



Deborah Craig OHI 1H
Ohio County, WV
SDC 40
Plan vs Actual

Plan Data for Deborah Craig OHI 1H

DogLeg Severity Unit: °/100.00ft

MD Inc	Az	TVD	+N/-S	+E/-W	VSac	DLS	Toolface	Comments
(USft)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)	(°)	(°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
2250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0 Nudge KOP
2698.95	8.98	239.55	2697.11	-17.79	-30.26	0.51	2.00	239.6 Hold
5759.21	8.98	239.55	5719.87	-259.83	-442.01	7.45	0.00	0.0 Curve KOP
6761.80	70.00	329.08	6484.56	158.26	-797.08	549.12	7.00	92.8 Build/Turn
6990.85	90.61	328.72	6522.93	350.54	-913.10	773.69	9.00	359.0 Landing Point
13910.85	90.61	328.72	6449.00	6264.38	-4505.79	7693.29	0.00	0.0 PBHL DC1H

Target Set Information:

Name: Deborah Craig OHI 1H

Name	TVD	+N/-S	+E/-W	Northing	Easting	Lat	Long
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(°)	(°)
LP DC1H	6525.00	184.23	-812.06	14544645.38	1755787.74	40.048456	-80.587744
PBHL DC1H	6449.00	6264.38	-4505.79	14550725.53	1752094.01	40.065199	-80.600846

Plan Data for Deborah Craig OHI 1H

Field: SOUTHWESTERN_OHIO CO, WV UTM MAD 83 (17N)
Map Unit: USFT
Vertical Reference Datum (VRD): Mean Sea Level
Projected Coordinate System: NAD83 / UTM zone 17N

Site: Deborah Craig Pad

Unit: USFeet
Company Name: SOUTHWESTERN ENERGY
North Reference: Grid
Elevation Above VRD: 1329.30USft

Position:
Offset is from Site centre
North Reference: Grid
Elevation Above VRD: 1329.30USft

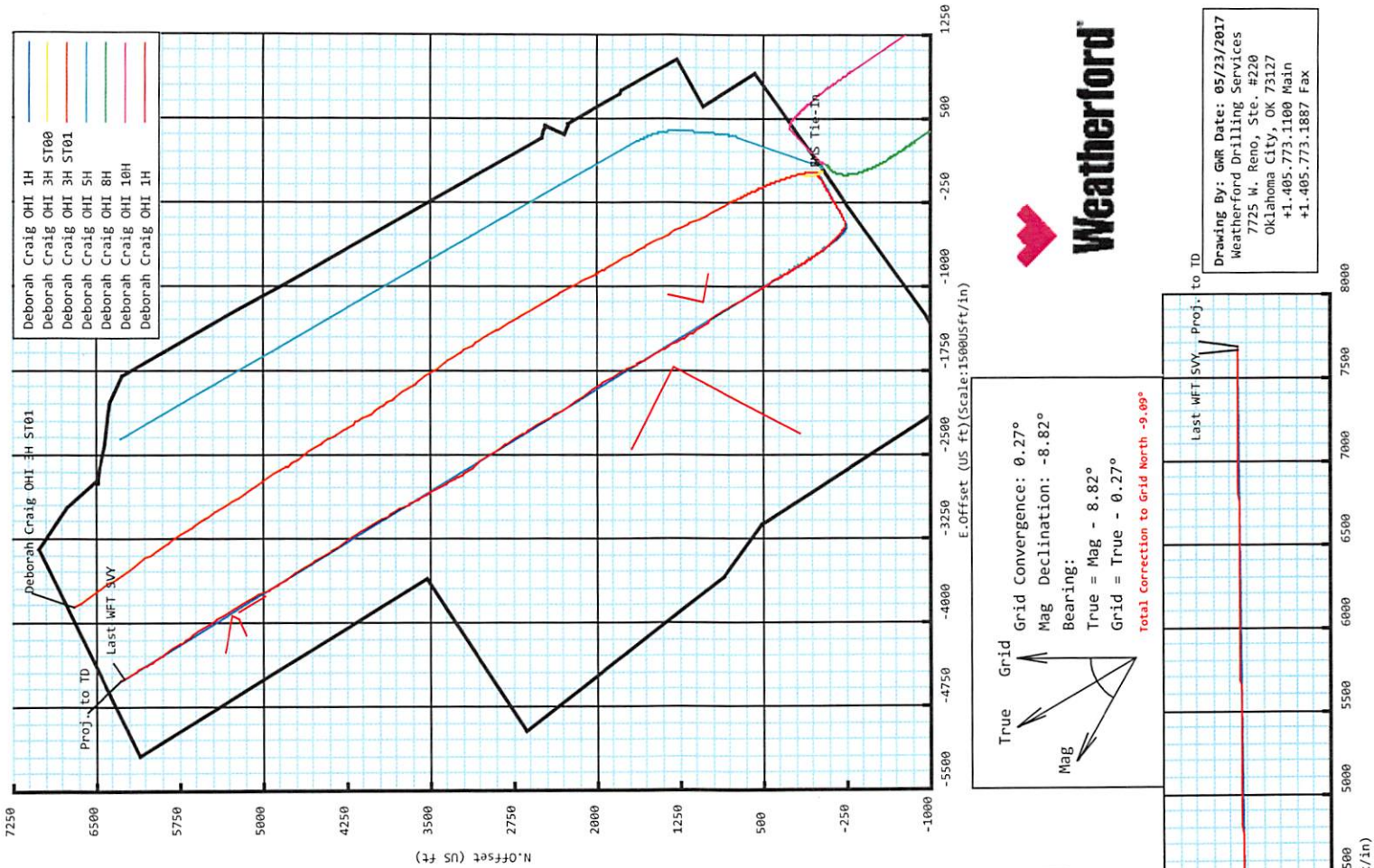
Slot: Deborah Craig OHI 1H

Position:
Offset is from Slot centre
North Reference: Grid
Elevation Above VRD: 1329.30USft

Well: Deborah Craig OHI 1H
Type: Main-Well
File Number:

Plan Folder: PI
Vertical Section: Position offset of origin from Slot centre:
+N/-S: 0.00USft
+E/-W: 0.00USft

Magnetic Parameters:
Model: Field Strength: Declination: Dip: Date:
biggm2017 52375(nt) -8.82° 67.15° 2017-05-22



Drawing By: GWR Date: 05/23/2017
Weatherford Drilling Services
7725 N. Reno, Ste. #220
Oklahoma City, OK 73127
+1.405.773.1100 Main
+1.405.773.1887 Fax

TVD (US ft)

VS (US ft)(Bearing:328.72° Scale:1000USft/in)

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SURVEY REPORT

Report Date: 6/14/2017
 Customer: SWN Production Co., LLC Field: Panhandle
 Job Name: NE-12532405 Rig: SDC 40
 Well Name: Deborah Craig OHI 1H Rig Loc: Ohio County, WV

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
Grid North	324.27 deg	52376 nT	67.15 deg	-8.82 deg	0.27 deg	-9.09 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	0.00 ft	0.00 deg	0.00 deg	0.00 ft	0.00 ft	0.00 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head			Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)			
173.00	0.40	27.65	173.00	0.53	0.28	0.27	0.23	
264.00	0.04	340.85	264.00	0.85	0.42	0.44	0.41	
356.00	0.00	24.25	356.00	0.88	0.41	0.47	0.04	
463.00	0.20	0.15	463.00	1.06	0.41	0.63	0.19	
556.00	0.30	92.95	556.00	1.21	0.65	0.60	0.40	
649.00	0.10	336.25	649.00	1.27	0.86	0.53	0.38	
692.00	0.30	318.35	692.00	1.39	0.77	0.68	0.48	
781.00	0.47	266.59	780.99	1.55	0.25	1.11	0.41	
874.00	0.36	247.77	873.99	1.41	-0.40	1.38	0.19	
963.00	0.43	228.40	962.99	1.09	-0.91	1.41	0.17	
1056.00	0.36	259.39	1055.99	0.80	-1.46	1.50	0.24	
1149.00	0.48	295.62	1148.99	0.91	-2.09	1.97	0.31	
1241.00	0.40	297.07	1240.98	1.23	-2.73	2.59	0.09	
1334.00	0.35	295.61	1333.98	1.50	-3.27	3.13	0.05	
1427.00	0.38	326.27	1426.98	1.88	-3.70	3.68	0.21	
1520.00	0.28	316.78	1519.98	2.30	-4.03	4.22	0.12	
1613.00	0.22	40.56	1612.98	2.60	-4.07	4.49	0.36	
1705.00	0.14	204.94	1704.98	2.63	-4.00	4.47	0.39	
1795.00	0.27	143.05	1794.98	2.36	-3.92	4.21	0.26	
1885.00	0.54	122.90	1884.97	1.96	-3.43	3.60	0.33	
1975.00	0.80	101.52	1974.97	1.61	-2.46	2.74	0.40	
2067.00	0.86	120.64	2066.96	1.13	-1.24	1.64	0.31	
2078.00	1.05	124.71	2077.96	1.03	-1.09	1.47	1.83	
2193.00	0.94	118.53	2192.94	-0.02	0.61	-0.37	0.13	
2286.00	0.44	203.80	2285.93	-0.71	1.14	-1.24	1.08	
2375.00	1.88	231.76	2374.91	-1.93	-0.15	-1.48	1.69	
2465.00	3.89	236.96	2464.79	-4.51	-3.87	-1.40	2.25	
2558.00	6.06	242.45	2557.44	-8.50	-10.87	-0.55	2.39	
2651.00	8.19	241.92	2649.72	-13.89	-21.06	1.03	2.29	
2741.00	8.54	241.36	2738.76	-20.11	-32.58	2.70	0.40	
2833.00	8.68	240.84	2829.72	-26.77	-44.64	4.34	0.17	
2926.00	8.64	239.17	2921.66	-33.77	-56.77	5.74	0.27	
3019.00	8.31	237.95	3013.65	-40.91	-68.46	6.77	0.40	
3112.00	8.57	238.58	3105.64	-48.09	-80.07	7.72	0.30	
3201.00	8.93	240.05	3193.60	-55.00	-91.72	8.92		

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Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
3294.00	8.65	239.62	3285.51	-62.14	-104.00	10.29	0.31
3387.00	8.45	239.44	3377.48	-69.15	-115.92	11.56	0.22
3480.00	8.82	242.75	3469.42	-75.89	-128.14	13.23	0.67
3572.00	8.69	244.08	3560.35	-82.15	-140.67	15.45	0.26
3665.00	9.05	241.15	3652.24	-88.75	-153.39	17.53	0.62
3758.00	9.02	240.53	3744.08	-95.87	-166.14	19.20	0.11
3851.00	8.71	240.34	3835.97	-102.94	-178.61	20.74	0.33
3944.00	8.52	239.68	3927.92	-109.90	-190.68	22.13	0.23
4036.00	8.74	239.60	4018.88	-116.88	-202.59	23.42	0.24
4129.00	8.53	239.20	4110.83	-123.99	-214.61	24.67	0.23
4222.00	7.93	237.84	4202.87	-130.93	-225.96	25.66	0.68
4315.00	8.34	239.13	4294.93	-137.81	-237.18	26.64	0.48
4407.00	8.95	240.89	4385.89	-144.71	-249.16	28.03	0.72
4500.00	8.57	240.39	4477.80	-151.66	-261.51	29.60	0.42
4593.00	9.22	238.98	4569.68	-158.92	-273.92	30.95	0.74
4686.00	9.04	237.54	4661.51	-166.68	-286.47	31.98	0.31
4779.00	8.53	235.43	4753.42	-174.52	-298.31	32.53	0.65
4872.00	8.80	233.93	4845.35	-182.62	-309.74	32.63	0.38
4964.00	8.69	237.57	4936.29	-190.49	-321.29	32.99	0.61
5057.00	8.88	245.20	5028.20	-197.27	-333.74	34.76	1.27
5147.00	8.76	242.67	5117.13	-203.33	-346.14	37.07	0.45
5240.00	8.53	239.01	5209.08	-210.13	-358.34	38.68	0.64
5332.00	9.03	238.44	5300.00	-217.42	-370.34	39.77	0.55
5425.00	9.19	242.24	5391.83	-224.70	-383.13	41.33	0.67
5518.00	8.58	240.73	5483.71	-231.55	-395.75	43.14	0.70
5611.00	9.30	241.69	5575.58	-238.51	-408.42	44.89	0.79
5724.00	7.58	240.72	5687.35	-246.48	-422.96	46.91	1.53
5771.00	6.54	253.29	5734.00	-248.77	-428.23	48.13	3.95
5817.00	7.27	272.65	5779.67	-249.39	-433.65	50.79	5.27
5863.00	8.64	283.39	5825.23	-248.45	-439.92	55.21	4.38
5910.00	10.92	289.67	5871.54	-246.14	-447.54	61.54	5.35
5956.00	13.24	295.23	5916.52	-242.43	-456.41	69.73	5.64
6003.00	16.13	299.43	5961.99	-236.92	-466.97	80.37	6.55
6049.00	19.87	302.86	6005.73	-229.54	-479.11	93.45	8.45
6095.00	23.53	305.50	6048.46	-219.96	-493.16	109.43	8.23
6142.00	27.24	307.96	6090.92	-207.89	-509.28	128.64	8.20
6188.00	30.84	310.16	6131.13	-193.81	-526.60	150.19	8.16
6234.00	34.59	312.18	6169.83	-177.43	-545.29	174.40	8.49
6281.00	38.17	313.66	6207.66	-158.44	-565.69	201.73	7.84
6327.00	41.71	314.94	6242.92	-137.81	-586.81	230.81	7.90
6374.00	45.14	316.65	6277.06	-114.64	-609.32	262.76	7.71
6420.00	47.93	320.10	6308.70	-89.68	-631.48	295.96	8.15
6466.00	49.74	321.88	6338.98	-62.77	-653.26	330.53	4.90
6513.00	51.61	323.44	6368.76	-33.86	-675.31	366.87	4.74
6559.00	54.00	325.14	6396.57	-4.11	-696.69	403.51	5.97
6606.00	57.40	326.15	6423.05	27.94	-718.59	442.32	7.45
6652.00	62.39	326.17	6446.12	60.99	-740.74	482.08	10.85
6698.00	66.57	326.01	6465.93	95.43	-763.90	523.56	9.09
6745.00	70.27	326.29	6483.22	131.72	-788.24	567.23	7.89
6791.00	73.61	327.81	6497.48	168.42	-812.02	610.91	

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Depth (ft)	Inc (deg)	Azimuth (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
6838.00	76.12	329.49	6509.75	207.16	-835.61	656.14	6.36
6884.00	78.88	331.09	6519.70	246.16	-857.86	700.79	6.89
6930.00	82.57	331.97	6527.12	286.06	-879.50	745.82	8.24
6977.00	86.85	332.09	6531.45	327.39	-901.45	792.18	9.11
7023.00	90.80	331.96	6532.39	368.00	-923.01	837.74	8.59
7116.00	90.68	328.32	6531.19	448.63	-969.31	930.23	3.92
7209.00	90.56	328.61	6530.18	527.89	-1017.94	1022.97	0.34
7302.00	90.62	329.65	6529.23	607.71	-1065.66	1115.63	1.12
7394.00	90.68	329.44	6528.18	687.01	-1112.29	1207.24	0.24
7487.00	91.05	328.74	6526.78	766.79	-1160.05	1299.90	0.85
7580.00	90.80	327.11	6525.28	845.58	-1209.43	1392.69	1.77
7673.00	90.92	326.14	6523.88	923.24	-1260.59	1485.60	1.05
7765.00	90.86	324.56	6522.45	998.91	-1312.89	1577.57	1.72
7858.00	90.86	325.35	6521.06	1075.04	-1366.28	1670.56	0.85
7951.00	90.92	327.73	6519.61	1152.61	-1417.55	1763.46	2.56
8044.00	90.99	331.72	6518.06	1232.90	-1464.42	1856.01	4.29
8137.00	90.74	329.80	6516.66	1314.04	-1509.84	1948.40	2.08
8229.00	90.86	330.88	6515.37	1393.97	-1555.36	2039.88	1.18
8322.00	90.80	331.55	6514.03	1475.47	-1600.14	2132.18	0.72
8415.00	90.86	330.49	6512.68	1556.82	-1645.19	2224.53	1.14
8508.00	90.93	333.94	6511.22	1639.07	-1688.53	2316.61	3.71
8600.00	90.97	333.28	6509.70	1721.48	-1729.42	2407.38	0.72
8693.00	90.93	330.03	6508.16	1803.30	-1773.56	2499.58	3.49
8786.00	91.05	328.44	6506.55	1883.20	-1821.12	2592.21	1.71
8879.00	90.62	327.13	6505.19	1961.87	-1870.69	2685.03	1.48
8968.00	90.68	326.26	6504.19	2036.25	-1919.56	2773.94	0.98
9058.00	90.43	326.36	6503.31	2111.13	-1969.48	2863.88	0.30
9151.00	90.37	326.30	6502.66	2188.53	-2021.04	2956.82	0.09
9240.00	90.43	327.00	6502.04	2262.87	-2069.96	3045.74	0.79
9332.00	90.80	328.73	6501.06	2340.77	-2118.90	3137.55	1.92
9425.00	90.86	330.92	6499.71	2421.15	-2165.63	3230.10	2.36
9518.00	90.86	331.29	6498.31	2502.57	-2210.57	3322.42	0.40
9610.00	90.19	329.49	6497.47	2582.54	-2256.02	3413.89	2.09
9703.00	90.49	327.31	6496.92	2661.75	-2304.75	3506.64	2.37
9796.00	90.56	328.29	6496.06	2740.44	-2354.30	3599.46	1.06
9889.00	90.49	326.95	6495.21	2818.97	-2404.10	3692.30	1.44
9981.00	90.56	325.00	6494.37	2895.22	-2455.58	3784.25	2.12
10074.00	90.93	325.01	6493.16	2971.40	-2508.91	3877.23	0.40
10167.00	90.74	324.93	6491.81	3047.54	-2562.29	3970.21	0.22
10259.00	90.68	326.01	6490.66	3123.33	-2614.43	4062.19	1.18
10352.00	90.74	324.93	6489.51	3199.94	-2667.14	4155.16	1.16
10445.00	90.80	329.38	6488.26	3278.04	-2717.56	4248.01	4.78
10537.00	91.17	332.29	6486.68	3358.36	-2762.39	4339.38	3.19
10630.00	90.80	333.58	6485.08	3441.16	-2804.69	4431.30	1.44
10722.00	90.93	332.28	6483.69	3523.07	-2846.56	4522.24	1.42
10815.00	90.92	329.82	6482.19	3604.43	-2891.56	4614.57	2.64
10908.00	90.92	330.83	6480.70	3685.22	-2937.60	4707.04	1.09
11000.00	90.49	331.08	6479.57	3765.65	-2982.26	4798.41	0.54
11093.00	90.99	332.43	6478.36	3847.56	-3026.27	4890.61	1.55
11186.00	90.56	330.45	6477.11	3929.24	-3070.72	4982.87	2.18

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Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
11275.00	90.86	329.76	6476.00	4006.39	-3115.08	5071.40	0.85
11368.00	90.93	329.15	6474.55	4086.47	-3162.34	5164.00	0.66
11461.00	90.43	327.13	6473.45	4165.45	-3211.42	5256.78	2.24
11554.00	90.43	326.93	6472.75	4243.47	-3262.03	5349.67	0.22
11647.00	90.68	326.62	6471.85	4321.26	-3312.98	5442.58	0.43
11739.00	90.80	328.05	6470.66	4398.70	-3362.63	5534.43	1.56
11832.00	90.68	328.54	6469.46	4477.82	-3411.50	5627.20	0.54
11925.00	90.25	327.21	6468.70	4556.57	-3460.96	5720.01	1.50
12018.00	90.62	326.73	6468.00	4634.54	-3511.65	5812.90	0.65
12110.00	90.31	327.28	6467.25	4711.70	-3561.74	5904.79	0.69
12203.00	90.62	327.82	6466.50	4790.18	-3611.64	5997.64	0.67
12296.00	90.49	329.23	6465.60	4869.49	-3660.20	6090.37	1.52
12389.00	90.80	331.88	6464.55	4950.46	-3705.91	6182.80	2.87
12482.00	90.86	332.48	6463.20	5032.70	-3749.31	6274.91	0.65
12574.00	90.19	330.95	6462.36	5113.71	-3792.90	6366.12	1.82
12667.00	90.25	330.19	6462.00	5194.71	-3838.59	6458.56	0.82
12760.00	90.62	330.28	6461.30	5275.44	-3884.76	6551.05	0.41
12853.00	90.62	330.49	6460.29	5356.29	-3930.72	6643.52	0.23
12946.00	90.68	329.05	6459.23	5436.63	-3977.53	6736.08	1.55
13038.00	90.62	327.09	6458.19	5514.70	-4026.19	6827.87	2.13
13131.00	90.74	326.21	6457.09	5592.38	-4077.31	6920.78	0.95
13224.00	90.43	324.35	6456.14	5668.82	-4130.27	7013.76	2.03
13317.00	90.68	326.68	6455.24	5745.46	-4182.92	7106.73	2.52
13410.00	90.49	327.30	6454.29	5823.45	-4233.59	7199.62	0.70
13503.00	90.37	326.06	6453.59	5901.16	-4284.67	7292.53	1.34
13592.00	90.37	326.42	6453.01	5975.15	-4334.13	7381.48	0.40
13682.00	90.55	329.92	6452.29	6051.60	-4381.58	7471.25	3.89
13775.00	90.12	331.17	6451.75	6132.57	-4427.31	7563.69	1.42
13868.00	90.56	331.17	6451.20	6214.04	-4472.16	7656.01	0.47
13905.00	90.12	331.13	6450.98	6246.45	-4490.01	7692.75	1.19
Projected to Total Depth:							
13928.00	90.12	331.13	6450.93	6266.59	-4501.12	7715.58	0.00

* SWN surveys from 173.00 ft MD to 692.00 ft MD *
 * Weatherford surveys from 781.00 ft MD to 13905.00 ft MD *
 * TD at 13928 ft MD *
 * The total correction is -9.09 deg relative to Grid North *

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