



A GYRO TECHNOLOGIES INC. COMPANY

PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

March 19, 2012

30-015-3929

Devon Energy Production Company
20 North Broadway
Oklahoma City, OK 73102

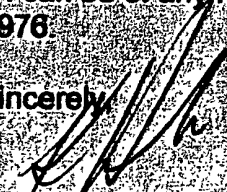
Attn: Mark Cooper

Re: Cotton Draw 11 Federal Com 1H

Please find enclosed a copy of the survey from 0' to 7,613' ran on the above referenced well.

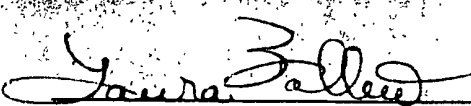
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

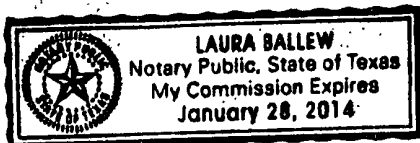
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 20th day of March, A.D., 2012, by Keith Havelka.


Laura Ballew
Notary Public, State of Texas





Company: Devon Energy
Lease/Well: Cotton Draw 11 Federal Com/1H
Location: 22 Miles E Of Loving NM
Rig Name: H&P 416
State/County: New Mexico/Eddy
Latitude: 32.14
GRID North is 0.31 Degrees East of True North
VS-Azi: 358.20 Degrees



Depth Reference : RKB=25 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro run_ed_int.ut

Minimum Curvature Method

Report Date/Time: 3/19/2012 / 15:52

Vaughn Energy Services

Gardendale, Texas

432-563-5444

Surveyor: Seth Hardin

Cotton Draw 11 Federal Com 1H / API 30-015-39729

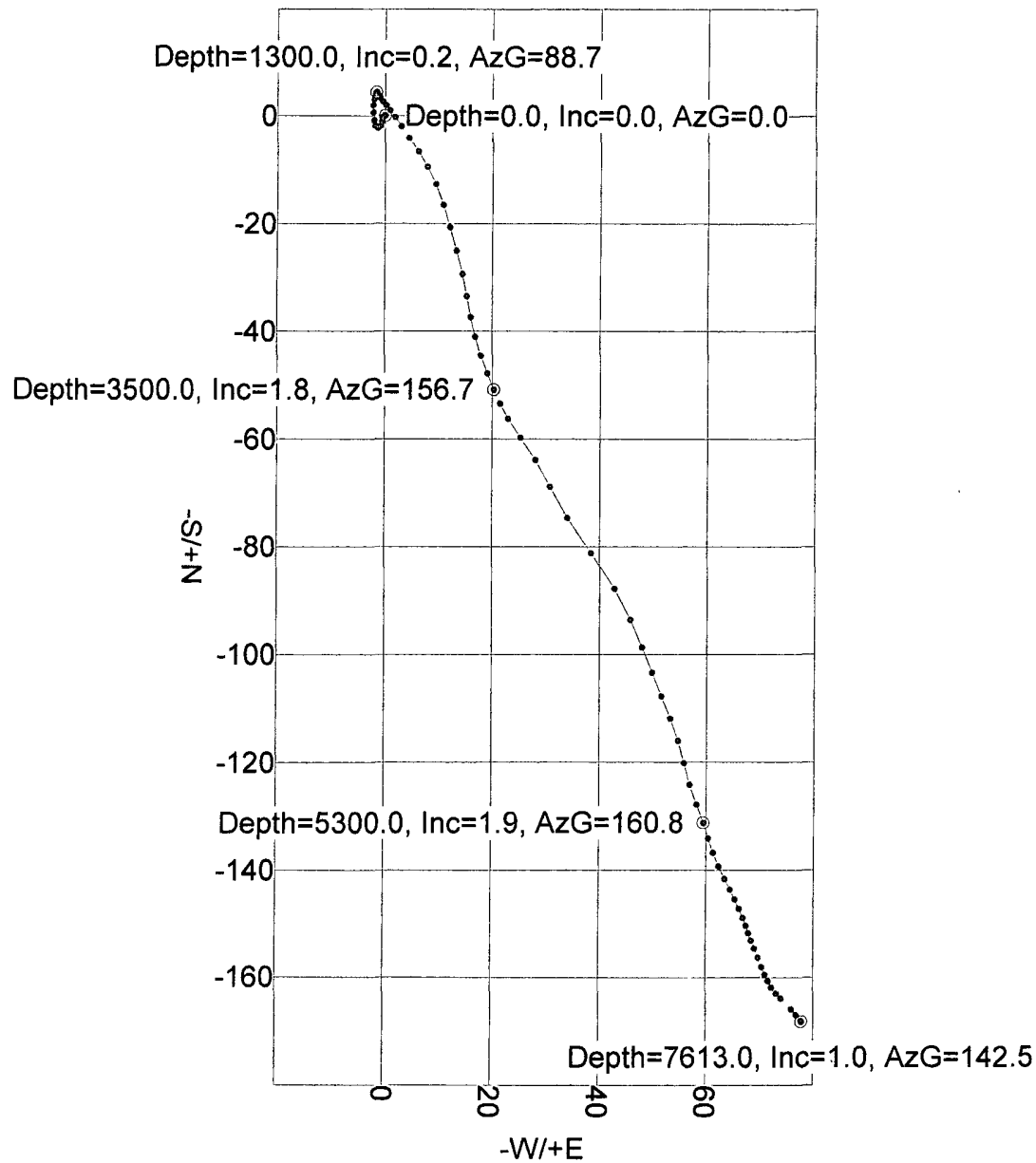
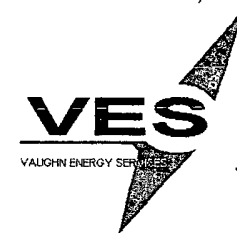
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.21	276.90	100.00	0.02	-0.18	0.03	0.18	276.90	0.21
200.00	0.41	193.81	200.00	-0.31	-0.44	-0.29	0.54	235.35	0.44
300.00	0.46	193.45	300.00	-1.04	-0.62	-1.02	1.22	210.83	0.04
400.00	0.50	193.09	399.99	-1.85	-0.81	-1.83	2.02	203.71	0.04
500.00	0.51	269.95	499.99	-2.28	-1.35	-2.23	2.65	210.75	0.62
600.00	0.52	346.81	599.99	-1.84	-1.90	-1.78	2.64	225.92	0.64
700.00	0.71	351.17	699.98	-0.79	-2.10	-0.72	2.24	249.36	0.20
800.00	0.90	355.53	799.97	0.61	-2.25	0.68	2.33	285.05	0.20
900.00	0.72	4.48	899.96	2.01	-2.26	2.08	3.03	311.63	0.22
1000.00	0.53	13.43	999.95	3.09	-2.11	3.15	3.74	325.67	0.21
1100.00	0.35	13.73	1099.95	3.83	-1.93	3.89	4.29	333.28	0.19
1200.00	0.16	14.03	1199.95	4.26	-1.82	4.32	4.64	336.85	0.19
1300.00	0.16	88.70	1299.95	4.40	-1.65	4.45	4.70	339.46	0.19
1400.00	0.16	163.38	1399.95	4.27	-1.47	4.32	4.52	341.01	0.19
1500.00	0.31	153.94	1499.95	3.90	-1.31	3.94	4.11	341.39	0.15
1600.00	0.46	144.51	1599.95	3.33	-0.96	3.36	3.47	343.89	0.16
1700.00	0.51	141.38	1699.94	2.66	-0.45	2.67	2.70	350.34	0.06
1800.00	0.56	138.26	1799.94	1.95	0.15	1.94	1.95	4.41	0.06

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.80	141.77	1899.93	1.04	0.91	1.01	1.38	41.15	0.24
2000.00	1.03	145.28	1999.92	-0.25	1.85	-0.31	1.87	97.73	0.24
2100.00	1.33	145.65	2099.90	-1.95	3.02	-2.05	3.60	122.90	0.30
2200.00	1.63	146.01	2199.86	-4.10	4.47	-4.23	6.07	132.48	0.30
2300.00	1.80	148.16	2299.82	-6.62	6.10	-6.80	9.00	137.32	0.18
2400.00	1.97	150.31	2399.77	-9.45	7.78	-9.69	12.24	140.52	0.18
2500.00	2.21	156.74	2499.70	-12.71	9.40	-13.00	15.81	143.53	0.33
2600.00	2.45	163.16	2599.62	-16.53	10.78	-16.86	19.73	146.90	0.35
2700.00	2.53	163.41	2699.52	-20.69	12.02	-21.05	23.93	149.83	0.08
2800.00	2.61	163.65	2799.42	-24.98	13.29	-25.39	28.30	151.98	0.08
2900.00	2.49	167.22	2899.32	-29.28	14.42	-29.72	32.64	153.79	0.20
3000.00	2.37	170.79	2999.23	-33.44	15.23	-33.90	36.74	155.52	0.19
3100.00	2.23	168.13	3099.15	-37.39	15.96	-37.87	40.65	156.89	0.17
3200.00	2.09	165.47	3199.08	-41.06	16.82	-41.57	44.37	157.73	0.17
3300.00	2.04	161.63	3299.02	-44.52	17.84	-45.05	47.96	158.17	0.15
3400.00	1.98	157.79	3398.95	-47.81	19.05	-48.38	51.46	158.27	0.15
3500.00	1.75	156.71	3498.90	-50.81	20.31	-51.42	54.72	158.21	0.23
3600.00	1.52	155.63	3598.86	-53.43	21.46	-54.07	57.58	158.12	0.23
3700.00	2.11	149.60	3698.81	-56.22	22.94	-56.92	60.72	157.80	0.62
3800.00	2.70	143.58	3798.72	-59.71	25.27	-60.47	64.84	157.06	0.64
3900.00	3.06	148.40	3898.60	-63.87	28.07	-64.72	69.77	156.28	0.43
4000.00	3.41	153.22	3998.44	-68.80	30.80	-69.73	75.38	155.88	0.45
4100.00	4.18	148.89	4098.22	-74.57	34.03	-75.61	81.97	155.47	0.82
4200.00	4.95	144.56	4197.90	-81.21	38.41	-82.38	89.84	154.69	0.84
4300.00	4.13	150.06	4297.58	-87.85	42.72	-89.15	97.69	154.07	0.93
4400.00	3.31	155.55	4397.37	-93.60	45.71	-94.99	104.16	153.97	0.90
4500.00	3.03	157.15	4497.22	-98.66	47.93	-100.12	109.68	154.09	0.29
4600.00	2.75	158.75	4597.09	-103.33	49.82	-104.85	114.72	154.26	0.29
4700.00	2.64	158.32	4696.98	-107.71	51.54	-109.28	119.41	154.43	0.12
4800.00	2.53	157.88	4796.88	-111.89	53.22	-113.51	123.91	154.56	0.12
4900.00	2.49	162.67	4896.78	-116.00	54.70	-117.67	128.25	154.75	0.21
5000.00	2.45	167.46	4996.69	-120.16	55.81	-121.86	132.49	155.09	0.21
5100.00	2.33	162.73	5096.60	-124.19	56.88	-125.92	136.60	155.39	0.23
5200.00	2.21	157.99	5196.53	-127.92	58.21	-129.69	140.54	155.53	0.22
5300.00	1.90	160.81	5296.46	-131.27	59.47	-133.07	144.11	155.63	0.33
5400.00	1.58	163.63	5396.42	-134.16	60.40	-135.99	147.13	155.76	0.32
5500.00	1.57	159.06	5496.38	-136.76	61.28	-138.62	149.86	155.86	0.13
5600.00	1.56	154.49	5596.34	-139.27	62.36	-141.16	152.59	155.88	0.13
5700.00	1.37	153.77	5696.31	-141.56	63.47	-143.49	155.14	155.85	0.19

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	1.17	153.06	5796.28	-143.54	64.46	-145.50	157.35	155.82	0.19
5900.00	1.15	154.68	5896.26	-145.36	65.35	-147.34	159.38	155.79	0.04
6000.00	1.12	156.31	5996.24	-147.16	66.17	-149.16	161.35	155.79	0.04
6100.00	0.97	158.58	6096.23	-148.84	66.88	-150.87	163.18	155.81	0.15
6200.00	0.83	160.85	6196.21	-150.32	67.42	-152.36	164.75	155.84	0.15
6300.00	0.84	159.57	6296.20	-151.69	67.92	-153.75	166.20	155.88	0.02
6400.00	0.84	158.28	6396.19	-153.06	68.44	-155.13	167.66	155.91	0.02
6500.00	0.99	158.32	6496.18	-154.54	69.04	-156.64	169.26	155.93	0.15
6600.00	1.14	158.35	6596.16	-156.27	69.72	-158.39	171.12	155.96	0.15
6700.00	0.97	156.94	6696.15	-157.98	70.42	-160.11	172.96	155.97	0.17
6800.00	0.80	155.52	6796.13	-159.40	71.04	-161.55	174.51	155.98	0.17
6900.00	0.79	152.72	6896.12	-160.64	71.65	-162.82	175.90	155.96	0.04
7000.00	0.77	149.91	6996.12	-161.83	72.30	-164.03	177.25	155.93	0.04
7100.00	0.75	141.09	7096.11	-162.92	73.05	-165.14	178.55	155.85	0.12
7200.00	0.73	132.27	7196.10	-163.86	73.93	-166.10	179.76	155.72	0.12
7400.00	0.87	139.35	7396.08	-165.87	75.86	-168.17	182.39	155.42	0.09
7500.00	0.76	137.94	7496.07	-166.93	76.79	-169.26	183.75	155.30	0.12
7600.00	0.90	145.06	7596.06	-168.07	77.69	-170.42	185.15	155.19	0.18
7613.00	0.98	142.54	7609.06	-168.24	77.81	-170.60	185.36	155.18	0.65



Vaughn Energy Services
Gardendale, Texas
432-563-5444
Surveyor: Seth Hardin
Cotton Draw 11 Federal Com 1H / API 30-015-39729



VES Survey Date: 03/11/2012

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 3/15/2012 through 3/23/2012 the taking of MWD surveys from a depth of 7,500 to a depth of 12,746 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 11 Fed Com #1H 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.

John Hollis
John Hollis OPS. Coordinator

Field Service Engineer: John Hollis

devon

Devon Energy

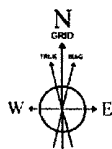
Location: Eddy County, NM
Field: (Cotton) Sec 10, T25S, R31E
Facility: Cotton Draw 11 Fed Com No. 1H

Slot: No 1H SHL
Well: No 1H
Wellbore: No 1H PWB

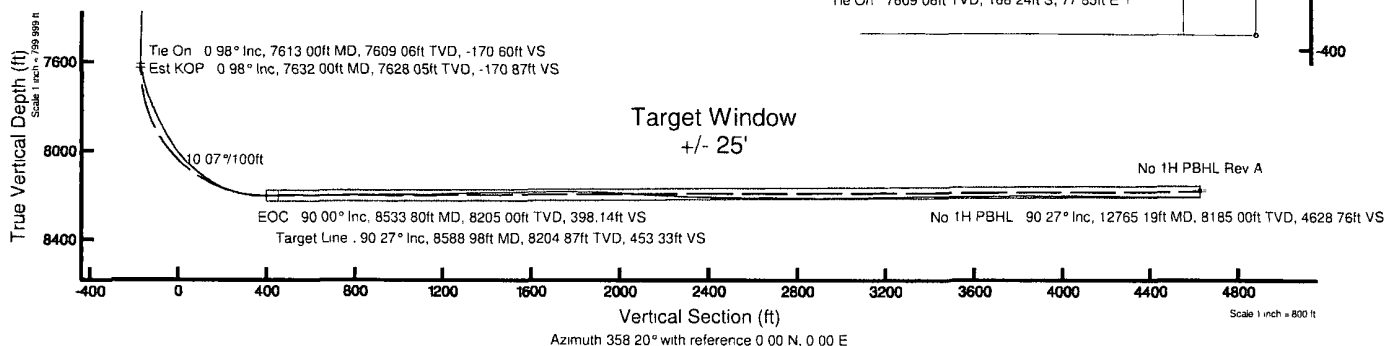
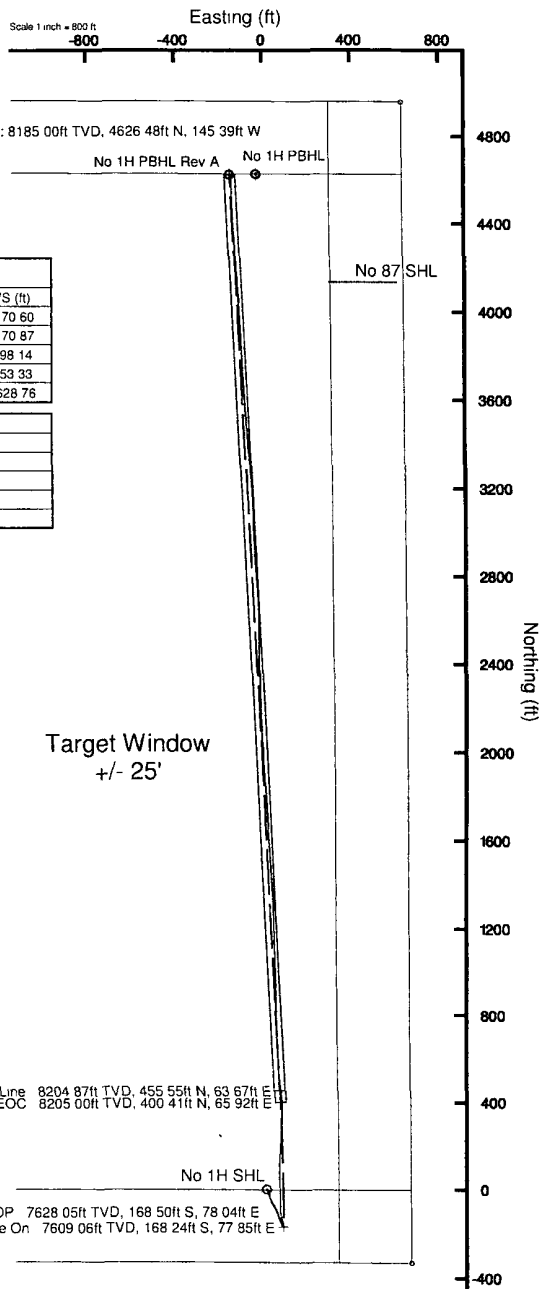


Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	7613.00	0.980	142.540	7609.06	-168.24	77.85	0.00	-170.60
Est KOP	7632.00	0.980	142.540	7628.05	-168.50	78.04	0.00	-170.87
EOC	8533.80	90.000	358.200	8205.00	400.41	65.92	10.07	398.14
Target Line	8588.98	90.273	357.130	8204.87	455.55	63.67	2.00	453.33
No 1H PBHL	12765.19	90.273	357.130	8185.00	4626.48	-145.39	0.00	4628.76

Plot reference wellpath is Rev-A 0	
True vertical depths are referenced to Rig on No 1H SHL (KB)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 1H SHL (KB)	North Reference: Grid north
Rig on No 1H SHL (KB) to Mean Sea Level: 3443.5 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot No 1H SHL): -3418.5 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentbry on 3/14/2012



BGGM (1945 0 to 2013 0) Do: 80 03° Field: 48483.7 nT
Magnetic North is 7.65 degrees East of True North (at 2/17/2012)
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 7.34 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.34 = 97.34





Actual Wellpath Report

No.1H AWP

Page 1 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.1H AWB
Facility	Cotton Draw 11 Fed Com No.1H		

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	0.999947	Report Generated	3/26/2012 at 9:03:54 AM
Convergence at slot	0.31° East	Database/Source file	WA Midland/No.1H_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	724292.97	414624.00	32°08'18.600"N	103°44'32.086"W
Facility Reference Pt			724292.97	414624.00	32°08'18.600"N	103°44'32.086"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.1H SHL (KB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Rig on No.1H SHL (KB) to Mean Sea Level	3443.50ft
Vertical Reference Pt	Rig on No.1H SHL (KB)	Rig on No.1H SHL (KB) to Mud Line at Slot (No.1H SHL)	25.00ft
MD Reference Pt	Rig on No.1H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	358.20°

devon

Actual Wellpath Report

No.1H AWP

Page 2 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.1H AWB
Facility	Cotton Draw 11 Fed Com No.1H		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station

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	276.900	0.00	0.00	0.00	0.00	724292.97	414624.00	32°08'18.600"N	103°44'32.086"W	0.00	
25.00	0.000	276.900	25.00	0.00	0.00	0.00	724292.97	414624.00	32°08'18.600"N	103°44'32.086"W	0.00	
100.00	0.210	276.900	100.00	0.02	0.02	-0.14	724292.83	414624.02	32°08'18.600"N	103°44'32.087"W	0.28	
200.00	0.410	193.810	200.00	-0.30	-0.31	-0.40	724292.57	414623.69	32°08'18.597"N	103°44'32.090"W	0.44	
300.00	0.460	193.450	300.00	-1.03	-1.05	-0.58	724292.39	414622.95	32°08'18.590"N	103°44'32.092"W	0.05	
400.00	0.500	193.090	399.99	-1.84	-1.86	-0.77	724292.20	414622.14	32°08'18.582"N	103°44'32.095"W	0.04	
500.00	0.510	269.950	499.99	-2.25	-2.29	-1.32	724291.65	414621.71	32°08'18.577"N	103°44'32.101"W	0.63	
600.00	0.520	346.810	599.99	-1.79	-1.85	-1.87	724291.10	414622.15	32°08'18.582"N	103°44'32.107"W	0.64	
700.00	0.710	351.170	699.98	-0.73	-0.79	-2.07	724290.90	414623.21	32°08'18.592"N	103°44'32.110"W	0.20	
800.00	0.900	355.530	799.97	-0.67	-0.60	-2.22	724290.75	414624.60	32°08'18.606"N	103°44'32.111"W	0.20	
900.00	0.720	4.480	899.96	2.08	2.01	-2.23	724290.74	414626.01	32°08'18.620"N	103°44'32.111"W	0.22	
1000.00	0.530	13.430	999.95	3.15	3.09	-2.08	724290.89	414627.09	32°08'18.631"N	103°44'32.110"W	0.21	
1100.00	0.350	13.730	1099.95	3.89	3.84	-1.90	724291.07	414627.84	32°08'18.638"N	103°44'32.107"W	0.18	
1200.00	0.160	14.030	1199.95	4.32	4.27	-1.79	724291.18	414628.27	32°08'18.642"N	103°44'32.106"W	0.19	
1300.00	0.160	88.700	1299.95	4.45	4.41	-1.62	724291.35	414628.41	32°08'18.644"N	103°44'32.104"W	0.19	
1400.00	0.160	163.380	1399.95	4.32	4.28	-1.44	724291.53	414628.28	32°08'18.642"N	103°44'32.102"W	0.19	
1500.00	0.310	153.940	1499.95	3.94	3.90	-1.28	724291.69	414627.90	32°08'18.639"N	103°44'32.100"W	0.15	
1600.00	0.460	144.510	1599.95	3.36	3.33	-0.93	724292.04	414627.33	32°08'18.633"N	103°44'32.096"W	0.16	
1700.00	0.510	141.380	1699.94	2.67	2.65	-0.42	724292.55	414626.65	32°08'18.626"N	103°44'32.090"W	0.06	
1800.00	0.560	138.260	1799.94	1.94	1.94	-0.19	724293.16	414625.94	32°08'18.619"N	103°44'32.083"W	0.06	
1900.00	0.800	141.770	1899.93	1.00	1.03	0.94	724293.91	414625.03	32°08'18.610"N	103°44'32.075"W	0.24	
2000.00	1.030	145.280	1999.92	-0.32	-0.26	1.89	724294.86	414623.74	32°08'18.597"N	103°44'32.064"W	0.24	
2100.00	1.330	145.650	2099.90	-2.05	-1.96	3.05	724296.02	414622.04	32°08'18.580"N	103°44'32.050"W	0.30	
2200.00	1.630	146.010	2199.86	-4.23	-4.09	4.50	724297.47	414619.91	32°08'18.559"N	103°44'32.034"W	0.30	
2300.00	1.800	148.160	2299.82	-6.80	-6.61	7.13	724299.10	414617.39	32°08'18.534"N	103°44'32.015"W	0.18	
2400.00	1.970	150.310	2399.77	-9.67	-9.43	7.81	724300.78	414614.57	32°08'18.506"N	103°44'31.995"W	0.18	
2500.00	2.210	156.740	2499.70	-12.99	-12.70	9.42	724302.39	414611.30	32°08'18.474"N	103°44'31.977"W	0.34	
2600.00	2.450	163.160	2599.62	-16.85	-16.52	10.80	724303.77	414607.49	32°08'18.436"N	103°44'31.961"W	0.35	
2700.00	2.530	163.410	2699.52	-21.04	-20.68	12.05	724305.02	414603.32	32°08'18.395"N	103°44'31.947"W	0.08	
2800.00	2.610	163.650	2799.42	-25.38	-24.98	13.32	724306.29	414599.03	32°08'18.352"N	103°44'31.932"W	0.08	
2900.00	2.490	167.220	2899.32	-29.72	-29.28	14.44	724307.41	414594.72	32°08'18.309"N	103°44'31.920"W	0.20	
3000.00	2.370	170.790	2999.23	-33.90	-33.44	15.25	724308.22	414590.56	32°08'18.268"N	103°44'31.910"W	0.19	
3100.00	2.230	168.130	3099.15	-37.87	-37.38	15.99	724308.95	414586.62	32°08'18.229"N	103°44'31.902"W	0.18	
3200.00	2.090	165.470	3199.08	-41.56	-41.05	16.84	724309.81	414582.95	32°08'18.193"N	103°44'31.892"W	0.17	
3300.00	2.040	161.630	3299.02	-45.05	-44.51	17.86	724310.83	414579.50	32°08'18.159"N	103°44'31.881"W	0.15	
3400.00	1.980	157.790	3398.95	-48.37	-47.80	19.08	724312.04	414576.21	32°08'18.126"N	103°44'31.867"W	0.15	
3500.00	1.750	156.710	3498.90	-51.41	-50.80	20.33	724313.30	414573.21	32°08'18.096"N	103°44'31.852"W	0.23	
3600.00	1.520	155.630	3598.86	-54.06	-53.41	21.48	724314.45	414570.59	32°08'18.070"N	103°44'31.839"W	0.23	
3700.00	2.110	149.600	3698.81	-56.90	-56.20	22.96	724315.93	414567.80	32°08'18.043"N	103°44'31.822"W	0.62	
3800.00	2.700	143.580	3798.72	-60.45	-59.69	25.29	724318.26	414564.32	32°08'18.008"N	103°44'31.795"W	0.64	
3900.00	3.060	148.400	3898.60	-64.71	-63.86	28.09	724321.06	414560.15	32°08'17.967"N	103°44'31.763"W	0.43	
4000.00	3.410	153.220	3998.44	-69.72	-68.78	30.83	724323.80	414555.22	32°08'17.918"N	103°44'31.732"W	0.44	
4100.00	4.180	148.890	4098.22	-75.59	-74.56	34.05	724327.02	414549.44	32°08'17.860"N	103°44'31.694"W	0.82	
4200.00	4.950	144.560	4197.90	-82.36	-81.20	38.44	724331.40	414542.81	32°08'17.794"N	103°44'31.644"W	0.84	
4300.00	4.130	150.060	4297.58	-89.13	-87.83	42.73	724335.70	414536.17	32°08'17.729"N	103°44'31.594"W	0.93	



Actual Wellpath Report

No.1H AWP

Page 3 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cotton) Sec 10, T2SS, R31E	Wellbore	No.1H AWB
Facility	Cotton Draw 11 Fed Com No.1H		

WELLPATH DATA (152 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
4400.00	3.310	155.550	4397.37	-94.97	-93.58	45.73	724338.69	414530.43	32°08'17.672"N	103°44'31.560"W	0.89	
4500.00	3.030	157.150	4497.22	-100.10	-98.64	47.95	724340.92	414525.36	32°08'17.621"N	103°44'31.534"W	0.29	
4600.00	2.750	158.750	4597.09	-104.83	-103.31	49.84	724342.81	414520.69	32°08'17.575"N	103°44'31.513"W	0.29	
4700.00	2.640	158.320	4696.98	-109.26	-107.69	51.56	724344.53	414516.32	32°08'17.532"N	103°44'31.493"W	0.11	
4800.00	2.530	157.880	4796.88	-113.49	-111.87	53.25	724346.21	414512.13	32°08'17.490"N	103°44'31.474"W	0.11	
4900.00	2.490	162.670	4896.78	-117.65	-115.99	54.72	724347.69	414508.01	32°08'17.449"N	103°44'31.457"W	0.21	
5000.00	2.450	167.460	4996.69	-121.85	-120.15	55.83	724348.80	414503.85	32°08'17.408"N	103°44'31.444"W	0.21	
5100.00	2.330	162.730	5096.60	-125.91	-124.18	56.90	724349.87	414499.83	32°08'17.368"N	103°44'31.432"W	0.23	
5200.00	2.210	157.990	5196.53	-129.68	-127.91	58.23	724351.20	414496.10	32°08'17.331"N	103°44'31.417"W	0.22	
5300.00	1.900	160.810	5296.46	-133.07	-131.26	59.50	724352.46	414492.74	32°08'17.298"N	103°44'31.402"W	0.33	
5400.00	1.580	163.630	5396.42	-135.98	-134.15	60.43	724353.40	414489.86	32°08'17.269"N	103°44'31.391"W	0.33	
5500.00	1.570	159.060	5496.38	-138.61	-136.75	61.31	724354.27	414487.25	32°08'17.243"N	103°44'31.381"W	0.13	
5600.00	1.560	154.490	5596.34	-141.15	-139.26	62.38	724355.35	414484.75	32°08'17.219"N	103°44'31.369"W	0.13	
5700.00	1.370	153.770	5696.31	-143.49	-141.56	63.50	724356.46	414482.45	32°08'17.196"N	103°44'31.356"W	0.19	
5800.00	1.170	153.060	5796.28	-145.50	-143.54	64.49	724357.46	414480.46	32°08'17.176"N	103°44'31.345"W	0.20	
5900.00	1.150	154.680	5896.26	-147.34	-145.36	65.38	724358.35	414478.65	32°08'17.158"N	103°44'31.335"W	0.04	
6000.00	1.120	156.310	5996.24	-149.17	-147.16	66.20	724359.17	414476.84	32°08'17.140"N	103°44'31.325"W	0.04	
6100.00	0.970	158.580	6096.23	-150.87	-148.85	66.90	724359.87	414475.16	32°08'17.123"N	103°44'31.317"W	0.16	
6200.00	0.830	160.850	6196.21	-152.36	-150.32	67.45	724360.42	414473.69	32°08'17.109"N	103°44'31.311"W	0.14	
6300.00	0.840	159.570	6296.20	-153.75	-151.69	67.94	724360.91	414472.32	32°08'17.095"N	103°44'31.305"W	0.02	
6400.00	0.840	158.280	6396.19	-155.13	-153.06	68.47	724361.44	414470.95	32°08'17.082"N	103°44'31.299"W	0.02	
6500.00	0.990	158.320	6496.18	-156.63	-154.54	69.06	724362.03	414469.47	32°08'17.067"N	103°44'31.292"W	0.15	
6600.00	1.140	158.350	6596.16	-158.38	-156.27	69.75	724362.71	414467.74	32°08'17.050"N	103°44'31.284"W	0.15	
6700.00	0.970	156.940	6696.15	-160.11	-157.97	70.45	724363.41	414466.04	32°08'17.033"N	103°44'31.276"W	0.17	
6800.00	0.800	155.520	6796.13	-161.54	-159.39	71.07	724364.03	414464.62	32°08'17.019"N	103°44'31.269"W	0.17	
6900.00	0.790	152.720	6896.12	-162.81	-160.63	71.67	724364.64	414463.37	32°08'17.007"N	103°44'31.262"W	0.04	
7000.00	0.770	149.910	6996.12	-164.02	-161.83	72.33	724365.29	414462.18	32°08'16.995"N	103°44'31.255"W	0.04	
7100.00	0.750	141.090	7096.11	-165.13	-162.92	73.07	724366.04	414461.09	32°08'16.984"N	103°44'31.246"W	0.12	
7200.00	0.730	132.270	7196.10	-166.10	-163.86	73.96	724366.92	414460.15	32°08'16.975"N	103°44'31.236"W	0.12	
7400.00	0.870	139.350	7396.08	-168.17	-165.87	75.89	724368.85	414458.14	32°08'16.955"N	103°44'31.214"W	0.09	
7500.00	0.760	137.940	7496.07	-169.27	-166.93	76.83	724369.79	414457.07	32°08'16.944"N	103°44'31.203"W	0.11	
7514.00	0.900	138.900	7510.07	-169.42	-167.09	76.96	724369.93	414456.92	32°08'16.942"N	103°44'31.201"W	1.00	
7562.00	0.800	156.400	7558.06	-170.02	-167.68	77.34	724370.31	414456.33	32°08'16.937"N	103°44'31.197"W	0.58	
7592.00	1.000	339.000	7588.06	-169.97	-167.63	77.33	724370.30	414456.38	32°08'16.937"N	103°44'31.197"W	6.00	
7622.00	4.100	341.000	7618.03	-168.70	-166.37	76.89	724369.86	414457.64	32°08'16.950"N	103°44'31.202"W	10.34	
7750.00	20.700	349.600	7742.61	-141.77	-139.60	71.28	724364.24	414484.41	32°08'17.215"N	103°44'31.266"W	13.01	
7781.00	22.900	349.500	7771.39	-130.39	-128.28	69.19	724362.15	414495.73	32°08'17.327"N	103°44'31.289"W	7.10	
7812.00	23.800	351.600	7799.85	-118.21	-116.16	67.18	724360.14	414507.85	32°08'17.447"N	103°44'31.312"W	3.95	
7844.00	25.400	354.500	7828.95	-104.95	-102.94	65.57	724358.54	414521.06	32°08'17.578"N	103°44'31.330"W	6.26	
7876.00	26.500	357.700	7857.72	-90.96	-88.97	64.63	724357.60	414535.03	32°08'17.716"N	103°44'31.340"W	5.56	
7906.00	27.500	0.800	7884.45	-77.35	-75.36	64.46	724357.42	414548.64	32°08'17.851"N	103°44'31.341"W	5.75	
7939.00	29.100	1.600	7913.51	-61.73	-59.72	64.79	724357.76	414564.28	32°08'18.006"N	103°44'31.336"W	4.98	
7970.00	30.700	359.300	7940.38	-46.29	-44.27	64.90	724357.87	414579.73	32°08'18.158"N	103°44'31.334"W	6.35	
8001.00	33.000	357.900	7966.71	-29.93	-27.92	64.50	724357.46	414596.08	32°08'18.320"N	103°44'31.337"W	7.79	
8034.00	35.500	357.000	7993.99	-11.36	-9.37	63.67	724356.63	414614.63	32°08'18.504"N	103°44'31.346"W	7.73	

devon

Actual Wellpath Report

No.1H AWP

Page 4 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.1H AWB
Facility	Cotton Draw 11 Fed Com No.1H		

WELLPATH DATA (152 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
8065.00	39.800	356.300	8018.53	7.56	9.53	62.55	724355.52	414633.53	32°08'18.691"N	103°44'31.358"W	13.94	
8097.00	43.900	357.500	8042.36	28.90	30.85	61.41	724354.37	414654.84	32°08'18.902"N	103°44'31.370"W	13.05	
8128.00	48.000	359.000	8063.91	51.18	53.11	60.74	724353.70	414677.11	32°08'19.122"N	103°44'31.376"W	13.67	
8160.00	50.000	0.400	8084.90	75.32	77.26	60.62	724353.58	414701.25	32°08'19.361"N	103°44'31.376"W	7.07	
8190.00	52.300	1.300	8103.72	98.65	100.62	60.97	724353.93	414724.61	32°08'19.592"N	103°44'31.370"W	8.01	
8223.00	54.200	1.400	8123.47	125.05	127.05	61.59	724354.56	414751.04	32°08'19.854"N	103°44'31.361"W	5.76	
8254.00	58.100	2.000	8140.73	150.74	152.78	62.36	724355.32	414776.77	32°08'20.108"N	103°44'31.351"W	12.68	
8285.00	62.500	2.400	8156.09	177.60	179.68	63.39	724356.36	414803.67	32°08'20.375"N	103°44'31.337"W	14.24	
8317.00	67.700	2.300	8169.55	206.54	208.67	64.58	724357.55	414832.66	32°08'20.661"N	103°44'31.321"W	16.25	
8349.00	72.200	2.800	8180.52	236.51	238.69	65.92	724358.89	414862.68	32°08'20.958"N	103°44'31.304"W	14.14	
8381.00	76.300	3.700	8189.21	267.18	269.44	67.67	724360.63	414893.42	32°08'21.262"N	103°44'31.281"W	13.10	
8411.00	81.600	3.100	8194.95	296.49	298.82	69.41	724362.38	414922.80	32°08'21.553"N	103°44'31.259"W	17.78	
8443.00	85.300	1.500	8198.60	328.19	330.58	70.69	724363.65	414954.56	32°08'21.867"N	103°44'31.242"W	12.58	
8475.00	87.400	0.700	8200.64	360.08	362.50	71.30	724364.26	414986.48	32°08'22.183"N	103°44'31.233"W	7.02	
8506.00	89.200	358.500	8201.56	391.06	393.49	71.08	724364.05	415017.46	32°08'22.490"N	103°44'31.234"W	9.17	
8538.00	90.300	356.100	8201.70	423.05	425.45	69.57	724362.54	415049.42	32°08'22.806"N	103°44'31.249"W	8.25	
8569.00	90.600	354.900	8201.46	454.02	456.35	67.14	724360.11	415080.33	32°08'23.112"N	103°44'31.276"W	3.99	
8664.00	90.100	356.000	8200.88	548.90	551.05	59.61	724352.57	415175.02	32°08'24.049"N	103°44'31.357"W	1.27	
8759.00	90.000	357.200	8200.79	643.86	645.88	53.97	724346.94	415269.84	32°08'24.988"N	103°44'31.417"W	1.27	
8854.00	90.900	358.500	8200.05	738.86	740.81	50.41	724343.38	415364.76	32°08'25.928"N	103°44'31.452"W	1.66	
8948.00	90.000	359.100	8199.31	832.85	834.78	48.44	724341.41	415458.73	32°08'26.858"N	103°44'31.469"W	1.15	
9042.00	91.100	359.600	8198.41	926.82	928.77	47.37	724340.34	415552.72	32°08'27.788"N	103°44'31.475"W	1.29	
9136.00	89.400	357.900	8198.00	1020.81	1022.74	45.32	724338.29	415646.68	32°08'28.718"N	103°44'31.493"W	2.56	
9231.00	90.800	358.100	8197.83	1115.81	1117.68	42.01	724334.98	415741.62	32°08'29.657"N	103°44'31.526"W	1.49	
9325.00	92.300	359.100	8195.29	1209.77	1211.61	39.71	724332.68	415835.55	32°08'30.587"N	103°44'31.546"W	1.92	
9420.00	91.500	357.700	8192.14	1304.71	1306.52	37.06	724330.03	415930.45	32°08'31.526"N	103°44'31.571"W	1.70	
9515.00	91.100	355.200	8189.98	1399.63	1401.30	31.18	724324.15	416025.23	32°08'32.464"N	103°44'31.634"W	2.66	
9609.00	90.400	356.500	8188.75	1493.54	1495.05	24.38	724317.35	416118.97	32°08'33.392"N	103°44'31.707"W	1.57	
9704.00	90.700	356.600	8187.84	1588.50	1589.87	18.66	724311.63	416213.78	32°08'34.331"N	103°44'31.767"W	0.33	
9798.00	91.000	356.900	8186.45	1682.46	1683.71	13.33	724306.30	416307.62	32°08'35.260"N	103°44'31.823"W	0.45	
9893.00	89.300	355.500	8186.20	1777.40	1778.49	7.04	724300.01	416402.40	32°08'36.198"N	103°44'31.890"W	2.32	
9987.00	88.600	356.000	8187.92	1871.29	1872.22	0.07	724293.04	416496.12	32°08'37.126"N	103°44'31.965"W	0.92	
10082.00	87.300	356.300	8191.32	1966.17	1966.94	-6.30	724286.67	416590.83	32°08'38.063"N	103°44'32.033"W	1.40	
10176.00	86.900	357.000	8196.07	2060.01	2060.66	-11.79	724281.18	416684.55	32°08'38.991"N	103°44'32.091"W	0.86	
10272.00	86.700	357.800	8201.43	2155.85	2156.41	-16.14	724276.83	416780.29	32°08'39.939"N	103°44'32.136"W	0.86	
10366.00	87.000	358.700	8206.60	2249.71	2250.22	-19.00	724273.97	416874.10	32°08'40.867"N	103°44'32.163"W	1.01	
10461.00	88.300	359.100	8210.49	2344.62	2345.12	-20.82	724272.15	416969.00	32°08'41.806"N	103°44'32.178"W	1.43	
10556.00	89.200	359.700	8212.57	2439.58	2440.10	-21.82	724271.15	417063.96	32°08'42.746"N	103°44'32.184"W	1.14	
10650.00	89.700	359.900	8213.47	2533.54	2534.09	-22.15	724270.82	417157.95	32°08'43.676"N	103°44'32.181"W	0.57	
10745.00	90.400	358.300	8213.39	2628.52	2629.07	-23.64	724269.33	417252.93	32°08'44.616"N	103°44'32.193"W	1.84	
10839.00	89.400	356.000	8213.55	2722.50	2722.95	-28.31	724264.66	417346.80	32°08'45.545"N	103°44'32.241"W	2.67	
10934.00	89.500	356.600	8214.46	2817.44	2817.75	-34.44	724258.53	417441.59	32°08'46.484"N	103°44'32.306"W	0.64	
11028.00	90.000	356.900	8214.87	2911.41	2911.60	-39.77	724253.20	417535.44	32°08'47.413"N	103°44'32.362"W	0.62	
11123.00	90.300	357.900	8214.62	3006.40	3006.50	-44.08	724248.89	417630.33	32°08'48.352"N	103°44'32.406"W	1.10	
11217.00	91.400	357.400	8213.23	3100.38	3100.40	-47.93	724245.04	417724.24	32°08'49.281"N	103°44'32.445"W	1.29	



Actual Wellpath Report

No.1H AWP

Page 5 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.1H AWB
Facility	Cotton Draw 11 Fed Com No.1H		

WELLPATH DATA (152 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
11312.00	91.600	356.700	8210.74	3195.33	3195.25	-52.82	724240.15	417819.07	32°08'50.220"N	103°44'32.496"W	0.77	
11406.00	90.900	355.900	8208.69	3289.25	3289.03	-58.89	724234.09	417912.85	32°08'51.149"N	103°44'32.561"W	1.13	
11501.00	90.500	355.100	8207.53	3384.14	3383.73	-66.34	724226.63	418007.54	32°08'52.086"N	103°44'32.641"W	0.94	
11596.00	89.800	355.700	8207.28	3479.02	3478.42	-73.96	724219.02	418102.23	32°08'53.023"N	103°44'32.724"W	0.97	
11690.00	90.000	355.700	8207.45	3572.93	3572.15	-81.01	724211.97	418195.96	32°08'53.951"N	103°44'32.800"W	0.21	
11785.00	90.900	356.900	8206.70	3667.88	3666.95	-87.14	724205.84	418290.75	32°08'54.890"N	103°44'32.865"W	1.58	
11879.00	90.800	356.400	8205.30	3761.83	3760.78	-92.63	724200.35	418384.57	32°08'55.818"N	103°44'32.923"W	0.54	
11974.00	89.200	356.500	8205.30	3856.78	3855.59	-98.51	724194.46	418479.38	32°08'56.757"N	103°44'32.985"W	1.69	
12068.00	90.200	357.100	8205.80	3950.75	3949.44	-103.76	724189.22	418573.23	32°08'57.686"N	103°44'33.040"W	1.24	
12163.00	89.300	356.600	8206.21	4045.73	4044.30	-108.98	724184.00	418668.08	32°08'58.625"N	103°44'33.095"W	1.08	
12257.00	89.900	356.700	8206.87	4139.69	4138.13	-114.47	724178.50	418761.91	32°08'59.554"N	103°44'33.153"W	0.65	
12352.00	89.500	356.400	8207.37	4234.65	4232.96	-120.19	724172.79	418856.73	32°09'00.492"N	103°44'33.213"W	0.53	
12447.00	89.500	356.400	8208.19	4329.60	4327.77	-126.15	724166.82	418951.53	32°09'01.431"N	103°44'33.277"W	0.00	
12541.00	89.100	357.000	8209.34	4423.56	4421.61	-131.56	724161.41	419045.36	32°09'02.359"N	103°44'33.334"W	0.77	
12636.00	89.300	357.800	8210.67	4518.54	4516.50	-135.87	724157.10	419140.25	32°09'03.299"N	103°44'33.378"W	0.87	
12695.00	89.700	357.800	8211.18	4577.53	4575.45	-138.14	724154.84	419199.20	32°09'03.882"N	103°44'33.400"W	0.68	
12746.00	89.700	357.800	8211.45	4628.53	4626.41	-140.10	724152.88	419250.16	32°09'04.387"N	103°44'33.420"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.1H PBHL		8176.00	4628.68	-26.33	724266.64	419252.43	32°09'04.403"N	103°44'32.096"W	point
No.1H PBHL Rev.A		8185.00	4626.48	-145.39	724147.59	419250.22	32°09'04.387"N	103°44'33.481"W	circle

WELLPATH COMPOSITION - Ref Wellbore: No.1H AWB Ref Wellpath: No.1H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	7500.00	Generic gyro - northseeking (Standard)	Ves Gyro <100-7613>	No.1H AWB
7500.00	12695.00	NaviTrak (Standard)	BHI MWD NaviTrak 8 3/4" Hole <7514-12695> (12746)Proj to Bit	No.1H AWB
12695.00	12746.00	Blind Drilling (std)	Projection to bit	No.1H AWB

Stimulations Summary

District PERMIAN BASIN		County EDDY		Field Name PADUCA			Project Group PB NEW MEXICO			State/Province NM					
Surface Legal Location SEC11 T25S R31E		API/UWI 3001539729		Latitude (DMS) 32° 8' 18.6" N		Longitude (DMS) 103° 44' 32.086" ...		Ground Elev 3,418.50		KB - GL (ft) 25.00		Orig KB Elev (ft) 3,443.50		TH Elev (ft)	
HYDRAULIC FRAC, 5/29/2012 07:45, DELAWARE, ST01, 12,222.0 ftKB - 12,746.0 ftKB, BHI, 282198 LBS; White 9472 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	5103.70	198.0	547.0	3,555.0	853.0	5,014.0	70	5,785.0	81	4.00					
HYDRAULIC FRAC, 5/29/2012 11:35, DELAWARE, ST01, 11,454.0 ftKB - 11,968.0 ftKB, BHI, 298063 LBS; White 10107 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	5243.10	406.0	558.0	3,770.0	925.0	4,579.0	77	5,568.0	81	4.00					
HYDRAULIC FRAC, 5/29/2012 14:55, DELAWARE, ST01, 10,686.0 ftKB - 11,200.0 ftKB, BHI, 314230 LBS; White 9409 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	5185.00	384.0	465.0	4,393.0	877.0	4,997.0	77	5,822.0	81	4.00					
HYDRAULIC FRAC, 5/29/2012 18:22, DELAWARE, ST01, 9,918.0 ftKB - 10,432.0 ftKB, BHI, 306958 LBS; White 9376 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	5235.60	375.0	613.0	4,166.0	1,107.0	4,887.0	74	5,919.0	81	4.00					
HYDRAULIC FRAC, 5/30/2012 08:11, DELAWARE, ST01, 9,150.0 ftKB - 9,664.0 ftKB, BHI, 323512 LBS; White 9429 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	5336.70	365.0	530.0	5,570.0	814.0	4,589.0	78	5,542.0	81	4.00					
HYDRAULIC FRAC, 5/30/2012 14:11, DELAWARE, ST01, 9,150.0 ftKB - 9,664.0 ftKB, BHI, White 11094 LBS; 289770 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	4340.40	305.0	226.0	4,125.0	379.0	4,135.0	73	5,767.0	80	4.00					