

<b>Company:</b> Tug Hill Operating, LLC	<b>Local Co-ordinate Reference:</b> Well Corley N-07HM (slot H)
<b>Project:</b> Marshall County, West Virginia	<b>TVD Reference:</b> RKB=1254+28 @ 1282.00usft (Precision 110)
<b>Site:</b> Corley Pad	<b>MD Reference:</b> RKB=1254+28 @ 1282.00usft (Precision 110)
<b>Well:</b> Corley N-07HM (slot H)	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Hole	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Surveys Original Hole	<b>Database:</b> DB_Jul2216dt_v14

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<b>Project</b> Marshall County, West Virginia	<b>System Datum:</b> Mean Sea Level	
<b>Map System:</b> Universal Transverse Mercator (US Survey Feet)		
<b>Geo Datum:</b> NAD83 West Virginia - HARN		
<b>Map Zone:</b> Zone 17N (80 to 78 W)		

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<b>Site</b> Corley Pad				
<b>Site Position:</b>	<b>Northing:</b> 14,436,832.02 usft	<b>Latitude:</b> 39.75286638		
<b>From:</b> Lat/Long	<b>Easting:</b> 1,706,973.98 usft	<b>Longitude:</b> -80.76319015		
<b>Position Uncertainty:</b> 0.00 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> 0.15 °		

<b>Well</b> Corley N-07HM (slot H)				
<b>Well Position</b> +N/-S 0.00 usft	<b>Northing:</b> 14,436,880.86 usft	<b>Latitude:</b> 39.75300049		
+E/-W 0.00 usft	<b>Easting:</b> 1,706,976.57 usft	<b>Longitude:</b> -80.76318049		
<b>Position Uncertainty</b> 0.00 usft	<b>Wellhead Elevation:</b> usft	<b>Ground Level:</b> 1,254.00 usft		

<b>Wellbore</b> Original Hole					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	REF2015	7/11/2018	-8.68	66.85	52,039.63408465

<b>Design</b> Surveys Original Hole				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.00		
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	330.28

<b>Survey Program</b>	<b>Date</b> 8/22/2018			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
276.00	14,211.00	MWD (Original Hole)	MWD	MWD - Standard
14,257.00	14,257.00	Projection (Original Hole)	MWD	MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,436,880.86	1,706,976.57	39.75300049	-80.76318049
276.00	0.64	330.27	275.99	-0.34	-1.50	14,436,880.52	1,706,975.07	39.75299957	-80.76318584
<b>MWD surveys</b>									
340.00	0.33	330.61	339.99	-0.54	-1.99	14,436,880.32	1,706,974.58	39.75299903	-80.76318759
435.00	0.27	330.71	434.99	-0.94	-2.23	14,436,879.92	1,706,974.34	39.75299793	-80.76318844
531.00	0.14	330.85	530.99	-1.04	-2.26	14,436,879.82	1,706,974.31	39.75299764	-80.76318855
627.00	0.23	330.91	626.99	-1.11	-2.33	14,436,879.75	1,706,974.24	39.75299747	-80.76318880
723.00	0.05	331.05	722.99	-1.33	-2.41	14,436,879.53	1,706,974.16	39.75299686	-80.76318907
748.00	0.23	331.23	747.99	-1.31	-2.45	14,436,879.55	1,706,974.12	39.75299691	-80.76318922
779.00	0.29	331.40	778.99	-1.22	-2.56	14,436,879.64	1,706,974.01	39.75299715	-80.76318961
810.00	0.25	331.20	809.99	-1.13	-2.67	14,436,879.73	1,706,973.89	39.75299740	-80.76319002

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<b>Design:</b>	Surveys Original	<b>Database:</b>	DB_Jul2216dt_v14

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Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
841.00	0.25	35.18	840.99	-1.02	-2.74	14,436,879.84	1,706,973.83	39.75299770	-80.76319024	
872.00	0.07	35.47	871.99	-0.94	-2.74	14,436,879.92	1,706,973.83	39.75299793	-80.76319024	
903.00	0.23	35.71	902.99	-0.86	-2.73	14,436,880.00	1,706,973.84	39.75299815	-80.76319020	
993.00	0.17	35.17	992.99	-0.80	-2.78	14,436,880.06	1,706,973.79	39.75299833	-80.76319038	
1,092.00	0.31	35.04	1,091.99	-1.18	-2.78	14,436,879.68	1,706,973.79	39.75299726	-80.76319039	
1,181.00	0.57	35.03	1,180.99	-1.86	-2.73	14,436,879.00	1,706,973.84	39.75299541	-80.76319023	
1,271.00	0.85	35.33	1,270.98	-2.97	-2.76	14,436,877.89	1,706,973.80	39.75299235	-80.76319035	
1,361.00	0.71	35.61	1,360.97	-4.20	-2.76	14,436,876.66	1,706,973.81	39.75298899	-80.76319034	
1,450.00	0.77	35.66	1,449.97	-4.19	-2.96	14,436,876.67	1,706,973.61	39.75298899	-80.76319107	
1,540.00	2.62	35.21	1,539.92	-1.66	-3.75	14,436,879.20	1,706,972.82	39.75299597	-80.76319385	
1,630.00	5.18	35.38	1,629.71	4.20	-5.54	14,436,885.06	1,706,971.03	39.75301206	-80.76320016	
1,719.00	8.47	35.38	1,718.07	14.16	-9.07	14,436,895.02	1,706,967.50	39.75303945	-80.76321261	
1,809.00	11.04	35.01	1,806.76	28.24	-14.90	14,436,909.10	1,706,961.66	39.75307816	-80.76323326	
1,899.00	11.68	35.43	1,894.99	44.40	-22.20	14,436,925.26	1,706,954.37	39.75312259	-80.76325905	
1,988.00	12.44	35.10	1,982.03	61.29	-29.98	14,436,942.15	1,706,946.59	39.75316903	-80.76328658	
2,078.00	12.96	35.07	2,069.83	79.08	-38.63	14,436,959.94	1,706,937.94	39.75321795	-80.76331719	
2,168.00	11.67	35.62	2,157.76	95.93	-47.81	14,436,976.79	1,706,928.76	39.75326429	-80.76334968	
2,257.00	10.41	35.65	2,245.11	110.64	-56.42	14,436,991.50	1,706,920.15	39.75330474	-80.76338019	
2,347.00	9.85	35.06	2,333.70	124.25	-64.49	14,437,005.12	1,706,912.08	39.75334220	-80.76340877	
2,437.00	9.93	35.29	2,422.37	137.39	-72.64	14,437,018.25	1,706,903.93	39.75337832	-80.76343765	
2,526.00	10.46	35.66	2,509.96	150.82	-80.87	14,437,031.68	1,706,895.70	39.75341526	-80.76346679	
2,592.00	10.55	35.44	2,574.85	161.14	-87.06	14,437,042.00	1,706,889.51	39.75344365	-80.76348872	
2,687.00	10.15	35.41	2,668.31	175.44	-96.36	14,437,056.30	1,706,880.21	39.75348299	-80.76352169	
2,777.00	11.45	35.31	2,756.72	189.88	-105.01	14,437,070.74	1,706,871.56	39.75352271	-80.76355234	
2,867.00	12.11	35.97	2,844.82	206.27	-113.31	14,437,087.13	1,706,863.26	39.75356779	-80.76358170	
2,956.00	11.76	35.88	2,931.90	222.73	-121.54	14,437,103.59	1,706,855.03	39.75361306	-80.76361083	
3,048.00	11.17	35.08	3,022.06	238.95	-129.98	14,437,119.81	1,706,846.58	39.75365766	-80.76364073	
3,138.00	12.57	35.41	3,110.14	255.63	-137.99	14,437,136.49	1,706,838.58	39.75370352	-80.76366904	
3,228.00	12.78	35.03	3,197.94	273.70	-145.95	14,437,154.56	1,706,830.62	39.75375321	-80.76369721	
3,317.00	11.90	35.73	3,284.89	291.06	-153.72	14,437,171.92	1,706,822.85	39.75380094	-80.76372469	
3,407.00	11.24	35.95	3,373.06	307.53	-161.11	14,437,188.39	1,706,815.46	39.75384622	-80.76375083	
3,497.00	10.12	35.35	3,461.50	322.67	-168.11	14,437,203.53	1,706,808.46	39.75388785	-80.76377558	
3,587.00	11.45	35.26	3,549.91	338.03	-174.98	14,437,218.90	1,706,801.59	39.75393010	-80.76379990	
3,676.00	11.85	35.31	3,637.07	354.61	-181.92	14,437,235.47	1,706,794.65	39.75397568	-80.76382444	
3,766.00	11.26	35.29	3,725.25	371.18	-189.02	14,437,252.04	1,706,787.55	39.75402124	-80.76384954	
3,856.00	10.10	35.01	3,813.69	386.38	-195.89	14,437,267.24	1,706,780.68	39.75406303	-80.76387383	
3,946.00	12.60	35.67	3,901.92	402.34	-203.58	14,437,283.20	1,706,772.99	39.75410690	-80.76390104	
4,035.00	13.29	35.42	3,988.66	420.02	-212.78	14,437,300.88	1,706,763.79	39.75415553	-80.76393361	
4,125.00	12.58	35.46	4,076.37	437.71	-222.41	14,437,318.57	1,706,754.16	39.75420419	-80.76396771	
4,215.00	12.00	35.00	4,164.31	454.34	-231.91	14,437,335.20	1,706,744.66	39.75424993	-80.76400136	
4,304.00	11.27	35.03	4,251.48	469.65	-241.28	14,437,350.51	1,706,735.29	39.75429204	-80.76403455	
4,394.00	12.47	35.13	4,339.56	485.54	-250.78	14,437,366.40	1,706,725.79	39.75433574	-80.76406819	
4,484.00	12.66	35.28	4,427.40	502.26	-260.95	14,437,383.12	1,706,715.62	39.75438174	-80.76410422	
4,574.00	12.48	35.83	4,515.25	518.61	-271.74	14,437,399.47	1,706,704.83	39.75442670	-80.76414247	
4,663.00	11.26	35.88	4,602.35	534.30	-281.10	14,437,415.16	1,706,695.47	39.75446986	-80.76417564	
4,753.00	11.63	35.58	4,690.56	550.24	-289.14	14,437,431.10	1,706,687.43	39.75451371	-80.76420410	
4,843.00	11.78	35.73	4,778.68	566.46	-297.53	14,437,447.32	1,706,679.04	39.75455830	-80.76423379	
4,932.00	11.72	35.33	4,865.82	582.31	-306.31	14,437,463.17	1,706,670.26	39.75460191	-80.76426488	
5,022.00	11.76	35.70	4,953.94	597.83	-316.00	14,437,478.69	1,706,660.57	39.75464460	-80.76429922	
5,112.00	10.99	35.81	5,042.18	613.30	-324.55	14,437,494.16	1,706,652.02	39.75468713	-80.76432949	
5,201.00	12.09	35.43	5,129.38	629.88	-331.01	14,437,510.74	1,706,645.56	39.75473271	-80.76435233	
5,291.00	12.15	35.32	5,217.38	647.68	-337.36	14,437,528.54	1,706,639.21	39.75478164	-80.76437474	
5,381.00	12.28	35.99	5,305.34	665.47	-344.14	14,437,546.33	1,706,632.43	39.75483055	-80.76439869	
5,471.00	12.60	35.22	5,393.23	683.39	-351.52	14,437,564.25	1,706,625.05	39.75487983	-80.76442481	
5,560.00	10.75	35.09	5,480.38	699.75	-359.04	14,437,580.61	1,706,617.53	39.75492479	-80.76445140	

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,650.00	10.75	327.37	5,568.80	714.56	-366.92	14,437,595.42	1,706,609.64	39.75496554	-80.76447931
5,740.00	11.46	327.90	5,657.12	729.21	-376.15	14,437,610.07	1,706,600.42	39.75500583	-80.76451201
5,830.00	12.15	328.24	5,745.22	744.40	-386.56	14,437,625.26	1,706,590.01	39.75504762	-80.76454888
5,919.00	13.24	328.22	5,832.06	761.72	-395.38	14,437,642.58	1,706,581.19	39.75509525	-80.76458011
5,994.00	15.87	328.30	5,904.64	779.44	-401.80	14,437,660.30	1,706,574.77	39.75514396	-80.76460279
6,083.00	17.67	328.90	5,989.86	803.45	-410.88	14,437,684.31	1,706,565.68	39.75520996	-80.76463489
6,173.00	20.48	329.38	6,074.91	831.05	-420.97	14,437,711.91	1,706,555.59	39.75528585	-80.76467054
6,263.00	24.13	329.12	6,158.16	863.52	-431.58	14,437,744.38	1,706,544.99	39.75537509	-80.76470795
6,352.00	29.98	329.38	6,237.39	901.98	-444.16	14,437,782.84	1,706,532.41	39.75548079	-80.76475237
6,442.00	37.80	329.46	6,312.05	948.86	-461.83	14,437,829.74	1,706,514.74	39.75560972	-80.76481481
6,532.00	46.15	329.75	6,378.93	1,003.05	-487.82	14,437,883.91	1,706,488.75	39.75575869	-80.76490677
6,621.00	50.07	329.32	6,438.35	1,060.39	-520.95	14,437,941.25	1,706,455.62	39.75591640	-80.76502411
6,711.00	57.89	329.55	6,491.24	1,122.72	-558.45	14,438,003.58	1,706,418.12	39.75608783	-80.76515695
6,800.00	66.29	329.39	6,532.86	1,190.86	-597.57	14,438,071.72	1,706,379.00	39.75627526	-80.76529551
6,890.00	75.25	329.52	6,562.47	1,264.82	-639.24	14,438,145.68	1,706,337.33	39.75647867	-80.76544309
6,980.00	77.54	329.08	6,583.64	1,340.80	-682.57	14,438,221.66	1,706,293.99	39.75668764	-80.76559658
7,070.00	82.37	329.58	6,599.33	1,416.99	-727.77	14,438,297.85	1,706,248.80	39.75689722	-80.76575669
7,159.00	86.86	329.35	6,607.69	1,491.79	-775.22	14,438,372.65	1,706,201.35	39.75710298	-80.76592483
7,249.00	88.92	329.03	6,611.00	1,566.65	-825.07	14,438,447.51	1,706,151.50	39.75730891	-80.76610150
7,338.00	90.11	329.96	6,611.75	1,640.38	-874.90	14,438,521.24	1,706,101.67	39.75751176	-80.76627814
7,428.00	90.02	329.03	6,611.65	1,714.95	-925.30	14,438,595.81	1,706,051.27	39.75771690	-80.76645678
7,518.00	89.14	329.32	6,612.31	1,790.57	-974.08	14,438,671.43	1,706,002.48	39.75792493	-80.76662965
7,607.00	92.00	329.92	6,611.42	1,867.71	-1,018.41	14,438,748.57	1,705,958.16	39.75813710	-80.76678666
7,697.00	92.00	329.92	6,608.28	1,947.07	-1,060.75	14,438,827.93	1,705,915.82	39.75835535	-80.76693657
7,786.00	92.22	329.92	6,605.01	2,025.54	-1,102.61	14,438,906.40	1,705,873.96	39.75857115	-80.76708481
7,876.00	91.25	329.04	6,602.28	2,104.58	-1,145.56	14,438,985.44	1,705,831.01	39.75878852	-80.76723691
7,965.00	89.67	329.81	6,601.57	2,181.98	-1,189.49	14,439,062.84	1,705,787.08	39.75900139	-80.76739248
8,055.00	90.51	329.16	6,601.43	2,259.91	-1,234.51	14,439,140.77	1,705,742.06	39.75921573	-80.76755196
8,145.00	88.92	329.02	6,601.87	2,337.52	-1,280.06	14,439,218.38	1,705,696.51	39.75942920	-80.76771333
8,234.00	88.79	329.37	6,603.65	2,413.95	-1,325.63	14,439,294.81	1,705,650.94	39.75963942	-80.76787478
8,324.00	88.88	329.85	6,605.48	2,491.17	-1,371.83	14,439,372.03	1,705,604.74	39.75985181	-80.76803844
8,413.00	90.29	329.29	6,606.13	2,567.51	-1,417.57	14,439,448.37	1,705,559.00	39.76006179	-80.76820051
8,503.00	90.64	329.29	6,605.40	2,644.88	-1,463.53	14,439,525.75	1,705,513.04	39.76027461	-80.76836334
8,593.00	90.81	329.81	6,604.26	2,722.46	-1,509.14	14,439,603.33	1,705,467.43	39.76048799	-80.76852491
8,682.00	90.86	329.11	6,602.96	2,799.11	-1,554.35	14,439,679.97	1,705,422.21	39.76069880	-80.76868511
8,772.00	90.68	329.23	6,601.75	2,875.98	-1,601.15	14,439,756.84	1,705,375.42	39.76091024	-80.76885091
8,861.00	90.37	329.49	6,600.93	2,951.75	-1,647.83	14,439,832.61	1,705,328.74	39.76111865	-80.76901634
8,951.00	89.98	329.77	6,600.66	3,027.33	-1,696.67	14,439,908.19	1,705,279.90	39.76132657	-80.76918944
9,041.00	90.55	329.65	6,600.24	3,102.13	-1,746.73	14,439,982.99	1,705,229.84	39.76153233	-80.76936686
9,130.00	90.73	329.02	6,599.25	3,177.46	-1,794.10	14,440,058.32	1,705,182.47	39.76173954	-80.76953475
9,219.00	90.77	329.93	6,598.08	3,253.72	-1,839.97	14,440,134.58	1,705,136.60	39.76194930	-80.76969727
9,309.00	89.63	329.04	6,597.77	3,331.64	-1,884.98	14,440,212.50	1,705,091.58	39.76216362	-80.76985674
9,399.00	89.54	329.96	6,598.42	3,410.36	-1,928.62	14,440,291.22	1,705,047.95	39.76238010	-80.77001129
9,488.00	89.32	329.31	6,599.31	3,488.29	-1,971.58	14,440,369.15	1,705,004.99	39.76259444	-80.77016345
9,578.00	89.23	329.87	6,600.45	3,567.07	-2,015.08	14,440,447.93	1,704,961.49	39.76281110	-80.77031755
9,667.00	90.77	329.60	6,600.45	3,644.71	-2,058.59	14,440,525.57	1,704,917.98	39.76302462	-80.77047166
9,757.00	90.33	329.22	6,599.58	3,723.35	-2,102.34	14,440,604.21	1,704,874.22	39.76324090	-80.77062664
9,847.00	90.02	329.60	6,599.31	3,802.00	-2,146.10	14,440,682.86	1,704,830.47	39.76345720	-80.77078163
9,936.00	91.21	329.08	6,598.35	3,879.33	-2,190.14	14,440,760.19	1,704,786.43	39.76366988	-80.77093763
10,026.00	91.12	329.72	6,596.52	3,957.18	-2,235.27	14,440,838.04	1,704,741.30	39.76388399	-80.77109751
10,115.00	90.64	329.20	6,595.16	4,033.82	-2,280.48	14,440,914.68	1,704,696.09	39.76409479	-80.77125772
10,205.00	90.37	329.85	6,594.36	4,110.99	-2,326.80	14,440,991.85	1,704,649.77	39.76430703	-80.77142185
10,295.00	90.11	329.76	6,593.99	4,187.97	-2,373.42	14,441,068.83	1,704,603.15	39.76451878	-80.77158703
10,384.00	91.34	329.64	6,592.86	4,264.41	-2,418.98	14,441,145.27	1,704,557.59	39.76472902	-80.77174849
10,474.00	91.21	329.72	6,590.86	4,342.08	-2,464.41	14,441,222.94	1,704,512.16	39.76494265	-80.77190943

<b>Company:</b> Tug Hill Operating, LLC	<b>Local Co-ordinate Reference:</b> Well Corley N-07HM (slot H)
<b>Project:</b> Marshall County West Virginia	<b>TVD Reference:</b> RKB=1254+28 @ 1282.00usft (Precision 110)
<b>Site:</b> Corley Pad	<b>MD Reference:</b> RKB=1254+28 @ 1282.00usft (Precision 110)
<b>Well:</b> Corley N-07HM (slot H)	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Hole	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Surveys Original	<b>Database:</b> DB_Jul2216dt_v14

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**Survey** WV Department of Environmental Protection

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,564.00	91.52	299	6,588.71	4,419.89	-2,509.59	14,441,300.75	1,704,466.98	39.76515664	-80.77206952
10,653.00	89.23	298.81	6,588.13	4,496.88	-2,554.22	14,441,377.74	1,704,422.35	39.76536839	-80.77222764
10,743.00	89.23	299.90	6,589.34	4,574.70	-2,599.42	14,441,455.56	1,704,377.15	39.76558243	-80.77238776
10,833.00	89.01	299.90	6,590.72	4,652.55	-2,644.55	14,441,533.41	1,704,332.02	39.76579655	-80.77254766
10,922.00	89.67	299.72	6,591.75	4,729.48	-2,689.30	14,441,610.34	1,704,287.27	39.76600811	-80.77270622
11,012.00	89.36	299.20	6,592.51	4,806.99	-2,735.03	14,441,687.85	1,704,241.54	39.76622130	-80.77286826
11,102.00	90.59	299.90	6,592.55	4,884.57	-2,780.64	14,441,765.43	1,704,195.93	39.76643469	-80.77302987
11,191.00	90.81	299.43	6,591.46	4,961.77	-2,824.91	14,441,842.63	1,704,151.66	39.76664700	-80.77318673
11,281.00	90.68	299.81	6,590.29	5,039.80	-2,869.75	14,441,920.66	1,704,106.82	39.76686161	-80.77334557
11,371.00	90.46	299.29	6,589.40	5,117.38	-2,915.35	14,441,998.24	1,704,061.22	39.76707499	-80.77350718
11,460.00	90.20	299.97	6,588.88	5,193.37	-2,961.68	14,442,074.23	1,704,014.89	39.76728399	-80.77367136
11,550.00	90.24	299.58	6,588.54	5,269.92	-3,009.01	14,442,150.78	1,703,967.56	39.76749455	-80.77383909
11,640.00	90.55	299.69	6,587.92	5,347.57	-3,054.50	14,442,228.43	1,703,922.07	39.76770811	-80.77400029
11,729.00	90.11	299.04	6,587.40	5,425.31	-3,097.83	14,442,306.17	1,703,878.74	39.76792190	-80.77415379
11,819.00	89.67	299.69	6,587.58	5,503.92	-3,141.65	14,442,384.78	1,703,834.92	39.76813809	-80.77430902
11,909.00	89.76	299.78	6,588.02	5,582.43	-3,185.64	14,442,463.29	1,703,790.93	39.76835401	-80.77446489
11,998.00	91.43	299.22	6,587.10	5,660.26	-3,228.79	14,442,541.13	1,703,747.78	39.76856807	-80.77461773
12,088.00	91.74	299.69	6,584.61	5,738.92	-3,272.47	14,442,619.78	1,703,704.10	39.76878436	-80.77477247
12,178.00	91.43	299.90	6,582.12	5,817.06	-3,317.05	14,442,697.92	1,703,659.52	39.76899927	-80.77493042
12,267.00	91.60	299.25	6,579.77	5,894.17	-3,361.43	14,442,775.03	1,703,615.14	39.76921134	-80.77508768
12,357.00	91.60	299.52	6,577.26	5,972.38	-3,405.89	14,442,853.24	1,703,570.68	39.76942644	-80.77524520
12,447.00	90.86	299.41	6,575.32	6,049.87	-3,451.60	14,442,930.73	1,703,524.97	39.76963958	-80.77540719
12,536.00	91.12	299.59	6,573.78	6,127.68	-3,494.73	14,443,008.54	1,703,481.84	39.76985354	-80.77555998
12,626.00	89.27	299.45	6,573.48	6,207.88	-3,535.56	14,443,088.74	1,703,441.01	39.77007407	-80.77570457
12,715.00	90.99	299.77	6,573.28	6,287.25	-3,575.81	14,443,168.11	1,703,400.76	39.77029233	-80.77584710
12,805.00	88.97	299.12	6,573.31	6,368.10	-3,615.33	14,443,248.96	1,703,361.23	39.77051464	-80.77598706
12,894.00	88.66	299.86	6,575.15	6,448.07	-3,654.36	14,443,328.93	1,703,322.21	39.77073452	-80.77612522
12,984.00	88.92	299.57	6,577.05	6,528.03	-3,695.60	14,443,408.89	1,703,280.97	39.77095440	-80.77627130
13,074.00	90.46	299.34	6,577.54	6,606.71	-3,739.29	14,443,487.57	1,703,237.28	39.77117077	-80.77642609
13,163.00	90.15	299.43	6,577.06	6,684.08	-3,783.27	14,443,564.94	1,703,193.30	39.77138356	-80.77658193
13,253.00	91.47	299.90	6,575.79	6,762.14	-3,828.04	14,443,643.00	1,703,148.53	39.77159825	-80.77674057
13,343.00	91.38	299.90	6,573.55	6,839.98	-3,873.16	14,443,720.84	1,703,103.40	39.77181232	-80.77690046
13,432.00	91.56	299.37	6,571.27	6,916.74	-3,918.14	14,443,797.61	1,703,058.43	39.77202345	-80.77705985
13,522.00	91.34	299.55	6,568.99	6,994.23	-3,963.86	14,443,875.09	1,703,012.71	39.77223657	-80.77722187
13,611.00	91.30	299.85	6,566.94	7,070.66	-4,009.42	14,443,951.52	1,702,967.15	39.77244677	-80.77738334
13,701.00	91.25	299.76	6,564.94	7,147.63	-4,056.02	14,444,028.49	1,702,920.55	39.77265847	-80.77754852
13,790.00	91.16	299.76	6,563.07	7,223.71	-4,102.17	14,444,104.57	1,702,874.40	39.77286771	-80.77771208
13,880.00	91.34	299.58	6,561.10	7,300.57	-4,148.95	14,444,181.43	1,702,827.61	39.77307911	-80.77787791
13,970.00	90.20	299.76	6,559.89	7,377.43	-4,195.75	14,444,258.29	1,702,780.82	39.77329053	-80.77804377
14,059.00	89.93	299.85	6,559.79	7,453.57	-4,241.84	14,444,334.43	1,702,734.73	39.77349992	-80.77820716
14,148.00	90.02	299.02	6,559.83	7,529.80	-4,287.77	14,444,410.66	1,702,688.80	39.77370960	-80.77836994
14,211.00	89.98	299.93	6,559.83	7,583.79	-4,320.24	14,444,464.65	1,702,656.33	39.77385808	-80.77848503
<b>Survey @ 14211.00 MD 6559.83 TVD</b>									
14,257.00	89.98	299.93	6,559.85	7,623.19	-4,343.98	14,444,504.05	1,702,632.59	39.77396645	-80.77856917
<b>Survey projected to 14257.00 MD 6559.85 TVD</b>									

<b>Company:</b>	Tug Hill Operating LLC	<b>Local Co-ordinate Reference:</b>	Well Corley N-07HM (slot H)
<b>Project:</b>	Marshall County West Virginia	<b>TVD Reference:</b>	RKB=1254+28 @ 1282.00usft (Precision 110)
<b>Site:</b>	Corley Pad	<b>MD Reference:</b>	RKB=1254+28 @ 1282.00usft (Precision 110)
<b>Well:</b>	Corley N-07HM (slot H)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys Original	<b>Database:</b>	DB_Jul2216dt_v14

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Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
276.00	275.99	-0.34	-1.50	MWD surveys
14,211.00	6,559.83	7,583.79	-4,320.24	Survey @ 14211.00 MD 6559.83 TVD
14,257.00	6,559.85	7,623.19	-4,343.98	Survey projected to 14257.00 MD 6559.85 TVD