

Wellbore Schematic

Well: Red Bud State Com 25-36-32 107H
SHL: Sec. 32 25S-36E 200' FSL & 1012' 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: 40824
AFE No.: 2018-032
API No.: xxxxxxxxxxxx
GL: 3,002'
Field: Delaware_WCX
Objective: Wolfcamp XY
TVD: 11,650'
MD: 21,516'
Rig: TBD
E-Mail: Wellsite2@ameredev.com

HOLES 000

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 7.625" 29.7#P-110HC FJM 11,078' MD	Triple Combo 340 Sacks TOC 4635' 25% Excess	8.9 - 10.5 Cut Brine
10" Build KOP 11,078' MD // 11,077' TVD	Third Bone Spring 11,321' TVD Wolfcamp 11,515' TVD 5.5" 20# P-110CYHP TMK UP SF TORQ 21,516' MD Target Wolfcamp XY 11650' TVD // 21516' MD	Triple Combo 935 Sacks TOC 10578' 25% Excess	11.5 - 12.5 ppg OBM
6.75" □			

AMEREDEV

Ameredev Operating, LLC

Lea County, NM (NAD83 NME)
(Redbud State) Sec32_T-25-S_R-26-E
Redbud State Com 25-36-32 #107H

OWB

Plan: Plan #1

HOBBS OCD

AUG 07 2018

RECEIVED

Standard Planning Report

11 July, 2018

INTREPID

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #107H
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 #107H	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	Latitude:	32.0801291
From:	Map	Easting:	865,740.00 usft	Longitude:	-103.2859471
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.56

Well	Redbud State Com 25-36-32 #107H					
Well Position	+N/-S	12.0 usft	Northing:	394,475.00 usft	Latitude:	32.0801285
	+E/-W	1,257.0 usft	Easting:	866,997.00 usft	Longitude:	-103.2818888
Position Uncertainty	0.0 usft		Wellhead Elevation:		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	47,776.79917670

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	359.37	

Plan Survey Tool Program	Date 07/10/18				
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	21,516.8 Plan #1 (OWB)	MWD	MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,150.1	3.00	344.05	2,150.0	3.8	-1.1	2.00	2.00	0.00	344.05	
2,973.2	3.00	344.05	2,972.0	45.2	-12.9	0.00	0.00	0.00	0.00	
3,123.3	0.00	0.00	3,122.0	49.0	-14.0	2.00	-2.00	0.00	180.00	
11,078.3	0.00	0.00	11,077.0	49.0	-14.0	0.00	0.00	0.00	0.00	
11,978.3	90.00	359.45	11,650.0	621.9	-19.5	10.00	10.00	-0.06	359.45	
21,386.8	90.00	359.45	11,650.0	10,030.0	-110.0	0.00	0.00	0.00	0.00	LTP (Redbud State
21,516.8	90.00	359.45	11,650.0	10,160.0	-111.3	0.00	0.00	0.00	0.00	PBHL (Redbud Stai

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #107H
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 #107H	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	344.05	2,100.0	1.7	-0.5	1.7	2.00	2.00	0.00
2,150.1	3.00	344.05	2,150.0	3.8	-1.1	3.8	2.00	2.00	0.00
HOLD - 823.1 at 2150.1 MD									
2,200.0	3.00	344.05	2,199.9	6.3	-1.8	6.3	0.00	0.00	0.00
2,300.0	3.00	344.05	2,299.7	11.3	-3.2	11.4	0.00	0.00	0.00
2,400.0	3.00	344.05	2,399.6	16.4	-4.7	16.4	0.00	0.00	0.00
2,500.0	3.00	344.05	2,499.5	21.4	-6.1	21.5	0.00	0.00	0.00
2,600.0	3.00	344.05	2,599.3	26.4	-7.6	26.5	0.00	0.00	0.00
2,700.0	3.00	344.05	2,699.2	31.5	-9.0	31.6	0.00	0.00	0.00
2,800.0	3.00	344.05	2,799.0	36.5	-10.4	36.6	0.00	0.00	0.00
2,900.0	3.00	344.05	2,898.9	41.5	-11.9	41.7	0.00	0.00	0.00
2,973.2	3.00	344.05	2,972.0	45.2	-12.9	45.4	0.00	0.00	0.00
DROP -2.00									
3,000.0	2.47	344.05	2,998.8	46.5	-13.3	46.6	2.00	-2.00	0.00
3,100.0	0.47	344.05	3,098.7	48.9	-14.0	49.1	2.00	-2.00	0.00
3,123.3	0.00	0.00	3,122.0	49.0	-14.0	49.2	2.00	-2.00	0.00
HOLD - 7955.0 at 3123.3 MD									
3,200.0	0.00	0.00	3,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
3,300.0	0.00	0.00	3,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
3,353.3	0.00	0.00	3,352.0	49.0	-14.0	49.2	0.00	0.00	0.00
Tansill									
3,400.0	0.00	0.00	3,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
3,500.0	0.00	0.00	3,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
3,600.0	0.00	0.00	3,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
3,700.0	0.00	0.00	3,698.7	49.0	-14.0	49.2	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #107H
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 #107H	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)
3,800.0	0.00	0.00	3,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
3,900.0	0.00	0.00	3,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,000.0	0.00	0.00	3,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,100.0	0.00	0.00	4,098.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,200.0	0.00	0.00	4,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,300.0	0.00	0.00	4,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,400.0	0.00	0.00	4,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,500.0	0.00	0.00	4,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,600.0	0.00	0.00	4,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,700.0	0.00	0.00	4,698.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,800.0	0.00	0.00	4,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
4,900.0	0.00	0.00	4,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,000.0	0.00	0.00	4,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,086.3	0.00	0.00	5,085.0	49.0	-14.0	49.2	0.00	0.00	0.00
Lamar									
5,100.0	0.00	0.00	5,098.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,115.3	0.00	0.00	5,114.0	49.0	-14.0	49.2	0.00	0.00	0.00
Bell Canyon									
5,136.3	0.00	0.00	5,135.0	49.0	-14.0	49.2	0.00	0.00	0.00
9.625"									
5,200.0	0.00	0.00	5,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,300.0	0.00	0.00	5,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,500.0	0.00	0.00	5,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,700.0	0.00	0.00	5,698.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
5,900.0	0.00	0.00	5,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,100.0	0.00	0.00	6,098.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,300.0	0.00	0.00	6,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,500.0	0.00	0.00	6,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,700.0	0.00	0.00	6,698.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,900.0	0.00	0.00	6,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
6,976.3	0.00	0.00	6,975.0	49.0	-14.0	49.2	0.00	0.00	0.00
Brushy Canyon									
7,000.0	0.00	0.00	6,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,100.0	0.00	0.00	7,098.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,300.0	0.00	0.00	7,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,400.0	0.00	0.00	7,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,500.0	0.00	0.00	7,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,700.0	0.00	0.00	7,698.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,800.0	0.00	0.00	7,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
7,900.0	0.00	0.00	7,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,000.0	0.00	0.00	7,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,014.3	0.00	0.00	8,013.0	49.0	-14.0	49.2	0.00	0.00	0.00
Bone Spring Lime									
8,100.0	0.00	0.00	8,098.7	49.0	-14.0	49.2	0.00	0.00	0.00

Database: EDM5000
Company: Ameredev Operating, LLC
Project: Lea County, NM (NAD83 NME)
Site: (Redbud State) Sec32_T-25-S_R-26-E
Well: Redbud State Com 25-36-32 #107H
Wellbore: OWB
Design: Plan #1

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

Well Redbud State Com 25-36-32 #107H
 KB @ 3029.0usft (Rig)
 KB @ 3029.0usft (Rig)
 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)
8,200.0	0.00	0.00	8,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,300.0	0.00	0.00	8,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,400.0	0.00	0.00	8,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,500.0	0.00	0.00	8,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,600.0	0.00	0.00	8,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,700.0	0.00	0.00	8,698.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,800.0	0.00	0.00	8,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
8,900.0	0.00	0.00	8,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,000.0	0.00	0.00	8,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,100.0	0.00	0.00	9,098.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,200.0	0.00	0.00	9,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,300.0	0.00	0.00	9,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,400.0	0.00	0.00	9,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,500.0	0.00	0.00	9,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,501.3	0.00	0.00	9,500.0	49.0	-14.0	49.2	0.00	0.00	0.00
First Bone Spring									
9,600.0	0.00	0.00	9,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,700.0	0.00	0.00	9,698.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,800.0	0.00	0.00	9,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
9,900.0	0.00	0.00	9,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,000.0	0.00	0.00	9,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,016.3	0.00	0.00	10,015.0	49.0	-14.0	49.2	0.00	0.00	0.00
Second Bone Spring									
10,100.0	0.00	0.00	10,098.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,200.0	0.00	0.00	10,198.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,300.0	0.00	0.00	10,298.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,400.0	0.00	0.00	10,398.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,500.0	0.00	0.00	10,498.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,600.0	0.00	0.00	10,598.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,700.0	0.00	0.00	10,698.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,701.3	0.00	0.00	10,700.0	49.0	-14.0	49.2	0.00	0.00	0.00
Third Bone Spring Upper									
10,800.0	0.00	0.00	10,798.7	49.0	-14.0	49.2	0.00	0.00	0.00
10,900.0	0.00	0.00	10,898.7	49.0	-14.0	49.2	0.00	0.00	0.00
11,000.0	0.00	0.00	10,998.7	49.0	-14.0	49.2	0.00	0.00	0.00
11,078.3	0.00	0.00	11,077.0	49.0	-14.0	49.2	0.00	0.00	0.00
KOP - DLS 10.00 TFO 359.45 - 7.625"									
11,100.0	2.17	359.45	11,098.7	49.4	-14.0	49.6	10.00	10.00	0.00
11,150.0	7.17	359.45	11,148.5	53.5	-14.0	53.6	10.00	10.00	0.00
11,200.0	12.17	359.45	11,197.8	61.9	-14.1	62.0	10.00	10.00	0.00
11,250.0	17.17	359.45	11,246.2	74.5	-14.2	74.7	10.00	10.00	0.00
11,300.0	22.17	359.45	11,293.2	91.4	-14.4	91.5	10.00	10.00	0.00
11,330.3	25.21	359.45	11,321.0	103.5	-14.5	103.7	10.00	10.00	0.00
Third Bone Spring									
11,350.0	27.17	359.45	11,338.7	112.2	-14.6	112.4	10.00	10.00	0.00
11,400.0	32.17	359.45	11,382.1	137.0	-14.8	137.1	10.00	10.00	0.00
11,450.0	37.17	359.45	11,423.2	165.4	-15.1	165.6	10.00	10.00	0.00
11,500.0	42.17	359.45	11,461.7	197.3	-15.4	197.5	10.00	10.00	0.00
11,550.0	47.17	359.45	11,497.2	232.5	-15.8	232.6	10.00	10.00	0.00
11,574.4	49.62	359.45	11,513.4	250.7	-15.9	250.9	10.00	10.00	0.00
FTP (Redbud State Com 25-36-32 #107H)									
11,576.9	49.86	359.45	11,515.0	252.6	-16.0	252.7	10.00	10.00	0.00
Wolfcamp									

Database: EDM5000
Company: Ameredev Operating, LLC
Project: Lea County, NM (NAD83 NME)
Site: (Redbud State) Sec32_T-25-S_R-26-E
Well: Redbud State Com 25-36-32 #107H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Redbud State Com 25-36-32 #107H
TVD Reference: KB @ 3029.0usft (Rig)
MD Reference: KB @ 3029.0usft (Rig)
North Reference: Grid
Survey Calculation Method: 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)
11,600.0	52.17	359.45	11,529.6	270.6	-16.1	270.7	10.00	10.00	0.00
11,650.0	57.17	359.45	11,558.5	311.3	-16.5	311.5	10.00	10.00	0.00
11,700.0	62.17	359.45	11,583.7	354.5	-16.9	354.7	10.00	10.00	0.00
11,750.0	67.17	359.45	11,605.1	399.7	-17.4	399.8	10.00	10.00	0.00
11,800.0	72.17	359.45	11,622.4	446.5	-17.8	446.7	10.00	10.00	0.00
11,850.0	77.17	359.45	11,635.7	494.7	-18.3	494.9	10.00	10.00	0.00
11,900.0	82.17	359.45	11,644.6	543.9	-18.8	544.1	10.00	10.00	0.00
11,950.0	87.17	359.45	11,649.3	593.7	-19.2	593.9	10.00	10.00	0.00
11,978.3	90.00	359.45	11,650.0	621.9	-19.5	622.1	10.00	10.00	0.00
EOC/HOLD - 9408.5 at 11978.3 MD									
12,000.0	90.00	359.45	11,650.0	643.7	-19.7	643.8	0.00	0.00	0.00
12,100.0	90.00	359.45	11,650.0	743.7	-20.7	743.8	0.00	0.00	0.00
12,200.0	90.00	359.45	11,650.0	843.7	-21.6	843.8	0.00	0.00	0.00
12,300.0	90.00	359.45	11,650.0	943.6	-22.6	943.8	0.00	0.00	0.00
12,400.0	90.00	359.45	11,650.0	1,043.6	-23.6	1,043.8	0.00	0.00	0.00
12,500.0	90.00	359.45	11,650.0	1,143.6	-24.5	1,143.8	0.00	0.00	0.00
12,600.0	90.00	359.45	11,650.0	1,243.6	-25.5	1,243.8	0.00	0.00	0.00
12,700.0	90.00	359.45	11,650.0	1,343.6	-26.5	1,343.8	0.00	0.00	0.00
12,800.0	90.00	359.45	11,650.0	1,443.6	-27.4	1,443.8	0.00	0.00	0.00
12,900.0	90.00	359.45	11,650.0	1,543.6	-28.4	1,543.8	0.00	0.00	0.00
13,000.0	90.00	359.45	11,650.0	1,643.6	-29.3	1,643.8	0.00	0.00	0.00
13,100.0	90.00	359.45	11,650.0	1,743.6	-30.3	1,743.8	0.00	0.00	0.00
13,200.0	90.00	359.45	11,650.0	1,843.6	-31.3	1,843.8	0.00	0.00	0.00
13,300.0	90.00	359.45	11,650.0	1,943.6	-32.2	1,943.8	0.00	0.00	0.00
13,400.0	90.00	359.45	11,650.0	2,043.6	-33.2	2,043.8	0.00	0.00	0.00
13,500.0	90.00	359.45	11,650.0	2,143.6	-34.1	2,143.8	0.00	0.00	0.00
13,600.0	90.00	359.45	11,650.0	2,243.6	-35.1	2,243.8	0.00	0.00	0.00
13,700.0	90.00	359.45	11,650.0	2,343.6	-36.1	2,343.8	0.00	0.00	0.00
13,800.0	90.00	359.45	11,650.0	2,443.6	-37.0	2,443.8	0.00	0.00	0.00
13,900.0	90.00	359.45	11,650.0	2,543.6	-38.0	2,543.8	0.00	0.00	0.00
14,000.0	90.00	359.45	11,650.0	2,643.6	-39.0	2,643.8	0.00	0.00	0.00
14,100.0	90.00	359.45	11,650.0	2,743.6	-39.9	2,743.8	0.00	0.00	0.00
14,200.0	90.00	359.45	11,650.0	2,843.6	-40.9	2,843.8	0.00	0.00	0.00
14,300.0	90.00	359.45	11,650.0	2,943.6	-41.8	2,943.8	0.00	0.00	0.00
14,400.0	90.00	359.45	11,650.0	3,043.6	-42.8	3,043.8	0.00	0.00	0.00
14,500.0	90.00	359.45	11,650.0	3,143.5	-43.8	3,143.8	0.00	0.00	0.00
14,600.0	90.00	359.45	11,650.0	3,243.5	-44.7	3,243.8	0.00	0.00	0.00
14,700.0	90.00	359.45	11,650.0	3,343.5	-45.7	3,343.8	0.00	0.00	0.00
14,800.0	90.00	359.45	11,650.0	3,443.5	-46.6	3,443.8	0.00	0.00	0.00
14,900.0	90.00	359.45	11,650.0	3,543.5	-47.6	3,543.8	0.00	0.00	0.00
15,000.0	90.00	359.45	11,650.0	3,643.5	-48.6	3,643.8	0.00	0.00	0.00
15,100.0	90.00	359.45	11,650.0	3,743.5	-49.5	3,743.8	0.00	0.00	0.00
15,200.0	90.00	359.45	11,650.0	3,843.5	-50.5	3,843.8	0.00	0.00	0.00
15,300.0	90.00	359.45	11,650.0	3,943.5	-51.5	3,943.8	0.00	0.00	0.00
15,400.0	90.00	359.45	11,650.0	4,043.5	-52.4	4,043.8	0.00	0.00	0.00
15,500.0	90.00	359.45	11,650.0	4,143.5	-53.4	4,143.8	0.00	0.00	0.00
15,600.0	90.00	359.45	11,650.0	4,243.5	-54.3	4,243.8	0.00	0.00	0.00
15,700.0	90.00	359.45	11,650.0	4,343.5	-55.3	4,343.8	0.00	0.00	0.00
15,800.0	90.00	359.45	11,650.0	4,443.5	-56.3	4,443.8	0.00	0.00	0.00
15,900.0	90.00	359.45	11,650.0	4,543.5	-57.2	4,543.8	0.00	0.00	0.00
16,000.0	90.00	359.45	11,650.0	4,643.5	-58.2	4,643.8	0.00	0.00	0.00
16,100.0	90.00	359.45	11,650.0	4,743.5	-59.2	4,743.8	0.00	0.00	0.00
16,200.0	90.00	359.45	11,650.0	4,843.5	-60.1	4,843.8	0.00	0.00	0.00
16,300.0	90.00	359.45	11,650.0	4,943.5	-61.1	4,943.8	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #107H
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 #107H	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	359.45	11,650.0	5,043.5	-62.0	5,043.8	0.00	0.00	0.00
16,500.0	90.00	359.45	11,650.0	5,143.5	-63.0	5,143.8	0.00	0.00	0.00
16,600.0	90.00	359.45	11,650.0	5,243.5	-64.0	5,243.8	0.00	0.00	0.00
16,700.0	90.00	359.45	11,650.0	5,343.4	-64.9	5,343.8	0.00	0.00	0.00
16,800.0	90.00	359.45	11,650.0	5,443.4	-65.9	5,443.8	0.00	0.00	0.00
16,900.0	90.00	359.45	11,650.0	5,543.4	-66.8	5,543.8	0.00	0.00	0.00
17,000.0	90.00	359.45	11,650.0	5,643.4	-67.8	5,643.8	0.00	0.00	0.00
17,100.0	90.00	359.45	11,650.0	5,743.4	-68.8	5,743.8	0.00	0.00	0.00
17,200.0	90.00	359.45	11,650.0	5,843.4	-69.7	5,843.8	0.00	0.00	0.00
17,300.0	90.00	359.45	11,650.0	5,943.4	-70.7	5,943.8	0.00	0.00	0.00
17,400.0	90.00	359.45	11,650.0	6,043.4	-71.7	6,043.8	0.00	0.00	0.00
17,500.0	90.00	359.45	11,650.0	6,143.4	-72.6	6,143.8	0.00	0.00	0.00
17,600.0	90.00	359.45	11,650.0	6,243.4	-73.6	6,243.8	0.00	0.00	0.00
17,700.0	90.00	359.45	11,650.0	6,343.4	-74.5	6,343.8	0.00	0.00	0.00
17,800.0	90.00	359.45	11,650.0	6,443.4	-75.5	6,443.8	0.00	0.00	0.00
17,900.0	90.00	359.45	11,650.0	6,543.4	-76.5	6,543.8	0.00	0.00	0.00
18,000.0	90.00	359.45	11,650.0	6,643.4	-77.4	6,643.8	0.00	0.00	0.00
18,100.0	90.00	359.45	11,650.0	6,743.4	-78.4	6,743.8	0.00	0.00	0.00
18,200.0	90.00	359.45	11,650.0	6,843.4	-79.4	6,843.8	0.00	0.00	0.00
18,300.0	90.00	359.45	11,650.0	6,943.4	-80.3	6,943.8	0.00	0.00	0.00
18,400.0	90.00	359.45	11,650.0	7,043.4	-81.3	7,043.8	0.00	0.00	0.00
18,500.0	90.00	359.45	11,650.0	7,143.4	-82.2	7,143.8	0.00	0.00	0.00
18,600.0	90.00	359.45	11,650.0	7,243.4	-83.2	7,243.8	0.00	0.00	0.00
18,700.0	90.00	359.45	11,650.0	7,343.4	-84.2	7,343.8	0.00	0.00	0.00
18,800.0	90.00	359.45	11,650.0	7,443.3	-85.1	7,443.8	0.00	0.00	0.00
18,900.0	90.00	359.45	11,650.0	7,543.3	-86.1	7,543.8	0.00	0.00	0.00
19,000.0	90.00	359.45	11,650.0	7,643.3	-87.0	7,643.8	0.00	0.00	0.00
19,100.0	90.00	359.45	11,650.0	7,743.3	-88.0	7,743.8	0.00	0.00	0.00
19,200.0	90.00	359.45	11,650.0	7,843.3	-89.0	7,843.8	0.00	0.00	0.00
19,300.0	90.00	359.45	11,650.0	7,943.3	-89.9	7,943.8	0.00	0.00	0.00
19,400.0	90.00	359.45	11,650.0	8,043.3	-90.9	8,043.8	0.00	0.00	0.00
19,500.0	90.00	359.45	11,650.0	8,143.3	-91.9	8,143.8	0.00	0.00	0.00
19,600.0	90.00	359.45	11,650.0	8,243.3	-92.8	8,243.8	0.00	0.00	0.00
19,700.0	90.00	359.45	11,650.0	8,343.3	-93.8	8,343.8	0.00	0.00	0.00
19,800.0	90.00	359.45	11,650.0	8,443.3	-94.7	8,443.8	0.00	0.00	0.00
19,900.0	90.00	359.45	11,650.0	8,543.3	-95.7	8,543.8	0.00	0.00	0.00
20,000.0	90.00	359.45	11,650.0	8,643.3	-96.7	8,643.8	0.00	0.00	0.00
20,100.0	90.00	359.45	11,650.0	8,743.3	-97.6	8,743.8	0.00	0.00	0.00
20,200.0	90.00	359.45	11,650.0	8,843.3	-98.6	8,843.8	0.00	0.00	0.00
20,300.0	90.00	359.45	11,650.0	8,943.3	-99.5	8,943.8	0.00	0.00	0.00
20,400.0	90.00	359.45	11,650.0	9,043.3	-100.5	9,043.8	0.00	0.00	0.00
20,500.0	90.00	359.45	11,650.0	9,143.3	-101.5	9,143.8	0.00	0.00	0.00
20,600.0	90.00	359.45	11,650.0	9,243.3	-102.4	9,243.8	0.00	0.00	0.00
20,700.0	90.00	359.45	11,650.0	9,343.3	-103.4	9,343.8	0.00	0.00	0.00
20,800.0	90.00	359.45	11,650.0	9,443.3	-104.4	9,443.8	0.00	0.00	0.00
20,900.0	90.00	359.45	11,650.0	9,543.3	-105.3	9,543.8	0.00	0.00	0.00
21,000.0	90.00	359.45	11,650.0	9,643.2	-106.3	9,643.8	0.00	0.00	0.00
21,100.0	90.00	359.45	11,650.0	9,743.2	-107.2	9,743.8	0.00	0.00	0.00
21,200.0	90.00	359.45	11,650.0	9,843.2	-108.2	9,843.8	0.00	0.00	0.00
21,300.0	90.00	359.45	11,650.0	9,943.2	-109.2	9,943.8	0.00	0.00	0.00
21,386.8	90.00	359.45	11,650.0	10,030.0	-110.0	10,030.6	0.00	0.00	0.00
HOLD - 130.0 at 21386.8 MD - LTP (Redbud State Com 25-36-32 #107H)									
21,400.0	90.00	359.45	11,650.0	10,043.2	-110.1	10,043.8	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #107H
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 #107H	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	11,650.0	10,143.2	-111.1	10,143.8	0.00	0.00	0.00
21,516.8	90.00	359.45	11,650.0	10,160.0	-111.3	10,160.6	0.00	0.00	0.00

PBHL - PBHL (Redbud State Com 25-36-32 #107H)

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									
LTP (Redbud State C	0.00	0.01	11,650.0	10,030.0	-110.0	404,505.00	866,887.00	32.1076989	-103.2819282
- plan hits target center									
- Point									
FTP (Redbud State C	0.00	0.01	11,650.0	130.0	-15.0	394,605.00	866,982.00	32.0804862	-103.2819332
- plan misses target center by 182.3usft at 11574.4usft MD (11513.4 TVD, 250.7 N, -15.9 E)									
- Point									
PBHL (Redbud State	0.00	0.01	11,650.0	10,160.0	-111.0	404,635.00	866,886.00	32.1080562	-103.2819273
- plan misses target center by 0.3usft at 21516.8usft MD (11650.0 TVD, 10160.0 N, -111.3 E)									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,321.0	1,321.0	13.375"	13-3/8	17-1/2
5,136.3	5,135.0	9.625"	9-5/8	12-1/4
11,078.3	11,077.0	7.625"	7-5/8	8-3/4
21,516.8	11,650.0	5.5"	5-1/2	6-3/4

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			
3,353.3	3,352.0	Tansill			
5,086.3	5,085.0	Lamar			
5,115.3	5,114.0	Bell Canyon			
6,976.3	6,975.0	Brushy Canyon			
8,014.3	8,013.0	Bone Spring Lime			
9,501.3	9,500.0	First Bone Spring			
10,016.3	10,015.0	Second Bone Spring			
10,701.3	10,700.0	Third Bone Spring Upper			
11,330.3	11,321.0	Third Bone Spring			
11,576.9	11,515.0	Wolfcamp			

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #107H
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 #107H	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	BUILD - 2.00
2,150.1	2,150.0	3.8	-1.1	HOLD - 823.1 at 2150.1 MD
2,973.2	2,972.0	45.2	-12.9	DROP -2.00
3,123.3	3,122.0	49.0	-14.0	HOLD - 7955.0 at 3123.3 MD
11,078.3	11,077.0	49.0	-14.0	KOP - DLS 10.00 TFO 359.45
11,978.3	11,650.0	621.9	-19.5	EOC/HOLD - 9408.5 at 11978.3 MD
21,386.8	11,650.0	10,030.0	-110.0	HOLD - 130.0 at 21386.8 MD
21,516.8	11,650.0	10,160.0	-111.3	PBHL