

30-625-44944

AMEREDEV

HOBBS OCD

JUN 27 2018

RECEIVED

Ameredev Operating, LLC

Lea County, NM (NAD83 NME)
(Magnolia) Sec22_T-26-S_R-36-E
Magnolia State Com 26-36-22 #121H

OWB

Plan: Plan #1

Standard Planning Report

20 June, 2018

INTREPID

Database:	EDM5000	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #121H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2940.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2940.0usft (Rig)
Site:	(Magnolia) Sec22_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #121H	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) Sec22_T-26-S_R-36-E		
Site Position:		Northing:	373,453.00 usft
From:	Map	Easting:	873,759.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32.0221665
		Longitude:	-103.2607341
		Grid Convergence:	0.57 °

Well	Magnolia State Com 26-36-22 #121H		
Well Position	+N/-S	-1.0 usft	Latitude:
	+E/-W	-40.0 usft	Longitude:
Position Uncertainty	0.0 usft	Wellhead Elevation:	2,913.0 usft

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	2018/06/14	6.69
			Dip Angle (°)
			59.91
			Field Strength (nT)
			47,752.21078363

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°)
			0.37

Plan Survey Tool Program	Date 2018/06/20		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name
1	0.0	21,966.8 Plan #1 (OWB)	MWD
			MWD - Standard
			Remarks



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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	
2,125.0	2.50	335.00	2,125.0	2.5	-1.2	2.00	2.00	0.00	335.00	
4,502.3	2.50	335.00	4,500.0	96.5	-45.0	0.00	0.00	0.00	0.00	
4,627.3	0.00	0.00	4,625.0	98.9	-46.1	2.00	-2.00	20.00	180.00	
11,562.6	0.00	0.00	11,560.3	98.9	-46.1	0.00	0.00	0.00	0.00	
12,162.6	60.00	26.80	12,056.5	354.6	83.0	10.00	10.00	0.00	26.80	
12,560.0	90.00	359.42	12,160.0	721.7	161.8	10.00	7.55	-6.89	-46.01	
21,836.8	90.00	359.42	12,160.0	9,998.0	68.0	0.00	0.00	0.00	0.00	LTP (Magnolia Stat
21,966.8	90.00	359.42	12,160.0	10,128.0	66.7	0.00	0.00	0.00	0.00	PBHL (Magnolia St

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Wellbore:	OWB		
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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
1,050.0	0.00	0.00	1,050.0	0.0	0.0	0.0	0.00	0.00	0.00
Dewey Lake									
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
1,350.0	0.00	0.00	1,350.0	0.0	0.0	0.0	0.00	0.00	0.00
13 3/8"									
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
BUILD - 2.00									
2,100.0	2.00	335.00	2,100.0	1.6	-0.7	1.6	2.00	2.00	0.00
2,125.0	2.50	335.00	2,125.0	2.5	-1.2	2.5	2.00	2.00	0.00
HOLD - 2377.3 at 2125.0 MD									
2,194.1	2.50	335.00	2,194.0	5.2	-2.4	5.2	0.00	0.00	0.00
Rustler									
2,200.0	2.50	335.00	2,199.9	5.4	-2.5	5.4	0.00	0.00	0.00
2,300.0	2.50	335.00	2,299.8	9.4	-4.4	9.4	0.00	0.00	0.00
2,400.0	2.50	335.00	2,399.7	13.3	-6.2	13.3	0.00	0.00	0.00
2,500.0	2.50	335.00	2,499.6	17.3	-8.1	17.2	0.00	0.00	0.00
2,513.4	2.50	335.00	2,513.0	17.8	-8.3	17.8	0.00	0.00	0.00
Salado									
2,600.0	2.50	335.00	2,599.5	21.2	-9.9	21.2	0.00	0.00	0.00
2,700.0	2.50	335.00	2,699.4	25.2	-11.8	25.1	0.00	0.00	0.00
2,800.0	2.50	335.00	2,799.3	29.2	-13.6	29.1	0.00	0.00	0.00
2,900.0	2.50	335.00	2,899.2	33.1	-15.4	33.0	0.00	0.00	0.00
3,000.0	2.50	335.00	2,999.1	37.1	-17.3	36.9	0.00	0.00	0.00
3,100.0	2.50	335.00	3,099.0	41.0	-19.1	40.9	0.00	0.00	0.00
3,200.0	2.50	335.00	3,198.9	45.0	-21.0	44.8	0.00	0.00	0.00
3,225.1	2.50	335.00	3,224.0	46.0	-21.4	45.8	0.00	0.00	0.00
Tansill									
3,300.0	2.50	335.00	3,298.8	48.9	-22.8	48.8	0.00	0.00	0.00
3,400.0	2.50	335.00	3,398.7	52.9	-24.7	52.7	0.00	0.00	0.00
3,500.0	2.50	335.00	3,498.7	56.8	-26.5	56.7	0.00	0.00	0.00
3,600.0	2.50	335.00	3,598.6	60.8	-28.3	60.6	0.00	0.00	0.00
3,700.0	2.50	335.00	3,698.5	64.7	-30.2	64.5	0.00	0.00	0.00
3,800.0	2.50	335.00	3,798.4	68.7	-32.0	68.5	0.00	0.00	0.00
3,900.0	2.50	335.00	3,898.3	72.6	-33.9	72.4	0.00	0.00	0.00

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,000.0	2.50	335.00	3,998.2	76.6	-35.7	76.4	0.00	0.00	0.00
4,100.0	2.50	335.00	4,098.1	80.5	-37.6	80.3	0.00	0.00	0.00
4,200.0	2.50	335.00	4,198.0	84.5	-39.4	84.2	0.00	0.00	0.00
4,300.0	2.50	335.00	4,297.9	88.5	-41.2	88.2	0.00	0.00	0.00
4,400.0	2.50	335.00	4,397.8	92.4	-43.1	92.1	0.00	0.00	0.00
4,502.3	2.50	335.00	4,500.0	96.5	-45.0	96.2	0.00	0.00	0.00
DROP - DLS 2.00 TFO 180.00									
4,600.0	0.55	335.00	4,597.7	98.8	-46.1	98.5	2.00	-2.00	0.00
4,627.3	0.00	0.00	4,625.0	98.9	-46.1	98.6	2.00	-2.00	0.00
HOLD - 6935.3 at 4627.3 MD									
4,700.0	0.00	0.00	4,697.7	98.9	-46.1	98.6	0.00	0.00	0.00
4,800.0	0.00	0.00	4,797.7	98.9	-46.1	98.6	0.00	0.00	0.00
4,900.0	0.00	0.00	4,897.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,000.0	0.00	0.00	4,997.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,100.0	0.00	0.00	5,097.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,197.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,202.3	0.00	0.00	5,200.0	98.9	-46.1	98.6	0.00	0.00	0.00
10 3/4"									
5,222.3	0.00	0.00	5,220.0	98.9	-46.1	98.6	0.00	0.00	0.00
Bell Canyon									
5,300.0	0.00	0.00	5,297.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,397.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,500.0	0.00	0.00	5,497.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,597.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,700.0	0.00	0.00	5,697.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,797.7	98.9	-46.1	98.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,897.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,997.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,100.0	0.00	0.00	6,097.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,197.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,300.0	0.00	0.00	6,297.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,397.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,500.0	0.00	0.00	6,497.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,597.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,700.0	0.00	0.00	6,697.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,797.7	98.9	-46.1	98.6	0.00	0.00	0.00
6,809.3	0.00	0.00	6,807.0	98.9	-46.1	98.6	0.00	0.00	0.00
Brushy Canyon									
6,900.0	0.00	0.00	6,897.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,997.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,100.0	0.00	0.00	7,097.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,197.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,300.0	0.00	0.00	7,297.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,397.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,500.0	0.00	0.00	7,497.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,597.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,700.0	0.00	0.00	7,697.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,797.7	98.9	-46.1	98.6	0.00	0.00	0.00
7,820.3	0.00	0.00	7,818.0	98.9	-46.1	98.6	0.00	0.00	0.00
Bone Spring (Lime)									
7,900.0	0.00	0.00	7,897.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,000.0	0.00	0.00	7,997.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,100.0	0.00	0.00	8,097.7	98.9	-46.1	98.6	0.00	0.00	0.00

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8,200.0	0.00	0.00	8,197.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,300.0	0.00	0.00	8,297.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,400.0	0.00	0.00	8,397.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,500.0	0.00	0.00	8,497.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,600.0	0.00	0.00	8,597.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,700.0	0.00	0.00	8,697.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,800.0	0.00	0.00	8,797.7	98.9	-46.1	98.6	0.00	0.00	0.00
8,900.0	0.00	0.00	8,897.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,000.0	0.00	0.00	8,997.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,100.0	0.00	0.00	9,097.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,200.0	0.00	0.00	9,197.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,300.0	0.00	0.00	9,297.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,377.3	0.00	0.00	9,375.0	98.9	-46.1	98.6	0.00	0.00	0.00
1st Bone Spring									
9,400.0	0.00	0.00	9,397.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,500.0	0.00	0.00	9,497.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,600.0	0.00	0.00	9,597.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,700.0	0.00	0.00	9,697.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,800.0	0.00	0.00	9,797.7	98.9	-46.1	98.6	0.00	0.00	0.00
9,896.3	0.00	0.00	9,894.0	98.9	-46.1	98.6	0.00	0.00	0.00
2nd Bone Spring									
9,900.0	0.00	0.00	9,897.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,000.0	0.00	0.00	9,997.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,100.0	0.00	0.00	10,097.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,200.0	0.00	0.00	10,197.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,300.0	0.00	0.00	10,297.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,400.0	0.00	0.00	10,397.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,500.0	0.00	0.00	10,497.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,600.0	0.00	0.00	10,597.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,634.3	0.00	0.00	10,632.0	98.9	-46.1	98.6	0.00	0.00	0.00
3rd Bone Spring Lime									
10,700.0	0.00	0.00	10,697.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,800.0	0.00	0.00	10,797.7	98.9	-46.1	98.6	0.00	0.00	0.00
10,802.3	0.00	0.00	10,800.0	98.9	-46.1	98.6	0.00	0.00	0.00
7 5/8"									
10,900.0	0.00	0.00	10,897.7	98.9	-46.1	98.6	0.00	0.00	0.00
11,000.0	0.00	0.00	10,997.7	98.9	-46.1	98.6	0.00	0.00	0.00
11,100.0	0.00	0.00	11,097.7	98.9	-46.1	98.6	0.00	0.00	0.00
11,200.0	0.00	0.00	11,197.7	98.9	-46.1	98.6	0.00	0.00	0.00
11,260.3	0.00	0.00	11,258.0	98.9	-46.1	98.6	0.00	0.00	0.00
3rd Bone Spring									
11,300.0	0.00	0.00	11,297.7	98.9	-46.1	98.6	0.00	0.00	0.00
11,400.0	0.00	0.00	11,397.7	98.9	-46.1	98.6	0.00	0.00	0.00
11,442.3	0.00	0.00	11,440.0	98.9	-46.1	98.6	0.00	0.00	0.00
Top of Wolfcamp									
11,500.0	0.00	0.00	11,497.7	98.9	-46.1	98.6	0.00	0.00	0.00
11,562.6	0.00	0.00	11,560.3	98.9	-46.1	98.6	0.00	0.00	0.00
KOP - BUILD 10.00									
11,600.0	3.74	26.80	11,597.6	100.0	-45.6	99.7	10.00	10.00	71.74
11,650.0	8.74	26.80	11,647.3	104.9	-43.1	104.6	10.00	10.00	0.00
11,700.0	13.74	26.80	11,696.3	113.5	-38.7	113.3	10.00	10.00	0.00
11,750.0	18.74	26.80	11,744.3	126.0	-32.4	125.8	10.00	10.00	0.00
11,800.0	23.74	26.80	11,790.9	142.2	-24.3	142.0	10.00	10.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #121H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2940.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2940.0usft (Rig)
Site:	(Magnolia) Sec22_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #121H	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)
11,850.0	28.74	26.80	11,835.8	161.9	-14.3	161.8	10.00	10.00	0.00
11,900.0	33.74	26.80	11,878.5	185.0	-2.6	185.0	10.00	10.00	0.00
11,950.0	38.74	26.80	11,918.8	211.4	10.7	211.5	10.00	10.00	0.00
12,000.0	43.74	26.80	11,956.4	240.8	25.5	241.0	10.00	10.00	0.00
12,050.0	48.74	26.80	11,991.0	273.0	41.8	273.3	10.00	10.00	0.00
12,081.5	51.89	26.80	12,011.1	294.7	52.8	295.0	10.00	10.00	0.00
FTP (Magnolia State Com #121H)									
12,100.0	53.74	26.80	12,022.3	307.8	59.4	308.2	10.00	10.00	0.00
12,150.0	58.74	26.80	12,050.1	344.9	78.1	345.4	10.00	10.00	0.00
12,162.6	60.00	26.80	12,056.5	354.6	83.0	355.2	10.00	10.00	0.00
TURN & BUILD - DLS 10.00 TFO -46.01									
12,200.0	62.63	23.77	12,074.4	384.3	97.0	384.9	10.00	7.04	-8.10
12,250.0	66.24	19.94	12,096.0	426.1	113.8	426.8	10.00	7.23	-7.66
12,300.0	69.95	16.32	12,114.7	470.2	128.2	471.0	10.00	7.41	-7.24
12,350.0	73.72	12.87	12,130.3	516.2	140.2	517.1	10.00	7.55	-6.90
12,400.0	77.55	9.55	12,142.7	563.6	149.6	564.6	10.00	7.66	-6.64
12,450.0	81.42	6.33	12,151.8	612.3	156.3	613.3	10.00	7.73	-6.45
12,500.0	85.31	3.17	12,157.6	661.8	160.4	662.8	10.00	7.79	-6.32
12,550.0	89.22	0.04	12,159.9	711.7	161.8	712.8	10.00	7.82	-6.25
12,560.0	90.00	359.42	12,160.0	721.7	161.8	722.7	10.00	7.82	-6.23
HOLD - 9276.8 at 12560.0 MD									
12,600.0	90.00	359.42	12,160.0	761.7	161.4	762.7	0.00	0.00	0.00
12,700.0	90.00	359.42	12,160.0	861.7	160.4	862.7	0.00	0.00	0.00
12,800.0	90.00	359.42	12,160.0	961.7	159.4	962.7	0.00	0.00	0.00
12,900.0	90.00	359.42	12,160.0	1,061.7	158.3	1,062.7	0.00	0.00	0.00
13,000.0	90.00	359.42	12,160.0	1,161.7	157.3	1,162.7	0.00	0.00	0.00
13,100.0	90.00	359.42	12,160.0	1,261.7	156.3	1,262.7	0.00	0.00	0.00
13,200.0	90.00	359.42	12,160.0	1,361.7	155.3	1,362.7	0.00	0.00	0.00
13,300.0	90.00	359.42	12,160.0	1,461.7	154.3	1,462.6	0.00	0.00	0.00
13,400.0	90.00	359.42	12,160.0	1,561.7	153.3	1,562.6	0.00	0.00	0.00
13,500.0	90.00	359.42	12,160.0	1,661.7	152.3	1,662.6	0.00	0.00	0.00
13,600.0	90.00	359.42	12,160.0	1,761.7	151.3	1,762.6	0.00	0.00	0.00
13,700.0	90.00	359.42	12,160.0	1,861.7	150.3	1,862.6	0.00	0.00	0.00
13,800.0	90.00	359.42	12,160.0	1,961.6	149.3	1,962.6	0.00	0.00	0.00
13,900.0	90.00	359.42	12,160.0	2,061.6	148.2	2,062.6	0.00	0.00	0.00
14,000.0	90.00	359.42	12,160.0	2,161.6	147.2	2,162.6	0.00	0.00	0.00
14,100.0	90.00	359.42	12,160.0	2,261.6	146.2	2,262.5	0.00	0.00	0.00
14,200.0	90.00	359.42	12,160.0	2,361.6	145.2	2,362.5	0.00	0.00	0.00
14,300.0	90.00	359.42	12,160.0	2,461.6	144.2	2,462.5	0.00	0.00	0.00
14,400.0	90.00	359.42	12,160.0	2,561.6	143.2	2,562.5	0.00	0.00	0.00
14,500.0	90.00	359.42	12,160.0	2,661.6	142.2	2,662.5	0.00	0.00	0.00
14,600.0	90.00	359.42	12,160.0	2,761.6	141.2	2,762.5	0.00	0.00	0.00
14,700.0	90.00	359.42	12,160.0	2,861.6	140.2	2,862.5	0.00	0.00	0.00
14,800.0	90.00	359.42	12,160.0	2,961.6	139.1	2,962.4	0.00	0.00	0.00
14,900.0	90.00	359.42	12,160.0	3,061.6	138.1	3,062.4	0.00	0.00	0.00
15,000.0	90.00	359.42	12,160.0	3,161.6	137.1	3,162.4	0.00	0.00	0.00
15,100.0	90.00	359.42	12,160.0	3,261.6	136.1	3,262.4	0.00	0.00	0.00
15,200.0	90.00	359.42	12,160.0	3,361.6	135.1	3,362.4	0.00	0.00	0.00
15,300.0	90.00	359.42	12,160.0	3,461.6	134.1	3,462.4	0.00	0.00	0.00
15,400.0	90.00	359.42	12,160.0	3,561.6	133.1	3,562.4	0.00	0.00	0.00
15,500.0	90.00	359.42	12,160.0	3,661.6	132.1	3,662.3	0.00	0.00	0.00
15,600.0	90.00	359.42	12,160.0	3,761.6	131.1	3,762.3	0.00	0.00	0.00
15,700.0	90.00	359.42	12,160.0	3,861.6	130.0	3,862.3	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #121H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2940.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2940.0usft (Rig)
Site:	(Magnolia) Sec22_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #121H	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)
15,800.0	90.00	359.42	12,160.0	3,961.5	129.0	3,962.3	0.00	0.00	0.00
15,900.0	90.00	359.42	12,160.0	4,061.5	128.0	4,062.3	0.00	0.00	0.00
16,000.0	90.00	359.42	12,160.0	4,161.5	127.0	4,162.3	0.00	0.00	0.00
16,100.0	90.00	359.42	12,160.0	4,261.5	126.0	4,262.3	0.00	0.00	0.00
16,200.0	90.00	359.42	12,160.0	4,361.5	125.0	4,362.2	0.00	0.00	0.00
16,300.0	90.00	359.42	12,160.0	4,461.5	124.0	4,462.2	0.00	0.00	0.00
16,400.0	90.00	359.42	12,160.0	4,561.5	123.0	4,562.2	0.00	0.00	0.00
16,500.0	90.00	359.42	12,160.0	4,661.5	122.0	4,662.2	0.00	0.00	0.00
16,600.0	90.00	359.42	12,160.0	4,761.5	120.9	4,762.2	0.00	0.00	0.00
16,700.0	90.00	359.42	12,160.0	4,861.5	119.9	4,862.2	0.00	0.00	0.00
16,800.0	90.00	359.42	12,160.0	4,961.5	118.9	4,962.2	0.00	0.00	0.00
16,889.3	90.00	359.42	12,160.0	5,050.8	118.0	5,051.5	0.00	0.00	0.00
SEC LINE 22 CROSS - 5278' FNL, 938' FEL									
16,900.0	90.00	359.42	12,160.0	5,061.5	117.9	5,062.1	0.00	0.00	0.00
17,000.0	90.00	359.42	12,160.0	5,161.5	116.9	5,162.1	0.00	0.00	0.00
17,100.0	90.00	359.42	12,160.0	5,261.5	115.9	5,262.1	0.00	0.00	0.00
17,200.0	90.00	359.42	12,160.0	5,361.5	114.9	5,362.1	0.00	0.00	0.00
17,300.0	90.00	359.42	12,160.0	5,461.5	113.9	5,462.1	0.00	0.00	0.00
17,400.0	90.00	359.42	12,160.0	5,561.5	112.9	5,562.1	0.00	0.00	0.00
17,500.0	90.00	359.42	12,160.0	5,661.5	111.8	5,662.1	0.00	0.00	0.00
17,600.0	90.00	359.42	12,160.0	5,761.5	110.8	5,762.1	0.00	0.00	0.00
17,700.0	90.00	359.42	12,160.0	5,861.4	109.8	5,862.0	0.00	0.00	0.00
17,800.0	90.00	359.42	12,160.0	5,961.4	108.8	5,962.0	0.00	0.00	0.00
17,900.0	90.00	359.42	12,160.0	6,061.4	107.8	6,062.0	0.00	0.00	0.00
18,000.0	90.00	359.42	12,160.0	6,161.4	106.8	6,162.0	0.00	0.00	0.00
18,100.0	90.00	359.42	12,160.0	6,261.4	105.8	6,262.0	0.00	0.00	0.00
18,200.0	90.00	359.42	12,160.0	6,361.4	104.8	6,362.0	0.00	0.00	0.00
18,300.0	90.00	359.42	12,160.0	6,461.4	103.8	6,462.0	0.00	0.00	0.00
18,400.0	90.00	359.42	12,160.0	6,561.4	102.7	6,561.9	0.00	0.00	0.00
18,500.0	90.00	359.42	12,160.0	6,661.4	101.7	6,661.9	0.00	0.00	0.00
18,600.0	90.00	359.42	12,160.0	6,761.4	100.7	6,761.9	0.00	0.00	0.00
18,700.0	90.00	359.42	12,160.0	6,861.4	99.7	6,861.9	0.00	0.00	0.00
18,800.0	90.00	359.42	12,160.0	6,961.4	98.7	6,961.9	0.00	0.00	0.00
18,900.0	90.00	359.42	12,160.0	7,061.4	97.7	7,061.9	0.00	0.00	0.00
19,000.0	90.00	359.42	12,160.0	7,161.4	96.7	7,161.9	0.00	0.00	0.00
19,100.0	90.00	359.42	12,160.0	7,261.4	95.7	7,261.8	0.00	0.00	0.00
19,200.0	90.00	359.42	12,160.0	7,361.4	94.7	7,361.8	0.00	0.00	0.00
19,300.0	90.00	359.42	12,160.0	7,461.4	93.6	7,461.8	0.00	0.00	0.00
19,400.0	90.00	359.42	12,160.0	7,561.4	92.6	7,561.8	0.00	0.00	0.00
19,500.0	90.00	359.42	12,160.0	7,661.4	91.6	7,661.8	0.00	0.00	0.00
19,600.0	90.00	359.42	12,160.0	7,761.4	90.6	7,761.8	0.00	0.00	0.00
19,700.0	90.00	359.42	12,160.0	7,861.3	89.6	7,861.8	0.00	0.00	0.00
19,800.0	90.00	359.42	12,160.0	7,961.3	88.6	7,961.7	0.00	0.00	0.00
19,900.0	90.00	359.42	12,160.0	8,061.3	87.6	8,061.7	0.00	0.00	0.00
20,000.0	90.00	359.42	12,160.0	8,161.3	86.6	8,161.7	0.00	0.00	0.00
20,100.0	90.00	359.42	12,160.0	8,261.3	85.6	8,261.7	0.00	0.00	0.00
20,200.0	90.00	359.42	12,160.0	8,361.3	84.5	8,361.7	0.00	0.00	0.00
20,300.0	90.00	359.42	12,160.0	8,461.3	83.5	8,461.7	0.00	0.00	0.00
20,400.0	90.00	359.42	12,160.0	8,561.3	82.5	8,561.7	0.00	0.00	0.00
20,500.0	90.00	359.42	12,160.0	8,661.3	81.5	8,661.7	0.00	0.00	0.00
20,600.0	90.00	359.42	12,160.0	8,761.3	80.5	8,761.6	0.00	0.00	0.00
20,700.0	90.00	359.42	12,160.0	8,861.3	79.5	8,861.6	0.00	0.00	0.00
20,800.0	90.00	359.42	12,160.0	8,961.3	78.5	8,961.6	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #121H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2940.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2940.0usft (Rig)
Site:	(Magnolia) Sec22_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #121H	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)	
20,900.0	90.00	359.42	12,160.0	9,061.3	77.5	9,061.6	0.00	0.00	0.00	
21,000.0	90.00	359.42	12,160.0	9,161.3	76.5	9,161.6	0.00	0.00	0.00	
21,100.0	90.00	359.42	12,160.0	9,261.3	75.4	9,261.6	0.00	0.00	0.00	
21,200.0	90.00	359.42	12,160.0	9,361.3	74.4	9,361.6	0.00	0.00	0.00	
21,300.0	90.00	359.42	12,160.0	9,461.3	73.4	9,461.5	0.00	0.00	0.00	
21,400.0	90.00	359.42	12,160.0	9,561.3	72.4	9,561.5	0.00	0.00	0.00	
21,500.0	90.00	359.42	12,160.0	9,661.3	71.4	9,661.5	0.00	0.00	0.00	
21,600.0	90.00	359.42	12,160.0	9,761.2	70.4	9,761.5	0.00	0.00	0.00	
21,700.0	90.00	359.42	12,160.0	9,861.2	69.4	9,861.5	0.00	0.00	0.00	
21,800.0	90.00	359.42	12,160.0	9,961.2	68.4	9,961.5	0.00	0.00	0.00	
21,836.8	90.00	359.42	12,160.0	9,998.0	68.0	9,998.2	0.00	0.00	0.00	
LTP - 330' FNL, 939' FEL - LTP (Magnolia State Com #121H)										
21,900.0	90.00	359.42	12,160.0	10,061.2	67.4	10,061.5	0.00	0.00	0.00	
21,966.8	90.00	359.42	12,160.0	10,128.0	66.7	10,128.2	0.00	0.00	0.00	
PBHL - 200' FNL, 939' FEL - PBHL (Magnolia State Com #121H)										

Design Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP (Magnolia State (	- plan hits target center	0.00	0.00	12,160.0	9,998.0	68.0	383,450.00	873,787.00	32.0496425	-103.2603234
- Shape	- Point									
FTP (Magnolia State (	- plan misses target center by 269.8usft at 12081.5usft MD (12011.1 TVD, 294.7 N, 52.8 E)	0.00	0.00	12,160.0	102.0	169.0	373,554.00	873,888.00	32.0224406	-103.2603147
- Shape	- Point									
PBHL (Magnolia State	- plan misses target center by 0.7usft at 21966.8usft MD (12160.0 TVD, 10128.0 N, 66.7 E)	0.00	0.00	12,160.0	10,128.0	66.0	383,580.00	873,785.00	32.0499999	-103.2603257
- Shape	- Point									

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name			Casing Diameter (")	Hole Diameter (")
1,350.0	1,350.0	13 3/8"			13-3/8	17-1/2
5,202.3	5,200.0	10 3/4"			10-3/4	12-1/4
10,802.3	10,800.0	7 5/8"			7-5/8	9-7/8
21,966.8	12,160.0	5 1/2"			5-1/2	6-3/4

Database:	EDM5000	Local Co-ordinate Reference:	Well Magnolia State Com 26-36-22 #121H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2940.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2940.0usft (Rig)
Site:	(Magnolia) Sec22_T-26-S_R-36-E	North Reference:	Grid
Well:	Magnolia State Com 26-36-22 #121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,050.0	1,050.0	Dewey Lake				
2,194.1	2,194.0	Rustler				
2,513.4	2,513.0	Salado				
3,225.1	3,224.0	Tansill				
5,222.3	5,220.0	Bell Canyon				
6,809.3	6,807.0	Brushy Canyon				
7,820.3	7,818.0	Bone Spring (Lime)				
9,377.3	9,375.0	1st Bone Spring				
9,896.3	9,894.0	2nd Bone Spring				
10,634.3	10,632.0	3rd Bone Spring Lime				
11,260.3	11,258.0	3rd Bone Spring				
11,442.3	11,440.0	Top of Wolfcamp				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,000.0	2,000.0	0.0	0.0	BUILD - 2.00	
2,125.0	2,125.0	2.5	-1.2	HOLD - 2377.3 at 2125.0 MD	
4,502.3	4,500.0	96.5	-45.0	DROP - DLS 2.00 TFO 180.00	
4,627.3	4,625.0	98.9	-46.1	HOLD - 6935.3 at 4627.3 MD	
11,562.6	11,560.3	98.9	-46.1	KOP - BUILD 10.00	
12,162.6	12,056.5	354.6	83.0	TURN & BUILD - DLS 10.00 TFO -46.01	
12,560.0	12,160.0	721.7	161.8	HOLD - 9276.8 at 12560.0 MD	
16,889.3	12,160.0	5,050.8	118.0	SEC LINE 22 CROSS - 5278' FNL, 938' FEL	
21,836.8	12,160.0	9,998.0	68.0	LTP - 330' FNL, 939' FEL	
21,966.8	12,160.0	10,128.0	66.7	PBHL - 200' FNL, 939' FEL	