

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 #091H

OWB

**HOBBS OCD
JUN 27 2018
RECEIVED**

Plan: Plan #1

Standard Planning Report

20 June, 2018

INTREPID

Database:	EDM5000	Local Co-ordinate Reference:	Well Amen Corner State Com 26-36-27 #091H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2938.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2938.0usft (Rig)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #091H	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	Latitude: 32.0209732
From: Map	Easting:	876,483.00 usft	Longitude: -103.2519593
Position Uncertainty:	0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.57 °

Well	Amen Corner State Com 26-36-27 #091H		
Well Position	+N/-S	407.0 usft	Northing: 373,453.00 usft
	+E/-W	-2,664.0 usft	Easting: 873,819.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32.0221649
			Longitude: -103.2605406
			Ground Level: 2,911.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2018/06/14	6.69	59.91	47,752.25844790

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	176.83

Plan Survey Tool Program	Date	2018/06/20		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	19,063.5 Plan #1 (OWB)	MWD	
			MWD - Standard	

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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	
2,150.0	3.00	80.00	2,149.9	0.7	3.9	2.00	2.00	0.00	80.00	
7,150.0	3.00	80.00	7,143.1	46.1	261.6	0.00	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,293.0	46.8	265.4	2.00	-2.00	-53.33	-180.00	
10,943.0	0.00	0.00	10,936.0	46.8	265.4	0.00	0.00	0.00	0.00	
11,843.0	90.00	172.91	11,509.0	-521.8	336.2	10.00	10.00	0.00	172.91	
12,167.8	90.00	179.41	11,509.0	-845.7	357.9	2.00	0.00	2.00	90.00	
18,934.5	90.00	179.41	11,509.0	-7,612.0	428.0	0.00	0.00	0.00	0.00	LTP (Amen Corner
19,063.5	90.00	179.41	11,509.0	-7,741.0	429.3	0.00	0.00	0.00	0.00	PBHL(Amen Corne

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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
1,100.0	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
BUILD - 2.00									
2,008.0	0.16	80.00	2,008.0	0.0	0.0	0.0	2.00	2.00	0.00
Rustler									
2,100.0	2.00	80.00	2,100.0	0.3	1.7	-0.2	2.00	2.00	0.00
2,150.0	3.00	80.00	2,149.9	0.7	3.9	-0.5	2.00	2.00	0.00
HOLD - 5000.0 at 2150.0 MD									
2,200.0	3.00	80.00	2,199.9	1.1	6.4	-0.8	0.00	0.00	0.00
2,300.0	3.00	80.00	2,299.7	2.0	11.6	-1.4	0.00	0.00	0.00
2,322.3	3.00	80.00	2,322.0	2.2	12.7	-1.5	0.00	0.00	0.00
Salado									
2,400.0	3.00	80.00	2,399.6	3.0	16.8	-2.0	0.00	0.00	0.00
2,500.0	3.00	80.00	2,499.5	3.9	21.9	-2.6	0.00	0.00	0.00
2,600.0	3.00	80.00	2,599.3	4.8	27.1	-3.3	0.00	0.00	0.00
2,700.0	3.00	80.00	2,699.2	5.7	32.2	-3.9	0.00	0.00	0.00
2,800.0	3.00	80.00	2,799.0	6.6	37.4	-4.5	0.00	0.00	0.00
2,900.0	3.00	80.00	2,898.9	7.5	42.5	-5.1	0.00	0.00	0.00
3,000.0	3.00	80.00	2,998.8	8.4	47.7	-5.8	0.00	0.00	0.00
3,100.0	3.00	80.00	3,098.6	9.3	52.8	-6.4	0.00	0.00	0.00
3,178.5	3.00	80.00	3,177.0	10.0	56.9	-6.9	0.00	0.00	0.00
Tansill									
3,200.0	3.00	80.00	3,198.5	10.2	58.0	-7.0	0.00	0.00	0.00
3,300.0	3.00	80.00	3,298.4	11.1	63.1	-7.6	0.00	0.00	0.00
3,400.0	3.00	80.00	3,398.2	12.0	68.3	-8.2	0.00	0.00	0.00
3,500.0	3.00	80.00	3,498.1	13.0	73.4	-8.9	0.00	0.00	0.00
3,600.0	3.00	80.00	3,597.9	13.9	78.6	-9.5	0.00	0.00	0.00
3,700.0	3.00	80.00	3,697.8	14.8	83.8	-10.1	0.00	0.00	0.00
3,800.0	3.00	80.00	3,797.7	15.7	88.9	-10.7	0.00	0.00	0.00
3,900.0	3.00	80.00	3,897.5	16.6	94.1	-11.4	0.00	0.00	0.00
4,000.0	3.00	80.00	3,997.4	17.5	99.2	-12.0	0.00	0.00	0.00
4,100.0	3.00	80.00	4,097.3	18.4	104.4	-12.6	0.00	0.00	0.00
4,200.0	3.00	80.00	4,197.1	19.3	109.5	-13.2	0.00	0.00	0.00
4,300.0	3.00	80.00	4,297.0	20.2	114.7	-13.8	0.00	0.00	0.00

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4,400.0	3.00	80.00	4,396.8	21.1	119.8	-14.5	0.00	0.00	0.00
4,500.0	3.00	80.00	4,496.7	22.0	125.0	-15.1	0.00	0.00	0.00
4,600.0	3.00	80.00	4,596.6	22.9	130.1	-15.7	0.00	0.00	0.00
4,700.0	3.00	80.00	4,696.4	23.9	135.3	-16.3	0.00	0.00	0.00
4,800.0	3.00	80.00	4,796.3	24.8	140.4	-17.0	0.00	0.00	0.00
4,900.0	3.00	80.00	4,896.2	25.7	145.6	-17.6	0.00	0.00	0.00
4,944.9	3.00	80.00	4,941.0	26.1	147.9	-17.9	0.00	0.00	0.00
Lamar									
4,995.0	3.00	80.00	4,991.0	26.5	150.5	-18.2	0.00	0.00	0.00
9 5/8"									
5,000.0	3.00	80.00	4,996.0	26.6	150.8	-18.2	0.00	0.00	0.00
5,100.0	3.00	80.00	5,095.9	27.5	155.9	-18.8	0.00	0.00	0.00
5,106.1	3.00	80.00	5,102.0	27.5	156.2	-18.9	0.00	0.00	0.00
Bell Canyon									
5,200.0	3.00	80.00	5,195.8	28.4	161.1	-19.4	0.00	0.00	0.00
5,300.0	3.00	80.00	5,295.6	29.3	166.2	-20.1	0.00	0.00	0.00
5,400.0	3.00	80.00	5,395.5	30.2	171.4	-20.7	0.00	0.00	0.00
5,500.0	3.00	80.00	5,495.3	31.1	176.5	-21.3	0.00	0.00	0.00
5,600.0	3.00	80.00	5,595.2	32.0	181.7	-21.9	0.00	0.00	0.00
5,700.0	3.00	80.00	5,695.1	32.9	186.8	-22.6	0.00	0.00	0.00
5,800.0	3.00	80.00	5,794.9	33.9	192.0	-23.2	0.00	0.00	0.00
5,900.0	3.00	80.00	5,894.8	34.8	197.1	-23.8	0.00	0.00	0.00
6,000.0	3.00	80.00	5,994.7	35.7	202.3	-24.4	0.00	0.00	0.00
6,100.0	3.00	80.00	6,094.5	36.6	207.5	-25.0	0.00	0.00	0.00
6,200.0	3.00	80.00	6,194.4	37.5	212.6	-25.7	0.00	0.00	0.00
6,300.0	3.00	80.00	6,294.2	38.4	217.8	-26.3	0.00	0.00	0.00
6,400.0	3.00	80.00	6,394.1	39.3	222.9	-26.9	0.00	0.00	0.00
6,500.0	3.00	80.00	6,494.0	40.2	228.1	-27.5	0.00	0.00	0.00
6,600.0	3.00	80.00	6,593.8	41.1	233.2	-28.2	0.00	0.00	0.00
6,700.0	3.00	80.00	6,693.7	42.0	238.4	-28.8	0.00	0.00	0.00
6,800.0	3.00	80.00	6,793.6	42.9	243.5	-29.4	0.00	0.00	0.00
6,900.0	3.00	80.00	6,893.4	43.8	248.7	-30.0	0.00	0.00	0.00
7,000.0	3.00	80.00	6,993.3	44.8	253.8	-30.6	0.00	0.00	0.00
7,035.8	3.00	80.00	7,029.0	45.1	255.7	-30.9	0.00	0.00	0.00
Brushy Canyon									
7,100.0	3.00	80.00	7,093.1	45.7	259.0	-31.3	0.00	0.00	0.00
7,150.0	3.00	80.00	7,143.1	46.1	261.6	-31.6	0.00	0.00	0.00
DROP - DLS 2.00 TFO -180.00									
7,200.0	2.00	80.00	7,193.0	46.5	263.7	-31.8	2.00	-2.00	0.00
7,300.0	0.00	0.00	7,293.0	46.8	265.4	-32.0	2.00	-2.00	-80.00
HOLD - 3643.0 at 7300.0 MD									
7,400.0	0.00	0.00	7,393.0	46.8	265.4	-32.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,493.0	46.8	265.4	-32.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,593.0	46.8	265.4	-32.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,693.0	46.8	265.4	-32.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,793.0	46.8	265.4	-32.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,893.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,000.0	0.00	0.00	7,993.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,072.0	0.00	0.00	8,065.0	46.8	265.4	-32.0	0.00	0.00	0.00
Bone Spring Lime									
8,100.0	0.00	0.00	8,093.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,193.0	46.8	265.4	-32.0	0.00	0.00	0.00

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8,300.0	0.00	0.00	8,293.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,393.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,493.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,593.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,693.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,793.0	46.8	265.4	-32.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,893.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,000.0	0.00	0.00	8,993.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,093.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,193.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,293.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,393.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,493.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,571.0	0.00	0.00	9,564.0	46.8	265.4	-32.0	0.00	0.00	0.00
First Bone Spring									
9,600.0	0.00	0.00	9,593.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,693.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,793.0	46.8	265.4	-32.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,893.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,000.0	0.00	0.00	9,993.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,093.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,200.0	0.00	0.00	10,193.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,208.0	0.00	0.00	10,201.0	46.8	265.4	-32.0	0.00	0.00	0.00
Second Bone Spring									
10,300.0	0.00	0.00	10,293.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,393.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,493.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,593.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,700.0	0.00	0.00	10,693.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,800.0	0.00	0.00	10,793.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,900.0	0.00	0.00	10,893.0	46.8	265.4	-32.0	0.00	0.00	0.00
10,943.0	0.00	0.00	10,936.0	46.8	265.4	-32.0	0.00	0.00	0.00
KOP - BUILD10.00 - Third Bone Spring Upper - 7 5/8"									
10,950.0	0.70	172.91	10,943.0	46.8	265.4	-32.0	10.00	10.00	2,466.40
11,000.0	5.70	172.91	10,992.9	44.0	265.8	-29.2	10.00	10.00	0.00
11,050.0	10.70	172.91	11,042.4	36.9	266.7	-22.1	10.00	10.00	0.00
11,100.0	15.70	172.91	11,091.1	25.6	268.1	-10.7	10.00	10.00	0.00
11,150.0	20.70	172.91	11,138.5	10.1	270.0	4.9	10.00	10.00	0.00
11,200.0	25.70	172.91	11,184.5	-9.4	272.4	24.5	10.00	10.00	0.00
11,250.0	30.70	172.91	11,228.5	-32.9	275.3	48.1	10.00	10.00	0.00
11,300.0	35.70	172.91	11,270.4	-60.0	278.7	75.4	10.00	10.00	0.00
11,350.0	40.70	172.91	11,309.6	-90.7	282.5	106.2	10.00	10.00	0.00
11,400.0	45.70	172.91	11,346.1	-124.7	286.8	140.4	10.00	10.00	0.00
11,450.0	50.70	172.91	11,379.4	-161.7	291.4	177.5	10.00	10.00	0.00
11,500.0	55.70	172.91	11,409.3	-201.4	296.3	217.5	10.00	10.00	0.00
11,550.0	60.70	172.91	11,435.7	-243.5	301.5	259.8	10.00	10.00	0.00
11,600.0	65.70	172.91	11,458.2	-287.8	307.1	304.4	10.00	10.00	0.00
11,602.0	65.90	172.91	11,459.0	-289.6	307.3	306.1	10.00	10.00	0.00
Third Bone Spring									
11,650.0	70.70	172.91	11,476.8	-333.9	312.8	350.7	10.00	10.00	0.00
11,700.0	75.70	172.91	11,491.2	-381.3	318.7	398.4	10.00	10.00	0.00
11,750.0	80.70	172.91	11,501.4	-429.9	324.7	447.2	10.00	10.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Amen Corner State Com 26-36-27 #091H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 2938.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2938.0usft (Rig)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #091H	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)
11,800.0	85.70	172.91	11,507.3	-479.2	330.9	496.7	10.00	10.00	0.00
11,843.0	90.00	172.91	11,509.0	-521.8	336.2	539.6	10.00	10.00	0.00
EOC/TURN - DLS 2.00 TFO 90.00									
11,880.1	90.00	173.65	11,509.0	-558.7	340.5	576.6	2.00	0.00	2.00
FTP (Amen Corner State Com #091H)									
11,900.0	90.00	174.05	11,509.0	-578.4	342.6	596.5	2.00	0.00	2.00
12,000.0	90.00	176.05	11,509.0	-678.0	351.3	696.4	2.00	0.00	2.00
12,100.0	90.00	178.05	11,509.0	-777.9	356.4	796.4	2.00	0.00	2.00
12,167.8	90.00	179.41	11,509.0	-845.7	357.9	864.2	2.00	0.00	2.00
HOLD - 6766.7 at 12167.8 MD									
12,200.0	90.00	179.41	11,509.0	-877.9	358.2	896.4	0.00	0.00	0.00
12,300.0	90.00	179.41	11,509.0	-977.9	359.3	996.3	0.00	0.00	0.00
12,400.0	90.00	179.41	11,509.0	-1,077.9	360.3	1,096.2	0.00	0.00	0.00
12,500.0	90.00	179.41	11,509.0	-1,177.9	361.3	1,196.1	0.00	0.00	0.00
12,600.0	90.00	179.41	11,509.0	-1,277.9	362.4	1,296.0	0.00	0.00	0.00
12,700.0	90.00	179.41	11,509.0	-1,377.9	363.4	1,395.9	0.00	0.00	0.00
12,800.0	90.00	179.41	11,509.0	-1,477.8	364.5	1,495.7	0.00	0.00	0.00
12,900.0	90.00	179.41	11,509.0	-1,577.8	365.5	1,595.6	0.00	0.00	0.00
13,000.0	90.00	179.41	11,509.0	-1,677.8	366.5	1,695.5	0.00	0.00	0.00
13,100.0	90.00	179.41	11,509.0	-1,777.8	367.6	1,795.4	0.00	0.00	0.00
13,200.0	90.00	179.41	11,509.0	-1,877.8	368.6	1,895.3	0.00	0.00	0.00
13,300.0	90.00	179.41	11,509.0	-1,977.8	369.6	1,995.2	0.00	0.00	0.00
13,400.0	90.00	179.41	11,509.0	-2,077.8	370.7	2,095.1	0.00	0.00	0.00
13,500.0	90.00	179.41	11,509.0	-2,177.8	371.7	2,195.0	0.00	0.00	0.00
13,600.0	90.00	179.41	11,509.0	-2,277.8	372.7	2,294.9	0.00	0.00	0.00
13,700.0	90.00	179.41	11,509.0	-2,377.8	373.8	2,394.8	0.00	0.00	0.00
13,800.0	90.00	179.41	11,509.0	-2,477.8	374.8	2,494.7	0.00	0.00	0.00
13,900.0	90.00	179.41	11,509.0	-2,577.8	375.9	2,594.6	0.00	0.00	0.00
14,000.0	90.00	179.41	11,509.0	-2,677.8	376.9	2,694.5	0.00	0.00	0.00
14,100.0	90.00	179.41	11,509.0	-2,777.8	377.9	2,794.4	0.00	0.00	0.00
14,200.0	90.00	179.41	11,509.0	-2,877.8	379.0	2,894.3	0.00	0.00	0.00
14,300.0	90.00	179.41	11,509.0	-2,977.8	380.0	2,994.2	0.00	0.00	0.00
14,400.0	90.00	179.41	11,509.0	-3,077.8	381.0	3,094.1	0.00	0.00	0.00
14,500.0	90.00	179.41	11,509.0	-3,177.8	382.1	3,194.0	0.00	0.00	0.00
14,600.0	90.00	179.41	11,509.0	-3,277.7	383.1	3,293.9	0.00	0.00	0.00
14,700.0	90.00	179.41	11,509.0	-3,377.7	384.1	3,393.8	0.00	0.00	0.00
14,800.0	90.00	179.41	11,509.0	-3,477.7	385.2	3,493.7	0.00	0.00	0.00
14,900.0	90.00	179.41	11,509.0	-3,577.7	386.2	3,593.6	0.00	0.00	0.00
15,000.0	90.00	179.41	11,509.0	-3,677.7	387.2	3,693.5	0.00	0.00	0.00
15,100.0	90.00	179.41	11,509.0	-3,777.7	388.3	3,793.4	0.00	0.00	0.00
15,200.0	90.00	179.41	11,509.0	-3,877.7	389.3	3,893.3	0.00	0.00	0.00
15,300.0	90.00	179.41	11,509.0	-3,977.7	390.4	3,993.2	0.00	0.00	0.00
15,400.0	90.00	179.41	11,509.0	-4,077.7	391.4	4,093.1	0.00	0.00	0.00
15,500.0	90.00	179.41	11,509.0	-4,177.7	392.4	4,193.0	0.00	0.00	0.00
15,600.0	90.00	179.41	11,509.0	-4,277.7	393.5	4,292.9	0.00	0.00	0.00
15,700.0	90.00	179.41	11,509.0	-4,377.7	394.5	4,392.8	0.00	0.00	0.00
15,800.0	90.00	179.41	11,509.0	-4,477.7	395.5	4,492.7	0.00	0.00	0.00
15,900.0	90.00	179.41	11,509.0	-4,577.7	396.6	4,592.6	0.00	0.00	0.00
16,000.0	90.00	179.41	11,509.0	-4,677.7	397.6	4,692.5	0.00	0.00	0.00
16,100.0	90.00	179.41	11,509.0	-4,777.7	398.6	4,792.4	0.00	0.00	0.00
16,200.0	90.00	179.41	11,509.0	-4,877.7	399.7	4,892.3	0.00	0.00	0.00
16,300.0	90.00	179.41	11,509.0	-4,977.7	400.7	4,992.2	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Amen Corner State Com 26-36-27 #091H
Company:	Ameredeve Operating, LLC	TVD Reference:	KB @ 2938.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2938.0usft (Rig)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #091H	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)
16,400.0	90.00	179.41	11,509.0	-5,077.7	401.7	5,092.1	0.00	0.00	0.00
16,500.0	90.00	179.41	11,509.0	-5,177.6	402.8	5,192.0	0.00	0.00	0.00
16,600.0	90.00	179.41	11,509.0	-5,277.6	403.8	5,291.9	0.00	0.00	0.00
16,700.0	90.00	179.41	11,509.0	-5,377.6	404.9	5,391.8	0.00	0.00	0.00
16,800.0	90.00	179.41	11,509.0	-5,477.6	405.9	5,491.7	0.00	0.00	0.00
16,900.0	90.00	179.41	11,509.0	-5,577.6	406.9	5,591.6	0.00	0.00	0.00
17,000.0	90.00	179.41	11,509.0	-5,677.6	408.0	5,691.5	0.00	0.00	0.00
17,100.0	90.00	179.41	11,509.0	-5,777.6	409.0	5,791.4	0.00	0.00	0.00
17,200.0	90.00	179.41	11,509.0	-5,877.6	410.0	5,891.3	0.00	0.00	0.00
17,238.5	90.00	179.41	11,509.0	-5,916.1	410.4	5,929.8	0.00	0.00	0.00
SEC LINE 27 CROSS - 5282' FNL, 4606' FEL									
17,300.0	90.00	179.41	11,509.0	-5,977.6	411.1	5,991.2	0.00	0.00	0.00
17,400.0	90.00	179.41	11,509.0	-6,077.6	412.1	6,091.1	0.00	0.00	0.00
17,500.0	90.00	179.41	11,509.0	-6,177.6	413.1	6,191.0	0.00	0.00	0.00
17,600.0	90.00	179.41	11,509.0	-6,277.6	414.2	6,290.9	0.00	0.00	0.00
17,700.0	90.00	179.41	11,509.0	-6,377.6	415.2	6,390.8	0.00	0.00	0.00
17,800.0	90.00	179.41	11,509.0	-6,477.6	416.2	6,490.7	0.00	0.00	0.00
17,900.0	90.00	179.41	11,509.0	-6,577.6	417.3	6,590.6	0.00	0.00	0.00
18,000.0	90.00	179.41	11,509.0	-6,677.6	418.3	6,690.5	0.00	0.00	0.00
18,100.0	90.00	179.41	11,509.0	-6,777.6	419.4	6,790.4	0.00	0.00	0.00
18,200.0	90.00	179.41	11,509.0	-6,877.6	420.4	6,890.3	0.00	0.00	0.00
18,300.0	90.00	179.41	11,509.0	-6,977.6	421.4	6,990.2	0.00	0.00	0.00
18,400.0	90.00	179.41	11,509.0	-7,077.5	422.5	7,090.1	0.00	0.00	0.00
18,500.0	90.00	179.41	11,509.0	-7,177.5	423.5	7,190.0	0.00	0.00	0.00
18,600.0	90.00	179.41	11,509.0	-7,277.5	424.5	7,289.9	0.00	0.00	0.00
18,700.0	90.00	179.41	11,509.0	-7,377.5	425.6	7,389.8	0.00	0.00	0.00
18,800.0	90.00	179.41	11,509.0	-7,477.5	426.6	7,489.7	0.00	0.00	0.00
18,900.0	90.00	179.41	11,509.0	-7,577.5	427.6	7,589.6	0.00	0.00	0.00
18,934.5	90.00	179.41	11,509.0	-7,612.0	428.0	7,624.0	0.00	0.00	0.00
LTP - 7385' FNL, 4604' FEL - LTP (Amen Corner State Com #091H)									
19,000.0	90.00	179.41	11,509.0	-7,677.5	428.7	7,689.5	0.00	0.00	0.00
19,063.5	90.00	179.41	11,509.0	-7,741.0	429.3	7,752.9	0.00	0.00	0.00
PBHL - 7514' FNL, 4604' FEL - PBHL(Amen Corner State Com #091H)									

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									
FTP (Amen Corner St	0.00	0.00	11,509.0	-557.0	355.0	372,896.00	874,174.00	32.0206242	-103.2594131
- plan misses target center by 14.6usft at 11880.1usft MD (11509.0 TVD, -558.7 N, 340.5 E)									
- Point									
PBHL(Amen Corner S	0.00	0.00	11,509.0	-7,741.0	429.0	365,712.00	874,248.00	32.0008769	-103.2594047
- plan misses target center by 0.3usft at 19063.5usft MD (11509.0 TVD, -7741.0 N, 429.3 E)									
- Point									
LTP (Amen Corner St	0.00	0.00	11,509.0	-7,612.0	428.0	365,841.00	874,247.00	32.0012315	-103.2594038
- plan hits target center									
- Point									

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Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 2938.0usft (Rig)
Site:	(Amen Corner) Sec-27_T-26-S_R-36-E	North Reference:	Grid
Well:	Amen Corner State Com 26-36-27 #091H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
4,995.0	4,991.0	9 5/8"	9-5/8	12-1/4
10,943.0	10,936.0	7 5/8"	7-5/8	8-3/4
19,063.5	11,509.0	5 1/2"	5-1/2	6-3/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,008.0	2,008.0	Rustler			
2,322.3	2,322.0	Salado			
3,178.5	3,177.0	Tansill			
4,944.9	4,941.0	Lamar			
5,106.1	5,102.0	Bell Canyon			
7,035.8	7,029.0	Brushy Canyon			
8,072.0	8,065.0	Bone Spring Lime			
9,571.0	9,564.0	First Bone Spring			
10,208.0	10,201.0	Second Bone Spring			
10,943.0	10,936.0	Third Bone Spring Upper			
11,602.0	11,459.0	Third Bone Spring			

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	BUILD - 2.00
2,150.0	2,149.9	0.7	3.9	HOLD - 5000.0 at 2150.0 MD
7,150.0	7,143.1	46.1	261.6	DROP - DLS 2.00 TFO -180.00
7,300.0	7,293.0	46.8	265.4	HOLD - 3643.0 at 7300.0 MD
10,943.0	10,936.0	46.8	265.4	KOP - BUILD10.00
11,843.0	11,509.0	-521.8	336.2	EOC/TURN - DLS 2.00 TFO 90.00
12,167.8	11,509.0	-845.7	357.9	HOLD - 6766.7 at 12167.8 MD
17,238.5	11,509.0	-5,916.1	410.4	SEC LINE 27 CROSS - 5282' FNL, 4606' FEL
18,934.5	11,509.0	-7,612.0	428.0	LTP - 7385' FNL, 4604' FEL
19,063.5	11,509.0	-7,741.0	429.3	PBHL - 7514' FNL, 4604' FEL