

AMEREDEV

AMERDEV LLC

Wellbore Schematic

Well: Red Bud State Com 25-36-32 117H
 SHL: Sec. 32 25S-36E 200' FSL & 992' FEL
 BHL: Sec. 29 25S-36E 200' FNL & 1026' FEL
 Lea, NM
 Wellhead: A - 13-5/8" 5M x 13-5/8" SOW
 B - 13-5/8" 5M 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: 40823
 AFE No.: 2018-031
 API No.: xxxxxxxxxxxx
 GL: 3,002'
 Field: Delaware_WCA
 Objective: Wolfcamp A
 TVD: 11,715'
 MD: 21,731'
 Rig: TBD
 E-Mail: Wellsite2@ameredev.com

AUG 07 2018

RECEIVED

Hole Size	Formation Tops	Logs	Cement	Mud Weight
17.5"	Rustler 1,196' TVD 13.375" 54.5# J-55 BTC 1,321' MD/TVD	1045 Sacks TOC 0'	100% Excess	8.6 - 10 ppg WBM
12.25"	Salado 1,804' TVD Tansill 3,352' TVD Lamar 5,085' TVD Bell Canyon 5,114' TVD 9.625" 40# L-80HC BTC 5,135' MD/TVD	1385 Sacks TOC 0'	50% Excess	10 - 11.5 ppg Brine
8.75"	Brushy Canyon 6,975' TVD Bone Spring Lime 8,013' TVD First Bone Spring 9,500' TVD Second Bone Spring 10,015' TVD Third Bone Spring Upper 10,700' TVD Third Bone Spring 11,321' TVD 7.625" 29.7#P-110HC FJM 11,145' MD	Triple Combo 344 Sacks TOC 4635'	25% Excess	8.9 - 10.5 Cut Brine
10" Build KOP 11,145' MD // 11,142' TVD	Wolfcamp 11,515' TVD 5.5" 20# P-110CYHP TMK UP SF TORQ 21,731' MD Target Wolfcamp A 11715' TVD // 21731' MD	Triple Combo 945 Sacks TOC 10645'	25% Excess	11.5 - 12.5 ppg OBM
6.75" □				

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HOBBS OCD
AUG 07 2018
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Ameredev Operating, LLC

Lea County, NM (NAD83 NME)
(Redbud State) Sec32_T-25-S_R-26-E
Redbud State Com 25-36-32 #117H

OWB

Plan: Plan #1

Standard Planning Report

11 July, 2018

INTREPID

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #117H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3029.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3029.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #117H	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	(Redbud State) Sec32_T-25-S_R-26-E		
Site Position:		Northing:	394,463.00 usft
From:	Map	Easting:	865,740.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32.0801291
		Longitude:	-103.2859471
		Grid Convergence:	0.56 °

Well	Redbud State Com 25-36-32 #117H		
Well Position	+N/-S	12.0 usft	Northing: 394,475.00 usft
	+E/-W	1,277.0 usft	Easting: 867,017.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32.0801279
			Longitude: -103.2818243
			Ground Level: 3,002.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	07/09/18	6.69	59.96	47,776.80547487

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	359.26

Plan Survey Tool Program	Date 07/10/18			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,731.2 Plan #1 (OWB)	MWD	
			MWD - Standard	

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Well:	Redbud State Com 25-36-32 #117H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

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	
2,150.1	3.00	221.13	2,150.1	-3.0	-2.6	2.00	2.00	0.00	221.13	
4,458.2	3.00	221.13	4,454.9	-94.0	-82.1	0.00	0.00	0.00	0.00	
4,608.3	0.00	0.00	4,605.0	-97.0	-84.7	2.00	-2.00	0.00	180.00	
11,145.3	0.00	0.00	11,142.0	-97.0	-84.7	0.00	0.00	0.00	0.00	
12,045.3	90.00	3.80	11,715.0	474.7	-46.7	10.00	10.00	0.00	3.80	
12,262.7	90.00	359.45	11,715.0	692.0	-40.6	2.00	0.00	-2.00	-90.00	
21,601.2	90.00	359.45	11,715.0	10,030.0	-130.0	0.00	0.00	0.00	0.00	LTP (Redbud State
21,731.2	90.00	359.45	11,715.0	10,160.0	-131.2	0.00	0.00	0.00	0.00	PBHL (Redbud State)

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Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #117H	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
1,196.0	0.00	0.00	1,196.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
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
1,321.0	0.00	0.00	1,321.0	0.0	0.0	0.0	0.00	0.00	0.00
13.375"									
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
1,804.0	0.00	0.00	1,804.0	0.0	0.0	0.0	0.00	0.00	0.00
Salado									
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	221.13	2,100.0	-1.3	-1.1	-1.3	2.00	2.00	0.00
2,150.1	3.00	221.13	2,150.1	-3.0	-2.6	-2.9	2.00	2.00	0.00
HOLD - 2308.0 at 2150.1 MD									
2,200.0	3.00	221.13	2,199.9	-4.9	-4.3	-4.9	0.00	0.00	0.00
2,300.0	3.00	221.13	2,299.7	-8.9	-7.8	-8.8	0.00	0.00	0.00
2,400.0	3.00	221.13	2,399.6	-12.8	-11.2	-12.7	0.00	0.00	0.00
2,500.0	3.00	221.13	2,499.5	-16.8	-14.6	-16.6	0.00	0.00	0.00
2,600.0	3.00	221.13	2,599.3	-20.7	-18.1	-20.5	0.00	0.00	0.00
2,700.0	3.00	221.13	2,699.2	-24.7	-21.5	-24.4	0.00	0.00	0.00
2,800.0	3.00	221.13	2,799.0	-28.6	-25.0	-28.3	0.00	0.00	0.00
2,900.0	3.00	221.13	2,898.9	-32.6	-28.4	-32.2	0.00	0.00	0.00
3,000.0	3.00	221.13	2,998.8	-36.5	-31.9	-36.1	0.00	0.00	0.00
3,100.0	3.00	221.13	3,098.6	-40.4	-35.3	-40.0	0.00	0.00	0.00
3,200.0	3.00	221.13	3,198.5	-44.4	-38.8	-43.9	0.00	0.00	0.00
3,300.0	3.00	221.13	3,298.4	-48.3	-42.2	-47.8	0.00	0.00	0.00
3,353.7	3.00	221.13	3,352.0	-50.5	-44.1	-49.9	0.00	0.00	0.00
Tansill									
3,400.0	3.00	221.13	3,398.2	-52.3	-45.7	-51.7	0.00	0.00	0.00
3,500.0	3.00	221.13	3,498.1	-56.2	-49.1	-55.6	0.00	0.00	0.00
3,600.0	3.00	221.13	3,597.9	-60.2	-52.5	-59.5	0.00	0.00	0.00
3,700.0	3.00	221.13	3,697.8	-64.1	-56.0	-63.4	0.00	0.00	0.00
3,800.0	3.00	221.13	3,797.7	-68.1	-59.4	-67.3	0.00	0.00	0.00
3,900.0	3.00	221.13	3,897.5	-72.0	-62.9	-71.2	0.00	0.00	0.00
4,000.0	3.00	221.13	3,997.4	-76.0	-66.3	-75.1	0.00	0.00	0.00
4,100.0	3.00	221.13	4,097.3	-79.9	-69.8	-79.0	0.00	0.00	0.00

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Planned Survey

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4,200.0	3.00	221.13	4,197.1	-83.8	-73.2	-82.9	0.00	0.00	0.00
4,300.0	3.00	221.13	4,297.0	-87.8	-76.7	-86.8	0.00	0.00	0.00
4,400.0	3.00	221.13	4,396.8	-91.7	-80.1	-90.7	0.00	0.00	0.00
4,458.2	3.00	221.13	4,454.9	-94.0	-82.1	-93.0	0.00	0.00	0.00
DROP -2.00									
4,500.0	2.17	221.13	4,496.7	-95.5	-83.4	-94.4	2.00	-2.00	0.00
4,608.3	0.00	0.00	4,605.0	-97.0	-84.7	-95.9	2.00	-2.00	0.00
HOLD - 6537.0 at 4608.3 MD									
4,700.0	0.00	0.00	4,696.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
4,800.0	0.00	0.00	4,796.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
4,900.0	0.00	0.00	4,896.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,000.0	0.00	0.00	4,996.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,088.3	0.00	0.00	5,085.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
Lamar									
5,100.0	0.00	0.00	5,096.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,117.3	0.00	0.00	5,114.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
Bell Canyon									
5,138.3	0.00	0.00	5,135.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
9.625"									
5,200.0	0.00	0.00	5,196.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,300.0	0.00	0.00	5,296.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,396.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,496.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,596.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,696.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,796.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,896.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,996.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,100.0	0.00	0.00	6,096.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,196.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,300.0	0.00	0.00	6,296.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,396.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,500.0	0.00	0.00	6,496.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,596.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,700.0	0.00	0.00	6,696.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,796.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,900.0	0.00	0.00	6,896.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
6,978.3	0.00	0.00	6,975.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
Brushy Canyon									
7,000.0	0.00	0.00	6,996.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,100.0	0.00	0.00	7,096.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,200.0	0.00	0.00	7,196.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,300.0	0.00	0.00	7,296.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,400.0	0.00	0.00	7,396.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,500.0	0.00	0.00	7,496.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,600.0	0.00	0.00	7,596.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,700.0	0.00	0.00	7,696.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,800.0	0.00	0.00	7,796.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
7,900.0	0.00	0.00	7,896.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,000.0	0.00	0.00	7,996.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,016.3	0.00	0.00	8,013.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
Bone Spring Lime									
8,100.0	0.00	0.00	8,096.7	-97.0	-84.7	-95.9	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)
8,200.0	0.00	0.00	8,196.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,300.0	0.00	0.00	8,296.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,400.0	0.00	0.00	8,396.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,500.0	0.00	0.00	8,496.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,600.0	0.00	0.00	8,596.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,700.0	0.00	0.00	8,696.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,800.0	0.00	0.00	8,796.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
8,900.0	0.00	0.00	8,896.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,000.0	0.00	0.00	8,996.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,100.0	0.00	0.00	9,096.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,200.0	0.00	0.00	9,196.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,300.0	0.00	0.00	9,296.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,400.0	0.00	0.00	9,396.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,500.0	0.00	0.00	9,496.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,503.3	0.00	0.00	9,500.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
First Bone Spring									
9,600.0	0.00	0.00	9,596.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,700.0	0.00	0.00	9,696.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,800.0	0.00	0.00	9,796.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
9,900.0	0.00	0.00	9,896.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,000.0	0.00	0.00	9,996.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,018.3	0.00	0.00	10,015.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
Second Bone Spring									
10,100.0	0.00	0.00	10,096.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,200.0	0.00	0.00	10,196.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,300.0	0.00	0.00	10,296.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,400.0	0.00	0.00	10,396.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,500.0	0.00	0.00	10,496.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,600.0	0.00	0.00	10,596.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,700.0	0.00	0.00	10,696.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,703.3	0.00	0.00	10,700.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
Third Bone Spring Upper									
10,800.0	0.00	0.00	10,796.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
10,900.0	0.00	0.00	10,896.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
11,000.0	0.00	0.00	10,996.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
11,100.0	0.00	0.00	11,096.7	-97.0	-84.7	-95.9	0.00	0.00	0.00
11,145.3	0.00	0.00	11,142.0	-97.0	-84.7	-95.9	0.00	0.00	0.00
KOP - Build 10.00 - 7.625"									
11,150.0	0.47	3.80	11,146.7	-97.0	-84.7	-95.9	10.00	10.00	0.00
11,200.0	5.47	3.80	11,196.6	-94.4	-84.5	-93.3	10.00	10.00	0.00
11,250.0	10.47	3.80	11,246.1	-87.5	-84.1	-86.4	10.00	10.00	0.00
11,300.0	15.47	3.80	11,294.8	-76.3	-83.3	-75.2	10.00	10.00	0.00
11,327.4	18.20	3.80	11,321.0	-68.4	-82.8	-67.3	10.00	10.00	0.00
Third Bone Spring									
11,350.0	20.47	3.80	11,342.4	-60.9	-82.3	-59.8	10.00	10.00	0.00
11,400.0	25.47	3.80	11,388.4	-41.4	-81.0	-40.4	10.00	10.00	0.00
11,450.0	30.47	3.80	11,432.5	-18.0	-79.5	-17.0	10.00	10.00	0.00
11,500.0	35.47	3.80	11,474.5	9.1	-77.7	10.1	10.00	10.00	0.00
11,550.0	40.47	3.80	11,513.9	39.8	-75.6	40.8	10.00	10.00	0.00
11,551.5	40.62	3.80	11,515.0	40.7	-75.6	41.7	10.00	10.00	0.00
Wolfcamp									
11,600.0	45.47	3.80	11,550.4	73.8	-73.4	74.7	10.00	10.00	0.00
11,650.0	50.47	3.80	11,583.9	110.8	-70.9	111.7	10.00	10.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #117H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3029.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3029.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #117H	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)
11,700.0	55.47	3.80	11,614.0	150.6	-68.3	151.5	10.00	10.00	0.00
11,738.0	59.27	3.80	11,634.5	182.5	-66.1	183.4	10.00	10.00	0.00
FTP (Redbud State Com 25-36-32 #117H)									
11,750.0	60.47	3.80	11,640.5	192.9	-65.4	193.7	10.00	10.00	0.00
11,800.0	65.47	3.80	11,663.2	237.3	-62.5	238.1	10.00	10.00	0.00
11,850.0	70.47	3.80	11,682.0	283.6	-59.4	284.3	10.00	10.00	0.00
11,900.0	75.47	3.80	11,696.6	331.3	-56.3	332.0	10.00	10.00	0.00
11,950.0	80.47	3.80	11,707.0	380.0	-53.0	380.7	10.00	10.00	0.00
12,000.0	85.47	3.80	11,713.2	429.5	-49.7	430.1	10.00	10.00	0.00
12,045.3	90.00	3.80	11,715.0	474.7	-46.7	475.3	10.00	10.00	0.00
EOC/TURN - DLS 2.00 TFO -90.00									
12,100.0	90.00	2.71	11,715.0	529.3	-43.6	529.8	2.00	0.00	-2.00
12,200.0	90.00	0.71	11,715.0	629.3	-40.6	629.7	2.00	0.00	-2.00
12,262.7	90.00	359.45	11,715.0	692.0	-40.6	692.5	2.00	0.00	-2.00
HOLD - 9338.4 at 12262.7 MD									
12,300.0	90.00	359.45	11,715.0	729.3	-40.9	729.7	0.00	0.00	0.00
12,400.0	90.00	359.45	11,715.0	829.2	-41.9	829.7	0.00	0.00	0.00
12,500.0	90.00	359.45	11,715.0	929.2	-42.8	929.7	0.00	0.00	0.00
12,600.0	90.00	359.45	11,715.0	1,029.2	-43.8	1,029.7	0.00	0.00	0.00
12,700.0	90.00	359.45	11,715.0	1,129.2	-44.7	1,129.7	0.00	0.00	0.00
12,800.0	90.00	359.45	11,715.0	1,229.2	-45.7	1,229.7	0.00	0.00	0.00
12,900.0	90.00	359.45	11,715.0	1,329.2	-46.7	1,329.7	0.00	0.00	0.00
13,000.0	90.00	359.45	11,715.0	1,429.2	-47.6	1,429.7	0.00	0.00	0.00
13,100.0	90.00	359.45	11,715.0	1,529.2	-48.6	1,529.7	0.00	0.00	0.00
13,200.0	90.00	359.45	11,715.0	1,629.2	-49.5	1,629.7	0.00	0.00	0.00
13,300.0	90.00	359.45	11,715.0	1,729.2	-50.5	1,729.7	0.00	0.00	0.00
13,400.0	90.00	359.45	11,715.0	1,829.2	-51.5	1,829.7	0.00	0.00	0.00
13,500.0	90.00	359.45	11,715.0	1,929.2	-52.4	1,929.7	0.00	0.00	0.00
13,600.0	90.00	359.45	11,715.0	2,029.2	-53.4	2,029.7	0.00	0.00	0.00
13,700.0	90.00	359.45	11,715.0	2,129.2	-54.3	2,129.7	0.00	0.00	0.00
13,800.0	90.00	359.45	11,715.0	2,229.2	-55.3	2,229.7	0.00	0.00	0.00
13,900.0	90.00	359.45	11,715.0	2,329.2	-56.2	2,329.7	0.00	0.00	0.00
14,000.0	90.00	359.45	11,715.0	2,429.2	-57.2	2,429.7	0.00	0.00	0.00
14,100.0	90.00	359.45	11,715.0	2,529.2	-58.2	2,529.7	0.00	0.00	0.00
14,200.0	90.00	359.45	11,715.0	2,629.2	-59.1	2,629.7	0.00	0.00	0.00
14,300.0	90.00	359.45	11,715.0	2,729.2	-60.1	2,729.7	0.00	0.00	0.00
14,400.0	90.00	359.45	11,715.0	2,829.2	-61.0	2,829.7	0.00	0.00	0.00
14,500.0	90.00	359.45	11,715.0	2,929.1	-62.0	2,929.7	0.00	0.00	0.00
14,600.0	90.00	359.45	11,715.0	3,029.1	-62.9	3,029.7	0.00	0.00	0.00
14,700.0	90.00	359.45	11,715.0	3,129.1	-63.9	3,129.7	0.00	0.00	0.00
14,800.0	90.00	359.45	11,715.0	3,229.1	-64.9	3,229.7	0.00	0.00	0.00
14,900.0	90.00	359.45	11,715.0	3,329.1	-65.8	3,329.7	0.00	0.00	0.00
15,000.0	90.00	359.45	11,715.0	3,429.1	-66.8	3,429.7	0.00	0.00	0.00
15,100.0	90.00	359.45	11,715.0	3,529.1	-67.7	3,529.7	0.00	0.00	0.00
15,200.0	90.00	359.45	11,715.0	3,629.1	-68.7	3,629.7	0.00	0.00	0.00
15,300.0	90.00	359.45	11,715.0	3,729.1	-69.7	3,729.7	0.00	0.00	0.00
15,400.0	90.00	359.45	11,715.0	3,829.1	-70.6	3,829.7	0.00	0.00	0.00
15,500.0	90.00	359.45	11,715.0	3,929.1	-71.6	3,929.7	0.00	0.00	0.00
15,600.0	90.00	359.45	11,715.0	4,029.1	-72.5	4,029.7	0.00	0.00	0.00
15,700.0	90.00	359.45	11,715.0	4,129.1	-73.5	4,129.7	0.00	0.00	0.00
15,800.0	90.00	359.45	11,715.0	4,229.1	-74.4	4,229.7	0.00	0.00	0.00
15,900.0	90.00	359.45	11,715.0	4,329.1	-75.4	4,329.7	0.00	0.00	0.00
16,000.0	90.00	359.45	11,715.0	4,429.1	-76.4	4,429.7	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #117H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3029.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3029.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #117H	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)
16,100.0	90.00	359.45	11,715.0	4,529.1	-77.3	4,529.7	0.00	0.00	0.00
16,200.0	90.00	359.45	11,715.0	4,629.1	-78.3	4,629.7	0.00	0.00	0.00
16,300.0	90.00	359.45	11,715.0	4,729.1	-79.2	4,729.7	0.00	0.00	0.00
16,400.0	90.00	359.45	11,715.0	4,829.1	-80.2	4,829.7	0.00	0.00	0.00
16,500.0	90.00	359.45	11,715.0	4,929.1	-81.1	4,929.7	0.00	0.00	0.00
16,600.0	90.00	359.45	11,715.0	5,029.1	-82.1	5,029.7	0.00	0.00	0.00
16,700.0	90.00	359.45	11,715.0	5,129.0	-83.1	5,129.7	0.00	0.00	0.00
16,800.0	90.00	359.45	11,715.0	5,229.0	-84.0	5,229.7	0.00	0.00	0.00
16,900.0	90.00	359.45	11,715.0	5,329.0	-85.0	5,329.7	0.00	0.00	0.00
17,000.0	90.00	359.45	11,715.0	5,429.0	-85.9	5,429.7	0.00	0.00	0.00
17,100.0	90.00	359.45	11,715.0	5,529.0	-86.9	5,529.7	0.00	0.00	0.00
17,200.0	90.00	359.45	11,715.0	5,629.0	-87.8	5,629.7	0.00	0.00	0.00
17,300.0	90.00	359.45	11,715.0	5,729.0	-88.8	5,729.7	0.00	0.00	0.00
17,400.0	90.00	359.45	11,715.0	5,829.0	-89.8	5,829.7	0.00	0.00	0.00
17,500.0	90.00	359.45	11,715.0	5,929.0	-90.7	5,929.7	0.00	0.00	0.00
17,600.0	90.00	359.45	11,715.0	6,029.0	-91.7	6,029.7	0.00	0.00	0.00
17,700.0	90.00	359.45	11,715.0	6,129.0	-92.6	6,129.7	0.00	0.00	0.00
17,800.0	90.00	359.45	11,715.0	6,229.0	-93.6	6,229.7	0.00	0.00	0.00
17,900.0	90.00	359.45	11,715.0	6,329.0	-94.6	6,329.7	0.00	0.00	0.00
18,000.0	90.00	359.45	11,715.0	6,429.0	-95.5	6,429.7	0.00	0.00	0.00
18,100.0	90.00	359.45	11,715.0	6,529.0	-96.5	6,529.7	0.00	0.00	0.00
18,200.0	90.00	359.45	11,715.0	6,629.0	-97.4	6,629.7	0.00	0.00	0.00
18,300.0	90.00	359.45	11,715.0	6,729.0	-98.4	6,729.7	0.00	0.00	0.00
18,400.0	90.00	359.45	11,715.0	6,829.0	-99.3	6,829.7	0.00	0.00	0.00
18,500.0	90.00	359.45	11,715.0	6,929.0	-100.3	6,929.7	0.00	0.00	0.00
18,600.0	90.00	359.45	11,715.0	7,029.0	-101.3	7,029.7	0.00	0.00	0.00
18,700.0	90.00	359.45	11,715.0	7,129.0	-102.2	7,129.7	0.00	0.00	0.00
18,800.0	90.00	359.45	11,715.0	7,229.0	-103.2	7,229.7	0.00	0.00	0.00
18,900.0	90.00	359.45	11,715.0	7,328.9	-104.1	7,329.7	0.00	0.00	0.00
19,000.0	90.00	359.45	11,715.0	7,428.9	-105.1	7,429.7	0.00	0.00	0.00
19,100.0	90.00	359.45	11,715.0	7,528.9	-106.0	7,529.7	0.00	0.00	0.00
19,200.0	90.00	359.45	11,715.0	7,628.9	-107.0	7,629.7	0.00	0.00	0.00
19,300.0	90.00	359.45	11,715.0	7,728.9	-108.0	7,729.7	0.00	0.00	0.00
19,400.0	90.00	359.45	11,715.0	7,828.9	-108.9	7,829.7	0.00	0.00	0.00
19,500.0	90.00	359.45	11,715.0	7,928.9	-109.9	7,929.7	0.00	0.00	0.00
19,600.0	90.00	359.45	11,715.0	8,028.9	-110.8	8,029.7	0.00	0.00	0.00
19,700.0	90.00	359.45	11,715.0	8,128.9	-111.8	8,129.7	0.00	0.00	0.00
19,800.0	90.00	359.45	11,715.0	8,228.9	-112.7	8,229.7	0.00	0.00	0.00
19,900.0	90.00	359.45	11,715.0	8,328.9	-113.7	8,329.7	0.00	0.00	0.00
20,000.0	90.00	359.45	11,715.0	8,428.9	-114.7	8,429.7	0.00	0.00	0.00
20,100.0	90.00	359.45	11,715.0	8,528.9	-115.6	8,529.7	0.00	0.00	0.00
20,200.0	90.00	359.45	11,715.0	8,628.9	-116.6	8,629.7	0.00	0.00	0.00
20,300.0	90.00	359.45	11,715.0	8,728.9	-117.5	8,729.7	0.00	0.00	0.00
20,400.0	90.00	359.45	11,715.0	8,828.9	-118.5	8,829.7	0.00	0.00	0.00
20,500.0	90.00	359.45	11,715.0	8,928.9	-119.5	8,929.7	0.00	0.00	0.00
20,600.0	90.00	359.45	11,715.0	9,028.9	-120.4	9,029.7	0.00	0.00	0.00
20,700.0	90.00	359.45	11,715.0	9,128.9	-121.4	9,129.7	0.00	0.00	0.00
20,800.0	90.00	359.45	11,715.0	9,228.9	-122.3	9,229.7	0.00	0.00	0.00
20,900.0	90.00	359.45	11,715.0	9,328.9	-123.3	9,329.7	0.00	0.00	0.00
21,000.0	90.00	359.45	11,715.0	9,428.9	-124.2	9,429.7	0.00	0.00	0.00
21,100.0	90.00	359.45	11,715.0	9,528.8	-125.2	9,529.7	0.00	0.00	0.00
21,200.0	90.00	359.45	11,715.0	9,628.8	-126.2	9,629.7	0.00	0.00	0.00
21,300.0	90.00	359.45	11,715.0	9,728.8	-127.1	9,729.7	0.00	0.00	0.00
21,400.0	90.00	359.45	11,715.0	9,828.8	-128.1	9,829.7	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #117H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3029.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3029.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #117H	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)
21,500.0	90.00	359.45	11,715.0	9,928.8	-129.0	9,929.7	0.00	0.00	0.00
21,601.2	90.00	359.45	11,715.0	10,030.0	-130.0	10,030.8	0.00	0.00	0.00
HOLD - 130.0 at 21601.2 MD - LTP (Redbud State Com 25-36-32 #117H)									
21,700.0	90.00	359.45	11,715.0	10,128.8	-130.9	10,129.7	0.00	0.00	0.00
21,731.2	90.00	359.45	11,715.0	10,160.0	-131.2	10,160.8	0.00	0.00	0.00
PBHL - PBHL (Redbud State Com 25-36-32 #117H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP (Redbud State C - hit/miss target - Shape - Point	0.00	0.01	11,715.0	10,030.0	-130.0	404,505.00	866,887.00	32.1076989	-103.2819282
PBHL (Redbud State - plan misses target center by 0.2usft at 21731.2usft MD (11715.0 TVD, 10160.0 N, -131.2 E) - Point	0.00	0.01	11,715.0	10,160.0	-131.0	404,635.00	866,886.00	32.1080562	-103.2819273
FTP (Redbud State C - plan misses target center by 101.1usft at 11738.0usft MD (11634.5 TVD, 182.5 N, -66.1 E) - Point	0.00	0.01	11,715.0	130.0	-35.0	394,605.00	866,982.00	32.0804862	-103.2819332

Casing Points					Casing Diameter (")	Hole Diameter (")
Measured Depth (usft)	Vertical Depth (usft)	Name				
1,321.0	1,321.0	13.375"			13-3/8	17-1/2
5,138.3	5,135.0	9.625"			9-5/8	12-1/4
11,145.3	11,142.0	7.625"			7-5/8	8-3/4
21,731.2	11,715.0	5.5"			5-1/2	6-3/4

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #117H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3029.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3029.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #117H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,196.0	1,196.0	Rustler				
1,804.0	1,804.0	Salado				
3,353.7	3,352.0	Tansill				
5,088.3	5,085.0	Lamar				
5,117.3	5,114.0	Bell Canyon				
6,978.3	6,975.0	Brushy Canyon				
8,016.3	8,013.0	Bone Spring Lime				
9,503.3	9,500.0	First Bone Spring				
10,018.3	10,015.0	Second Bone Spring				
10,703.3	10,700.0	Third Bone Spring Upper				
11,327.4	11,321.0	Third Bone Spring				
11,551.5	11,515.0	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	
2,150.1	2,150.1	-3.0	-2.6	HOLD - 2308.0 at 2150.1 MD	
4,458.2	4,454.9	-94.0	-82.1	DROP - 2.00	
4,608.3	4,605.0	-97.0	-84.7	HOLD - 6537.0 at 4608.3 MD	
11,145.3	11,142.0	-97.0	-84.7	KOP - Build 10.00	
12,045.3	11,715.0	474.7	-46.7	EOC/TURN - DLS 2.00 TFO -90.00	
12,262.7	11,715.0	692.0	-40.6	HOLD - 9338.4 at 12262.7 MD	
21,601.2	11,715.0	10,030.0	-130.0	HOLD - 130.0 at 21601.2 MD	
21,731.2	11,715.0	10,160.0	-131.2	PBHL	