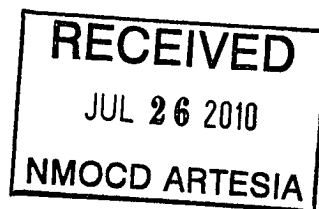



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Devon Energy

Eddy Co., New Mexico (Nad 83)

Strawberry 7 Fed #5H

Strawberry 7 Fed #5H

Lateral #1

Survey: Cudd MWD Survey #1

Standard Survey Report

11 May, 2010

MR





CUDD Drilling & Measurement Services

Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Site Strawberry 7 Fed #5H
Project:	Eddy Co., New Mexico (Nad 83)	TVD Reference:	WELL @ 3496.00ft (Original Well Elev)
Site:	Strawberry 7 Fed #5H	MD Reference:	WELL @ 3496.00ft (Original Well Elev)
Well:	Strawberry 7 Fed #5H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003.21 Single User Db

Project:	Eddy 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 Strawberry 7 Fed #5H, Sec 7, T-19S, R 31E					
Site Position:		Northing:	610,015.30 ft	Latitude:	32° 40' 34.438
From:	Map	Easting:	674,299.90 ft	Longitude:	103° 54' 4.341 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.23 °

Well:	Strawberry 7 Fed #5H					
Well Position	+N/-S	0.00 ft	Northing:	610,015.30 ft	Latitude:	32° 40' 34.438 N
	+E/-W	0.00 ft	Easting:	674,299.90 ft	Longitude:	103° 54' 4.341 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	3,496.00 ft	Ground Level:	3,477.00 ft	

Wellbore:	Lateral #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	02/10/09	8.04	60.62	49,114

Design:	Lateral #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	267.62	

Survey Program	Date	05/11/10			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
138.30	8,146.00	Gyro Survey #1 (Lateral #1)	NS-GYRO-MS	North sensing gyrocompassing m/s	
8,173.00	13,115.00	Cudd MWD Survey #1 (Lateral #1)	CUDD MWD	MWD - Standard CUDD MWD	

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
8,146.00	0.81	351.95	8,144.26	111.23	55.16	-59.73	0.00	0.00	0.00	
Last Gyro Survey										
8,173.00	1.50	8.40	8,171.25	111.77	55.18	-59.78	2.81	2.56	60.93	
First Cudd MWD Survey										
8,204.00	1.80	317.10	8,202.24	112.53	54.91	-59.54	4.69	0.97	-165.48	
8,236.00	5.30	283.10	8,234.18	113.23	53.13	-57.79	12.31	10.94	-106.25	
8,268.00	9.50	275.70	8,265.90	113.83	49.06	-53.75	13.43	13.13	-23.13	
8,298.00	13.40	268.80	8,295.30	114.00	43.12	-47.82	13.76	13.00	-23.00	
8,331.00	16.90	267.80	8,327.15	113.74	34.50	-39.19	10.64	10.61	-3.03	
8,362.00	20.00	269.50	8,356.55	113.52	24.69	-29.39	10.15	10.00	5.48	
8,393.00	23.20	268.40	8,385.37	113.30	13.29	-17.98	10.40	10.32	-3.55	
8,425.00	26.00	266.50	8,414.47	112.70	-0.02	-4.66	9.09	8.75	-5.94	



CUDD Drilling & Measurement Services
Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Site Strawberry 7 Fed #5H
Project:	Eddy Co., New Mexico (Nad 83)	TVD Reference:	WELL @ 3496.00ft (Original Well Elev)
Site:	Strawberry 7 Fed #5H	MD Reference:	WELL @ 3496.00ft (Original Well Elev)
Well:	Strawberry 7 Fed #5H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003.21 Single User Db

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)
8,457.00	29.40	264.10	8,442.80	111.46	-14.84	10.19	11.18	10.63	-7.50
8,489.00	32.40	261.60	8,470.25	109.40	-31.13	26.56	10.20	9.38	-7.81
8,522.00	33.20	260.30	8,497.99	106.59	-48.79	44.32	3.23	2.42	-3.94
8,554.00	35.20	259.50	8,524.46	103.43	-66.49	62.14	6.41	6.25	-2.50
8,586.00	38.10	259.50	8,550.13	99.95	-85.27	81.05	9.06	9.06	0.00
8,618.00	41.10	260.70	8,574.78	96.45	-105.36	101.27	9.67	9.38	3.75
8,650.00	44.60	260.10	8,598.24	92.82	-126.82	122.85	11.01	10.94	-1.88
8,682.00	46.90	260.20	8,620.57	88.90	-149.40	145.58	7.19	7.19	0.31
8,714.00	49.70	260.50	8,641.85	84.89	-172.95	169.28	8.78	8.75	0.94
8,746.00	52.00	261.60	8,662.05	81.04	-197.46	193.93	7.67	7.19	3.44
8,778.00	53.80	264.90	8,681.36	78.05	-222.80	219.37	9.96	5.63	10.31
8,810.00	56.20	266.90	8,699.71	76.18	-248.95	245.57	9.08	7.50	6.25
8,842.00	58.70	268.80	8,716.93	75.17	-275.90	272.54	9.28	7.81	5.94
8,874.00	61.40	270.90	8,732.91	75.11	-303.62	300.24	10.17	8.44	6.56
8,906.00	64.40	271.70	8,747.48	75.76	-332.09	328.66	9.64	9.38	2.50
8,938.00	67.80	272.40	8,760.44	76.80	-361.33	357.83	10.81	10.63	2.19
8,969.00	70.70	274.30	8,771.43	78.50	-390.26	386.67	10.97	9.35	6.13
8,999.00	71.40	277.70	8,781.17	81.47	-418.48	414.73	10.97	2.33	11.33
9,031.00	71.20	278.60	8,791.43	85.77	-448.48	444.53	2.74	-0.63	2.81
9,063.00	72.70	278.30	8,801.35	90.24	-478.57	474.41	4.77	4.69	-0.94
9,095.00	76.80	277.70	8,809.76	94.53	-509.14	504.78	12.94	12.81	-1.88
9,127.00	81.00	276.80	8,815.92	98.49	-540.28	535.73	13.41	13.13	-2.81
9,159.00	85.80	276.10	8,819.60	102.06	-571.86	567.13	15.16	15.00	-2.19
9,191.00	90.50	275.00	8,820.63	105.15	-603.68	598.80	15.08	14.69	-3.44
9,223.00	91.20	273.90	8,820.16	107.63	-635.58	630.57	4.07	2.19	-3.44
9,255.00	91.60	273.20	8,819.38	109.62	-667.51	662.38	2.52	1.25	-2.19
9,287.00	91.60	272.90	8,818.48	111.32	-699.45	694.23	0.94	0.00	-0.94
9,319.00	91.70	272.80	8,817.56	112.91	-731.40	726.08	0.44	0.31	-0.31
9,351.00	91.10	271.70	8,816.78	114.16	-763.37	757.97	3.91	-1.88	-3.44
9,383.00	91.10	271.70	8,816.16	115.11	-795.35	789.88	0.00	0.00	0.00
9,414.00	90.90	270.00	8,815.62	115.57	-826.34	820.83	5.52	-0.65	-5.48
9,446.00	90.90	268.80	8,815.12	115.24	-858.33	852.81	3.75	0.00	-3.75
9,478.00	90.70	267.90	8,814.67	114.32	-890.31	884.80	2.88	-0.63	-2.81
9,509.00	90.70	267.50	8,814.29	113.07	-921.29	915.80	1.29	0.00	-1.29
9,541.00	91.30	267.00	8,813.74	111.54	-953.25	947.79	2.44	1.88	-1.56
9,573.00	91.30	266.70	8,813.01	109.78	-985.19	979.78	0.94	0.00	-0.94
9,604.00	91.20	266.60	8,812.33	107.97	-1,016.13	1,010.77	0.46	-0.32	-0.32
9,636.00	91.50	266.60	8,811.58	106.07	-1,048.06	1,042.75	0.94	0.94	0.00
9,668.00	91.50	266.50	8,810.74	104.15	-1,079.99	1,074.74	0.31	0.00	-0.31
9,700.00	91.50	266.10	8,809.90	102.08	-1,111.92	1,106.72	1.25	0.00	-1.25
9,764.00	91.60	265.80	8,808.17	97.56	-1,175.73	1,170.67	0.49	0.16	-0.47
9,828.00	91.20	265.80	8,806.61	92.88	-1,239.54	1,234.62	0.63	-0.63	0.00
9,892.00	90.60	265.60	8,805.60	88.08	-1,303.35	1,298.57	0.99	-0.94	-0.31
9,956.00	90.60	266.40	8,804.93	83.62	-1,367.19	1,362.54	1.25	0.00	1.25
10,020.00	90.30	265.90	8,804.43	79.32	-1,431.05	1,426.52	0.91	-0.47	-0.78
10,051.00	90.30	265.60	8,804.27	77.02	-1,461.96	1,457.50	0.97	0.00	-0.97
10,083.00	90.70	265.50	8,803.99	74.54	-1,493.86	1,489.48	1.29	1.25	-0.31
10,147.00	90.70	265.70	8,803.21	69.63	-1,557.67	1,553.44	0.31	0.00	0.31
10,211.00	90.20	264.90	8,802.71	64.38	-1,621.45	1,617.38	1.47	-0.78	-1.25
10,273.00	91.10	265.10	8,802.00	58.98	-1,683.21	1,679.31	1.49	1.45	0.32
10,334.00	91.20	264.90	8,800.78	53.67	-1,743.97	1,740.23	0.37	0.16	-0.33
10,398.00	90.90	264.30	8,799.61	47.64	-1,807.67	1,804.13	1.05	-0.47	-0.94
10,430.00	91.20	264.40	8,799.02	44.49	-1,839.51	1,836.08	0.99	0.94	0.31
10,462.00	90.60	263.90	8,798.52	41.23	-1,871.34	1,868.01	2.44	-1.88	-1.56



CUDD Drilling & Measurement Services
Survey Report



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Project:	Eddy Co., New Mexico (Nad 83)	TVD Reference:	WELL @ 3496.00ft (Original Well Elev)
Site:	Strawberry 7 Fed #5H	MD Reference:	WELL @ 3496.00ft (Original Well Elev)
Well:	Strawberry 7 Fed #5H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	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)
10,494.00	90.90	265.50	8,798.10	38.28	-1,903.20	1,899.97	5.09	0.94	5.00
10,526.00	91.40	263.70	8,797.46	35.27	-1,935.05	1,931.92	5.84	1.56	-5.63
10,558.00	91.50	264.00	8,796.65	31.84	-1,966.86	1,963.84	0.99	0.31	0.94
10,589.00	90.80	264.70	8,796.02	28.79	-1,997.70	1,994.78	3.19	-2.26	2.26
10,621.00	90.50	264.40	8,795.66	25.75	-2,029.55	2,026.73	1.33	-0.94	-0.94
10,653.00	90.50	264.40	8,795.38	22.63	-2,061.40	2,058.68	0.00	0.00	0.00
10,716.00	90.30	263.70	8,794.94	16.10	-2,124.06	2,121.56	1.16	-0.32	-1.11
10,780.00	89.60	264.20	8,795.00	9.35	-2,187.70	2,185.42	1.34	-1.09	0.78
10,844.00	88.80	265.30	8,795.89	3.50	-2,251.42	2,249.34	2.13	-1.25	1.72
10,908.00	89.30	265.10	8,796.95	-1.86	-2,315.19	2,313.27	0.84	0.78	-0.31
10,972.00	90.80	265.30	8,796.90	-7.21	-2,378.96	2,377.21	2.36	2.34	0.31
11,036.00	90.70	265.40	8,796.06	-12.40	-2,442.75	2,441.16	0.22	-0.16	0.16
11,100.00	90.70	264.50	8,795.28	-18.04	-2,506.49	2,505.08	1.41	0.00	-1.41
11,164.00	90.50	264.40	8,794.61	-24.22	-2,570.19	2,568.98	0.35	-0.31	-0.16
11,225.00	90.40	264.10	8,794.13	-30.34	-2,630.88	2,629.87	0.52	-0.16	-0.49
11,318.00	90.60	262.00	8,793.32	-41.59	-2,723.19	2,722.57	2.27	0.22	-2.26
11,348.00	90.90	262.30	8,792.92	-45.69	-2,752.91	2,752.43	1.41	1.00	1.00
11,410.00	91.00	262.20	8,791.89	-54.04	-2,814.33	2,814.15	0.23	0.16	-0.16
11,472.00	89.80	264.80	8,791.46	-61.06	-2,875.92	2,875.98	4.62	-1.94	4.19
11,536.00	90.10	265.00	8,791.52	-66.75	-2,939.67	2,939.91	0.56	0.47	0.31
11,599.00	89.30	266.10	8,791.85	-71.64	-3,002.48	3,002.86	2.16	-1.27	1.75
11,661.00	89.10	266.90	8,792.71	-75.42	-3,064.36	3,064.85	1.33	-0.32	1.29
11,691.00	88.80	267.40	8,793.26	-76.92	-3,094.31	3,094.84	1.94	-1.00	1.67
11,722.00	88.70	268.10	8,793.94	-78.13	-3,125.28	3,125.83	2.28	-0.32	2.26
11,784.00	90.10	269.40	8,794.59	-79.48	-3,187.26	3,187.81	3.08	2.26	2.10
11,847.00	90.00	268.90	8,794.53	-80.42	-3,250.25	3,250.79	0.81	-0.16	-0.79
11,908.00	90.10	269.00	8,794.48	-81.54	-3,311.24	3,311.77	0.23	0.16	0.16
11,970.00	90.80	268.80	8,793.99	-82.73	-3,373.23	3,373.76	1.17	1.13	-0.32
12,031.00	90.00	269.40	8,793.57	-83.69	-3,434.22	3,434.73	1.64	-1.31	0.98
12,093.00	90.40	269.50	8,793.35	-84.28	-3,496.22	3,496.70	0.67	0.65	0.16
12,155.00	90.60	269.10	8,792.81	-85.04	-3,558.21	3,558.67	0.72	0.32	-0.65
12,216.00	90.10	269.90	8,792.44	-85.57	-3,619.21	3,619.64	1.55	-0.82	1.31
12,246.00	90.10	269.50	8,792.38	-85.73	-3,649.21	3,649.62	1.33	0.00	-1.33
12,277.00	90.20	269.40	8,792.30	-86.02	-3,680.20	3,680.60	0.46	0.32	-0.32
12,339.00	90.30	269.10	8,792.03	-86.84	-3,742.20	3,742.58	0.51	0.16	-0.48
12,400.00	90.50	268.90	8,791.61	-87.90	-3,803.19	3,803.56	0.46	0.33	-0.33
12,464.00	90.60	268.60	8,790.99	-89.30	-3,867.17	3,867.54	0.49	0.16	-0.47
12,527.00	90.40	267.60	8,790.44	-91.39	-3,930.13	3,930.54	1.62	-0.32	-1.59
12,591.00	89.80	267.40	8,790.33	-94.18	-3,994.07	3,994.54	0.99	-0.94	-0.31
12,653.00	89.90	267.20	8,790.49	-97.10	-4,056.00	4,056.53	0.36	0.16	-0.32
12,717.00	89.80	266.40	8,790.66	-100.67	-4,119.90	4,120.53	1.26	-0.16	-1.25
12,780.00	90.20	266.10	8,790.66	-104.79	-4,182.76	4,183.51	0.79	0.63	-0.48
12,844.00	90.70	265.80	8,790.16	-109.31	-4,246.60	4,247.48	0.91	0.78	-0.47
12,907.00	89.80	265.10	8,789.88	-114.31	-4,309.40	4,310.43	1.81	-1.43	-1.11
12,971.00	89.80	263.80	8,790.11	-120.50	-4,373.10	4,374.33	2.03	0.00	-2.03
13,060.00	90.00	263.80	8,790.26	-130.11	-4,461.58	4,463.13	0.22	0.22	0.00
Last Cudd MWD Survey									
13,115.00	90.00	263.80	8,790.26	-136.05	-4,516.26	4,518.01	0.00	0.00	0.00
Proj to Bit									



CUDD Drilling & Measurement Services
Survey Report



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Project:	Eddy Co., New Mexico (Nad 83)	TVD Reference:	WELL @ 3496.00ft (Original Well Elev)
Site:	Strawberry 7 Fed #5H	MD Reference:	WELL @ 3496.00ft (Original Well Elev)
Well:	Strawberry 7 Fed #5H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003.21 Single User Db

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,146.00	8,144.26	111.23	55.16	Last Gyro Survey
8,173.00	8,171.25	111.77	55.18	First Cudd MWD Survey
13,060.00	8,790.26	-130.11	-4,461.58	Last Cudd MWD Survey
13,115.00	8,790.26	-136.05	-4,516.26	Proj to Bit

Checked By: _____	Approved By: _____	Date: _____
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