0000	0.00	-176.41		Drop 2°/100
5	7020.87	0.00	0.00	6995.00	-177.31	471.81	2.0000	180.00	-182.08		Hold Vertical
6	7903.91	0.00	0.00	7878.04	-177.31	471.81	0.0000	0.00	-182.08		KOP - Build 10°/100
7	8803.91	90.00	359.42	8451.00	395.61	465.97	10.0000	359.42	390.88		LP - Hold 90° Inc, 359.42° Azm
8	13486.44	90.00	359.42	8451.00	5077.90	418.20	0.0000	0.00	5073.41	Blueberry Pie State Com 502H- PBHL	PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Blueberry Pie State Com 502H - PP/FTP	8451.00	265.00	467.30	634667.60	809577.70	32.74170	-103.46093
Blueberry Pie State Com 502H- LTP	8451.00	4997.90	419.00	639400.50	809529.40	32.75471	-103.46096
Blueberry Pie State Com 502H- PBHL	8451.00	5077.90	418.20	639480.50	809528.60	32.75493	-103.46096



Azimuths to Grid North
True North: -0.47°
Magnetic North: 5.60°

Magnetic Field
Strength: 47479.6nT
Dip Angle: 60.51°
Date: 4/1/2024
Model: MVHD

PROJECT DETAILS: Lea County, NM (NAD83 NME)

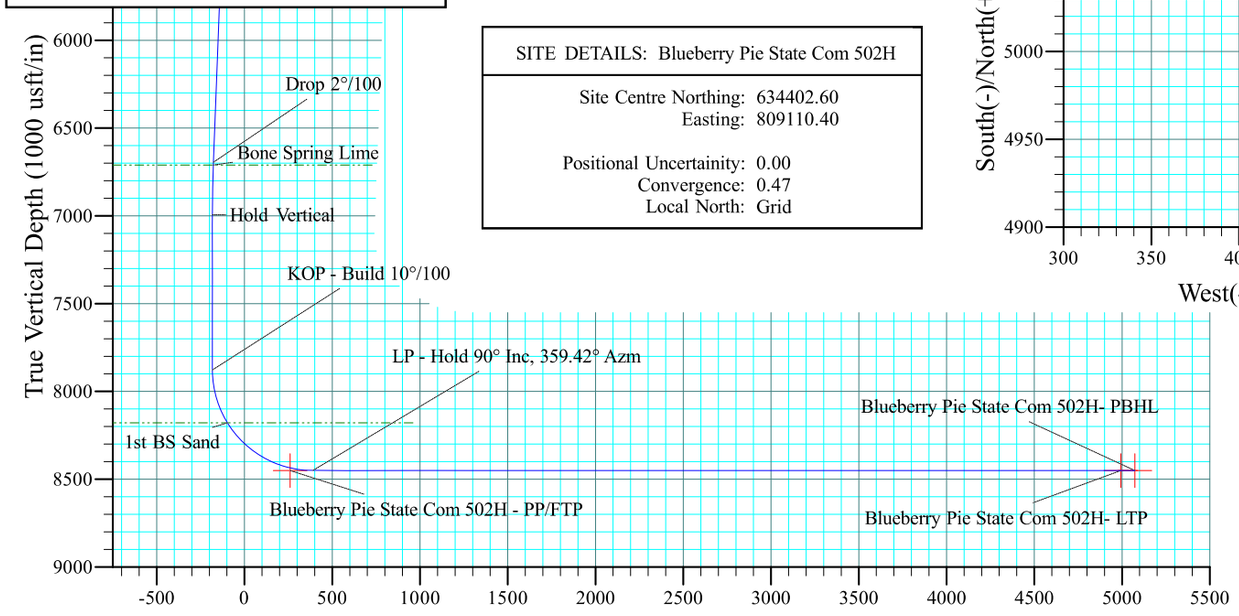
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

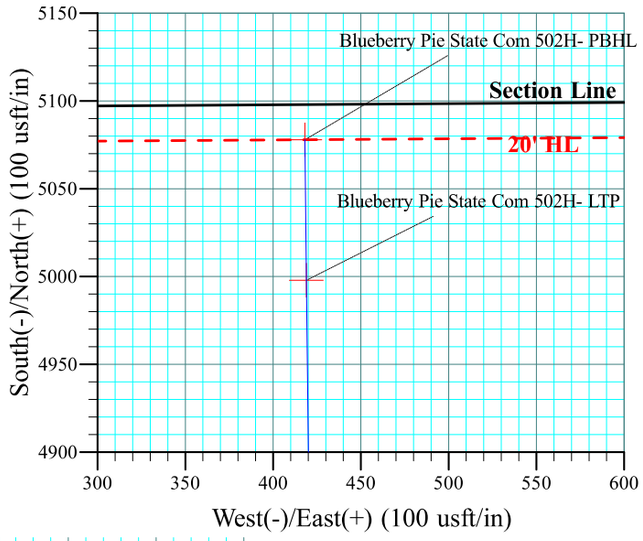
System Datum: Mean Sea Level

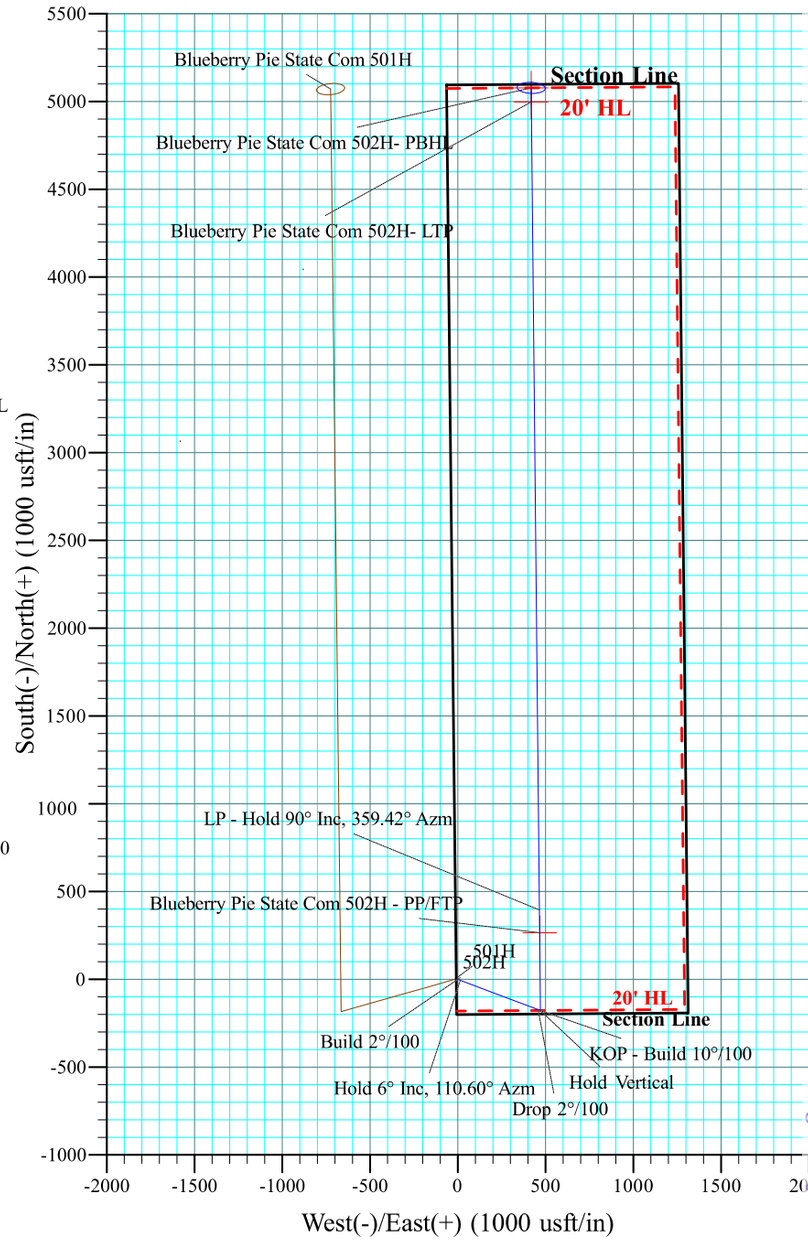
SITE DETAILS: Blueberry Pie State Com 502H

Site Centre Northing: 634402.60
Easting: 809110.40

Positional Uncertainity: 0.00
Convergence: 0.47
Local North: Grid







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 / 12 / 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
Blueberry Pie 16 State Com #502H		UL O, Sec 16	200 FSL	750	750	1000
		T18S, R35E	2630 FEL			

IV. Central Delivery Point Name: Targa Resources TIP (32.739827, -103.487875) [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
Blueberry Pie 16 State Com #502H		**11/01/2024**	**12/15/2024**	**1/1/2025**	**02/01/2025**	**02/01/2025**
						Estimated

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: 03/12/2024
Phone: 432-684-6373

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval: