



Devon Energy

Chaves Co, New Mexico (Nad-83)

Loving 7 Fee #1H

Loving 7 Fee #1H

Lateral #2

30-005-64129

Survey: Cudd MWD Survey #3

Standard Survey Report

12 December, 2010



**CUDD Drilling & Measurement Services****Survey Report**

Company:	Devon Energy	Local Co-ordinate Reference:	Site Loving 7 Fee #1H
Project:	Chaves Co, New Mexico (Nad-83)	TVD Reference:	WELL @ 3899.00ft (Original Well Elev)
Site:	Loving 7 Fee #1H	MD Reference:	WELL @ 3899.00ft (Original Well Elev)
Well:	Loving 7 Fee #1H	North Reference:	Grid
Wellbore:	Lateral #2	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #2	Database:	EDM 2003.21 Single User Db

Project	Chaves Co, New Mexico (Nad-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Loving 7 Fee #1H, Sec 7, T-10S, R-29E		
Site Position:		Northing:	895,440.51 ft
From:	Map	Easting:	636,547.60 ft
Position Uncertainty:	0 00 ft	Slot Radius:	"
		Latitude:	33° 27' 39 907 N
		Longitude:	104° 1' 16 108 W
		Grid Convergence:	0.17 °

Well	Loving 7 Fee #1H					
Well Position	+N/-S	0.00 ft	Northing:	895,440.51 ft	Latitude:	33° 27' 39 907 N
	+E/-W	0.00 ft	Easting:	636,547.60 ft	Longitude:	104° 1' 16.108 W
Position Uncertainty		0 00 ft	Wellhead Elevation:	3,899.00 ft	Ground Level:	3,880.00 ft

Wellbore	Lateral #2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/15/10	7.95	61.28	49,397

Design : Lateral #2				
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0.00	0.00	89.67

Survey Program	Date 12/12/10				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	7,700.00	Gyro Survey #2 (After Casing) (Lateral #2)	NS-GYRO-MS	North sensing gyrocompassing m/s	
7,730.00	11,150.00	Cudd MWD Survey #3 (Lateral #2)	CUDD MWD	MWD - Standard CUDD MWD	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,700.00	23.15	91.88	7,689.63	-6.57	189.88	189.84	0.00	0.00	0.00
7,730.00	23.90	89.80	7,717.14	-6.74	201.85	201.81	3.73	2.50	-6.93
First Cudd MWD Survey #3									
7,761.00	24.00	90.70	7,745.47	-6.80	214.44	214.39	1.22	0.32	2.90
7,793.00	23.20	90.60	7,774.79	-6.94	227.25	227.20	2.50	-2.50	-0.31
7,825.00	25.00	90.60	7,804.00	-7.08	240.31	240.27	5.63	5.63	0.00
7,856.00	25.20	91.10	7,832.07	-7.27	253.46	253.41	0.94	0.65	1.61
7,888.00	24.70	91.60	7,861.09	-7.59	266.95	266.91	1.70	-1.56	1.56
7,920.00	23.80	91.80	7,890.26	-7.98	280.09	280.04	2.82	-2.81	0.63
7,951.00	24.30	91.50	7,918.57	-8.35	292.72	292.67	1.66	1.61	-0.97
7,983.00	27.10	90.50	7,947.40	-8.58	306.59	306.54	8.85	8.75	-3.13
8,015.00	29.50	90.90	7,975.58	-8.77	321.76	321.70	7.52	7.50	1.25



CUDD Drilling & Measurement Services

Survey Report



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Well:	Loving 7 Fee #1H	North Reference:	Grid
Wellbore:	Lateral #2	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #2	Database:	EDM 2003.21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,046.00	32.70	92.40	8,002.12	-9.24	337.76	337.70	10.62	10.32	4.84
8,078.00	39.20	92.10	8,028.01	-9.97	356.53	356.46	20.32	20.31	-0.94
8,110.00	48.20	90.20	8,051.12	-10.39	378.60	378.54	28.42	28.13	-5.94
8,141.00	56.30	89.30	8,070.08	-10.27	403.10	403.03	26.23	26.13	-2.90
8,172.00	58.40	89.20	8,086.81	-9.93	429.19	429.13	6.78	6.77	-0.32
8,204.00	61.00	89.50	8,102.95	-9.61	456.82	456.75	8.17	8.13	0.94
8,235.00	64.00	90.00	8,117.26	-9.50	484.31	484.25	9.78	9.68	1.61
8,267.00	67.40	90.40	8,130.43	-9.60	513.47	513.41	10.69	10.63	1.25
8,299.00	70.50	90.30	8,141.92	-9.78	543.33	543.27	9.69	9.69	-0.31
8,330.00	73.40	90.80	8,151.53	-10.06	572.80	572.73	9.48	9.35	1.61
8,361.00	75.60	90.20	8,159.81	-10.32	602.67	602.60	7.34	7.10	-1.94
8,394.00	77.40	90.20	8,167.52	-10.44	634.76	634.69	5.45	5.45	0.00
8,427.00	77.40	90.50	8,174.71	-10.63	666.96	666.89	0.89	0.00	0.91
8,458.00	78.50	90.10	8,181.19	-10.79	697.28	697.20	3.77	3.55	-1.29
8,490.00	80.20	90.20	8,187.10	-10.87	728.73	728.65	5.32	5.31	0.31
8,521.00	83.00	90.40	8,191.63	-11.04	759.39	759.31	9.05	9.03	0.65
8,551.00	85.10	90.20	8,194.74	-11.19	789.23	789.15	7.03	7.00	-0.67
8,585.00	86.90	90.10	8,197.11	-11.28	823.14	823.06	5.30	5.29	-0.29
8,616.00	87.20	89.90	8,198.70	-11.28	854.10	854.02	1.16	0.97	-0.65
8,648.00	87.10	90.20	8,200.29	-11.31	886.06	885.98	0.99	-0.31	0.94
8,680.00	86.80	90.20	8,202.00	-11.42	918.02	917.93	0.94	-0.94	0.00
8,717.00	85.40	90.30	8,204.51	-11.58	954.93	954.85	3.79	-3.78	0.27
8,748.00	84.10	89.80	8,207.35	-11.61	985.80	985.71	4.49	-4.19	-1.61
8,780.00	83.70	89.90	8,210.75	-11.52	1,017.62	1,017.53	1.29	-1.25	0.31
8,812.00	84.90	90.50	8,213.93	-11.64	1,049.46	1,049.37	4.19	3.75	1.88
8,843.00	85.10	90.70	8,216.63	-11.96	1,080.34	1,080.25	0.91	0.65	0.65
8,875.00	85.40	90.30	8,219.28	-12.24	1,112.23	1,112.14	1.56	0.94	-1.25
8,907.00	83.80	89.90	8,222.29	-12.29	1,144.08	1,143.99	5.15	-5.00	-1.25
8,938.00	83.30	89.30	8,225.77	-12.08	1,174.89	1,174.80	2.51	-1.61	-1.94
8,970.00	82.90	89.20	8,229.62	-11.66	1,206.65	1,206.56	1.29	-1.25	-0.31
9,002.00	83.30	89.20	8,233.46	-11.22	1,238.42	1,238.33	1.25	1.25	0.00
9,033.00	84.40	89.90	8,236.78	-10.98	1,269.24	1,269.15	4.20	3.55	2.26
9,065.00	85.70	89.80	8,239.55	-10.89	1,301.12	1,301.03	4.07	4.06	-0.31
9,097.00	85.10	90.00	8,242.11	-10.84	1,333.01	1,332.93	1.98	-1.88	0.63
9,128.00	83.80	89.10	8,245.11	-10.60	1,363.87	1,363.78	5.09	-4.19	-2.90
9,159.00	84.40	89.80	8,248.30	-10.30	1,394.70	1,394.62	2.96	1.94	2.26
9,191.00	83.50	89.60	8,251.67	-10.13	1,426.52	1,426.44	2.88	-2.81	-0.63
9,222.00	82.40	90.10	8,255.47	-10.05	1,457.29	1,457.20	3.89	-3.55	1.61
9,254.00	81.40	89.80	8,259.98	-10.02	1,488.97	1,488.88	3.26	-3.13	-0.94
9,286.00	81.50	89.80	8,264.74	-9.91	1,520.61	1,520.53	0.31	0.31	0.00
9,318.00	82.50	89.60	8,269.19	-9.75	1,552.30	1,552.22	3.19	3.13	-0.63
9,349.00	83.60	89.60	8,272.95	-9.53	1,583.07	1,582.99	3.55	3.55	0.00
9,381.00	84.10	89.50	8,276.37	-9.28	1,614.88	1,614.80	1.59	1.56	-0.31
9,413.00	84.40	89.40	8,279.58	-8.98	1,646.72	1,646.64	0.99	0.94	-0.31
9,444.00	84.50	89.00	8,282.58	-8.55	1,677.57	1,677.49	1.32	0.32	-1.29
9,476.00	84.70	89.20	8,285.59	-8.05	1,709.43	1,709.35	0.88	0.63	0.63
9,508.00	84.90	89.20	8,288.49	-7.60	1,741.29	1,741.22	0.63	0.63	0.00
9,539.00	85.20	89.50	8,291.16	-7.25	1,772.17	1,772.10	1.37	0.97	0.97
9,571.00	85.40	89.90	8,293.79	-7.08	1,804.07	1,803.99	1.39	0.63	1.25
9,599.00	85.50	89.10	8,296.01	-6.84	1,831.98	1,831.91	2.87	0.36	-2.86
9,635.00	85.60	89.50	8,298.80	-6.40	1,867.87	1,867.80	1.14	0.28	1.11
9,667.00	86.10	89.70	8,301.12	-6.18	1,899.78	1,899.71	1.68	1.56	0.63
9,698.00	86.20	89.80	8,303.20	-6.04	1,930.71	1,930.64	0.46	0.32	0.32
9,730.00	85.10	89.20	8,305.62	-5.77	1,962.62	1,962.55	3.91	-3.44	-1.88

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Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,762.00	84.90	89.00	8,308.41	-5.27	1,994.49	1,994.43	0.88	-0.63	-0.63
9,793.00	85.00	89.50	8,311.14	-4.86	2,025.37	2,025.31	1.64	0.32	1.61
9,825.00	85.10	89.50	8,313.90	-4.58	2,057.25	2,057.19	0.31	0.31	0.00
9,856.00	85.10	89.70	8,316.55	-4.37	2,088.13	2,088.07	0.64	0.00	0.65
9,888.00	85.30	90.00	8,319.23	-4.28	2,120.02	2,119.96	1.12	0.63	0.94
9,920.00	85.10	90.00	8,321.91	-4.28	2,151.91	2,151.85	0.63	-0.63	0.00
9,952.00	84.60	90.00	8,324.78	-4.28	2,183.78	2,183.72	1.56	-1.56	0.00
9,983.00	84.10	90.00	8,327.83	-4.28	2,214.63	2,214.57	1.61	-1.61	0.00
10,015.00	84.10	90.20	8,331.12	-4.34	2,246.46	2,246.40	0.62	0.00	0.63
10,046.00	84.90	90.20	8,334.09	-4.45	2,277.32	2,277.25	2.58	2.58	0.00
10,077.00	84.70	91.10	8,336.90	-4.80	2,308.19	2,308.12	2.96	-0.65	2.90
10,108.00	84.70	91.70	8,339.77	-5.55	2,339.04	2,338.97	1.93	0.00	1.94
10,140.00	85.00	91.80	8,342.64	-6.53	2,370.90	2,370.82	0.99	0.94	0.31
10,172.00	84.80	92.30	8,345.48	-7.67	2,402.75	2,402.67	1.68	-0.63	1.56
10,204.00	85.30	92.90	8,348.24	-9.11	2,434.60	2,434.51	2.44	1.56	1.88
10,236.00	85.20	93.40	8,350.89	-10.86	2,466.44	2,466.34	1.59	-0.31	1.56
10,267.00	85.90	93.10	8,353.30	-12.62	2,497.30	2,497.18	2.46	2.26	-0.97
10,299.00	86.90	93.80	8,355.31	-14.54	2,529.18	2,529.05	3.81	3.13	2.19
10,331.00	86.90	94.00	8,357.04	-16.71	2,561.06	2,560.92	0.62	0.00	0.63
10,362.00	86.90	95.70	8,358.72	-19.33	2,591.90	2,591.74	5.48	0.00	5.48
10,394.00	86.10	97.00	8,360.67	-22.86	2,623.64	2,623.47	4.76	-2.50	4.06
10,425.00	86.10	97.60	8,362.78	-26.79	2,654.32	2,654.12	1.93	0.00	1.94
10,457.00	86.20	97.60	8,364.93	-31.01	2,685.97	2,685.74	0.31	0.31	0.00
10,489.00	87.90	97.50	8,366.57	-35.21	2,717.65	2,717.40	5.32	5.31	-0.31
10,520.00	88.70	96.70	8,367.49	-39.04	2,748.39	2,748.12	3.65	2.58	-2.58
10,552.00	88.70	96.10	8,368.22	-42.61	2,780.19	2,779.89	1.87	0.00	-1.88
10,584.00	88.50	95.30	8,369.00	-45.79	2,812.02	2,811.71	2.58	-0.63	-2.50
10,615.00	88.40	95.00	8,369.84	-48.57	2,842.88	2,842.55	1.02	-0.32	-0.97
10,647.00	88.90	94.30	8,370.59	-51.16	2,874.77	2,874.42	2.69	1.56	-2.19
10,679.00	88.80	94.20	8,371.23	-53.53	2,906.67	2,906.31	0.44	-0.31	-0.31
10,710.00	88.40	93.10	8,371.99	-55.50	2,937.60	2,937.23	3.77	-1.29	-3.55
10,742.00	89.00	93.20	8,372.72	-57.26	2,969.54	2,969.16	1.90	1.88	0.31
10,774.00	89.30	92.30	8,373.19	-58.80	3,001.50	3,001.11	2.96	0.94	-2.81
10,806.00	88.80	92.40	8,373.72	-60.11	3,033.47	3,033.07	1.59	-1.56	0.31
10,837.00	88.70	91.40	8,374.40	-61.14	3,064.45	3,064.04	3.24	-0.32	-3.23
10,869.00	88.80	91.80	8,375.10	-62.03	3,096.43	3,096.01	1.29	0.31	1.25
10,901.00	88.30	91.70	8,375.91	-63.01	3,128.40	3,127.98	1.59	-1.56	-0.31
10,932.00	88.30	91.00	8,376.83	-63.74	3,159.38	3,158.96	2.26	0.00	-2.26
10,964.00	88.10	91.50	8,377.83	-64.43	3,191.36	3,190.93	1.68	-0.63	1.56
10,996.00	87.70	90.90	8,379.01	-65.10	3,223.33	3,222.90	2.25	-1.25	-1.88
11,027.00	87.70	90.80	8,380.25	-65.56	3,254.30	3,253.86	0.32	0.00	-0.32
11,059.00	87.40	91.60	8,381.62	-66.23	3,286.26	3,285.82	2.67	-0.94	2.50
11,097.00	87.40	92.90	8,383.34	-67.72	3,324.19	3,323.74	3.42	0.00	3.42
Last Cudd MWD Survey									
11,150.00	87.40	92.90	8,385.75	-70.40	3,377.07	3,376.61	0.00	0.00	0.00
Proj to Bit									



CUDD Drilling & Measurement Services

Survey Report

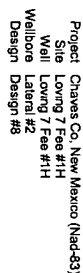


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Project:	Chaves Co, New Mexico (Nad-83)	TVD Reference:	WELL @ 3899.00ft (Original Well Elev)
Site:	Loving 7 Fee #1H	MD Reference:	WELL @ 3899.00ft (Original Well Elev)
Well:	Loving 7 Fee #1H	North Reference:	Grid
Wellbore:	Lateral #2	Survey Calculation Method:	Minimum Curvature
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Survey Annotations

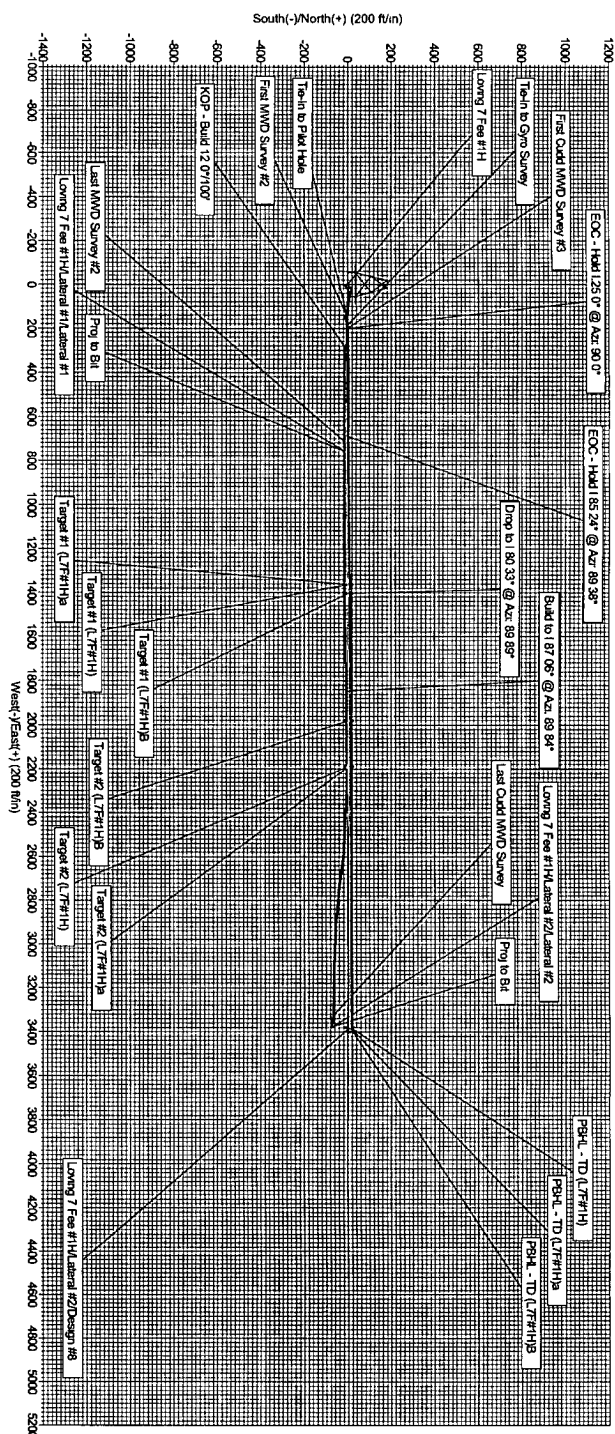
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,730.00	7,717.14	-6.74	201.85	First Cudd MWD Survey #3
11,097.00	8,383.34	-67.72	3,324.19	Last Cudd MWD Survey
11,150.00	8,385.75	-70.40	3,377.07	Proj to Bit

Checked By: _____ Approved By: _____ Date: _____



GUD
DRILLING & MEASUREMENT
SERVICES

Plan Design #6 (Using 7 for #14 Journal #2)	
Created By: Mike Stanley	Date: 9/16/December 12/2010
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____

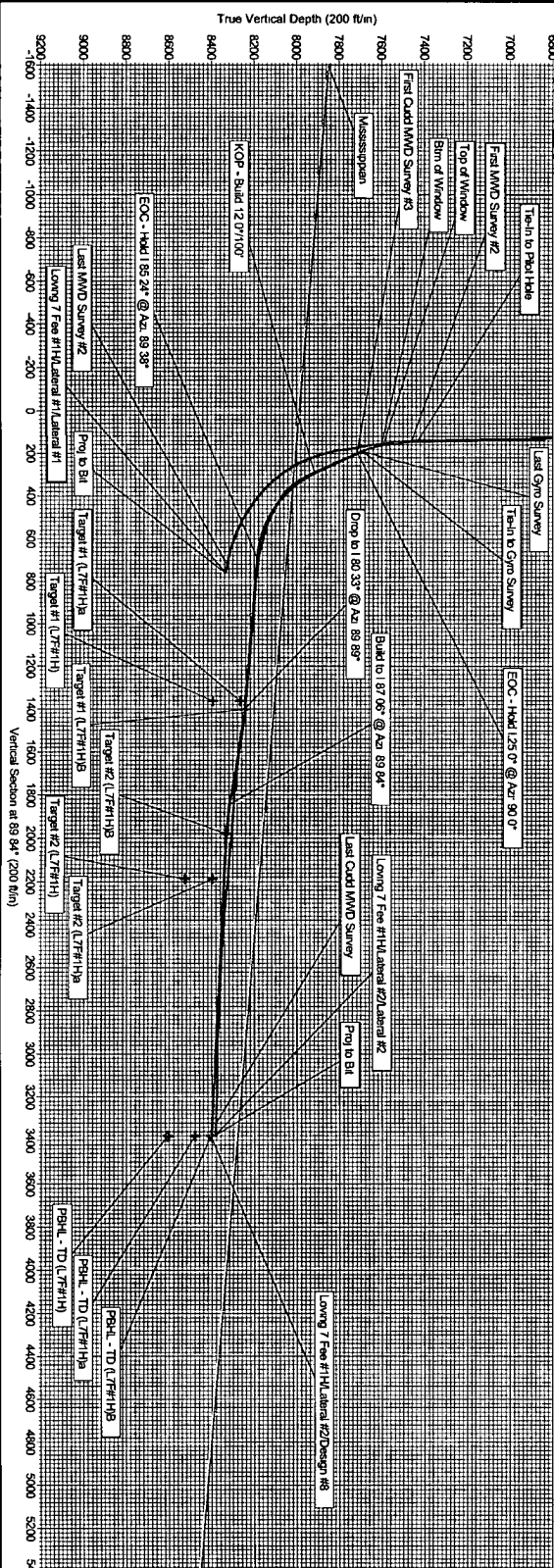


SECTION DETAILS											
	Sec	MD	Ine	Az	T/D	+N/S	+E/W	Dleg	Face	Vsec	Target
	1	7700.00	23.15	91.88	7689.63	-6.57	189.88	0.00	0.00	188.86	
	2	7726.00	25.00	90.00	7713.57	-6.74	200.48	7.70	-23.38	200.46	
	3	7847.77	25.00	90.00	7914.56	-6.74	224.21	0.00	0.00	224.19	
	4	8649.79	62.24	89.38	8182.80	3.76	697.31	12.00	-0.71	697.30	Target #1 (L77#119)
	5	8649.79	62.24	89.38	8182.80	3.76	697.31	12.00	-0.71	697.30	
	6	8603.33	80.33	89.83	8260.38	4.60	1500.80	5.00	0.00	1500.80	
	7	8617.23	80.33	89.89	8319.25	5.28	1564.45	0.00	0.00	1564.46	
	8	9751.66	87.06	89.64	8334.00	5.95	1979.99	5.00	-0.42	1980.00	Target #2 (L77#119)
	9	1153.51	87.06	89.64	8406.00	9.56	3379.99	0.00	0.00	3380.00	PBL - TD (L77#119)

ANNOTATIONS		
TYD	MD	Annotation
7589 63	7700 00	Ta-hn to Gpm Survey
7713 37	7726 00	ECC - Build 12.5' @ Az 90.0°
7914 36	7947 77	KOP - Build 12.0' 01.00
8188 40 *	8449 79	ECC - Build 1.65 24' @ Az 89.38°
8248 00	9167 88	Dip to 180.33° @ Az 89.69°
8319 25	9617 23	Build to 187.06° @ Az 89.84°

WELL DETAILS, Logging Fee #114				
Ground Level				
			3680.00	
		WELL @ 3699.00ft (Original Well Elev)		
+N/S	+E/W	Northing	Easting	Longitude
0.00	0.00	6895440.61	639547.60	33° 27' 39.807" N 104° 1' 16.108" W
				Spot

WELLBORE TARGET DETAILS (MAP COORDINATES AND LAT/LONG)								
Name	TVD	+N-S	+E-W	Noting	Eastings	Longitudes	Shape	
TUGRAH 1 (L/FTH/HB)	6246.00	3.67	142.02	689444.48	33.27	39.804 N	104° 07' 59.546 W	P
TUGRAH 2 (L/FTH/HB)	8324.00	5.60	1978.99	685446.11	33.27	39.803 N	104° 07' 52.755 W	P
PRB-12 (L/FTH/HB)	8468.00	9.56	3379.99	685403.07	33.27	39.869 N	104° 07' 35.623 W	P



PRODUCT DETAILS: Charles Co. (New Mexico) (Nad-83)	
Geoidetic System	US State Plane 1983
Datum	North American Datum 1983
Ellipsoid	GRS 1980
Zone	New Mexico Eastern Zone
System Datum	Mean Sea Level

Azimuths to Grid North
 True North -0.17°
 Magnetic North 7.77°

Magnetic Field
 Strength 49396.65 nT
 Dip Angle 61.28°
 Data 11/15/2010
 Model: GSR200510

Loving 7 Fee #1H_Lateral_Final MWD Survey_Report_12-12-10.txt

Devon Energy

Loving 7 Fee #1H - Cudd MWD Survey #3

Chaves Co, New Mexico (Nad-83)

Loving 7 Fee #1H

Measured Dogleg Depth Rate (ft) (°/100ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)
7700.00	23.15	91.88	7689.63	6.57 S	189.88 E	189.84
0.00						
7730.00	23.90	89.80	7717.14	6.74 S	201.85 E	201.81
3.73						
7761.00	24.00	90.70	7745.47	6.80 S	214.44 E	214.39
1.22						
7793.00	23.20	90.60	7774.79	6.94 S	227.25 E	227.20
2.50						
7825.00	25.00	90.60	7804.00	7.08 S	240.31 E	240.27
5.63						
7856.00	25.20	91.10	7832.07	7.27 S	253.46 E	253.41
0.94						
7888.00	24.70	91.60	7861.09	7.59 S	266.95 E	266.91
1.70						
7920.00	23.80	91.80	7890.26	7.98 S	280.09 E	280.04
2.82						
7951.00	24.30	91.50	7918.57	8.35 S	292.72 E	292.67
1.66						
7983.00	27.10	90.50	7947.40	8.58 S	306.59 E	306.54
8.85						
8015.00	29.50	90.90	7975.58	8.77 S	321.76 E	321.70
7.52						
8046.00	32.70	92.40	8002.12	9.24 S	337.76 E	337.70
10.62						
8078.00	39.20	92.10	8028.01	9.97 S	356.53 E	356.46
20.32						
8110.00	48.20	90.20	8051.12	10.39 S	378.60 E	378.54
28.42						
8141.00	56.30	89.30	8070.08	10.27 S	403.10 E	403.03
26.23						
8172.00	58.40	89.20	8086.81	9.93 S	429.19 E	429.13
6.78						
8204.00	61.00	89.50	8102.95	9.61 S	456.82 E	456.75
8.17						
8235.00	64.00	90.00	8117.26	9.50 S	484.31 E	484.25
9.78						
8267.00	67.40	90.40	8130.43	9.60 S	513.47 E	513.41
10.69						
8299.00	70.50	90.30	8141.92	9.78 S	543.33 E	543.27
9.69						
8330.00	73.40	90.80	8151.53	10.06 S	572.80 E	572.73
9.48						
8361.00	75.60	90.20	8159.81	10.32 S	602.67 E	602.60
7.34						
8394.00	77.40	90.20	8167.52	10.44 S	634.76 E	634.69
5.45						
8427.00	77.40	90.50	8174.71	10.63 S	666.96 E	666.89
0.89						
8458.00	78.50	90.10	8181.19	10.79 S	697.28 E	697.20
3.77						

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8490.00	80.20	90.20	8187.10	10.87 S	728.73 E	728.65
5.32						
8521.00	83.00	90.40	8191.63	11.04 S	759.39 E	759.31
9.05						
8551.00	85.10	90.20	8194.74	11.19 S	789.23 E	789.15
7.03						
8585.00	86.90	90.10	8197.11	11.28 S	823.14 E	823.06
5.30						
8616.00	87.20	89.90	8198.70	11.28 S	854.10 E	854.02
1.16						
8648.00	87.10	90.20	8200.29	11.31 S	886.06 E	885.98
0.99						
8680.00	86.80	90.20	8202.00	11.42 S	918.02 E	917.93
0.94						
8717.00	85.40	90.30	8204.51	11.58 S	954.93 E	954.85
3.79						
8748.00	84.10	89.80	8207.35	11.61 S	985.80 E	985.71
4.49						
8780.00	83.70	89.90	8210.75	11.52 S	1017.62 E	1017.53
1.29						
8812.00	84.90	90.50	8213.93	11.64 S	1049.46 E	1049.37
4.19						
8843.00	85.10	90.70	8216.63	11.96 S	1080.34 E	1080.25
0.91						
8875.00	85.40	90.30	8219.28	12.24 S	1112.23 E	1112.14
1.56						
8907.00	83.80	89.90	8222.29	12.29 S	1144.08 E	1143.99
5.15						
8938.00	83.30	89.30	8225.77	12.08 S	1174.89 E	1174.80
2.51						
8970.00	82.90	89.20	8229.62	11.66 S	1206.65 E	1206.56
1.29						
9002.00	83.30	89.20	8233.46	11.22 S	1238.42 E	1238.33
1.25						
9033.00	84.40	89.90	8236.78	10.98 S	1269.24 E	1269.15
4.20						
9065.00	85.70	89.80	8239.55	10.89 S	1301.12 E	1301.03
4.07						
9097.00	85.10	90.00	8242.11	10.84 S	1333.01 E	1332.93
1.98						
9128.00	83.80	89.10	8245.11	10.60 S	1363.87 E	1363.78
5.09						
9159.00	84.40	89.80	8248.30	10.30 S	1394.70 E	1394.62
2.96						
9191.00	83.50	89.60	8251.67	10.13 S	1426.52 E	1426.44
2.88						
9222.00	82.40	90.10	8255.47	10.05 S	1457.29 E	1457.20
3.89						
9254.00	81.40	89.80	8259.98	10.02 S	1488.97 E	1488.88
3.26						
9286.00	81.50	89.80	8264.74	9.91 S	1520.61 E	1520.53
0.31						
9318.00	82.50	89.60	8269.19	9.75 S	1552.30 E	1552.22
3.19						
9349.00	83.60	89.60	8272.95	9.53 S	1583.07 E	1582.99
3.55						
9381.00	84.10	89.50	8276.37	9.28 S	1614.88 E	1614.80
1.59						
9413.00	84.40	89.40	8279.58	8.98 S	1646.72 E	1646.64
0.99						
9444.00	84.50	89.00	8282.58	8.55 S	1677.57 E	1677.49
1.32						
9476.00	84.70	89.20	8285.59	8.05 S	1709.43 E	1709.35

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0.88						
9508.00	84.90	89.20	8288.49	7.60 S	1741.29 E	1741.22
0.63						
9539.00	85.20	89.50	8291.16	7.25 S	1772.17 E	1772.10
1.37						
9571.00	85.40	89.90	8293.79	7.08 S	1804.07 E	1803.99
1.39						
9599.00	85.50	89.10	8296.01	6.84 S	1831.98 E	1831.91
2.87						
9635.00	85.60	89.50	8298.80	6.40 S	1867.87 E	1867.80
1.14						
9667.00	86.10	89.70	8301.12	6.18 S	1899.78 E	1899.71
1.68						
9698.00	86.20	89.80	8303.20	6.04 S	1930.71 E	1930.64
0.46						
9730.00	85.10	89.20	8305.62	5.77 S	1962.62 E	1962.55
3.91						
9762.00	84.90	89.00	8308.41	5.27 S	1994.49 E	1994.43
0.88						
9793.00	85.00	89.50	8311.14	4.86 S	2025.37 E	2025.31
1.64						
9825.00	85.10	89.50	8313.90	4.58 S	2057.25 E	2057.19
0.31						
9856.00	85.10	89.70	8316.55	4.37 S	2088.13 E	2088.07
0.64						
9888.00	85.30	90.00	8319.23	4.28 S	2120.02 E	2119.96
1.12						
9920.00	85.10	90.00	8321.91	4.28 S	2151.91 E	2151.85
0.63						
9952.00	84.60	90.00	8324.78	4.28 S	2183.78 E	2183.72
1.56						
9983.00	84.10	90.00	8327.83	4.28 S	2214.63 E	2214.57
1.61						
10015.00	84.10	90.20	8331.12	4.34 S	2246.46 E	2246.40
0.62						
10046.00	84.90	90.20	8334.09	4.45 S	2277.32 E	2277.25
2.58						
10077.00	84.70	91.10	8336.90	4.80 S	2308.19 E	2308.12
2.96						
10108.00	84.70	91.70	8339.77	5.55 S	2339.04 E	2338.97
1.93						
10140.00	85.00	91.80	8342.64	6.53 S	2370.90 E	2370.82
0.99						
10172.00	84.80	92.30	8345.48	7.67 S	2402.75 E	2402.67
1.68						
10204.00	85.30	92.90	8348.24	9.11 S	2434.60 E	2434.51
2.44						
10236.00	85.20	93.40	8350.89	10.86 S	2466.44 E	2466.34
1.59						
10267.00	85.90	93.10	8353.30	12.62 S	2497.30 E	2497.18
2.46						
10299.00	86.90	93.80	8355.31	14.54 S	2529.18 E	2529.05
3.81						
10331.00	86.90	94.00	8357.04	16.71 S	2561.06 E	2560.92
0.62						
10362.00	86.90	95.70	8358.72	19.33 S	2591.90 E	2591.74
5.48						
10394.00	86.10	97.00	8360.67	22.86 S	2623.64 E	2623.47
4.76						
10425.00	86.10	97.60	8362.78	26.79 S	2654.32 E	2654.12
1.93						
10457.00	86.20	97.60	8364.93	31.01 S	2685.97 E	2685.74
0.31						

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10489.00	87.90	97.50	8366.57	35.21 S	2717.65 E	2717.40
5.32						
10520.00	88.70	96.70	8367.49	39.04 S	2748.39 E	2748.12
3.65						
10552.00	88.70	96.10	8368.22	42.61 S	2780.19 E	2779.89
1.87						
10584.00	88.50	95.30	8369.00	45.79 S	2812.02 E	2811.71
2.58						
10615.00	88.40	95.00	8369.84	48.57 S	2842.88 E	2842.55
1.02						
10647.00	88.90	94.30	8370.59	51.16 S	2874.77 E	2874.42
2.69						
10679.00	88.80	94.20	8371.23	53.53 S	2906.67 E	2906.31
0.44						
10710.00	88.40	93.10	8371.99	55.50 S	2937.60 E	2937.23
3.77						
10742.00	89.00	93.20	8372.72	57.26 S	2969.54 E	2969.16
1.90						
10774.00	89.30	92.30	8373.19	58.80 S	3001.50 E	3001.11
2.96						
10806.00	88.80	92.40	8373.72	60.11 S	3033.47 E	3033.07
1.59						
10837.00	88.70	91.40	8374.40	61.14 S	3064.45 E	3064.04
3.24						
10869.00	88.80	91.80	8375.10	62.03 S	3096.43 E	3096.01
1.29						
10901.00	88.30	91.70	8375.91	63.01 S	3128.40 E	3127.98
1.59						
10932.00	88.30	91.00	8376.83	63.74 S	3159.38 E	3158.96
2.26						
10964.00	88.10	91.50	8377.83	64.43 S	3191.36 E	3190.93
1.68						
10996.00	87.70	90.90	8379.01	65.10 S	3223.33 E	3222.90
2.25						
11027.00	87.70	90.80	8380.25	65.56 S	3254.30 E	3253.86
0.32						
11059.00	87.40	91.60	8381.62	66.23 S	3286.26 E	3285.82
2.67						
11097.00	87.40	92.90	8383.34	67.72 S	3324.19 E	3323.74
3.42						
11150.00	87.40	92.90	8385.75	70.40 S	3377.07 E	3376.61
0.00						

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to WELL. Northings and Eastings are relative to Site.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from slot and calculated along an Azimuth of 89.668° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.

Central meridian is -104.333°.
Grid Convergence at Surface is 0.172°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 11150.00ft., the Bottom Hole Displacement is 3377.80ft., in the Direction of 89.668° (Grid).