

15-39230

devon

Actual Wellpath Report

No.2H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.2H SHL
Area	Eddy County, NM	Well	No.2H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.2H AWB
Facility	Cotton Draw 10 Fed No.2H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Gentbry
Scale	0.999945	Report Generated	2/21/2012 at 8:43:02 AM
Convergence at slot	0.31° East	Database/Source file	WA Midland/No.2H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	718969.84	419273.98	32°09'04.900"N	103°45'33.707"W
Facility Reference Pt			718969.84	419273.98	32°09'04.900"N	103°45'33.707"W
Field Reference Pt			718969.84	419273.98	32°09'04.900"N	103°45'33.707"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.2H SHL (KB) to Facility Vertical Datum	26.20ft
Horizontal Reference Pt	Slot	Rig on No.2H SHL (KB) to Mean Sea Level	3448.50ft
Vertical Reference Pt	Rig on No.2H SHL (KB)	Rig on No.2H SHL (KB) to Mud Line at Slot (No.2H SHL)	26.20ft
MD Reference Pt	Rig on No.2H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.64°



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Facility	Cotton Draw 10 Fed No.2H		

WELLPATH DATA (155 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	11.350	0.00	0.00	0.00	0.00	718969.84	419273.98	32°09'04.900"N	103°45'33.707"W	0.00	
100.00	0.820	11.350	100.00	-0.70	0.70	0.14	718969.98	419274.68	32°09'04.907"N	103°45'33.705"W	0.82	
200.00	0.990	13.230	199.98	-2.24	2.24	0.48	718970.32	419276.22	32°09'04.922"N	103°45'33.701"W	0.17	
300.00	0.850	13.340	299.97	-3.80	3.81	0.85	718970.69	419277.79	32°09'04.937"N	103°45'33.697"W	0.14	
400.00	0.630	22.100	399.96	-5.03	5.04	1.23	718971.07	419279.02	32°09'04.949"N	103°45'33.692"W	0.25	
500.00	0.230	11.090	499.96	-5.73	5.74	1.47	718971.31	419279.72	32°09'04.956"N	103°45'33.689"W	0.41	
600.00	0.710	216.600	599.96	-5.44	5.44	1.14	718970.98	419279.42	32°09'04.953"N	103°45'33.693"W	0.92	
700.00	1.080	216.250	699.95	-4.18	4.19	0.21	718970.05	419278.17	32°09'04.941"N	103°45'33.704"W	0.37	
800.00	1.270	217.660	799.92	-2.56	2.55	-1.02	718968.82	419276.53	32°09'04.925"N	103°45'33.719"W	0.19	
900.00	1.720	211.990	899.89	-0.41	0.40	-2.49	718967.35	419274.38	32°09'04.904"N	103°45'33.736"W	0.47	
1000.00	1.360	220.710	999.85	1.75	-1.77	-4.06	718965.78	419272.21	32°09'04.882"N	103°45'33.754"W	0.43	
1100.00	0.830	230.430	1099.84	3.10	-3.13	-5.39	718964.45	419270.85	32°09'04.869"N	103°45'33.770"W	0.56	
1200.00	0.140	240.710	1199.83	3.62	-3.66	-6.06	718963.78	419270.32	32°09'04.864"N	103°45'33.778"W	0.69	
1300.00	0.350	37.500	1299.83	3.44	-3.47	-5.98	718963.86	419270.51	32°09'04.866"N	103°45'33.777"W	0.48	
1400.00	0.800	52.740	1399.83	2.77	-2.81	-5.24	718964.60	419271.17	32°09'04.872"N	103°45'33.768"W	0.47	
1500.00	1.060	58.590	1499.81	1.88	-1.90	-3.89	718965.95	419272.08	32°09'04.881"N	103°45'33.752"W	0.28	
1600.00	1.700	62.710	1599.78	0.73	-0.74	-1.78	718968.06	419273.24	32°09'04.892"N	103°45'33.728"W	0.65	
1700.00	2.370	61.620	1699.72	-0.91	0.92	1.35	718971.19	419274.90	32°09'04.909"N	103°45'33.691"W	0.67	
1800.00	2.970	68.070	1799.61	-2.84	2.87	5.57	718975.41	419276.85	32°09'04.928"N	103°45'33.642"W	0.67	
1900.00	3.230	71.620	1899.46	-4.66	4.73	10.65	718980.49	419278.71	32°09'04.946"N	103°45'33.583"W	0.32	
2000.00	3.300	75.910	1999.30	-6.21	6.32	16.12	718985.96	419280.30	32°09'04.961"N	103°45'33.519"W	0.25	
2100.00	3.440	76.450	2099.13	-7.58	7.72	21.82	718991.66	419281.70	32°09'04.975"N	103°45'33.452"W	0.14	
2200.00	3.540	77.260	2198.94	-8.93	9.10	27.75	718997.59	419283.08	32°09'04.988"N	103°45'33.383"W	0.11	
2300.00	3.630	82.130	2298.75	-10.00	10.22	33.90	719003.74	419284.20	32°09'04.999"N	103°45'33.312"W	0.32	
2400.00	3.750	86.920	2398.54	-10.57	10.83	40.30	719010.14	419284.81	32°09'05.005"N	103°45'33.237"W	0.33	
2500.00	3.680	105.730	2498.33	-9.84	10.13	46.66	719016.49	419284.11	32°09'04.997"N	103°45'33.164"W	1.22	
2600.00	3.790	111.860	2598.12	-7.70	8.03	52.81	719022.65	419282.01	32°09'04.976"N	103°45'33.092"W	0.41	
2700.00	3.460	119.570	2697.92	-4.94	5.31	58.50	719028.34	419279.29	32°09'04.949"N	103°45'33.026"W	0.59	
2800.00	3.470	120.500	2797.74	-1.88	2.29	63.74	719033.57	419276.27	32°09'04.919"N	103°45'32.965"W	0.06	
2900.00	2.820	125.030	2897.59	1.09	-0.66	68.36	719038.19	419273.32	32°09'04.890"N	103°45'32.912"W	0.70	
3000.00	2.060	142.670	2997.50	3.95	-3.50	71.46	719041.30	419270.48	32°09'04.861"N	103°45'32.876"W	1.06	
3100.00	1.780	141.020	3097.44	6.60	-6.14	73.53	719043.37	419267.84	32°09'04.835"N	103°45'32.852"W	0.29	
3200.00	1.450	127.520	3197.40	8.59	-8.12	75.51	719045.35	419265.86	32°09'04.815"N	103°45'32.829"W	0.50	
3300.00	2.050	109.320	3297.36	9.97	-9.48	78.20	719048.04	419264.50	32°09'04.802"N	103°45'32.798"W	0.81	
3400.00	1.400	100.500	3397.31	10.81	-10.29	81.09	719050.93	419263.69	32°09'04.794"N	103°45'32.764"W	0.70	
3500.00	1.050	90.670	3497.29	11.05	-10.53	83.21	719053.04	419263.45	32°09'04.791"N	103°45'32.740"W	0.41	
3600.00	1.060	89.190	3597.27	11.06	-10.52	85.05	719054.88	419263.46	32°09'04.791"N	103°45'32.718"W	0.03	
3700.00	2.120	92.550	3697.23	11.15	-10.59	87.82	719057.66	419263.39	32°09'04.790"N	103°45'32.686"W	1.06	
3800.00	3.360	113.910	3797.12	12.45	-11.86	92.35	719062.18	419262.12	32°09'04.777"N	103°45'32.633"W	1.59	
3900.00	3.190	122.360	3896.95	15.16	-14.54	97.38	719067.21	419259.44	32°09'04.751"N	103°45'32.575"W	0.51	
4000.00	5.070	143.840	3996.70	20.24	-19.60	102.34	719072.17	419254.38	32°09'04.700"N	103°45'32.518"W	2.40	
4100.00	6.310	145.600	4096.20	28.38	-27.70	108.05	719077.88	419246.28	32°09'04.620"N	103°45'32.452"W	1.25	
4200.00	5.180	143.780	4195.70	36.60	-35.88	113.82	719083.65	419238.11	32°09'04.539"N	103°45'32.385"W	1.14	
4300.00	3.900	143.060	4295.38	42.99	-42.24	118.53	719088.37	419231.75	32°09'04.475"N	103°45'32.331"W	1.28	
4400.00	3.510	142.120	4395.17	48.14	-47.37	122.46	719092.29	419226.61	32°09'04.424"N	103°45'32.285"W	0.39	



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Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.2H AWB
Facility	Cotton Draw 10 Fed No.2H		

WELLPATH DATA (155 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4500.00	3.450	141.310	4494.99	52.93	-52.13	126.22	719096.05	419221.85	32°09'04.377"N	103°45'32.242"W	0.08	
4600.00	3.480	141.420	4594.81	57.68	-56.86	129.99	719099.82	419217.13	32°09'04.330"N	103°45'32.198"W	0.03	
4700.00	3.070	140.930	4694.64	62.15	-61.31	133.57	719103.40	419212.68	32°09'04.286"N	103°45'32.157"W	0.41	
4800.00	2.920	137.100	4794.51	66.12	-65.25	136.99	719106.82	419208.73	32°09'04.247"N	103°45'32.117"W	0.25	
4900.00	2.920	135.380	4894.38	69.82	-68.93	140.51	719110.35	419205.05	32°09'04.210"N	103°45'32.077"W	0.09	
5000.00	2.940	141.800	4994.25	73.67	-72.76	143.89	719113.72	419201.22	32°09'04.172"N	103°45'32.038"W	0.33	
5100.00	2.580	139.450	5094.13	77.41	-76.49	146.94	719116.77	419197.50	32°09'04.135"N	103°45'32.002"W	0.38	
5200.00	2.840	143.080	5194.02	81.12	-80.18	149.89	719119.72	419193.81	32°09'04.098"N	103°45'31.968"W	0.31	
5300.00	2.330	141.120	5293.92	84.70	-83.74	152.65	719122.49	419190.25	32°09'04.063"N	103°45'31.936"W	0.52	
5400.00	2.170	140.960	5393.84	87.77	-86.79	155.12	719124.95	419187.19	32°09'04.033"N	103°45'31.908"W	0.16	
5500.00	2.200	139.150	5493.77	90.71	-89.71	157.57	719127.40	419184.27	32°09'04.004"N	103°45'31.880"W	0.08	
5600.00	2.140	139.930	5593.69	93.61	-92.59	160.03	719129.86	419181.39	32°09'03.975"N	103°45'31.851"W	0.07	
5700.00	2.180	138.050	5693.62	96.47	-95.44	162.50	719132.33	419178.55	32°09'03.947"N	103°45'31.823"W	0.08	
5800.00	1.920	136.090	5793.56	99.10	-98.06	164.93	719134.76	419175.93	32°09'03.921"N	103°45'31.795"W	0.27	
5900.00	1.550	133.380	5893.51	101.25	-100.20	167.08	719136.91	419173.79	32°09'03.899"N	103°45'31.770"W	0.38	
6000.00	1.460	130.110	5993.48	103.01	-101.95	169.04	719138.87	419172.04	32°09'03.882"N	103°45'31.747"W	0.12	
6100.00	1.350	129.410	6093.45	104.59	-103.51	170.92	719140.75	419170.47	32°09'03.866"N	103°45'31.725"W	0.11	
6200.00	1.300	133.310	6193.42	106.13	-105.04	172.66	719142.49	419168.95	32°09'03.851"N	103°45'31.705"W	0.10	
6300.00	1.310	136.480	6293.40	107.75	-106.65	174.27	719144.10	419167.34	32°09'03.835"N	103°45'31.686"W	0.07	
6400.00	1.200	140.740	6393.37	109.40	-108.29	175.72	719145.55	419165.70	32°09'03.819"N	103°45'31.670"W	0.14	
6500.00	1.040	138.200	6493.35	110.89	-109.77	176.99	719146.82	419164.21	32°09'03.804"N	103°45'31.655"W	0.17	
6600.00	1.000	142.550	6593.34	112.27	-111.14	178.12	719147.95	419162.84	32°09'03.790"N	103°45'31.642"W	0.09	
6700.00	0.670	160.210	6693.33	113.52	-112.39	178.85	719148.68	419161.60	32°09'03.778"N	103°45'31.634"W	0.41	
6800.00	0.420	179.090	6793.32	114.43	-113.30	179.05	719148.88	419160.68	32°09'03.769"N	103°45'31.631"W	0.30	
6900.00	0.470	189.900	6893.32	115.20	-114.07	178.99	719148.82	419159.91	32°09'03.761"N	103°45'31.632"W	0.10	
7000.00	0.240	160.990	6993.32	115.81	-114.68	178.99	719148.82	419159.31	32°09'03.755"N	103°45'31.632"W	0.28	
7100.00	0.250	186.650	7093.32	116.22	-115.09	179.03	719148.86	419158.90	32°09'03.751"N	103°45'31.632"W	0.11	
7200.00	0.370	197.760	7193.31	116.74	-115.61	178.91	719148.74	419158.37	32°09'03.746"N	103°45'31.633"W	0.13	
7300.00	0.200	199.970	7293.31	117.21	-116.09	178.75	719148.58	419157.90	32°09'03.742"N	103°45'31.635"W	0.17	
7400.00	0.230	220.470	7393.31	117.53	-116.40	178.56	719148.39	419157.58	32°09'03.738"N	103°45'31.637"W	0.08	
7500.00	0.550	194.280	7493.31	118.15	-117.02	178.31	719148.14	419156.97	32°09'03.732"N	103°45'31.640"W	0.36	
7532.00	0.530	211.890	7525.31	118.42	-117.29	178.19	719148.02	419156.69	32°09'03.730"N	103°45'31.641"W	0.52	
7598.00	1.400	181.400	7591.30	119.48	-118.36	178.01	719147.84	419155.63	32°09'03.719"N	103°45'31.644"W	1.49	
7630.00	4.400	178.000	7623.25	121.10	-119.98	178.05	719147.88	419154.01	32°09'03.703"N	103°45'31.643"W	9.39	
7661.00	9.700	178.900	7654.01	124.91	-123.78	178.14	719147.97	419150.21	32°09'03.665"N	103°45'31.643"W	17.10	
7692.00	15.900	181.200	7684.22	131.77	-130.64	178.10	719147.93	419143.34	32°09'03.598"N	103°45'31.643"W	20.06	
7724.00	21.400	180.800	7714.53	141.99	-140.87	177.93	719147.75	419133.12	32°09'03.496"N	103°45'31.646"W	17.19	
7756.00	24.800	179.500	7743.96	154.55	-153.42	177.90	719147.73	419120.57	32°09'03.372"N	103°45'31.647"W	10.74	
7787.00	27.300	179.000	7771.81	168.16	-167.03	178.08	719147.91	419106.95	32°09'03.237"N	103°45'31.646"W	8.10	
7819.00	28.700	180.000	7800.06	183.18	-182.06	178.21	719148.04	419091.93	32°09'03.089"N	103°45'31.645"W	4.61	
7850.00	29.800	180.100	7827.11	198.33	-197.20	178.20	719148.03	419076.79	32°09'02.939"N	103°45'31.646"W	3.55	
7882.00	32.100	179.800	7854.55	214.78	-213.66	178.21	719148.04	419060.33	32°09'02.776"N	103°45'31.647"W	7.20	
7913.00	34.000	181.500	7880.54	231.68	-230.56	178.02	719147.85	419043.43	32°09'02.609"N	103°45'31.651"W	6.82	
7945.00	36.200	182.800	7906.72	250.07	-248.95	177.32	719147.15	419025.05	32°09'02.427"N	103°45'31.660"W	7.26	
7976.00	37.700	184.700	7931.49	268.65	-267.54	176.10	719145.93	419006.46	32°09'02.243"N	103°45'31.675"W	6.08	



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Area	Eddy County, NM	Well	No.2H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.2H AWP
Facility	Cotton Draw 10 Fed No.2H		

WELLPATH DATA (155 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8008.00	39.300	184.100	7956.53	288.50	-287.40	174.57	719144.40	418986.60	32°09'02.047"N	103°45'31.694"W	5.13	
8039.00	41.500	183.200	7980.14	308.54	-307.45	173.29	719143.12	418966.55	32°09'01.848"N	103°45'31.710"W	7.34	
8071.00	43.000	183.100	8003.83	330.02	-328.93	172.11	719141.94	418945.07	32°09'01.636"N	103°45'31.725"W	4.69	
8102.00	43.600	182.800	8026.39	351.24	-350.16	171.02	719140.85	418923.84	32°09'01.426"N	103°45'31.739"W	2.05	
8134.00	45.300	183.100	8049.23	373.61	-372.54	169.86	719139.69	418901.46	32°09'01.204"N	103°45'31.754"W	5.35	
8165.00	48.200	183.000	8070.47	396.15	-395.09	168.66	719138.49	418878.91	32°09'00.981"N	103°45'31.770"W	9.36	
8197.00	51.500	183.800	8091.10	420.55	-419.50	167.21	719137.04	418854.50	32°09'00.740"N	103°45'31.788"W	10.49	
8228.00	54.000	182.900	8109.86	445.17	-444.13	165.77	719135.60	418829.87	32°09'00.496"N	103°45'31.806"W	8.39	
8260.00	56.300	181.000	8128.15	471.41	-470.37	164.88	719134.71	418803.63	32°09'00.237"N	103°45'31.818"W	8.68	
8291.00	60.700	179.800	8144.34	497.83	-496.80	164.70	719134.53	418777.21	32°08'59.975"N	103°45'31.822"W	14.57	
8323.00	66.200	179.700	8158.64	526.45	-525.41	164.83	719134.66	418748.60	32°08'59.692"N	103°45'31.822"W	17.19	
8354.00	71.600	180.200	8169.79	555.36	-554.32	164.85	719134.68	418719.69	32°08'59.406"N	103°45'31.824"W	17.48	
8386.00	75.600	180.300	8178.83	586.05	-585.01	164.72	719134.55	418689.00	32°08'59.102"N	103°45'31.827"W	12.50	
8417.00	77.000	180.300	8186.17	616.16	-615.13	164.56	719134.39	418658.88	32°08'58.804"N	103°45'31.831"W	4.52	
8449.00	79.800	181.300	8192.60	647.50	-646.47	164.12	719133.95	418627.55	32°08'58.494"N	103°45'31.838"W	9.27	
8481.00	83.000	180.400	8197.39	679.13	-678.10	163.65	719133.48	418595.91	32°08'58.181"N	103°45'31.845"W	10.38	
8512.00	84.900	179.700	8200.66	709.95	-708.93	163.63	719133.46	418565.09	32°08'57.876"N	103°45'31.848"W	6.53	
8544.00	85.500	179.900	8203.33	741.84	-740.82	163.74	719133.57	418533.21	32°08'57.561"N	103°45'31.848"W	1.98	
8575.00	85.700	180.000	8205.71	772.75	-771.73	163.77	719133.60	418502.30	32°08'57.255"N	103°45'31.850"W	0.72	
8607.00	86.000	180.000	8208.03	804.66	-803.64	163.77	719133.60	418470.38	32°08'56.939"N	103°45'31.852"W	0.94	
8638.00	86.400	180.400	8210.08	835.59	-834.57	163.66	719133.49	418439.45	32°08'56.633"N	103°45'31.855"W	1.82	
8670.00	87.000	180.500	8211.92	867.54	-866.52	163.41	719133.24	418407.51	32°08'56.317"N	103°45'31.860"W	1.90	
8701.00	89.000	181.400	8213.01	898.51	-897.49	162.89	719132.72	418376.54	32°08'56.010"N	103°45'31.868"W	7.07	
8733.00	90.300	182.200	8213.20	930.48	-929.48	161.89	719131.72	418344.56	32°08'55.694"N	103°45'31.882"W	4.77	
8764.00	90.700	181.900	8212.93	961.45	-960.46	160.78	719130.61	418313.58	32°08'55.387"N	103°45'31.896"W	1.61	
8859.00	91.400	182.000	8211.19	1056.36	-1055.38	157.55	719127.38	418218.66	32°08'54.448"N	103°45'31.940"W	0.74	
8954.00	90.900	181.800	8209.28	1151.27	-1150.31	154.40	719124.23	418123.73	32°08'53.509"N	103°45'31.982"W	0.57	
9048.00	92.300	182.000	8206.66	1245.15	-1244.22	151.28	719121.11	418029.83	32°08'52.580"N	103°45'32.024"W	1.50	
9143.00	92.000	181.800	8203.09	1340.01	-1339.10	148.13	719117.97	417934.95	32°08'51.641"N	103°45'32.067"W	0.38	
9237.00	91.400	182.800	8200.31	1433.87	-1432.98	144.36	719114.20	417841.08	32°08'50.712"N	103°45'32.117"W	1.24	
9332.00	89.600	183.900	8199.48	1528.66	-1527.81	138.81	719108.65	417746.25	32°08'49.774"N	103°45'32.187"W	2.22	
9427.00	90.300	184.100	8199.56	1623.38	-1622.58	132.19	719102.02	417651.49	32°08'48.837"N	103°45'32.270"W	0.77	
9521.00	90.100	183.700	8199.23	1717.12	-1716.36	125.79	719095.63	417557.72	32°08'47.909"N	103°45'32.350"W	0.48	
9615.00	88.600	183.800	8200.30	1810.87	-1810.15	119.65	719089.48	417463.93	32°08'46.982"N	103°45'32.427"W	1.60	
9710.00	89.300	184.400	8202.04	1905.57	-1904.89	112.85	719082.69	417369.20	32°08'46.045"N	103°45'32.512"W	0.97	
9805.00	90.900	186.800	8201.87	2000.04	-1999.43	103.59	719073.42	417274.67	32°08'45.110"N	103°45'32.626"W	3.04	
9899.00	89.500	186.700	8201.54	2093.32	-2092.77	92.54	719062.37	417181.33	32°08'44.187"N	103°45'32.760"W	1.49	
9994.00	89.200	186.800	8202.62	2187.58	-2187.11	81.37	719051.21	417087.00	32°08'43.254"N	103°45'32.896"W	0.33	
10088.00	88.900	185.000	8204.18	2281.00	-2280.59	71.71	719041.55	416993.52	32°08'42.329"N	103°45'33.014"W	1.94	
10183.00	88.400	182.500	8206.42	2375.72	-2375.36	65.50	719035.34	416898.76	32°08'41.392"N	103°45'33.092"W	2.68	
10277.00	88.900	182.100	8208.63	2469.60	-2469.25	61.73	719031.56	416804.87	32°08'40.463"N	103°45'33.142"W	0.68	
10372.00	88.800	181.500	8210.54	2564.51	-2564.19	58.74	719028.58	416709.94	32°08'39.524"N	103°45'33.183"W	0.64	
10467.00	89.500	183.500	8211.95	2659.37	-2659.08	54.60	719024.44	416615.05	32°08'38.585"N	103°45'33.237"W	2.23	
10561.00	88.100	184.100	8213.92	2753.10	-2752.85	48.37	719018.21	416521.28	32°08'37.657"N	103°45'33.315"W	1.62	
10656.00	90.100	184.500	8215.41	2847.77	-2847.57	41.25	719011.09	416426.57	32°08'36.720"N	103°45'33.404"W	2.15	



Actual Wellpath Report

No.2H AWP

Page 5 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.2H SHL
Area	Eddy County, NM	Well	No.2H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.2H AWB
Facility	Cotton Draw 10 Fed No.2H		

WELLPATH DATA (155 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10750.00	90.100	182.000	8215.25	2941.58	-2941.41	35.92	719005.76	416332.74	32°08'35.792"N	103°45'33.471"W	2.66	
10845.00	89.300	181.000	8215.74	3036.52	-3036.37	33.44	719003.27	416237.78	32°08'34.853"N	103°45'33.506"W	1.35	
10939.00	89.500	181.100	8216.73	3130.49	-3130.35	31.71	719001.55	416143.81	32°08'33.923"N	103°45'33.532"W	0.24	
11034.00	90.100	182.200	8217.06	3225.43	-3225.31	28.98	718998.82	416048.85	32°08'32.983"N	103°45'33.570"W	1.32	
11129.00	89.500	180.600	8217.39	3320.38	-3320.28	26.66	718996.50	415953.89	32°08'32.044"N	103°45'33.603"W	1.80	
11223.00	90.000	180.600	8217.80	3414.37	-3414.27	25.67	718995.51	415859.90	32°08'31.114"N	103°45'33.620"W	0.53	
11318.00	90.800	180.700	8217.14	3509.35	-3509.26	24.60	718994.43	415764.92	32°08'30.174"N	103°45'33.638"W	0.85	
11412.00	89.200	179.000	8217.14	3603.34	-3603.26	24.84	718994.68	415670.93	32°08'29.244"N	103°45'33.641"W	2.48	
11507.00	88.600	176.900	8218.96	3698.28	-3698.17	28.24	718998.08	415576.02	32°08'28.304"N	103°45'33.608"W	2.30	
11602.00	89.500	176.200	8220.54	3793.12	-3792.98	33.95	719003.79	415481.21	32°08'27.366"N	103°45'33.547"W	1.20	
11696.00	89.900	175.400	8221.03	3886.91	-3886.73	40.84	719010.68	415387.47	32°08'26.438"N	103°45'33.473"W	0.95	
11791.00	91.100	176.100	8220.20	3981.69	-3981.46	47.88	719017.72	415292.74	32°08'25.500"N	103°45'33.397"W	1.46	
11885.00	91.600	177.600	8217.99	4075.55	-4075.29	53.04	719022.88	415198.92	32°08'24.571"N	103°45'33.343"W	1.68	
11979.00	90.900	178.800	8215.94	4169.49	-4169.22	55.99	719025.83	415105.00	32°08'23.642"N	103°45'33.314"W	1.48	
12074.00	90.500	179.300	8214.78	4264.48	-4264.20	57.57	719027.41	415010.02	32°08'22.702"N	103°45'33.302"W	0.67	
12169.00	92.000	178.800	8212.70	4359.45	-4359.16	59.14	719028.98	414915.07	32°08'21.762"N	103°45'33.289"W	1.66	
12263.00	94.500	178.500	8207.37	4453.28	-4452.98	61.35	719031.19	414821.26	32°08'20.834"N	103°45'33.269"W	2.68	
12358.00	96.900	178.000	8197.94	4547.77	-4547.46	64.24	719034.08	414726.78	32°08'19.899"N	103°45'33.242"W	2.58	
12390.00	97.600	177.500	8193.90	4579.50	-4579.17	65.49	719035.32	414695.07	32°08'19.585"N	103°45'33.229"W	2.68	
12443.00	97.600	177.500	8186.89	4632.00	-4631.66	67.78	719037.61	414642.58	32°08'19.065"N	103°45'33.206"W	0.00	Proj to Bit

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.2H PBHL		8215.00	-4633.76	29.34	718999.18	414640.48	32°08'19.046"N	103°45'33.653"W	circle

WELLPATH COMPOSITION - Ref Wellbore: No.2H AWB Ref Wellpath: No.2H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	7532.00	Generic gyro - northseeking (Standard)	Scientific Gyro <100-7532>	No.2H AWB
7532.00	12443.00	NaviTrak (Standard)	MWD NaviTrak <7598-XXXX>	No.2H AWB

DEVON ENERGY

Cotton Draw

Eddy County, NM

Cotton Draw 10 Federal Com #2H

VH - Job #32K0212150

Survey: Gyro

SDI Standard Survey Report

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

Michael

Notarized this date 15th of March, 2012.

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 10 Federal Com #2H
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 10 Federal Com #2H	North Reference:	Grid
Wellbore:	VH - Job #32K0212150	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212150	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 10 Federal Com #2H, Directional (Baker)					
Well Position	+N/-S	0 0 usft	Northing:	419,260 04 usft	Latitude:	32° 9' 4 900 N
	+E/-W	0 0 usft	Easting:	677,636 15 usft	Longitude:	103° 45' 33 707 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K0212150				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/11/2012	7 59	60 07	48,511

Design	VH - Job #32K0212150				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0 0	0 0	0 0	179 64	

Survey Program		Date		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100 0	7,532 0	Gyro (VH - Job #32K0212150)	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 82	11 35	100 0	0 7	0 1	11 35	0 7
200 0	0 99	13 23	200 0	2 2	0 5	12 06	2 3
300 0	0 85	13 34	300 0	3 8	0 8	12 56	3 9
400 0	0 63	22 10	400 0	5 0	1 2	13 68	5 2
500 0	0 23	11 09	500 0	5 7	1 5	14 37	5 9
600 0	0 71	216 60	600 0	5 4	1 1	11 84	5 6
700 0	1 08	216 25	699 9	4 2	0 2	2 93	4 2
800 0	1 27	217 66	799 9	2 5	-1 0	338.19	2 7
900 0	1 72	211 99	899 9	0 4	-2 5	279 09	2 5
1,000 0	1 36	220 71	999 9	-1 8	-4 1	246 41	4 4
1,100 0	0 83	230.43	1,099.8	-3 1	-5 4	239 84	6 2



Project: Cotton Draw
Eddy County, NM
Well: Cotton Draw 10 Federal Com #2H
Wellbore: VH - Job #32K0212150
Design: VH - Job #32K0212150



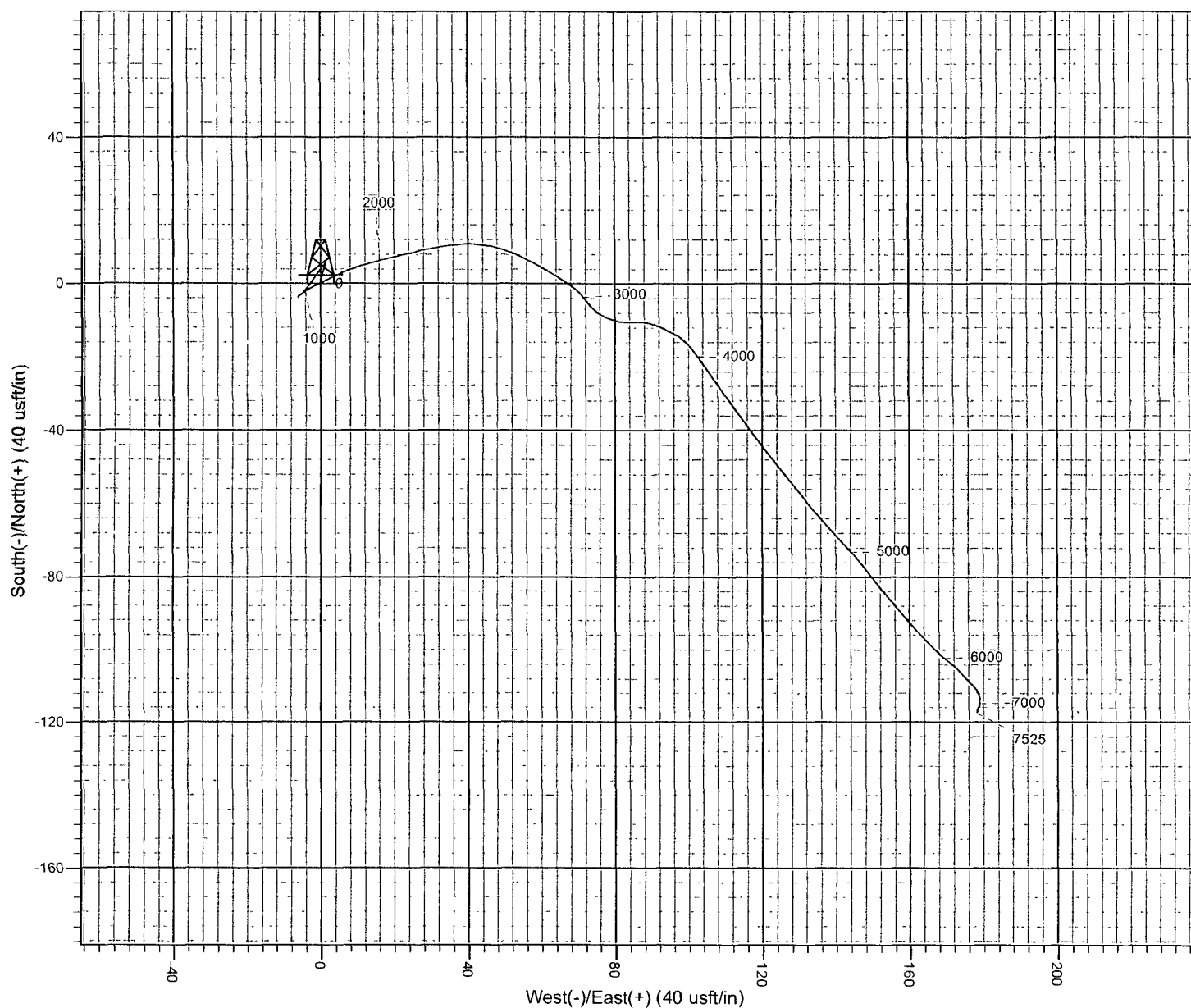
Azimuths to Grid North
True North -0 30°
Magnetic North 7 28°

Magnetic Field
Strength 48511.4 nT
Dip Angle 60.07°
Date 2/11/2012
Model IGRF2010

WELL DETAILS: Cotton Draw 10 Federal Com #2H
WELL @ 0.0usft (Original Well Elev)

Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	419260.04	677636.15	32° 9' 4.900 N	103° 45' 33.707 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

Stimulations Summary

District	County		Field Name		Project Group		State/Province			
PERMIAN BASIN	EDDY		PADUCA		PB NEW MEXICO		NM			
Surface Legal Location		API/UWI	Latitude (DMS)	Longitude (DMS)	Ground Elev	KB - GL (ft)	Orig KB Elev (ft)	TH Elev (ft)		
SEC10 T25S R31E		3001539230	32° 9' 4.9" N	103° 45' 33.707"	3,422.30	26.20	3,448.50			
VIKING D 2800, 3/19/2012 07:18, DELAWARE, OH, 11,958.0 ftKB - 12,432.0 ftKB, BHI, Ottawa 7315 LBS; 336455 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
310,625.0	6558.50		940.0	8,063.0		5,155.0	74	7,987.0	81	4.00
VIKING D 2800, 3/19/2012 19:04, DELAWARE, OH, 11,250.0 ftKB - 11,724.0 ftKB, BHI, 306958 LBS; Ottawa 4781 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
310,625.0	5315.70		1,061.0	4,512.0		4,706.0	79	7,253.0	81	4.00
VIKING D 2800, 3/20/2012 05:57, DELAWARE, OH, 10,542.0 ftKB - 11,016.0 ftKB, BHI, Ottawa 4766 LBS; 293863 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
310,625.0	4985.00		864.0	4,273.0		4,319.0	78	6,622.0	81	4.00
VIKING D 2800, 3/20/2012 13:27, DELAWARE, OH, 9,834.0 ftKB - 10,308.0 ftKB, BHI, Ottawa 4760 LBS; 300785 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
310,625.0	5543.00			5,074.0		4,380.0	77	7,569.0	81	4.00
VIKING D 2800, 3/20/2012 16:53, DELAWARE, OH, 9,126.0 ftKB - 9,600.0 ftKB, BHI, 298075 LBS; Ottawa 4779 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
310,625.0	5161.10		856.0	5,949.0		4,145.0	76	7,515.0	81	4.00
VIKING D 2800, 3/20/2012 20:03, DELAWARE, OH, 8,418.0 ftKB - 8,892.0 ftKB, BHI, Ottawa 6668 LBS; 329761 LBS										
Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
310,625.0	5430.20		802.0	4,862.0		3,605.0	75	6,291.0	81	4.00

2105 MARKET STREET
MIDLAND, TX 79703
24 HR (432) 694-9517

STATE OF NEW MEXICO

COUNTY OF Eddy

I, John Hollis, Directional Driller certify that I am employed by Baker Hughes INTEQ; did conduct or supervise on the day(s) of 2/12/2012 through 2/17/2012 the taking of MWD surveys from a depth of 7,532 to a depth of 12,443 that the data is true, correct, complete and within the limitations of the tool as set forth by Baker Hughes INTEQ; that I am authorized and qualified to make this report; that this survey was conducted at the request of Devon for the Cotton Draw 10 Fed #2H in Eddy County, NM; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by INTEQ.

OPs, coordinator
Ronny Hise

Field Service Engineer: John Hollis

devon

Devon Energy

Location Eddy County, NM
Field (Cotton) Sec 10, T25S, R31E
Facility Cotton Draw 10 Fed No 2H

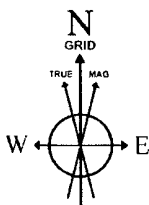
Slot No 2H SHL
Well No 2H
Wellbore No 2H PWB



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*100ft)	VS (ft)
Tie On	7532.00	0.530	211.890	7525.31	117.29	178.19	0.00	118.42
Est KOP	7653.00	0.530	211.890	7646.30	-118.24	177.60	0.00	119.37
EOC	8548.94	90.000	181.847	8215.00	-691.14	156.49	9.99	692.11
No 2H PBHL	12493.61	90.000	181.847	8215.00	-4633.76	29.35	0.00	4633.86

Plot reference wellpath is Plan #1	
True vertical depths are referenced to Rig on No 2H SHL (KB)	Grid System NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 2H SHL (KB)	North Reference Grid north
Rig on No 2H SHL (KB) to Mean Sea Level: 3448.5 feet	Scale True distance
Mean Sea Level to Mud line (At Slot No 2H SHL) -3422.3 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by gentbry on 2/11/2012



BGGM (1945.0 to 2013.0) Dip 60.04° Field 48496.9 nT
Magnetic North is 7.67 degrees East of True North (at 1/26/2012)
Grid North is 0.31 degrees East of True North
To correct azimuth from True to Grid subtract 0.31 degrees
To correct azimuth from Magnetic to Grid add 7.36 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.36 = 97.36

