

DEVON ENERGY

Cotton Draw
Eddy County, NM
Cotton Draw Unit #134H
VH - Job #32K0111004

30-015-38293



Survey: Actual

SDI Standard Survey Report

09 January, 2011

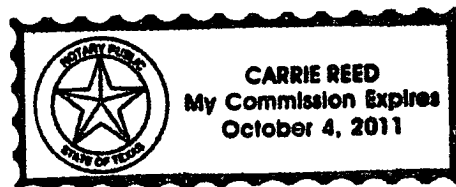
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notarized this date 9th of January, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Cotton Draw Unit #134H
Project:	Cotton Draw	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cotton Draw Unit #134H	North Reference:	Grid
Wellbore:	VH - Job #32K0111004	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0111004	Database:	EDM-Regulatory

Project	Cotton Draw		
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		

Site		Eddy County, NM			
Site Position:		Northing:	425,181.39 usft	Latitude:	32° 10' 3.550 N
From:	Lat/Long	Easting:	676,632.12 usft	Longitude:	103° 45' 45.020 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.30 °

Well	Cotton Draw Unit #134H, Directional (Weatherford)					
Well Position	+N/-S	0.0 usft	Northing:	419,790.73 usft	Latitude:	32° 9' 10.099 N
	+E/-W	0.0 usft	Easting:	678,624.80 usft	Longitude:	103° 45' 22.174 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore	VH - Job #32K0111004				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	1/1/2011	7.77	60.10	48,658

Design: VH - Job #32K0111004				
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	359.86

Survey Program		Date	1/9/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100 0	8,300 0	Actual (VH - Job #32K0111004)	Keeper	Keeper Gyro	

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0 0	0 00	0 00	0.0	0 0	0 0	0 00	0 0
100 0	0 84	228 58	100 0	-0 5	-0 5	228.58	0 7
200 0	0 86	228 75	200.0	-1 5	-1 7	228 64	2 2
300 0	0 88	235 63	300.0	-2 4	-2 9	230 10	3 7
400 0	0 89	238 81	400 0	-3 2	-4 2	232 18	5 3
500 0	0 91	242.17	499 9	-4 0	-5 5	234 09	6 8
600 0	0 92	245 12	599 9	-4 7	-7 0	235 90	8 4
700 0	0 83	251.45	699 9	-5 3	-8 4	237 77	9 9
800 0	0 79	266 26	799 9	-5 6	-9 7	240 32	11 2
900 0	0 65	275 76	899 9	-5 5	-11 0	243 26	12 3
1,000 0	0 61	288 43	999.9	-5 3	-12 1	246 22	13 2
1,100.0	0.57	293 47	1,099 9	-5 0	-13 0	249 20	13 9

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Wellbore:	VH - Job #32K0111004	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0111004	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,200.0	0.57	326.49	1,199.9	-4.3	-13.8	252.50	14.4	
1,300.0	0.56	353.29	1,299.9	-3.4	-14.1	256.29	14.5	
1,400.0	0.71	21.10	1,399.9	-2.4	-13.9	260.33	14.1	
1,500.0	1.03	26.16	1,499.9	-1.0	-13.3	265.75	13.3	
1,600.0	1.14	22.68	1,599.9	0.7	-12.5	273.36	12.5	
1,700.0	1.40	27.18	1,699.8	2.7	-11.6	283.31	11.9	
1,800.0	1.50	42.31	1,799.8	4.8	-10.1	295.29	11.2	
1,900.0	1.68	52.17	1,899.8	6.7	-8.1	309.41	10.5	
2,000.0	1.68	52.33	1,999.7	8.5	-5.8	325.60	10.2	
2,100.0	1.65	65.34	2,099.7	10.0	-3.3	341.55	10.5	
2,200.0	1.62	63.51	2,199.6	11.2	-0.7	356.18	11.2	
2,300.0	1.67	75.31	2,299.6	12.2	1.9	8.99	12.3	
2,400.0	1.82	79.39	2,399.5	12.8	4.9	20.87	13.7	
2,500.0	1.83	85.28	2,499.5	13.3	8.0	31.24	15.5	
2,600.0	1.66	86.98	2,599.4	13.5	11.1	39.44	17.5	
2,700.0	1.68	95.93	2,699.4	13.4	14.0	46.23	19.4	
2,800.0	1.39	92.80	2,799.4	13.2	16.7	51.63	21.3	
2,900.0	1.36	91.36	2,899.3	13.1	19.1	55.49	23.1	
3,000.0	1.25	87.04	2,999.3	13.1	21.3	58.39	25.1	
3,100.0	1.31	86.70	3,099.3	13.3	23.6	60.64	27.0	
3,200.0	1.95	82.65	3,199.2	13.5	26.4	62.85	29.7	
3,300.0	1.98	80.18	3,299.2	14.1	29.8	64.74	32.9	
3,400.0	1.77	76.50	3,399.1	14.7	33.0	65.97	36.1	
3,500.0	1.54	69.52	3,499.1	15.5	35.7	66.51	39.0	
3,600.0	1.60	68.13	3,599.1	16.5	38.3	66.66	41.7	
3,700.0	1.94	78.24	3,699.0	17.4	41.3	67.14	44.8	
3,800.0	2.13	82.65	3,798.9	18.0	44.8	68.12	48.2	
3,900.0	2.21	90.35	3,898.9	18.2	48.5	69.44	51.8	
4,000.0	2.28	113.49	3,998.8	17.4	52.3	71.60	55.1	
4,100.0	2.58	125.19	4,098.7	15.3	55.9	74.70	58.0	
4,200.0	2.29	128.49	4,198.6	12.8	59.3	77.86	60.7	
4,300.0	1.61	125.41	4,298.6	10.7	62.1	80.21	63.0	
4,400.0	1.30	122.39	4,398.5	9.3	64.2	81.76	64.8	
4,500.0	1.13	122.54	4,498.5	8.1	65.9	82.96	66.4	
4,600.0	0.98	130.07	4,598.5	7.1	67.4	84.02	67.8	
4,700.0	0.84	133.57	4,698.5	6.0	68.6	84.99	68.9	
4,800.0	0.78	135.61	4,798.5	5.0	69.6	85.88	69.8	
4,900.0	0.58	153.15	4,898.5	4.1	70.3	86.68	70.4	
5,000.0	0.73	157.54	4,998.5	3.0	70.8	87.54	70.9	
5,100.0	0.77	167.93	5,098.4	1.8	71.2	88.56	71.2	
5,200.0	0.81	162.81	5,198.4	0.5	71.5	89.63	71.5	
5,300.0	0.65	195.77	5,298.4	-0.8	71.6	90.61	71.6	
5,400.0	0.58	214.77	5,398.4	-1.7	71.1	91.38	71.2	
5,500.0	0.40	234.36	5,498.4	-2.3	70.6	91.90	70.6	

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Well:	Cotton Draw Unit #134H	North Reference:	Grid
Wellbore:	VH - Job #32K0111004	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0111004	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	0.21	259.80	5,598.4	-2.6	70.1	92.10	70.2
5,700.0	0.33	278.06	5,698.4	-2.6	69.6	92.11	69.7
5,800.0	0.21	245.30	5,798.4	-2.6	69.2	92.15	69.2
5,900.0	0.28	195.74	5,898.4	-2.9	69.0	92.42	69.0
6,000.0	0.49	108.06	5,998.4	-3.3	69.3	92.71	69.4
6,100.0	0.50	186.23	6,098.4	-3.8	69.7	93.16	69.8
6,200.0	0.75	173.54	6,198.4	-4.9	69.7	94.05	69.9
6,300.0	0.86	171.75	6,298.4	-6.3	69.9	95.17	70.2
6,400.0	0.99	172.16	6,398.4	-7.9	70.1	96.45	70.5
6,500.0	1.07	173.19	6,498.4	-9.7	70.3	97.86	71.0
6,600.0	0.97	176.80	6,598.3	-11.5	70.5	99.25	71.4
6,700.0	0.80	171.61	6,698.3	-13.0	70.6	100.44	71.8
6,800.0	0.78	183.37	6,798.3	-14.4	70.7	101.50	72.1
6,900.0	0.77	194.46	6,898.3	-15.7	70.5	102.57	72.2
7,000.0	0.67	220.85	6,998.3	-16.8	69.9	103.51	71.9
7,100.0	0.80	220.26	7,098.3	-17.8	69.1	104.43	71.4
7,200.0	0.78	234.28	7,198.3	-18.7	68.1	105.37	70.6
7,300.0	0.86	238.42	7,298.3	-19.5	66.9	106.25	69.7
7,400.0	0.69	221.02	7,398.3	-20.4	65.9	107.17	68.9
7,500.0	0.61	188.71	7,498.3	-21.3	65.4	108.07	68.8
7,600.0	0.80	165.99	7,598.3	-22.5	65.5	108.99	69.3
7,700.0	1.05	150.39	7,698.2	-24.0	66.1	109.96	70.3
7,800.0	1.11	157.56	7,798.2	-25.7	66.9	111.01	71.7
7,900.0	1.07	159.97	7,898.2	-27.5	67.6	112.11	73.0
8,000.0	1.07	162.98	7,998.2	-29.2	68.2	113.21	74.2
8,100.0	1.22	183.94	8,098.2	-31.2	68.4	114.52	75.2
8,200.0	1.49	198.30	8,198.1	-33.5	67.9	116.25	75.7
8,300.0	1.55	206.82	8,298.1	-35.9	66.9	118.24	75.9



Scientific Drilling
Directional Drilling Operations

Project: Cotton Draw
Eddy County, NM
Well: Cotton Draw Unit #134H
Wellbore: VH - Job #32K0111004
Design: VH - Job #32K0111004

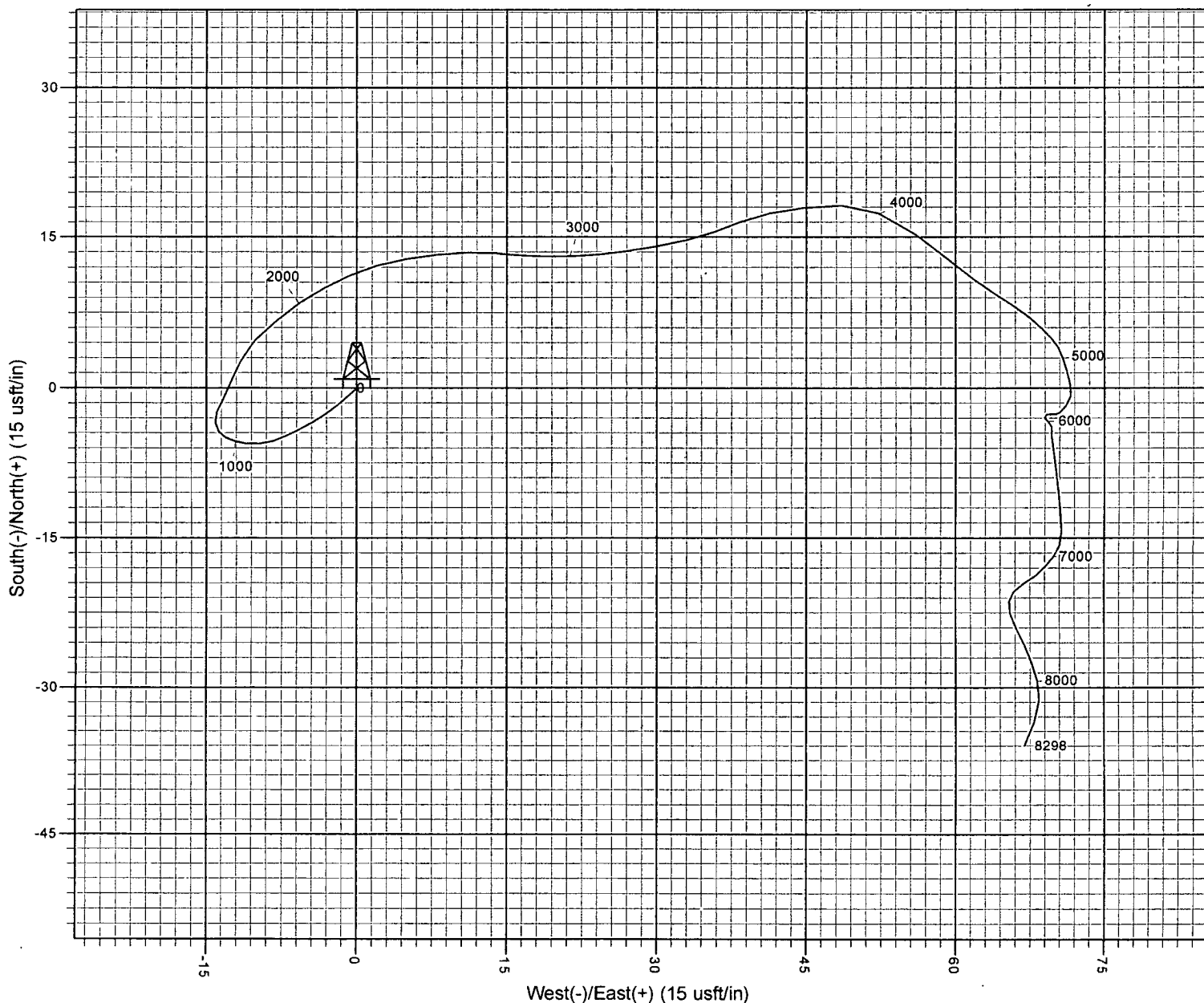


Azimuths to Grid North
True North: -0.31°
Magnetic North: 7.47°

Magnetic Field
Strength 48658 3snT
Dip Angle 60.10°
Date 1/1/2011
Model: BGGM2010

WELL DETAILS: Cotton Draw Unit #134H
WELL @ 0.0usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	419790.73	678624.80	32° 9' 10.099 N	103° 45' 22.174 W	



PROJECT DETAILS: Cotton Draw
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

SITE DETAILS: Eddy County, NM
Site Centre Latitude: 32° 10' 3.550 N
Longitude: 103° 45' 45.020 W
Positional Uncertainty: 0.0
Convergence: 0.30
Local North: Grid