

<b>Company:</b>	Tug Hill Operating LLC	<b>Local Co-ordinate Reference:</b>	Well Weller 6 HM (C)
<b>Project:</b>	Marshall County, West Virginia.	<b>TVD Reference:</b>	RKB=1273+26 @ 1299.00usft (Nabors B28)
<b>Site:</b>	Lily/Weller	<b>MD Reference:</b>	RKB=1273+26 @ 1299.00usft (Nabors B28)
<b>Well:</b>	Weller 6 HM (C)	<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

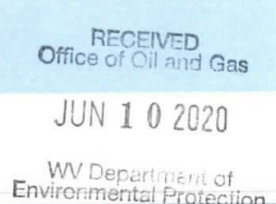
<b>Project</b>	Marshall County, West Virginia.		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD83 West Virginia - HARN		
<b>Map Zone:</b>	Zone 17N (84 W to 78 W)		

<b>Site</b>	Lily/Weller				
<b>Site Position:</b>		<b>Northing:</b>	14,431,189.55 usft	<b>Latitude:</b>	39.73745061
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,694,826.67 usft	<b>Longitude:</b>	-80.80645320
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.12 °

<b>Well</b>	Weller 6 HM (C)					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	14,431,172.73 usft	<b>Latitude:</b>	39.73740430
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	1,694,843.77 usft	<b>Longitude:</b>	-80.80639249
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	1,273.00 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>
	IGRF2015	3/2/2019	-8.66	66.79	51,962.36426181

<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	150.89

<b>Survey Program</b>	<b>Date</b>	3/12/2019			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
187.00	975.00	MWD surf (Original Hole)	MWD	MWD - Standard	
1,078.00	14,050.00	MWD (Original Hole)	MWD	MWD - Standard	
14,104.00	14,104.00	Projection (Original Hole)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured</b>	<b>Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Map Northing (usft)</b>	<b>Map Easting (usft)</b>	<b>Latitude</b>	<b>Longitude</b>
	0.00	0.00	0.00	0.00	0.00	0.00	14,431,172.73	1,694,843.77	39.73740430	-80.80639249
	187.00	0.25	330.80	187.00	0.36	-0.20	14,431,173.08	1,694,843.57	39.73740528	-80.80639320
<b>MWD surveys</b>										
	217.00	0.25	2.12	217.00	0.48	-0.23	14,431,173.21	1,694,843.54	39.73740562	-80.80639330
	248.00	0.37	268.07	248.00	0.54	-0.33	14,431,173.27	1,694,843.45	39.73740579	-80.80639365
	278.00	0.33	22.87	278.00	0.62	-0.39	14,431,173.35	1,694,843.38	39.73740600	-80.80639387
	308.00	0.08	292.98	308.00	0.71	-0.38	14,431,173.44	1,694,843.40	39.73740625	-80.80639382
	339.00	0.52	28.97	339.00	0.84	-0.33	14,431,173.57	1,694,843.44	39.73740661	-80.80639365
	369.00	0.26	46.82	369.00	1.00	-0.21	14,431,173.73	1,694,843.56	39.73740706	-80.80639323
	399.00	0.09	63.62	399.00	1.06	-0.14	14,431,173.79	1,694,843.63	39.73740722	-80.80639298

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<b>Site:</b>	Lily/Weller	<b>MD Reference:</b>	RKB=1273+26 @ 1299.00usft (Nabors B28)
<b>Well:</b>	Weller 6 HM (C)	<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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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
430.00	0.35	38.40	430.00	1.15	-0.06	14,431,173.88	1,694,843.71	39.73740745	-80.80639270
460.00	0.28	311.26	460.00	1.27	-0.06	14,431,174.00	1,694,843.71	39.73740778	-80.80639269
490.00	0.36	329.19	490.00	1.40	-0.16	14,431,174.12	1,694,843.61	39.73740814	-80.80639305
520.00	0.38	229.26	520.00	1.41	-0.29	14,431,174.14	1,694,843.49	39.73740818	-80.80639349
550.00	0.21	43.74	550.00	1.39	-0.32	14,431,174.12	1,694,843.45	39.73740811	-80.80639363
580.00	0.08	314.94	580.00	1.44	-0.30	14,431,174.17	1,694,843.47	39.73740826	-80.80639354
611.00	0.35	56.37	611.00	1.51	-0.24	14,431,174.24	1,694,843.54	39.73740845	-80.80639332
641.00	0.10	156.15	641.00	1.54	-0.15	14,431,174.26	1,694,843.62	39.73740852	-80.80639301
672.00	0.61	109.22	671.99	1.46	0.02	14,431,174.19	1,694,843.79	39.73740830	-80.80639242
702.00	0.30	164.47	701.99	1.33	0.19	14,431,174.06	1,694,843.96	39.73740795	-80.80639181
733.00	0.57	121.47	732.99	1.17	0.34	14,431,173.90	1,694,844.11	39.73740751	-80.80639126
764.00	0.28	24.30	763.99	1.16	0.51	14,431,173.89	1,694,844.28	39.73740748	-80.80639068
795.00	0.09	167.65	794.99	1.20	0.54	14,431,173.93	1,694,844.31	39.73740760	-80.80639055
826.00	0.33	278.88	825.99	1.19	0.46	14,431,173.92	1,694,844.23	39.73740758	-80.80639085
857.00	0.17	260.05	856.99	1.20	0.33	14,431,173.93	1,694,844.10	39.73740759	-80.80639132
889.00	0.29	158.67	888.99	1.12	0.31	14,431,173.84	1,694,844.08	39.73740736	-80.80639139
920.00	0.36	141.51	919.99	0.97	0.40	14,431,173.70	1,694,844.17	39.73740695	-80.80639107
952.00	0.38	121.89	951.99	0.83	0.55	14,431,173.56	1,694,844.32	39.73740658	-80.80639053
975.00	0.22	151.89	974.99	0.75	0.64	14,431,173.48	1,694,844.41	39.73740636	-80.80639022
1,078.00	0.58	113.06	1,077.99	0.37	1.21	14,431,173.10	1,694,844.98	39.73740532	-80.80638819
1,173.00	0.87	83.73	1,172.98	0.26	2.37	14,431,172.99	1,694,846.14	39.73740501	-80.80638407
1,267.00	0.40	195.99	1,266.98	0.03	2.99	14,431,172.76	1,694,846.76	39.73740436	-80.80638187
1,362.00	0.87	237.20	1,361.97	-0.68	2.29	14,431,172.05	1,694,846.06	39.73740241	-80.80638435
1,456.00	0.05	290.73	1,455.97	-1.05	1.65	14,431,171.67	1,694,845.42	39.73740139	-80.80638663
1,550.00	0.67	31.16	1,549.96	-0.57	1.90	14,431,172.16	1,694,845.67	39.73740272	-80.80638575
1,645.00	1.06	45.82	1,644.95	0.52	2.81	14,431,173.25	1,694,846.59	39.73740571	-80.80638248
1,739.00	0.39	69.20	1,738.95	1.24	3.74	14,431,173.97	1,694,847.51	39.73740768	-80.80637919
1,833.00	2.28	190.23	1,832.92	-0.49	3.70	14,431,172.24	1,694,847.48	39.73740293	-80.80637932
1,927.00	4.93	185.88	1,926.73	-6.35	2.96	14,431,166.38	1,694,846.73	39.73738685	-80.80638202
2,022.00	7.64	194.05	2,021.15	-16.54	1.01	14,431,156.19	1,694,844.78	39.73735888	-80.80638904
2,116.00	9.68	199.76	2,114.08	-30.04	-3.18	14,431,142.69	1,694,840.59	39.73732183	-80.80640404
2,211.00	10.67	201.06	2,207.58	-45.76	-9.04	14,431,126.97	1,694,834.73	39.73727868	-80.80642501
2,306.00	10.53	194.13	2,300.96	-62.39	-14.32	14,431,110.34	1,694,829.45	39.73723305	-80.80644392
2,401.00	10.34	178.53	2,394.41	-79.33	-16.22	14,431,093.40	1,694,827.55	39.73718653	-80.80645081
2,495.00	11.42	166.10	2,486.73	-96.80	-13.77	14,431,075.93	1,694,830.00	39.73713853	-80.80644222
2,588.00	11.73	158.98	2,577.85	-114.57	-8.17	14,431,058.16	1,694,835.60	39.73708972	-80.80642243
2,678.00	11.88	148.91	2,665.95	-131.04	-0.10	14,431,041.69	1,694,843.67	39.73704443	-80.80639386
2,773.00	11.56	143.85	2,758.97	-147.10	10.56	14,431,025.63	1,694,854.33	39.73700026	-80.80635605
2,868.00	16.47	139.47	2,851.12	-165.03	24.94	14,431,007.70	1,694,868.71	39.73695092	-80.80630505
2,962.00	18.51	136.70	2,940.77	-186.02	43.83	14,430,986.71	1,694,887.60	39.73689316	-80.80623800
3,056.00	20.28	136.86	3,029.43	-208.77	65.21	14,430,963.96	1,694,908.98	39.73683057	-80.80616215
3,151.00	20.57	142.08	3,118.47	-233.95	86.72	14,430,938.78	1,694,930.49	39.73676128	-80.80608580
3,248.00	19.25	137.71	3,209.67	-259.23	107.96	14,430,913.50	1,694,951.73	39.73669175	-80.80601047
3,343.00	19.58	140.75	3,299.27	-283.14	128.57	14,430,889.59	1,694,972.34	39.73662595	-80.80593734
3,437.00	19.54	144.15	3,387.85	-308.08	147.74	14,430,864.65	1,694,991.51	39.73655735	-80.80586933
3,531.00	18.47	141.46	3,476.73	-332.47	166.22	14,430,840.26	1,695,010.00	39.73649026	-80.80580377
3,626.00	17.20	141.50	3,567.16	-355.23	184.35	14,430,817.50	1,695,028.12	39.73642763	-80.80573948
3,720.00	16.89	139.94	3,657.03	-376.56	201.79	14,430,796.17	1,695,045.56	39.73636895	-80.80567761
3,814.00	17.29	142.52	3,746.88	-398.10	219.07	14,430,774.63	1,695,062.85	39.73630970	-80.80561628
3,909.00	17.77	144.44	3,837.47	-421.09	236.09	14,430,751.63	1,695,079.87	39.73624645	-80.80555591
4,004.00	18.19	142.32	3,927.83	-444.62	253.59	14,430,728.11	1,695,097.36	39.73618172	-80.80549386
4,099.00	16.44	140.32	4,018.52	-466.71	271.24	14,430,706.02	1,695,115.01	39.73612097	-80.80543125
4,193.00	16.29	140.68	4,108.72	-487.14	288.08	14,430,685.59	1,695,131.86	39.73606475	-80.80537149
4,288.00	17.57	141.46	4,199.60	-508.67	305.46	14,430,664.06	1,695,149.23	39.73600553	-80.80530984
4,383.00	18.12	138.49	4,290.03	-530.95	324.19	14,430,641.78	1,695,167.96	39.73594424	-80.80524341

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4,477.00	18.21	137.24	4,379.34	-552.68	343.85	14,430,620.05	1,695,187.62	39.73588444	-80.80517364
4,572.00	17.70	140.46	4,469.72	-574.71	363.12	14,430,598.02	1,695,206.89	39.73582381	-80.80510526
4,667.00	18.18	140.06	4,560.10	-597.21	381.83	14,430,575.52	1,695,225.60	39.73576191	-80.80503889
4,761.00	19.23	140.15	4,649.13	-620.34	401.16	14,430,552.39	1,695,244.93	39.73569827	-80.80497029
4,856.00	18.48	139.13	4,739.04	-643.74	421.04	14,430,528.99	1,695,264.81	39.73563390	-80.80489977
4,950.00	17.37	138.19	4,828.47	-665.46	440.14	14,430,507.27	1,695,283.91	39.73557412	-80.80483199
5,044.00	16.83	142.00	4,918.32	-686.64	457.87	14,430,486.09	1,695,301.65	39.73551584	-80.80476907
5,139.00	18.70	145.85	5,008.79	-710.09	474.89	14,430,462.64	1,695,318.66	39.73545136	-80.80470872
5,234.00	18.76	145.84	5,098.76	-735.33	492.02	14,430,437.40	1,695,335.79	39.73538193	-80.80464800
5,329.00	17.66	144.28	5,189.00	-759.67	509.01	14,430,413.06	1,695,352.78	39.73531498	-80.80458775
5,423.00	17.02	143.57	5,278.73	-782.32	525.50	14,430,390.41	1,695,369.28	39.73525269	-80.80452925
5,517.00	16.66	150.08	5,368.70	-805.07	540.40	14,430,367.66	1,695,384.17	39.73519012	-80.80447646
5,611.00	16.35	153.80	5,458.83	-828.62	552.96	14,430,344.11	1,695,396.73	39.73512537	-80.80443195
5,706.00	15.69	157.62	5,550.15	-852.49	563.75	14,430,320.24	1,695,407.53	39.73505973	-80.80439374
5,800.00	16.98	167.50	5,640.37	-877.65	571.57	14,430,295.08	1,695,415.34	39.73499059	-80.80436615
5,894.00	17.97	170.33	5,730.03	-905.35	576.97	14,430,267.38	1,695,420.74	39.73491450	-80.80434713
5,989.00	19.48	162.59	5,820.01	-934.92	584.18	14,430,237.81	1,695,427.95	39.73483325	-80.80432174
6,119.00	20.22	154.95	5,942.31	-975.96	600.18	14,430,196.77	1,695,443.95	39.73472044	-80.80426514
6,192.00	18.37	159.26	6,011.21	-998.15	609.59	14,430,174.58	1,695,453.36	39.73465945	-80.80423182
6,214.00	20.57	161.54	6,031.95	-1,005.06	612.04	14,430,167.67	1,695,455.82	39.73464046	-80.80422315
6,261.00	22.68	162.68	6,075.64	-1,021.54	617.36	14,430,151.19	1,695,461.13	39.73459516	-80.80420438
6,309.00	25.49	163.92	6,119.46	-1,040.30	622.97	14,430,132.42	1,695,466.75	39.73454359	-80.80418455
6,356.00	30.59	164.97	6,160.93	-1,061.59	628.88	14,430,111.14	1,695,472.65	39.73448511	-80.80416371
6,404.00	34.02	165.41	6,201.49	-1,086.38	635.43	14,430,086.35	1,695,479.20	39.73441697	-80.80414060
6,451.00	37.89	166.20	6,239.53	-1,113.13	642.19	14,430,059.59	1,695,485.96	39.73434347	-80.80411677
6,498.00	41.10	167.34	6,275.79	-1,142.23	649.02	14,430,030.50	1,695,492.79	39.73426352	-80.80409270
6,545.00	44.84	166.29	6,310.18	-1,173.41	656.34	14,429,999.32	1,695,500.11	39.73417784	-80.80406692
6,592.00	48.26	165.06	6,342.50	-1,206.46	664.79	14,429,966.26	1,695,508.56	39.73408702	-80.80403712
6,639.00	51.56	163.01	6,372.76	-1,241.02	674.69	14,429,931.71	1,695,518.46	39.73399205	-80.80400216
6,687.00	55.21	161.63	6,401.39	-1,277.72	686.40	14,429,895.01	1,695,530.17	39.73389120	-80.80396080
6,734.00	57.63	161.72	6,427.38	-1,314.89	698.71	14,429,857.84	1,695,542.48	39.73378905	-80.80391730
6,780.00	61.93	162.16	6,450.53	-1,352.67	711.02	14,429,820.06	1,695,554.79	39.73368522	-80.80387379
6,827.00	66.51	163.30	6,470.96	-1,393.07	723.58	14,429,779.66	1,695,567.35	39.73357418	-80.80382945
6,875.00	69.54	164.27	6,488.92	-1,435.81	736.00	14,429,736.92	1,695,579.77	39.73345673	-80.80378559
6,922.00	71.82	165.92	6,504.47	-1,478.67	747.40	14,429,694.06	1,695,591.18	39.73333897	-80.80374537
6,969.00	77.89	165.06	6,516.75	-1,522.57	758.77	14,429,650.16	1,695,602.54	39.73321834	-80.80370528
6,999.00	82.42	163.39	6,521.88	-1,551.00	766.81	14,429,621.73	1,695,610.58	39.73314020	-80.80367692
7,064.00	88.92	159.96	6,526.78	-1,612.49	787.18	14,429,560.24	1,695,630.95	39.73297122	-80.80360493
7,159.00	89.10	156.97	6,528.42	-1,700.83	822.04	14,429,471.90	1,695,665.81	39.73272839	-80.80348162
7,254.00	89.58	152.75	6,529.52	-1,786.81	862.39	14,429,385.92	1,695,706.16	39.73249203	-80.80333878
7,348.00	90.29	152.10	6,529.63	-1,870.13	905.90	14,429,302.60	1,695,749.67	39.73226295	-80.80318466
7,443.00	89.71	148.36	6,529.63	-1,952.57	953.06	14,429,220.15	1,695,796.83	39.73203624	-80.80301755
7,538.00	90.59	147.92	6,529.38	-2,033.26	1,003.21	14,429,139.47	1,695,846.98	39.73181435	-80.80283983
7,632.00	89.85	147.13	6,529.02	-2,112.56	1,053.68	14,429,060.17	1,695,897.45	39.73159626	-80.80266093
7,726.00	89.32	150.91	6,529.70	-2,193.13	1,102.05	14,428,979.60	1,695,945.82	39.73137469	-80.80248950
7,821.00	89.27	151.08	6,530.87	-2,276.21	1,148.11	14,428,896.52	1,695,991.88	39.73114625	-80.80232632
7,914.00	89.80	152.10	6,531.62	-2,358.01	1,192.36	14,428,814.72	1,696,036.13	39.73092135	-80.80216959
8,009.00	88.84	148.53	6,532.75	-2,440.52	1,239.39	14,428,732.21	1,696,083.16	39.73069446	-80.80200294
8,103.00	89.76	149.41	6,533.90	-2,521.06	1,287.84	14,428,651.67	1,696,131.62	39.73047298	-80.80183124
8,199.00	89.23	149.94	6,534.74	-2,603.92	1,336.31	14,428,568.81	1,696,180.08	39.73024512	-80.80165950
8,292.00	88.97	146.34	6,536.20	-2,682.89	1,385.39	14,428,489.84	1,696,229.16	39.73002796	-80.80148557
8,387.00	89.80	145.46	6,537.22	-2,761.55	1,438.64	14,428,411.18	1,696,282.42	39.72981161	-80.80129677
8,481.00	89.67	148.45	6,537.66	-2,840.33	1,489.90	14,428,332.40	1,696,333.67	39.72959493	-80.80111510
8,575.00	90.46	148.62	6,537.55	-2,920.51	1,538.96	14,428,252.22	1,696,382.73	39.72937444	-80.80094122
8,670.00	89.89	149.85	6,537.26	-3,002.14	1,587.55	14,428,170.59	1,696,431.33	39.72914996	-80.80076903

WV Department of Environmental Protection

<b>Company:</b>	Tug Hill Operating LLC	<b>Local Co-ordinate Reference:</b>	Well Weller 6 HM (C)
<b>Project:</b>	Marshall County, West Virginia.	<b>TVD Reference:</b>	RKB=1273+26 @ 1299.00usft (Nabors B28)
<b>Site:</b>	Lily/Weller	<b>MD Reference:</b>	RKB=1273+26 @ 1299.00usft (Nabors B28)
<b>Well:</b>	Weller 6 HM (C)	<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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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,764.00	89.10	149.06	6,538.09	-3,083.09	1,635.32	14,428,089.64	1,696,479.10	39.72892736	-80.80059976
8,858.00	89.76	148.27	6,539.03	-3,163.37	1,684.20	14,428,009.36	1,696,527.98	39.72870657	-80.80042654
8,953.00	88.00	149.41	6,540.88	-3,244.65	1,733.35	14,427,928.08	1,696,577.12	39.72848307	-80.80025240
9,048.00	88.35	152.05	6,543.91	-3,327.47	1,779.77	14,427,845.26	1,696,623.54	39.72825533	-80.80008795
9,142.00	88.44	151.79	6,546.54	-3,410.37	1,824.00	14,427,762.36	1,696,667.77	39.72802738	-80.79993130
9,237.00	90.59	151.26	6,547.35	-3,493.87	1,869.29	14,427,678.86	1,696,713.06	39.72779779	-80.79977088
9,332.00	90.68	152.40	6,546.29	-3,577.61	1,914.13	14,427,595.12	1,696,757.90	39.72756754	-80.79961205
9,427.00	89.93	152.31	6,545.79	-3,661.76	1,958.21	14,427,510.96	1,696,801.98	39.72733616	-80.79945595
9,521.00	90.99	152.14	6,545.03	-3,744.93	2,002.01	14,427,427.80	1,696,845.78	39.72710749	-80.79930082
9,616.00	90.51	152.49	6,543.79	-3,829.05	2,046.15	14,427,343.68	1,696,889.92	39.72687621	-80.79914452
9,712.00	91.56	151.26	6,542.05	-3,913.69	2,091.39	14,427,259.03	1,696,935.16	39.72664346	-80.79898428
9,807.00	90.33	150.03	6,540.49	-3,996.48	2,137.95	14,427,176.25	1,696,981.73	39.72641582	-80.79881933
9,901.00	89.32	148.09	6,540.78	-4,077.10	2,186.28	14,427,095.63	1,697,030.05	39.72619411	-80.79864810
9,997.00	89.41	148.01	6,541.84	-4,158.55	2,237.08	14,427,014.18	1,697,080.85	39.72597011	-80.79846809
10,092.00	89.85	146.86	6,542.45	-4,238.61	2,288.21	14,426,934.12	1,697,131.98	39.72574992	-80.79828687
10,187.00	90.81	145.37	6,541.91	-4,317.47	2,341.17	14,426,855.25	1,697,184.94	39.72553302	-80.79809914
10,282.00	88.75	147.04	6,542.27	-4,396.41	2,394.01	14,426,776.31	1,697,237.78	39.72531590	-80.79791186
10,377.00	89.27	149.33	6,543.91	-4,477.12	2,444.08	14,426,695.60	1,697,287.85	39.72509393	-80.79773442
10,472.00	88.44	151.08	6,545.81	-4,559.55	2,491.27	14,426,613.18	1,697,335.04	39.72486729	-80.79756724
10,567.00	88.84	151.61	6,548.07	-4,642.89	2,536.82	14,426,529.84	1,697,380.59	39.72463813	-80.79740594
10,661.00	89.45	150.82	6,549.47	-4,725.26	2,582.07	14,426,447.47	1,697,425.85	39.72441162	-80.79724564
10,756.00	90.64	152.49	6,549.39	-4,808.87	2,627.18	14,426,363.86	1,697,470.95	39.72418173	-80.79708591
10,850.00	89.14	151.61	6,549.57	-4,891.90	2,671.23	14,426,280.83	1,697,515.00	39.72395343	-80.79692989
10,945.00	90.07	151.08	6,550.23	-4,975.26	2,716.79	14,426,197.47	1,697,560.56	39.72372421	-80.79676855
11,040.00	91.16	150.47	6,549.21	-5,058.16	2,763.16	14,426,114.57	1,697,606.94	39.72349625	-80.79660428
11,135.00	90.11	151.26	6,548.16	-5,141.13	2,809.41	14,426,031.59	1,697,653.18	39.72326809	-80.79644046
11,228.00	90.11	152.05	6,547.98	-5,222.98	2,853.57	14,425,949.75	1,697,697.34	39.72304303	-80.79628409
11,323.00	90.77	151.61	6,547.25	-5,306.73	2,898.41	14,425,866.00	1,697,742.19	39.72281276	-80.79612528
11,418.00	89.67	151.26	6,546.88	-5,390.16	2,943.84	14,425,782.57	1,697,787.61	39.72258334	-80.79596441
11,513.00	89.49	150.20	6,547.58	-5,473.03	2,990.28	14,425,699.70	1,697,834.06	39.72235547	-80.79579990
11,607.00	89.98	151.35	6,548.01	-5,555.06	3,036.18	14,425,617.67	1,697,879.95	39.72212990	-80.79563735
11,702.00	89.01	149.50	6,548.85	-5,637.68	3,083.06	14,425,535.05	1,697,926.83	39.72190272	-80.79547128
11,796.00	88.84	149.41	6,550.62	-5,718.62	3,130.82	14,425,454.11	1,697,974.60	39.72168013	-80.79530207
11,891.00	89.19	148.71	6,552.25	-5,800.09	3,179.66	14,425,372.64	1,698,023.43	39.72145609	-80.79512906
11,986.00	89.80	148.80	6,553.09	-5,881.30	3,228.93	14,425,291.43	1,698,072.71	39.72123273	-80.79495448
12,081.00	90.15	148.62	6,553.13	-5,962.49	3,278.27	14,425,210.24	1,698,122.05	39.72100947	-80.79477967
12,175.00	90.55	147.74	6,552.55	-6,042.36	3,327.83	14,425,130.37	1,698,171.61	39.72078981	-80.79460407
12,269.00	90.02	149.50	6,552.09	-6,122.60	3,376.78	14,425,050.13	1,698,220.55	39.72056912	-80.79443066
12,364.00	90.51	149.68	6,551.65	-6,204.53	3,424.87	14,424,968.20	1,698,268.64	39.72034381	-80.79426032
12,459.00	89.32	148.36	6,551.79	-6,285.98	3,473.76	14,424,886.75	1,698,317.54	39.72011983	-80.79408709
12,554.00	89.63	149.41	6,552.66	-6,367.30	3,522.85	14,424,805.42	1,698,366.62	39.71989617	-80.79393138
12,649.00	88.62	148.80	6,554.11	-6,448.81	3,571.63	14,424,723.92	1,698,415.40	39.71967201	-80.79377404
12,744.00	89.05	148.09	6,556.04	-6,529.75	3,621.33	14,424,642.98	1,698,465.10	39.71944942	-80.79356430
12,839.00	88.53	148.53	6,558.05	-6,610.57	3,671.22	14,424,562.16	1,698,515.00	39.71922716	-80.79338753
12,934.00	88.48	151.00	6,560.52	-6,692.61	3,719.04	14,424,480.12	1,698,562.81	39.71900154	-80.79321815
13,028.00	89.14	150.82	6,562.48	-6,774.73	3,764.73	14,424,398.00	1,698,608.50	39.71877571	-80.79305634
13,122.00	89.63	150.47	6,563.49	-6,856.66	3,810.81	14,424,316.07	1,698,654.58	39.71855043	-80.79289315
13,218.00	89.76	150.47	6,564.00	-6,940.19	3,858.13	14,424,232.54	1,698,701.90	39.71832073	-80.79272557
13,312.00	90.29	150.03	6,563.96	-7,021.80	3,904.77	14,424,150.93	1,698,748.54	39.71809631	-80.79256037
13,407.00	90.73	150.20	6,563.11	-7,104.16	3,952.10	14,424,068.57	1,698,795.87	39.71786981	-80.79239272
13,501.00	91.21	149.76	6,561.52	-7,185.54	3,999.12	14,423,987.19	1,698,842.90	39.71764603	-80.79222618
13,596.00	91.08	150.91	6,559.62	-7,268.07	4,046.13	14,423,904.66	1,698,889.90	39.71741907	-80.79205969
13,691.00	90.24	150.82	6,558.53	-7,351.04	4,092.38	14,423,821.69	1,698,936.15	39.71719090	-80.79189591
13,785.00	89.76	151.00	6,558.53	-7,433.19	4,138.08	14,423,739.54	1,698,981.85	39.71696502	-80.79173407
13,880.00	89.36	150.20	6,559.26	-7,515.95	4,184.72	14,423,656.78	1,699,028.49	39.71673744	-80.79156891

WV Department of Environmental Protection

<b>Company:</b>	Tug Hill Operating LLC	<b>Local Co-ordinate Reference:</b>	Well Weller 6 HM (C)
<b>Project:</b>	Marshall County, West Virginia.	<b>TVD Reference:</b>	RKB=1273+26 @ 1299.00usft (Nabors B28)
<b>Site:</b>	Lily/Weller	<b>MD Reference:</b>	RKB=1273+26 @ 1299.00usft (Nabors B28)
<b>Well:</b>	Weller 6 HM (C)	<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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Survey

JUN 10 2020

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,975.00	88.70	149.41	6,560.86	-7,598.05	4,232.49	14,423,574.68	1,699,076.26	39.71651167	-80.79139971
14,050.00	88.26	149.76	6,562.85	-7,662.70	4,270.44	14,423,510.03	1,699,114.22	39.71633386	-80.79126527
<b>Survey @ 14050.00 MD 6562.85 TVD</b>									
14,104.00	88.26	149.76	6,564.49	-7,709.33	4,297.63	14,423,463.40	1,699,141.40	39.71620563	-80.79116899
<b>Survey projected to 14104.00 MD 6564.49 TVD</b>									

WV Department of Environmental Protection

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
187.00	187.00	0.36	-0.20	MWD surveys
14,050.00	6,562.85	-7,662.70	4,270.44	Survey @ 14050.00 MD 6562.85 TVD
14,104.00	6,564.49	-7,709.33	4,297.63	Survey projected to 14104.00 MD 6564.49 TVD