Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

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

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO.

5. Indicate Type of Lease STATE [X] FEE [ ]

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Lookin Good 34 St Com

1. Type of Well: Oil Well [X] Gas Well [ ] Other

8. Well Number 502H

2. Name of Operator
Marshall & Winston, Inc.

9. OGRID Number 14187

3. Address of Operator
P. O. Box 50880, Midland, TX 79710-0880

10. Pool name or Wildcat

4. Well Location
Unit Letter A : 250 feet from the North line and 1110 feet from the East line
Section 34 Township 20S Range 35E NMPM County Lea

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3692.48' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[X]	COMMENCE DRILLING OPNS.	[ ]	P AND A	[ ]
PULL OR ALTER CASING	[ ]	MULTIPLE COMPL	[ ]	CASING/CEMENT JOB	[ ]		
DOWNHOLE COMMINGLE	[ ]						
CLOSED-LOOP SYSTEM	[ ]						
OTHER:	[ ]			OTHER:	[ ]		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Marshall & Winston, Inc. respectfully requests to submit a sundry to change SHL to redrill the Lookin Good 34 State Com #502H (API#30-025-53925), due to parted casing in the intermediate section in the current well (Sundry Submission ID 493727).

Original Location Lookin Good 34 State Com #502H:
SHL UL A, Sec. 34, T20S, R35E, 250' FNL & 1135' FEL, Lea Co., NM
BHL UL P, Sec. 34, T20S, R35E, 50' FSL & 400' FEL, Lea Co., NM

Redrill Location Lookin Good 34 State Com #502H:
SHL UL A, Sec. 34, T20S, R35E, 250' FNL & 1110' FEL, Lea Co., NM
BHL UL P, Sec. 34, T20S, R35E, 50' FSL & 400' FEL, Lea Co., NM

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Todd Passmore TITLE Operations Manager DATE 08/08/2025

Type or print name Todd Passmore E-mail address: tpassmore@mar-win.com PHONE: 432-684-6373

For State Use Only

APPROVED BY: TITLE DATE

Conditions of Approval (if any):

Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

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

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

C-102
Revised July 9, 2024
Submit Electronically via OCD Permitting

Submittal Type: ☐ Initial Submittal ☒ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
~~30-025-53925~~ 30-025-54944	28434	~~GAMMA RIDGE, BONE SPRING, RIDGE~~ GRAMA RIDGE; BONE SPRING, NORTH

Property Code	Property Name	Well Number
313600	LOOKIN GOOD 34 STATE COM	502H

OGRID No.	Operator Name	Ground Level Elevation
14187	MARSHALL & WINSTON, Inc.	3692.48'

Surface Owner: ☐State ☒Fee ☐Tribal ☐Federal
Mineral Owner: ☒State ☐Fee ☐Tribal ☐Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	34	20S	35E		250' FNL	1110' FEL	32.536196	-103.440156	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	34	20S	35E		50' FSL	400' FEL	32.522491	-103.437860	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
160.5	Infill		N	N/A

Order Numbers: N/A
Well setbacks are under Common Ownership: ☒Yes ☐No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	34	20S	35E		48' FNL	372' FEL	32.536621	-103.437458	LEA

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	34	20S	35E		462' FNL	400' FEL	32.535613	-103.437853	LEA

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	34	20S	35E		100' FSL	400' FEL	32.522629	-103.437860	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type	Ground Floor Elevation:
160.5	☒Horizontal ☐Vertical	3718'

OPERATOR CERTIFICATIONS

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

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

Signature 8/8/25 Date

Todd Passmore
Printed Name

tpassmore@mar-win.com
Email Address

SURVEYOR CERTIFICATIONS

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

LUIS ARMANDO ARRIETA NEW MEXICO 26407 PROFESSIONAL SURVEYOR

Luis Larranaga

Signature and Seal of Professional Surveyor

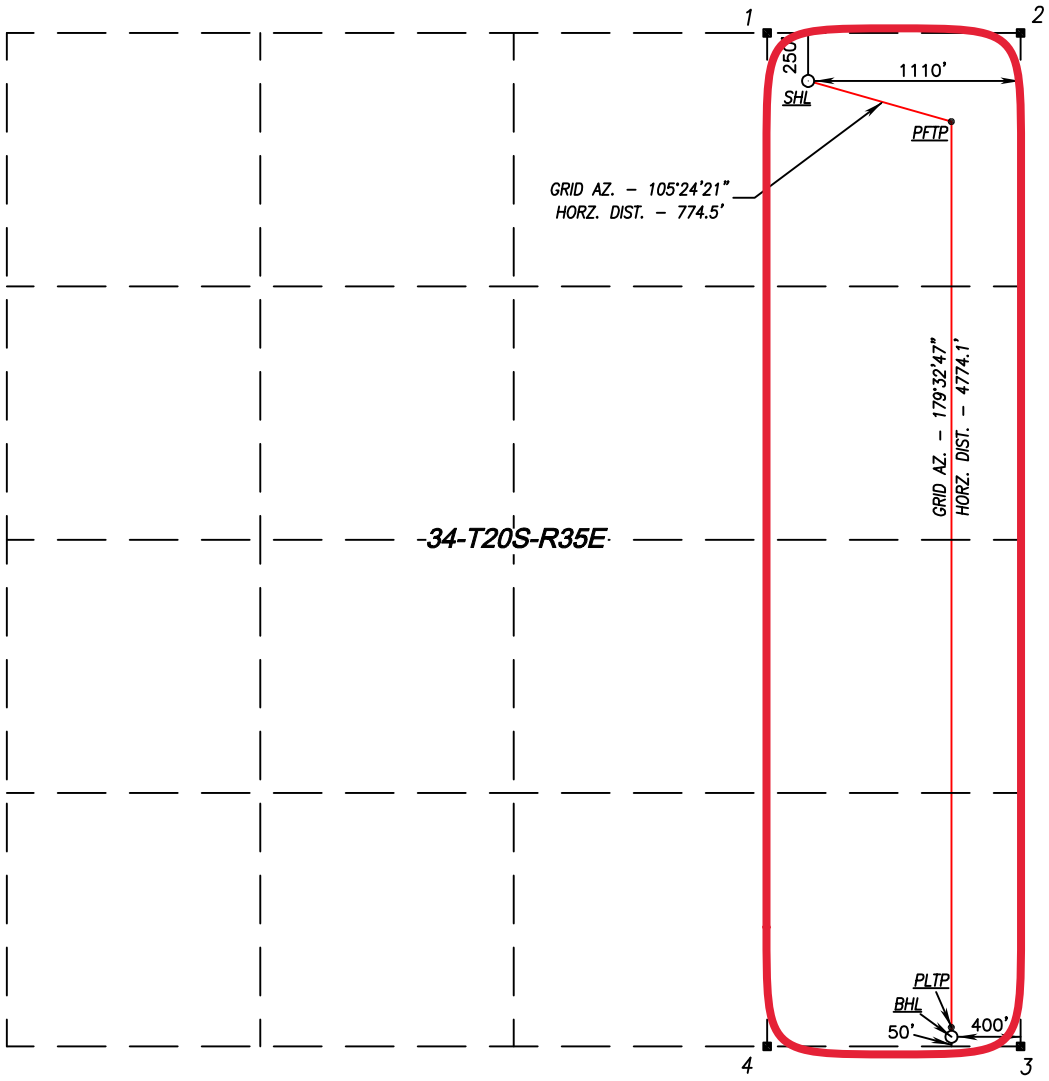
Certificate Number	Date of Survey
26407	8/8/25

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

ACREAGE DEDICATION PLATS

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

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



POINT LEGEND		
POINT	NORTHING	EASTING
1	560200.9	816378.8
2	560211.9	817700.9
3	554926.1	817742.9
4	554914.5	816420.9

NAD 83 NME
SURFACE LOCATION
Y=559952.6 N
X=816593.0 E
LAT.=32.536196° N
LONG.=103.440156° W

PFTP
462' FNL & 400' FEL
Y=559746.6 N
X=817304.7 E
LAT.=32.535613° N
LONG.=103.437853° W

PLTP
100' FSL & 400' FEL
Y=555022.6 N
X=817342.1 E
LAT.=32.522629° N
LONG.=103.437860° W

NAD 83 NME
PROPOSED BOTTOM HOLE LOCATION
Y=554972.6 N
X=817342.5 E
LAT.=32.522491° N
LONG.=103.437860° W

Intent ☐ As Drilled

API #

Operator Name:	Property Name:	Well Number
MARSHALL & WINSTON, INC	LOOKIN GOOD 34 STATE COM	502H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	34	20-S	35-E		48	NORTH	372	EAST	LEA

Latitude	Longitude	NAD
32.53662127	-103.43745786	NAD 83 NME

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	34	20-S	35-E		462	NORTH	400.00	EAST	LEA

Latitude	Longitude	NAD
32.535613	-103.43785	NAD 83 NME

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	34	20-S	35-E		100	SOUTH	400.00	EAST	

Latitude	Longitude	NAD
32.522629	-103.437860	NAD 83 NME

Is this well the defining well for the Horizontal Spacing Unit? NO ☐

Is this well an infill well? ☐ NO

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
Lookin Good 34 State Com 502H - Plan 1

Lea County, NM
Lookin Good 34 State Com

MD	INC	AZI	Course Length	TVD	Subsea Depth	N/-S	E/-W	X	Y	Lat	Long	Dogleg Severity	Vertical Section
0.00	0.00	0.00	0.00	0.00	3718.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
100.00	0.00	0.00	100.00	100.00	3618.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
200.00	0.00	0.00	100.00	200.00	3518.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
300.00	0.00	0.00	100.00	300.00	3418.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
400.00	0.00	0.00	100.00	400.00	3318.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
500.00	0.00	0.00	100.00	500.00	3218.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
600.00	0.00	0.00	100.00	600.00	3118.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
700.00	0.00	0.00	100.00	700.00	3018.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
800.00	0.00	0.00	100.00	800.00	2918.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
900.00	0.00	0.00	100.00	900.00	2818.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1000.00	0.00	0.00	100.00	1000.00	2718.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1100.00	0.00	0.00	100.00	1100.00	2618.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1200.00	0.00	0.00	100.00	1200.00	2518.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1300.00	0.00	0.00	100.00	1300.00	2418.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1400.00	0.00	0.00	100.00	1400.00	2318.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1500.00	0.00	0.00	100.00	1500.00	2218.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1600.00	0.00	0.00	100.00	1600.00	2118.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1700.00	0.00	0.00	100.00	1700.00	2018.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1800.00	0.00	0.00	100.00	1800.00	1918.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
1900.00	0.00	0.00	100.00	1900.00	1818.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
2000.00	0.00	0.00	100.00	2000.00	1718.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
2100.00	0.00	0.00	100.00	2100.00	1618.48	0.00	0.00	816593.00	559952.60	32.54	-103.44	0.00	0.00
2200.00	2.00	20.00	100.00	2199.98	1518.50	1.64	0.60	816593.60	559954.24	32.54	-103.44	2.00	-1.64
2300.00	4.00	20.00	100.00	2299.84	1418.64	6.56	2.39	816595.39	559959.16	32.54	-103.44	2.00	-6.54
2400.00	6.00	20.00	100.00	2399.45	1319.03	14.75	5.37	816598.37	559967.35	32.54	-103.44	2.00	-14.70
2450.00	7.00	20.00	50.00	2449.13	1269.35	20.07	7.30	816600.30	559972.67	32.54	-103.44	2.00	-20.01
2500.00	6.81	28.17	50.00	2498.77	1219.71	25.54	9.74	816602.74	559978.14	32.54	-103.44	2.00	-25.46

2600.00	6.85	45.05	100.00	2598.07	1120.41	34.98	16.76	816609.76	559987.58	32.54	-103.44	2.00	-34.84
2700.00	7.45	60.45	100.00	2697.30	1021.18	42.39	26.62	816619.62	559994.99	32.54	-103.44	2.00	-42.18
2800.00	8.48	72.84	100.00	2796.34	922.14	47.76	39.31	816632.31	560000.36	32.54	-103.44	2.00	-47.45
2840.60	9.00	76.98	40.60	2836.47	882.01	49.36	45.26	816638.26	560001.96	32.54	-103.44	2.00	-49.00
2900.00	9.00	76.98	59.40	2895.14	823.34	51.45	54.31	816647.31	560004.05	32.54	-103.44	0.00	-51.02
3000.00	9.00	76.98	100.00	2993.91	724.57	54.97	69.55	816662.55	560007.57	32.54	-103.44	0.00	-54.43
3100.00	9.00	76.98	100.00	3092.68	625.80	58.50	84.78	816677.78	560011.10	32.54	-103.44	0.00	-57.83
3200.00	9.00	76.98	100.00	3191.45	527.03	62.02	100.02	816693.02	560014.62	32.54	-103.44	0.00	-61.23
3300.00	9.00	76.98	100.00	3290.22	428.26	65.55	115.26	816708.26	560018.15	32.54	-103.44	0.00	-64.64
3400.00	9.00	76.98	100.00	3388.99	329.49	69.07	130.50	816723.50	560021.67	32.54	-103.44	0.00	-68.04
3500.00	9.00	76.98	100.00	3487.76	230.72	72.59	145.73	816738.73	560025.19	32.54	-103.44	0.00	-71.45
3600.00	9.00	76.98	100.00	3586.53	131.95	76.12	160.97	816753.97	560028.72	32.54	-103.44	0.00	-74.85
3700.00	9.00	76.98	100.00	3685.30	33.18	79.64	176.21	816769.21	560032.24	32.54	-103.44	0.00	-78.25
3800.00	9.00	76.98	100.00	3784.07	-65.59	83.16	191.44	816784.44	560035.76	32.54	-103.44	0.00	-81.66
3900.00	9.00	76.98	100.00	3882.84	-164.36	86.69	206.68	816799.68	560039.29	32.54	-103.44	0.00	-85.06
4000.00	9.00	76.98	100.00	3981.61	-263.13	90.21	221.92	816814.92	560042.81	32.54	-103.44	0.00	-88.46
4100.00	9.00	76.98	100.00	4080.38	-361.90	93.73	237.15	816830.15	560046.33	32.54	-103.44	0.00	-91.87
4200.00	9.00	76.98	100.00	4179.14	-460.66	97.26	252.39	816845.39	560049.86	32.54	-103.44	0.00	-95.27
4300.00	9.00	76.98	100.00	4277.91	-559.43	100.78	267.63	816860.63	560053.38	32.54	-103.44	0.00	-98.68
4400.00	9.00	76.98	100.00	4376.68	-658.20	104.30	282.86	816875.86	560056.90	32.54	-103.44	0.00	-102.08
4500.00	9.00	76.98	100.00	4475.45	-756.97	107.83	298.10	816891.10	560060.43	32.54	-103.44	0.00	-105.48
4600.00	9.00	76.98	100.00	4574.22	-855.74	111.35	313.34	816906.34	560063.95	32.54	-103.44	0.00	-108.89
4700.00	9.00	76.98	100.00	4672.99	-954.51	114.87	328.57	816921.57	560067.47	32.54	-103.44	0.00	-112.29
4800.00	9.00	76.98	100.00	4771.76	-1053.28	118.40	343.81	816936.81	560071.00	32.54	-103.44	0.00	-115.69
4900.00	9.00	76.98	100.00	4870.53	-1152.05	121.92	359.05	816952.05	560074.52	32.54	-103.44	0.00	-119.10
5000.00	9.00	76.98	100.00	4969.30	-1250.82	125.45	374.28	816967.28	560078.05	32.54	-103.44	0.00	-122.50
5100.00	9.00	76.98	100.00	5068.07	-1349.59	128.97	389.52	816982.52	560081.57	32.54	-103.44	0.00	-125.91
5200.00	9.00	76.98	100.00	5166.84	-1448.36	132.49	404.76	816997.76	560085.09	32.54	-103.44	0.00	-129.31
5300.00	9.00	76.98	100.00	5265.61	-1547.13	136.02	419.99	817012.99	560088.62	32.54	-103.44	0.00	-132.71
5400.00	9.00	76.98	100.00	5364.38	-1645.90	139.54	435.23	817028.23	560092.14	32.54	-103.44	0.00	-136.12
5500.00	9.00	76.98	100.00	5463.15	-1744.67	143.06	450.47	817043.47	560095.66	32.54	-103.44	0.00	-139.52
5600.00	9.00	76.98	100.00	5561.92	-1843.44	146.59	465.70	817058.70	560099.19	32.54	-103.44	0.00	-142.92
5700.00	9.00	76.98	100.00	5660.69	-1942.21	150.11	480.94	817073.94	560102.71	32.54	-103.44	0.00	-146.33
5800.00	9.00	76.98	100.00	5759.46	-2040.98	153.63	496.18	817089.18	560106.23	32.54	-103.44	0.00	-149.73
5900.00	9.00	76.98	100.00	5858.23	-2139.75	157.16	511.42	817104.42	560109.76	32.54	-103.44	0.00	-153.14
6000.00	9.00	76.98	100.00	5957.00	-2238.52	160.68	526.65	817119.65	560113.28	32.54	-103.44	0.00	-156.54

6100.00	9.00	76.98	100.00	6055.77	-2337.29	164.20	541.89	817134.89	560116.80	32.54	-103.44	0.00	-159.94
6200.00	9.00	76.98	100.00	6154.54	-2436.06	167.73	557.13	817150.13	560120.33	32.54	-103.44	0.00	-163.35
6300.00	9.00	76.98	100.00	6253.31	-2534.83	171.25	572.36	817165.36	560123.85	32.54	-103.44	0.00	-166.75
6400.00	9.00	76.98	100.00	6352.07	-2633.59	174.77	587.60	817180.60	560127.37	32.54	-103.44	0.00	-170.15
6500.00	9.00	76.98	100.00	6450.84	-2732.36	178.30	602.84	817195.84	560130.90	32.54	-103.44	0.00	-173.56
6600.00	9.00	76.98	100.00	6549.61	-2831.13	181.82	618.07	817211.07	560134.42	32.54	-103.44	0.00	-176.96
6700.00	9.00	76.98	100.00	6648.38	-2929.90	185.35	633.31	817226.31	560137.95	32.54	-103.44	0.00	-180.37
6800.00	9.00	76.98	100.00	6747.15	-3028.67	188.87	648.55	817241.55	560141.47	32.54	-103.44	0.00	-183.77
6900.00	9.00	76.98	100.00	6845.92	-3127.44	192.39	663.78	817256.78	560144.99	32.54	-103.44	0.00	-187.17
6969.96	9.00	76.98	69.96	6915.02	-3196.54	194.86	674.44	817267.44	560147.46	32.54	-103.44	0.00	-189.55
7000.00	8.40	76.98	30.04	6944.72	-3226.24	195.88	678.87	817271.87	560148.48	32.54	-103.44	2.00	-190.54
7100.00	6.40	76.98	100.00	7043.88	-3325.40	198.78	691.41	817284.41	560151.38	32.54	-103.44	2.00	-193.34
7200.00	4.40	76.98	100.00	7143.43	-3424.95	200.90	700.57	817293.57	560153.50	32.54	-103.44	2.00	-195.39
7300.00	2.40	76.98	100.00	7243.25	-3524.77	202.23	706.35	817299.35	560154.83	32.54	-103.44	2.00	-196.68
7400.00	0.40	76.98	100.00	7343.22	-3624.74	202.78	708.72	817301.72	560155.38	32.54	-103.44	2.00	-197.21
7419.83	0.00	179.55	19.83	7363.04	-3644.56	202.80	708.79	817301.79	560155.40	32.54	-103.44	2.00	-197.23
7500.00	0.00	0.00	80.17	7443.22	-3724.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
7600.00	0.00	0.00	100.00	7543.22	-3824.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
7700.00	0.00	0.00	100.00	7643.22	-3924.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
7800.00	0.00	0.00	100.00	7743.22	-4024.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
7900.00	0.00	0.00	100.00	7843.22	-4124.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8000.00	0.00	0.00	100.00	7943.22	-4224.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8100.00	0.00	0.00	100.00	8043.22	-4324.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8200.00	0.00	0.00	100.00	8143.22	-4424.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8300.00	0.00	0.00	100.00	8243.22	-4524.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8400.00	0.00	0.00	100.00	8343.22	-4624.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8500.00	0.00	0.00	100.00	8443.22	-4724.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8600.00	0.00	0.00	100.00	8543.22	-4824.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8700.00	0.00	0.00	100.00	8643.22	-4924.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8800.00	0.00	0.00	100.00	8743.22	-5024.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
8900.00	0.00	0.00	100.00	8843.22	-5124.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9000.00	0.00	0.00	100.00	8943.22	-5224.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9100.00	0.00	0.00	100.00	9043.22	-5324.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9200.00	0.00	0.00	100.00	9143.22	-5424.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9300.00	0.00	0.00	100.00	9243.22	-5524.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9400.00	0.00	0.00	100.00	9343.22	-5624.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23

9500.00	0.00	0.00	100.00	9443.22	-5724.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9600.00	0.00	0.00	100.00	9543.22	-5824.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9700.00	0.00	0.00	100.00	9643.22	-5924.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9800.00	0.00	0.00	100.00	9743.22	-6024.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9900.00	0.00	0.00	100.00	9843.22	-6124.74	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9934.83	0.00	179.55	34.83	9878.04	-6159.56	202.80	708.79	817301.79	560155.40	32.54	-103.44	0.00	-197.23
9950.00	1.52	179.55	15.17	9893.21	-6174.73	202.60	708.79	817301.79	560155.20	32.54	-103.44	10.00	-197.03
10000.00	6.52	179.55	50.00	9943.07	-6224.59	199.10	708.82	817301.82	560151.70	32.54	-103.44	10.00	-193.52
10050.00	11.52	179.55	50.00	9992.44	-6273.96	191.26	708.88	817301.88	560143.86	32.54	-103.44	10.00	-185.69
10100.00	16.52	179.55	50.00	10040.94	-6322.46	179.16	708.97	817301.97	560131.76	32.54	-103.44	10.00	-173.58
10150.00	21.52	179.55	50.00	10088.19	-6369.71	162.87	709.10	817302.10	560115.47	32.54	-103.44	10.00	-157.30
10200.00	26.52	179.55	50.00	10133.85	-6415.37	142.53	709.26	817302.26	560095.13	32.54	-103.44	10.00	-136.95
10250.00	31.52	179.55	50.00	10177.56	-6459.08	118.28	709.45	817302.45	560070.88	32.54	-103.44	10.00	-112.71
10300.00	36.52	179.55	50.00	10218.99	-6500.51	90.32	709.67	817302.67	560042.92	32.54	-103.44	10.00	-84.74
10350.00	41.52	179.55	50.00	10257.82	-6539.34	58.85	709.92	817302.92	560011.45	32.54	-103.44	10.00	-53.27
10400.00	46.52	179.55	50.00	10293.77	-6575.29	24.12	710.19	817303.19	559976.72	32.54	-103.44	10.00	-18.54
10450.00	51.52	179.55	50.00	10326.55	-6608.07	-13.61	710.49	817303.49	559938.99	32.54	-103.44	10.00	19.19
10500.00	56.52	179.55	50.00	10355.92	-6637.44	-54.06	710.80	817303.80	559898.54	32.54	-103.44	10.00	59.64
10550.00	61.52	179.55	50.00	10381.65	-6663.17	-96.91	711.14	817304.14	559855.69	32.54	-103.44	10.00	102.49
10600.00	66.52	179.55	50.00	10403.55	-6685.07	-141.84	711.49	817304.49	559810.76	32.54	-103.44	10.00	147.42
10650.00	71.52	179.55	50.00	10421.45	-6702.97	-188.51	711.86	817304.86	559764.09	32.54	-103.44	10.00	194.09
10700.00	76.52	179.55	50.00	10435.21	-6716.73	-236.56	712.24	817305.24	559716.04	32.54	-103.44	10.00	242.15
10750.00	81.52	179.55	50.00	10444.73	-6726.25	-285.63	712.62	817305.62	559666.97	32.54	-103.44	10.00	291.21
10800.00	86.52	179.55	50.00	10449.94	-6731.46	-335.34	713.01	817306.01	559617.26	32.54	-103.44	10.00	340.93
10834.83	90.00	179.55	34.83	10451.00	-6732.52	-370.14	713.29	817306.29	559582.46	32.54	-103.44	10.00	375.73
10900.00	90.00	179.55	65.17	10451.00	-6732.52	-435.31	713.80	817306.80	559517.29	32.54	-103.44	0.00	440.90
11000.00	90.00	179.55	100.00	10451.00	-6732.52	-535.31	714.58	817307.58	559417.29	32.53	-103.44	0.00	540.90
11100.00	90.00	179.55	100.00	10451.00	-6732.52	-635.31	715.37	817308.37	559317.29	32.53	-103.44	0.00	640.90
11200.00	90.00	179.55	100.00	10451.00	-6732.52	-735.30	716.15	817309.15	559217.30	32.53	-103.44	0.00	740.90
11300.00	90.00	179.55	100.00	10451.00	-6732.52	-835.30	716.94	817309.94	559117.30	32.53	-103.44	0.00	840.90
11400.00	90.00	179.55	100.00	10451.00	-6732.52	-935.30	717.73	817310.73	559017.30	32.53	-103.44	0.00	940.90
11500.00	90.00	179.55	100.00	10451.00	-6732.52	-1035.29	718.51	817311.51	558917.31	32.53	-103.44	0.00	1040.90
11600.00	90.00	179.55	100.00	10451.00	-6732.52	-1135.29	719.30	817312.30	558817.31	32.53	-103.44	0.00	1140.90
11700.00	90.00	179.55	100.00	10451.00	-6732.52	-1235.29	720.08	817313.08	558717.31	32.53	-103.44	0.00	1240.90
11800.00	90.00	179.55	100.00	10451.00	-6732.52	-1335.28	720.87	817313.87	558617.32	32.53	-103.44	0.00	1340.90
11900.00	90.00	179.55	100.00	10451.00	-6732.52	-1435.28	721.65	817314.65	558517.32	32.53	-103.44	0.00	1440.90

12000.00	90.00	179.55	100.00	10451.00	-6732.52	-1535.28	722.44	817315.44	558417.32	32.53	-103.44	0.00	1540.90
12100.00	90.00	179.55	100.00	10451.00	-6732.52	-1635.27	723.22	817316.22	558317.33	32.53	-103.44	0.00	1640.90
12200.00	90.00	179.55	100.00	10451.00	-6732.52	-1735.27	724.01	817317.01	558217.33	32.53	-103.44	0.00	1740.90
12300.00	90.00	179.55	100.00	10451.00	-6732.52	-1835.27	724.79	817317.79	558117.33	32.53	-103.44	0.00	1840.90
12400.00	90.00	179.55	100.00	10451.00	-6732.52	-1935.27	725.58	817318.58	558017.33	32.53	-103.44	0.00	1940.90
12500.00	90.00	179.55	100.00	10451.00	-6732.52	-2035.26	726.36	817319.36	557917.34	32.53	-103.44	0.00	2040.90
12600.00	90.00	179.55	100.00	10451.00	-6732.52	-2135.26	727.15	817320.15	557817.34	32.53	-103.44	0.00	2140.90
12700.00	90.00	179.55	100.00	10451.00	-6732.52	-2235.26	727.94	817320.94	557717.34	32.53	-103.44	0.00	2240.90
12800.00	90.00	179.55	100.00	10451.00	-6732.52	-2335.25	728.72	817321.72	557617.35	32.53	-103.44	0.00	2340.90
12900.00	90.00	179.55	100.00	10451.00	-6732.52	-2435.25	729.51	817322.51	557517.35	32.53	-103.44	0.00	2440.90
13000.00	90.00	179.55	100.00	10451.00	-6732.52	-2535.25	730.29	817323.29	557417.35	32.53	-103.44	0.00	2540.90
13100.00	90.00	179.55	100.00	10451.00	-6732.52	-2635.24	731.08	817324.08	557317.36	32.53	-103.44	0.00	2640.90
13200.00	90.00	179.55	100.00	10451.00	-6732.52	-2735.24	731.86	817324.86	557217.36	32.53	-103.44	0.00	2740.90
13300.00	90.00	179.55	100.00	10451.00	-6732.52	-2835.24	732.65	817325.65	557117.36	32.53	-103.44	0.00	2840.90
13400.00	90.00	179.55	100.00	10451.00	-6732.52	-2935.23	733.43	817326.43	557017.37	32.53	-103.44	0.00	2940.90
13500.00	90.00	179.55	100.00	10451.00	-6732.52	-3035.23	734.22	817327.22	556917.37	32.53	-103.44	0.00	3040.90
13600.00	90.00	179.55	100.00	10451.00	-6732.52	-3135.23	735.00	817328.00	556817.37	32.53	-103.44	0.00	3140.90
13700.00	90.00	179.55	100.00	10451.00	-6732.52	-3235.23	735.79	817328.79	556717.37	32.53	-103.44	0.00	3240.90
13800.00	90.00	179.55	100.00	10451.00	-6732.52	-3335.22	736.57	817329.57	556617.38	32.53	-103.44	0.00	3340.90
13900.00	90.00	179.55	100.00	10451.00	-6732.52	-3435.22	737.36	817330.36	556517.38	32.53	-103.44	0.00	3440.90
14000.00	90.00	179.55	100.00	10451.00	-6732.52	-3535.22	738.15	817331.15	556417.38	32.53	-103.44	0.00	3540.90
14100.00	90.00	179.55	100.00	10451.00	-6732.52	-3635.21	738.93	817331.93	556317.39	32.53	-103.44	0.00	3640.90
14200.00	90.00	179.55	100.00	10451.00	-6732.52	-3735.21	739.72	817332.72	556217.39	32.53	-103.44	0.00	3740.90
14300.00	90.00	179.55	100.00	10451.00	-6732.52	-3835.21	740.50	817333.50	556117.39	32.53	-103.44	0.00	3840.90
14400.00	90.00	179.55	100.00	10451.00	-6732.52	-3935.20	741.29	817334.29	556017.40	32.53	-103.44	0.00	3940.90
14500.00	90.00	179.55	100.00	10451.00	-6732.52	-4035.20	742.07	817335.07	555917.40	32.53	-103.44	0.00	4040.90
14600.00	90.00	179.55	100.00	10451.00	-6732.52	-4135.20	742.86	817335.86	555817.40	32.52	-103.44	0.00	4140.90
14700.00	90.00	179.55	100.00	10451.00	-6732.52	-4235.19	743.64	817336.64	555717.41	32.52	-103.44	0.00	4240.90
14800.00	90.00	179.55	100.00	10451.00	-6732.52	-4335.19	744.43	817337.43	555617.41	32.52	-103.44	0.00	4340.90
14900.00	90.00	179.55	100.00	10451.00	-6732.52	-4435.19	745.21	817338.21	555517.41	32.52	-103.44	0.00	4440.90
15000.00	90.00	179.55	100.00	10451.00	-6732.52	-4535.19	746.00	817339.00	555417.42	32.52	-103.44	0.00	4540.90
15100.00	90.00	179.55	100.00	10451.00	-6732.52	-4635.18	746.78	817339.78	555317.42	32.52	-103.44	0.00	4640.90
15200.00	90.00	179.55	100.00	10451.00	-6732.52	-4735.18	747.57	817340.57	555217.42	32.52	-103.44	0.00	4740.90
15300.00	90.00	179.55	100.00	10451.00	-6732.52	-4835.18	748.36	817341.36	555117.42	32.52	-103.44	0.00	4840.90
15394.83	90.00	179.55	94.83	10451.00	-6732.52	-4930.00	749.10	817342.10	555022.60	32.52	-103.44	0.00	4935.73
15400.00	90.00	179.55	5.17	10451.00	-6732.52	-4935.17	749.14	817342.14	555017.43	32.52	-103.44	0.00	4940.90

15444.83	90.00	179.55	44.83	10451.00	-6732.52	-4980.00	749.49	817342.49	554972.60	32.52	-103.44	0.00	4985.73
All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.													
Vertical depths are relative to GL 2692.48 + 26' KB. Northings and Eastings are relative to Well.													
The Dogleg Severity is in Degrees per 100 feet.													
Vertical Section is from Slot and calculated along an Azimuth of 179.550° (Grid).													
Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.													
Central meridian is -104.333°.													
Grid Convergence at Surface is 0.480°.													
Based upon Minimum Curvature type calculations, at a Measured Depth of 15444.83ft.,													
the Bottom Hole Displacement is 5036.08ft., in the Direction of 179.550° (Grid).													

Marshall & Winston Inc.

Company: Marshall & Winston
Field: Lea County, NM
Location: Lookin Good 34 State Com
Well: Lookin Good 34 State Com 502H
OH
Plan: Plan 1
GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)

Azimuths to Grid North
True North: -0.48°
Magnetic North: 5.72°

Magnetic Field
Strength: 47202.1nT
Dip Angle: 60.05°
Date: 8/8/2025
Model: IGRF2025

To convert a Magnetic Direction to a Grid Direction, Add 5.72°

PROJECT DETAILS: Lea County, NM

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

LEGACY DIRECTIONAL

WELL DETAILS: Lookin Good 34 State Com 502H

GL 2692.48 + 26' KB @ 3718.48usft (ICD 333) 3692.48

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	559952.60	816593.00	32.536196	-103.440156

SECTION DETAILS

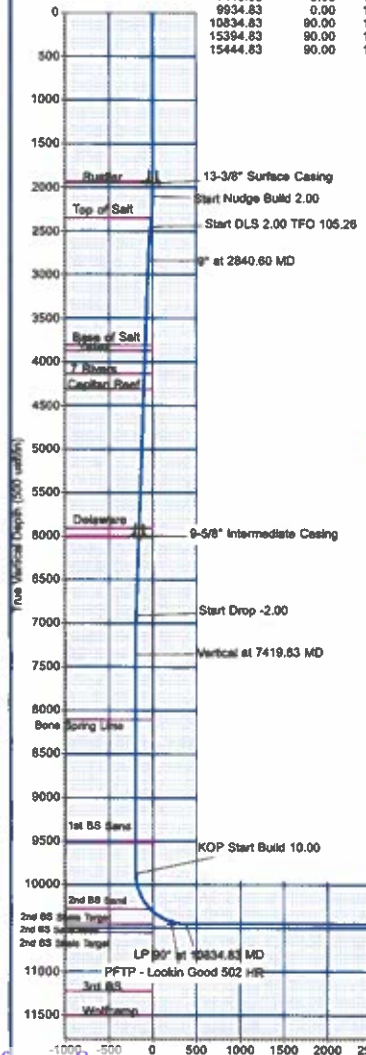
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	
2450.00	7.00	20.00	2449.13	20.07	7.30	2.00	20.00	-20.01	
2840.60	9.00	76.98	2836.47	49.36	45.26	2.00	105.26	-49.00	
6989.96	9.00	76.98	6915.02	194.88	674.44	0.00	0.00	-189.55	
7419.83	0.00	179.55	7363.04	202.80	708.79	2.00	180.00	-197.23	
9934.83	0.00	179.55	9878.04	202.80	708.79	0.00	0.00	-197.23	
10834.83	90.00	179.55	10451.00	-370.14	713.29	10.00	0.00	375.73	
15394.83	90.00	179.55	10451.00	-4930.00	749.10	0.00	0.00	4935.73	PLTP - Lookin Good 502 HR
15444.83	90.00	179.55	10451.00	-4980.00	749.49	0.00	0.00	4985.73	PBHL - Lookin Good 502 HR

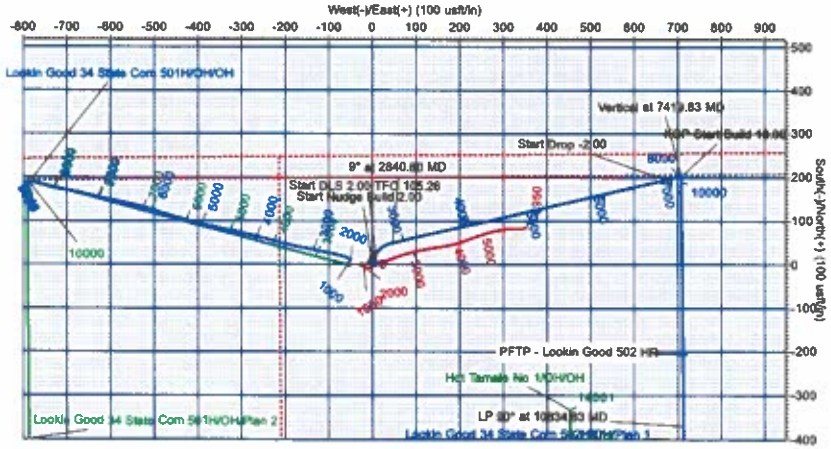
DESIGN TARGET DETAILS

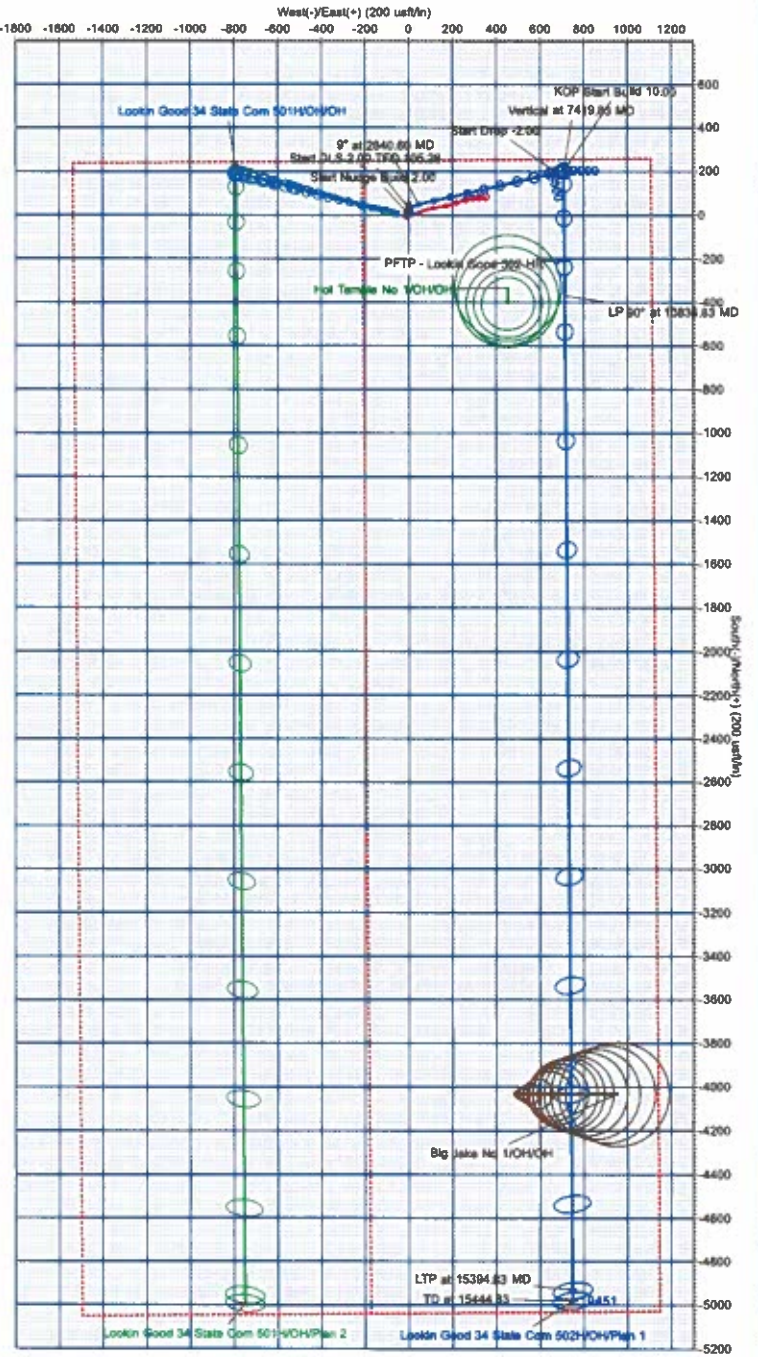
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL - Lookin Good 502 HR	10451.00	-4980.00	749.50	554972.60	817342.50	32.522491	-103.437861
PFTP - Lookin Good 502 HR	10451.00	-206.00	711.70	559746.60	817304.70	32.535613	-103.437853
PLTP - Lookin Good 502 HR	10451.00	-4930.00	749.10	555022.60	817342.10	32.522629	-103.437860

CASING DETAILS

TVD	MD	Name
1955.00	1955.00	13-3/8" Surface Casing
6010.00	6053.86	9-5/8" Intermediate Casing







Marshall & Winston

Lea County, NM
Lookin Good 34 State Com
Lookin Good 34 State Com 502H

OH

Plan: Plan 1

Standard Planning Report

08 August, 2025

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Company:	Marshall & Winston	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

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

Site	Lookin Good 34 State Com				
Site Position:		**Northing:**	559,952.00 usft	**Latitude:**	32.536195
From:	Map	**Easting:**	816,538.20 usft	**Longitude:**	-103.440335
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well	Lookin Good 34 State Com 502H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	559,952.60 usft	**Latitude:**	32.536196
	+E/-W	0.00 usft	**Easting:**	816,593.00 usft	**Longitude:**	-103.440157
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,692.48 usft
Grid Convergence:		0.48 °				

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2025	8/8/2025	6.20	60.05	47,202.05875673

Design	Plan 1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	179.55	

Plan Survey Tool Program	**Date** 8/8/2025			
	Depth From (usft)	**Depth To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Remarks**
1	0.00	15,444.40	Plan 1 (OH)	MWD OWSG MWD - Standard	

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Company:	Marshall & Winston	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,450.00	7.00	20.00	2,449.13	20.07	7.30	2.00	2.00	0.00	20.00	
2,840.60	9.00	76.98	2,836.47	49.36	45.26	2.00	0.51	14.59	105.26	
6,969.96	9.00	76.98	6,915.02	194.86	674.44	0.00	0.00	0.00	0.00	
7,419.83	0.00	179.55	7,363.04	202.80	708.79	2.00	-2.00	0.00	180.00	
9,934.83	0.00	179.55	9,878.04	202.80	708.79	0.00	0.00	0.00	0.00	
10,834.83	90.00	179.55	10,451.00	-370.14	713.29	10.00	10.00	0.00	0.00	
15,394.83	90.00	179.55	10,451.00	-4,930.00	749.10	0.00	0.00	0.00	0.00	PLTP - Lookin Good S
15,444.83	90.00	179.55	10,451.00	-4,980.00	749.49	0.00	0.00	0.00	0.00	PBHL - Lookin Good S

Legacy Directional Drilling
Planning Report

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Company:	Marshall & Winston	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,930.00	0.00	0.00	1,930.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,955.00	0.00	0.00	1,955.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Csg - 13-3/8" Surface Casing									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Nudge Build 2.00									
2,200.00	2.00	20.00	2,199.98	1.64	0.60	-1.64	2.00	2.00	0.00
2,300.00	4.00	20.00	2,299.84	6.56	2.39	-6.54	2.00	2.00	0.00
2,345.30	4.91	20.00	2,345.00	9.86	3.59	-9.83	2.00	2.00	0.00
Top of Salt									
2,400.00	6.00	20.00	2,399.45	14.75	5.37	-14.70	2.00	2.00	0.00
2,450.00	7.00	20.00	2,449.13	20.07	7.30	-20.01	2.00	2.00	0.00
Start DLS 2.00 TFO 105.26									
2,500.00	6.81	28.17	2,498.77	25.54	9.74	-25.46	2.00	-0.39	16.34
2,600.00	6.85	45.05	2,598.07	34.98	16.76	-34.84	2.00	0.04	16.88
2,700.00	7.45	60.45	2,697.30	42.39	26.62	-42.18	2.00	0.60	15.40
2,800.00	8.48	72.84	2,796.34	47.76	39.31	-47.45	2.00	1.04	12.39
2,840.60	9.00	76.98	2,836.47	49.36	45.26	-49.00	2.00	1.27	10.20
9° at 2840.60 MD									
2,900.00	9.00	76.98	2,895.14	51.45	54.31	-51.02	0.00	0.00	0.00
3,000.00	9.00	76.98	2,993.91	54.97	69.55	-54.43	0.00	0.00	0.00
3,100.00	9.00	76.98	3,092.68	58.50	84.78	-57.83	0.00	0.00	0.00
3,200.00	9.00	76.98	3,191.45	62.02	100.02	-61.23	0.00	0.00	0.00
3,300.00	9.00	76.98	3,290.22	65.55	115.26	-64.64	0.00	0.00	0.00
3,400.00	9.00	76.98	3,388.99	69.07	130.49	-68.04	0.00	0.00	0.00
3,500.00	9.00	76.98	3,487.76	72.59	145.73	-71.45	0.00	0.00	0.00
3,600.00	9.00	76.98	3,586.53	76.12	160.97	-74.85	0.00	0.00	0.00
3,700.00	9.00	76.98	3,685.30	79.64	176.21	-78.25	0.00	0.00	0.00
3,800.00	9.00	76.98	3,784.07	83.16	191.44	-81.66	0.00	0.00	0.00
3,822.21	9.00	76.98	3,806.00	83.95	194.83	-82.41	0.00	0.00	0.00
Base of Salt									

Legacy Directional Drilling

Planning Report

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Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,883.97	9.00	76.98	3,867.00	86.12	204.24	-84.52	0.00	0.00	0.00
Yates									
3,900.00	9.00	76.98	3,882.84	86.69	206.68	-85.06	0.00	0.00	0.00
4,000.00	9.00	76.98	3,981.61	90.21	221.92	-88.46	0.00	0.00	0.00
4,100.00	9.00	76.98	4,080.38	93.73	237.15	-91.87	0.00	0.00	0.00
4,149.23	9.00	76.98	4,129.00	95.47	244.65	-93.54	0.00	0.00	0.00
7 Rivers									
4,200.00	9.00	76.98	4,179.14	97.26	252.39	-95.27	0.00	0.00	0.00
4,300.00	9.00	76.98	4,277.91	100.78	267.63	-98.68	0.00	0.00	0.00
4,332.49	9.00	76.98	4,310.00	101.93	272.58	-99.78	0.00	0.00	0.00
Capitan Reef									
4,400.00	9.00	76.98	4,376.68	104.30	282.86	-102.08	0.00	0.00	0.00
4,500.00	9.00	76.98	4,475.45	107.83	298.10	-105.48	0.00	0.00	0.00
4,600.00	9.00	76.98	4,574.22	111.35	313.34	-108.89	0.00	0.00	0.00
4,700.00	9.00	76.98	4,672.99	114.87	328.57	-112.29	0.00	0.00	0.00
4,800.00	9.00	76.98	4,771.76	118.40	343.81	-115.69	0.00	0.00	0.00
4,900.00	9.00	76.98	4,870.53	121.92	359.05	-119.10	0.00	0.00	0.00
5,000.00	9.00	76.98	4,969.30	125.45	374.28	-122.50	0.00	0.00	0.00
5,100.00	9.00	76.98	5,068.07	128.97	389.52	-125.91	0.00	0.00	0.00
5,200.00	9.00	76.98	5,166.84	132.49	404.76	-129.31	0.00	0.00	0.00
5,300.00	9.00	76.98	5,265.61	136.02	419.99	-132.71	0.00	0.00	0.00
5,400.00	9.00	76.98	5,364.38	139.54	435.23	-136.12	0.00	0.00	0.00
5,500.00	9.00	76.98	5,463.15	143.06	450.47	-139.52	0.00	0.00	0.00
5,600.00	9.00	76.98	5,561.92	146.59	465.70	-142.92	0.00	0.00	0.00
5,700.00	9.00	76.98	5,660.69	150.11	480.94	-146.33	0.00	0.00	0.00
5,800.00	9.00	76.98	5,759.46	153.63	496.18	-149.73	0.00	0.00	0.00
5,900.00	9.00	76.98	5,858.23	157.16	511.42	-153.14	0.00	0.00	0.00
5,952.42	9.00	76.98	5,910.00	159.00	519.40	-154.92	0.00	0.00	0.00
Delaware									
6,000.00	9.00	76.98	5,957.00	160.68	526.65	-156.54	0.00	0.00	0.00
6,053.66	9.00	76.98	6,010.00	162.57	534.83	-158.37	0.00	0.00	0.00
Intermediate Csg - 9-5/8" Intermediate Casing									
6,100.00	9.00	76.98	6,055.77	164.20	541.89	-159.94	0.00	0.00	0.00
6,200.00	9.00	76.98	6,154.54	167.73	557.13	-163.35	0.00	0.00	0.00
6,300.00	9.00	76.98	6,253.31	171.25	572.36	-166.75	0.00	0.00	0.00
6,400.00	9.00	76.98	6,352.07	174.77	587.60	-170.15	0.00	0.00	0.00
6,500.00	9.00	76.98	6,450.84	178.30	602.84	-173.56	0.00	0.00	0.00
6,600.00	9.00	76.98	6,549.61	181.82	618.07	-176.96	0.00	0.00	0.00
6,700.00	9.00	76.98	6,648.38	185.35	633.31	-180.37	0.00	0.00	0.00
6,800.00	9.00	76.98	6,747.15	188.87	648.55	-183.77	0.00	0.00	0.00
6,900.00	9.00	76.98	6,845.92	192.39	663.78	-187.17	0.00	0.00	0.00
6,969.96	9.00	76.98	6,915.02	194.86	674.44	-189.55	0.00	0.00	0.00
Start Drop -2.00									
7,000.00	8.40	76.98	6,944.72	195.88	678.87	-190.54	2.00	-2.00	0.00
7,100.00	6.40	76.98	7,043.88	198.78	691.41	-193.34	2.00	-2.00	0.00
7,200.00	4.40	76.98	7,143.43	200.90	700.57	-195.39	2.00	-2.00	0.00
7,300.00	2.40	76.98	7,243.25	202.23	706.35	-196.68	2.00	-2.00	0.00
7,400.00	0.40	76.98	7,343.22	202.78	708.72	-197.21	2.00	-2.00	0.00
7,419.83	0.00	179.55	7,363.04	202.80	708.79	-197.23	2.00	-2.00	0.00
Vertical at 7419.83 MD									
7,500.00	0.00	0.00	7,443.22	202.80	708.79	-197.23	0.00	0.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Company:	Marshall & Winston	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,600.00	0.00	0.00	7,543.22	202.80	708.79	-197.23	0.00	0.00	0.00
7,700.00	0.00	0.00	7,643.22	202.80	708.79	-197.23	0.00	0.00	0.00
7,800.00	0.00	0.00	7,743.22	202.80	708.79	-197.23	0.00	0.00	0.00
7,900.00	0.00	0.00	7,843.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,000.00	0.00	0.00	7,943.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,100.00	0.00	0.00	8,043.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,167.79	0.00	0.00	8,111.00	202.80	708.79	-197.23	0.00	0.00	0.00
Bone Spring Lime									
8,200.00	0.00	0.00	8,143.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,300.00	0.00	0.00	8,243.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,400.00	0.00	0.00	8,343.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,500.00	0.00	0.00	8,443.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,600.00	0.00	0.00	8,543.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,700.00	0.00	0.00	8,643.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,800.00	0.00	0.00	8,743.22	202.80	708.79	-197.23	0.00	0.00	0.00
8,900.00	0.00	0.00	8,843.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,000.00	0.00	0.00	8,943.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,100.00	0.00	0.00	9,043.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,200.00	0.00	0.00	9,143.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,300.00	0.00	0.00	9,243.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,400.00	0.00	0.00	9,343.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,500.00	0.00	0.00	9,443.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,574.79	0.00	0.00	9,518.00	202.80	708.79	-197.23	0.00	0.00	0.00
1st BS Sand									
9,600.00	0.00	0.00	9,543.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,700.00	0.00	0.00	9,643.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,800.00	0.00	0.00	9,743.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,900.00	0.00	0.00	9,843.22	202.80	708.79	-197.23	0.00	0.00	0.00
9,934.83	0.00	0.00	9,878.04	202.80	708.79	-197.23	0.00	0.00	0.00
KOP Start Build 10.00									
9,950.00	1.52	179.55	9,893.21	202.60	708.79	-197.03	10.00	10.00	0.00
10,000.00	6.52	179.55	9,943.07	199.10	708.82	-193.52	10.00	10.00	0.00
10,050.00	11.52	179.55	9,992.44	191.26	708.88	-185.69	10.00	10.00	0.00
10,100.00	16.52	179.55	10,040.94	179.16	708.97	-173.58	10.00	10.00	0.00
10,150.00	21.52	179.55	10,088.19	162.87	709.10	-157.30	10.00	10.00	0.00
10,200.00	26.52	179.55	10,133.85	142.53	709.26	-136.95	10.00	10.00	0.00
10,250.00	31.52	179.55	10,177.56	118.28	709.45	-112.71	10.00	10.00	0.00
10,300.00	36.52	179.55	10,218.99	90.32	709.67	-84.74	10.00	10.00	0.00
10,350.00	41.52	179.55	10,257.83	58.85	709.92	-53.27	10.00	10.00	0.00
10,381.75	44.69	179.55	10,281.00	37.16	710.09	-31.58	10.00	10.00	0.00
2nd BS Sand									
10,400.00	46.52	179.55	10,293.77	24.12	710.19	-18.54	10.00	10.00	0.00
10,450.00	51.52	179.55	10,326.55	-13.61	710.49	19.19	10.00	10.00	0.00
10,500.00	56.52	179.55	10,355.92	-54.06	710.80	59.64	10.00	10.00	0.00
10,550.00	61.52	179.55	10,381.65	-96.91	711.14	102.49	10.00	10.00	0.00
10,600.00	66.52	179.55	10,403.55	-141.84	711.49	147.42	10.00	10.00	0.00
10,650.00	71.52	179.55	10,421.45	-188.51	711.86	194.09	10.00	10.00	0.00
10,700.00	76.52	179.55	10,435.21	-236.56	712.24	242.15	10.00	10.00	0.00
10,750.00	81.52	179.55	10,444.73	-285.63	712.62	291.21	10.00	10.00	0.00
10,800.00	86.52	179.55	10,449.94	-335.34	713.01	340.93	10.00	10.00	0.00
10,834.83	90.00	179.55	10,451.00	-370.14	713.29	375.73	10.00	10.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Company:	Marshall & Winston	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
LP 90° at 10834.83 MD - 2nd BS Shale Target									
10,900.00	90.00	179.55	10,451.00	-435.31	713.80	440.90	0.00	0.00	0.00
11,000.00	90.00	179.55	10,451.00	-535.31	714.58	540.90	0.00	0.00	0.00
11,100.00	90.00	179.55	10,451.00	-635.31	715.37	640.90	0.00	0.00	0.00
11,200.00	90.00	179.55	10,451.00	-735.30	716.15	740.90	0.00	0.00	0.00
11,300.00	90.00	179.55	10,451.00	-835.30	716.94	840.90	0.00	0.00	0.00
11,400.00	90.00	179.55	10,451.00	-935.30	717.73	940.90	0.00	0.00	0.00
11,500.00	90.00	179.55	10,451.00	-1,035.29	718.51	1,040.90	0.00	0.00	0.00
11,600.00	90.00	179.55	10,451.00	-1,135.29	719.30	1,140.90	0.00	0.00	0.00
11,700.00	90.00	179.55	10,451.00	-1,235.29	720.08	1,240.90	0.00	0.00	0.00
11,800.00	90.00	179.55	10,451.00	-1,335.28	720.87	1,340.90	0.00	0.00	0.00
11,900.00	90.00	179.55	10,451.00	-1,435.28	721.65	1,440.90	0.00	0.00	0.00
12,000.00	90.00	179.55	10,451.00	-1,535.28	722.44	1,540.90	0.00	0.00	0.00
12,100.00	90.00	179.55	10,451.00	-1,635.27	723.22	1,640.90	0.00	0.00	0.00
12,200.00	90.00	179.55	10,451.00	-1,735.27	724.01	1,740.90	0.00	0.00	0.00
12,300.00	90.00	179.55	10,451.00	-1,835.27	724.79	1,840.90	0.00	0.00	0.00
12,400.00	90.00	179.55	10,451.00	-1,935.27	725.58	1,940.90	0.00	0.00	0.00
12,500.00	90.00	179.55	10,451.00	-2,035.26	726.36	2,040.90	0.00	0.00	0.00
12,600.00	90.00	179.55	10,451.00	-2,135.26	727.15	2,140.90	0.00	0.00	0.00
12,700.00	90.00	179.55	10,451.00	-2,235.26	727.94	2,240.90	0.00	0.00	0.00
12,800.00	90.00	179.55	10,451.00	-2,335.25	728.72	2,340.90	0.00	0.00	0.00
12,900.00	90.00	179.55	10,451.00	-2,435.25	729.51	2,440.90	0.00	0.00	0.00
13,000.00	90.00	179.55	10,451.00	-2,535.25	730.29	2,540.90	0.00	0.00	0.00
13,100.00	90.00	179.55	10,451.00	-2,635.24	731.08	2,640.90	0.00	0.00	0.00
13,200.00	90.00	179.55	10,451.00	-2,735.24	731.86	2,740.90	0.00	0.00	0.00
13,300.00	90.00	179.55	10,451.00	-2,835.24	732.65	2,840.90	0.00	0.00	0.00
13,400.00	90.00	179.55	10,451.00	-2,935.23	733.43	2,940.90	0.00	0.00	0.00
13,500.00	90.00	179.55	10,451.00	-3,035.23	734.22	3,040.90	0.00	0.00	0.00
13,600.00	90.00	179.55	10,451.00	-3,135.23	735.00	3,140.90	0.00	0.00	0.00
13,700.00	90.00	179.55	10,451.00	-3,235.23	735.79	3,240.90	0.00	0.00	0.00
13,800.00	90.00	179.55	10,451.00	-3,335.22	736.57	3,340.90	0.00	0.00	0.00
13,900.00	90.00	179.55	10,451.00	-3,435.22	737.36	3,440.90	0.00	0.00	0.00
14,000.00	90.00	179.55	10,451.00	-3,535.22	738.15	3,540.90	0.00	0.00	0.00
14,100.00	90.00	179.55	10,451.00	-3,635.21	738.93	3,640.90	0.00	0.00	0.00
14,200.00	90.00	179.55	10,451.00	-3,735.21	739.72	3,740.90	0.00	0.00	0.00
14,300.00	90.00	179.55	10,451.00	-3,835.21	740.50	3,840.90	0.00	0.00	0.00
14,400.00	90.00	179.55	10,451.00	-3,935.20	741.29	3,940.90	0.00	0.00	0.00
14,500.00	90.00	179.55	10,451.00	-4,035.20	742.07	4,040.90	0.00	0.00	0.00
14,600.00	90.00	179.55	10,451.00	-4,135.20	742.86	4,140.90	0.00	0.00	0.00
14,700.00	90.00	179.55	10,451.00	-4,235.19	743.64	4,240.90	0.00	0.00	0.00
14,800.00	90.00	179.55	10,451.00	-4,335.19	744.43	4,340.90	0.00	0.00	0.00
14,900.00	90.00	179.55	10,451.00	-4,435.19	745.21	4,440.90	0.00	0.00	0.00
15,000.00	90.00	179.55	10,451.00	-4,535.19	746.00	4,540.90	0.00	0.00	0.00
15,100.00	90.00	179.55	10,451.00	-4,635.18	746.78	4,640.90	0.00	0.00	0.00
15,200.00	90.00	179.55	10,451.00	-4,735.18	747.57	4,740.90	0.00	0.00	0.00
15,300.00	90.00	179.55	10,451.00	-4,835.18	748.36	4,840.90	0.00	0.00	0.00
15,394.83	90.00	179.55	10,451.00	-4,930.00	749.10	4,935.73	0.00	0.00	0.00
LTP at 15394.83 MD									
15,400.00	90.00	179.55	10,451.00	-4,935.17	749.14	4,940.90	0.00	0.00	0.00
15,443.83	90.00	179.55	10,451.00	-4,979.00	749.48	4,984.73	0.00	0.00	0.00
TD at 15444.83									
15,444.83	90.00	179.55	10,451.00	-4,980.00	749.49	4,985.73	0.00	0.00	0.00

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Company:	Marshall & Winston	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)

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
PLTP - Lookin Good 502 - plan hits target center - Point	0.00	0.00	10,451.00	-4,930.00	749.10	555,022.60	817,342.10	32.522629	-103.437861
PBHL - Lookin Good 502 - plan misses target center by 0.01usft at 15444.83usft MD (10451.00 TVD, -4980.00 N, 749.49 E) - Point	0.00	0.00	10,451.00	-4,980.00	749.50	554,972.60	817,342.50	32.522491	-103.437861
PFTP - Lookin Good 502 - plan misses target center by 23.05usft at 10674.96usft MD (10428.84 TVD, -212.34 N, 712.05 E) - Point	0.00	0.00	10,451.00	-206.00	711.70	559,746.60	817,304.70	32.535613	-103.437853

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,955.00	1,955.00	13-3/8" Surface Casing	13-3/8	17-1/4
6,053.66	6,010.00	9-5/8" Intermediate Casing	9-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,930.00	1,930.00	Rustler			
1,955.00	1,955.00	Surface Csg			
2,345.30	2,345.00	Top of Salt			
3,822.21	3,806.00	Base of Salt			
3,883.97	3,867.00	Yates			
4,149.23	4,129.00	7 Rivers			
4,332.49	4,310.00	Capitan Reef			
5,952.42	5,910.00	Delaware			
6,053.66	6,010.00	Intermediate Csg			
8,167.79	8,111.00	Bone Spring Lime			
9,574.79	9,518.00	1st BS Sand			
10,381.75	10,281.00	2nd BS Sand			
10,834.83	10,451.00	2nd BS Shale Target			

Legacy Directional Drilling

Planning Report

Database:	EDM_WA	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Company:	Marshall & Winston	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Project:	Lea County, NM	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site:	Lookin Good 34 State Com	**North Reference:**	Grid
Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,100.00	2,100.00	0.00	0.00	Start Nudge Build 2.00
2,450.00	2,449.13	20.07	7.30	Start DLS 2.00 TFO 105.26
2,840.60	2,836.47	49.36	45.26	9" at 2840.60 MD
6,969.96	6,915.02	194.86	674.44	Start Drop -2.00
7,419.83	7,363.04	202.80	708.79	Vertical at 7419.83 MD
9,934.83	9,878.04	202.80	708.79	KOP Start Build 10.00
10,834.83	10,451.00	-370.14	713.29	LP 90° at 10834.83 MD
15,394.83	10,451.00	-4,930.00	749.10	LTP at 15394.83 MD
15,443.83	10,451.00	-4,979.00	749.48	TD at 15444.83

Marshall & Winston

Lea County, NM
Lookin Good 34 State Com
Lookin Good 34 State Com 502H

OH
Plan 1

Anticollision Report

08 August, 2025

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Reference	Plan 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 2,362.30usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	**Casing Method:**	Not applied

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

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,444.40	Plan 1 (OH)	MWD	OWSG MWD - Standard

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
Lookin Good 34 State Com						
Big Jake No 1 - OH - OH	14,497.43	10,432.63	39.84	-219.20	0.154	Collision Risk Procedures Re
Big Jake No 1 - OH - OH	14,500.00	10,432.63	39.92	-219.55	0.154	Collision Risk Procedures Re
Hot Tamale No 1 - OH - OH	10,868.85	10,414.21	260.24	40.81	1.186	Collision Risk Procedures Re
Lookin Good 34 State Com 501H - OH - OH	1,947.69	1,946.80	50.79	37.43	3.803	CC
Lookin Good 34 State Com 501H - OH - OH	2,100.00	2,098.95	51.03	36.99	3.635	ES, SF
Lookin Good 34 State Com 501H - OH - Plan 2	2,100.00	2,099.02	54.80	39.94	3.687	CC, ES
Lookin Good 34 State Com 501H - OH - Plan 2	2,200.00	2,197.16	57.05	41.49	3.666	SF
Lookin Good 34 State Com 502H - OH - OH	2,286.66	2,287.18	11.59	-3.35	0.776	Collision Risk Procedures Re
Lookin Good 34 State Com 502H - OH - OH	2,300.00	2,300.52	11.64	-3.35	0.776	Collision Risk Procedures Re

Offset Design: Lookin Good 34 State Com - Big Jake No 1 - OH - OH — Offset Site Error: 0.00 usft

Survey Program: 180-2° Cone of Uncertainty — Offset Well Error: 0.00 usft

Rule Assigned: Distance

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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,200.00	10,451.00	10,431.77	10,448.22	48.09	182.04	-86.01	-4,032.32	781.80	2,297.78	2,077.24	220.54	10.419	
12,300.00	10,451.00	10,431.80	10,448.26	49.12	182.04	-86.06	-4,032.32	781.81	2,197.79	1,977.25	220.55	9.965	
12,400.00	10,451.00	10,431.84	10,448.30	50.18	182.04	-86.11	-4,032.32	781.81	2,097.81	1,877.26	220.55	9.512	
12,500.00	10,451.00	10,431.88	10,448.34	51.27	182.04	-86.17	-4,032.32	781.81	1,997.83	1,777.27	220.56	9.058	
12,600.00	10,451.00	10,431.92	10,448.37	52.40	182.04	-86.22	-4,032.32	781.81	1,897.85	1,677.28	220.57	8.604	
12,700.00	10,451.00	10,431.95	10,448.41	53.55	182.04	-86.28	-4,032.32	781.81	1,797.87	1,577.30	220.58	8.151	
12,800.00	10,451.00	10,431.99	10,448.45	54.73	182.04	-86.33	-4,032.32	781.82	1,697.90	1,477.32	220.58	7.697	
12,900.00	10,451.00	10,432.03	10,448.49	55.93	182.04	-86.38	-4,032.32	781.82	1,597.93	1,377.34	220.59	7.244	
13,000.00	10,451.00	10,432.07	10,448.53	57.16	182.04	-86.44	-4,032.32	781.82	1,497.96	1,277.37	220.59	6.791	
13,100.00	10,451.00	10,432.10	10,448.56	58.41	182.04	-86.49	-4,032.32	781.82	1,398.00	1,177.41	220.59	6.337	
13,200.00	10,451.00	10,432.14	10,448.60	59.67	182.04	-86.55	-4,032.32	781.82	1,298.04	1,077.45	220.59	5.884	
13,300.00	10,451.00	10,432.18	10,448.64	60.96	182.04	-86.60	-4,032.32	781.82	1,198.09	977.51	220.59	5.431	
13,400.00	10,451.00	10,432.22	10,448.68	62.26	182.04	-86.66	-4,032.32	781.83	1,098.16	877.58	220.58	4.979	
13,500.00	10,451.00	10,432.25	10,448.71	63.58	182.05	-86.71	-4,032.32	781.83	998.23	777.67	220.56	4.526	
13,600.00	10,451.00	10,432.29	10,448.75	64.92	182.05	-86.76	-4,032.32	781.83	898.32	677.78	220.54	4.073	
13,700.00	10,451.00	10,432.33	10,448.79	66.27	182.05	-86.82	-4,032.32	781.83	798.43	577.92	220.51	3.621	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Big Jake No 1 - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 180-2° Cone of Uncertainty — **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
13,800.00	10,451.00	10,432.37	10,448.83	67.63	182.05	-86.87	-4,032.32	781.83	698.57	478.11	220.46	3.169	
13,900.00	10,451.00	10,432.41	10,448.86	69.01	182.05	-86.93	-4,032.32	781.84	598.76	378.36	220.40	2.717	
14,000.00	10,451.00	10,432.44	10,448.90	70.39	182.05	-86.98	-4,032.32	781.84	499.03	278.71	220.32	2.265	
14,100.00	10,451.00	10,432.48	10,448.94	71.79	182.05	-87.03	-4,032.32	781.84	399.42	179.21	220.22	1.814	Collision Risk Procedures Req
14,200.00	10,451.00	10,432.52	10,448.98	73.20	182.05	-87.09	-4,032.32	781.84	300.09	79.96	220.13	1.363	Collision Risk Procedures Req
14,300.00	10,451.00	10,432.56	10,449.01	74.63	182.05	-87.14	-4,032.32	781.84	201.41	-18.90	220.31	0.914	Collision Risk Procedures Req
14,400.00	10,451.00	10,432.59	10,449.05	76.06	182.05	-87.20	-4,032.32	781.84	105.26	-118.17	223.44	0.471	Collision Risk Procedures Req
14,497.43	10,451.00	10,432.63	10,449.09	77.46	182.05	-87.25	-4,032.32	781.85	39.84	-219.20	259.04	0.154	Collision Risk Procedures Req, CC, SF
14,500.00	10,451.00	10,432.63	10,449.09	77.49	182.05	-87.25	-4,032.32	781.85	39.92	-219.55	259.48	0.154	Collision Risk Procedures Req, ES
14,600.00	10,451.00	10,432.67	10,449.13	78.94	182.05	-87.31	-4,032.32	781.85	110.03	-122.86	232.90	0.472	Collision Risk Procedures Req
14,700.00	10,451.00	10,432.71	10,449.17	80.40	182.05	-87.36	-4,032.32	781.85	206.45	-20.11	226.56	0.911	Collision Risk Procedures Req
14,800.00	10,451.00	10,432.74	10,449.20	81.86	182.05	-87.41	-4,032.32	781.85	305.18	80.52	224.66	1.358	Collision Risk Procedures Req
14,900.00	10,451.00	10,432.78	10,449.24	83.33	182.05	-87.47	-4,032.32	781.85	404.53	180.71	223.83	1.807	Collision Risk Procedures Req
15,000.00	10,451.00	10,432.82	10,449.28	84.81	182.06	-87.52	-4,032.32	781.86	504.14	280.76	223.38	2.257	
15,100.00	10,451.00	10,432.86	10,449.32	86.30	182.06	-87.58	-4,032.32	781.86	603.88	380.77	223.12	2.707	
15,200.00	10,451.00	10,432.90	10,449.35	87.79	182.06	-87.63	-4,032.32	781.86	703.70	480.75	222.95	3.156	
15,300.00	10,451.00	10,432.93	10,449.39	89.28	182.06	-87.68	-4,032.32	781.86	803.56	580.72	222.84	3.606	
15,400.00	10,451.00	10,432.97	10,449.43	90.78	182.06	-87.74	-4,032.32	781.86	903.45	680.67	222.77	4.055	
15,445.39	10,451.00	10,432.99	10,449.45	91.47	182.06	-87.76	-4,032.32	781.86	948.79	726.04	222.75	4.259	

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Hot Tamale No 1 - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 12600-2° Cone of Uncertainty — **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	38.48	0.00	0.00	131.86	-406.17	453.32	609.88				
100.00	100.00	61.52	100.00	0.27	1.07	131.86	-406.17	453.32	608.66	607.32	1.34	454.567	
200.00	200.00	161.52	200.00	0.62	2.82	131.86	-406.17	453.32	608.66	605.22	3.44	176.810	
300.00	300.00	261.52	300.00	0.98	4.56	131.86	-406.17	453.32	608.66	603.12	5.55	109.749	
400.00	400.00	361.52	400.00	1.34	6.31	131.86	-406.17	453.32	608.66	601.01	7.65	79.570	
500.00	500.00	461.52	500.00	1.70	8.05	131.86	-406.17	453.32	608.66	598.91	9.75	62.409	
600.00	600.00	561.52	600.00	2.06	9.80	131.86	-406.17	453.32	608.66	596.81	11.86	51.336	
700.00	700.00	661.52	700.00	2.42	11.54	131.86	-406.17	453.32	608.66	594.70	13.96	43.601	
800.00	800.00	761.52	800.00	2.77	13.29	131.86	-406.17	453.32	608.66	592.60	16.06	37.892	
900.00	900.00	861.52	900.00	3.13	15.03	131.86	-406.17	453.32	608.66	590.50	18.17	33.504	
1,000.00	1,000.00	961.52	1,000.00	3.49	16.78	131.86	-406.17	453.32	608.66	588.39	20.27	30.027	
1,100.00	1,100.00	1,061.52	1,100.00	3.85	18.52	131.86	-406.17	453.32	608.66	586.29	22.37	27.204	
1,200.00	1,200.00	1,161.52	1,200.00	4.21	20.27	131.86	-406.17	453.32	608.66	584.19	24.48	24.867	
1,300.00	1,300.00	1,261.52	1,300.00	4.57	22.01	131.86	-406.17	453.32	608.66	582.08	26.58	22.899	
1,400.00	1,400.00	1,361.52	1,400.00	4.93	23.76	131.86	-406.17	453.32	608.66	579.98	28.68	21.220	
1,500.00	1,500.00	1,461.52	1,500.00	5.28	25.50	131.86	-406.17	453.32	608.66	577.87	30.79	19.770	
1,600.00	1,600.00	1,561.52	1,600.00	5.64	27.25	131.86	-406.17	453.32	608.66	575.77	32.89	18.505	
1,700.00	1,700.00	1,661.52	1,700.00	6.00	28.99	131.86	-406.17	453.32	608.66	573.67	34.99	17.393	
1,800.00	1,800.00	1,761.52	1,800.00	6.36	30.74	131.86	-406.17	453.32	608.66	571.56	37.10	16.407	
1,900.00	1,900.00	1,861.52	1,900.00	6.72	32.48	131.86	-406.17	453.32	608.66	569.46	39.20	15.527	
2,000.00	2,000.00	1,961.52	2,000.00	7.08	34.23	131.86	-406.17	453.32	608.66	567.36	41.30	14.736	
2,100.00	2,100.00	2,061.52	2,100.00	7.43	35.97	131.86	-406.17	453.32	608.66	565.25	43.41	14.022	
2,200.00	2,199.98	2,161.50	2,199.98	7.79	37.72	112.00	-406.17	453.32	609.31	563.80	45.51	13.388	
2,300.00	2,299.84	2,261.36	2,299.84	8.15	39.46	112.42	-406.17	453.32	611.30	563.69	47.61	12.840	
2,400.00	2,399.45	2,360.97	2,399.45	8.51	41.20	113.10	-406.17	453.32	614.68	564.97	49.71	12.366	
2,500.00	2,498.77	2,460.29	2,498.77	8.87	42.93	105.95	-406.17	453.32	618.98	567.18	51.80	11.950	
2,600.00	2,598.07	2,559.59	2,598.07	9.23	44.67	90.25	-406.17	453.32	620.64	566.74	53.89	11.516	
2,700.00	2,697.30	2,658.82	2,697.30	9.59	46.40	76.10	-406.17	453.32	619.09	563.10	55.99	11.058	
2,800.00	2,796.34	2,757.86	2,796.34	9.95	48.12	65.04	-406.17	453.32	614.38	556.30	58.08	10.578	
2,900.00	2,895.14	2,856.66	2,895.14	10.32	49.85	62.23	-406.17	453.32	607.14	546.97	60.17	10.091	
3,000.00	2,993.91	2,955.43	2,993.91	10.69	51.57	63.54	-406.17	453.32	599.94	537.68	62.26	9.636	
3,100.00	3,092.68	3,054.20	3,092.68	11.07	53.30	64.88	-406.17	453.32	593.07	528.71	64.36	9.215	
3,200.00	3,191.45	3,152.97	3,191.45	11.45	55.02	66.25	-406.17	453.32	586.53	520.07	66.46	8.825	
3,300.00	3,290.22	3,251.74	3,290.22	11.84	56.74	67.64	-406.17	453.32	580.34	511.77	68.57	8.463	
3,400.00	3,388.99	3,350.51	3,388.99	12.23	58.47	69.07	-406.17	453.32	574.51	503.83	70.68	8.128	
3,500.00	3,487.76	3,449.28	3,487.76	12.62	60.19	70.53	-406.17	453.32	569.05	496.26	72.80	7.817	
3,600.00	3,586.53	3,548.05	3,586.53	13.01	61.91	72.01	-406.17	453.32	563.97	489.06	74.91	7.528	
3,700.00	3,685.30	3,646.82	3,685.30	13.41	63.64	73.51	-406.17	453.32	559.29	482.25	77.03	7.260	
3,800.00	3,784.07	3,745.59	3,784.07	13.81	65.36	75.04	-406.17	453.32	555.00	475.84	79.16	7.011	
3,900.00	3,882.84	3,844.36	3,882.84	14.21	67.08	76.60	-406.17	453.32	551.12	469.84	81.29	6.780	
4,000.00	3,981.61	3,943.13	3,981.61	14.62	68.81	78.17	-406.17	453.32	547.67	464.25	83.42	6.566	
4,100.00	4,080.38	4,041.90	4,080.38	15.02	70.53	79.76	-406.17	453.32	544.64	459.09	85.55	6.367	
4,200.00	4,179.14	4,140.66	4,179.14	15.43	72.25	81.37	-406.17	453.32	542.04	454.36	87.68	6.182	
4,300.00	4,277.91	4,239.43	4,277.91	15.84	73.98	82.99	-406.17	453.32	539.89	450.07	89.81	6.011	
4,400.00	4,376.68	4,338.20	4,376.68	16.25	75.70	84.62	-406.17	453.32	538.18	446.23	91.95	5.853	
4,500.00	4,475.45	4,436.97	4,475.45	16.66	77.43	86.26	-406.17	453.32	536.92	442.84	94.09	5.707	
4,600.00	4,574.22	4,535.74	4,574.22	17.07	79.15	87.91	-406.17	453.32	536.12	439.89	96.22	5.572	
4,700.00	4,672.99	4,634.51	4,672.99	17.49	80.87	89.56	-406.17	453.32	535.77	437.41	98.36	5.447	
4,726.50	4,699.17	4,660.69	4,699.17	17.60	81.33	90.00	-406.17	453.32	535.75	436.83	98.93	5.416	
4,800.00	4,771.76	4,733.28	4,771.76	17.90	82.60	91.21	-406.17	453.32	535.88	435.38	100.50	5.332	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Hot Tamale No 1 - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 12600-2° Cone of Uncertainty — **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
4,900.00	4,870.53	4,832.05	4,870.53	18.32	84.32	92.86	-406.17	453.32	536.44	433.81	102.63	5.227	
5,000.00	4,969.30	4,930.82	4,969.30	18.74	86.04	94.51	-406.17	453.32	537.46	432.69	104.77	5.130	
5,100.00	5,068.07	5,029.59	5,068.07	19.16	87.77	96.15	-406.17	453.32	538.93	432.02	106.90	5.041	
5,200.00	5,166.84	5,128.36	5,166.84	19.58	89.49	97.77	-406.17	453.32	540.85	431.81	109.04	4.960	
5,300.00	5,265.61	5,227.13	5,265.61	20.00	91.21	99.39	-406.17	453.32	543.21	432.04	111.17	4.886	
5,400.00	5,364.38	5,325.90	5,364.38	20.42	92.94	100.99	-406.17	453.32	546.01	432.71	113.30	4.819	
5,500.00	5,463.15	5,424.67	5,463.15	20.84	94.66	102.57	-406.17	453.32	549.24	433.81	115.43	4.758	
5,600.00	5,561.92	5,523.44	5,561.92	21.26	96.38	104.14	-406.17	453.32	552.89	435.34	117.55	4.703	
5,700.00	5,660.69	5,622.21	5,660.69	21.68	98.11	105.68	-406.17	453.32	556.96	437.29	119.68	4.654	
5,800.00	5,759.46	5,720.98	5,759.46	22.11	99.83	107.20	-406.17	453.32	561.44	439.64	121.80	4.610	
5,900.00	5,858.23	5,819.75	5,858.23	22.53	101.55	108.69	-406.17	453.32	566.31	442.40	123.92	4.570	
6,000.00	5,957.00	5,918.52	5,957.00	22.95	103.28	110.16	-406.17	453.32	571.57	445.54	126.03	4.535	
6,100.00	6,055.77	6,017.29	6,055.77	23.38	105.00	111.60	-406.17	453.32	577.21	449.06	128.15	4.504	
6,200.00	6,154.54	6,116.06	6,154.54	23.80	106.73	113.02	-406.17	453.32	583.21	452.95	130.26	4.477	
6,300.00	6,253.31	6,214.83	6,253.31	24.23	108.45	114.40	-406.17	453.32	589.56	457.20	132.37	4.454	
6,400.00	6,352.07	6,313.59	6,352.07	24.66	110.17	115.76	-406.17	453.32	596.26	461.78	134.48	4.434	
6,500.00	6,450.84	6,412.36	6,450.84	25.08	111.90	117.08	-406.17	453.32	603.29	466.71	136.58	4.417	
6,600.00	6,549.61	6,511.13	6,549.61	25.51	113.62	118.38	-406.17	453.32	610.64	471.95	138.69	4.403	
6,700.00	6,648.38	6,609.90	6,648.38	25.94	115.34	119.64	-406.17	453.32	618.29	477.51	140.79	4.392	
6,800.00	6,747.15	6,708.67	6,747.15	26.36	117.07	120.87	-406.17	453.32	626.25	483.36	142.89	4.383	
6,900.00	6,845.92	6,807.44	6,845.92	26.79	118.79	122.07	-406.17	453.32	634.49	489.50	144.98	4.376	
7,000.00	6,944.72	6,906.24	6,944.72	27.22	120.51	123.27	-406.17	453.32	642.91	495.83	147.08	4.371	
7,100.00	7,043.88	7,005.40	7,043.88	27.63	122.24	124.34	-406.17	453.32	650.12	500.94	149.18	4.358	
7,200.00	7,143.43	7,104.95	7,143.43	28.01	123.98	125.10	-406.17	453.32	655.49	504.22	151.27	4.333	
7,300.00	7,243.25	7,204.77	7,243.25	28.37	125.72	125.58	-406.17	453.32	658.92	505.57	153.36	4.297	
7,400.00	7,343.22	7,304.74	7,343.22	28.71	127.47	125.77	-406.17	453.32	660.34	504.91	155.44	4.248	
7,500.00	7,443.22	7,404.74	7,443.22	29.02	129.21	-157.24	-406.17	453.32	660.38	502.88	157.50	4.193	
7,600.00	7,543.22	7,504.74	7,543.22	29.35	130.96	-157.24	-406.17	453.32	660.38	500.81	159.58	4.138	
7,700.00	7,643.22	7,604.74	7,643.22	29.67	132.70	-157.24	-406.17	453.32	660.38	498.73	161.65	4.085	
7,800.00	7,743.22	7,704.74	7,743.22	29.99	134.45	-157.24	-406.17	453.32	660.38	496.66	163.73	4.033	
7,900.00	7,843.22	7,804.74	7,843.22	30.32	136.19	-157.24	-406.17	453.32	660.38	494.58	165.80	3.983	
8,000.00	7,943.22	7,904.74	7,943.22	30.64	137.94	-157.24	-406.17	453.32	660.38	492.50	167.88	3.934	
8,100.00	8,043.22	8,004.74	8,043.22	30.97	139.68	-157.24	-406.17	453.32	660.38	490.42	169.96	3.886	
8,200.00	8,143.22	8,104.74	8,143.22	31.30	141.43	-157.24	-406.17	453.32	660.38	488.35	172.04	3.839	
8,300.00	8,243.22	8,204.74	8,243.22	31.63	143.17	-157.24	-406.17	453.32	660.38	486.27	174.12	3.793	
8,400.00	8,343.22	8,304.74	8,343.22	31.95	144.92	-157.24	-406.17	453.32	660.38	484.19	176.20	3.748	
8,500.00	8,443.22	8,404.74	8,443.22	32.28	146.66	-157.24	-406.17	453.32	660.38	482.11	178.28	3.704	
8,600.00	8,543.22	8,504.74	8,543.22	32.61	148.41	-157.24	-406.17	453.32	660.38	480.03	180.36	3.662	
8,700.00	8,643.22	8,604.74	8,643.22	32.94	150.15	-157.24	-406.17	453.32	660.38	477.95	182.44	3.620	
8,800.00	8,743.22	8,704.74	8,743.22	33.27	151.90	-157.24	-406.17	453.32	660.38	475.86	184.52	3.579	
8,900.00	8,843.22	8,804.74	8,843.22	33.61	153.64	-157.24	-406.17	453.32	660.38	473.78	186.60	3.539	
9,000.00	8,943.22	8,904.74	8,943.22	33.94	155.39	-157.24	-406.17	453.32	660.38	471.70	188.68	3.500	
9,100.00	9,043.22	9,004.74	9,043.22	34.27	157.13	-157.24	-406.17	453.32	660.38	469.62	190.77	3.462	
9,200.00	9,143.22	9,104.74	9,143.22	34.60	158.88	-157.24	-406.17	453.32	660.38	467.53	192.85	3.424	
9,300.00	9,243.22	9,204.74	9,243.22	34.94	160.62	-157.24	-406.17	453.32	660.38	465.45	194.93	3.388	
9,400.00	9,343.22	9,304.74	9,343.22	35.27	162.37	-157.24	-406.17	453.32	660.38	463.36	197.02	3.352	
9,500.00	9,443.22	9,404.74	9,443.22	35.60	164.11	-157.24	-406.17	453.32	660.38	461.28	199.10	3.317	
9,600.00	9,543.22	9,504.74	9,543.22	35.94	165.86	-157.24	-406.17	453.32	660.38	459.20	201.19	3.282	
9,700.00	9,643.22	9,604.74	9,643.22	36.28	167.60	-157.24	-406.17	453.32	660.38	457.11	203.27	3.249	
9,800.00	9,743.22	9,704.74	9,743.22	36.61	169.35	-157.24	-406.17	453.32	660.38	455.02	205.36	3.216	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Hot Tamale No 1 - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 12600-2" Cone of Uncertainty — **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
9,900.00	9,843.22	9,804.74	9,843.22	36.95	171.09	-157.24	-406.17	453.32	660.38	452.94	207.45	3.183	
10,000.00	9,943.07	9,904.59	9,943.07	37.25	172.84	23.47	-406.17	453.32	656.98	447.50	209.48	3.136	
10,100.00	10,040.94	10,002.46	10,040.94	37.54	174.54	24.96	-406.17	453.32	638.72	427.23	211.49	3.020	
10,200.00	10,133.85	10,095.37	10,133.85	37.79	176.16	28.01	-406.17	453.32	605.45	392.07	213.38	2.837	
10,300.00	10,218.99	10,180.51	10,218.99	37.99	177.65	33.22	-406.17	453.32	558.76	343.66	215.10	2.598	
10,400.00	10,293.77	10,255.29	10,293.77	38.16	178.95	41.45	-406.17	453.32	501.13	284.53	216.60	2.314	
10,500.00	10,355.92	10,317.44	10,355.92	38.29	180.04	53.42	-406.17	453.32	436.21	218.38	217.83	2.003	
10,600.00	10,403.55	10,365.07	10,403.55	38.41	180.87	68.12	-406.17	453.32	369.49	150.73	218.76	1.689	Collision Risk Procedures Req.
10,700.00	10,435.21	10,396.73	10,435.21	38.54	181.42	81.46	-406.17	453.32	309.53	90.17	219.35	1.411	Collision Risk Procedures Req.
10,800.00	10,449.94	10,411.46	10,449.94	38.72	181.68	89.08	-406.17	453.32	269.18	49.65	219.53	1.226	Collision Risk Procedures Req.
10,868.85	10,452.69	10,414.21	10,452.69	38.88	181.73	90.00	-406.17	453.32	260.24	40.81	219.43	1.186	Collision Risk Procedures Req , CC, ES
10,900.00	10,451.00	10,412.52	10,451.00	38.97	181.70	90.00	-406.17	453.32	262.11	42.78	219.32	1.195	Collision Risk Procedures Req.
11,000.00	10,451.00	10,412.52	10,451.00	39.30	181.70	90.00	-406.17	453.32	291.44	72.31	219.13	1.330	Collision Risk Procedures Req.
11,100.00	10,451.00	10,412.52	10,451.00	39.71	181.70	90.00	-406.17	453.32	348.10	129.04	219.06	1.589	Collision Risk Procedures Req.
11,200.00	10,451.00	10,412.52	10,451.00	40.19	181.70	90.00	-406.17	453.32	421.20	202.14	219.07	1.923	Collision Risk Procedures Req.
11,300.00	10,451.00	10,412.52	10,451.00	40.74	181.70	90.00	-406.17	453.32	503.64	284.54	219.10	2.299	
11,400.00	10,451.00	10,412.52	10,451.00	41.35	181.70	90.00	-406.17	453.32	591.51	372.38	219.13	2.699	
11,500.00	10,451.00	10,412.52	10,451.00	42.02	181.70	90.00	-406.17	453.32	682.73	463.56	219.17	3.115	
11,600.00	10,451.00	10,412.52	10,451.00	42.74	181.70	90.00	-406.17	453.32	776.12	556.91	219.21	3.541	
11,700.00	10,451.00	10,412.52	10,451.00	43.52	181.70	90.00	-406.17	453.32	870.98	651.74	219.24	3.973	
11,800.00	10,451.00	10,412.52	10,451.00	44.35	181.70	90.00	-406.17	453.32	966.87	747.60	219.27	4.410	
11,900.00	10,451.00	10,412.52	10,451.00	45.22	181.70	90.00	-406.17	453.32	1,063.52	844.22	219.30	4.850	
12,000.00	10,451.00	10,412.52	10,451.00	46.13	181.70	90.00	-406.17	453.32	1,160.74	941.41	219.33	5.292	
12,100.00	10,451.00	10,412.52	10,451.00	47.09	181.70	90.00	-406.17	453.32	1,258.39	1,039.04	219.36	5.737	
12,200.00	10,451.00	10,412.52	10,451.00	48.09	181.70	90.00	-406.17	453.32	1,356.39	1,137.00	219.38	6.183	
12,300.00	10,451.00	10,412.52	10,451.00	49.12	181.70	90.00	-406.17	453.32	1,454.66	1,235.25	219.41	6.630	
12,400.00	10,451.00	10,412.52	10,451.00	50.18	181.70	90.00	-406.17	453.32	1,553.15	1,333.71	219.44	7.078	
12,500.00	10,451.00	10,412.52	10,451.00	51.27	181.70	90.00	-406.17	453.32	1,651.82	1,432.35	219.47	7.527	
12,600.00	10,451.00	10,412.52	10,451.00	52.40	181.70	90.00	-406.17	453.32	1,750.64	1,531.14	219.49	7.976	
12,700.00	10,451.00	10,412.52	10,451.00	53.55	181.70	90.00	-406.17	453.32	1,849.59	1,630.06	219.52	8.425	
12,800.00	10,451.00	10,412.52	10,451.00	54.73	181.70	90.00	-406.17	453.32	1,948.64	1,729.09	219.55	8.875	
12,900.00	10,451.00	10,412.52	10,451.00	55.93	181.70	90.00	-406.17	453.32	2,047.79	1,828.21	219.58	9.326	
13,000.00	10,451.00	10,412.52	10,451.00	57.16	181.70	90.00	-406.17	453.32	2,147.02	1,927.40	219.61	9.776	
13,100.00	10,451.00	10,412.52	10,451.00	58.41	181.70	90.00	-406.17	453.32	2,246.31	2,026.67	219.64	10.227	
13,200.00	10,451.00	10,412.52	10,451.00	59.67	181.70	90.00	-406.17	453.32	2,345.67	2,125.99	219.68	10.678	

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 501H - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 181-MWD, 1918-MWD — **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
0.00	0.00	0.00	0.98	0.00	0.00	-90.63	-0.60	-54.80	54.81				
100.00	100.00	99.02	100.00	0.27	0.15	-90.38	-0.36	-54.80	54.80	54.39	0.42	131.337	
200.00	200.00	199.04	200.01	0.62	0.34	-89.64	0.35	-54.80	54.80	53.84	0.97	56.720	
300.00	300.00	299.14	300.12	0.98	0.70	-88.67	1.27	-54.67	54.68	53.00	1.68	32.486	
400.00	400.00	399.17	400.14	1.34	1.06	-87.62	2.26	-54.37	54.41	52.01	2.40	22.671	
500.00	500.00	499.12	500.08	1.70	1.42	-86.54	3.27	-54.11	54.21	51.09	3.12	17.394	
600.00	600.00	599.08	600.04	2.06	1.78	-85.40	4.34	-53.93	54.10	50.27	3.83	14.113	
700.00	700.00	699.13	700.08	2.42	2.13	-84.09	5.56	-53.75	54.03	49.48	4.55	11.874	
800.00	800.00	799.27	800.20	2.77	2.49	-82.53	6.99	-53.31	53.76	48.49	5.27	10.206	
900.00	900.00	899.39	900.32	3.13	2.85	-81.20	8.15	-52.65	53.28	47.29	5.98	8.903	
1,000.00	1,000.00	999.35	1,000.27	3.49	3.21	-80.08	9.08	-51.89	52.68	45.98	6.70	7.862	
1,100.00	1,100.00	1,099.26	1,100.17	3.85	3.57	-78.97	9.99	-51.29	52.25	44.83	7.42	7.046	
1,200.00	1,200.00	1,199.29	1,200.19	4.21	3.92	-77.84	10.94	-50.74	51.91	43.77	8.13	6.383	
1,300.00	1,300.00	1,299.30	1,300.20	4.57	4.28	-76.61	11.93	-50.10	51.50	42.66	8.85	5.821	
1,400.00	1,400.00	1,399.11	1,400.01	4.93	4.64	-75.56	12.80	-49.68	51.30	41.74	9.56	5.364	
1,404.45	1,404.45	1,403.55	1,404.45	4.94	4.66	-75.52	12.83	-49.67	51.30	41.71	9.60	5.346	
1,500.00	1,500.00	1,499.12	1,500.01	5.28	4.99	-74.89	13.38	-49.55	51.33	41.05	10.28	4.995	
1,600.00	1,600.00	1,599.19	1,600.08	5.64	5.35	-74.62	13.59	-49.40	51.23	40.25	10.99	4.663	
1,700.00	1,700.00	1,699.19	1,700.08	6.00	5.69	-74.66	13.51	-49.25	51.07	39.39	11.69	4.370	
1,800.00	1,800.00	1,799.18	1,800.07	6.36	6.02	-74.93	13.24	-49.17	50.92	38.53	12.38	4.112	
1,900.00	1,900.00	1,899.14	1,900.04	6.72	6.36	-75.20	12.98	-49.13	50.81	37.74	13.07	3.886	
1,947.69	1,947.69	1,946.80	1,947.69	6.89	6.47	-75.33	12.86	-49.14	50.79	37.43	13.36	3.803 CC	
2,000.00	2,000.00	1,999.05	1,999.94	7.08	6.56	-75.71	12.54	-49.25	50.82	37.19	13.63	3.728	
2,100.00	2,100.00	2,098.95	2,099.84	7.43	6.60	-76.37	12.02	-49.59	51.03	36.99	14.04	3.635 ES, SF	
2,200.00	2,199.98	2,197.00	2,197.87	7.79	6.64	-97.80	12.78	-51.33	53.15	38.73	14.42	3.686	
2,300.00	2,299.84	2,294.66	2,295.35	8.15	6.69	-101.62	14.92	-56.68	59.83	45.03	14.80	4.042	
2,400.00	2,399.45	2,392.41	2,392.71	8.51	6.76	-106.66	18.06	-64.81	70.58	55.37	15.21	4.642	
2,500.00	2,498.77	2,490.00	2,489.71	8.87	6.86	-120.12	21.45	-74.94	85.26	69.62	15.64	5.452	
2,600.00	2,598.07	2,586.21	2,585.18	9.23	6.97	-140.21	24.30	-86.50	104.61	88.53	16.07	6.508	
2,700.00	2,697.30	2,684.24	2,682.43	9.59	7.11	-157.07	26.71	-98.62	127.09	110.53	16.56	7.675	
2,800.00	2,796.34	2,781.88	2,779.35	9.95	7.26	-169.69	29.05	-110.19	151.61	134.56	17.05	8.890	
2,900.00	2,895.14	2,879.37	2,876.20	10.32	7.44	-173.27	31.50	-121.14	177.60	160.04	17.56	10.114	
3,000.00	2,993.91	2,974.58	2,970.76	10.69	7.62	-172.75	33.86	-131.87	203.84	185.78	18.05	11.291	
3,100.00	3,092.68	3,067.95	3,063.38	11.07	7.82	-172.34	36.08	-143.51	231.26	212.71	18.54	12.472	
3,200.00	3,191.45	3,166.94	3,161.58	11.45	8.04	-172.05	38.23	-155.77	258.63	239.52	19.10	13.538	
3,300.00	3,290.22	3,265.43	3,259.44	11.84	8.27	-171.84	40.39	-166.79	284.84	265.17	19.67	14.481	
3,400.00	3,388.99	3,357.49	3,350.84	12.23	8.50	-171.65	42.50	-177.52	311.51	291.32	20.19	15.429	
3,500.00	3,487.76	3,446.48	3,438.96	12.62	8.74	-171.38	45.00	-189.69	340.08	319.38	20.69	16.436	
3,600.00	3,586.53	3,539.63	3,530.98	13.01	9.01	-171.01	48.34	-203.76	369.98	348.74	21.25	17.414	
3,700.00	3,685.30	3,639.36	3,629.54	13.41	9.30	-170.64	52.16	-218.52	399.59	377.71	21.87	18.268	
3,800.00	3,784.07	3,739.53	3,728.69	13.81	9.61	-170.35	55.91	-232.20	428.11	405.60	22.51	19.018	
3,900.00	3,882.84	3,839.24	3,827.52	14.21	9.91	-170.12	59.48	-244.99	455.86	432.72	23.15	19.695	
4,000.00	3,981.61	3,937.50	3,925.04	14.62	10.22	-169.99	62.46	-256.65	482.69	458.92	23.78	20.302	
4,100.00	4,080.38	4,028.51	4,015.30	15.02	10.51	-169.87	65.33	-267.94	510.06	485.71	24.35	20.944	
4,200.00	4,179.14	4,121.31	4,107.21	15.43	10.81	-169.76	68.23	-280.41	538.42	513.47	24.95	21.578	
4,300.00	4,277.91	4,220.89	4,205.87	15.84	11.14	-169.67	71.19	-293.55	566.56	540.95	25.61	22.120	
4,400.00	4,376.68	4,319.04	4,303.19	16.25	11.47	-169.59	74.08	-305.96	594.16	567.89	26.27	22.621	
4,500.00	4,475.45	4,415.29	4,398.65	16.66	11.80	-169.53	76.83	-318.01	621.65	594.74	26.91	23.103	
4,600.00	4,574.22	4,512.25	4,494.81	17.07	12.13	-169.49	79.40	-330.09	649.09	621.54	27.56	23.553	
4,700.00	4,672.99	4,609.14	4,590.93	17.49	12.47	-169.45	82.08	-342.00	676.37	648.16	28.21	23.973	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 501H - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 181-MWD, 1918-MWD — **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
4,800.00	4,771.76	4,705.10	4,686.13	17.90	12.81	-169.41	84.76	-353.80	703.65	674.79	28.87	24.377	
4,900.00	4,870.53	4,802.28	4,782.54	18.32	13.15	-169.38	87.37	-365.73	730.92	701.39	29.53	24.751	
5,000.00	4,969.30	4,900.52	4,880.03	18.74	13.50	-169.35	90.05	-377.56	757.95	727.75	30.21	25.093	
5,100.00	5,068.07	4,997.43	4,976.21	19.16	13.84	-169.31	92.91	-389.05	784.80	753.92	30.87	25.419	
5,200.00	5,166.84	5,094.23	5,072.29	19.58	14.19	-169.26	95.88	-400.51	811.63	780.08	31.55	25.729	
5,300.00	5,265.61	5,192.68	5,170.00	20.00	14.55	-169.20	99.00	-412.02	838.31	806.08	32.23	26.009	
5,400.00	5,364.38	5,288.63	5,265.27	20.42	14.90	-169.16	102.05	-423.07	864.82	831.92	32.90	26.286	
5,500.00	5,463.15	5,382.30	5,358.24	20.84	15.24	-169.11	104.98	-434.07	891.55	857.99	33.56	26.568	
5,600.00	5,561.92	5,478.98	5,454.19	21.26	15.60	-169.07	108.10	-445.62	918.48	884.24	34.24	26.827	
5,700.00	5,660.69	5,576.64	5,551.11	21.68	15.96	-169.03	111.15	-457.13	945.25	910.33	34.93	27.064	
5,800.00	5,759.46	5,678.09	5,651.84	22.11	16.34	-168.99	114.33	-468.81	971.77	936.12	35.64	27.263	
5,900.00	5,858.23	5,776.22	5,749.31	22.53	16.70	-168.95	117.53	-479.69	997.86	961.52	36.34	27.460	
6,000.00	5,957.00	5,876.17	5,848.61	22.95	17.07	-168.90	120.93	-490.59	1,023.77	986.72	37.05	27.633	
6,100.00	6,055.77	5,975.72	5,947.54	23.38	17.44	-168.86	124.24	-501.12	1,049.37	1,011.61	37.76	27.794	
6,200.00	6,154.54	6,081.27	6,052.51	23.80	17.82	-168.83	127.58	-511.63	1,074.37	1,035.86	38.50	27.904	
6,300.00	6,253.31	6,180.28	6,151.04	24.23	18.18	-168.82	130.41	-521.02	1,098.91	1,059.70	39.21	28.029	
6,400.00	6,352.07	6,280.41	6,250.74	24.66	18.48	-168.82	132.67	-529.00	1,123.96	1,084.18	39.79	28.250	
6,500.00	6,450.84	6,337.79	6,307.54	25.08	18.77	-168.80	135.00	-538.13	1,150.75	1,110.40	40.34	28.523	
6,600.00	6,549.61	6,421.31	6,390.28	25.51	19.10	-168.77	137.75	-549.21	1,178.93	1,137.98	40.95	28.793	
6,700.00	6,648.38	6,515.17	6,483.19	25.94	19.47	-168.74	140.76	-562.13	1,207.62	1,165.99	41.63	29.012	
6,800.00	6,747.15	6,614.03	6,581.08	26.36	19.86	-168.72	143.71	-575.68	1,236.26	1,193.92	42.34	29.196	
6,900.00	6,845.92	6,712.68	6,678.81	26.79	20.26	-168.72	146.31	-588.85	1,264.57	1,221.51	43.06	29.367	
7,000.00	6,944.72	6,809.60	6,774.83	27.22	20.64	-168.75	148.76	-601.77	1,292.72	1,248.95	43.76	29.538	
7,100.00	7,043.88	6,919.65	6,883.93	27.63	21.07	-168.83	151.44	-615.94	1,317.95	1,273.39	44.56	29.579	
7,200.00	7,143.43	7,031.98	6,995.46	28.01	21.51	-168.86	154.40	-628.99	1,338.58	1,293.22	45.36	29.513	
7,300.00	7,243.25	7,132.28	7,095.11	28.37	21.89	-168.83	157.20	-640.06	1,355.27	1,309.21	46.06	29.421	
7,400.00	7,343.22	7,235.54	7,197.72	28.71	22.28	-168.77	160.01	-651.30	1,368.45	1,321.66	46.79	29.249	
7,500.00	7,443.22	7,335.91	7,297.48	29.02	22.67	-91.68	162.53	-662.02	1,379.12	1,331.64	47.47	29.051	
7,600.00	7,543.22	7,440.95	7,401.92	29.35	23.07	-91.57	165.00	-672.96	1,389.46	1,341.26	48.20	28.828	
7,700.00	7,643.22	7,542.20	7,502.62	29.67	23.45	-91.46	167.26	-683.27	1,399.59	1,350.69	48.90	28.622	
7,800.00	7,743.22	7,645.16	7,605.05	29.99	23.84	-91.37	169.26	-693.51	1,409.49	1,359.88	49.61	28.411	
7,900.00	7,843.22	7,748.06	7,707.44	30.32	24.22	-91.29	170.92	-703.56	1,419.22	1,368.89	50.32	28.202	
8,000.00	7,943.22	7,852.77	7,811.68	30.64	24.61	-91.23	172.30	-713.39	1,428.58	1,377.53	51.04	27.987	
8,100.00	8,043.22	7,954.59	7,913.07	30.97	24.99	-91.17	173.48	-722.70	1,437.69	1,385.94	51.75	27.782	
8,200.00	8,143.22	8,046.40	8,004.48	31.30	25.34	-91.10	175.05	-731.17	1,446.89	1,394.50	52.39	27.616	
8,300.00	8,243.22	8,141.96	8,099.52	31.63	25.70	-90.98	177.95	-740.66	1,456.77	1,403.70	53.06	27.454	
8,400.00	8,343.22	8,251.48	8,208.47	31.95	26.11	-90.84	181.28	-751.21	1,466.36	1,412.54	53.82	27.245	
8,500.00	8,443.22	8,368.64	8,325.16	32.28	26.55	-90.72	184.21	-761.35	1,474.99	1,420.37	54.62	27.004	
8,600.00	8,543.22	8,484.76	8,440.92	32.61	26.97	-90.63	186.41	-770.15	1,482.56	1,427.16	55.41	26.758	
8,700.00	8,643.22	8,615.27	8,571.21	32.94	27.43	-90.58	187.88	-777.61	1,488.21	1,431.96	56.26	26.454	
8,800.00	8,743.22	8,719.75	8,675.58	33.27	27.78	-90.54	188.66	-782.37	1,492.76	1,435.79	56.97	26.204	
8,900.00	8,843.22	8,816.85	8,772.57	33.61	28.12	-90.52	189.13	-786.86	1,497.37	1,439.73	57.64	25.977	
9,000.00	8,943.22	8,930.79	8,886.40	33.94	28.50	-90.53	188.92	-791.85	1,501.78	1,443.38	58.40	25.717	
9,100.00	9,043.22	9,046.54	9,002.08	34.27	28.88	-90.58	187.66	-795.60	1,505.02	1,445.87	59.15	25.445	
9,200.00	9,143.22	9,173.34	9,128.84	34.60	29.28	-90.65	185.71	-798.20	1,507.16	1,447.23	59.93	25.149	
9,300.00	9,243.22	9,302.56	9,258.05	34.94	29.65	-90.69	184.58	-797.90	1,506.87	1,446.19	60.68	24.832	
9,400.00	9,343.22	9,409.85	9,365.33	35.27	29.95	-90.73	183.63	-796.54	1,505.61	1,444.25	61.35	24.540	
9,500.00	9,443.22	9,536.14	9,491.57	35.60	30.30	-90.74	183.34	-793.32	1,503.01	1,440.94	62.07	24.214	
9,600.00	9,543.22	9,637.51	9,592.88	35.94	30.58	-90.69	184.64	-790.01	1,499.73	1,437.01	62.73	23.909	
9,700.00	9,643.22	9,693.00	9,648.33	36.28	30.74	-90.66	185.54	-788.18	1,497.08	1,433.81	63.26	23.664	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 501H - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 181-MWD, 1918-MWD

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
9,705.12	9,648.34	9,693.00	9,648.33	36.29	30.74	-90.66	185.54	-788.18	1,497.07	1,433.79	63.28	23.657	
9,800.00	9,743.22	9,693.00	9,648.33	36.61	30.74	-90.66	185.54	-788.18	1,500.07	1,436.56	63.52	23.617	
9,900.00	9,843.22	9,693.00	9,648.33	36.95	30.74	-90.66	185.54	-788.18	1,509.70	1,446.12	63.58	23.743	
10,000.00	9,943.07	9,693.00	9,648.33	37.25	30.74	88.65	185.54	-788.18	1,525.80	1,462.46	63.34	24.091	
10,100.00	10,040.94	9,693.00	9,648.33	37.54	30.74	86.40	185.54	-788.18	1,547.79	1,484.75	63.04	24.554	
10,200.00	10,133.85	9,693.00	9,648.33	37.79	30.74	83.61	185.54	-788.18	1,574.77	1,512.16	62.62	25.149	
10,300.00	10,218.99	9,693.00	9,648.33	37.99	30.74	80.39	185.54	-788.18	1,605.70	1,543.55	62.15	25.835	
10,400.00	10,293.77	9,693.00	9,648.33	38.16	30.74	76.87	185.54	-788.18	1,639.44	1,577.73	61.71	26.568	
10,500.00	10,355.92	9,693.00	9,648.33	38.29	30.74	73.22	185.54	-788.18	1,674.83	1,613.48	61.35	27.298	
10,600.00	10,403.55	9,693.00	9,648.33	38.41	30.74	69.57	185.54	-788.18	1,710.72	1,649.58	61.14	27.981	
10,700.00	10,435.21	9,693.00	9,648.33	38.54	30.74	66.08	185.54	-788.18	1,746.03	1,684.93	61.10	28.579	
10,800.00	10,449.94	9,693.00	9,648.33	38.72	30.74	62.85	185.54	-788.18	1,779.74	1,718.51	61.24	29.063	
10,900.00	10,451.00	9,693.00	9,648.33	38.97	30.74	61.80	185.54	-788.18	1,812.65	1,751.11	61.53	29.459	
11,000.00	10,451.00	9,693.00	9,648.33	39.30	30.74	61.80	185.54	-788.18	1,849.92	1,788.04	61.88	29.894	
11,100.00	10,451.00	9,693.00	9,648.33	39.71	30.74	61.80	185.54	-788.18	1,891.75	1,829.49	62.26	30.382	
11,200.00	10,451.00	9,693.00	9,648.33	40.19	30.74	61.80	185.54	-788.18	1,937.85	1,875.18	62.67	30.922	
11,300.00	10,451.00	9,693.00	9,648.33	40.74	30.74	61.80	185.54	-788.18	1,987.91	1,924.82	63.09	31.511	
11,400.00	10,451.00	9,693.00	9,648.33	41.35	30.74	61.80	185.54	-788.18	2,041.65	1,978.14	63.51	32.148	
11,500.00	10,451.00	9,693.00	9,648.33	42.02	30.74	61.80	185.54	-788.18	2,098.77	2,034.84	63.93	32.830	
11,600.00	10,451.00	9,693.00	9,648.33	42.74	30.74	61.80	185.54	-788.18	2,159.02	2,094.68	64.34	33.557	
11,700.00	10,451.00	9,693.00	9,648.33	43.52	30.74	61.80	185.54	-788.18	2,222.14	2,157.40	64.74	34.324	
11,800.00	10,451.00	9,693.00	9,648.33	44.35	30.74	61.80	185.54	-788.18	2,287.89	2,222.76	65.13	35.129	
11,900.00	10,451.00	9,693.00	9,648.33	45.22	30.74	61.80	185.54	-788.18	2,356.04	2,290.55	65.50	35.971	

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 501H - OH - Plan 2 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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
0.00	0.00	0.00	0.98	0.00	0.00	-90.63	-0.60	-54.80	54.81				
100.00	100.00	99.02	100.00	0.27	0.26	-90.63	-0.60	-54.80	54.80	54.28	0.53	103.806	
200.00	200.00	199.02	200.00	0.62	0.62	-90.63	-0.60	-54.80	54.80	53.56	1.24	44.055	
300.00	300.00	299.02	300.00	0.98	0.98	-90.63	-0.60	-54.80	54.80	52.84	1.96	27.948	
400.00	400.00	399.02	400.00	1.34	1.34	-90.63	-0.60	-54.80	54.80	52.13	2.68	20.465	
500.00	500.00	499.02	500.00	1.70	1.70	-90.63	-0.60	-54.80	54.80	51.41	3.39	16.143	
600.00	600.00	599.02	600.00	2.06	2.05	-90.63	-0.60	-54.80	54.80	50.69	4.11	13.328	
700.00	700.00	699.02	700.00	2.42	2.41	-90.63	-0.60	-54.80	54.80	49.97	4.83	11.350	
800.00	800.00	799.02	800.00	2.77	2.77	-90.63	-0.60	-54.80	54.80	49.26	5.55	9.882	
900.00	900.00	899.02	900.00	3.13	3.13	-90.63	-0.60	-54.80	54.80	48.54	6.26	8.751	
1,000.00	1,000.00	999.02	1,000.00	3.49	3.49	-90.63	-0.60	-54.80	54.80	47.82	6.98	7.852	
1,100.00	1,100.00	1,099.02	1,100.00	3.85	3.85	-90.63	-0.60	-54.80	54.80	47.11	7.70	7.121	
1,200.00	1,200.00	1,199.02	1,200.00	4.21	4.20	-90.63	-0.60	-54.80	54.80	46.39	8.41	6.514	
1,300.00	1,300.00	1,299.02	1,300.00	4.57	4.56	-90.63	-0.60	-54.80	54.80	45.67	9.13	6.002	
1,400.00	1,400.00	1,399.02	1,400.00	4.93	4.92	-90.63	-0.60	-54.80	54.80	44.96	9.85	5.565	
1,500.00	1,500.00	1,499.02	1,500.00	5.28	5.28	-90.63	-0.60	-54.80	54.80	44.24	10.56	5.188	
1,600.00	1,600.00	1,599.02	1,600.00	5.64	5.64	-90.63	-0.60	-54.80	54.80	43.52	11.28	4.858	
1,700.00	1,700.00	1,699.02	1,700.00	6.00	6.00	-90.63	-0.60	-54.80	54.80	42.81	12.00	4.568	
1,800.00	1,800.00	1,799.02	1,800.00	6.36	6.36	-90.63	-0.60	-54.80	54.80	42.09	12.72	4.310	
1,900.00	1,900.00	1,899.02	1,900.00	6.72	6.71	-90.63	-0.60	-54.80	54.80	41.37	13.43	4.080	
2,000.00	2,000.00	1,999.02	2,000.00	7.08	7.07	-90.63	-0.60	-54.80	54.80	40.65	14.15	3.873	
2,100.00	2,100.00	2,099.02	2,100.00	7.43	7.43	-90.63	-0.60	-54.80	54.80	39.94	14.87	3.687	CC, ES
2,200.00	2,199.98	2,197.16	2,198.13	7.79	7.78	-111.76	-0.18	-56.39	57.05	41.49	15.56	3.666	SF
2,300.00	2,299.84	2,294.91	2,295.74	8.15	8.12	-114.63	1.09	-61.21	63.96	47.73	16.24	3.940	
2,400.00	2,399.45	2,391.91	2,392.38	8.51	8.46	-118.19	3.19	-69.17	75.76	58.86	16.90	4.484	
2,500.00	2,498.77	2,490.50	2,490.45	8.87	8.81	-130.06	5.77	-78.94	91.24	73.64	17.60	5.185	
2,600.00	2,598.07	2,588.83	2,588.26	9.23	9.16	-148.73	8.34	-88.68	109.20	90.90	18.30	5.968	
2,700.00	2,697.30	2,686.75	2,685.67	9.59	9.51	-164.28	10.90	-98.39	129.44	110.45	18.99	6.816	
2,800.00	2,796.34	2,784.15	2,782.56	9.95	9.86	-175.85	13.44	-108.04	151.92	132.24	19.68	7.720	
2,900.00	2,895.14	2,881.04	2,878.94	10.32	10.22	-178.60	15.97	-117.64	176.32	155.96	20.36	8.660	
3,000.00	2,993.91	2,977.87	2,975.26	10.69	10.57	-177.41	18.51	-127.24	201.01	179.96	21.04	9.553	
3,100.00	3,092.68	3,074.70	3,071.58	11.07	10.93	-176.48	21.04	-136.84	225.75	204.03	21.73	10.391	
3,200.00	3,191.45	3,171.54	3,167.90	11.45	11.29	-175.73	23.57	-146.43	250.55	228.13	22.41	11.178	
3,300.00	3,290.22	3,268.37	3,264.23	11.84	11.65	-175.12	26.10	-156.03	275.37	252.27	23.10	11.919	
3,400.00	3,388.99	3,365.20	3,360.55	12.23	12.01	-174.61	28.63	-165.63	300.22	276.43	23.79	12.617	
3,500.00	3,487.76	3,462.03	3,456.87	12.62	12.38	-174.18	31.16	-175.22	325.09	300.60	24.49	13.275	
3,600.00	3,586.53	3,558.86	3,553.19	13.01	12.74	-173.81	33.69	-184.82	349.97	324.79	25.18	13.897	
3,700.00	3,685.30	3,655.69	3,649.51	13.41	13.10	-173.48	36.22	-194.42	374.87	348.99	25.88	14.485	
3,800.00	3,784.07	3,752.52	3,745.83	13.81	13.47	-173.20	38.75	-204.01	399.77	373.20	26.58	15.042	
3,900.00	3,882.84	3,849.36	3,842.15	14.21	13.84	-172.95	41.28	-213.61	424.69	397.41	27.28	15.569	
4,000.00	3,981.61	3,946.19	3,938.48	14.62	14.20	-172.73	43.81	-223.21	449.61	421.63	27.98	16.070	
4,100.00	4,080.38	4,043.02	4,034.80	15.02	14.57	-172.53	46.35	-232.80	474.53	445.85	28.68	16.546	
4,200.00	4,179.14	4,139.85	4,131.12	15.43	14.94	-172.36	48.88	-242.40	499.46	470.08	29.38	16.999	
4,300.00	4,277.91	4,236.68	4,227.44	15.84	15.31	-172.19	51.41	-252.00	524.40	494.31	30.09	17.430	
4,400.00	4,376.68	4,333.51	4,323.76	16.25	15.68	-172.05	53.94	-261.59	549.34	518.55	30.79	17.841	
4,500.00	4,475.45	4,430.34	4,420.08	16.66	16.05	-171.91	56.47	-271.19	574.28	542.78	31.50	18.233	
4,600.00	4,574.22	4,527.18	4,516.40	17.07	16.42	-171.79	59.00	-280.79	599.22	567.02	32.20	18.607	
4,700.00	4,672.99	4,624.01	4,612.73	17.49	16.79	-171.68	61.53	-290.38	624.17	591.26	32.91	18.966	
4,800.00	4,771.76	4,720.84	4,709.05	17.90	17.16	-171.57	64.06	-299.98	649.12	615.50	33.62	19.308	
4,900.00	4,870.53	4,817.67	4,805.37	18.32	17.54	-171.48	66.59	-309.58	674.07	639.74	34.33	19.637	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 501H - OH - Plan 2 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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
5,000.00	4,969.30	4,914.50	4,901.69	18.74	17.91	-171.39	69.12	-319.17	699.02	663.98	35.04	19.951	
5,100.00	5,068.07	5,011.33	4,998.01	19.16	18.28	-171.30	71.66	-328.77	723.97	688.23	35.75	20.253	
5,200.00	5,166.84	5,108.16	5,094.33	19.58	18.66	-171.23	74.19	-338.37	748.93	712.47	36.46	20.543	
5,300.00	5,265.61	5,204.99	5,190.65	20.00	19.03	-171.15	76.72	-347.96	773.88	736.72	37.17	20.821	
5,400.00	5,364.38	5,301.83	5,286.98	20.42	19.40	-171.08	79.25	-357.56	798.84	760.96	37.88	21.089	
5,500.00	5,463.15	5,398.66	5,383.30	20.84	19.78	-171.02	81.78	-367.16	823.80	785.21	38.59	21.347	
5,600.00	5,561.92	5,495.49	5,479.62	21.26	20.15	-170.96	84.31	-376.75	848.76	809.45	39.30	21.595	
5,700.00	5,660.69	5,592.32	5,575.94	21.68	20.53	-170.90	86.84	-386.35	873.72	833.70	40.02	21.834	
5,800.00	5,759.46	5,689.15	5,672.26	22.11	20.90	-170.85	89.37	-395.95	898.68	857.95	40.73	22.064	
5,900.00	5,858.23	5,785.98	5,768.58	22.53	21.28	-170.80	91.90	-405.55	923.64	882.20	41.44	22.286	
6,000.00	5,957.00	5,882.81	5,864.90	22.95	21.65	-170.75	94.43	-415.14	948.60	906.44	42.16	22.501	
6,100.00	6,055.77	5,979.65	5,961.23	23.38	22.03	-170.70	96.97	-424.74	973.56	930.69	42.87	22.708	
6,200.00	6,154.54	6,076.48	6,057.55	23.80	22.40	-170.66	99.50	-434.34	998.53	954.94	43.59	22.908	
6,300.00	6,253.31	6,173.31	6,153.87	24.23	22.78	-170.62	102.03	-443.93	1,023.49	979.19	44.30	23.102	
6,400.00	6,352.07	6,270.14	6,250.19	24.66	23.16	-170.58	104.56	-453.53	1,048.46	1,003.44	45.02	23.289	
6,500.00	6,450.84	6,366.97	6,346.51	25.08	23.53	-170.54	107.09	-463.13	1,073.42	1,027.68	45.74	23.470	
6,600.00	6,549.61	6,463.80	6,442.83	25.51	23.91	-170.51	109.62	-472.72	1,098.38	1,051.93	46.45	23.646	
6,700.00	6,648.38	6,560.63	6,539.15	25.94	24.29	-170.47	112.15	-482.32	1,123.35	1,076.18	47.17	23.816	
6,800.00	6,747.15	6,657.47	6,635.48	26.36	24.66	-170.44	114.68	-491.92	1,148.32	1,100.43	47.89	23.981	
6,900.00	6,845.92	6,754.30	6,731.80	26.79	25.04	-170.41	117.21	-501.51	1,173.28	1,124.68	48.60	24.140	
7,000.00	6,944.72	6,851.17	6,828.16	27.22	25.42	-170.40	119.75	-511.11	1,198.10	1,148.78	49.32	24.292	
7,100.00	7,043.88	6,948.64	6,925.12	27.63	25.80	-170.43	122.29	-520.77	1,220.39	1,170.35	50.04	24.390	
7,200.00	7,143.43	7,046.81	7,022.77	28.01	26.18	-170.41	124.86	-530.50	1,239.31	1,188.56	50.75	24.418	
7,300.00	7,243.25	7,145.57	7,121.01	28.37	26.56	-170.37	127.44	-540.29	1,254.85	1,203.38	51.47	24.381	
7,400.00	7,343.22	7,244.79	7,219.71	28.71	26.95	-170.28	130.03	-550.12	1,266.98	1,214.80	52.18	24.281	
7,500.00	7,443.22	7,344.26	7,318.65	29.02	27.34	-93.17	132.63	-559.98	1,276.80	1,223.92	52.88	24.147	
7,600.00	7,543.22	7,443.73	7,417.60	29.35	27.73	-93.02	135.23	-569.84	1,286.56	1,232.97	53.58	24.011	
7,700.00	7,643.22	7,543.20	7,516.55	29.67	28.12	-92.89	137.83	-579.70	1,296.33	1,242.04	54.29	23.878	
7,800.00	7,743.22	7,642.68	7,615.50	29.99	28.50	-92.75	140.43	-589.56	1,306.10	1,251.10	55.00	23.749	
7,900.00	7,843.22	7,742.15	7,714.45	30.32	28.89	-92.62	143.03	-599.42	1,315.88	1,260.18	55.70	23.623	
8,000.00	7,943.22	7,841.62	7,813.40	30.64	29.28	-92.48	145.63	-609.27	1,325.67	1,269.26	56.41	23.500	
8,100.00	8,043.22	7,941.10	7,912.35	30.97	29.67	-92.35	148.23	-619.13	1,335.47	1,278.35	57.12	23.380	
8,200.00	8,143.22	8,040.57	8,011.29	31.30	30.06	-92.22	150.83	-628.99	1,345.27	1,287.44	57.83	23.264	
8,300.00	8,243.22	8,140.04	8,110.24	31.63	30.45	-92.10	153.43	-638.85	1,355.08	1,296.54	58.54	23.150	
8,400.00	8,343.22	8,239.52	8,209.19	31.95	30.83	-91.97	156.03	-648.71	1,364.90	1,305.65	59.24	23.038	
8,500.00	8,443.22	8,338.99	8,308.14	32.28	31.22	-91.85	158.63	-658.57	1,374.72	1,314.76	59.95	22.930	
8,600.00	8,543.22	8,438.46	8,407.09	32.61	31.61	-91.73	161.23	-668.43	1,384.55	1,323.88	60.66	22.823	
8,700.00	8,643.22	8,537.94	8,506.04	32.94	32.00	-91.61	163.83	-678.28	1,394.38	1,333.01	61.37	22.720	
8,800.00	8,743.22	8,637.41	8,604.99	33.27	32.39	-91.49	166.43	-688.14	1,404.22	1,342.14	62.08	22.618	
8,900.00	8,843.22	8,736.88	8,703.94	33.61	32.78	-91.37	169.03	-698.00	1,414.07	1,351.27	62.79	22.519	
9,000.00	8,943.22	8,836.36	8,802.89	33.94	33.17	-91.26	171.63	-707.86	1,423.92	1,360.42	63.50	22.422	
9,100.00	9,043.22	8,935.83	8,901.84	34.27	33.56	-91.15	174.23	-717.72	1,433.78	1,369.56	64.22	22.328	
9,200.00	9,143.22	9,035.30	9,000.79	34.60	33.95	-91.04	176.83	-727.58	1,443.64	1,378.71	64.93	22.235	
9,300.00	9,243.22	9,134.78	9,099.74	34.94	34.34	-90.93	179.43	-737.44	1,453.51	1,387.87	65.64	22.145	
9,400.00	9,343.22	9,234.25	9,198.69	35.27	34.73	-90.82	182.03	-747.29	1,463.38	1,397.03	66.35	22.056	
9,500.00	9,443.22	9,333.72	9,297.64	35.60	35.12	-90.71	184.63	-757.15	1,473.26	1,406.20	67.06	21.969	
9,600.00	9,543.22	9,433.20	9,396.59	35.94	35.51	-90.60	187.23	-767.01	1,483.15	1,415.37	67.77	21.884	
9,700.00	9,643.22	9,535.87	9,498.72	36.28	35.91	-90.50	189.92	-777.18	1,493.03	1,424.52	68.51	21.794	
9,800.00	9,743.22	9,737.12	9,699.50	36.61	36.65	-90.36	193.27	-789.88	1,499.34	1,429.54	69.80	21.480	
9,900.00	9,843.22	9,880.85	9,843.22	36.95	37.13	-90.35	193.60	-791.15	1,499.96	1,429.29	70.67	21.226	

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

Legacy Directional Drilling

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Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 501H - OH - Plan 2 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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
9,904.45	9,847.67	9,885.30	9,847.67	36.96	37.15	90.10	193.60	-791.15	1,499.96	1,429.27	70.69	21.218	
10,000.00	9,943.07	9,980.71	9,943.07	37.25	37.46	90.24	193.60	-791.15	1,499.97	1,428.76	71.21	21.063	
10,100.00	10,040.94	10,081.01	10,043.28	37.54	37.77	90.88	190.73	-791.12	1,500.14	1,428.38	71.76	20.906	
10,200.00	10,133.85	10,185.27	10,145.50	37.79	38.08	91.57	170.96	-790.97	1,500.54	1,428.20	72.34	20.744	
10,300.00	10,218.99	10,293.32	10,245.84	37.99	38.35	92.23	131.31	-790.66	1,501.13	1,428.26	72.87	20.600	
10,400.00	10,293.77	10,405.22	10,340.00	38.16	38.58	92.83	71.18	-790.18	1,501.82	1,428.46	73.36	20.471	
10,500.00	10,355.92	10,520.82	10,423.11	38.29	38.76	93.34	-8.89	-789.55	1,502.54	1,428.70	73.84	20.348	
10,600.00	10,403.55	10,639.68	10,490.04	38.41	38.91	93.74	-106.86	-788.79	1,503.18	1,428.84	74.33	20.222	
10,700.00	10,435.21	10,761.06	10,536.06	38.54	39.07	94.00	-218.93	-787.91	1,503.63	1,428.76	74.87	20.083	
10,800.00	10,449.94	10,883.92	10,557.60	38.72	39.29	94.12	-339.64	-786.96	1,503.83	1,428.37	75.47	19.926	
10,900.00	10,451.00	10,991.41	10,558.98	38.97	39.57	94.12	-447.09	-786.11	1,503.84	1,427.73	76.10	19.760	
11,000.00	10,451.00	11,091.41	10,558.98	39.30	39.92	94.12	-547.09	-785.33	1,503.84	1,426.99	76.85	19.568	
11,100.00	10,451.00	11,191.41	10,558.98	39.71	40.34	94.12	-647.09	-784.54	1,503.84	1,426.11	77.73	19.346	
11,200.00	10,451.00	11,291.41	10,558.98	40.19	40.82	94.12	-747.08	-783.76	1,503.84	1,425.10	78.74	19.098	
11,300.00	10,451.00	11,391.41	10,558.98	40.74	41.38	94.12	-847.08	-782.97	1,503.84	1,423.96	79.88	18.827	
11,400.00	10,451.00	11,491.41	10,558.98	41.35	41.99	94.12	-947.08	-782.19	1,503.84	1,422.71	81.13	18.536	
11,500.00	10,451.00	11,591.41	10,558.98	42.02	42.65	94.12	-1,047.07	-781.40	1,503.84	1,421.34	82.50	18.229	
11,600.00	10,451.00	11,691.41	10,558.98	42.74	43.38	94.12	-1,147.07	-780.62	1,503.84	1,419.86	83.97	17.908	
11,700.00	10,451.00	11,791.41	10,558.98	43.52	44.15	94.12	-1,247.07	-779.83	1,503.84	1,418.29	85.55	17.578	
11,800.00	10,451.00	11,891.41	10,558.98	44.35	44.97	94.12	-1,347.06	-779.04	1,503.84	1,416.61	87.23	17.240	
11,900.00	10,451.00	11,991.41	10,558.98	45.22	45.83	94.12	-1,447.06	-778.26	1,503.84	1,414.84	88.99	16.898	
12,000.00	10,451.00	12,091.41	10,558.98	46.13	46.74	94.12	-1,547.06	-777.47	1,503.84	1,412.99	90.85	16.554	
12,100.00	10,451.00	12,191.41	10,558.98	47.09	47.69	94.12	-1,647.05	-776.69	1,503.84	1,411.06	92.78	16.209	
12,200.00	10,451.00	12,291.41	10,558.98	48.09	48.67	94.12	-1,747.05	-775.90	1,503.84	1,409.05	94.79	15.865	
12,300.00	10,451.00	12,391.41	10,558.98	49.12	49.69	94.12	-1,847.05	-775.12	1,503.84	1,406.97	96.87	15.524	
12,400.00	10,451.00	12,491.41	10,558.98	50.18	50.75	94.12	-1,947.05	-774.33	1,503.84	1,404.82	99.02	15.187	
12,500.00	10,451.00	12,591.41	10,558.98	51.27	51.84	94.12	-2,047.04	-773.55	1,503.84	1,402.61	101.23	14.856	
12,600.00	10,451.00	12,691.41	10,558.98	52.40	52.95	94.12	-2,147.04	-772.76	1,503.84	1,400.34	103.50	14.530	
12,700.00	10,451.00	12,791.41	10,558.98	53.55	54.09	94.12	-2,247.04	-771.98	1,503.84	1,398.02	105.82	14.211	
12,800.00	10,451.00	12,891.41	10,558.98	54.73	55.26	94.12	-2,347.03	-771.19	1,503.84	1,395.64	108.20	13.899	
12,900.00	10,451.00	12,991.41	10,558.98	55.93	56.46	94.12	-2,447.03	-770.41	1,503.84	1,393.22	110.62	13.595	
13,000.00	10,451.00	13,091.41	10,558.98	57.16	57.67	94.12	-2,547.03	-769.62	1,503.84	1,390.75	113.09	13.298	
13,100.00	10,451.00	13,191.41	10,558.98	58.41	58.91	94.12	-2,647.02	-768.83	1,503.84	1,388.24	115.60	13.009	
13,200.00	10,451.00	13,291.41	10,558.98	59.67	60.17	94.12	-2,747.02	-768.05	1,503.84	1,385.69	118.15	12.729	
13,300.00	10,451.00	13,391.41	10,558.98	60.96	61.44	94.12	-2,847.02	-767.26	1,503.84	1,383.11	120.73	12.456	
13,400.00	10,451.00	13,491.41	10,558.98	62.26	62.74	94.12	-2,947.01	-766.48	1,503.84	1,380.49	123.35	12.192	
13,500.00	10,451.00	13,591.41	10,558.98	63.58	64.05	94.12	-3,047.01	-765.69	1,503.84	1,377.84	126.00	11.935	
13,600.00	10,451.00	13,691.41	10,558.98	64.92	65.38	94.12	-3,147.01	-764.91	1,503.84	1,375.15	128.69	11.686	
13,700.00	10,451.00	13,791.41	10,558.98	66.27	66.72	94.12	-3,247.01	-764.12	1,503.84	1,372.44	131.40	11.445	
13,800.00	10,451.00	13,891.41	10,558.98	67.63	68.07	94.12	-3,347.00	-763.34	1,503.84	1,369.70	134.14	11.211	
13,900.00	10,451.00	13,991.41	10,558.98	69.01	69.44	94.12	-3,447.00	-762.55	1,503.84	1,366.94	136.90	10.985	
14,000.00	10,451.00	14,091.41	10,558.98	70.39	70.82	94.12	-3,547.00	-761.77	1,503.84	1,364.15	139.69	10.766	
14,100.00	10,451.00	14,191.41	10,558.98	71.79	72.21	94.12	-3,646.99	-760.98	1,503.84	1,361.34	142.50	10.553	
14,200.00	10,451.00	14,291.41	10,558.98	73.20	73.62	94.12	-3,746.99	-760.20	1,503.84	1,358.51	145.33	10.348	
14,300.00	10,451.00	14,391.41	10,558.98	74.63	75.03	94.12	-3,846.99	-759.41	1,503.84	1,355.66	148.18	10.149	
14,400.00	10,451.00	14,491.41	10,558.98	76.06	76.45	94.12	-3,946.98	-758.62	1,503.84	1,352.79	151.05	9.956	
14,500.00	10,451.00	14,591.41	10,558.98	77.49	77.88	94.12	-4,046.98	-757.84	1,503.84	1,349.91	153.93	9.769	
14,600.00	10,451.00	14,691.41	10,558.98	78.94	79.33	94.12	-4,146.98	-757.05	1,503.84	1,347.00	156.84	9.589	
14,700.00	10,451.00	14,791.41	10,558.98	80.40	80.78	94.12	-4,246.97	-756.27	1,503.84	1,344.08	159.76	9.413	
14,800.00	10,451.00	14,891.41	10,558.98	81.86	82.23	94.12	-4,346.97	-755.48	1,503.84	1,341.15	162.69	9.244	

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

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Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 501H - OH - Plan 2

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

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
14,900.00	10,451.00	14,991.41	10,558.98	83.33	83.70	94.12	-4,446.97	-754.70	1,503.84	1,338.20	165.64	9.079	
15,000.00	10,451.00	15,091.41	10,558.98	84.81	85.17	94.12	-4,546.97	-753.91	1,503.84	1,335.24	168.60	8.920	
15,100.00	10,451.00	15,191.41	10,558.98	86.30	86.65	94.12	-4,646.96	-753.13	1,503.84	1,332.27	171.57	8.765	
15,200.00	10,451.00	15,291.41	10,558.98	87.79	88.13	94.12	-4,746.96	-752.34	1,503.84	1,329.28	174.56	8.615	
15,300.00	10,451.00	15,391.41	10,558.98	89.28	89.62	94.12	-4,846.96	-751.56	1,503.84	1,326.28	177.56	8.470	
15,400.00	10,451.00	15,491.41	10,558.98	90.78	91.12	94.12	-4,946.95	-750.77	1,503.84	1,323.28	180.56	8.329	
15,445.39	10,451.00	15,536.80	10,558.98	91.47	91.80	94.12	-4,992.34	-750.41	1,503.84	1,321.91	181.93	8.266	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 502H - OH - OH — **Offset Site Error:** 0.00 usft

Survey Program: 155-MWD, 2018-MWD — **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
0.00	0.00	0.00	0.68	0.00	0.00	-90.92	-0.40	-24.80	24.81				
100.00	100.00	99.23	99.91	0.27	0.15	-90.63	-0.27	-24.98	24.98	24.57	0.41	60.430	
200.00	200.00	199.31	199.99	0.62	0.39	-89.84	0.07	-25.38	25.38	24.37	1.01	25.133	
300.00	300.00	299.46	300.14	0.98	0.74	-89.24	0.33	-24.99	24.99	23.28	1.72	14.543	
400.00	400.00	399.50	400.17	1.34	1.09	-88.84	0.49	-24.36	24.36	21.94	2.43	10.036	
500.00	500.00	499.53	500.20	1.70	1.44	-89.32	0.28	-23.58	23.59	20.45	3.14	7.515	
600.00	600.00	599.54	600.20	2.06	1.79	-90.67	-0.26	-22.70	22.70	18.85	3.85	5.897	
700.00	700.00	699.52	700.18	2.42	2.15	-92.03	-0.77	-21.80	21.82	17.26	4.56	4.782	
800.00	800.00	799.48	800.14	2.77	2.50	-93.67	-1.35	-21.04	21.08	15.81	5.28	3.996	
900.00	900.00	899.45	900.10	3.13	2.86	-95.60	-2.00	-20.42	20.52	14.53	5.99	3.426	
1,000.00	1,000.00	999.43	1,000.07	3.49	3.21	-97.81	-2.73	-19.93	20.12	13.41	6.70	3.001	
1,100.00	1,100.00	1,099.43	1,100.08	3.85	3.57	-100.31	-3.53	-19.41	19.73	12.32	7.42	2.661	
1,200.00	1,200.00	1,199.45	1,200.09	4.21	3.92	-103.17	-4.40	-18.81	19.32	11.19	8.13	2.376	
1,300.00	1,300.00	1,299.47	1,300.10	4.57	4.28	-106.58	-5.37	-18.04	18.82	9.97	8.85	2.127	
1,400.00	1,400.00	1,399.46	1,400.08	4.93	4.64	-110.18	-6.32	-17.19	18.31	8.75	9.56	1.915	Collision Risk Procedures Req.
1,500.00	1,500.00	1,499.43	1,500.05	5.28	5.00	-112.52	-6.88	-16.59	17.96	7.68	10.28	1.747	Collision Risk Procedures Req.
1,600.00	1,600.00	1,599.43	1,600.04	5.64	5.35	-113.89	-7.16	-16.17	17.69	6.69	11.00	1.609	Collision Risk Procedures Req.
1,700.00	1,700.00	1,699.42	1,700.04	6.00	5.71	-115.07	-7.40	-15.82	17.47	5.75	11.71	1.491	Collision Risk Procedures Req.
1,800.00	1,800.00	1,799.41	1,800.02	6.36	6.07	-116.12	-7.61	-15.52	17.29	4.86	12.43	1.391	Collision Risk Procedures Req.
1,898.90	1,898.90	1,898.29	1,898.90	6.71	6.42	-117.44	-7.94	-15.28	17.22	4.08	13.14	1.311	Collision Risk Procedures Req.
1,900.00	1,900.00	1,899.38	1,900.00	6.72	6.43	-117.46	-7.94	-15.28	17.22	4.07	13.14	1.310	Collision Risk Procedures Req.
2,000.00	2,000.00	1,999.37	1,999.99	7.08	6.74	-119.02	-8.37	-15.08	17.25	3.43	13.82	1.248	Collision Risk Procedures Req.
2,100.00	2,100.00	2,099.83	2,100.43	7.43	6.78	-120.87	-8.34	-13.95	16.26	2.04	14.22	1.144	Collision Risk Procedures Req.
2,200.00	2,199.98	2,200.34	2,200.80	7.79	6.81	-154.25	-7.55	-8.85	13.20	-1.38	14.58	0.905	Collision Risk Procedures Req.
2,286.66	2,286.53	2,287.18	2,287.28	8.10	6.86	177.37	-5.32	-1.37	11.59	-3.35	14.93	0.776	Collision Risk Procedures Req., CC, SF
2,300.00	2,299.84	2,300.52	2,300.55	8.15	6.87	172.00	-4.80	-0.03	11.64	-3.35	14.99	0.776	Collision Risk Procedures Req., ES
2,400.00	2,399.45	2,400.18	2,399.38	8.51	6.94	136.39	-0.11	11.81	16.20	0.75	15.44	1.049	Collision Risk Procedures Req.
2,500.00	2,498.77	2,499.59	2,497.71	8.87	7.04	113.62	5.36	25.40	25.57	9.68	15.89	1.609	Collision Risk Procedures Req.
2,600.00	2,598.07	2,599.26	2,596.27	9.23	7.17	91.68	10.84	39.17	32.98	16.62	16.36	2.016	
2,700.00	2,697.30	2,699.16	2,695.12	9.59	7.32	74.55	16.03	52.71	37.15	20.29	16.86	2.204	
2,800.00	2,796.34	2,799.12	2,794.07	9.95	7.49	62.09	21.00	65.96	37.83	20.45	17.38	2.177	
2,900.00	2,895.14	2,898.79	2,892.75	10.32	7.68	59.22	25.27	79.25	36.24	18.31	17.92	2.022	
3,000.00	2,993.91	2,998.64	2,991.63	10.69	7.89	61.49	28.60	92.73	35.19	16.69	18.50	1.902	Collision Risk Procedures Req.
3,100.00	3,092.68	3,098.65	3,090.71	11.07	8.11	64.27	31.91	105.98	34.06	14.96	19.10	1.783	Collision Risk Procedures Req.
3,200.00	3,191.45	3,198.45	3,189.60	11.45	8.34	67.82	34.72	119.12	33.37	13.64	19.73	1.692	Collision Risk Procedures Req.
3,251.78	3,242.59	3,250.13	3,240.81	11.65	8.47	69.98	35.91	125.92	33.29	13.23	20.06	1.660	Collision Risk Procedures Req.
3,300.00	3,290.22	3,298.33	3,288.59	11.84	8.59	72.12	36.93	132.23	33.31	12.94	20.37	1.635	Collision Risk Procedures Req.
3,400.00	3,388.99	3,398.37	3,387.77	12.23	8.85	76.87	39.03	145.14	33.44	12.40	21.04	1.589	Collision Risk Procedures Req.
3,500.00	3,487.76	3,498.32	3,486.92	12.62	9.12	82.20	41.17	157.60	33.60	11.87	21.72	1.547	Collision Risk Procedures Req.
3,600.00	3,586.53	3,598.25	3,586.10	13.01	9.40	88.17	43.06	169.68	34.18	11.78	22.41	1.526	Collision Risk Procedures Req.
3,700.00	3,685.30	3,698.31	3,685.51	13.41	9.68	95.23	44.96	180.94	35.00	11.92	23.08	1.517	Collision Risk Procedures Req.
3,800.00	3,784.07	3,798.50	3,785.12	13.81	9.97	103.29	47.40	191.34	35.78	12.05	23.73	1.508	Collision Risk Procedures Req.
3,900.00	3,882.84	3,898.57	3,884.64	14.21	10.26	111.66	50.64	201.32	36.49	12.16	24.33	1.500	Collision Risk Procedures Req.
4,000.00	3,981.61	3,998.40	3,983.94	14.62	10.56	120.20	54.19	210.90	37.74	12.84	24.90	1.516	Collision Risk Procedures Req.
4,100.00	4,080.38	4,098.09	4,083.14	15.02	10.86	128.26	57.61	220.24	39.98	14.54	25.44	1.572	Collision Risk Procedures Req.
4,200.00	4,179.14	4,197.64	4,182.25	15.43	11.16	135.68	60.74	229.07	43.44	17.47	25.97	1.673	Collision Risk Procedures Req.
4,300.00	4,277.91	4,297.16	4,281.39	15.84	11.47	142.37	63.64	237.23	48.12	21.62	26.50	1.816	Collision Risk Procedures Req.
4,400.00	4,376.68	4,396.84	4,380.71	16.25	11.77	147.82	66.30	245.18	53.67	26.62	27.05	1.984	Collision Risk Procedures Req.
4,500.00	4,475.45	4,496.52	4,480.03	16.66	12.08	152.02	68.86	253.32	59.54	31.91	27.63	2.155	
4,600.00	4,574.22	4,595.83	4,579.02	17.07	12.40	155.53	71.12	260.90	66.26	38.03	28.23	2.347	

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

Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Offset Design: Lookin Good 34 State Com - Lookin Good 34 State Com 502H - OH - OH

Offset Site Error: 0.00 usft

Survey Program: 155-MWD, 2018-MWD

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
4,700.00	4,672.99	4,695.48	4,678.38	17.49	12.71	158.56	73.45	268.20	73.42	44.57	28.85	2.545	
4,800.00	4,771.76	4,794.98	4,777.58	17.90	13.03	160.92	75.56	275.51	80.83	51.36	29.48	2.742	
4,900.00	4,870.53	4,894.28	4,876.62	18.32	13.34	162.61	77.14	282.71	88.71	58.59	30.12	2.945	
5,000.00	4,969.30	4,993.72	4,975.80	18.74	13.66	163.90	78.37	289.72	97.00	66.23	30.77	3.152	
5,100.00	5,068.07	5,092.98	5,074.82	19.16	13.98	165.03	79.60	296.51	105.51	74.08	31.43	3.357	
5,200.00	5,166.84	5,192.32	5,173.94	19.58	14.30	166.03	80.70	302.92	114.47	82.38	32.09	3.567	
5,300.00	5,265.61	5,291.55	5,272.97	20.00	14.63	166.86	81.68	309.22	123.60	90.84	32.76	3.773	
5,400.00	5,364.38	5,390.98	5,372.20	20.42	14.95	167.46	82.32	315.40	133.02	99.59	33.43	3.979	
5,500.00	5,463.15	5,490.54	5,471.56	20.84	15.27	167.83	82.61	321.75	142.45	108.34	34.12	4.176	
5,600.00	5,561.92	5,590.51	5,571.32	21.26	15.61	168.15	82.95	328.25	151.77	116.96	34.80	4.361	
5,700.00	5,660.69	5,690.62	5,671.20	21.68	15.94	168.40	83.34	335.08	160.76	125.27	35.50	4.529	
5,800.00	5,759.46	5,790.00	5,770.33	22.11	16.27	168.49	83.37	342.09	169.70	133.51	36.19	4.689	
5,900.00	5,858.23	5,888.39	5,868.52	22.53	16.60	168.93	84.28	348.17	179.07	142.21	36.87	4.858	
6,000.00	5,957.00	5,970.00	5,949.97	22.95	16.87	169.27	85.03	353.21	189.35	152.07	37.28	5.079	
6,100.00	6,055.77	5,970.00	5,949.97	23.38	16.87	169.27	85.03	353.21	230.35	196.93	33.42	6.893	
6,200.00	6,154.54	5,970.00	5,949.97	23.80	16.87	169.27	85.03	353.21	300.45	271.47	28.98	10.369	
6,300.00	6,253.31	5,970.00	5,949.97	24.23	16.87	169.27	85.03	353.21	384.03	358.01	26.02	14.759	
6,400.00	6,352.07	5,970.00	5,949.97	24.66	16.87	169.27	85.03	353.21	474.01	449.78	24.22	19.567	
6,500.00	6,450.84	5,970.00	5,949.97	25.08	16.87	169.27	85.03	353.21	567.35	544.22	23.14	24.522	
6,600.00	6,549.61	5,970.00	5,949.97	25.51	16.87	169.27	85.03	353.21	662.64	640.17	22.47	29.489	
6,700.00	6,648.38	5,970.00	5,949.97	25.94	16.87	169.27	85.03	353.21	759.15	737.08	22.07	34.401	
6,800.00	6,747.15	5,970.00	5,949.97	26.36	16.87	169.27	85.03	353.21	856.45	834.62	21.83	39.226	
6,900.00	6,845.92	5,970.00	5,949.97	26.79	16.87	169.27	85.03	353.21	954.31	932.60	21.71	43.951	
7,000.00	6,944.72	5,970.00	5,949.97	27.22	16.87	169.85	85.03	353.21	1,052.55	1,030.88	21.67	48.572	
7,100.00	7,043.88	5,970.00	5,949.97	27.63	16.87	171.48	85.03	353.21	1,150.63	1,128.98	21.66	53.129	
7,200.00	7,143.43	5,970.00	5,949.97	28.01	16.87	172.74	85.03	353.21	1,248.37	1,226.71	21.66	57.624	
7,300.00	7,243.25	5,970.00	5,949.97	28.37	16.87	173.75	85.03	353.21	1,345.74	1,324.05	21.69	62.043	
7,400.00	7,343.22	5,970.00	5,949.97	28.71	16.87	174.56	85.03	353.21	1,442.70	1,420.97	21.74	66.374	
7,500.00	7,443.22	5,970.00	5,949.97	29.02	16.87	-108.32	85.03	353.21	1,539.51	1,517.70	21.81	70.596	
7,600.00	7,543.22	5,970.00	5,949.97	29.35	16.87	-108.32	85.03	353.21	1,636.69	1,614.77	21.92	74.681	
7,700.00	7,643.22	5,970.00	5,949.97	29.67	16.87	-108.32	85.03	353.21	1,734.18	1,712.13	22.05	78.643	
7,800.00	7,743.22	5,970.00	5,949.97	29.99	16.87	-108.32	85.03	353.21	1,831.95	1,809.74	22.21	82.487	
7,900.00	7,843.22	5,970.00	5,949.97	30.32	16.87	-108.32	85.03	353.21	1,929.94	1,907.56	22.38	86.217	
8,000.00	7,943.22	5,970.00	5,949.97	30.64	16.87	-108.32	85.03	353.21	2,028.14	2,005.56	22.58	89.838	
8,100.00	8,043.22	5,970.00	5,949.97	30.97	16.87	-108.32	85.03	353.21	2,126.50	2,103.72	22.78	93.355	
8,200.00	8,143.22	5,970.00	5,949.97	31.30	16.87	-108.32	85.03	353.21	2,225.00	2,202.01	22.99	96.770	
8,300.00	8,243.22	5,970.00	5,949.97	31.63	16.87	-108.32	85.03	353.21	2,323.64	2,300.42	23.22	100.087	

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

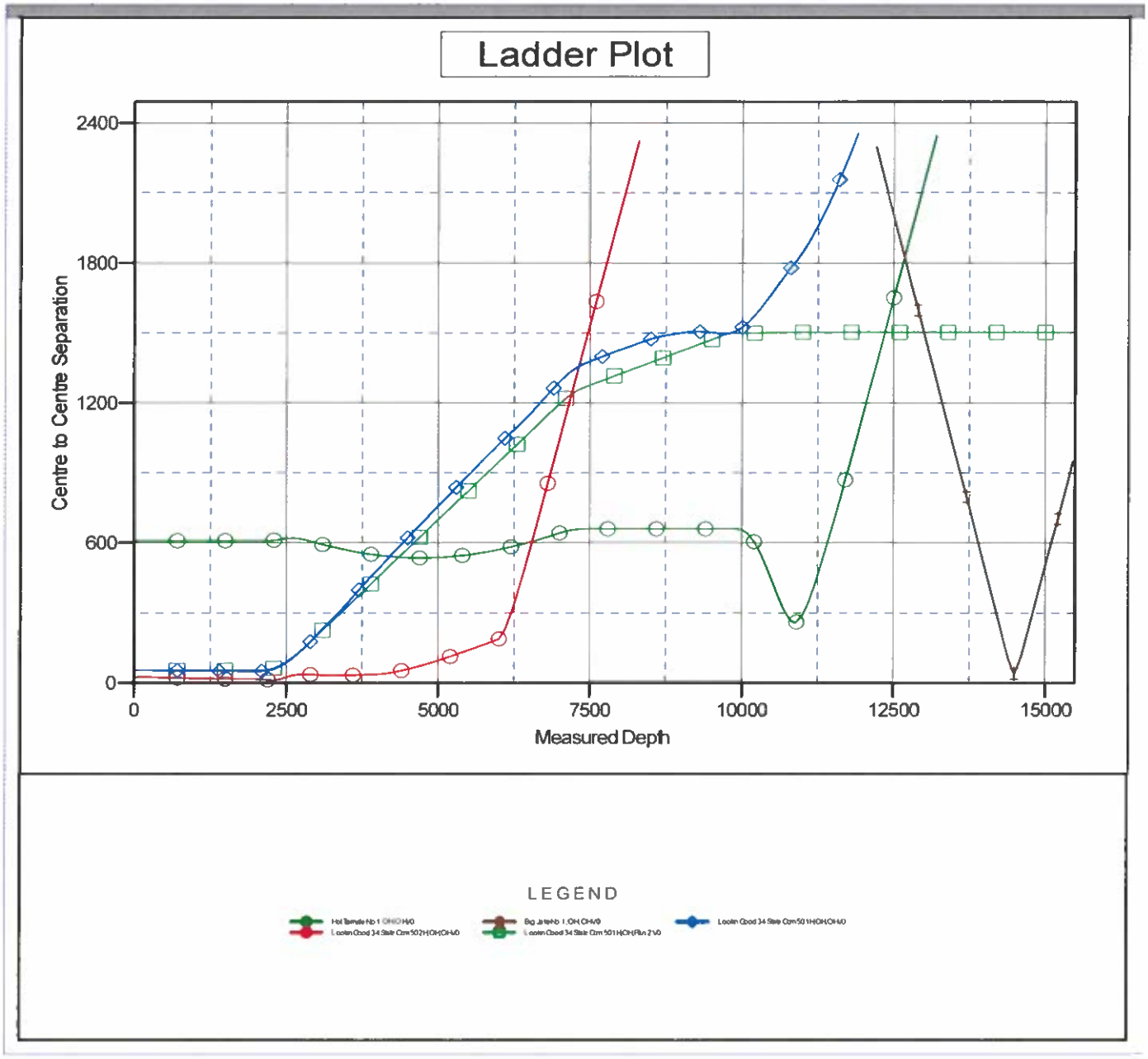
Legacy Directional Drilling

Anticollision Report

Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to GL 2692.48 + 26' KB @ 3718.48usft (
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: Lookin Good 34 State Com 502H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.48°



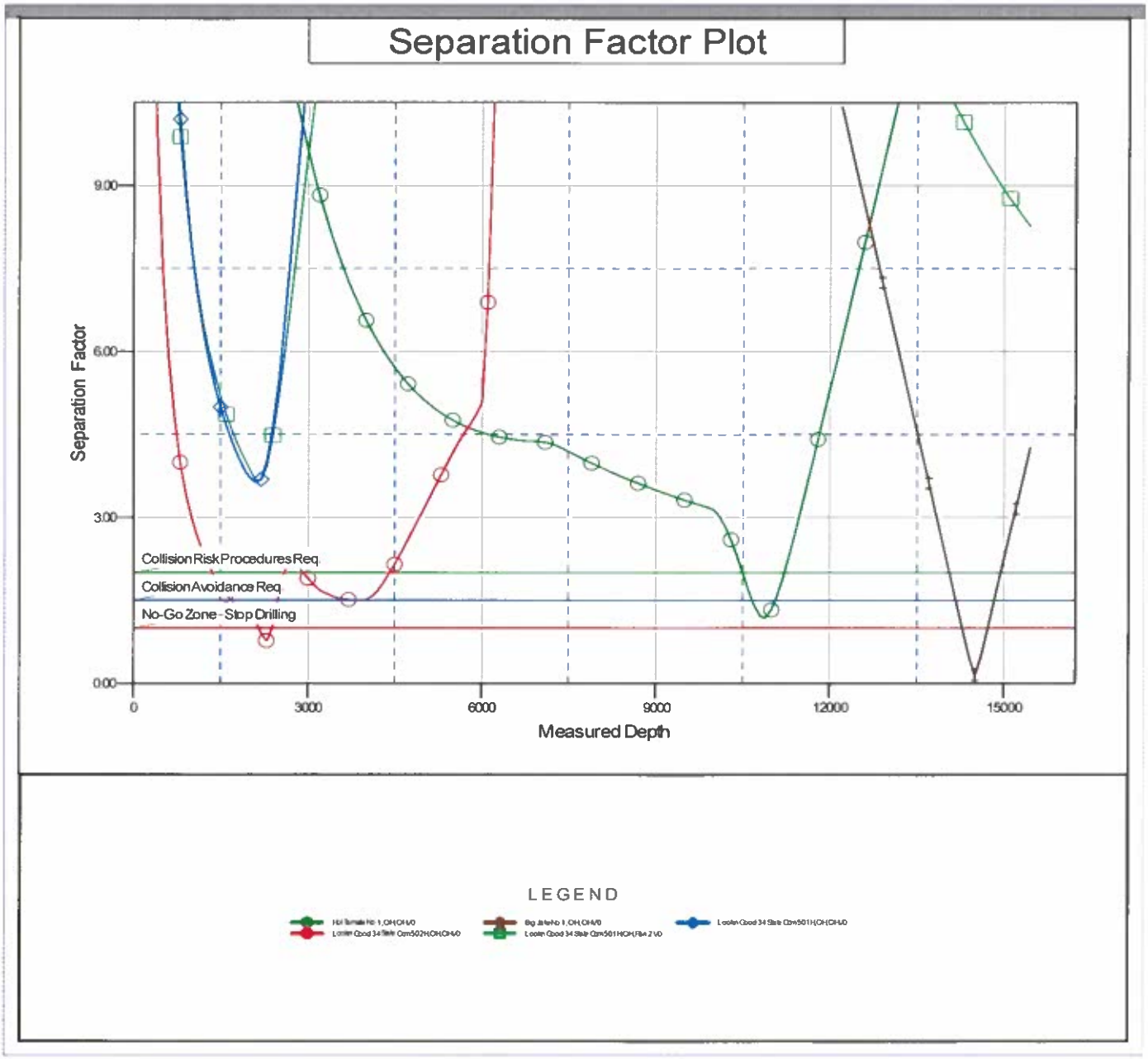
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Legacy Directional Drilling

Anticollision Report

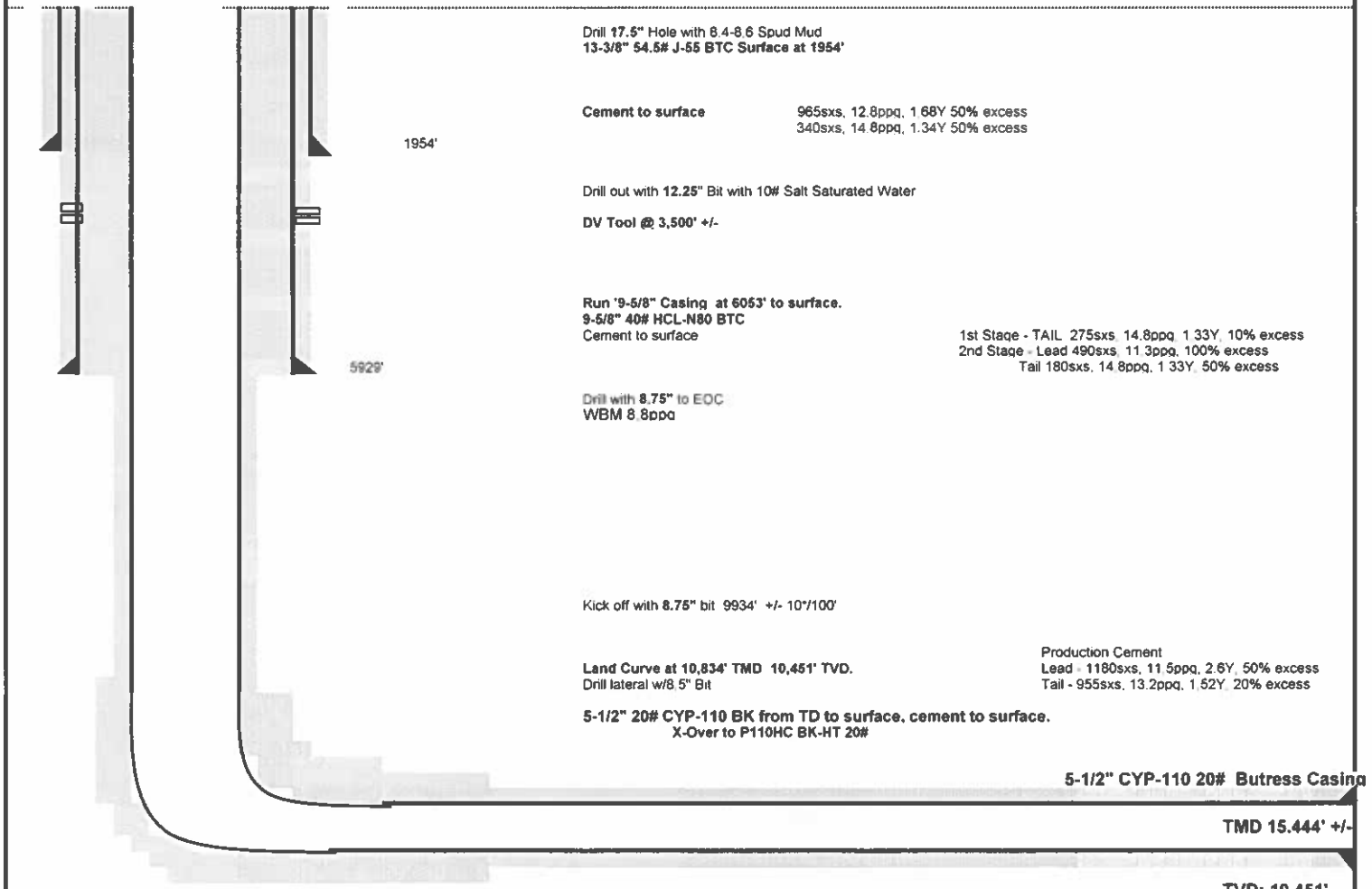
Company:	Marshall & Winston	**Local Co-ordinate Reference:**	Well Lookin Good 34 State Com 502H
Project:	Lea County, NM	**TVD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Reference Site:	Lookin Good 34 State Com	**MD Reference:**	GL 2692.48 + 26' KB @ 3718.48usft (ICD 333)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Lookin Good 34 State Com 502H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM_WA
Reference Design:	Plan 1	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to GL 2692.48 + 26' KB @ 3718.48usft (	Coordinates are relative to: Lookin Good 34 State Com 502H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is -104.333334	Grid Convergence at Surface is: 0.48°



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

AFE No: 502H API # TBD Permit No. TBD	Lookin Good 34 State Com 502H Lea County, NM Proposed Wellbore Sketch	SHL: 250' FNL & 1110' FEL BHL: 50' FSL & 400' FEL Sec 34, T-20-S, R-35-E, Lea County NM TD: 15,444' TMD 10,451' TVD



Drill 17.5" Hole with 8.4-8.6 Spud Mud
13-3/8" 54.5# J-55 BTC Surface at 1954'

Cement to surface 965sxs, 12.8ppg, 1.68Y 50% excess
340sxs, 14.8ppg, 1.34Y 50% excess

Drill out with **12.25"** Bit with 10# Salt Saturated Water

DV Tool @ 3,500' +/-

Run '9-5/8" Casing at 6053' to surface.
9-5/8" 40# HCL-N80 BTC
Cement to surface

1st Stage - TAIL 275sxs, 14.8ppg, 1.33Y, 10% excess
2nd Stage - Lead 490sxs, 11.3ppg, 100% excess
Tail 180sxs, 14.8ppg, 1.33Y, 50% excess

Drill with **8.75"** to EOC
WBM 8.8ppg

Kick off with **8.75"** bit 9934' +/- 10°/100'

Land Curve at 10,834' TMD 10,451' TVD.
Drill lateral w/8.5" Bit

Production Cement
Lead - 1180sxs, 11.5ppg, 2.6Y, 50% excess
Tail - 955sxs, 13.2ppg, 1.52Y, 20% excess

5-1/2" 20# CYP-110 BK from TD to surface, cement to surface.
X-Over to P110HC BK-HT 20#

5-1/2" CYP-110 20# Butress Casing

TMD 15.444' +/-

TVD: 10.451'

Well Information

Surface Location: Lea County, NM T20S R35E Section 34

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:** 8 / 7 / 2025

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Lookin Good 34 State Com 502HR		UL A, Sec 34	250 FNL	750	750	1000
		T20S, R35E	1110 FEL			

IV. Central Delivery Point Name: Lookin Good East CTB [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Lookin Good 34 State Com 502H		8/18/25	9/22/25	10/20/25	11/5/25	11/5/25
						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.

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:	10/24/24
Phone:	432-684-6373

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

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

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 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.
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.

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Operator:	OGRID:
MARSHALL & WINSTON INC P.O. Box 50880 Midland, TX 79710	14187
	Action Number: 493772
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
matthew.gomez	Original wellbore must be plugged in accordance with OCD regulations, and a subsequent P&A is to be submitted.	8/8/2025
matthew.gomez	Well has been skid. Previous API # 30-025-53925. Current API # 30-025-54944	8/8/2025
matthew.gomez	This well is within the Capitan Reef. The first intermediate casing string shall be sat and cemented back to surface immediately below the base of the Capitan Reef.	8/8/2025
matthew.gomez	In Capitan Reef areas if lost circulation (50% or greater) occurs below the base of the salt, the operator shall switch to freshwater mud until the intermediate casing is set. (The operator shall notify NMOCD of this switch.)	8/8/2025
matthew.gomez	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.	8/8/2025
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	8/8/2025
matthew.gomez	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.	8/8/2025
matthew.gomez	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.	8/8/2025
matthew.gomez	Cement is required to circulate on both surface and intermediate1 strings of casing.	8/8/2025
matthew.gomez	File As Drilled C-102 and a directional Survey with C-104 completion packet.	8/8/2025
matthew.gomez	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing	8/8/2025