

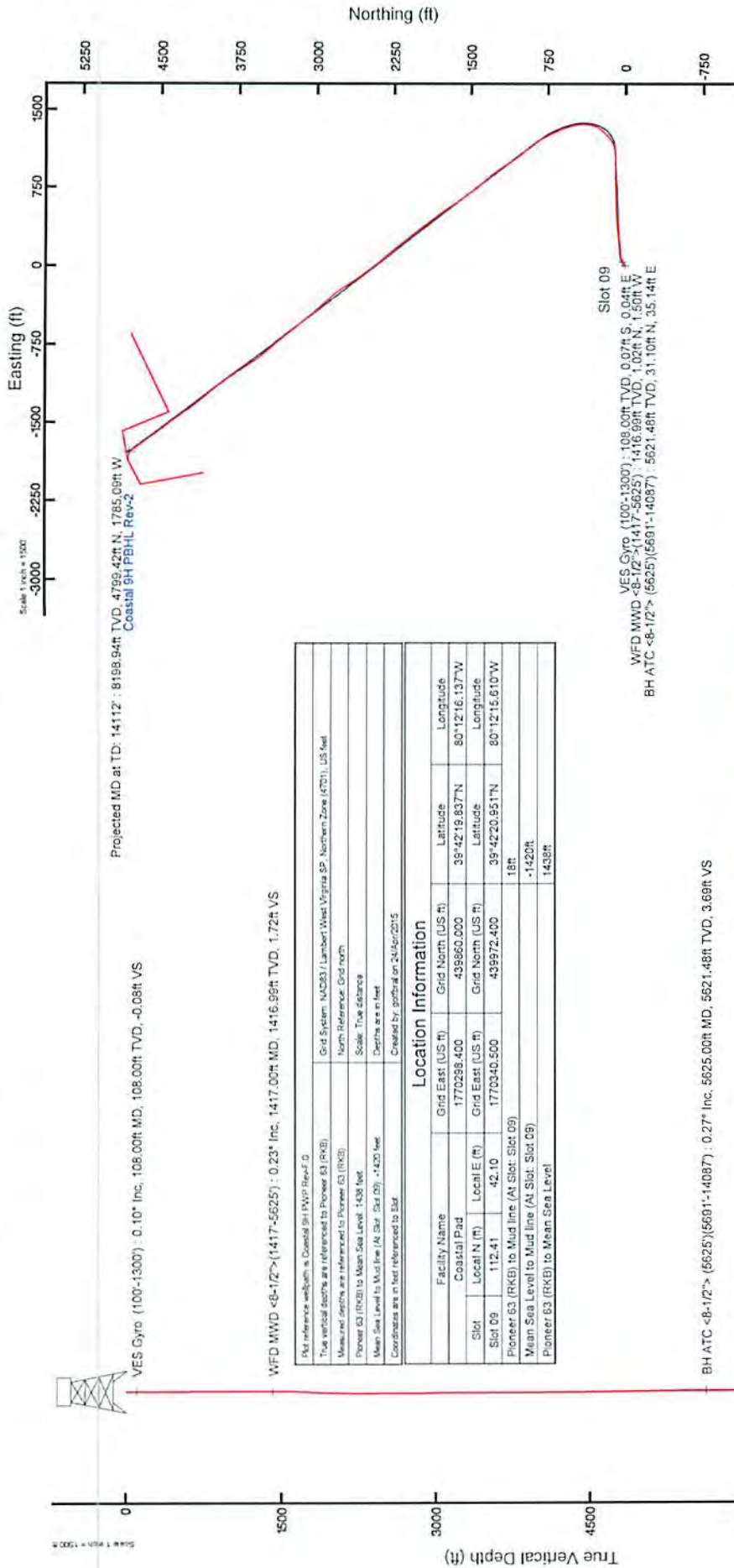


NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
 Field: Monongalia
 Facility: Coastal Pad
 Slot: Slot 09
 Well: Coastal 9H
 Wellbore: Coastal 9H PWB



61.01676



Projected MD at TD: 14112' : 8199.94ft TVD, 4799.42ft N, 1785.08ft W
 Coastal 9H PBHL Rev-2

VES Gyro (100-13000) : 0.10° Inc, 108.00ft MD, 108.00ft TVD, -0.08ft VS

WFD MWD <8-1/2> (1417-5625) : 0.23° Inc, 1417.00ft MD, 1416.99ft TVD, 1.72ft VS

MD reference wellbore is Coastal 9H PWB Rev-2

Total vertical depths are referenced to Pioneer 63 (RXB)

Measured depths are referenced to Pioneer 63 (RXB)

Pioneer 63 (RXB) to Mean Sea Level: 1438 feet

Mean Sea Level to Mud line (At Slot 09): 420 feet

Coordinates are in feet referenced to Star

Created by: geobase on 24/04/2015

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Coastal Pad	1770298.400	439860.000	39°42'19.937"N	80°12'16.137"W	
Slot	Local E (ft)	Grid East (US ft)	Latitude	Longitude	
Pioneer 63 (RXB) to Mud line (At Slot 09)	112.41	42.10	39°42'20.951"N	80°12'15.610"W	
Mean Sea Level to Mud line (At Slot 09)	18ft				
Pioneer 63 (RXB) to Mean Sea Level	-1420ft				
	1438ft				

VES Gyro (100-13000) : 108.00ft TVD, 0.07ft S, 0.04ft E
 WFD MWD <8-1/2> (1417-5625) : 1416.99ft TVD, 1.02ft N, 1.50ft W
 BH ATC <8-1/2> (5625)(5691-14087) : 5621.48ft TVD, 31.10ft N, 35.14ft E

BH ATC <8-1/2> (5625)(5691-14087) : 0.27° Inc, 5625.00ft MD, 5621.48ft TVD, 3.69ft VS

API: 47-061-01676-0000
 Rig: Pioneer 63
 BHI Job #: 6977634
 Duration: 04.15.2015 - 04.22.2015

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Projected MD at TD: 14112' : 90.18° Inc, 14112.00ft MD, 8199.94ft TVD, 4907.28ft VS

BGGM (1945.0 to 2016.0) Dip: 67.03° Field: 52291 RT
 Magnetic North is 8.94 degrees West of True North (at 07Apr 2015)
 Grid North is 0.45 degrees West of True North
 To correct azimuth from True to Grid add 0.45 degrees
 To correct azimuth from Magnetic to Grid subtract 8.49 degrees

Scale 1 inch = 1500 ft

Vertical Section (ft)

Azimuth 323.00° with reference 0.00 N, 0.00 E

10/30/2015

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ACTUAL WELLPATH REPORT (CSV version)
 Prepared by Baker Hughes
 Software System: WellArchitect® 4.0.1

REFERENCE WELLPATH IDENTIFICATION

Operator: NORTHEAST NATURAL ENERGY, LLC
 Area: Monongalia County, WV
 Field: Monongalia
 Facility: Coastal Pad
 Slot: Coastal 09
 Well: Coastal 9H

Wellbore: Coastal 9H AWB
 Wellpath: Coastal 9H AWP Proj: 14112'
 Sidetrack: (none)

REPORT SETUP INFORMATION

Projection System: NAD83 / Lambert West Virginia SP, Northern Zone (4703), US feet
 North Reference: Grid
 Scale: 0.999942
 Convergence at slot: 0.45° West
 Software System: WellArchitect® 4.0.1
 User: Gottfrral
 Report Generated: 24/Apr/2015 at 08:53
 DataBase/Source file: WANorthEast/ev7677.xml

WELLPATH LOCATION

Slot Location: Local North Latitude Longitude
 Facility Reference Pt: [ft] [ft] [ft] 112.41 42.1 1770340.5 439972.4 39°42'20.951"N 80°12'15.610"W
 Field Reference Pt: 1770298.4 439860 39°42'19.837"N 80°12'16.137"W
 1777685.7 440640.65 39°42'28.114"N 80°10'41.690"W

WELLPATH DATUM

Calculation method: Minimum curvature
 Horizontal Reference Point: Slot
 MID Reference Point: Pioneer 63 (RKB)
 Field Vertical Reference: Pioneer 63 (RKB)
 Mean Sea Level: Mean Sea Level
 18.00ft
 1438.00ft
 18.00ft
 N 0.00, E 0.00 ft
 323.00°

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WELLPATH DATA † = 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	Closure Di [ft]	Closure Di DLS [°/100ft]
	0	0	0	153.03	0	0	0	1770340.5	439972.4	39°42'20.951"N	80°12'15.610"W	0	0
	18	0	153.03	153.03	18	0	0	1770340.5	439972.4	39°42'20.951"N	80°12'15.610"W	0	0
	108	0.1	153.03	108	-0.08	-0.08	0.04	1770340.54	439972.33	39°42'20.950"N	80°12'15.609"W	0.08	153.03
	208	0.19	206.32	208	-0.24	-0.24	-0.3	1770340.5	439972.1	39°42'20.948"N	80°12'15.610"W	0.3	179.675
	308	0.24	270.21	308	-0.19	-0.19	-0.44	1770340.22	439971.96	39°42'20.947"N	80°12'15.613"W	0.53	212.34
	408	0.21	49.88	408	-0.05	-0.05	-0.33	1770340.15	439972.07	39°42'20.948"N	80°12'15.614"W	0.48	227.134
	508	0.16	55.73	508	-0.05	-0.13	-0.1	1770340.34	439972.27	39°42'20.950"N	80°12'15.611"W	0.16	216.454
	608	0.36	324.23	608	0.26	0.2	-0.16	1770340.04	439973.01	39°42'20.957"N	80°12'15.612"W	0.26	321.44
	708	0.22	322.69	708	0.77	0.61	-0.46	1770340.04	439973.01	39°42'20.957"N	80°12'15.616"W	0.77	322.894

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808	0.24	293.65	808	1.14	0.85	-0.77	1770339.73	439973.25	39°42'20.959"N	80°12'15.620"W	1.15	317.743	0.12
908	0.25	290.58	907.99	1.51	1.01	-1.17	1770339.33	439973.41	39°42'20.961"N	80°12'15.625"W	1.54	310.857	0.03
1008	0.24	296.57	1007.99	1.88	1.18	-1.56	1770338.94	439973.58	39°42'20.963"N	80°12'15.630"W	1.96	307.124	0.03
1108	0.13	88.75	1107.99	2.01	1.29	-1.63	1770338.87	439973.69	39°42'20.964"N	80°12'15.631"W	2.08	308.214	0.36
1208	0.05	143.67	1207.99	1.91	1.26	-1.5	1770339	439973.66	39°42'20.963"N	80°12'15.629"W	1.96	310.2	0.11
1308	0.19	152.57	1307.99	1.7	1.08	-1.39	1770339.11	439973.48	39°42'20.962"N	80°12'15.628"W	1.76	307.819	0.14
1417	0.23	297.53	1416.99	1.72	1.02	-1.5	1770339.39	439973.42	39°42'20.961"N	80°12'15.629"W	1.82	304.2	0.37
1438	0.46	13.5	1437.99	1.81	1.12	-1.52	1770338.98	439973.52	39°42'20.962"N	80°12'15.629"W	1.89	306.442	2.2
1471	1.05	27.87	1470.99	2.03	1.52	-1.35	1770339.15	439973.92	39°42'20.966"N	80°12'15.627"W	2.03	318.399	1.86
1538	3.31	50.72	1537.94	2.36	3.29	0.44	1770340.94	439975.69	39°42'20.983"N	80°12'15.604"W	3.32	7.546	3.55
1633	7.94	68.53	1632.46	0.71	7.43	8.67	1770349.17	439979.83	39°42'21.025"N	80°12'15.499"W	11.42	49.412	5.15
1731	8.59	69.16	1729.44	-3.13	12.51	21.81	1770362.31	439984.91	39°42'21.076"N	80°12'15.332"W	25.14	60.163	0.67
1764	7.68	71.78	1762.1	-4.58	14.05	26.26	1770366.76	439986.45	39°42'21.092"N	80°12'15.275"W	29.78	61.849	2.78
1794	7.68	75.21	1791.83	-6.03	15.17	30.15	1770370.65	439987.57	39°42'21.103"N	80°12'15.225"W	33.75	63.294	1.2
1826	7.51	75.22	1823.55	-7.63	16.25	34.24	1770374.74	439988.65	39°42'21.114"N	80°12'15.173"W	37.9	64.615	0.53
1857	6.47	75.45	1854.32	-9.06	17.2	37.89	1770378.39	439989.6	39°42'21.124"N	80°12'15.127"W	41.61	65.58	3.36
1889	4.99	76.42	1886.16	-10.3	17.98	40.99	1770381.48	439990.38	39°42'21.132"N	80°12'15.087"W	44.76	66.311	4.63
1920	3.73	71.31	1917.07	-11.17	18.61	43.26	1770383.75	439991.39	39°42'21.138"N	80°12'15.058"W	47.09	66.727	4.19
1952	2.93	77.07	1949.01	-11.84	19.1	45.02	1770385.52	439991.5	39°42'21.143"N	80°12'15.036"W	48.9	67.012	2.94
1984	2.63	75.74	1980.98	-12.45	19.46	46.5	1770387.17	439991.85	39°42'21.147"N	80°12'15.017"W	50.41	67.295	0.66
2016	2.87	79.02	2012.94	-13.08	19.79	48	1770388.5	439992.19	39°42'21.150"N	80°12'14.997"W	51.92	67.594	0.9
2047	3.38	79.26	2043.89	-13.83	20.11	49.66	1770390.16	439992.51	39°42'21.154"N	80°12'14.976"W	53.57	67.956	1.65
2110	3.35	85.12	2106.79	-15.63	20.61	53.32	1770393.81	439993.01	39°42'21.159"N	80°12'14.930"W	57.16	68.866	0.55
2206	1.63	96.51	2202.69	-18.06	20.69	57.47	1770397.97	439993.09	39°42'21.160"N	80°12'14.876"W	61.08	70.196	1.86
2301	0.44	288.89	2297.68	-18.69	20.66	58.47	1770398.96	439993.06	39°42'21.160"N	80°12'14.864"W	62.01	70.539	2.17
2363	1.25	282.14	2359.67	-17.98	20.88	57.58	1770398.08	439993.28	39°42'21.162"N	80°12'14.875"W	61.25	70.07	1.31
2458	0.76	315.52	2454.66	-16.57	21.55	56.13	1770396.62	439993.94	39°42'21.168"N	80°12'14.894"W	60.12	68.999	0.78
2553	0.67	66.85	2549.66	-16.08	22.21	56.19	1770397.66	439994.61	39°42'21.175"N	80°12'14.893"W	60.43	68.431	1.24
2648	0.62	63.9	2644.65	-16.31	22.66	57.17	1770397.66	439995.06	39°42'21.179"N	80°12'14.880"W	61.49	68.379	0.06
2742	0.55	36.25	2738.65	-16.27	23.25	57.89	1770398.39	439995.64	39°42'21.185"N	80°12'14.871"W	62.38	68.122	0.31
2764	0.48	12.37	2760.65	-16.18	23.42	57.97	1770398.47	439995.82	39°42'21.187"N	80°12'14.870"W	62.52	68.001	1.02
2846	0.72	332.5	2842.64	-15.45	24.21	57.81	1770398.3	439996.61	39°42'21.195"N	80°12'14.872"W	62.67	67.273	0.57
2909	1.03	321.19	2905.63	-14.5	25.01	57.27	1770397.77	439997.4	39°42'21.203"N	80°12'14.879"W	62.49	66.413	0.56
2972	0.88	325.67	2968.62	-13.45	25.85	56.64	1770397.14	439998.24	39°42'21.211"N	80°12'14.888"W	62.26	65.472	0.27
3035	0.95	331.64	3031.62	-12.45	26.71	56.12	1770396.62	439999.1	39°42'21.219"N	80°12'14.894"W	62.15	64.553	0.19
3098	0.58	313.63	3094.61	-11.62	27.39	55.64	1770396.14	439999.78	39°42'21.226"N	80°12'14.900"W	62.02	63.796	0.69
3161	0.54	242.34	3157.61	-11.25	27.47	55.15	1770395.65	439999.87	39°42'21.227"N	80°12'14.907"W	61.61	63.574	1.04
3224	0.49	255.85	3220.61	-11.1	27.26	54.62	1770395.12	439999.66	39°42'21.225"N	80°12'14.913"W	61.05	63.476	0.21
3286	0.55	257.76	3282.6	-10.87	27.14	54.08	1770394.57	439999.53	39°42'21.223"N	80°12'14.920"W	60.5	63.353	0.1
3349	0.56	253.81	3345.6	-10.64	26.99	53.49	1770393.98	439999.38	39°42'21.222"N	80°12'14.928"W	59.91	63.227	0.06
3413	0.52	256.7	3409.6	-10.41	26.83	52.9	1770393.4	439999.23	39°42'21.220"N	80°12'14.935"W	59.32	63.106	0.08
3476	0.48	252.71	3472.6	-10.21	26.69	52.37	1770392.87	439999.09	39°42'21.219"N	80°12'14.942"W	58.78	62.998	0.08
3539	0.42	244.43	3535.59	-10.07	26.51	51.91	1770392.1	439998.91	39°42'21.217"N	80°12'14.948"W	58.29	62.949	0.14
3602	0.51	233.53	3598.59	-10.02	26.24	51.48	1770391.98	439998.64	39°42'21.214"N	80°12'14.954"W	57.78	62.988	0.2
3665	0.51	232.9	3661.59	-10.02	25.91	51.03	1770391.53	439998.31	39°42'21.211"N	80°12'14.959"W	57.23	63.083	0.01
3729	0.54	235.3	3725.59	-10.01	25.56	50.55	1770391.05	439997.96	39°42'21.208"N	80°12'14.965"W	56.65	63.176	0.06
3792	0.42	239.08	3788.58	-9.97	25.28	50.11	1770390.61	439997.67	39°42'21.205"N	80°12'14.971"W	56.13	63.234	0.2
3856	0.24	249.13	3852.58	-9.91	25.11	49.79	1770390.28	439997.51	39°42'21.203"N	80°12'14.975"W	55.76	63.237	0.29
3919	0.31	238.44	3915.58	-9.86	24.97	49.52	1770390.01	439997.37	39°42'21.202"N	80°12'14.979"W	55.46	63.228	0.14
3983	0.22	254.95	3979.58	-9.79	24.85	49.25	1770389.5	439997.25	39°42'21.200"N	80°12'14.982"W	55.16	63.227	0.18
4046	0.24	263.8	4042.58	-9.68	24.8	49	1770389.5	439997.2	39°42'21.200"N	80°12'14.985"W	54.92	63.153	0.06
4109	0.37	273.28	4105.58	-9.48	24.8	48.67	1770389.17	439997.2	39°42'21.200"N	80°12'14.989"W	54.62	62.997	0.22
4172	0.29	287.98	4168.58	-9.22	24.86	48.31	1770388.81	439997.26	39°42'21.200"N	80°12'14.994"W	54.34	62.77	0.18
4235	0.39	300.65	4231.58	-8.89	25.02	47.98	1770388.48	439997.42	39°42'21.202"N	80°12'14.998"W	54.11	62.458	0.2
4298	0.51	292	4294.58	-8.45	25.23	47.53	1770388.03	439997.63	39°42'21.204"N	80°12'15.004"W	53.82	62.037	0.22
4361	0.44	301.53	4357.57	-7.99	25.47	47.07	1770387.56	439997.86	39°42'21.206"N	80°12'15.010"W	53.52	61.584	0.17

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4425	0.65	292.14	4421.57	-7.45	25.73	46.52	1770387.02	439998.13	39°42'21.209"N	80°12'15.017"W	53.16	61.053	0.36
4488	0.65	290.89	4484.57	-6.84	25.99	45.86	1770386.35	439998.39	39°42'21.211"N	80°12'15.026"W	52.71	60.454	0.02
4552	0.77	288.86	4548.56	-6.17	26.26	45.11	1770385.61	439998.66	39°42'21.214"N	80°12'15.035"W	52.2	59.793	0.19
4616	0.67	285.19	4612.56	-5.52	26.5	44.34	1770384.84	439998.93	39°42'21.216"N	80°12'15.045"W	51.66	59.138	0.17
4679	0.69	287.37	4675.55	-4.92	26.71	43.63	1770384.12	439999.11	39°42'21.218"N	80°12'15.054"W	51.15	58.524	0.05
4742	0.73	296.85	4738.55	-4.26	27	42.91	1770383.4	439999.4	39°42'21.221"N	80°12'15.063"W	50.7	57.815	0.2
4805	0.75	288.71	4801.54	-3.55	27.32	42.16	1770382.62	439999.72	39°42'21.224"N	80°12'15.073"W	50.23	57.057	0.17
4867	0.96	287.18	4863.54	-2.8	27.6	41.28	1770381.77	440000	39°42'21.227"N	80°12'15.084"W	49.65	56.23	0.34
4930	0.89	293.25	4926.53	-1.95	27.95	40.32	1770380.82	440000.35	39°42'21.230"N	80°12'15.097"W	49.06	55.272	0.19
4993	0.99	291.18	4989.52	-1.06	28.34	39.37	1770379.86	440000.74	39°42'21.234"N	80°12'15.109"W	48.5	54.25	0.17
5057	1.11	282.63	5053.51	-0.12	28.67	38.24	1770378.74	440001.07	39°42'21.237"N	80°12'15.123"W	47.8	53.139	0.31
5120	0.82	284.07	5116.5	0.7	28.92	37.21	1770377.71	440001.32	39°42'21.240"N	80°12'15.136"W	47.13	52.149	0.46
5183	0.59	284.71	5179.49	1.31	29.11	36.46	1770376.96	440001.51	39°42'21.241"N	80°12'15.146"W	46.66	51.397	0.37
5246	0.56	295.76	5242.49	1.83	29.33	35.87	1770376.37	440001.72	39°42'21.246"N	80°12'15.154"W	46.33	50.732	0.18
5310	0.56	298.19	5306.49	2.4	29.61	35.31	1770375.81	440002.01	39°42'21.249"N	80°12'15.166"W	46.08	50.02	0.04
5373	0.35	328.87	5369.49	2.87	29.92	34.94	1770375.44	440002.32	39°42'21.249"N	80°12'15.166"W	46	49.428	0.5
5435	0.28	19.84	5431.49	3.14	30.22	34.9	1770375.39	440002.62	39°42'21.252"N	80°12'15.166"W	46.16	49.103	0.45
5499	0.23	17.43	5495.48	3.3	30.49	34.99	1770375.48	440002.89	39°42'21.255"N	80°12'15.165"W	46.41	48.925	0.08
5562	0.32	14.25	5558.48	3.48	30.78	35.07	1770375.57	440003.18	39°42'21.258"N	80°12'15.164"W	46.66	48.721	0.14
5625	0.27	12.49	5621.48	3.69	31.1	35.14	1770375.64	440003.5	39°42'21.261"N	80°12'15.163"W	46.93	48.493	0.08
5691	0.29	12.37	5687.48	3.9	31.42	35.21	1770375.71	440003.81	39°42'21.264"N	80°12'15.162"W	47.19	48.262	0.03
5735	0.03	156.9	5731.48	3.96	31.51	35.24	1770375.74	440003.91	39°42'21.265"N	80°12'15.162"W	47.28	48.196	0.72
5799	0	81.51	5795.48	3.94	31.5	35.25	1770375.75	440003.9	39°42'21.265"N	80°12'15.162"W	47.27	48.215	0.05
5862	0.07	277.34	5858.48	3.97	31.5	35.21	1770375.73	440003.9	39°42'21.265"N	80°12'15.162"W	47.25	48.18	0.11
5925	0.07	291.09	5921.48	4.03	31.52	35.14	1770375.63	440003.92	39°42'21.265"N	80°12'15.163"W	47.2	48.103	0.03
5988	0.03	71.23	5984.48	4.06	31.54	35.12	1770375.61	440003.94	39°42'21.265"N	80°12'15.164"W	47.2	48.069	0.15
6050	0	81.51	6046.48	4.05	31.55	35.13	1770375.63	440003.94	39°42'21.265"N	80°12'15.163"W	47.22	48.077	0.05
6113	0.03	109.95	6109.48	4.04	31.54	35.15	1770375.64	440003.94	39°42'21.265"N	80°12'15.163"W	47.22	48.095	0.05
6176	0.03	235.3	6172.48	4.02	31.53	35.15	1770375.65	440003.91	39°42'21.265"N	80°12'15.163"W	47.21	48.11	0.08
6239	0.06	256.48	6235.48	4.04	31.51	35.1	1770375.6	440003.91	39°42'21.273"N	80°12'15.133"W	47.17	48.088	0.05
6303	4.52	72.6	6299.42	3.21	32.26	37.48	1770377.98	440004.65	39°42'21.273"N	80°12'15.133"W	49.45	49.283	7.16
6366	10.83	66.02	6361.82	3.04	35.41	45.26	1770385.76	440007.8	39°42'21.304"N	80°12'15.034"W	57.47	51.966	10.1
6429	12.94	70.72	6423.47	-2.44	40.14	57.33	1770397.83	440012.54	39°42'21.352"N	80°12'14.880"W	69.99	55.001	3.68
6492	16.23	81.96	6484.44	-8.86	43.7	72.71	1770413.21	440016.1	39°42'21.389"N	80°12'14.684"W	84.84	58.992	6.87
6556	22.25	89.98	6544.85	-20.49	44.96	93.71	1770434.2	440017.36	39°42'21.403"N	80°12'14.415"W	103.94	64.369	10.25
6619	27.51	89.88	6601.98	-36.41	44.99	120.2	1770460.7	440017.39	39°42'21.405"N	80°12'14.076"W	128.35	69.478	8.35
6683	33.02	86.06	6657.24	-54.81	46.22	152.41	1770492.9	440018.62	39°42'21.420"N	80°12'13.664"W	159.27	73.128	9.12
6746	39.54	82.93	6708.01	-74.2	49.88	189.48	1770529.97	440022.27	39°42'21.459"N	80°12'13.190"W	195.93	75.252	10.76
6809	45.27	80.71	6754.51	-94.63	55.96	231.5	1770571.99	440028.36	39°42'21.522"N	80°12'12.653"W	238.17	76.41	9.4
6871	46.29	80.96	6797.75	-115.37	63.04	275.37	1770615.85	440035.44	39°42'21.595"N	80°12'12.093"W	282.49	77.106	1.67
6935	46.28	84.28	6841.98	-138.23	68.98	321.23	1770661.71	440041.38	39°42'21.622"N	80°12'11.507"W	328.55	77.881	3.75
6998	46.31	86.55	6885.52	-162.64	72.62	366.62	1770707.1	440045.02	39°42'21.697"N	80°12'10.926"W	373.74	78.796	2.61
7061	46.13	86.42	6929.11	-187.74	75.41	412.02	1770752.5	440047.8	39°42'21.728"N	80°12'10.346"W	418.87	79.629	0.32
7124	46.37	85.71	6972.67	-212.57	78.53	457.42	1770797.9	440050.93	39°42'21.762"N	80°12'09.765"W	464.12	80.258	0.9
7187	46.35	86.09	7016.15	-237.33	81.79	502.9	1770843.37	440054.19	39°42'21.798"N	80°12'09.183"W	509.51	80.762	0.44
7250	46.31	88.08	7059.65	-262.87	84.11	548.41	1770888.87	440056.5	39°42'21.825"N	80°12'08.601"W	554.82	81.28	2.29
7313	46.36	88.54	7103.15	-289.21	85.45	593.96	1770934.42	440057.85	39°42'21.841"N	80°12'08.019"W	600.07	81.813	0.53
7377	46.35	88.24	7147.32	-316.03	86.75	640.25	1770980.71	440059.15	39°42'21.858"N	80°12'07.427"W	646.1	82.283	0.34
7439	46.26	87.42	7190.16	-341.63	88.45	685.05	1771025.51	440060.85	39°42'21.878"N	80°12'06.854"W	690.73	82.643	0.97
7502	46.26	87.13	7233.71	-367.26	90.62	730.51	1771070.97	440063.01	39°42'21.903"N	80°12'06.272"W	736.11	82.929	0.33
7565	45.94	87.84	7277.4	-392.97	92.61	775.86	1771116.32	440065.32	39°42'21.926"N	80°12'05.692"W	781.37	83.193	0.96
7628	46.34	88.79	7321.05	-419.23	93.94	821.27	1771161.72	440066.34	39°42'21.943"N	80°12'05.111"W	826.62	83.474	1.26
7691	46.22	90.58	7364.59	-446.42	94.19	866.79	1771207.24	440066.59	39°42'21.949"N	80°12'04.529"W	871.9	83.798	2.06
7754	46.35	90.94	7408.13	-474.31	93.59	912.33	1771252.77	440065.98	39°42'21.946"N	80°12'03.946"W	917.11	84.143	0.46
7817	46.42	89.4	7451.59	-501.86	93.45	957.93	1771298.38	440065.85	39°42'21.949"N	80°12'03.363"W	962.48	84.428	1.77
7880	46.28	88.51	7495.08	-528.63	94.29	1003.51	1771343.95	440066.68	39°42'21.960"N	80°12'02.780"W	1007.93	84.633	1.05

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7943	45.37	87.71	7538.98	-554.62	95.77	1048.67	1771389.11	440068.17	39°42'21.978"N	80°12'02.202"W	1053.03	84.782	1.71
8006	45.29	86.48	7583.27	-579.73	98.04	1093.41	1771433.85	440070.44	39°42'22.004"N	80°12'01.630"W	1097.8	84.876	1.39
8069	43.42	74.66	7628.39	-600.11	105.16	1136.72	1771477.15	440077.55	39°42'22.078"N	80°12'01.076"W	1141.57	84.715	13.43
8132	42.57	60.99	7674.57	-611.09	121.26	1176.32	1771516.75	440093.65	39°42'22.140"N	80°12'00.571"W	1182.55	84.115	14.84
8196	39.55	52.15	7722.87	-613.8	144.28	1211.38	1771551.81	440116.67	39°42'22.470"N	80°12'00.125"W	1219.94	83.208	10.22
8260	39.57	48.16	7772.21	-611.78	170.39	1242.66	1771583.09	440142.78	39°42'22.731"N	80°11'59.727"W	1254.29	82.193	3.97
8323	44.23	46.04	7819.1	-607.42	199.04	1273.45	1771613.87	440171.43	39°42'23.016"N	80°11'59.336"W	1288.91	81.116	7.73
8387	48.2	39.57	7863.4	-599.16	232.96	1304.74	1771645.16	440205.34	39°42'23.354"N	80°11'58.999"W	1325.37	79.877	9.57
8450	48.69	26.97	7905.28	-583.29	272.24	1330.49	1771670.91	440244.62	39°42'23.744"N	80°11'58.614"W	1358.05	78.436	14.97
8514	49.19	16.04	7947.39	-558.14	317.01	1348.11	1771688.53	440289.39	39°42'24.188"N	80°11'58.393"W	1384.88	76.767	12.89
8577	51.21	6.69	7987.77	-526	364.38	1357.57	1771697.99	440336.76	39°42'24.657"N	80°11'58.276"W	1405.62	74.976	11.84
8640	51.78	359.03	8027.03	-488.2	413.55	1360.02	1771700.43	440385.93	39°42'25.143"N	80°11'58.250"W	1421.5	73.087	9.55
8703	51.61	350.72	8086.12	-446.28	462.72	1355.61	1771696.03	440435.09	39°42'25.628"N	80°11'58.311"W	1432.41	71.153	10.35
8767	54.42	345.18	8104.64	-399.95	512.67	1344.9	1771685.32	440485.03	39°42'26.121"N	80°11'58.655"W	1444.21	69.015	8.19
8830	62.14	341.64	8137.74	-349.75	563.95	1329.55	1771669.97	440536.32	39°42'26.627"N	80°11'58.655"W	1444.21	67.015	13.15
8893	68.74	338.84	8163.92	-295.05	617.83	1310.16	1771650.58	440590.19	39°42'27.158"N	80°11'58.908"W	1448.52	64.753	11.23
8956	73.84	336.69	8184.12	-237.37	673.03	1287.57	1771627.99	440645.39	39°42'27.702"N	80°11'59.203"W	1452.86	62.403	8.72
9019	78.79	334.19	8199.03	-177.62	728.68	1262.12	1771602.55	440701.04	39°42'28.250"N	80°11'59.534"W	1457.37	60	8.75
9083	84.02	331.61	8208.59	-115.3	784.98	1233.3	1771573.73	440757.34	39°42'28.804"N	80°11'59.908"W	1461.93	57.524	9.09
9145	85.84	329.03	8214.07	-54.06	838.63	1202.72	1771543.15	440810.98	39°42'29.332"N	80°12'00.305"W	1466.24	55.113	5.08
9207	85.78	323.58	8218.57	7.65	890.06	1168.43	1771508.86	440862.41	39°42'29.837"N	80°12'00.749"W	1468.82	52.701	8.77
9271	85.78	319.95	8223.25	71.46	940.19	1128.94	1771469.37	440912.53	39°42'30.330"N	80°12'01.259"W	1469.17	50.212	5.66
9332	85.87	319.05	8227.69	132.18	986.45	1089.42	1771429.86	440958.79	39°42'30.784"N	80°12'01.769"W	1474.24	45.396	10.08
9395	91.2	322.5	8229.3	195.08	1035.21	1049.62	1771390.06	441007.55	39°42'31.263"N	80°12'02.284"W	1478.24	42.998	1.48
9458	90.12	326.7	8228.57	258.04	1086.55	1013.14	1771353.58	441058.89	39°42'31.767"N	80°12'03.666"W	1485.5	40.625	6.88
9522	89.66	326.61	8228.7	321.91	1140.02	977.96	1771318.4	441112.35	39°42'32.293"N	80°12'03.211"W	1502.01	38.335	1.68
9585	89.94	325.59	8228.92	384.81	1192.31	942.82	1771283.26	441164.23	39°42'33.314"N	80°12'04.133"W	1520.03	36.088	1.91
9648	89.82	324.39	8229.05	447.77	1243.9	906.68	1771209.33	441266.62	39°42'33.809"N	80°12'04.622"W	1558.9	33.874	4.03
9711	90.15	321.87	8229.07	510.77	1294.3	868.88	1771169.49	441315.42	39°42'34.288"N	80°12'05.137"W	1578.36	31.685	3.5
9774	90.43	319.68	8228.75	573.72	1343.1	829.04	1771129.06	441363.73	39°42'34.763"N	80°12'05.659"W	1599.35	29.543	1.25
9837	90.31	320.46	8228.34	636.63	1391.41	788.61	1771089.2	441412.51	39°42'35.242"N	80°12'06.174"W	1623.2	27.47	0.93
9900	90.18	321.03	8228.07	699.58	1440.19	748.74	1771012.6	441512.53	39°42'36.224"N	80°12'07.164"W	1680.49	23.576	2.92
9963	90.46	322.85	8227.72	762.57	1489.79	709.91	1770975.1	441564.38	39°42'36.734"N	80°12'07.649"W	1713.9	21.733	1.97
10026	90.28	323.49	8227.31	825.57	1540.22	672.14	1770939.26	441616.18	39°42'37.243"N	80°12'08.113"W	1749.55	20.015	1.91
10090	90.37	324.75	8226.95	889.55	1592.07	634.64	1770904.54	441668.74	39°42'37.760"N	80°12'08.562"W	1787.76	18.392	2.02
10153	90.68	325.91	8226.37	952.5	1643.88	598.8	1770869.57	441722.33	39°42'38.287"N	80°12'09.015"W	1828.26	16.822	0.99
10216	90.71	327.18	8225.61	1015.37	1696.44	564.07	1770833.8	441774.17	39°42'38.796"N	80°12'09.478"W	1868.19	15.312	3.68
10280	90.83	326.56	8224.75	1079.22	1750.03	529.1	1770796.4	441824.86	39°42'39.294"N	80°12'09.962"W	1907.85	13.826	2.18
10343	90.74	324.24	8223.88	1142.15	1801.88	493.33	1770758.42	441875.12	39°42'39.788"N	80°12'10.453"W	1948.19	12.388	0.33
10406	90.37	322.92	8223.27	1205.14	1852.57	455.93	1770720.6	441926.73	39°42'40.295"N	80°12'10.942"W	1991.07	11.005	2.66
10469	90.58	322.92	8222.75	1268.14	1902.83	417.95	1770683.27	441977.47	39°42'40.794"N	80°12'11.425"W	2034.28	9.701	3.1
10533	90.37	324.61	8222.22	1332.13	1954.45	380.12	1770644.7	442027.27	39°42'41.283"N	80°12'11.923"W	2077.39	8.421	1.62
10596	90.86	322.72	8221.54	1395.12	2005.19	342.79	1770605.19	442077.61	39°42'41.777"N	80°12'12.434"W	2121.91	7.166	0.52
10659	90.55	321.75	8220.77	1458.11	2054.99	304.21	1770567.13	442127.8	39°42'42.271"N	80°12'12.926"W	2167.41	6.002	2.64
10723	90.77	322	8220.03	1522.09	2105.34	264.71	1770528.77	442179.02	39°42'42.774"N	80°12'13.422"W	2214.77	4.877	1.56
10786	90.8	323.66	8219.17	1585.08	2155.53	226.65	1770489.98	442228.64	39°42'43.261"N	80°12'13.913"W	2261.33	3.79	2.18
10850	90.68	322.67	8218.34	1649.08	2206.75	188.28	1770449.73	442278.39	39°42'43.750"N	80°12'14.443"W	2308.72	2.712	1.04
10913	90.77	321.3	8217.54	1712.06	2256.38	149.49	1770408.95	442326.4	39°42'44.221"N	80°12'14.970"W	2355.14	1.666	3.48
10977	90.4	320.75	8216.89	1776.02	2306.13	109.23	1770368.87	442374.98	39°42'44.698"N	80°12'15.488"W	2402.89	0.677	6.36
11040	90.25	318.56	8216.53	1838.91	2354.14	68.45	1770330.62	442426.28	39°42'45.205"N	80°12'15.982"W	2454.05	359.769	3.91
11103	91.39	322.4	8215.63	1901.83	2402.73	28.37	1770293.87	442474.58	39°42'45.702"N	80°12'16.458"W	2505.63	358.934	0.81
11167	89.63	324.18	8215.06	1965.82	2454.03	-9.88	1770257.4	442527.58	39°42'46.198"N	80°12'16.929"W	2556.68	358.137	2.24
11230	90.06	324.45	8214.23	2028.8	2505.2	-46.63	1770220.59	442578.69	39°42'46.700"N	80°12'17.406"W	2609.21	357.366	3.82
11292	89.08	323.47	8215.7	2090.79	2555.33	-83.1	1770185.53	442632.22	39°42'47.226"N	80°12'17.860"W	2664.49	356.666	5.84
11355	90.92	325.02	8215.7	2153.77	2606.45	-119.91							
11419	89.6	328.52	8215.41	2217.62	2659.98	-154.98							

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TVD	MD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	Comment
11482		90.31	330.29	8215.46	2280.22	2714.2	-187.04	1770153.47	442686.44 39°42'47.760"N 80°12'18.275"W
11545		89.82	326.03	8215.39	2342.99	2767.71	-220.27	1770120.24	442739.94 39°42'48.286"N 80°12'18.706"W
11608		89.85	320.99	8215.57	2405.93	2818.34	-257.72	1770082.79	442790.57 39°42'48.783"N 80°12'19.190"W
11672		90.12	318.71	8215.58	2469.83	2867.26	-298.99	1770041.53	442839.49 39°42'49.264"N 80°12'19.723"W
11736		89.91	318.58	8215.57	2533.65	2915.3	-341.27	1769999.25	442887.52 39°42'49.735"N 80°12'20.269"W
11799		90.89	318.84	8215.13	2596.47	2962.64	-382.84	1769957.68	442934.86 39°42'50.200"N 80°12'20.806"W
11862		90.37	319.08	8214.43	2659.31	3010.15	-424.21	1769916.32	442982.37 39°42'50.666"N 80°12'21.340"W
11926		90.49	319.9	8213.95	2723.18	3058.81	-465.78	1769874.75	443031.02 39°42'51.144"N 80°12'21.877"W
11989		90.15	320.93	8213.6	2786.12	3107.36	-505.92	1769834.61	443079.57 39°42'51.620"N 80°12'22.395"W
12052		90.62	323.02	8213.18	2849.1	3156.98	-544.73	1769795.81	443129.19 39°42'52.108"N 80°12'22.897"W
12114		90.86	322.26	8212.38	2911.1	3206.26	-582.35	1769758.19	443178.46 39°42'52.598"N 80°12'23.383"W
12178		91.32	321.33	8211.16	2975.07	3256.54	-621.92	1769718.62	443228.74 39°42'53.085"N 80°12'23.895"W
12241		91.11	321.35	8209.82	3038.03	3305.72	-661.27	1769679.27	443277.91 39°42'53.568"N 80°12'24.403"W
12304		90.62	320.27	8208.87	3100.97	3354.54	-701.07	1769639.47	443326.74 39°42'54.048"N 80°12'24.917"W
12366		90.49	318.42	8208.27	3162.84	3401.58	-741.46	1769599.08	443375.77 39°42'54.510"N 80°12'25.439"W
12429		90.28	318.54	8207.85	3225.64	3448.74	-783.22	1769557.33	443420.94 39°42'54.972"N 80°12'25.978"W
12492		90.43	320.43	8207.46	3288.52	3496.64	-824.15	1769516.4	443468.83 39°42'55.443"N 80°12'26.506"W
12554		90.46	320.99	8206.98	3350.47	3544.62	-863.41	1769477.15	443516.81 39°42'55.914"N 80°12'27.014"W
12618		90.58	324.1	8206.4	3414.46	3595.42	-902.32	1769438.23	443565.76 39°42'56.413"N 80°12'27.517"W
12681		90.58	327.27	8205.76	3477.38	3647.44	-937.83	1769402.73	443619.62 39°42'56.924"N 80°12'27.976"W
12744		90.49	328.99	8205.17	3540.12	3700.94	-971.09	1769369.47	443673.12 39°42'57.450"N 80°12'28.407"W
12808		90.49	325.61	8204.62	3603.93	3754.79	-1005.66	1769334.9	443726.96 39°42'57.980"N 80°12'28.855"W
12871		90.49	325.3	8204.08	3666.87	3806.68	-1041.38	1769299.18	443778.85 39°42'58.490"N 80°12'29.318"W
12935		90.52	325.57	8203.52	3730.81	3859.38	-1077.69	1769262.87	443831.55 39°42'59.008"N 80°12'29.787"W
12998		90.4	324.61	8203.01	3793.76	3911.04	-1113.74	1769226.82	443883.2 39°42'59.515"N 80°12'30.254"W
13060		90.52	321.7	8202.52	3855.75	3960.65	-1150.92	1769189.65	443932.81 39°43'00.003"N 80°12'30.735"W
13123		90.49	320.14	8201.96	3918.71	4009.55	-1190.63	1769149.94	443981.71 39°43'00.483"N 80°12'31.248"W
13187		90.74	319.68	8201.27	3982.61	4058.51	-1231.84	1769108.73	444030.66 39°43'00.963"N 80°12'31.780"W
13250		90.49	320.83	8200.6	4045.53	4106.95	-1272.12	1769068.46	444079.1 39°43'01.439"N 80°12'32.300"W
13313		90.37	321.03	8200.13	4108.49	4155.86	-1311.83	1769028.75	444128.01 39°43'01.919"N 80°12'32.814"W
13376		90.62	323.22	8199.58	4171.48	4205.58	-1350.5	1768990.08	444177.73 39°43'02.408"N 80°12'33.313"W
13438		90.22	326.9	8199.13	4233.43	4256.39	-1386	1768954.58	444226.54 39°43'02.907"N 80°12'33.773"W
13502		90.03	324.88	8198.99	4297.34	4309.38	-1421.89	1768918.7	444275.39 39°43'03.428"N 80°12'34.237"W
13565		90.12	323.93	8198.9	4360.32	4360.61	-1458.56	1768882.03	444324.75 39°43'03.931"N 80°12'34.712"W
13628		89.6	322.83	8199.06	4423.32	4411.17	-1496.14	1768844.45	444373.31 39°43'04.428"N 80°12'35.198"W
13690		89.91	322.04	8199.32	4485.31	4460.32	-1533.94	1768806.66	444422.45 39°43'04.911"N 80°12'35.687"W
13754		89.97	322.67	8199.39	4549.31	4510.99	-1573.03	1768767.57	444471.3 39°43'05.409"N 80°12'36.192"W
13817		90.06	323.93	8199.37	4612.31	4561.5	-1610.68	1768729.92	444520.33 39°43'05.905"N 80°12'36.679"W
13880		89.91	324	8199.39	4675.3	4612.45	-1647.74	1768692.86	444569.54 39°43'06.405"N 80°12'37.158"W
13943		89.91	323.58	8199.49	4738.29	4663.28	-1684.95	1768655.65	444618.3 39°43'06.905"N 80°12'37.640"W
14006		90.25	323.64	8199.4	4801.29	4714	-1722.33	1768618.27	444667.11 39°43'07.403"N 80°12'38.123"W
14069		90.31	323.69	8199.09	4864.28	4764.75	-1759.66	1768580.95	444716.71 39°43'07.902"N 80°12'38.606"W
14087		90.18	323.76	8199.02	4882.28	4779.26	-1770.31	1768543.37	444765.41 39°43'08.404"N 80°12'39.084"W
14112		90.18	323.76	8198.94	4907.28	4799.42	-1785.09	1768506.66	444814.53 39°43'08.902"N 80°12'39.567"W

T A R G E T S

Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	Comment
Coastal 9H HL Pt 1		1438	4087.13	-1985.57	1768355.05	444059.28	39°43'01.180"12'41.428"W	point		
Coastal 9H HL Pt 2		1438	4691.15	-2098.83	1768241.8	444663.62	39°43'07.180"12'42.939"W	point		
Coastal 9H HL Pt 3		1438	4810.06	-1865.23	1768475.38	444782.17	39°43'08.380"12'39.961"W	point		
Coastal 9H HL Pt 4		1438	4861.97	-1579.68	1768760.92	444834.08	39°43'08.880"12'36.312"W	point		
Coastal 9H HL Pt 5		1438	4415.42	-1395.95	1768944.63	444387.55	39°43'04.480"12'33.916"W	point		
Coastal 9H HL Pt 6		1438	4780.3	-650.3	1769690.24	444752.41	39°43'08.180"12'24.411"W	point		
Coastal 9H LP Rev-2		8222	830.59	1209.24	1771549.67	440802.94	39°42'29.280"12'00.221"W	point		
Coastal 9H P8HL Rev-2		8222	4801.39	-1783.01	1768557.6	444773.5	39°43'08.280"12'38.908"W	point		

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 OCT 07 2015

61-01676

WELLPATH COMPOSITION Ref Wellbore: Coastal 9H AWB Ref Wellpath: Coastal 9H AWP Proj: 14112'

Log Name/Comment	Start MD [ft]	End MD [ft]	Pos Unc Model
02_VES Gyro (100'-1300')	18	1308	Generic gyro - northseeking (Standard)
03_WFD MWD <B-1/2"> (1417-5625)	1308	5625	ISCVSA MWD, Rev. 2 (Standard)
04_BH ATC <B-1/2"> (5625)(5691'-14087')	5625	14087	NavTrak (AT Curve Short Spaced)
Projection to bit	14087	14112	Blind Drilling (std)

COMMENTS

Wellpath general comments
 API: 47-061-01676-0000
 Rig: Pioneer 63
 BHI Job #: 6977634
 Duration: 04.15.2015 - 04.22.2015
 VES Gyro (100'-1300')
 WFD MWD <B-1/2"> (1417-5625)'
 BH ATC <B-1/2"> (5625)(5691'-14087)'
 Projected MD at TD: 14112'

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