

30-025-44653

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AMEREDEV

Ameredev Operating, LLC

Lea County, NM (NAD83 NME)
(Magnolia) Sec-27_T-26-S_R-36-E
Magnolia State Com 26-36-22 #105H

OWB

Plan: Plan #1

Standard Planning Report

02 April, 2018

INTREPID

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #105H
Company:	Amerdev Operating, LLC	TVD Reference:	KB @ 2933.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2933.0usft (H&P 616)
Site:	(Magnolia) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

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

Site	(Magnolia) Sec-27_T-26-S_R-36-E		
Site Position:		Northing:	373,046.00 usft
From:	Map	Easting:	876,423.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 15.509 N
		Longitude:	103° 15' 7.750 W
		Grid Convergence:	0.57 °

Well	Magnolia State Com 26-36-22 #105H		
Well Position	+N/-S	0.0 usft	Northing: 373,046.00 usft
	+E/-W	0.0 usft	Easting: 876,423.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32° 1' 15.509 N
			Longitude: 103° 15' 7.750 W
			Ground Level: 2,906.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	04/02/18	6.70	59.92	47,773.01080064

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.70

Plan Survey Tool Program	Date	04/02/18		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,999.3 Plan #1 (OWB)	MWD	
			MWD - Standard	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,145.6	2.91	212.01	2,145.6	-3.1	-2.0	2.00	2.00	0.00	212.01	
3,856.7	2.91	212.01	3,854.4	-76.9	-48.0	0.00	0.00	0.00	0.00	
4,002.3	0.00	0.00	4,000.0	-80.0	-50.0	2.00	-2.00	0.00	180.00	
11,029.3	0.00	0.00	11,027.0	-80.0	-50.0	0.00	0.00	0.00	0.00	
11,929.3	90.00	6.60	11,600.0	489.2	15.9	10.00	10.00	0.00	6.60	
12,285.8	90.00	359.47	11,600.0	844.9	34.7	2.00	0.00	-2.00	-90.00	
21,999.3	90.00	359.47	11,600.0	10,558.0	-55.0	0.00	0.00	0.00	0.00	0.00 PBHL (Magnolia St

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Site:	(Magnolia) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
NUDGE - Build 2.00									
2,100.0	2.00	212.01	2,100.0	-1.5	-0.9	-1.5	2.00	2.00	0.00
2,145.6	2.91	212.01	2,145.6	-3.1	-2.0	-3.1	2.00	2.00	0.00
HOLD - 1711.1 at 2145.6 MD									
2,200.0	2.91	212.01	2,199.9	-5.5	-3.4	-5.5	0.00	0.00	0.00
2,300.0	2.91	212.01	2,299.7	-9.8	-6.1	-9.8	0.00	0.00	0.00
2,400.0	2.91	212.01	2,399.6	-14.1	-8.8	-14.1	0.00	0.00	0.00
2,500.0	2.91	212.01	2,499.5	-18.4	-11.5	-18.3	0.00	0.00	0.00
2,600.0	2.91	212.01	2,599.4	-22.7	-14.2	-22.6	0.00	0.00	0.00
2,700.0	2.91	212.01	2,699.2	-27.0	-16.9	-26.9	0.00	0.00	0.00
2,800.0	2.91	212.01	2,799.1	-31.3	-19.6	-31.2	0.00	0.00	0.00
2,900.0	2.91	212.01	2,899.0	-35.6	-22.3	-35.5	0.00	0.00	0.00
3,000.0	2.91	212.01	2,998.8	-39.9	-25.0	-39.8	0.00	0.00	0.00
3,100.0	2.91	212.01	3,098.7	-44.3	-27.7	-44.1	0.00	0.00	0.00
3,200.0	2.91	212.01	3,198.6	-48.6	-30.4	-48.4	0.00	0.00	0.00
3,300.0	2.91	212.01	3,298.4	-52.9	-33.0	-52.7	0.00	0.00	0.00
3,400.0	2.91	212.01	3,398.3	-57.2	-35.7	-57.0	0.00	0.00	0.00
3,500.0	2.91	212.01	3,498.2	-61.5	-38.4	-61.3	0.00	0.00	0.00
3,600.0	2.91	212.01	3,598.1	-65.8	-41.1	-65.6	0.00	0.00	0.00
3,700.0	2.91	212.01	3,697.9	-70.1	-43.8	-69.9	0.00	0.00	0.00
3,800.0	2.91	212.01	3,797.8	-74.4	-46.5	-74.2	0.00	0.00	0.00
3,856.7	2.91	212.01	3,854.4	-76.9	-48.0	-76.6	0.00	0.00	0.00
DROP - -2.00									
3,900.0	2.05	212.01	3,897.7	-78.5	-49.0	-78.2	2.00	-2.00	0.00
4,002.3	0.00	0.00	4,000.0	-80.0	-50.0	-79.7	2.00	-2.00	0.00
HOLD - 7027.0 at 4002.3 MD									
4,100.0	0.00	0.00	4,097.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
4,200.0	0.00	0.00	4,197.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
4,300.0	0.00	0.00	4,297.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
4,400.0	0.00	0.00	4,397.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
4,500.0	0.00	0.00	4,497.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
4,600.0	0.00	0.00	4,597.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
4,700.0	0.00	0.00	4,697.7	-80.0	-50.0	-79.7	0.00	0.00	0.00

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Planned Survey									
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4,800.0	0.00	0.00	4,797.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
4,900.0	0.00	0.00	4,897.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,000.0	0.00	0.00	4,997.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,100.0	0.00	0.00	5,097.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,200.0	0.00	0.00	5,197.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,300.0	0.00	0.00	5,297.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,400.0	0.00	0.00	5,397.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,500.0	0.00	0.00	5,497.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,600.0	0.00	0.00	5,597.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,700.0	0.00	0.00	5,697.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,800.0	0.00	0.00	5,797.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
5,900.0	0.00	0.00	5,897.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,000.0	0.00	0.00	5,997.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,100.0	0.00	0.00	6,097.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,200.0	0.00	0.00	6,197.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,300.0	0.00	0.00	6,297.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,397.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,500.0	0.00	0.00	6,497.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,597.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,700.0	0.00	0.00	6,697.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,797.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
6,900.0	0.00	0.00	6,897.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,997.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,100.0	0.00	0.00	7,097.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,200.0	0.00	0.00	7,197.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,300.0	0.00	0.00	7,297.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,400.0	0.00	0.00	7,397.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,500.0	0.00	0.00	7,497.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,600.0	0.00	0.00	7,597.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,700.0	0.00	0.00	7,697.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,797.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
7,900.0	0.00	0.00	7,897.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,000.0	0.00	0.00	7,997.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,100.0	0.00	0.00	8,097.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,200.0	0.00	0.00	8,197.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,300.0	0.00	0.00	8,297.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,400.0	0.00	0.00	8,397.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,500.0	0.00	0.00	8,497.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,600.0	0.00	0.00	8,597.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,700.0	0.00	0.00	8,697.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,800.0	0.00	0.00	8,797.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
8,900.0	0.00	0.00	8,897.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,000.0	0.00	0.00	8,997.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,100.0	0.00	0.00	9,097.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,200.0	0.00	0.00	9,197.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,300.0	0.00	0.00	9,297.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,400.0	0.00	0.00	9,397.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,500.0	0.00	0.00	9,497.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,600.0	0.00	0.00	9,597.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,700.0	0.00	0.00	9,697.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,800.0	0.00	0.00	9,797.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
9,900.0	0.00	0.00	9,897.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,000.0	0.00	0.00	9,997.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,100.0	0.00	0.00	10,097.7	-80.0	-50.0	-79.7	0.00	0.00	0.00

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Well:	Magnolia State Com 26-36-22 #105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
10,200.0	0.00	0.00	10,197.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,300.0	0.00	0.00	10,297.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,400.0	0.00	0.00	10,397.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,500.0	0.00	0.00	10,497.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,600.0	0.00	0.00	10,597.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,700.0	0.00	0.00	10,697.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,800.0	0.00	0.00	10,797.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
10,900.0	0.00	0.00	10,897.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
11,000.0	0.00	0.00	10,997.7	-80.0	-50.0	-79.7	0.00	0.00	0.00
11,029.3	0.00	0.00	11,027.0	-80.0	-50.0	-79.7	0.00	0.00	0.00
KOP - Build 10.00, 279'4"FNL & 241.3'FEL									
11,050.0	2.07	6.60	11,047.7	-79.6	-50.0	-79.4	10.00	10.00	0.00
11,100.0	7.07	6.60	11,097.5	-75.7	-49.5	-75.4	10.00	10.00	0.00
11,150.0	12.07	6.60	11,146.8	-67.4	-48.5	-67.2	10.00	10.00	0.00
11,200.0	17.07	6.60	11,195.2	-54.9	-47.1	-54.7	10.00	10.00	0.00
11,250.0	22.07	6.60	11,242.2	-38.3	-45.2	-38.1	10.00	10.00	0.00
11,300.0	27.07	6.60	11,287.7	-17.7	-42.8	-17.4	10.00	10.00	0.00
11,350.0	32.07	6.60	11,331.2	6.8	-40.0	7.0	10.00	10.00	0.00
11,400.0	37.07	6.60	11,372.3	35.0	-36.7	35.2	10.00	10.00	0.00
11,450.0	42.07	6.60	11,410.9	66.6	-33.0	66.8	10.00	10.00	0.00
11,500.0	47.07	6.60	11,446.5	101.5	-29.0	101.6	10.00	10.00	0.00
11,550.0	52.07	6.60	11,478.9	139.3	-24.6	139.4	10.00	10.00	0.00
11,600.0	57.07	6.60	11,507.9	179.7	-19.9	179.8	10.00	10.00	0.00
11,623.6	59.43	6.60	11,520.3	199.7	-17.6	199.7	10.00	10.00	0.00
Sec 27 & 22 Crossing, 0'FSL & 2376.2'FEL									
11,650.0	62.07	6.60	11,533.2	222.5	-15.0	222.6	10.00	10.00	0.00
11,700.0	67.07	6.60	11,554.7	267.4	-9.8	267.4	10.00	10.00	0.00
11,750.0	72.07	6.60	11,572.1	313.9	-4.4	313.9	10.00	10.00	0.00
11,800.0	77.07	6.60	11,585.4	361.8	1.1	361.8	10.00	10.00	0.00
11,850.0	82.07	6.60	11,594.5	410.6	6.8	410.6	10.00	10.00	0.00
11,900.0	87.07	6.60	11,599.2	460.0	12.5	460.0	10.00	10.00	0.00
11,929.3	90.00	6.60	11,600.0	489.2	15.9	489.1	10.00	10.00	0.00
EOC/TRN - DLS 2.00 TFO -90.00									
12,000.0	90.00	5.19	11,600.0	559.4	23.1	559.3	2.00	0.00	-2.00
12,100.0	90.00	3.19	11,600.0	659.2	30.4	659.0	2.00	0.00	-2.00
12,200.0	90.00	1.19	11,600.0	759.1	34.2	758.9	2.00	0.00	-2.00
12,285.8	90.00	359.47	11,600.0	844.9	34.7	844.7	2.00	0.00	-2.00
Start 9713.5 hold at 12285.8 MD									
12,300.0	90.00	359.47	11,600.0	859.1	34.6	858.9	0.00	0.00	0.00
12,400.0	90.00	359.47	11,600.0	959.1	33.7	958.9	0.00	0.00	0.00
12,500.0	90.00	359.47	11,600.0	1,059.1	32.7	1,058.9	0.00	0.00	0.00
12,600.0	90.00	359.47	11,600.0	1,159.1	31.8	1,158.9	0.00	0.00	0.00
12,700.0	90.00	359.47	11,600.0	1,259.1	30.9	1,258.9	0.00	0.00	0.00
12,800.0	90.00	359.47	11,600.0	1,359.1	30.0	1,358.9	0.00	0.00	0.00
12,900.0	90.00	359.47	11,600.0	1,459.1	29.0	1,458.9	0.00	0.00	0.00
13,000.0	90.00	359.47	11,600.0	1,559.1	28.1	1,558.9	0.00	0.00	0.00
13,100.0	90.00	359.47	11,600.0	1,659.1	27.2	1,658.9	0.00	0.00	0.00
13,200.0	90.00	359.47	11,600.0	1,759.1	26.3	1,758.9	0.00	0.00	0.00
13,300.0	90.00	359.47	11,600.0	1,859.1	25.4	1,858.9	0.00	0.00	0.00
13,400.0	90.00	359.47	11,600.0	1,959.0	24.4	1,958.9	0.00	0.00	0.00
13,500.0	90.00	359.47	11,600.0	2,059.0	23.5	2,058.9	0.00	0.00	0.00
13,600.0	90.00	359.47	11,600.0	2,159.0	22.6	2,158.9	0.00	0.00	0.00
13,700.0	90.00	359.47	11,600.0	2,259.0	21.7	2,258.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #105H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2933.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2933.0usft (H&P 616)
Site:	(Magnolia) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
13,800.0	90.00	359.47	11,600.0	2,359.0	20.7	2,358.9	0.00	0.00	0.00
13,900.0	90.00	359.47	11,600.0	2,459.0	19.8	2,458.9	0.00	0.00	0.00
14,000.0	90.00	359.47	11,600.0	2,559.0	18.9	2,558.9	0.00	0.00	0.00
14,100.0	90.00	359.47	11,600.0	2,659.0	18.0	2,658.9	0.00	0.00	0.00
14,200.0	90.00	359.47	11,600.0	2,759.0	17.0	2,758.9	0.00	0.00	0.00
14,277.8	90.00	359.47	11,600.0	2,836.8	16.3	2,836.7	0.00	0.00	0.00
Sec 22 midpoint, 2636.7'FSL & 2318'FEL									
14,300.0	90.00	359.47	11,600.0	2,859.0	16.1	2,858.9	0.00	0.00	0.00
14,400.0	90.00	359.47	11,600.0	2,959.0	15.2	2,958.9	0.00	0.00	0.00
14,500.0	90.00	359.47	11,600.0	3,059.0	14.3	3,058.9	0.00	0.00	0.00
14,600.0	90.00	359.47	11,600.0	3,159.0	13.3	3,158.9	0.00	0.00	0.00
14,700.0	90.00	359.47	11,600.0	3,259.0	12.4	3,258.9	0.00	0.00	0.00
14,800.0	90.00	359.47	11,600.0	3,359.0	11.5	3,358.9	0.00	0.00	0.00
14,900.0	90.00	359.47	11,600.0	3,459.0	10.6	3,458.9	0.00	0.00	0.00
15,000.0	90.00	359.47	11,600.0	3,559.0	9.6	3,558.9	0.00	0.00	0.00
15,100.0	90.00	359.47	11,600.0	3,659.0	8.7	3,658.9	0.00	0.00	0.00
15,200.0	90.00	359.47	11,600.0	3,759.0	7.8	3,758.9	0.00	0.00	0.00
15,300.0	90.00	359.47	11,600.0	3,859.0	6.9	3,858.9	0.00	0.00	0.00
15,400.0	90.00	359.47	11,600.0	3,959.0	6.0	3,958.9	0.00	0.00	0.00
15,500.0	90.00	359.47	11,600.0	4,059.0	5.0	4,058.9	0.00	0.00	0.00
15,600.0	90.00	359.47	11,600.0	4,159.0	4.1	4,158.9	0.00	0.00	0.00
15,700.0	90.00	359.47	11,600.0	4,258.9	3.2	4,258.9	0.00	0.00	0.00
15,800.0	90.00	359.47	11,600.0	4,358.9	2.3	4,358.9	0.00	0.00	0.00
15,900.0	90.00	359.47	11,600.0	4,458.9	1.3	4,458.9	0.00	0.00	0.00
16,000.0	90.00	359.47	11,600.0	4,558.9	0.4	4,558.9	0.00	0.00	0.00
16,100.0	90.00	359.47	11,600.0	4,658.9	-0.5	4,658.9	0.00	0.00	0.00
16,200.0	90.00	359.47	11,600.0	4,758.9	-1.4	4,758.9	0.00	0.00	0.00
16,300.0	90.00	359.47	11,600.0	4,858.9	-2.4	4,858.9	0.00	0.00	0.00
16,400.0	90.00	359.47	11,600.0	4,958.9	-3.3	4,958.9	0.00	0.00	0.00
16,500.0	90.00	359.47	11,600.0	5,058.9	-4.2	5,058.9	0.00	0.00	0.00
16,600.0	90.00	359.47	11,600.0	5,158.9	-5.1	5,158.9	0.00	0.00	0.00
16,700.0	90.00	359.47	11,600.0	5,258.9	-6.1	5,258.9	0.00	0.00	0.00
16,800.0	90.00	359.47	11,600.0	5,358.9	-7.0	5,358.9	0.00	0.00	0.00
16,900.0	90.00	359.47	11,600.0	5,458.9	-7.9	5,458.9	0.00	0.00	0.00
16,919.6	90.00	359.47	11,600.0	5,478.5	-8.1	5,478.5	0.00	0.00	0.00
Sec 22 & 15 Crossing, 5278.6'FSL & 2318'FEL									
17,000.0	90.00	359.47	11,600.0	5,558.9	-8.8	5,558.9	0.00	0.00	0.00
17,100.0	90.00	359.47	11,600.0	5,658.9	-9.7	5,658.9	0.00	0.00	0.00
17,200.0	90.00	359.47	11,600.0	5,758.9	-10.7	5,758.9	0.00	0.00	0.00
17,300.0	90.00	359.47	11,600.0	5,858.9	-11.6	5,858.9	0.00	0.00	0.00
17,400.0	90.00	359.47	11,600.0	5,958.9	-12.5	5,958.9	0.00	0.00	0.00
17,500.0	90.00	359.47	11,600.0	6,058.9	-13.4	6,058.9	0.00	0.00	0.00
17,600.0	90.00	359.47	11,600.0	6,158.9	-14.4	6,158.9	0.00	0.00	0.00
17,700.0	90.00	359.47	11,600.0	6,258.9	-15.3	6,258.9	0.00	0.00	0.00
17,800.0	90.00	359.47	11,600.0	6,358.9	-16.2	6,358.9	0.00	0.00	0.00
17,900.0	90.00	359.47	11,600.0	6,458.9	-17.1	6,458.9	0.00	0.00	0.00
18,000.0	90.00	359.47	11,600.0	6,558.9	-18.1	6,558.9	0.00	0.00	0.00
18,100.0	90.00	359.47	11,600.0	6,658.8	-19.0	6,658.9	0.00	0.00	0.00
18,200.0	90.00	359.47	11,600.0	6,758.8	-19.9	6,758.9	0.00	0.00	0.00
18,300.0	90.00	359.47	11,600.0	6,858.8	-20.8	6,858.9	0.00	0.00	0.00
18,400.0	90.00	359.47	11,600.0	6,958.8	-21.8	6,958.9	0.00	0.00	0.00
18,500.0	90.00	359.47	11,600.0	7,058.8	-22.7	7,058.9	0.00	0.00	0.00
18,600.0	90.00	359.47	11,600.0	7,158.8	-23.6	7,158.9	0.00	0.00	0.00
18,700.0	90.00	359.47	11,600.0	7,258.8	-24.5	7,258.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #105H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2933.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2933.0usft (H&P 616)
Site:	(Magnolia) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
18,800.0	90.00	359.47	11,600.0	7,358.8	-25.4	7,358.9	0.00	0.00	0.00
18,900.0	90.00	359.47	11,600.0	7,458.8	-26.4	7,458.8	0.00	0.00	0.00
19,000.0	90.00	359.47	11,600.0	7,558.8	-27.3	7,558.8	0.00	0.00	0.00
19,100.0	90.00	359.47	11,600.0	7,658.8	-28.2	7,658.8	0.00	0.00	0.00
19,200.0	90.00	359.47	11,600.0	7,758.8	-29.1	7,758.8	0.00	0.00	0.00
19,300.0	90.00	359.47	11,600.0	7,858.8	-30.1	7,858.8	0.00	0.00	0.00
19,400.0	90.00	359.47	11,600.0	7,958.8	-31.0	7,958.8	0.00	0.00	0.00
19,500.0	90.00	359.47	11,600.0	8,058.8	-31.9	8,058.8	0.00	0.00	0.00
19,600.0	90.00	359.47	11,600.0	8,158.8	-32.8	8,158.8	0.00	0.00	0.00
19,700.0	90.00	359.47	11,600.0	8,258.8	-33.8	8,258.8	0.00	0.00	0.00
19,800.0	90.00	359.47	11,600.0	8,358.8	-34.7	8,358.8	0.00	0.00	0.00
19,900.0	90.00	359.47	11,600.0	8,458.8	-35.6	8,458.8	0.00	0.00	0.00
20,000.0	90.00	359.47	11,600.0	8,558.8	-36.5	8,558.8	0.00	0.00	0.00
20,100.0	90.00	359.47	11,600.0	8,658.8	-37.5	8,658.8	0.00	0.00	0.00
20,200.0	90.00	359.47	11,600.0	8,758.8	-38.4	8,758.8	0.00	0.00	0.00
20,300.0	90.00	359.47	11,600.0	8,858.8	-39.3	8,858.8	0.00	0.00	0.00
20,400.0	90.00	359.47	11,600.0	8,958.7	-40.2	8,958.8	0.00	0.00	0.00
20,500.0	90.00	359.47	11,600.0	9,058.7	-41.2	9,058.8	0.00	0.00	0.00
20,600.0	90.00	359.47	11,600.0	9,158.7	-42.1	9,158.8	0.00	0.00	0.00
20,700.0	90.00	359.47	11,600.0	9,258.7	-43.0	9,258.8	0.00	0.00	0.00
20,800.0	90.00	359.47	11,600.0	9,358.7	-43.9	9,358.8	0.00	0.00	0.00
20,900.0	90.00	359.47	11,600.0	9,458.7	-44.8	9,458.8	0.00	0.00	0.00
21,000.0	90.00	359.47	11,600.0	9,558.7	-45.8	9,558.8	0.00	0.00	0.00
21,100.0	90.00	359.47	11,600.0	9,658.7	-46.7	9,658.8	0.00	0.00	0.00
21,200.0	90.00	359.47	11,600.0	9,758.7	-47.6	9,758.8	0.00	0.00	0.00
21,300.0	90.00	359.47	11,600.0	9,858.7	-48.5	9,858.8	0.00	0.00	0.00
21,400.0	90.00	359.47	11,600.0	9,958.7	-49.5	9,958.8	0.00	0.00	0.00
21,500.0	90.00	359.47	11,600.0	10,058.7	-50.4	10,058.8	0.00	0.00	0.00
21,600.0	90.00	359.47	11,600.0	10,158.7	-51.3	10,158.8	0.00	0.00	0.00
21,700.0	90.00	359.47	11,600.0	10,258.7	-52.2	10,258.8	0.00	0.00	0.00
21,800.0	90.00	359.47	11,600.0	10,358.7	-53.2	10,358.8	0.00	0.00	0.00
21,900.0	90.00	359.47	11,600.0	10,458.7	-54.1	10,458.8	0.00	0.00	0.00
21,999.3	90.00	359.47	11,600.0	10,558.0	-55.0	10,558.1	0.00	0.00	0.00

TD at 21999.3, 200'FNL & 2318'FNL

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL (Magnolia State - plan hits target center - Point	0.00	0.00	11,600.0	10,558.0	-55.0	383,604.00	876,368.00	32° 2' 59.982 N	103° 15' 7.161 W
FTP (Magnolia State () - plan misses target center by 16.6usft at 11972.1usft MD (11600.0 TVD, 531.7 N, 20.5 E) - Point	0.00	0.00	11,600.0	530.0	37.0	373,576.00	876,460.00	32° 1' 20.750 N	103° 15' 7.259 W
LTP (Magnolia State () - plan misses target center by 0.2usft at 21869.3usft MD (11600.0 TVD, 10428.0 N, -53.8 E) - Rectangle (sides W60.0 H9,898.0 D25.0)	0.00	359.47	11,600.0	10,428.0	-54.0	383,474.00	876,369.00	32° 2' 58.696 N	103° 15' 7.165 W

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #105H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2933.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2933.0usft (H&P 616)
Site:	(Magnolia) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #105H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,350.0	1,350.0	13.375	13-3/8	17-1/2
5,202.3	5,200.0	9.625	9-5/8	12-1/4
10,802.3	10,800.0	7.625	7-5/8	8-3/4
21,999.3	11,600.0	5 1/2"	5-1/2	6-3/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
900.0	900.0	Dewey Lake			
2,158.1	2,158.0	Rustler			
2,396.4	2,396.0	Salado			
3,207.4	3,206.0	Tansill			
4,957.3	4,955.0	Lamar			
5,217.3	5,215.0	Bell Canyon			
6,674.3	6,672.0	Brushy Canyon			
7,609.3	7,607.0	Bone Spring Lime			
9,326.3	9,324.0	First Bone Spring			
9,847.3	9,845.0	Second Bone Spring			
10,607.3	10,605.0	Third Bone Spring Upper			
11,257.3	11,249.0	Third Bone Spring			
11,458.3	11,417.0	Wolfcamp			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,000.0	2,000.0	0.0	0.0	NUDGE - Build 2.00
2,145.6	2,145.6	-3.1	-2.0	HOLD - 1711.1 at 2145.6 MD
3,856.7	3,854.4	-76.9	-48.0	DROP - -2.00
4,002.3	4,000.0	-80.0	-50.0	HOLD - 7027.0 at 4002.3 MD
11,029.3	11,027.0	-80.0	-50.0	KOP - Build 10.00, 279'4"FNL & 241.3'FEL
11,623.6	11,520.3	199.7	-17.6	Sec 27 & 22 Crossing, 0'FSL & 2376.2'FEL
11,929.3	11,600.0	489.2	15.9	EOC/TRN - DLS 2.00 TFO -90.00
12,285.8	11,600.0	844.9	34.7	Start 9713.5 hold at 12285.8 MD
14,277.8	11,600.0	2,836.8	16.3	Sec 22 midpoint, 2636.7'FSL & 2318'FEL
16,919.6	11,600.0	5,478.5	-8.1	Sec 22 & 15 Crossing, 5278.6'FSL & 2318'FEL
21,999.3	11,600.0	10,558.0	-55.0	TD at 21999.3, 200'FNL & 2318'FNL

Wellbore Schematic

Well: Magnolia State Com 26-36-22 105H
SHL: Sec. 27 26S-36E 200' FNL & 2360' FEL
BHL: Sec. 15 26S-36E 200' FNL & 2318' FEL
 Lea, NM
Wellhead: A - 13-5/8" 10M x 13-5/8" SOW
 B - 13-5/8" 10M x 13-5/8" 10M
 C - 13-5/8" 10M x 13-5/8" 10M
 Tubing Spool - 5-1/8" 15M x 13-3/8" 10M
Xmas Tree: 2-9/16" 10M
Tubing: 2-7/8" L-80 6.5# 8rd EUE

Co. Well ID: 40523
AFE No.: 2018-009
API No.: xxxxxxxxxxxx
GL: 2,906'
Field: Delaware_WCX
Objective: Wolfcamp XY
TVD: 11,600'
MD: 21,430'
Rig: H&P 616
E-Mail: Wellsite2@ameredev.com

Hole Size	Formation Tops	Logs	Cement	Mud Weight
17.5"	Dewey Lake 900'		1125 Sacks TOC 0' 100% Excess	8.6 - 10 ppg WBM
	13.375" 54.5# J-55 BTC 1,350'			
12.25"	Rustler 2,158'		1150 Sacks TOC 0' 50% Excess	10 - 11.5 ppg Brine
	Salado 2,396'			
	Tansill 3,206'			
	Lamar 4,955'			
	9.625" 40# L-80HC BTC 5,200'			
8.75"	Bell Canyon 5,215'	Triple Combo	300 Sacks TOC 4700' 25% Excess	9.5 - 10.5 Cut Brine
	Brushy Canyon 6,672'			
	Bone Spring Lime 7,607'			
	First Bone Spring 9,324'			
	Second Bone Spring 9,845'			
	Third Bone Spring Upper 10,605'			
	7.625" 29.7#P-110HC FJM 10,800'			
6.75"	Third Bone Spring 11,249'	Triple Combo	930 Sacks TOC 10,300' 25% Excess	11.5 - 12.5 ppg OBM
KOP 11,030'	Wolfcamp 11,417'			
10" Build	5.5" 20# P-110HC CDC 21,430'			
	Target Wolfcamp XY 11,600' TVD // 21,430' MD			