

07/28/2012

To Whom It May Concern:

As a representative of Wellpath Energy Services LLC. I certify that to the best of my knowledge all the survey data contained in the packet for the well listed below is accurate and true.

Lime Rock Resources
Well: William A Federal #10
Lease: Eddy County

30-015-40480

Thank You,

A handwritten signature in cursive script that reads 'Adam Jimenez'.

Adam Jimenez
Senior MWD Engineer
Wellpath Energy Services LLC

OK

LIME ROCK RESOURCES

EDDY COUNTY, NM (NAD 27)

SEC. 29 T.17S RGE. 28E

WILLIAM A FEDERAL #10

JOB # WPE1217D - ORIGINAL WELLBORE

28 July, 2012

Survey: FINAL SURVEYS - ORIGINAL WELLBORE



Survey Report



Company: LIME ROCK RESOURCES
Project: EDDY COUNTY, NM (NAD 27)
Site: SEC. 29 T.17S RGE. 28E
Well: WILLIAM A FEDERAL #10
Wellbore: JOB # WPE1217D - ORIGINAL WELL
Design: JOB # WPE1217D - ORIGINAL WELL

Local Co-ordinate Reference: Well WILLIAM A FEDERAL #10
TVD Reference: KB @ 3656.0usft (UDI #22)
MD Reference: KB @ 3656.0usft (UDI #22)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM_5000_1_7

Project	EDDY COUNTY, NM (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site SEC. 29 T.17S RGE. 28E

Site Position: Northing: 654,565.10usft Latitude: 32° 47' 57.919 N
From: Map Easting: 539,801.70usft Longitude: 104° 12' 13.688 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16" Grid Convergence: 0.07 °

Well WILLIAM A FEDERAL #10

Well Position +N/-S 0.0 usft Northing: 654,565.10 usft Latitude: 32° 47' 57.919 N
 +E/-W 0.0 usft Easting: 539,801.70 usft Longitude: 104° 12' 13.688 W
Position Uncertainty 0.0 usft Wellhead Elevation: usft Ground Level: 3,645.0usft

Wellbore JOB # WPE1217D - ORIGINAL WELLBORE

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	23/07/2012	7.79	60.58	48,780

Design JOB # WPE1217D - ORIGINAL WELLBORE

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	229.57

Survey Program Date 28/07/2012

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
466.0	1,829.0	FINAL SURVEYS - ORIGINAL WELLBOR	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea 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	3,656.0	0.0	0.0	0.0	0.00	0.00	0.00
466.0	0.20	176.50	466.0	3,190.0	-0.8	0.0	0.5	0.04	0.04	0.00
498.0	0.40	202.60	498.0	3,158.0	-1.0	0.0	0.6	0.74	0.62	81.56
530.0	1.20	243.70	530.0	3,126.0	-1.2	-0.3	1.0	2.93	2.50	128.44
561.0	2.40	245.00	561.0	3,095.0	-1.6	-1.2	2.0	3.87	3.87	4.19
593.0	3.82	245.00	592.9	3,063.1	-2.4	-2.8	3.7	4.44	4.44	0.00
625.0	5.30	245.10	624.8	3,031.2	-3.4	-5.1	6.1	4.63	4.62	0.31
656.0	6.70	241.70	655.7	3,000.3	-4.9	-8.0	9.3	4.66	4.52	-10.97
688.0	8.30	237.20	687.4	2,968.6	-7.0	-11.6	13.4	5.32	5.00	-14.06
720.0	9.80	232.10	719.0	2,937.0	-10.0	-15.7	18.4	5.31	4.69	-15.94
751.0	11.30	227.80	749.5	2,906.5	-13.6	-20.0	24.1	5.46	4.84	-13.87
783.0	12.70	227.40	780.8	2,875.2	-18.1	-24.9	30.7	4.38	4.37	-1.25
815.0	14.70	228.90	811.8	2,844.2	-23.2	-30.6	38.3	6.35	6.25	4.69

Survey Report



Company: LIME ROCK RESOURCES **Local Co-ordinate Reference:** Well WILLIAM A FEDERAL #10
Project: EDDY COUNTY, NM (NAD 27) **TVD Reference:** KB @ 3656.0usft (UDI #22)
Site: SEC. 29 T.17S RGE. 28E **MD Reference:** KB @ 3656.0usft (UDI #22)
Well: WILLIAM A FEDERAL #10 **North Reference:** True
Wellbore: JOB # WPE1217D - ORIGINAL WELL **Survey Calculation Method:** Minimum Curvature
Design: JOB # WPE1217D - ORIGINAL WELL **Database:** EDM_5000_1_7

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
847.0	16.40	229.20	842.7	2,813.3	-28.8	-37.0	46.9	5.32	5.31	0.94
878.0	18.10	230.90	872.3	2,783.7	-34.7	-44.1	56.0	5.72	5.48	5.48
910.0	19.80	231.80	902.5	2,753.5	-41.2	-52.2	66.4	5.39	5.31	2.81
942.0	21.50	231.90	932.5	2,723.5	-48.1	-61.1	77.7	5.31	5.31	0.31
1,005.0	24.70	232.10	990.4	2,665.6	-63.4	-80.6	102.4	5.08	5.08	0.32
1,037.0	26.40	229.90	1,019.3	2,636.7	-72.0	-91.3	116.2	6.08	5.31	-6.87
1,068.0	28.00	227.90	1,046.9	2,609.1	-81.4	-101.9	130.4	5.94	5.16	-6.45
1,100.0	28.30	228.40	1,075.1	2,580.9	-91.4	-113.2	145.5	1.19	0.94	1.56
1,132.0	27.50	227.80	1,103.4	2,552.6	-101.4	-124.3	160.4	2.65	-2.50	-1.87
1,163.0	27.30	227.10	1,130.9	2,525.1	-111.1	-134.8	174.7	1.22	-0.65	-2.26
1,195.0	27.60	227.00	1,159.3	2,496.7	-121.1	-145.6	189.4	0.95	0.94	-0.31
1,227.0	27.20	226.50	1,187.7	2,468.3	-131.2	-156.4	204.1	1.44	-1.25	-1.56
1,259.0	28.10	225.50	1,216.0	2,440.0	-141.5	-167.0	218.9	3.16	2.81	-3.12
1,290.0	27.90	224.90	1,243.4	2,412.6	-151.8	-177.4	233.5	1.11	-0.65	-1.94
1,322.0	28.10	225.50	1,271.7	2,384.3	-162.4	-188.0	248.4	1.08	0.62	1.87
1,354.0	27.50	225.10	1,300.0	2,356.0	-172.9	-198.6	263.3	1.96	-1.87	-1.25
1,385.0	26.80	224.60	1,327.6	2,328.4	-182.9	-208.6	277.4	2.37	-2.26	-1.61
1,417.0	25.80	223.90	1,356.2	2,299.8	-193.1	-218.5	291.5	3.27	-3.12	-2.19
1,449.0	25.60	223.60	1,385.1	2,270.9	-203.1	-228.1	305.3	0.75	-0.62	-0.94
1,480.0	25.10	223.80	1,413.1	2,242.9	-212.7	-237.3	318.5	1.64	-1.61	0.65
1,512.0	24.00	225.40	1,442.2	2,213.8	-222.1	-246.6	331.8	4.02	-3.44	5.00
1,543.0	22.80	228.00	1,470.7	2,185.3	-230.6	-255.6	344.1	5.11	-3.87	8.39
1,575.0	21.30	231.50	1,500.3	2,155.7	-238.4	-264.7	356.1	6.23	-4.69	10.94
1,607.0	19.50	235.00	1,530.3	2,125.7	-245.0	-273.6	367.2	6.79	-5.62	10.94
1,638.0	17.50	236.40	1,559.7	2,096.3	-250.6	-281.8	377.0	6.61	-6.45	4.52
1,670.0	15.30	236.40	1,590.4	2,065.6	-255.6	-289.3	386.0	6.87	-6.87	0.00
1,702.0	13.30	236.80	1,621.4	2,034.6	-259.9	-295.9	393.8	6.26	-6.25	1.25
1,734.0	11.30	239.10	1,652.7	2,003.3	-263.6	-301.7	400.6	6.43	-6.25	7.19
1,765.0	9.70	242.40	1,683.2	1,972.8	-266.3	-306.6	406.1	5.51	-5.16	10.65
1,797.0	8.40	245.20	1,714.8	1,941.2	-268.6	-311.1	411.0	4.29	-4.06	8.75
TD - ORIGINAL WELLBORE										
1,829.0	7.50	249.10	1,746.4	1,909.6	-270.3	-315.2	415.2	3.28	-2.81	12.19

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
PROP TD - WILLIAM	0.00	0.00	3,677.5	-244.5	-286.9	654,320.30	539,515.10	32° 47' 55.500 N	104° 12' 17.049 W
- survey misses target center by 1931.4usft at 1829.0usft MD (1746.4 TVD, -270.3 N, -315.2 E)									
- Rectangle (sides W30.0 H30.0 D0.0)									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
1,829.0	1,746.4	-270.3	-315.2	TD - ORIGINAL WELLBORE

Checked By: Allen Jaramero Approved By: [Signature] Date: 07/28/2012



08/12/2012

To Whom It May Concern:

As a representative of Wellpath Energy Services LLC. I certify that to the best of my knowledge all the survey data contained in the packet for the well listed below is accurate and true.

Lime Rock Resources
Well: William A Federal #10 ST
Lease: Eddy County

Thank You,

A handwritten signature in black ink that reads 'Adam Jimenez'. The signature is written in a cursive style.

Adam Jimenez
Senior MWD Engineer
Wellpath Energy Services LLC

OK

LIME ROCK RESOURCES

EDDY COUNTY, NM (NAD 27)

SEC. 29 T.17S RGE. 28E

WILLIAM A FEDERAL #10

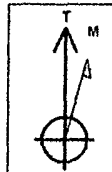
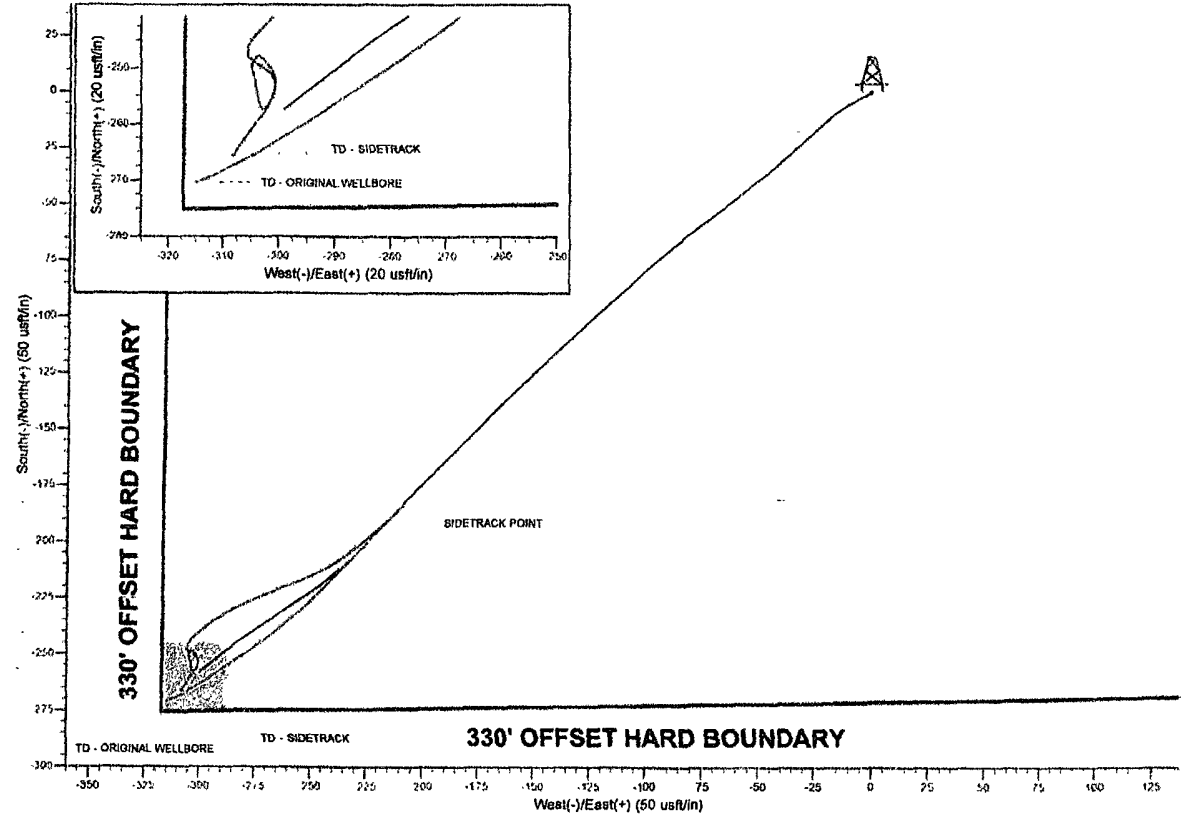
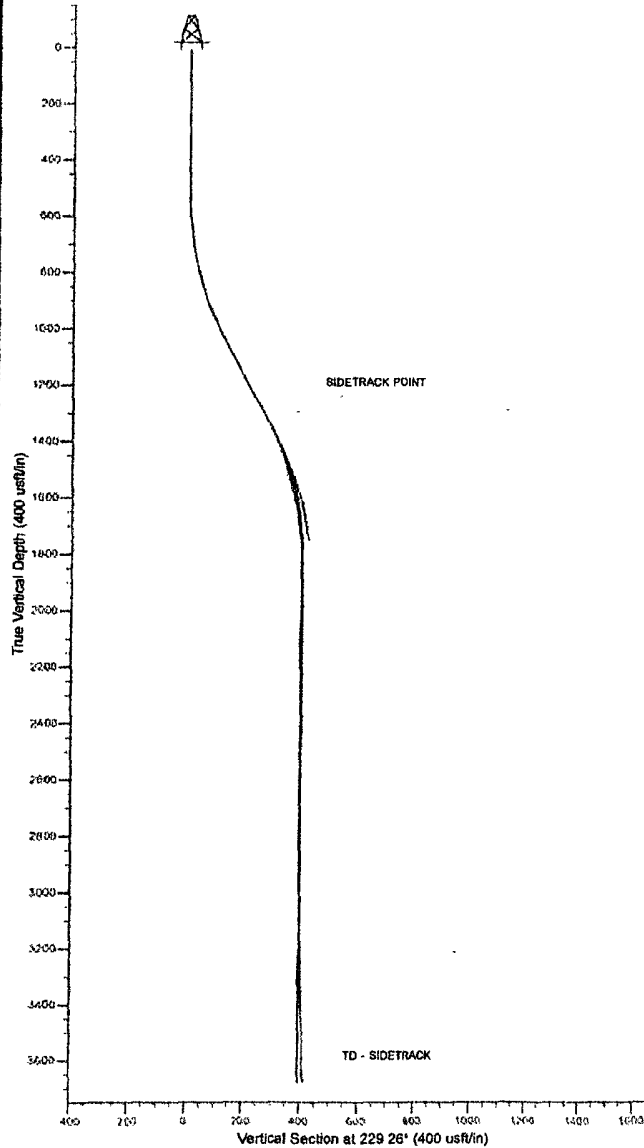
JOB #WPE1217D - SIDETRACK

12 August, 2012

Survey: FINAL SURVEYS - SIDETRACK



Project: EDDY COUNTY, NM (NAD 27)
 Site: SEC. 29 T.17S RGE. 28E
 Well: WILLIAM A FEDERAL #10
 Wellbore: JOB #WPE1217D - SIDETRACK
 Design: FINAL SURVEYS - SIDETRACK



Azimuths to True North
 Magnetic North: 7.78°
 Magnetic Field
 Strength: 48778 6anT
 Dip Angle: 60.58°
 Date: 28/07/2012
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Annotation
1327.8	1385.0	28.80	224.80	-182.9	-208.6	-182.9	SIDETRACK POINT
3873.5	3750.0	1.40	214.80	-285.6	-308.3	-265.6	TD - SIDETRACK

Survey Report



Company: LIME ROCK RESOURCES
Project: EDDY COUNTY, NM (NAD 27)
Site: SEC 29 T 17S RGE. 28E
Well: WILLIAM A FEDERAL #10
Wellbore: JOB #WPE1217D - SIDETRACK
Design: FINAL SURVEYS - SIDETRACK

Local Co-ordinate Reference: Well WILLIAM A FEDERAL #10
TVD Reference: KB @ 3656.0usft (UDI #22)
MD Reference: KB @ 3656.0usft (UDI #22)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM_5000_1_7

Project	EDDY COUNTY, NM (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site SEC. 29 T.17S RGE. 28E

Site Position: Northing: 654,565.10 usft Latitude: 32° 47' 57.919 N
From: Map Easting: 539,801.70 usft Longitude: 104° 12' 13.688 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16" Grid Convergence: 0.07 °

Well WILLIAM A FEDERAL #10

Well Position +N/-S 0.0 usft Northing: 654,565.10 usft Latitude: 32° 47' 57.919 N
 +E/-W 0.0 usft Easting: 539,801.70 usft Longitude: 104° 12' 13.688 W
Position Uncertainty 0.0 usft Wellhead Elevation: usft Ground Level: 3,645.0 usft

Wellbore JOB #WPE1217D - SIDETRACK

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	28/07/2012	7.78	60.58	48,779

Design FINAL SURVEYS - SIDETRACK

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 1,385.0
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
 (usft) (usft) (usft) (°)
 0.0 0.0 0.0 229.26

Survey Program Date 12/08/2012

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
466.0	1,385.0	FINAL SURVEYS - ORIGINAL WELLBOR	MWD	MWD - Standard
1,446.0	3,750.0	FINAL SURVEYS - SIDETRACK (JOB #WPE1217D)	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
SIDETRACK POINT										
1,385.0	26.80	224.60	1,327.6	2,328.4	-182.9	-208.6	277.4	0.00	0.00	0.00
1,446.0	23.60	230.80	1,382.8	2,273.2	-200.4	-227.7	303.4	6.79	-5.25	10.16
1,477.0	22.10	236.50	1,411.3	2,244.7	-207.6	-237.4	315.4	8.62	-4.84	18.39
1,509.0	19.90	243.70	1,441.2	2,214.8	-213.3	-247.3	326.6	10.58	-6.87	22.50
1,541.0	18.50	248.40	1,471.4	2,184.6	-217.6	-256.9	336.7	6.51	-4.37	14.69
1,573.0	16.70	248.80	1,501.9	2,154.1	-221.1	-265.9	345.8	5.64	-5.62	1.25
1,604.0	14.70	246.00	1,531.8	2,124.2	-224.3	-273.7	353.8	6.90	-6.45	-9.03
1,636.0	13.30	245.20	1,562.8	2,093.2	-227.5	-280.7	361.2	4.42	-4.37	-2.50
1,668.0	12.30	240.90	1,594.0	2,062.0	-230.7	-287.1	368.1	4.31	-3.12	-13.44
1,699.0	10.90	236.40	1,624.4	2,031.6	-234.0	-292.4	374.2	5.37	-4.52	-14.52

Survey Report



Company: LIME ROCK RESOURCES
 Project: EDDY COUNTY, NM (NAD 27)
 Site: SEC. 29 T.17S RGE. 28E
 Well: WILLIAM A FEDERAL #10
 Wellbore: JOB #WPE1217D - SIDETRACK
 Design: FINAL SURVEYS - SIDETRACK

Local Co-ordinates Reference: Well WILLIAM A FEDERAL #10
 TVD Reference: KB @ 3656.0usft (UDI #22)
 MD Reference: KB @ 3656.0usft (UDI #22)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM_5000_1_7

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,731.0	9.50	232.60	1,655.9	2,000.1	-237.2	-297.0	379.9	4.85	-4.37	-11.87
1,763.0	7.10	227.00	1,687.5	1,968.5	-240.2	-300.5	384.5	7.91	-7.50	-17.50
1,785.0	5.90	224.90	1,709.4	1,948.6	-241.9	-302.3	387.0	5.56	-5.45	-9.55
1,817.0	4.90	220.40	1,741.3	1,914.7	-244.1	-304.4	389.9	3.39	-3.12	-14.06
1,848.0	3.50	197.50	1,772.2	1,883.8	-246.0	-305.5	392.1	6.96	-4.52	-73.87
1,880.0	2.60	155.30	1,804.1	1,851.9	-247.6	-305.5	393.1	7.34	-2.81	-131.87
1,912.0	3.30	118.60	1,836.1	1,819.9	-248.7	-304.4	393.0	6.16	2.19	-114.69
1,944.0	3.50	121.30	1,868.0	1,788.0	-249.7	-302.8	392.3	0.80	0.62	8.44
1,975.0	3.10	138.60	1,899.0	1,757.0	-250.8	-301.4	392.0	3.45	-1.29	55.81
2,007.0	3.10	170.50	1,930.9	1,725.1	-252.3	-300.7	392.5	5.32	0.00	99.69
2,039.0	2.70	195.60	1,962.9	1,693.1	-253.9	-300.7	393.5	4.12	-1.25	78.44
2,070.0	2.60	202.30	1,993.9	1,662.1	-255.2	-301.2	394.8	1.05	-0.32	21.61
2,102.0	1.90	221.70	2,025.8	1,630.2	-256.3	-301.8	396.0	3.20	-2.19	60.62
2,134.0	1.70	231.00	2,057.8	1,598.2	-257.0	-302.6	397.0	1.10	-0.62	29.06
2,166.0	1.20	326.40	2,089.8	1,566.2	-257.0	-303.1	397.4	6.78	-1.56	298.12
2,197.0	1.50	348.40	2,120.8	1,535.2	-256.3	-303.4	397.2	1.91	0.97	70.97
2,229.0	1.50	347.60	2,152.8	1,503.2	-255.5	-303.5	396.7	0.07	0.00	-2.50
2,261.0	1.60	350.60	2,184.8	1,471.2	-254.7	-303.7	396.3	0.40	0.31	9.37
2,293.0	1.60	348.90	2,216.8	1,439.2	-253.8	-303.9	395.9	0.15	0.00	-5.31
2,356.0	1.70	345.50	2,279.8	1,376.2	-252.0	-304.3	395.0	0.22	0.16	-5.40
2,419.0	1.80	343.60	2,342.7	1,313.3	-250.2	-304.8	394.2	0.18	0.16	-3.02
2,483.0	0.50	28.30	2,406.7	1,249.3	-249.0	-304.9	393.5	2.32	-2.03	69.84
2,546.0	0.40	63.50	2,469.7	1,186.3	-248.6	-304.6	393.0	0.46	-0.16	55.87
2,610.0	0.30	34.00	2,533.7	1,122.3	-248.4	-304.3	392.7	0.32	-0.16	-46.09
2,673.0	0.40	24.70	2,596.7	1,059.3	-248.0	-304.1	392.3	0.18	0.16	-14.76
2,736.0	0.60	28.70	2,659.7	996.3	-247.6	-303.9	391.8	0.32	0.32	6.35
2,800.0	0.70	131.40	2,723.7	932.3	-247.5	-303.4	391.4	1.59	0.16	160.47
2,863.0	1.10	136.90	2,786.7	869.3	-248.2	-302.7	391.4	0.65	0.63	8.73
2,927.0	1.10	141.50	2,850.7	805.3	-249.1	-301.9	391.4	0.14	0.00	7.19
2,990.0	1.20	149.50	2,913.7	742.3	-250.2	-301.2	391.5	0.30	0.16	12.70
3,054.0	1.30	166.20	2,977.7	678.3	-251.5	-300.7	391.9	0.59	0.16	26.09
3,117.0	1.40	181.70	3,040.6	615.4	-252.9	-300.5	392.8	0.60	0.16	24.60
3,212.0	1.50	205.60	3,135.6	520.4	-255.2	-301.1	394.7	0.64	0.11	25.16
3,307.0	1.60	218.20	3,230.6	425.4	-257.4	-302.5	397.2	0.37	0.11	13.26
3,466.0	1.10	214.60	3,389.5	266.5	-260.4	-304.7	400.8	0.32	-0.31	-2.26
3,684.0	1.40	214.60	3,607.5	48.5	-264.3	-307.4	405.4	0.14	0.14	0.00
TD - SIDETRACK										
3,750.0	1.40	214.60	3,673.5	-17.5	-265.6	-308.3	407.0	0.00	0.00	0.00

Survey Report



Company: LIME ROCK RESOURCES
Project: EDDY COUNTY, NM (NAD 27)
Site: SEC. 29 T.17S RGE. 28E
Well: WILLIAM A FEDERAL #10
Wellbore: JOB #WPE1217D - SIDETRACK
Design: FINAL SURVEYS - SIDETRACK

Local Co-ordinate Reference: Well WILLIAM A FEDERAL #10
TVD Reference: KB @ 3656.0usft (UDI #22)
MD Reference: KB @ 3656.0usft (UDI #22)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM_5000_1_7

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PROP TD - WILLIAM	0.00	0.00	3,677.5	-244.5	-286.9	654,320.30	539,515.10	32° 47' 55.500 N	104° 12' 17.049 W
- hit/miss target - Shape - survey misses target center by 30.4usft at 3750.0usft MD (3673.5 TVD, -265.6 N, -308.3 E) - Rectangle (sides W30.0 H30.0 D0.0)									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
1,385.0	1,327.6	-182.9	-208.6	SIDETRACK POINT
3,750.0	3,673.5	-265.6	-308.3	TD - SIDETRACK

Checked By: *Adam Dancy* Approved By: *[Signature]* Date: 02/12/2012