

District I

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

District II

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

District III

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

District IV

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

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

Form C-101
August 1, 2011

Permit 303125

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

1. Operator Name and Address MARSHALL & WINSTON INC P.O. Box 50880 Midland, TX 79710		2. OGRID Number 14187
		3. API Number 30-025-49506
4. Property Code 39736	5. Property Name LOCO DINERO 36 STATE COM	6. Well No. 007H

7. Surface Location

UL - Lot B	Section 36	Township 21S	Range 33E	Lot Idn B	Feet From 200	N/S Line N	Feet From 1560	E/W Line E	County Lea
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8. Proposed Bottom Hole Location

UL - Lot O	Section 36	Township 21S	Range 33E	Lot Idn O	Feet From 20	N/S Line S	Feet From 1830	E/W Line E	County Lea
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9. Pool Information

WC-025 G-06 S213326D;BONE SPRING	97929
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3645
16. Multiple N	17. Proposed Depth 16376	18. Formation Bone Spring	19. Contractor	20. Spud Date 2/5/2022
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1805	1550	0
Int1	12.25	9.625	40	5305	1300	0
Prod	8.75	5.5	20	16376	2450	0

Casing/Cement Program: Additional Comments

Surface hole will be drilled with fresh water - 8.4 ppg Intermediate hole will be drilled with brine water - 10.0 ppg Intermediate hole from casing depth to KOP (10774') will be drilled with cut brine - 9.6 ppg From KOP (10774') to TD will be drilled using oil based mud - 9.8 - 10.5 ppg

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ , if applicable.		OIL CONSERVATION DIVISION	
Signature:			
Printed Name:	Electronically filed by Sherry Roberts	Approved By:	Paul F Kautz
Title:	Operations Secretary	Title:	Geologist
Email Address:	sroberts@mar-win.com	Approved Date:	11/3/2021
Date:	11/1/2021	Phone:	432-684-6373
		Expiration Date: 11/3/2023	
		Conditions of Approval Attached	

DISTRICT I

1000 N. FRANKLIN ST., SUITE 100, ALBUQUERQUE, NM 87102
Phone: (505) 243-6100 Fax: (505) 243-6100

DISTRICT II

511 E. FIRST ST., ALBUQUERQUE, NM 87102
Phone: (505) 243-6100 Fax: (505) 243-6100

DISTRICT III

1000 E. RAZON RD., ALBUQUERQUE, NM 87110
Phone: (505) 243-6100 Fax: (505) 243-6100

DISTRICT IV

1000 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3400 Fax: (505) 476-3400State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-49506	Pool Code 97929	Pool Name WC-025 GDB 52133265; Bone Springs
Property Code 39736	Property Name LOCO DINERO 36 STATE COM	Well Number 7H
GRID No. 14187	Operator Name MARSHALL & WINSTON, INC.	Elevation 3645.2'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	36	21-S	33-E		200	NORTH	1560	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	36	21-S	33-E		20	SOUTH	1830	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 83 NME SURFACE LOCATION Y=525467.1 N X=791447.4 E LAT.=32.441965° N LONG.=103.522594° W	Y=525659.9 N X=790364.0 E FTP 462' FSL & 1830' FEL Y=525203.3 N X=791178.3 E LAT.=32.441245° N LONG.=103.523470° W GRID AZ. TO FTP 225°28'17"	200' SL 1560' Y=525668.6 N X=791685.0 E
GRID AZ. = 179°33'28" HORZ. DIST. = 4798.7'		
NAD 83 NME PROPOSED BOTTOM HOLE LOCATION Y=520404.7 N X=791216.3 E LAT.=32.428055° N LONG.=103.523468° W	LTP 100' FSL & 1830' FEL Y=520484.7 N X=791215.7 E LAT.=32.428275° N LONG.=103.523468° W Y=520380.2 N X=790408.1 E	Y=520387.6 N X=791727.3 E 1830'
20' B.H.		

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

Signature _____ Date 9/28/2021
Todd Passmore
Printed Name
tpassmore@mar-win.com
E-mail Address
SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
AUGUST 26, 2021
Date of Survey
Signature & Seal of Professional Surveyor

Chad L. Hargrow 9/9/21
Certificate No. CHAD HARGROW 17777
W.O. #21-761 DRAWN BY: AH

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

Form APD Comments

Permit 303125

PERMIT COMMENTS

Operator Name and Address: MARSHALL & WINSTON INC [14187] P.O. Box 50880 Midland, TX 79710		API Number: 30-025-49506
		Well: LOCO DINERO 36 STATE COM #007H
Created By	Comment	Comment Date
pkautz	hold for NGMP	11/2/2021

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Santa Fe, NM 87505

Form APD Conditions

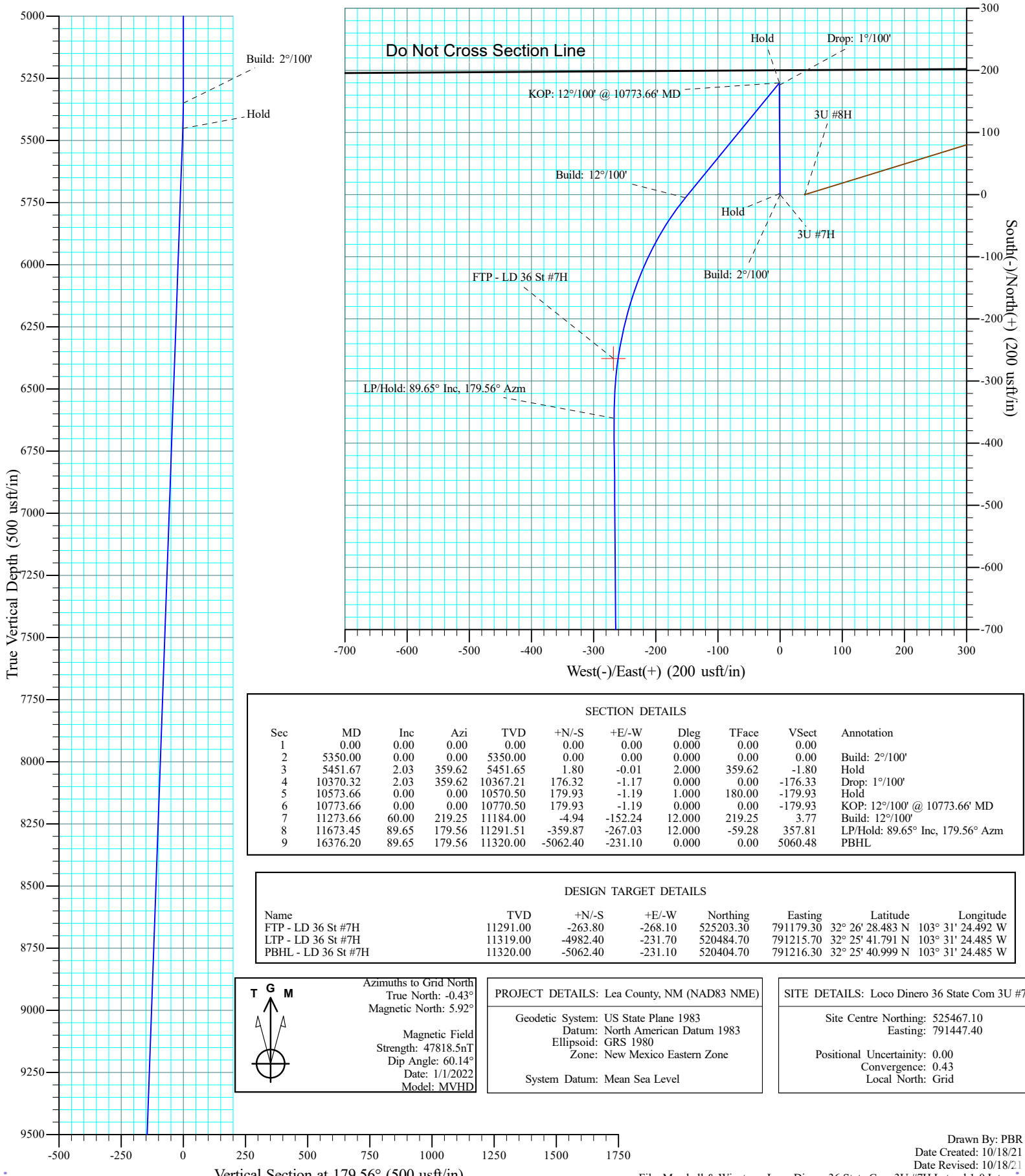
Permit 303125

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MARSHALL & WINSTON INC [14187] P.O. Box 50880 Midland, TX 79710	API Number: 30-025-49506
	Well: LOCO DINERO 36 STATE COM #007H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

Loco Dinero 36 State Com 3U #7H
Lea County, NM (NAD83 NME)
Job No. WT-22-***
Lateral 1r0



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	
2	5350.00	0.00	0.00	5350.00	0.00	0.00	0.000	0.00	0.00	Build: 2°/100'
3	5451.67	2.03	359.62	5451.65	1.80	-0.01	2.000	359.62	-1.80	Hold
4	10370.32	2.03	359.62	10367.21	176.32	-1.17	0.000	0.00	-176.33	Drop: 1°/100'
5	10573.66	0.00	0.00	10570.50	179.93	-1.19	1.000	180.00	-179.93	Hold
6	10773.66	0.00	0.00	10770.50	179.93	-1.19	0.000	0.00	-179.93	KOP: 12°/100' @ 10773.66' MD
7	11273.65	60.00	219.25	11184.00	-4.94	-152.24	12.000	219.25	3.77	Build: 12°/100'
8	11673.45	89.65	179.56	11291.51	-359.87	-267.03	12.000	-59.28	357.81	LP/Hold: 89.65° Inc, 179.56° Azm
9	16376.20	89.65	179.56	11320.00	-5062.40	-231.10	0.000	0.00	5060.48	PBHL

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP - LD 36 St #7H	11291.00	-263.80	-268.10	525203.30	791179.30	32° 26' 28.483 N	103° 31' 24.492 W
LTP - LD 36 St #7H	11319.00	-4982.40	-231.70	520484.70	791215.70	32° 25' 41.791 N	103° 31' 24.485 W
PBHL - LD 36 St #7H	11320.00	-5062.40	-231.10	520404.70	791216.30	32° 25' 40.999 N	103° 31' 24.485 W

T G M

Azimuths to Grid North
True North: -0.43°
Magnetic North: 5.92°

Magnetic Field
Strength: 47818.5nT
Dip Angle: 60.14°
Date: 1/1/2022
Model: MVHD

PROJECT DETAILS: Lea County, NM (NAD83 NME)

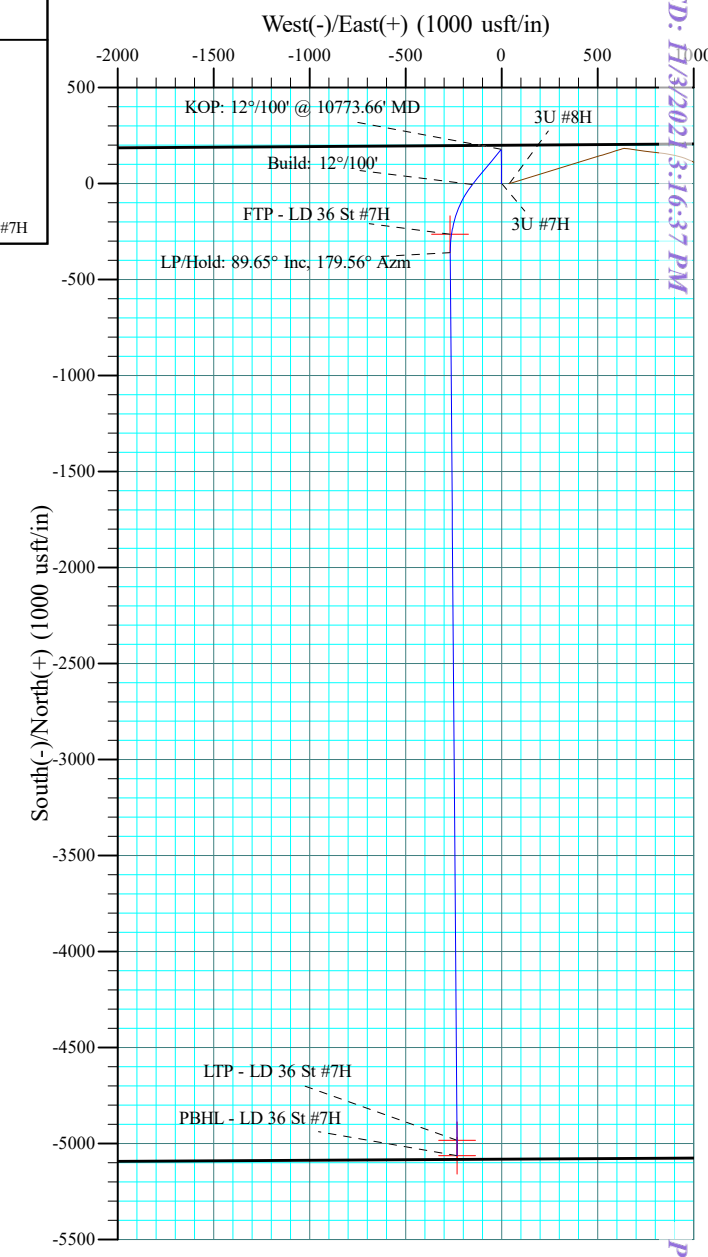
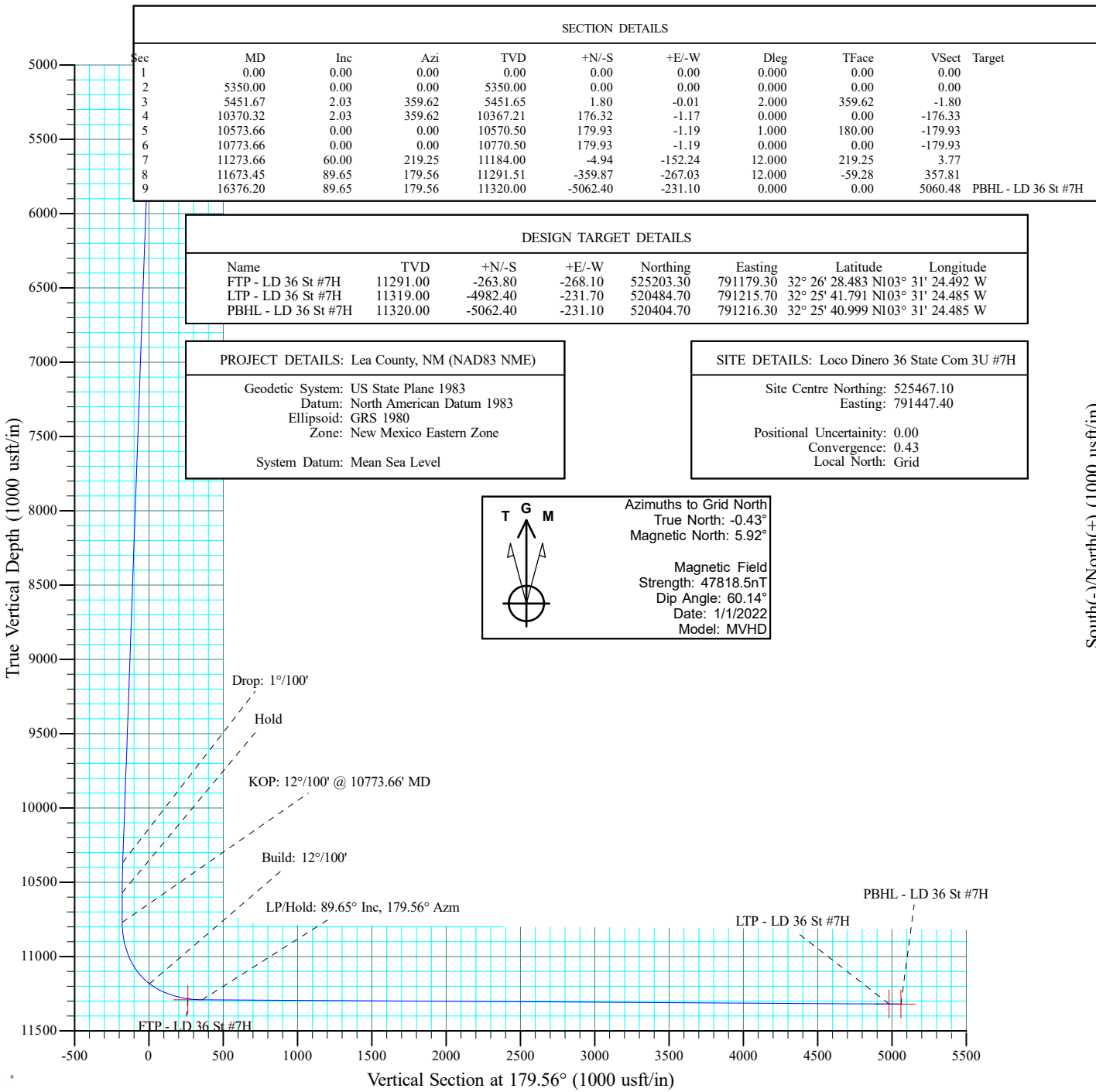
Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level

SITE DETAILS: Loco Dinero 36 State Com 3U #7H

Site Centre Northing: 525467.10
 Easting: 791447.40
 Positional Uncertainty: 0.00
 Convergence: 0.43
 Local North: Grid

Vertical Section at 179.56° (500 usft/in)

Loco Dinero 36 State Com 3U #7H
Lea County, NM (NAD83 NME)
Job No. WT-22-***
Lateral 1r0



Aim Directional Services, LLC

Survey Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Well:	3U #7H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

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

Site	Loco Dinero 36 State Com 3U #7H		
Site Position:		Northing:	525,467.10 usft
From:	Map	Easting:	791,447.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 26' 31.073 N
		Longitude:	103° 31' 21.341 W
		Grid Convergence:	0.43 °

Well	3U #7H		
Well Position	+N/-S	0.00 usft	Northing: 525,467.10 usft
	+E/-W	0.00 usft	Easting: 791,447.40 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 26' 31.073 N
		Longitude:	103° 31' 21.341 W
		Ground Level:	3,645.00 usft

Wellbore	Planning				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	1/1/2022	6.36	60.14	47,818.523

Design	Lateral 1r0				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.56	

Survey Tool Program	Date	10/26/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	16,376.18	Lateral 1r0 (Planning)	MWD+HDGM	OWSG MWD + HDGM	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.000	0.000	0.000	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.000	0.000	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.000	0.000	0.000	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.000	0.000	0.000	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.000	0.000	0.000	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.000	0.000	0.000	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.000	0.000	0.000	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.000	0.000	0.000	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.000	0.000	0.000	

Aim Directional Services, LLC

Survey Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Well:	3U #7H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.000	0.000	0.000	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.000	0.000	0.000	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.000	0.000	0.000	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.000	0.000	0.000	
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.000	0.000	0.000	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.000	0.000	0.000	
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.000	0.000	0.000	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.000	0.000	0.000	
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.000	0.000	0.000	

Aim Directional Services, LLC

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Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
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Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,350.00	0.00	0.00	5,350.00	0.00	0.00	0.00	0.000	0.000	0.000
Build: 2°/100'									
5,400.00	1.00	359.62	5,400.00	0.44	0.00	-0.44	2.000	2.000	0.000
5,451.67	2.03	359.62	5,451.65	1.80	-0.01	-1.80	2.000	2.000	0.000
Hold									
5,500.00	2.03	359.62	5,499.95	3.52	-0.02	-3.52	0.000	0.000	0.000
5,600.00	2.03	359.62	5,599.89	7.07	-0.05	-7.07	0.000	0.000	0.000
5,700.00	2.03	359.62	5,699.82	10.61	-0.07	-10.62	0.000	0.000	0.000
5,800.00	2.03	359.62	5,799.76	14.16	-0.09	-14.16	0.000	0.000	0.000
5,900.00	2.03	359.62	5,899.70	17.71	-0.12	-17.71	0.000	0.000	0.000
6,000.00	2.03	359.62	5,999.63	21.26	-0.14	-21.26	0.000	0.000	0.000
6,100.00	2.03	359.62	6,099.57	24.81	-0.16	-24.81	0.000	0.000	0.000
6,200.00	2.03	359.62	6,199.51	28.36	-0.19	-28.36	0.000	0.000	0.000
6,300.00	2.03	359.62	6,299.44	31.90	-0.21	-31.90	0.000	0.000	0.000
6,400.00	2.03	359.62	6,399.38	35.45	-0.23	-35.45	0.000	0.000	0.000
6,500.00	2.03	359.62	6,499.32	39.00	-0.26	-39.00	0.000	0.000	0.000
6,600.00	2.03	359.62	6,599.26	42.55	-0.28	-42.55	0.000	0.000	0.000
6,700.00	2.03	359.62	6,699.19	46.10	-0.30	-46.10	0.000	0.000	0.000
6,800.00	2.03	359.62	6,799.13	49.64	-0.33	-49.64	0.000	0.000	0.000
6,900.00	2.03	359.62	6,899.07	53.19	-0.35	-53.19	0.000	0.000	0.000
7,000.00	2.03	359.62	6,999.00	56.74	-0.38	-56.74	0.000	0.000	0.000
7,100.00	2.03	359.62	7,098.94	60.29	-0.40	-60.29	0.000	0.000	0.000
7,200.00	2.03	359.62	7,198.88	63.84	-0.42	-63.84	0.000	0.000	0.000
7,300.00	2.03	359.62	7,298.81	67.38	-0.45	-67.39	0.000	0.000	0.000
7,400.00	2.03	359.62	7,398.75	70.93	-0.47	-70.93	0.000	0.000	0.000
7,500.00	2.03	359.62	7,498.69	74.48	-0.49	-74.48	0.000	0.000	0.000
7,600.00	2.03	359.62	7,598.63	78.03	-0.52	-78.03	0.000	0.000	0.000
7,700.00	2.03	359.62	7,698.56	81.58	-0.54	-81.58	0.000	0.000	0.000
7,800.00	2.03	359.62	7,798.50	85.12	-0.56	-85.13	0.000	0.000	0.000
7,900.00	2.03	359.62	7,898.44	88.67	-0.59	-88.67	0.000	0.000	0.000
8,000.00	2.03	359.62	7,998.37	92.22	-0.61	-92.22	0.000	0.000	0.000
8,100.00	2.03	359.62	8,098.31	95.77	-0.63	-95.77	0.000	0.000	0.000
8,200.00	2.03	359.62	8,198.25	99.32	-0.66	-99.32	0.000	0.000	0.000
8,300.00	2.03	359.62	8,298.19	102.87	-0.68	-102.87	0.000	0.000	0.000
8,400.00	2.03	359.62	8,398.12	106.41	-0.70	-106.42	0.000	0.000	0.000
8,500.00	2.03	359.62	8,498.06	109.96	-0.73	-109.96	0.000	0.000	0.000
8,600.00	2.03	359.62	8,598.00	113.51	-0.75	-113.51	0.000	0.000	0.000
8,700.00	2.03	359.62	8,697.93	117.06	-0.77	-117.06	0.000	0.000	0.000
8,800.00	2.03	359.62	8,797.87	120.61	-0.80	-120.61	0.000	0.000	0.000
8,900.00	2.03	359.62	8,897.81	124.15	-0.82	-124.16	0.000	0.000	0.000
9,000.00	2.03	359.62	8,997.74	127.70	-0.84	-127.70	0.000	0.000	0.000
9,100.00	2.03	359.62	9,097.68	131.25	-0.87	-131.25	0.000	0.000	0.000
9,200.00	2.03	359.62	9,197.62	134.80	-0.89	-134.80	0.000	0.000	0.000

Aim Directional Services, LLC

Survey Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Well:	3U #7H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,300.00	2.03	359.62	9,297.56	138.35	-0.91	-138.35	0.000	0.000	0.000
9,400.00	2.03	359.62	9,397.49	141.89	-0.94	-141.90	0.000	0.000	0.000
9,500.00	2.03	359.62	9,497.43	145.44	-0.96	-145.45	0.000	0.000	0.000
9,600.00	2.03	359.62	9,597.37	148.99	-0.99	-148.99	0.000	0.000	0.000
9,700.00	2.03	359.62	9,697.30	152.54	-1.01	-152.54	0.000	0.000	0.000
9,800.00	2.03	359.62	9,797.24	156.09	-1.03	-156.09	0.000	0.000	0.000
9,900.00	2.03	359.62	9,897.18	159.63	-1.06	-159.64	0.000	0.000	0.000
10,000.00	2.03	359.62	9,997.11	163.18	-1.08	-163.19	0.000	0.000	0.000
10,100.00	2.03	359.62	10,097.05	166.73	-1.10	-166.73	0.000	0.000	0.000
10,200.00	2.03	359.62	10,196.99	170.28	-1.13	-170.28	0.000	0.000	0.000
10,300.00	2.03	359.62	10,296.93	173.83	-1.15	-173.83	0.000	0.000	0.000
10,370.32	2.03	359.62	10,367.20	176.32	-1.17	-176.33	0.000	0.000	0.000
Drop: 1°/100'									
10,400.00	1.74	359.62	10,396.87	177.30	-1.17	-177.30	1.000	-1.000	0.000
10,500.00	0.74	359.62	10,496.84	179.46	-1.19	-179.46	1.000	-1.000	0.000
10,573.66	0.00	0.00	10,570.50	179.93	-1.19	-179.93	1.000	-1.000	0.514
Hold									
10,600.00	0.00	0.00	10,596.84	179.93	-1.19	-179.93	0.000	0.000	0.000
10,700.00	0.00	0.00	10,696.84	179.93	-1.19	-179.93	0.000	0.000	0.000
10,773.66	0.00	0.00	10,770.50	179.93	-1.19	-179.93	0.000	0.000	0.000
KOP: 12°/100' @ 10773.66' MD									
10,775.00	0.16	219.25	10,771.84	179.93	-1.19	-179.93	11.989	11.989	0.000
10,800.00	3.16	219.25	10,796.83	179.37	-1.65	-179.37	12.000	12.000	0.000
10,825.00	6.16	219.25	10,821.74	177.79	-2.93	-177.81	12.000	12.000	0.000
10,850.00	9.16	219.25	10,846.51	175.21	-5.04	-175.25	12.000	12.000	0.000
10,875.00	12.16	219.25	10,871.08	171.63	-7.97	-171.69	12.000	12.000	0.000
10,900.00	15.16	219.25	10,895.37	167.06	-11.70	-167.15	12.000	12.000	0.000
10,925.00	18.16	219.25	10,919.32	161.51	-16.24	-161.63	12.000	12.000	0.000
10,950.00	21.16	219.25	10,942.86	155.00	-21.56	-155.16	12.000	12.000	0.000
10,975.00	24.16	219.25	10,965.92	147.54	-27.65	-147.75	12.000	12.000	0.000
11,000.00	27.16	219.25	10,988.46	139.16	-34.50	-139.42	12.000	12.000	0.000
11,025.00	30.16	219.25	11,010.39	129.87	-42.09	-130.19	12.000	12.000	0.000
11,050.00	33.16	219.25	11,031.67	119.71	-50.39	-120.10	12.000	12.000	0.000
11,075.00	36.16	219.25	11,052.23	108.70	-59.38	-109.16	12.000	12.000	0.000
11,100.00	39.16	219.25	11,072.02	96.88	-69.05	-97.40	12.000	12.000	0.000
11,125.00	42.16	219.25	11,090.98	84.26	-79.35	-84.87	12.000	12.000	0.000
11,150.00	45.16	219.25	11,109.06	70.90	-90.27	-71.59	12.000	12.000	0.000
11,175.00	48.16	219.25	11,126.22	56.82	-101.77	-57.60	12.000	12.000	0.000
11,200.00	51.16	219.25	11,142.40	42.07	-113.83	-42.94	12.000	12.000	0.000
11,225.00	54.16	219.25	11,157.56	26.68	-126.40	-27.65	12.000	12.000	0.000
11,250.00	57.16	219.25	11,171.66	10.69	-139.46	-11.76	12.000	12.000	0.000
11,273.66	60.00	219.25	11,184.00	-4.94	-152.24	3.77	12.000	12.000	0.000
Build: 12°/100'									
11,275.00	60.08	219.09	11,184.67	-5.84	-152.97	4.67	11.999	6.139	-11.900

Aim Directional Services, LLC

Survey Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Well:	3U #7H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,300.00	61.65	216.16	11,196.84	-23.14	-166.30	21.86	12.000	6.274	-11.712
11,325.00	63.28	213.32	11,208.40	-41.35	-178.92	39.98	12.000	6.517	-11.364
11,350.00	64.96	210.56	11,219.31	-60.44	-190.82	58.97	12.000	6.737	-11.038
11,375.00	66.70	207.88	11,229.55	-80.34	-201.95	78.79	12.000	6.935	-10.735
11,400.00	68.48	205.26	11,239.08	-101.01	-212.28	99.38	12.000	7.113	-10.455
11,425.00	70.29	202.71	11,247.88	-122.39	-221.79	120.68	12.000	7.272	-10.199
11,450.00	72.15	200.22	11,255.93	-144.41	-230.45	142.64	12.000	7.413	-9.968
11,475.00	74.03	197.78	11,263.20	-167.03	-238.23	165.19	12.000	7.536	-9.761
11,500.00	75.94	195.39	11,269.68	-190.17	-245.12	188.28	12.000	7.644	-9.578
11,525.00	77.88	193.03	11,275.34	-213.77	-251.10	211.83	12.000	7.737	-9.418
11,550.00	79.83	190.71	11,280.18	-237.77	-256.14	235.80	12.000	7.815	-9.282
11,575.00	81.80	188.42	11,284.17	-262.10	-260.24	260.10	12.000	7.880	-9.168
11,600.00	83.78	186.15	11,287.30	-286.70	-263.39	284.67	12.000	7.931	-9.078
11,625.00	85.78	183.90	11,289.58	-311.50	-265.57	309.45	12.000	7.970	-9.009
11,650.00	87.77	181.66	11,290.98	-336.43	-266.78	334.37	12.000	7.995	-8.963
11,673.45	89.65	179.56	11,291.51	-359.87	-267.03	357.81	12.000	8.009	-8.939
LP/Hold: 89.65° Inc, 179.56° Azm									
11,700.00	89.65	179.56	11,291.67	-386.42	-266.82	384.36	0.000	0.000	0.000
11,800.00	89.65	179.56	11,292.28	-486.41	-266.06	484.36	0.000	0.000	0.000
11,900.00	89.65	179.56	11,292.88	-586.41	-265.30	584.35	0.000	0.000	0.000
12,000.00	89.65	179.56	11,293.49	-686.40	-264.53	684.35	0.000	0.000	0.000
12,100.00	89.65	179.56	11,294.10	-786.40	-263.77	784.35	0.000	0.000	0.000
12,200.00	89.65	179.56	11,294.70	-886.39	-263.00	884.35	0.000	0.000	0.000
12,300.00	89.65	179.56	11,295.31	-986.39	-262.24	984.35	0.000	0.000	0.000
12,400.00	89.65	179.56	11,295.91	-1,086.38	-261.48	1,084.34	0.000	0.000	0.000
12,500.00	89.65	179.56	11,296.52	-1,186.38	-260.71	1,184.34	0.000	0.000	0.000
12,600.00	89.65	179.56	11,297.12	-1,286.38	-259.95	1,284.34	0.000	0.000	0.000
12,700.00	89.65	179.56	11,297.73	-1,386.37	-259.18	1,384.34	0.000	0.000	0.000
12,800.00	89.65	179.56	11,298.34	-1,486.37	-258.42	1,484.34	0.000	0.000	0.000
12,900.00	89.65	179.56	11,298.94	-1,586.36	-257.66	1,584.34	0.000	0.000	0.000
13,000.00	89.65	179.56	11,299.55	-1,686.36	-256.89	1,684.33	0.000	0.000	0.000
13,100.00	89.65	179.56	11,300.15	-1,786.35	-256.13	1,784.33	0.000	0.000	0.000
13,200.00	89.65	179.56	11,300.76	-1,886.35	-255.36	1,884.33	0.000	0.000	0.000
13,300.00	89.65	179.56	11,301.36	-1,986.34	-254.60	1,984.33	0.000	0.000	0.000
13,400.00	89.65	179.56	11,301.97	-2,086.34	-253.84	2,084.33	0.000	0.000	0.000
13,500.00	89.65	179.56	11,302.58	-2,186.33	-253.07	2,184.32	0.000	0.000	0.000
13,600.00	89.65	179.56	11,303.18	-2,286.33	-252.31	2,284.32	0.000	0.000	0.000
13,700.00	89.65	179.56	11,303.79	-2,386.32	-251.54	2,384.32	0.000	0.000	0.000
13,800.00	89.65	179.56	11,304.39	-2,486.32	-250.78	2,484.32	0.000	0.000	0.000
13,900.00	89.65	179.56	11,305.00	-2,586.31	-250.02	2,584.32	0.000	0.000	0.000
14,000.00	89.65	179.56	11,305.61	-2,686.31	-249.25	2,684.32	0.000	0.000	0.000
14,100.00	89.65	179.56	11,306.21	-2,786.30	-248.49	2,784.31	0.000	0.000	0.000
14,200.00	89.65	179.56	11,306.82	-2,886.30	-247.73	2,884.31	0.000	0.000	0.000
14,300.00	89.65	179.56	11,307.42	-2,986.29	-246.96	2,984.31	0.000	0.000	0.000

Aim Directional Services, LLC

Survey Report

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Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Well:	3U #7H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,400.00	89.65	179.56	11,308.03	-3,086.29	-246.20	3,084.31	0.000	0.000	0.000
14,500.00	89.65	179.56	11,308.63	-3,186.28	-245.43	3,184.31	0.000	0.000	0.000
14,600.00	89.65	179.56	11,309.24	-3,286.28	-244.67	3,284.30	0.000	0.000	0.000
14,700.00	89.65	179.56	11,309.85	-3,386.28	-243.91	3,384.30	0.000	0.000	0.000
14,800.00	89.65	179.56	11,310.45	-3,486.27	-243.14	3,484.30	0.000	0.000	0.000
14,900.00	89.65	179.56	11,311.06	-3,586.27	-242.38	3,584.30	0.000	0.000	0.000
15,000.00	89.65	179.56	11,311.66	-3,686.26	-241.61	3,684.30	0.000	0.000	0.000
15,100.00	89.65	179.56	11,312.27	-3,786.26	-240.85	3,784.30	0.000	0.000	0.000
15,200.00	89.65	179.56	11,312.87	-3,886.25	-240.09	3,884.29	0.000	0.000	0.000
15,300.00	89.65	179.56	11,313.48	-3,986.25	-239.32	3,984.29	0.000	0.000	0.000
15,400.00	89.65	179.56	11,314.09	-4,086.24	-238.56	4,084.29	0.000	0.000	0.000
15,500.00	89.65	179.56	11,314.69	-4,186.24	-237.79	4,184.29	0.000	0.000	0.000
15,600.00	89.65	179.56	11,315.30	-4,286.23	-237.03	4,284.29	0.000	0.000	0.000
15,700.00	89.65	179.56	11,315.90	-4,386.23	-236.27	4,384.28	0.000	0.000	0.000
15,800.00	89.65	179.56	11,316.51	-4,486.22	-235.50	4,484.28	0.000	0.000	0.000
15,900.00	89.65	179.56	11,317.12	-4,586.22	-234.74	4,584.28	0.000	0.000	0.000
16,000.00	89.65	179.56	11,317.72	-4,686.21	-233.97	4,684.28	0.000	0.000	0.000
16,100.00	89.65	179.56	11,318.33	-4,786.21	-233.21	4,784.28	0.000	0.000	0.000
16,200.00	89.65	179.56	11,318.93	-4,886.20	-232.45	4,884.27	0.000	0.000	0.000
16,300.00	89.65	179.56	11,319.54	-4,986.20	-231.68	4,984.27	0.000	0.000	0.000
16,376.20	89.65	179.56	11,320.00	-5,062.40	-231.10	5,060.47	0.000	0.000	0.000

PBHL

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP - LD 36 St #7H - hit/miss target - Shape - Point	0.00	0.00	11,291.00	-263.80	-268.10	525,203.30	791,179.30	32° 26' 28.483 N	103° 31' 24.492 W
LTP - LD 36 St #7H - plan misses target center by 0.52usft at 16296.20usft MD (11319.52 TVD, -4982.40 N, -231.71 E) - Point	0.00	0.00	11,319.00	-4,982.40	-231.70	520,484.70	791,215.70	32° 25' 41.791 N	103° 31' 24.485 W
PBHL - LD 36 St #7H - plan hits target center - Point	0.00	0.00	11,320.00	-5,062.40	-231.10	520,404.70	791,216.30	32° 25' 40.999 N	103° 31' 24.485 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,800.00	1,800.00	Casing	13-3/8	17-1/2
5,250.00	5,250.00	Casing	9-5/8	12-1/4

Aim Directional Services, LLC

Survey Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Well:	3U #7H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5350	5350	0	0	Build: 2°/100'
5452	5452	2	0	Hold
10,370	10,367	176	-1	Drop: 1°/100'
10,574	10,570	180	-1	Hold
10,774	10,770	180	-1	KOP: 12°/100' @ 10773.66' MD
11,274	11,184	-5	-152	Build: 12°/100'
11,673	11,292	-360	-267	LP/Hold: 89.65° Inc, 179.56° Azm
16,376	11,320	-5062	-231	PBHL

Checked By: _____ Approved By: _____ Date: _____

Marshall & Winston, Inc.

Lea County, NM (NAD83 NME)

Loco Dinero 36 State Com 3U #7H

3U #7H

Planning

Lateral 1r0

Anticollision Report

26 October, 2021

Aim Directional Services, LLC

Anticollision Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Reference Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	3U #7H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Planning	Database:	EDMRESTORED
Reference Design:	Lateral 1r0	Offset TVD Reference:	Offset Datum

Reference	Lateral 1r0
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD + Stations Interval 100.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum centre distance of 100,000.00usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program		Date	10/26/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	16,376.18	Lateral 1r0 (Planning)	MWD+HDGM	OWSG MWD + HDGM	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Loco Dinero 36 State Com 3U #8H						
3U #8H - Planning - Lateral 1r0	5,350.00	5,348.00	40.00	2.10	1.055	Level 3, CC, ES, SF

Offset Design:	Loco Dinero 36 State Com 3U #8H - 3U #8H - Planning - Lateral 1r0													Offset Site Error:	0.00 usft
Survey Program:	0-MWD+HDGM													Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.00	0.00	0.00	0.00	0.00	0.00	89.71	0.20	40.00	40.05						
100.00	100.00	98.00	98.00	0.13	0.13	89.71	0.20	40.00	40.00	39.73	0.27	150.284			
200.00	200.00	198.00	198.00	0.49	0.49	89.71	0.20	40.00	40.00	39.02	0.98	40.874			
300.00	300.00	298.00	298.00	0.85	0.84	89.71	0.20	40.00	40.00	38.30	1.70	23.591			
400.00	400.00	398.00	398.00	1.21	1.20	89.71	0.20	40.00	40.00	37.59	2.41	16.580			
500.00	500.00	498.00	498.00	1.57	1.56	89.71	0.20	40.00	40.00	36.87	3.13	12.782			
600.00	600.00	598.00	598.00	1.93	1.92	89.71	0.20	40.00	40.00	36.15	3.85	10.399			
700.00	700.00	698.00	698.00	2.29	2.28	89.71	0.20	40.00	40.00	35.44	4.56	8.766			
800.00	800.00	798.00	798.00	2.64	2.64	89.71	0.20	40.00	40.00	34.72	5.28	7.575			
900.00	900.00	898.00	898.00	3.00	3.00	89.71	0.20	40.00	40.00	34.00	6.00	6.670			
1,000.00	1,000.00	998.00	998.00	3.36	3.35	89.71	0.20	40.00	40.00	33.29	6.71	5.958			
1,100.00	1,100.00	1,098.00	1,098.00	3.72	3.71	89.71	0.20	40.00	40.00	32.57	7.43	5.383			
1,200.00	1,200.00	1,198.00	1,198.00	4.08	4.07	89.71	0.20	40.00	40.00	31.85	8.15	4.909			
1,300.00	1,300.00	1,298.00	1,298.00	4.44	4.43	89.71	0.20	40.00	40.00	31.14	8.87	4.512			
1,400.00	1,400.00	1,398.00	1,398.00	4.79	4.79	89.71	0.20	40.00	40.00	30.42	9.58	4.175			
1,500.00	1,500.00	1,498.00	1,498.00	5.15	5.15	89.71	0.20	40.00	40.00	29.70	10.30	3.884			
1,600.00	1,600.00	1,598.00	1,598.00	5.51	5.50	89.71	0.20	40.00	40.00	28.98	11.02	3.631			
1,700.00	1,700.00	1,698.00	1,698.00	5.87	5.86	89.71	0.20	40.00	40.00	28.27	11.73	3.409			
1,800.00	1,800.00	1,798.00	1,798.00	6.23	6.22	89.71	0.20	40.00	40.00	27.55	12.45	3.213			
1,900.00	1,900.00	1,898.00	1,898.00	6.59	6.58	89.71	0.20	40.00	40.00	26.83	13.17	3.038			
2,000.00	2,000.00	1,998.00	1,998.00	6.95	6.94	89.71	0.20	40.00	40.00	26.12	13.88	2.881			
2,100.00	2,100.00	2,098.00	2,098.00	7.30	7.30	89.71	0.20	40.00	40.00	25.40	14.60	2.740			
2,200.00	2,200.00	2,198.00	2,198.00	7.66	7.66	89.71	0.20	40.00	40.00	24.68	15.32	2.611			
2,300.00	2,300.00	2,298.00	2,298.00	8.02	8.01	89.71	0.20	40.00	40.00	23.97	16.03	2.495			
2,400.00	2,400.00	2,398.00	2,398.00	8.38	8.37	89.71	0.20	40.00	40.00	23.25	16.75	2.388			
2,500.00	2,500.00	2,498.00	2,498.00	8.74	8.73	89.71	0.20	40.00	40.00	22.53	17.47	2.290			

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

Aim Directional Services, LLC

Anticollision Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Reference Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	3U #7H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Planning	Database:	EDMRESTORED
Reference Design:	Lateral 1r0	Offset TVD Reference:	Offset Datum

Offset Design: Loco Dinero 36 State Com 3U #8H - 3U #8H - Planning - Lateral 1r0													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Rule Assigned:		Distance	Minimum	Separation	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Tooface (")	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
2,600.00	2,600.00	2,598.00	2,598.00	9.10	9.09	89.71	0.20	40.00	40.00	21.82	18.19	2.200	
2,700.00	2,700.00	2,698.00	2,698.00	9.45	9.45	89.71	0.20	40.00	40.00	21.10	18.90	2.116	
2,800.00	2,800.00	2,798.00	2,798.00	9.81	9.81	89.71	0.20	40.00	40.00	20.38	19.62	2.039	
2,900.00	2,900.00	2,898.00	2,898.00	10.17	10.16	89.71	0.20	40.00	40.00	19.66	20.34	1.967	
3,000.00	3,000.00	2,998.00	2,998.00	10.53	10.52	89.71	0.20	40.00	40.00	18.95	21.05	1.900	
3,100.00	3,100.00	3,098.00	3,098.00	10.89	10.88	89.71	0.20	40.00	40.00	18.23	21.77	1.837	
3,200.00	3,200.00	3,198.00	3,198.00	11.25	11.24	89.71	0.20	40.00	40.00	17.51	22.49	1.779	
3,300.00	3,300.00	3,298.00	3,298.00	11.61	11.60	89.71	0.20	40.00	40.00	16.80	23.20	1.724	
3,400.00	3,400.00	3,398.00	3,398.00	11.96	11.96	89.71	0.20	40.00	40.00	16.08	23.92	1.672	
3,500.00	3,500.00	3,498.00	3,498.00	12.32	12.32	89.71	0.20	40.00	40.00	15.36	24.64	1.624	
3,600.00	3,600.00	3,598.00	3,598.00	12.68	12.67	89.71	0.20	40.00	40.00	14.65	25.35	1.578	
3,700.00	3,700.00	3,698.00	3,698.00	13.04	13.03	89.71	0.20	40.00	40.00	13.93	26.07	1.534	
3,800.00	3,800.00	3,798.00	3,798.00	13.40	13.39	89.71	0.20	40.00	40.00	13.21	26.79	1.493 Level 3	
3,900.00	3,900.00	3,898.00	3,898.00	13.76	13.75	89.71	0.20	40.00	40.00	12.49	27.51	1.454 Level 3	
4,000.00	4,000.00	3,998.00	3,998.00	14.11	14.11	89.71	0.20	40.00	40.00	11.78	28.22	1.417 Level 3	
4,100.00	4,100.00	4,098.00	4,098.00	14.47	14.47	89.71	0.20	40.00	40.00	11.06	28.94	1.382 Level 3	
4,200.00	4,200.00	4,198.00	4,198.00	14.83	14.82	89.71	0.20	40.00	40.00	10.34	29.66	1.349 Level 3	
4,300.00	4,300.00	4,298.00	4,298.00	15.19	15.18	89.71	0.20	40.00	40.00	9.63	30.37	1.317 Level 3	
4,400.00	4,400.00	4,398.00	4,398.00	15.55	15.54	89.71	0.20	40.00	40.00	8.91	31.09	1.287 Level 3	
4,500.00	4,500.00	4,498.00	4,498.00	15.91	15.90	89.71	0.20	40.00	40.00	8.19	31.81	1.258 Level 3	
4,600.00	4,600.00	4,598.00	4,598.00	16.27	16.26	89.71	0.20	40.00	40.00	7.48	32.52	1.230 Level 3	
4,700.00	4,700.00	4,698.00	4,698.00	16.62	16.62	89.71	0.20	40.00	40.00	6.76	33.24	1.203 Level 3	
4,800.00	4,800.00	4,798.00	4,798.00	16.98	16.98	89.71	0.20	40.00	40.00	6.04	33.96	1.178 Level 3	
4,900.00	4,900.00	4,898.00	4,898.00	17.34	17.33	89.71	0.20	40.00	40.00	5.33	34.67	1.154 Level 3	
5,000.00	5,000.00	4,998.00	4,998.00	17.70	17.69	89.71	0.20	40.00	40.00	4.61	35.39	1.130 Level 3	
5,100.00	5,100.00	5,098.00	5,098.00	18.06	18.05	89.71	0.20	40.00	40.00	3.89	36.11	1.108 Level 3	
5,200.00	5,200.00	5,198.00	5,198.00	18.42	18.41	89.71	0.20	40.00	40.00	3.17	36.83	1.086 Level 3	
5,300.00	5,300.00	5,298.00	5,298.00	18.77	18.77	89.71	0.20	40.00	40.00	2.46	37.54	1.065 Level 3	
5,350.00	5,350.00	5,348.00	5,348.00	18.95	18.95	89.71	0.20	40.00	40.00	2.10	37.90	1.055 Level 3, CC, ES, SF	
5,400.00	5,400.00	5,397.36	5,397.36	19.13	19.12	90.54	0.32	40.37	40.38	2.13	38.25	1.056 Level 3	
5,451.67	5,451.65	5,448.31	5,448.29	19.32	19.30	91.84	0.70	41.61	41.66	3.06	38.60	1.079 Level 3	
5,500.00	5,499.95	5,495.92	5,495.86	19.49	19.46	93.21	1.29	43.55	43.68	4.77	38.92	1.122 Level 3	
5,600.00	5,599.89	5,594.19	5,593.90	19.85	19.80	94.57	3.26	49.94	50.29	10.75	39.55	1.272 Level 3	
5,700.00	5,699.82	5,691.96	5,691.15	20.21	20.15	94.40	6.19	59.49	60.09	19.95	40.14	1.497 Level 3	
5,800.00	5,799.76	5,789.92	5,788.24	20.57	20.49	93.39	10.03	71.97	72.81	32.05	40.75	1.787	
5,900.00	5,899.70	5,889.03	5,886.37	20.92	20.84	92.54	14.08	85.17	86.11	44.67	41.45	2.078	
6,000.00	5,999.63	5,988.13	5,984.51	21.28	21.19	91.92	18.14	98.37	99.43	57.29	42.14	2.359	
6,100.00	6,099.57	6,087.24	6,082.65	21.64	21.54	91.44	22.20	111.57	112.76	69.92	42.84	2.632	
6,200.00	6,199.51	6,186.34	6,180.78	22.00	21.90	91.07	26.26	124.78	126.10	82.56	43.54	2.896	
6,300.00	6,299.44	6,285.44	6,278.92	22.36	22.25	90.76	30.32	137.98	139.43	95.20	44.24	3.152	
6,400.00	6,399.38	6,384.55	6,377.06	22.72	22.61	90.51	34.38	151.18	152.78	107.84	44.94	3.400	
6,500.00	6,499.32	6,483.65	6,475.19	23.07	22.97	90.30	38.43	164.38	166.12	120.48	45.64	3.640	
6,600.00	6,599.26	6,582.76	6,573.33	23.43	23.33	90.12	42.49	177.58	179.47	133.12	46.34	3.872	
6,700.00	6,699.19	6,681.86	6,671.47	23.79	23.69	89.97	46.55	190.79	192.82	145.77	47.05	4.098	
6,800.00	6,799.13	6,780.96	6,769.60	24.15	24.06	89.83	50.61	203.99	206.16	158.41	47.75	4.317	
6,900.00	6,899.07	6,880.07	6,867.74	24.51	24.42	89.72	54.67	217.19	219.51	171.06	48.46	4.530	
7,000.00	6,999.00	6,979.17	6,965.88	24.87	24.79	89.61	58.72	230.39	232.87	183.70	49.17	4.736	
7,100.00	7,098.94	7,078.28	7,064.01	25.23	25.15	89.52	62.78	243.59	246.22	196.34	49.87	4.937	
7,200.00	7,198.88	7,177.38	7,162.15	25.58	25.52	89.44	66.84	256.80	259.57	208.99	50.58	5.132	
7,300.00	7,298.81	7,276.48	7,260.29	25.94	25.89	89.36	70.90	270.00	272.92	221.63	51.29	5.321	
7,400.00	7,398.75	7,375.59	7,358.42	26.30	26.26	89.29	74.96	283.20	286.28	234.28	52.00	5.506	
7,500.00	7,498.69	7,474.69	7,456.56	26.66	26.63	89.23	79.01	296.40	299.63	246.92	52.71	5.685	

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

Aim Directional Services, LLC

Anticollision Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Reference Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	3U #7H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Planning	Database:	EDMRESTORED
Reference Design:	Lateral 1r0	Offset TVD Reference:	Offset Datum

Offset Design: Loco Dinero 36 State Com 3U #8H - 3U #8H - Planning - Lateral 1r0													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Rule Assigned:		Distance	Minimum	Separation	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
7,600.00	7,598.63	7,573.79	7,554.70	27.02	27.00	89.17	83.07	309.60	312.98	259.57	53.42	5.859	
7,700.00	7,698.56	7,672.90	7,652.83	27.38	27.38	89.12	87.13	322.81	326.34	272.21	54.13	6.029	
7,800.00	7,798.50	7,772.00	7,750.97	27.74	27.75	89.07	91.19	336.01	339.69	284.85	54.84	6.194	
7,900.00	7,898.44	7,871.11	7,849.11	28.09	28.13	89.03	95.25	349.21	353.05	297.50	55.55	6.355	
8,000.00	7,998.37	7,970.21	7,947.25	28.45	28.50	88.99	99.31	362.41	366.40	310.14	56.26	6.512	
8,100.00	8,098.31	8,069.31	8,045.38	28.81	28.88	88.95	103.36	375.61	379.75	322.78	56.97	6.665	
8,200.00	8,198.25	8,168.42	8,143.52	29.17	29.25	88.91	107.42	388.82	393.11	335.42	57.69	6.815	
8,300.00	8,298.19	8,267.52	8,241.66	29.53	29.63	88.88	111.48	402.02	406.47	348.06	58.40	6.960	
8,400.00	8,398.12	8,366.63	8,339.79	29.89	30.01	88.85	115.54	415.22	419.82	360.71	59.11	7.102	
8,500.00	8,498.06	8,465.73	8,437.93	30.25	30.39	88.82	119.60	428.42	433.18	373.35	59.83	7.240	
8,600.00	8,598.00	8,564.83	8,536.07	30.61	30.77	88.79	123.65	441.62	446.53	385.99	60.54	7.375	
8,700.00	8,697.93	8,663.94	8,634.20	30.96	31.15	88.76	127.71	454.83	459.89	398.63	61.26	7.507	
8,800.00	8,797.87	8,763.04	8,732.34	31.32	31.53	88.74	131.77	468.03	473.24	411.27	61.97	7.636	
8,900.00	8,897.81	8,862.15	8,830.48	31.68	31.91	88.72	135.83	481.23	486.60	423.91	62.69	7.762	
9,000.00	8,997.74	8,961.25	8,928.61	32.04	32.29	88.69	139.89	494.43	499.95	436.55	63.40	7.885	
9,100.00	9,097.68	9,060.35	9,026.75	32.40	32.67	88.67	143.94	507.63	513.31	449.19	64.12	8.005	
9,200.00	9,197.62	9,159.46	9,124.89	32.76	33.06	88.65	148.00	520.84	526.67	461.83	64.84	8.123	
9,300.00	9,297.56	9,258.56	9,223.02	33.12	33.44	88.64	152.06	534.04	540.02	474.47	65.55	8.238	
9,400.00	9,397.49	9,357.67	9,321.16	33.48	33.82	88.62	156.12	547.24	553.38	487.11	66.27	8.350	
9,500.00	9,497.43	9,456.77	9,419.30	33.84	34.21	88.60	160.18	560.44	566.73	499.75	66.99	8.460	
9,600.00	9,597.37	9,555.87	9,517.43	34.20	34.59	88.58	164.24	573.64	580.09	512.38	67.71	8.568	
9,700.00	9,697.30	9,656.55	9,617.13	34.56	34.98	88.57	168.35	587.04	593.43	524.98	68.44	8.670	
9,800.00	9,797.24	9,756.95	9,726.63	34.92	35.41	88.59	172.47	600.45	605.60	536.31	69.29	8.740	
9,900.00	9,897.18	9,877.80	9,836.84	35.28	35.83	88.66	175.99	611.88	615.92	545.80	70.13	8.783	
10,000.00	9,997.11	9,989.04	9,947.63	35.64	36.24	88.78	178.88	621.30	624.39	553.45	70.94	8.801	
10,100.00	10,097.05	10,100.57	10,058.90	35.99	36.65	88.95	181.15	628.69	630.99	559.25	71.74	8.795	
10,200.00	10,196.99	10,212.32	10,170.51	36.35	37.05	89.17	182.79	634.00	635.73	563.20	72.52	8.766	
10,300.00	10,296.93	10,324.20	10,282.33	36.71	37.45	89.45	183.78	637.24	638.60	565.31	73.28	8.714	
10,370.32	10,367.21	10,402.91	10,361.03	36.97	37.72	89.67	184.10	638.27	639.50	565.70	73.80	8.665	
10,400.00	10,396.87	10,436.13	10,394.25	37.07	37.84	89.76	184.14	638.40	639.61	565.58	74.02	8.641	
10,500.00	10,496.84	10,536.72	10,494.84	37.43	38.18	89.96	184.14	638.40	639.60	564.87	74.74	8.558	
10,558.52	10,555.36	10,595.24	10,553.36	37.64	38.39	90.00	184.14	638.40	639.60	564.45	75.15	8.511	
10,573.66	10,570.50	10,610.38	10,568.50	37.70	38.44	89.62	184.14	638.40	639.60	564.35	75.26	8.499	
10,600.00	10,596.84	10,636.72	10,594.84	37.79	38.53	89.62	184.14	638.40	639.60	564.16	75.44	8.478	
10,601.80	10,598.64	10,638.52	10,596.64	37.80	38.54	89.62	184.14	638.40	639.60	564.15	75.46	8.476	
10,700.00	10,696.84	10,719.13	10,677.25	38.15	38.82	89.63	184.12	638.58	640.03	563.92	76.11	8.409	
10,773.66	10,770.50	10,750.00	10,708.06	38.41	38.93	89.65	183.87	640.42	644.46	568.11	76.35	8.440	
10,775.00	10,771.84	10,750.00	10,708.06	38.42	38.93	-129.59	183.87	640.42	644.59	568.24	76.35	8.442	
10,800.00	10,796.83	10,761.83	10,719.82	38.50	38.97	-129.31	183.71	641.65	647.67	571.28	76.39	8.479	
10,825.00	10,821.74	10,775.00	10,732.88	38.58	39.02	-128.95	183.48	643.35	652.12	575.70	76.42	8.533	
10,850.00	10,846.51	10,782.57	10,740.36	38.66	39.05	-128.45	183.33	644.49	657.88	581.52	76.37	8.615	
10,875.00	10,871.08	10,792.60	10,750.25	38.74	39.09	-127.87	183.11	646.19	664.96	588.64	76.32	8.713	
10,900.00	10,895.37	10,800.00	10,757.52	38.81	39.12	-127.13	182.92	647.57	673.31	597.09	76.22	8.834	
10,925.00	10,919.32	10,811.76	10,769.02	38.89	39.17	-126.35	182.60	649.99	682.86	606.68	76.18	8.964	
10,950.00	10,942.86	10,825.00	10,781.89	38.96	39.22	-125.50	182.20	653.06	693.62	617.46	76.17	9.107	
10,975.00	10,965.92	10,825.00	10,781.89	39.03	39.22	-124.17	182.20	653.06	705.48	629.59	75.89	9.296	
11,000.00	10,988.46	10,837.64	10,794.10	39.10	39.27	-123.04	181.77	656.31	718.36	642.48	75.88	9.467	
11,025.00	11,010.39	10,850.00	10,805.95	39.17	39.32	-121.79	181.30	659.80	732.31	656.44	75.86	9.653	
11,050.00	11,031.67	10,850.00	10,805.95	39.24	39.32	-119.89	181.30	659.80	747.14	671.54	75.59	9.884	
11,075.00	11,052.23	10,859.43	10,814.92	39.31	39.36	-118.19	180.92	662.67	762.85	687.31	75.55	10.098	
11,100.00	11,072.02	10,865.70	10,820.86	39.38	39.39	-116.15	180.66	664.67	779.39	703.94	75.44	10.331	
11,125.00	11,090.98	10,875.00	10,829.61	39.44	39.43	-114.08	180.25	667.78	796.68	721.25	75.43	10.562	

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

Aim Directional Services, LLC

Anticollision Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Reference Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	3U #7H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Planning	Database:	EDMRESTORED
Reference Design:	Lateral 1r0	Offset TVD Reference:	Offset Datum

Offset Design: Loco Dinero 36 State Com 3U #8H - 3U #8H - Planning - Lateral 1r0													Offset Site Error: 0.00 usft
Survey Program:	0-MWD+HDGM												Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance	Rule Assigned:	Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
11,150.00	11,109.06	10,875.00	10,829.61	39.51	39.43	-111.23	180.25	667.78	814.61	739.39	75.22	10.830	
11,175.00	11,126.22	10,875.00	10,829.61	39.57	39.43	-108.08	180.25	667.78	833.22	758.18	75.03	11.105	
11,200.00	11,142.40	10,885.71	10,839.61	39.64	39.48	-105.47	179.74	671.58	852.23	777.10	75.12	11.344	
11,225.00	11,157.56	10,889.44	10,843.08	39.70	39.50	-102.12	179.56	672.95	871.77	796.70	75.08	11.612	
11,250.00	11,171.66	10,900.00	10,852.82	39.77	39.54	-99.14	179.03	676.98	891.80	816.60	75.21	11.858	
11,273.66	11,184.00	10,900.00	10,852.82	39.83	39.54	-95.27	179.03	676.98	910.94	835.81	75.13	12.125	
11,275.00	11,184.67	10,900.00	10,852.82	39.83	39.54	-95.06	179.03	676.98	912.03	836.91	75.12	12.140	
11,300.00	11,196.84	10,900.00	10,852.82	39.90	39.54	-91.30	179.03	676.98	932.18	857.13	75.06	12.420	
11,325.00	11,208.40	10,900.00	10,852.82	39.97	39.54	-87.92	179.03	676.98	951.93	876.93	75.00	12.692	
11,350.00	11,219.31	10,900.00	10,852.82	40.04	39.54	-84.86	179.03	676.98	971.23	896.27	74.95	12.958	
11,375.00	11,229.55	10,900.00	10,852.82	40.11	39.54	-82.11	179.03	676.98	990.06	915.14	74.92	13.215	
11,400.00	11,239.08	10,900.00	10,852.82	40.18	39.54	-79.63	179.03	676.98	1,008.40	933.50	74.90	13.464	
11,425.00	11,247.88	10,900.00	10,852.82	40.24	39.54	-77.40	179.03	676.98	1,026.23	951.34	74.89	13.704	
11,450.00	11,255.93	10,909.89	10,861.86	40.31	39.59	-76.12	178.50	680.95	1,043.38	968.29	75.09	13.894	
11,475.00	11,263.20	10,911.44	10,863.27	40.37	39.60	-74.42	178.42	681.59	1,060.08	984.94	75.13	14.109	
11,500.00	11,269.68	10,912.87	10,864.57	40.43	39.60	-72.90	178.34	682.19	1,076.20	1,001.01	75.18	14.315	
11,525.00	11,275.34	10,914.18	10,865.76	40.49	39.61	-71.55	178.26	682.73	1,091.72	1,016.49	75.23	14.511	
11,550.00	11,280.18	10,915.37	10,866.83	40.55	39.62	-70.35	178.20	683.23	1,106.64	1,031.35	75.30	14.697	
11,575.00	11,284.17	10,916.44	10,867.80	40.60	39.62	-69.31	178.14	683.68	1,120.94	1,045.58	75.36	14.874	
11,600.00	11,287.30	10,925.00	10,875.51	40.65	39.66	-68.86	177.65	687.38	1,134.68	1,059.11	75.58	15.014	
11,625.00	11,289.58	10,925.00	10,875.51	40.70	39.66	-68.02	177.65	687.38	1,147.68	1,072.04	75.64	15.174	
11,650.00	11,290.98	10,925.00	10,875.51	40.74	39.66	-67.33	177.65	687.38	1,160.02	1,084.32	75.70	15.323	
11,673.45	11,291.51	10,925.00	10,875.51	40.78	39.66	-66.80	177.65	687.38	1,170.99	1,095.21	75.77	15.454	
11,700.00	11,291.67	10,925.00	10,875.51	40.83	39.66	-66.80	177.65	687.38	1,183.30	1,107.44	75.86	15.598	
11,800.00	11,292.28	10,925.00	10,875.51	41.01	39.66	-66.80	177.65	687.38	1,233.71	1,157.51	76.21	16.189	
11,900.00	11,292.88	10,925.00	10,875.51	41.25	39.66	-66.80	177.65	687.38	1,289.92	1,213.35	76.57	16.847	
12,000.00	11,293.49	10,925.00	10,875.51	41.52	39.66	-66.80	177.65	687.38	1,351.20	1,274.28	76.93	17.565	
12,100.00	11,294.10	10,925.00	10,875.51	41.85	39.66	-66.80	177.65	687.38	1,416.90	1,339.63	77.27	18.336	
12,200.00	11,294.70	10,925.00	10,875.51	42.23	39.66	-66.80	177.65	687.38	1,486.42	1,408.82	77.60	19.155	
12,300.00	11,295.31	12,557.12	11,295.25	42.65	47.34	-90.07	-977.26	1,244.22	1,506.49	1,420.97	85.51	17.617	
12,400.00	11,295.91	12,657.12	11,295.85	43.12	47.77	-90.07	-1,077.25	1,244.82	1,506.33	1,419.80	86.53	17.408	
12,500.00	11,296.52	12,757.12	11,296.46	43.64	48.24	-90.07	-1,177.25	1,245.43	1,506.17	1,418.53	87.63	17.187	
12,600.00	11,297.12	12,857.12	11,297.07	44.20	48.75	-90.07	-1,277.25	1,246.03	1,506.01	1,417.19	88.82	16.956	
12,700.00	11,297.73	12,957.12	11,297.68	44.80	49.29	-90.07	-1,377.24	1,246.64	1,505.85	1,415.77	90.08	16.716	
12,800.00	11,298.34	13,057.12	11,298.28	45.43	49.87	-90.07	-1,477.24	1,247.24	1,505.69	1,414.27	91.42	16.470	
12,900.00	11,298.94	13,157.12	11,298.89	46.11	50.49	-90.07	-1,577.23	1,247.85	1,505.54	1,412.70	92.83	16.218	
13,000.00	11,299.55	13,257.12	11,299.50	46.83	51.15	-90.07	-1,677.23	1,248.46	1,505.38	1,411.07	94.31	15.962	
13,100.00	11,300.15	13,357.12	11,300.10	47.57	51.84	-90.07	-1,777.23	1,249.06	1,505.22	1,409.36	95.86	15.703	
13,200.00	11,300.76	13,457.12	11,300.71	48.35	52.56	-90.07	-1,877.22	1,249.67	1,505.06	1,407.60	97.46	15.443	
13,300.00	11,301.36	13,557.12	11,301.32	49.16	53.32	-90.07	-1,977.22	1,250.27	1,504.90	1,405.77	99.13	15.182	
13,400.00	11,301.97	13,657.12	11,301.93	50.01	54.10	-90.07	-2,077.21	1,250.88	1,504.74	1,403.89	100.85	14.921	
13,500.00	11,302.58	13,757.12	11,302.53	50.87	54.92	-90.07	-2,177.21	1,251.48	1,504.58	1,401.96	102.62	14.661	
13,600.00	11,303.18	13,857.12	11,303.14	51.77	55.76	-90.07	-2,277.21	1,252.09	1,504.43	1,399.97	104.45	14.403	
13,700.00	11,303.79	13,957.12	11,303.75	52.69	56.63	-90.07	-2,377.20	1,252.69	1,504.27	1,397.94	106.33	14.148	
13,800.00	11,304.39	14,057.12	11,304.35	53.63	57.53	-90.07	-2,477.20	1,253.30	1,504.11	1,395.86	108.25	13.895	
13,900.00	11,305.00	14,157.12	11,304.96	54.60	58.45	-90.07	-2,577.20	1,253.90	1,503.95	1,393.74	110.21	13.646	
14,000.00	11,305.61	14,257.12	11,305.57	55.59	59.39	-90.07	-2,677.19	1,254.51	1,503.79	1,391.58	112.21	13.401	
14,100.00	11,306.21	14,357.12	11,306.18	56.60	60.35	-90.07	-2,777.19	1,255.12	1,503.63	1,389.38	114.26	13.160	
14,200.00	11,306.82	14,457.12	11,306.78	57.63	61.34	-90.07	-2,877.18	1,255.72	1,503.47	1,387.14	116.34	12.923	
14,300.00	11,307.42	14,557.12	11,307.39	58.67	62.34	-90.07	-2,977.18	1,256.33	1,503.32	1,384.86	118.45	12.691	
14,400.00	11,308.03	14,657.12	11,308.00	59.73	63.36	-90.07	-3,077.18	1,256.93	1,503.16	1,382.56	120.60	12.464	
14,500.00	11,308.63	14,757.11	11,308.60	60.81	64.40	-90.07	-3,177.17	1,257.54	1,503.00	1,380.22	122.78	12.242	

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

Aim Directional Services, LLC

Anticollision Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Reference Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	3U #7H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Planning	Database:	EDMRESTORED
Reference Design:	Lateral 1r0	Offset TVD Reference:	Offset Datum

Offset Design: Loco Dinero 36 State Com 3U #8H - 3U #8H - Planning - Lateral 1r0													Offset Site Error: 0.00 usft
Survey Program:	0-MWD+HDGM												Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Rule Assigned:								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,600.00	11,309.24	14,857.11	11,309.21	61.91	65.46	-90.07	-3,277.17	1,258.14	1,502.84	1,377.85	124.99	12.024	
14,700.00	11,309.85	14,957.11	11,309.82	63.02	66.53	-90.07	-3,377.17	1,258.75	1,502.68	1,375.46	127.22	11.811	
14,800.00	11,310.45	15,057.11	11,310.43	64.14	67.62	-90.07	-3,477.16	1,259.35	1,502.52	1,373.04	129.49	11.604	
14,900.00	11,311.06	15,157.11	11,311.03	65.28	68.72	-90.07	-3,577.16	1,259.96	1,502.37	1,370.59	131.78	11.401	
15,000.00	11,311.66	15,257.11	11,311.64	66.43	69.84	-90.07	-3,677.15	1,260.56	1,502.21	1,368.12	134.09	11.203	
15,100.00	11,312.27	15,357.11	11,312.25	67.59	70.97	-90.07	-3,777.15	1,261.17	1,502.05	1,365.62	136.42	11.010	
15,200.00	11,312.87	15,457.11	11,312.85	68.76	72.11	-90.07	-3,877.15	1,261.78	1,501.89	1,363.11	138.78	10.822	
15,300.00	11,313.48	15,557.11	11,313.46	69.94	73.26	-90.08	-3,977.14	1,262.38	1,501.73	1,360.57	141.16	10.639	
15,400.00	11,314.09	15,657.11	11,314.07	71.13	74.42	-90.08	-4,077.14	1,262.99	1,501.57	1,358.02	143.56	10.460	
15,500.00	11,314.69	15,757.11	11,314.68	72.33	75.59	-90.08	-4,177.13	1,263.59	1,501.41	1,355.44	145.97	10.286	
15,600.00	11,315.30	15,857.11	11,315.28	73.55	76.78	-90.08	-4,277.13	1,264.20	1,501.26	1,352.85	148.41	10.116	
15,700.00	11,315.90	15,957.11	11,315.89	74.77	77.97	-90.08	-4,377.13	1,264.80	1,501.10	1,350.24	150.86	9.951	
15,800.00	11,316.51	16,057.11	11,316.50	75.99	79.17	-90.08	-4,477.12	1,265.41	1,500.94	1,347.62	153.32	9.789	
15,900.00	11,317.12	16,157.11	11,317.11	77.23	80.38	-90.08	-4,577.12	1,266.01	1,500.78	1,344.98	155.80	9.633	
16,000.00	11,317.72	16,257.11	11,317.71	78.47	81.60	-90.08	-4,677.12	1,266.62	1,500.62	1,342.32	158.30	9.480	
16,100.00	11,318.33	16,357.11	11,318.32	79.72	82.83	-90.08	-4,777.11	1,267.22	1,500.46	1,339.65	160.81	9.331	
16,200.00	11,318.93	16,457.11	11,318.93	80.98	84.06	-90.08	-4,877.11	1,267.83	1,500.30	1,336.97	163.33	9.186	
16,300.00	11,319.54	16,557.11	11,319.53	82.25	85.30	-90.08	-4,977.10	1,268.44	1,500.15	1,334.28	165.87	9.044	
16,376.20	11,320.00	16,633.32	11,320.00	83.21	86.25	-90.08	-5,053.31	1,268.90	1,500.03	1,332.22	167.81	8.939	

Aim Directional Services, LLC

Anticollision Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Well 3U #7H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	Updated @ 3670.00usft (25' KB)
Reference Site:	Loco Dinero 36 State Com 3U #7H	MD Reference:	Updated @ 3670.00usft (25' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	3U #7H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Planning	Database:	EDMRESTORED
Reference Design:	Lateral 1r0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Updated @ 3670.00usft (25' KB)

Offset Depths are relative to Offset Datum

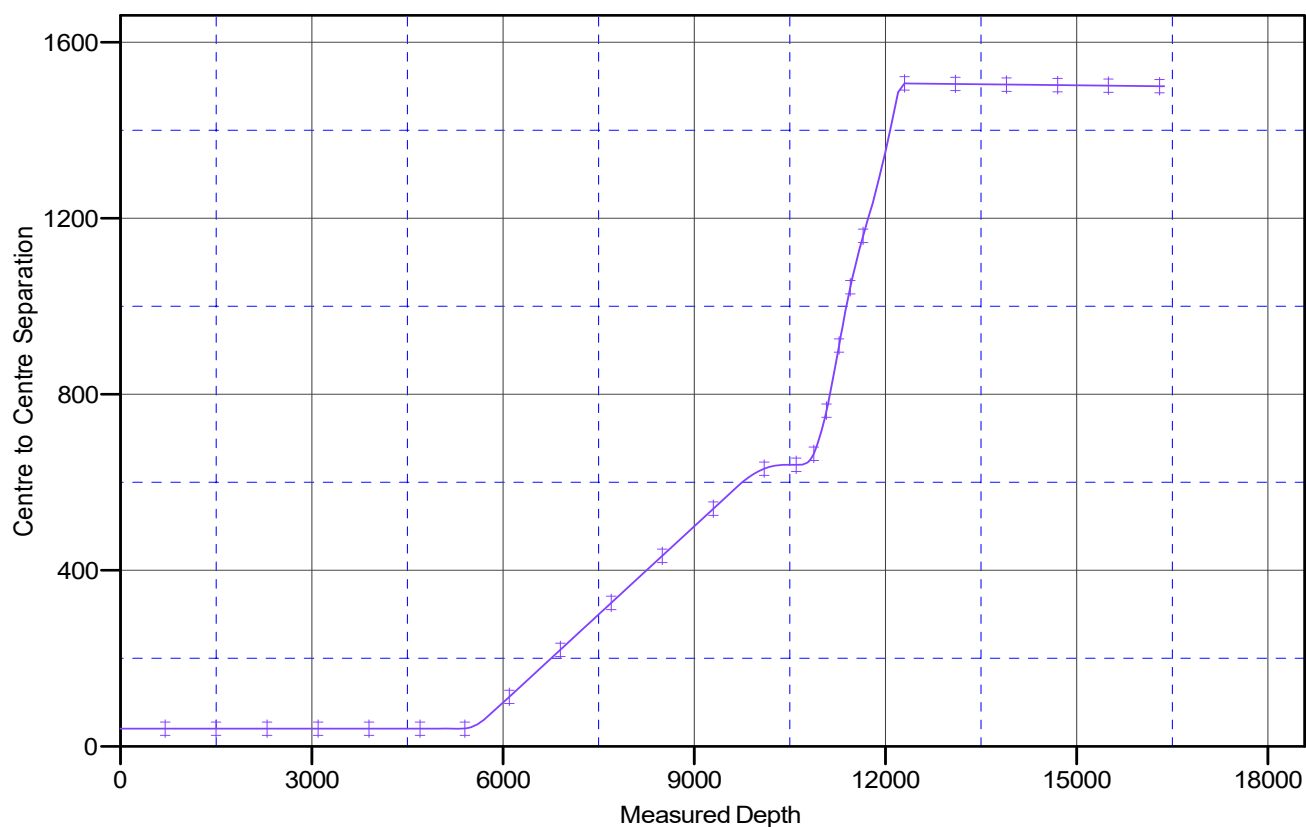
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 3U #7H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.43°

Ladder Plot



LEGEND

 3U #8H, Planning, Lateral 1r0 VO

Aim Directional Services, LLC

Anticollision Report

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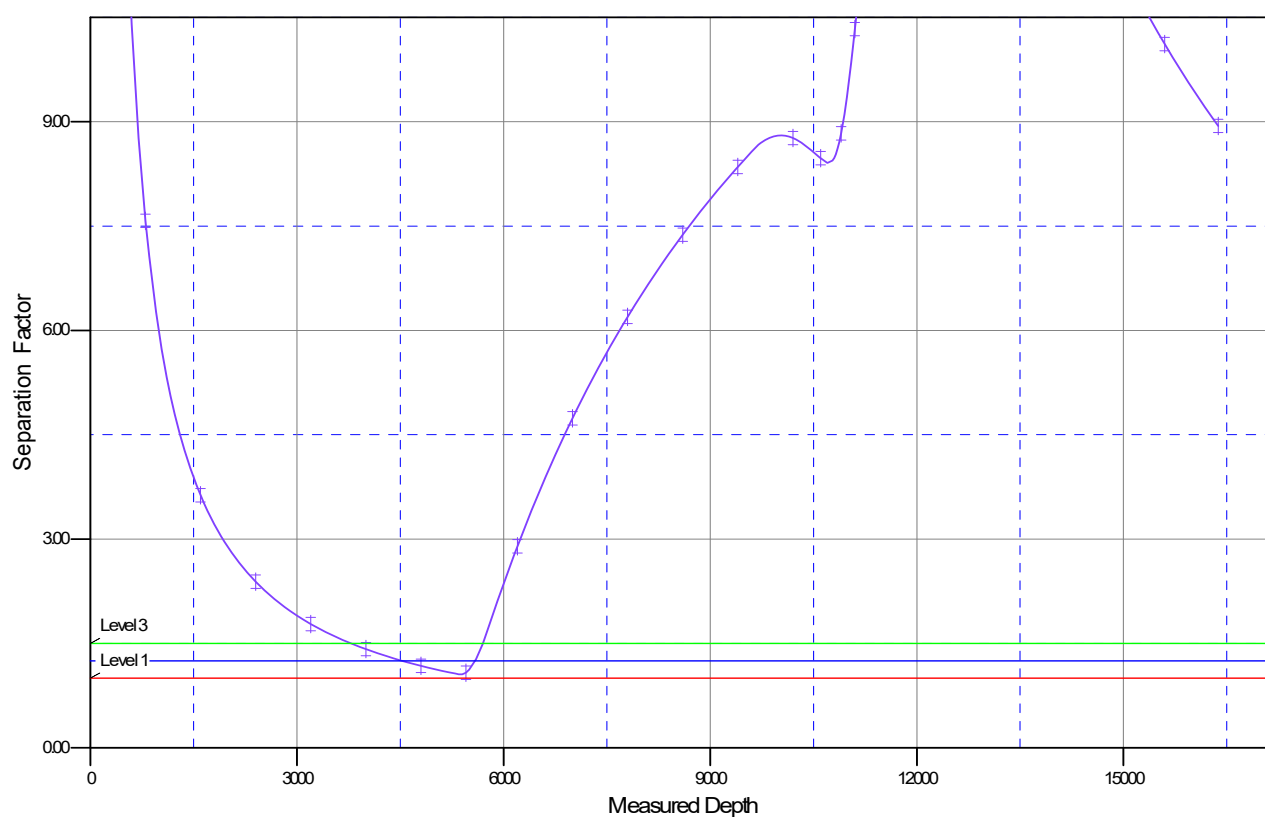
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Separation Factor Plot



LEGEND

—●— 3U #8H, Planning, Lateral 1r0 V0

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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:** 11 / 2 / 2021

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
Loco Dinero 36 State Com 7H		UL B, Sec 36, T21S, R33E	200' FNL 1560' FEL	800	950	500

IV. Central Delivery Point Name: Loco Dinero 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
Loco Dinero 36 State Com 7H		2/24/21	3/25/21	5/25/21	6/10/21	6/10/21 Estimated

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

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

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

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

Marshall & Winston, Inc.

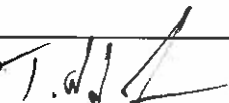
Natural Gas Management Plan ~ Attachment

- VI. Marshall & Winston, Inc. (M&W) engineering staff will utilize separation equipment based on capacities suggested by the manufacturer in conjunction with anticipated daily production rates. Engineered design of the VRU system along with pipe sizing will be verified by COMM Engineering Services to ensure maximum efficiency for anticipated volumes.

- VII. M&W will take the following actions to comply with the regulations listed in 19.15.28.8:
 - A. M&W plans to efficiently recover natural gas by minimizing waste gas as defined in 19.15.2 NMAC. M&W will ensure each new well drilled and completed is connected to a natural gas gathering system before the well is on line. If the natural gas gathering infrastructure is not in place the well will be delayed or shut in until the gathering system is available.
 - B. Drilling operations are equipped with a flare located at least 100 ft from the 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.

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: 11/3/2021
Phone: 432-684-6373
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval: