

AMEREDEV

Ameredev Operating, LLC

Lea County, NM (NAD83 NME)

(Amen Corner) Sec-27_T-26-S_R-36-E

Amen Corner State Com 26-36-27 #115H

OWB

Plan: Plan 1

Standard Planning Report

03 April, 2018

INTREPID

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Amen Corner State Com 26-36-27 #115H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2935.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2935.0usft (H&P 616)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #115H	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	(Amen Corner) Sec-27_T-26-S_R-36-E		
Site Position:		Northing:	373,046.00 usft
From:	Map	Easting:	876,483.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 15.504 N
		Longitude:	103° 15' 7.053 W
		Grid Convergence:	0.57 °

Well	Amen Corner State Com 26-36-27 #115H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	-20.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Ground Level:
			2,908.0 usft

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	04/02/18	6.70
			Dip Angle (°)
			59.92
			Field Strength (nT)
			47,773.00873908

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)
	0.0	0.0	0.0
			Direction (°)
			179.44

Plan Survey Tool Program	Date 04/03/18		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name
1	0.0	19,112.9 Plan 1 (OWB)	MWD
			MWD - Standard
			Remarks

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	
2,177.4	3.55	36.87	2,177.3	4.4	3.3	2.00	2.00	0.00	36.87	
4,827.9	3.55	36.87	4,822.7	135.6	101.7	0.00	0.00	0.00	0.00	
5,005.3	0.00	0.00	5,000.0	140.0	105.0	2.00	-2.00	0.00	180.00	
11,326.3	0.00	0.00	11,321.0	140.0	105.0	0.00	0.00	0.00	0.00	
12,226.3	90.00	187.25	11,894.0	-428.4	32.7	10.00	10.00	0.00	187.25	
12,615.7	90.00	179.46	11,894.0	-816.8	9.9	2.00	0.00	-2.00	-90.00	
19,113.2	90.00	179.46	11,894.0	-7,314.0	71.0	0.00	0.00	0.00	0.00	PBHL (Amen Come

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Well:	Amen Corner State Com 26-36-27 #115H	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	36.87	2,100.0	1.4	1.0	-1.4	2.00	2.00	0.00
2,177.4	3.55	36.87	2,177.3	4.4	3.3	-4.4	2.00	2.00	0.00
HOLD - 2650.5 at 2177.4 MD									
2,200.0	3.55	36.87	2,199.8	5.5	4.1	-5.5	0.00	0.00	0.00
2,300.0	3.55	36.87	2,299.7	10.5	7.8	-10.4	0.00	0.00	0.00
2,400.0	3.55	36.87	2,399.5	15.4	11.6	-15.3	0.00	0.00	0.00
2,500.0	3.55	36.87	2,499.3	20.4	15.3	-20.2	0.00	0.00	0.00
2,600.0	3.55	36.87	2,599.1	25.3	19.0	-25.1	0.00	0.00	0.00
2,700.0	3.55	36.87	2,698.9	30.3	22.7	-30.0	0.00	0.00	0.00
2,800.0	3.55	36.87	2,798.7	35.2	26.4	-35.0	0.00	0.00	0.00
2,900.0	3.55	36.87	2,898.5	40.2	30.1	-39.9	0.00	0.00	0.00
3,000.0	3.55	36.87	2,998.3	45.1	33.8	-44.8	0.00	0.00	0.00
3,100.0	3.55	36.87	3,098.1	50.1	37.5	-49.7	0.00	0.00	0.00
3,200.0	3.55	36.87	3,197.9	55.0	41.3	-54.6	0.00	0.00	0.00
3,300.0	3.55	36.87	3,297.7	60.0	45.0	-59.5	0.00	0.00	0.00
3,400.0	3.55	36.87	3,397.5	64.9	48.7	-64.4	0.00	0.00	0.00
3,500.0	3.55	36.87	3,497.4	69.9	52.4	-69.4	0.00	0.00	0.00
3,600.0	3.55	36.87	3,597.2	74.8	56.1	-74.3	0.00	0.00	0.00
3,700.0	3.55	36.87	3,697.0	79.8	59.8	-79.2	0.00	0.00	0.00
3,800.0	3.55	36.87	3,796.8	84.7	63.5	-84.1	0.00	0.00	0.00
3,900.0	3.55	36.87	3,896.6	89.7	67.3	-89.0	0.00	0.00	0.00
4,000.0	3.55	36.87	3,996.4	94.6	71.0	-93.9	0.00	0.00	0.00
4,100.0	3.55	36.87	4,096.2	99.6	74.7	-98.8	0.00	0.00	0.00
4,200.0	3.55	36.87	4,196.0	104.5	78.4	-103.8	0.00	0.00	0.00
4,300.0	3.55	36.87	4,295.8	109.5	82.1	-108.7	0.00	0.00	0.00
4,400.0	3.55	36.87	4,395.6	114.4	85.8	-113.6	0.00	0.00	0.00
4,500.0	3.55	36.87	4,495.4	119.4	89.5	-118.5	0.00	0.00	0.00
4,600.0	3.55	36.87	4,595.2	124.3	93.2	-123.4	0.00	0.00	0.00
4,700.0	3.55	36.87	4,695.1	129.3	97.0	-128.3	0.00	0.00	0.00
4,800.0	3.55	36.87	4,794.9	134.2	100.7	-133.2	0.00	0.00	0.00
4,827.9	3.55	36.87	4,822.7	135.6	101.7	-134.6	0.00	0.00	0.00

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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)
DROP - -2.00									
4,900.0	2.11	36.87	4,894.7	138.5	103.8	-137.4	2.00	-2.00	0.00
5,005.3	0.00	0.00	5,000.0	140.0	105.0	-139.0	2.00	-2.00	0.00
HOLD - 6321.0 at 5005.3 MD									
5,100.0	0.00	0.00	5,094.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,194.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,294.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,394.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,494.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,594.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,694.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,794.7	140.0	105.0	-139.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,894.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,994.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,094.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,194.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,294.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,394.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,494.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,594.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,694.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,794.7	140.0	105.0	-139.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,894.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,994.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,094.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,194.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,294.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,394.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,494.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,594.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,694.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,794.7	140.0	105.0	-139.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,894.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,000.0	0.00	0.00	7,994.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,094.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,194.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,294.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,394.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,494.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,594.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,694.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,794.7	140.0	105.0	-139.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,894.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,000.0	0.00	0.00	8,994.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,094.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,194.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,294.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,394.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,494.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,594.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,694.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,794.7	140.0	105.0	-139.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,894.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,000.0	0.00	0.00	9,994.7	140.0	105.0	-139.0	0.00	0.00	0.00

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 Wellbore: OWB
 Design: Plan 1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well Amen Corner State Com 26-36-27 #115H
 KB @ 2935.0usft (H&P 616)
 KB @ 2935.0usft (H&P 616)
 Grid
 Minimum Curvature

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)
10,100.0	0.00	0.00	10,094.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,200.0	0.00	0.00	10,194.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,300.0	0.00	0.00	10,294.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,394.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,494.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,594.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,700.0	0.00	0.00	10,694.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,800.0	0.00	0.00	10,794.7	140.0	105.0	-139.0	0.00	0.00	0.00
10,900.0	0.00	0.00	10,894.7	140.0	105.0	-139.0	0.00	0.00	0.00
11,000.0	0.00	0.00	10,994.7	140.0	105.0	-139.0	0.00	0.00	0.00
11,100.0	0.00	0.00	11,094.7	140.0	105.0	-139.0	0.00	0.00	0.00
11,200.0	0.00	0.00	11,194.7	140.0	105.0	-139.0	0.00	0.00	0.00
11,300.0	0.00	0.00	11,294.7	140.0	105.0	-139.0	0.00	0.00	0.00
11,326.3	0.00	0.00	11,321.0	140.0	105.0	-139.0	0.00	0.00	0.00
KOP - Build 10.00, 61°FNL & 2214°FEL									
11,350.0	2.37	187.25	11,344.7	139.5	104.9	-138.5	10.00	10.00	0.00
11,400.0	7.37	187.25	11,394.5	135.3	104.4	-134.3	10.00	10.00	0.00
11,450.0	12.37	187.25	11,443.7	126.8	103.3	-125.8	10.00	10.00	0.00
11,500.0	17.37	187.25	11,492.0	114.1	101.7	-113.1	10.00	10.00	0.00
11,550.0	22.37	187.25	11,539.1	97.2	99.6	-96.3	10.00	10.00	0.00
11,600.0	27.37	187.25	11,584.4	76.4	96.9	-75.4	10.00	10.00	0.00
11,650.0	32.37	187.25	11,627.7	51.7	93.8	-50.8	10.00	10.00	0.00
11,700.0	37.37	187.25	11,668.8	23.3	90.2	-22.5	10.00	10.00	0.00
11,750.0	42.37	187.25	11,707.1	-8.5	86.1	9.3	10.00	10.00	0.00
11,800.0	47.37	187.25	11,742.5	-43.4	81.7	44.2	10.00	10.00	0.00
11,850.0	52.37	187.25	11,774.8	-81.3	76.8	82.1	10.00	10.00	0.00
11,900.0	57.37	187.25	11,803.5	-121.9	71.7	122.6	10.00	10.00	0.00
11,950.0	62.37	187.25	11,828.6	-164.8	66.2	165.4	10.00	10.00	0.00
12,000.0	67.37	187.25	11,849.8	-209.7	60.5	210.2	10.00	10.00	0.00
12,050.0	72.37	187.25	11,867.0	-256.2	54.6	256.7	10.00	10.00	0.00
12,100.0	77.37	187.25	11,880.1	-304.1	48.5	304.5	10.00	10.00	0.00
12,150.0	82.37	187.25	11,888.9	-352.9	42.3	353.3	10.00	10.00	0.00
12,200.0	87.37	187.25	11,893.4	-402.3	36.0	402.6	10.00	10.00	0.00
12,226.3	90.00	187.25	11,894.0	-428.4	32.7	428.7	10.00	10.00	0.00
EOC/TRN - DLS 2.00 TFO -90.00									
12,300.0	90.00	185.78	11,894.0	-501.6	24.3	501.8	2.00	0.00	-2.00
12,400.0	90.00	183.78	11,894.0	-601.2	16.0	601.4	2.00	0.00	-2.00
12,500.0	90.00	181.78	11,894.0	-701.1	11.2	701.2	2.00	0.00	-2.00
12,600.0	90.00	179.78	11,894.0	-801.1	9.8	801.2	2.00	0.00	-2.00
12,615.7	90.00	179.46	11,894.0	-816.8	9.9	816.9	2.00	0.00	-2.00
Start 6497.4 hold at 12615.7 MD									
12,700.0	90.00	179.46	11,894.0	-901.1	10.7	901.2	0.00	0.00	0.00
12,800.0	90.00	179.46	11,894.0	-1,001.1	11.6	1,001.2	0.00	0.00	0.00
12,900.0	90.00	179.46	11,894.0	-1,101.1	12.6	1,101.2	0.00	0.00	0.00
13,000.0	90.00	179.46	11,894.0	-1,201.1	13.5	1,201.2	0.00	0.00	0.00
13,100.0	90.00	179.46	11,894.0	-1,301.1	14.5	1,301.2	0.00	0.00	0.00
13,200.0	90.00	179.46	11,894.0	-1,401.1	15.4	1,401.2	0.00	0.00	0.00
13,300.0	90.00	179.46	11,894.0	-1,501.1	16.3	1,501.2	0.00	0.00	0.00
13,400.0	90.00	179.46	11,894.0	-1,601.1	17.3	1,601.2	0.00	0.00	0.00
13,500.0	90.00	179.46	11,894.0	-1,701.1	18.2	1,701.2	0.00	0.00	0.00
13,600.0	90.00	179.46	11,894.0	-1,801.1	19.2	1,801.2	0.00	0.00	0.00
13,700.0	90.00	179.46	11,894.0	-1,901.1	20.1	1,901.2	0.00	0.00	0.00
13,800.0	90.00	179.46	11,894.0	-2,001.1	21.0	2,001.2	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Amen Corner State Com 26-36-27 #115H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2935.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2935.0usft (H&P 616)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #115H	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)
13,900.0	90.00	179.46	11,894.0	-2,101.0	22.0	2,101.2	0.00	0.00	0.00
14,000.0	90.00	179.46	11,894.0	-2,201.0	22.9	2,201.2	0.00	0.00	0.00
14,100.0	90.00	179.46	11,894.0	-2,301.0	23.9	2,301.2	0.00	0.00	0.00
14,200.0	90.00	179.46	11,894.0	-2,401.0	24.8	2,401.2	0.00	0.00	0.00
14,300.0	90.00	179.46	11,894.0	-2,501.0	25.7	2,501.2	0.00	0.00	0.00
14,400.0	90.00	179.46	11,894.0	-2,601.0	26.7	2,601.2	0.00	0.00	0.00
14,500.0	90.00	179.46	11,894.0	-2,701.0	27.6	2,701.2	0.00	0.00	0.00
14,600.0	90.00	179.46	11,894.0	-2,801.0	28.6	2,801.2	0.00	0.00	0.00
14,700.0	90.00	179.46	11,894.0	-2,901.0	29.5	2,901.2	0.00	0.00	0.00
14,800.0	90.00	179.46	11,894.0	-3,001.0	30.5	3,001.2	0.00	0.00	0.00
14,900.0	90.00	179.46	11,894.0	-3,101.0	31.4	3,101.2	0.00	0.00	0.00
15,000.0	90.00	179.46	11,894.0	-3,201.0	32.3	3,201.2	0.00	0.00	0.00
15,100.0	90.00	179.46	11,894.0	-3,301.0	33.3	3,301.2	0.00	0.00	0.00
15,200.0	90.00	179.46	11,894.0	-3,401.0	34.2	3,401.2	0.00	0.00	0.00
15,300.0	90.00	179.46	11,894.0	-3,501.0	35.2	3,501.2	0.00	0.00	0.00
15,400.0	90.00	179.46	11,894.0	-3,601.0	36.1	3,601.2	0.00	0.00	0.00
15,500.0	90.00	179.46	11,894.0	-3,701.0	37.0	3,701.2	0.00	0.00	0.00
15,600.0	90.00	179.46	11,894.0	-3,801.0	38.0	3,801.2	0.00	0.00	0.00
15,700.0	90.00	179.46	11,894.0	-3,901.0	38.9	3,901.2	0.00	0.00	0.00
15,800.0	90.00	179.46	11,894.0	-4,001.0	39.9	4,001.2	0.00	0.00	0.00
15,900.0	90.00	179.46	11,894.0	-4,101.0	40.8	4,101.2	0.00	0.00	0.00
16,000.0	90.00	179.46	11,894.0	-4,201.0	41.7	4,201.2	0.00	0.00	0.00
16,100.0	90.00	179.46	11,894.0	-4,300.9	42.7	4,301.2	0.00	0.00	0.00
16,200.0	90.00	179.46	11,894.0	-4,400.9	43.6	4,401.2	0.00	0.00	0.00
16,300.0	90.00	179.46	11,894.0	-4,500.9	44.6	4,501.2	0.00	0.00	0.00
16,400.0	90.00	179.46	11,894.0	-4,600.9	45.5	4,601.2	0.00	0.00	0.00
16,500.0	90.00	179.46	11,894.0	-4,700.9	46.4	4,701.2	0.00	0.00	0.00
16,600.0	90.00	179.46	11,894.0	-4,800.9	47.4	4,801.2	0.00	0.00	0.00
16,700.0	90.00	179.46	11,894.0	-4,900.9	48.3	4,901.2	0.00	0.00	0.00
16,800.0	90.00	179.46	11,894.0	-5,000.9	49.3	5,001.2	0.00	0.00	0.00
16,881.9	90.00	179.46	11,894.0	-5,082.8	50.0	5,083.1	0.00	0.00	0.00
Sec 27 & 34 Cross, 2318'FEL									
16,900.0	90.00	179.46	11,894.0	-5,100.9	50.2	5,101.2	0.00	0.00	0.00
17,000.0	90.00	179.46	11,894.0	-5,200.9	51.1	5,201.2	0.00	0.00	0.00
17,100.0	90.00	179.46	11,894.0	-5,300.9	52.1	5,301.2	0.00	0.00	0.00
17,200.0	90.00	179.46	11,894.0	-5,400.9	53.0	5,401.2	0.00	0.00	0.00
17,300.0	90.00	179.46	11,894.0	-5,500.9	54.0	5,501.2	0.00	0.00	0.00
17,400.0	90.00	179.46	11,894.0	-5,600.9	54.9	5,601.2	0.00	0.00	0.00
17,500.0	90.00	179.46	11,894.0	-5,700.9	55.8	5,701.2	0.00	0.00	0.00
17,600.0	90.00	179.46	11,894.0	-5,800.9	56.8	5,801.2	0.00	0.00	0.00
17,700.0	90.00	179.46	11,894.0	-5,900.9	57.7	5,901.2	0.00	0.00	0.00
17,800.0	90.00	179.46	11,894.0	-6,000.9	58.7	6,001.2	0.00	0.00	0.00
17,900.0	90.00	179.46	11,894.0	-6,100.9	59.6	6,101.2	0.00	0.00	0.00
18,000.0	90.00	179.46	11,894.0	-6,200.9	60.5	6,201.2	0.00	0.00	0.00
18,100.0	90.00	179.46	11,894.0	-6,300.9	61.5	6,301.2	0.00	0.00	0.00
18,200.0	90.00	179.46	11,894.0	-6,400.9	62.4	6,401.2	0.00	0.00	0.00
18,300.0	90.00	179.46	11,894.0	-6,500.9	63.4	6,501.2	0.00	0.00	0.00
18,400.0	90.00	179.46	11,894.0	-6,600.8	64.3	6,601.2	0.00	0.00	0.00
18,500.0	90.00	179.46	11,894.0	-6,700.8	65.2	6,701.2	0.00	0.00	0.00
18,600.0	90.00	179.46	11,894.0	-6,800.8	66.2	6,801.2	0.00	0.00	0.00
18,700.0	90.00	179.46	11,894.0	-6,900.8	67.1	6,901.2	0.00	0.00	0.00
18,800.0	90.00	179.46	11,894.0	-7,000.8	68.1	7,001.2	0.00	0.00	0.00
18,900.0	90.00	179.46	11,894.0	-7,100.8	69.0	7,101.2	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Amen Corner State Com 26-36-27 #115H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2935.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2935.0usft (H&P 616)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #115H	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)
19,000.0	90.00	179.46	11,894.0	-7,200.8	69.9	7,201.2	0.00	0.00	0.00
19,100.0	90.00	179.46	11,894.0	-7,300.8	70.9	7,301.2	0.00	0.00	0.00
19,113.2	90.00	179.46	11,894.0	-7,314.0	71.0	7,314.3	0.00	0.00	0.00

TD at 19113.2, 200°FSL & 2318°FEL

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 (Amen Corner St - plan hits target center - Point	0.00	179.46	11,894.0	-7,314.0	71.0	365,732.00	876,534.00	32° 0' 3.129 N	103° 15' 7.311 W
LTP (Amen Corner St - plan misses target center by 0.2usft at 18983.2usft MD (11894.0 TVD, -7184.0 N, 69.8 E) - Rectangle (sides W60.0 H7,054.8 D25.0)	0.00	179.46	11,894.0	-7,184.0	70.0	365,862.00	876,533.00	32° 0' 4.416 N	103° 15' 7.308 W
FTP (Amen Corner St - plan misses target center by 96.6usft at 11953.6usft MD (11830.3 TVD, -168.0 N, 65.8 E) - Point	0.00	0.00	11,894.0	-130.0	4.0	372,916.00	876,467.00	32° 1' 14.219 N	103° 15' 7.254 W

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
5,205.3	5,200.0	9.625	9-5/8	12-1/4
10,805.3	10,800.0	7.625	7-5/8	8-3/4
19,113.2	11,894.0	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			
2,159.1	2,159.0	Rustler			
2,395.5	2,395.0	Salado			
3,208.1	3,206.0	Tansill			
4,960.3	4,955.0	Lamar			
5,219.3	5,214.0	Bell Canyon			
6,677.3	6,672.0	Brushy Canyon			
7,609.3	7,604.0	Bone Spring Lime			
9,329.3	9,324.0	First Bone Spring			
9,850.3	9,845.0	Second Bone Spring			
10,610.3	10,605.0	Third Bone Spring Upper			
11,254.3	11,249.0	Third Bone Spring			
11,257.3	11,252.0	Wolfcamp			
11,985.3	11,844.0	Wolfcamp B			

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Amen Corner State Com 26-36-27 #115H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2935.0usft (H&P 616)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2935.0usft (H&P 616)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #115H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan 1		

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
2,177.4	2,177.3	4.4	3.3	HOLD - 2650.5 at 2177.4 MD
4,827.9	4,822.7	135.6	101.7	DROP - -2.00
5,005.3	5,000.0	140.0	105.0	HOLD - 6321.0 at 5005.3 MD
11,326.3	11,321.0	140.0	105.0	KOP - Build 10.00, 61'FNL & 2214'FEL
12,226.3	11,894.0	-428.4	32.7	EOC/TRN - DLS 2.00 TFO -90.00
12,615.7	11,894.0	-816.8	9.9	Start 6497.4 hold at 12615.7 MD
16,881.9	11,894.0	-5,082.8	50.0	Sec 27 & 34 Cross, 2318'FEL
19,113.2	11,894.0	-7,314.0	71.0	TD at 19113.2, 200'FSL & 2318'FEL

Wellbore Schematic

Well: Amen Corner State Com 26-36-27 115H
SHL: Sec. 27 26S-36E 200' FNL & 2320' FEL
BHL: Sec. 34 26S-36E 200' FSL & 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: 40222
AFE No.: 2018-010
API No.: xxxxxxxxxxxx
GL: 2,908'
Field: Delaware_WCA
Objective: Wolfcamp A
TVD: 11,894'
MD: 19,794'
Rig: H&P 616
E-Mail: Wellsite2@ameredev.com

Hole Size	Formation Tops	Logs	Cement	Mud Weight
17.5"	Dewey Lake 900' 13.375" 54.5# J-55 BTC 1,350'		1125 Sacks TOC 0' 100% Excess	8.6 - 10 ppg WBM
12.25"	Rustler 2,159' Salado 2,395' Tansill 3,206' Lamar 4,955' 9.625" 40# L-80HC BTC 5,200'		1150 Sacks TOC 0' 50% Excess	10 - 11.5 ppg Brine
8.75"	Bell Canyon 5,214' Brushy Canyon 6,672' Bone Spring Lime 7,604' 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'	Triple Combo	300 Sacks TOC 4700' 25% Excess	9.5 - 10.5 Cut Brine
6.75" KOP 11,330' 10° Build	Third Bone Spring 11,249' Wolfcamp 11,417' 5.5" 20# P-110HC CDC 19,794' Target Wolfcamp A 11,894' TVD // 19,794' MD	Triple Combo	800 Sacks TOC 10,300' 25% Excess	11.5 - 12.5 ppg OBM