

45033

Wellbore Schematic

Well: Red Bud State Com 25-36-32 077H
SHL: Sec. 32 25S-36E 200' FSL & 912' FEL
BHL: Sec. 29 25S-36E 200' FNL & 660' FEL
 Lea, NM

Wellhead: A - 11" 5M x 9-5/8" SOW
 B - 11" 10M x 11" 5M
 Tubing Spool - 5-1/8" 15M x 11" 10M

Xmas Tree: 2-9/16" 10M

Tubing: 2-7/8" L-80 6.5# 8rd EUE

Co. Well ID: 40827

AFE No.: 2018-035

API No.: xxxxxxxxxxxx

GL: 3,003'

Field: Delaware_FBSG

Objective: First Bone Spring

TVD: 9,600'

MD: 19,446'

Rig: TBD

E-Mail: Wellsite2@amerdev.com

HOEBS OCD

AUG 07 2018

RECEIVED

Hole Size	Formation Tops	Logs	Cement	Mud Weight
12.25"	Rustler 1,196' TVD 9.625" 40# L-80HC BTC 1,321' MD/TVD	482 Sacks TOC 0'	100% Excess	8.6 - 10 ppg WBM
8.75"	Salado 1,804' TVD Tansill 3,352' TVD Lamar 5,085' TVD Bell Canyon 5,114' TVD 7.625" 29.7#P-110HC FJM 5,135' MD/TVD	446 Sacks TOC 0'	50% Excess	10 - 11.5 ppg Brine
6.75"	Brushy Canyon 6,975' TVD Bone Spring Lime 8,013' TVD First Bone Spring 9,500' TVD	Triple Combo		8.9 - 10.5 Cut Brine
10° Build KOP 9,027' TVD // 9,033' MD	5.5" 20# P-110CYHP TMK UP SF TORQ 19,446' MD Target First Bone Spring 9600 TVD // 19446 MD			
		1265 Sacks TOC 4635'	25% Excess	

AMEREDEV

Ameredev Operating, LLC

Lea County, NM (NAD83 NME)
(Redbud State) Sec32_T-25-S_R-26-E
Redbud State Com 25-36-32 #077H

OWB

Plan: Plan #1

Standard Planning Report

11 July, 2018

HOBBS CCD

AUG 07 2018

RECEIVED

INTREPID

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #077H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3030.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3030.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #077H	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 #077H					
Well Position	+N/-S	13.0 usft	Northing:	394,476.00 usft	Latitude:	32.0801285
	+E/-W	1,357.0 usft	Easting:	867,097.00 usft	Longitude:	-103.2815660
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level:	3,003.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	07/09/18	6.69	59.96	47,776.82498609

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	0.87

Plan Survey Tool Program	Date 07/10/18			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	19,446.5 Plan #1 (OWB)	MWD	
			MWD - Standard	

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Wellbore:	OWB		
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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	
2,149.8	3.00	72.27	2,149.7	1.2	3.7	2.00	2.00	0.00	72.27	
6,806.7	3.00	72.27	6,800.3	75.3	235.6	0.00	0.00	0.00	0.00	
6,956.5	0.00	0.00	6,950.0	76.5	239.3	2.00	-2.00	0.00	180.00	
9,033.5	0.00	0.00	9,027.0	76.5	239.3	0.00	0.00	0.00	0.00	
9,933.5	90.00	0.60	9,600.0	649.4	245.3	10.00	10.00	0.00	0.60	
9,990.9	90.00	359.45	9,600.0	706.9	245.3	2.00	0.00	-2.00	-90.01	
19,316.5	90.00	359.45	9,600.0	10,032.0	156.0	0.00	0.00	0.00	0.00	LTP (Redbud State
19,446.5	90.00	359.45	9,600.0	10,162.0	154.8	0.00	0.00	0.00	0.00	PBHL (Redbud State

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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)
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
9.625"									
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	72.27	2,100.0	0.5	1.7	0.6	2.00	2.00	0.00
2,149.8	3.00	72.27	2,149.7	1.2	3.7	1.2	2.00	2.00	0.00
HOLD - 4656.9 at 2149.8 MD									
2,200.0	3.00	72.27	2,199.9	2.0	6.2	2.1	0.00	0.00	0.00
2,300.0	3.00	72.27	2,299.7	3.6	11.2	3.8	0.00	0.00	0.00
2,400.0	3.00	72.27	2,399.6	5.2	16.2	5.4	0.00	0.00	0.00
2,500.0	3.00	72.27	2,499.5	6.8	21.2	7.1	0.00	0.00	0.00
2,600.0	3.00	72.27	2,599.3	8.4	26.1	8.8	0.00	0.00	0.00
2,700.0	3.00	72.27	2,699.2	9.9	31.1	10.4	0.00	0.00	0.00
2,800.0	3.00	72.27	2,799.0	11.5	36.1	12.1	0.00	0.00	0.00
2,900.0	3.00	72.27	2,898.9	13.1	41.1	13.8	0.00	0.00	0.00
3,000.0	3.00	72.27	2,998.8	14.7	46.1	15.4	0.00	0.00	0.00
3,100.0	3.00	72.27	3,098.6	16.3	51.0	17.1	0.00	0.00	0.00
3,200.0	3.00	72.27	3,198.5	17.9	56.0	18.8	0.00	0.00	0.00
3,300.0	3.00	72.27	3,298.4	19.5	61.0	20.4	0.00	0.00	0.00
3,353.7	3.00	72.27	3,352.0	20.4	63.7	21.3	0.00	0.00	0.00
Tansill									
3,400.0	3.00	72.27	3,398.2	21.1	66.0	22.1	0.00	0.00	0.00
3,500.0	3.00	72.27	3,498.1	22.7	70.9	23.8	0.00	0.00	0.00
3,600.0	3.00	72.27	3,597.9	24.3	75.9	25.4	0.00	0.00	0.00
3,700.0	3.00	72.27	3,697.8	25.9	80.9	27.1	0.00	0.00	0.00
3,800.0	3.00	72.27	3,797.7	27.5	85.9	28.8	0.00	0.00	0.00
3,900.0	3.00	72.27	3,897.5	29.0	90.9	30.4	0.00	0.00	0.00
4,000.0	3.00	72.27	3,997.4	30.6	95.8	32.1	0.00	0.00	0.00
4,100.0	3.00	72.27	4,097.3	32.2	100.8	33.8	0.00	0.00	0.00

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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)
4,200.0	3.00	72.27	4,197.1	33.8	105.8	35.4	0.00	0.00	0.00
4,300.0	3.00	72.27	4,297.0	35.4	110.8	37.1	0.00	0.00	0.00
4,400.0	3.00	72.27	4,396.9	37.0	115.8	38.8	0.00	0.00	0.00
4,500.0	3.00	72.27	4,496.7	38.6	120.7	40.4	0.00	0.00	0.00
4,600.0	3.00	72.27	4,596.6	40.2	125.7	42.1	0.00	0.00	0.00
4,700.0	3.00	72.27	4,696.4	41.8	130.7	43.8	0.00	0.00	0.00
4,800.0	3.00	72.27	4,796.3	43.4	135.7	45.4	0.00	0.00	0.00
4,900.0	3.00	72.27	4,896.2	45.0	140.6	47.1	0.00	0.00	0.00
5,000.0	3.00	72.27	4,996.0	46.6	145.6	48.8	0.00	0.00	0.00
5,089.1	3.00	72.27	5,085.0	48.0	150.1	50.3	0.00	0.00	0.00
Lamar									
5,100.0	3.00	72.27	5,095.9	48.1	150.6	50.4	0.00	0.00	0.00
5,118.1	3.00	72.27	5,114.0	48.4	151.5	50.7	0.00	0.00	0.00
Bell Canyon									
5,139.2	3.00	72.27	5,135.0	48.8	152.6	51.1	0.00	0.00	0.00
7.625"									
5,200.0	3.00	72.27	5,195.8	49.7	155.6	52.1	0.00	0.00	0.00
5,300.0	3.00	72.27	5,295.6	51.3	160.6	53.8	0.00	0.00	0.00
5,400.0	3.00	72.27	5,395.5	52.9	165.5	55.4	0.00	0.00	0.00
5,500.0	3.00	72.27	5,495.4	54.5	170.5	57.1	0.00	0.00	0.00
5,600.0	3.00	72.27	5,595.2	56.1	175.5	58.8	0.00	0.00	0.00
5,700.0	3.00	72.27	5,695.1	57.7	180.5	60.4	0.00	0.00	0.00
5,800.0	3.00	72.27	5,794.9	59.3	185.5	62.1	0.00	0.00	0.00
5,900.0	3.00	72.27	5,894.8	60.9	190.4	63.8	0.00	0.00	0.00
6,000.0	3.00	72.27	5,994.7	62.5	195.4	65.4	0.00	0.00	0.00
6,100.0	3.00	72.27	6,094.5	64.1	200.4	67.1	0.00	0.00	0.00
6,200.0	3.00	72.27	6,194.4	65.7	205.4	68.8	0.00	0.00	0.00
6,300.0	3.00	72.27	6,294.3	67.2	210.3	70.4	0.00	0.00	0.00
6,400.0	3.00	72.27	6,394.1	68.8	215.3	72.1	0.00	0.00	0.00
6,500.0	3.00	72.27	6,494.0	70.4	220.3	73.8	0.00	0.00	0.00
6,600.0	3.00	72.27	6,593.8	72.0	225.3	75.4	0.00	0.00	0.00
6,700.0	3.00	72.27	6,693.7	73.6	230.3	77.1	0.00	0.00	0.00
6,806.7	3.00	72.27	6,800.3	75.3	235.6	78.9	0.00	0.00	0.00
DROP - 2.00									
6,900.0	1.13	72.27	6,893.5	76.3	238.8	80.0	2.00	-2.00	0.00
6,956.5	0.00	0.00	6,950.0	76.5	239.3	80.1	2.00	-2.00	0.00
HOLD - 2077.0 at 6956.5 MD									
6,981.5	0.00	0.00	6,975.0	76.5	239.3	80.1	0.00	0.00	0.00
Brushy Canyon									
7,000.0	0.00	0.00	6,993.5	76.5	239.3	80.1	0.00	0.00	0.00
7,100.0	0.00	0.00	7,093.5	76.5	239.3	80.1	0.00	0.00	0.00
7,200.0	0.00	0.00	7,193.5	76.5	239.3	80.1	0.00	0.00	0.00
7,300.0	0.00	0.00	7,293.5	76.5	239.3	80.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,393.5	76.5	239.3	80.1	0.00	0.00	0.00
7,500.0	0.00	0.00	7,493.5	76.5	239.3	80.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,593.5	76.5	239.3	80.1	0.00	0.00	0.00
7,700.0	0.00	0.00	7,693.5	76.5	239.3	80.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,793.5	76.5	239.3	80.1	0.00	0.00	0.00
7,900.0	0.00	0.00	7,893.5	76.5	239.3	80.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,993.5	76.5	239.3	80.1	0.00	0.00	0.00
8,019.5	0.00	0.00	8,013.0	76.5	239.3	80.1	0.00	0.00	0.00
Bone Spring Lime									
8,100.0	0.00	0.00	8,093.5	76.5	239.3	80.1	0.00	0.00	0.00

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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	8,193.5	76.5	239.3	80.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,293.5	76.5	239.3	80.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,393.5	76.5	239.3	80.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,493.5	76.5	239.3	80.1	0.00	0.00	0.00
8,600.0	0.00	0.00	8,593.5	76.5	239.3	80.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,693.5	76.5	239.3	80.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,793.5	76.5	239.3	80.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,893.5	76.5	239.3	80.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,993.5	76.5	239.3	80.1	0.00	0.00	0.00
9,033.5	0.00	0.00	9,027.0	76.5	239.3	80.1	0.00	0.00	0.00
KOP - Build 10.00									
9,050.0	1.65	0.60	9,043.5	76.7	239.3	80.4	10.00	10.00	0.00
9,100.0	6.65	0.60	9,093.3	80.4	239.3	84.0	10.00	10.00	0.00
9,150.0	11.65	0.60	9,142.7	88.3	239.4	91.9	10.00	10.00	0.00
9,200.0	16.65	0.60	9,191.2	100.5	239.6	104.2	10.00	10.00	0.00
9,250.0	21.65	0.60	9,238.4	116.9	239.7	120.6	10.00	10.00	0.00
9,300.0	26.65	0.60	9,284.0	137.4	239.9	141.0	10.00	10.00	0.00
9,350.0	31.65	0.60	9,327.6	161.7	240.2	165.3	10.00	10.00	0.00
9,400.0	36.65	0.60	9,369.0	189.8	240.5	193.4	10.00	10.00	0.00
9,450.0	41.65	0.60	9,407.8	221.3	240.8	225.0	10.00	10.00	0.00
9,500.0	46.65	0.60	9,443.6	256.1	241.2	259.8	10.00	10.00	0.00
9,509.2	47.57	0.60	9,449.9	262.9	241.3	266.5	10.00	10.00	0.00
FTP (Redbud State Com 25-36-32 #077H)									
9,550.0	51.65	0.60	9,476.3	293.9	241.6	297.6	10.00	10.00	0.00
9,589.9	55.64	0.60	9,500.0	326.1	241.9	329.7	10.00	10.00	0.00
First Bone Spring									
9,600.0	56.65	0.60	9,505.6	334.5	242.0	338.1	10.00	10.00	0.00
9,650.0	61.65	0.60	9,531.2	377.4	242.5	381.0	10.00	10.00	0.00
9,700.0	66.65	0.60	9,553.0	422.3	242.9	426.0	10.00	10.00	0.00
9,750.0	71.65	0.60	9,570.8	469.1	243.4	472.7	10.00	10.00	0.00
9,800.0	76.65	0.60	9,584.5	517.1	243.9	520.8	10.00	10.00	0.00
9,850.0	81.65	0.60	9,593.9	566.2	244.4	569.9	10.00	10.00	0.00
9,900.0	86.65	0.60	9,599.0	615.9	244.9	619.6	10.00	10.00	0.00
9,933.5	90.00	0.60	9,600.0	649.4	245.3	653.1	10.00	10.00	0.00
EOC/TURN - DLS 2.00 TFO -90.01									
9,990.9	90.00	359.45	9,600.0	706.9	245.3	710.5	2.00	0.00	-2.00
HOLD - 9325.6 at 9990.9 MD									
10,000.0	90.00	359.45	9,600.0	715.9	245.2	719.6	0.00	0.00	0.00
10,100.0	90.00	359.45	9,600.0	815.9	244.3	819.5	0.00	0.00	0.00
10,200.0	90.00	359.45	9,600.0	915.9	243.3	919.5	0.00	0.00	0.00
10,300.0	90.00	359.45	9,600.0	1,015.9	242.4	1,019.5	0.00	0.00	0.00
10,400.0	90.00	359.45	9,600.0	1,115.9	241.4	1,119.5	0.00	0.00	0.00
10,500.0	90.00	359.45	9,600.0	1,215.9	240.4	1,219.4	0.00	0.00	0.00
10,600.0	90.00	359.45	9,600.0	1,315.9	239.5	1,319.4	0.00	0.00	0.00
10,700.0	90.00	359.45	9,600.0	1,415.9	238.5	1,419.4	0.00	0.00	0.00
10,800.0	90.00	359.45	9,600.0	1,515.9	237.6	1,519.3	0.00	0.00	0.00
10,900.0	90.00	359.45	9,600.0	1,615.9	236.6	1,619.3	0.00	0.00	0.00
11,000.0	90.00	359.45	9,600.0	1,715.9	235.7	1,719.3	0.00	0.00	0.00
11,100.0	90.00	359.45	9,600.0	1,815.9	234.7	1,819.2	0.00	0.00	0.00
11,200.0	90.00	359.45	9,600.0	1,915.9	233.7	1,919.2	0.00	0.00	0.00
11,300.0	90.00	359.45	9,600.0	2,015.9	232.8	2,019.2	0.00	0.00	0.00
11,400.0	90.00	359.45	9,600.0	2,115.9	231.8	2,119.1	0.00	0.00	0.00
11,500.0	90.00	359.45	9,600.0	2,215.9	230.9	2,219.1	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 #077H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Redbud State Com 25-36-32 #077H
TVD Reference: KB @ 3030.0usft (Rig)
MD Reference: KB @ 3030.0usft (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	90.00	359.45	9,600.0	2,315.8	229.9	2,319.1	0.00	0.00	0.00
11,700.0	90.00	359.45	9,600.0	2,415.8	229.0	2,419.1	0.00	0.00	0.00
11,800.0	90.00	359.45	9,600.0	2,515.8	228.0	2,519.0	0.00	0.00	0.00
11,900.0	90.00	359.45	9,600.0	2,615.8	227.0	2,619.0	0.00	0.00	0.00
12,000.0	90.00	359.45	9,600.0	2,715.8	226.1	2,719.0	0.00	0.00	0.00
12,100.0	90.00	359.45	9,600.0	2,815.8	225.1	2,818.9	0.00	0.00	0.00
12,200.0	90.00	359.45	9,600.0	2,915.8	224.2	2,918.9	0.00	0.00	0.00
12,300.0	90.00	359.45	9,600.0	3,015.8	223.2	3,018.9	0.00	0.00	0.00
12,400.0	90.00	359.45	9,600.0	3,115.8	222.3	3,118.8	0.00	0.00	0.00
12,500.0	90.00	359.45	9,600.0	3,215.8	221.3	3,218.8	0.00	0.00	0.00
12,600.0	90.00	359.45	9,600.0	3,315.8	220.3	3,318.8	0.00	0.00	0.00
12,700.0	90.00	359.45	9,600.0	3,415.8	219.4	3,418.7	0.00	0.00	0.00
12,800.0	90.00	359.45	9,600.0	3,515.8	218.4	3,518.7	0.00	0.00	0.00
12,900.0	90.00	359.45	9,600.0	3,615.8	217.5	3,618.7	0.00	0.00	0.00
13,000.0	90.00	359.45	9,600.0	3,715.8	216.5	3,718.7	0.00	0.00	0.00
13,100.0	90.00	359.45	9,600.0	3,815.8	215.5	3,818.6	0.00	0.00	0.00
13,200.0	90.00	359.45	9,600.0	3,915.8	214.6	3,918.6	0.00	0.00	0.00
13,300.0	90.00	359.45	9,600.0	4,015.8	213.6	4,018.6	0.00	0.00	0.00
13,400.0	90.00	359.45	9,600.0	4,115.8	212.7	4,118.5	0.00	0.00	0.00
13,500.0	90.00	359.45	9,600.0	4,215.8	211.7	4,218.5	0.00	0.00	0.00
13,600.0	90.00	359.45	9,600.0	4,315.8	210.8	4,318.5	0.00	0.00	0.00
13,700.0	90.00	359.45	9,600.0	4,415.8	209.8	4,418.4	0.00	0.00	0.00
13,800.0	90.00	359.45	9,600.0	4,515.7	208.8	4,518.4	0.00	0.00	0.00
13,900.0	90.00	359.45	9,600.0	4,615.7	207.9	4,618.4	0.00	0.00	0.00
14,000.0	90.00	359.45	9,600.0	4,715.7	206.9	4,718.3	0.00	0.00	0.00
14,100.0	90.00	359.45	9,600.0	4,815.7	206.0	4,818.3	0.00	0.00	0.00
14,200.0	90.00	359.45	9,600.0	4,915.7	205.0	4,918.3	0.00	0.00	0.00
14,300.0	90.00	359.45	9,600.0	5,015.7	204.1	5,018.3	0.00	0.00	0.00
14,400.0	90.00	359.45	9,600.0	5,115.7	203.1	5,118.2	0.00	0.00	0.00
14,500.0	90.00	359.45	9,600.0	5,215.7	202.1	5,218.2	0.00	0.00	0.00
14,600.0	90.00	359.45	9,600.0	5,315.7	201.2	5,318.2	0.00	0.00	0.00
14,700.0	90.00	359.45	9,600.0	5,415.7	200.2	5,418.1	0.00	0.00	0.00
14,800.0	90.00	359.45	9,600.0	5,515.7	199.3	5,518.1	0.00	0.00	0.00
14,900.0	90.00	359.45	9,600.0	5,615.7	198.3	5,618.1	0.00	0.00	0.00
15,000.0	90.00	359.45	9,600.0	5,715.7	197.3	5,718.0	0.00	0.00	0.00
15,100.0	90.00	359.45	9,600.0	5,815.7	196.4	5,818.0	0.00	0.00	0.00
15,200.0	90.00	359.45	9,600.0	5,915.7	195.4	5,918.0	0.00	0.00	0.00
15,300.0	90.00	359.45	9,600.0	6,015.7	194.5	6,017.9	0.00	0.00	0.00
15,400.0	90.00	359.45	9,600.0	6,115.7	193.5	6,117.9	0.00	0.00	0.00
15,500.0	90.00	359.45	9,600.0	6,215.7	192.6	6,217.9	0.00	0.00	0.00
15,600.0	90.00	359.45	9,600.0	6,315.7	191.6	6,317.9	0.00	0.00	0.00
15,700.0	90.00	359.45	9,600.0	6,415.7	190.6	6,417.8	0.00	0.00	0.00
15,800.0	90.00	359.45	9,600.0	6,515.7	189.7	6,517.8	0.00	0.00	0.00
15,900.0	90.00	359.45	9,600.0	6,615.7	188.7	6,617.8	0.00	0.00	0.00
16,000.0	90.00	359.45	9,600.0	6,715.6	187.8	6,717.7	0.00	0.00	0.00
16,100.0	90.00	359.45	9,600.0	6,815.6	186.8	6,817.7	0.00	0.00	0.00
16,200.0	90.00	359.45	9,600.0	6,915.6	185.9	6,917.7	0.00	0.00	0.00
16,300.0	90.00	359.45	9,600.0	7,015.6	184.9	7,017.6	0.00	0.00	0.00
16,400.0	90.00	359.45	9,600.0	7,115.6	183.9	7,117.6	0.00	0.00	0.00
16,500.0	90.00	359.45	9,600.0	7,215.6	183.0	7,217.6	0.00	0.00	0.00
16,600.0	90.00	359.45	9,600.0	7,315.6	182.0	7,317.5	0.00	0.00	0.00
16,700.0	90.00	359.45	9,600.0	7,415.6	181.1	7,417.5	0.00	0.00	0.00
16,800.0	90.00	359.45	9,600.0	7,515.6	180.1	7,517.5	0.00	0.00	0.00
16,900.0	90.00	359.45	9,600.0	7,615.6	179.1	7,617.5	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #077H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3030.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3030.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #077H	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)
17,000.0	90.00	359.45	9,600.0	7,715.6	178.2	7,717.4	0.00	0.00	0.00
17,100.0	90.00	359.45	9,600.0	7,815.6	177.2	7,817.4	0.00	0.00	0.00
17,200.0	90.00	359.45	9,600.0	7,915.6	176.3	7,917.4	0.00	0.00	0.00
17,300.0	90.00	359.45	9,600.0	8,015.6	175.3	8,017.3	0.00	0.00	0.00
17,400.0	90.00	359.45	9,600.0	8,115.6	174.4	8,117.3	0.00	0.00	0.00
17,500.0	90.00	359.45	9,600.0	8,215.6	173.4	8,217.3	0.00	0.00	0.00
17,600.0	90.00	359.45	9,600.0	8,315.6	172.4	8,317.2	0.00	0.00	0.00
17,700.0	90.00	359.45	9,600.0	8,415.6	171.5	8,417.2	0.00	0.00	0.00
17,800.0	90.00	359.45	9,600.0	8,515.6	170.5	8,517.2	0.00	0.00	0.00
17,900.0	90.00	359.45	9,600.0	8,615.6	169.6	8,617.1	0.00	0.00	0.00
18,000.0	90.00	359.45	9,600.0	8,715.6	168.6	8,717.1	0.00	0.00	0.00
18,100.0	90.00	359.45	9,600.0	8,815.6	167.7	8,817.1	0.00	0.00	0.00
18,200.0	90.00	359.45	9,600.0	8,915.5	166.7	8,917.1	0.00	0.00	0.00
18,300.0	90.00	359.45	9,600.0	9,015.5	165.7	9,017.0	0.00	0.00	0.00
18,400.0	90.00	359.45	9,600.0	9,115.5	164.8	9,117.0	0.00	0.00	0.00
18,500.0	90.00	359.45	9,600.0	9,215.5	163.8	9,217.0	0.00	0.00	0.00
18,600.0	90.00	359.45	9,600.0	9,315.5	162.9	9,316.9	0.00	0.00	0.00
18,700.0	90.00	359.45	9,600.0	9,415.5	161.9	9,416.9	0.00	0.00	0.00
18,800.0	90.00	359.45	9,600.0	9,515.5	160.9	9,516.9	0.00	0.00	0.00
18,900.0	90.00	359.45	9,600.0	9,615.5	160.0	9,616.8	0.00	0.00	0.00
19,000.0	90.00	359.45	9,600.0	9,715.5	159.0	9,716.8	0.00	0.00	0.00
19,100.0	90.00	359.45	9,600.0	9,815.5	158.1	9,816.8	0.00	0.00	0.00
19,200.0	90.00	359.45	9,600.0	9,915.5	157.1	9,916.7	0.00	0.00	0.00
19,300.0	90.00	359.45	9,600.0	10,015.5	156.2	10,016.7	0.00	0.00	0.00
19,316.5	90.00	359.45	9,600.0	10,032.0	156.0	10,033.2	0.00	0.00	0.00
HOLD 130.0 hold at 19316.5 MD - LTP (Redbud State Com 25-36-32 #077H)									
19,400.0	90.00	359.45	9,600.0	10,115.5	155.2	10,116.7	0.00	0.00	0.00
19,446.5	90.00	359.45	9,600.0	10,162.0	154.8	10,163.2	0.00	0.00	0.00
PBHL - 5.5" - PBHL (Redbud State Com 25-36-32 #077H)									

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	0.00	9,600.0	10,032.0	156.0	404,508.00	867,253.00	32.1076973	-103.2807462
- plan hits target center									
- Point									
PBHL (Redbud State	0.00	0.00	9,600.0	10,162.0	155.0	404,638.00	867,252.00	32.1080546	-103.2807454
- plan misses target center by 0.2usft at 19446.5usft MD (9600.0 TVD, 10162.0 N, 154.8 E)									
- Point									
FTP (Redbud State C	0.00	0.00	9,600.0	133.0	251.0	394,609.00	867,348.00	32.0804874	-103.2807515
- plan misses target center by 198.7usft at 9509.2usft MD (9449.9 TVD, 262.9 N, 241.3 E)									
- Point									

Database:	EDM5000	Local Co-ordinate Reference:	Well Redbud State Com 25-36-32 #077H
Company:	Ameredev Operating, LLC	TVD Reference:	KB @ 3030.0usft (Rig)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB @ 3030.0usft (Rig)
Site:	(Redbud State) Sec32_T-25-S_R-26-E	North Reference:	Grid
Well:	Redbud State Com 25-36-32 #077H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,321.0	1,321.0	9.625"	9-5/8	12-1/4	
5,139.2	5,135.0	7.625"	7-5/8	8-3/4	
19,446.5	9,600.0	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			
3,353.7	3,352.0	Tansill			
5,089.1	5,085.0	Lamar			
5,118.1	5,114.0	Bell Canyon			
6,981.5	6,975.0	Brushy Canyon			
8,019.5	8,013.0	Bone Spring Lime			
9,589.9	9,500.0	First Bone Spring			

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	
2,149.8	2,149.7	1.2	3.7	HOLD - 4656.9 at 2149.8 MD	
6,806.7	6,800.3	75.3	235.6	DROP - 2.00	
6,956.5	6,950.0	76.5	239.3	HOLD - 2077.0 at 6956.5 MD	
9,033.5	9,027.0	76.5	239.3	KOP - Build 10.00	
9,933.5	9,600.0	649.4	245.3	EOC/TURN - DLS 2.00 TFO -90.01	
9,990.9	9,600.0	706.9	245.3	HOLD - 9325.6 at 9990.9 MD	
19,316.5	9,600.0	10,032.0	156.0	HOLD 130.0 hold at 19316.5 MD	
19,446.5	9,600.0	10,162.0	154.8	PBHL	