

Company: Tug Hill Operating LLC	Project: Marshall County, West Virginia.
Site: Heaven Hill 3	Project: Marshall County, West Virginia.
Well: Heaven Hill 3-6 HU (E)	Well: Heaven Hill 3
Wellbore: Original Hole	Wellbore: Original Hole
Design: Surveys Original Hole	Design: Surveys Original Hole

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

Site: Heaven Hill 3	Site Position: Northing: 14,457,178.76 usft Easting: 1,726,571.98 usft Latitude: 39.80858060 Longitude: -80.69321360	Position Uncertainty: 0.00 usft
	Slot Radius: 13-3/16 "	

Well: Heaven Hill 3-6 HU (E)	Well Position: +N/S: 0.00 usft +E/W: 0.00 usft	Position Uncertainty: 0.00 usft
	Northing: 14,457,206.09 usft Easting: 1,726,546.42 usft	
	Latitude: 39.80865589 Longitude: -80.69330431	
	Ground Level: 1,326.00 usft	

Wellbore: Original Hole	Model Name: IGRF2015	Sample Date: 3/30/2018	Declination: (-) -8.73	Dip Angle: (°) 66.91	Field Strength: 52.092.05617205
--------------------------------	-----------------------------	-------------------------------	-------------------------------	-----------------------------	--

Design: Surveys Original Hole	Audit Notes: Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/S (usft)	+E/W (usft)	Direction (°)
	0.00	0.00	0.00	158.90

Survey Program	Date: 10/24/2018	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
		156.00	23,039.00	MWD (Original Hole)	MWD	MWD - Standard

RECEIVED
 Office of Oil and Gas
 JUL 10 2020
 WV Department of
 Environmental Protection

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference:
 Well Heaven Hill 3-6 HU (E)
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
TVD Reference:
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference:
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference:
 Gnd
Survey Calculation Method:
 Minimum Curvature
Database:
 DB_Jul2216dt_v14

Survey	MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	EW (usft)	Dleg ("/100usft)	Latitude (")	Longitude (")	V. Sec (usft)
--------	-----------	---------	-------------------	------------	------------	-----------	------------------	--------------	---------------	---------------

	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.8086589	-80.69330431	0.00
	156.00	0.29	309.70	156.00	0.25	-0.30	-0.30	39.8086569	-80.69330539	-0.34
MWD surveys	187.00	0.41	275.28	187.00	0.31	-0.47	-0.47	39.8086575	-80.69330600	-0.46
	217.00	0.32	243.31	217.00	0.28	-0.66	-0.66	39.8086568	-80.69330664	-0.50
	247.00	0.22	241.47	247.00	0.22	-0.78	-0.78	39.8086560	-80.69330709	-0.49
	278.00	0.25	290.85	278.00	0.22	-0.90	-0.90	39.8086549	-80.69330750	-0.52
	308.00	0.14	256.56	308.00	0.23	-0.99	-0.99	39.8086563	-80.69330785	-0.57
	338.00	0.17	238.02	338.00	0.20	-1.07	-1.07	39.8086564	-80.69330811	-0.57
	375.00	0.39	170.14	375.00	0.04	-1.09	-1.09	39.8086560	-80.69330820	-0.43
	405.00	0.07	337.53	405.00	-0.04	-1.08	-1.08	39.8086579	-80.69330816	-0.36
	435.00	0.19	128.37	435.00	-0.05	-1.05	-1.05	39.8086575	-80.69330805	-0.33
	466.00	0.16	182.60	466.00	-0.13	-1.01	-1.01	39.8086555	-80.69330791	-0.24
	496.00	0.46	52.89	496.00	-0.10	-0.92	-0.92	39.8086563	-80.69330758	-0.24
	526.00	0.11	309.93	526.00	-0.01	-0.84	-0.84	39.8086588	-80.69330731	-0.30
	556.00	0.19	25.91	556.00	0.06	-0.84	-0.84	39.8086560	-80.69330731	-0.36
	586.00	0.13	96.23	586.00	0.10	-0.79	-0.79	39.8086567	-80.69330712	-0.37
	617.00	0.07	232.81	617.00	0.08	-0.77	-0.77	39.8086561	-80.69330705	-0.35
	647.00	0.28	158.94	647.00	0.00	-0.76	-0.76	39.8086591	-80.69330700	-0.27
	678.00	0.11	52.56	678.00	-0.05	-0.71	-0.71	39.8086576	-80.69330682	-0.21
	708.00	0.37	150.39	708.00	-0.12	-0.64	-0.64	39.8086558	-80.69330657	-0.12
	739.00	0.31	141.10	738.99	-0.27	-0.53	-0.53	39.8086516	-80.69330621	0.06
	769.00	0.11	183.40	768.99	-0.36	-0.48	-0.48	39.8086549	-80.69330604	0.16
	799.00	0.22	71.74	798.99	-0.37	-0.43	-0.43	39.8086548	-80.69330585	0.19
	830.00	0.30	127.90	829.99	-0.40	-0.31	-0.31	39.8086547	-80.69330542	0.26
	861.00	0.09	164.80	860.99	-0.48	-0.24	-0.24	39.8086545	-80.69330517	0.36
	891.00	0.03	78.52	890.99	-0.50	-0.23	-0.23	39.8086545	-80.69330512	0.38

RECEIVED
 Office of Oil and Gas
 JUL 10 2020
 WV Department of
 Environmental Protection

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference:
TVD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	Dleg (°/100usft)	Latitude (°)	Longitude (°)	V. Sec (usft)
--------	-----------	---------	-------------------	------------	------------	-----------	------------------	--------------	---------------	---------------

923.00	0.43	169.58	922.99	-0.61	-0.20	1.35	39.80865421	-80.69330502	0.50
954.00	0.13	152.23	953.99	-0.76	-0.16	0.99	39.80865381	-80.69330488	0.65
981.00	0.15	146.26	980.99	-0.81	-0.12	0.09	39.80865365	-80.69330476	0.72
1,018.00	0.22	112.68	1,017.99	-0.88	-0.03	0.34	39.80865347	-80.69330444	0.81
1,050.00	0.20	145.23	1,049.99	-0.95	0.06	0.37	39.80865327	-80.69330412	0.91
1,081.00	0.20	176.10	1,080.99	-1.05	0.09	0.34	39.80865300	-80.69330400	1.01
1,106.00	0.19	124.13	1,105.99	-1.12	0.13	0.68	39.80865282	-80.69330387	1.09
1,187.00	0.27	247.84	1,186.99	-1.26	0.06	0.50	39.80865242	-80.69330410	1.20
1,281.00	0.39	292.51	1,280.99	-1.23	-0.44	0.29	39.80865253	-80.69330588	0.99
1,376.00	0.55	5.82	1,375.99	-0.65	-0.69	0.61	39.80865412	-80.69330678	0.36
1,471.00	1.05	353.33	1,470.98	0.67	-0.75	0.55	39.80865774	-80.69330696	-0.89
1,565.00	1.41	357.49	1,564.96	2.68	-0.90	0.39	39.80866326	-80.69330747	-2.82
1,659.00	1.84	16.01	1,658.92	5.29	-0.53	0.72	39.80867041	-80.69330613	-5.13
1,753.00	3.02	23.01	1,752.83	9.02	0.85	1.29	39.80868064	-80.69330116	-8.11
1,848.00	3.94	17.44	1,847.66	14.43	2.81	1.03	39.80869550	-80.69329413	-12.47
1,943.00	4.33	13.08	1,942.41	21.04	4.60	0.53	39.80871363	-80.69328767	-17.99
2,037.00	4.01	13.56	2,036.16	27.69	6.17	0.34	39.80873188	-80.69328199	-23.64
2,131.00	3.03	27.17	2,129.98	33.10	8.08	1.36	39.80874671	-80.69327514	-28.00
2,226.00	2.22	45.90	2,224.89	36.61	10.55	1.23	39.80875634	-80.69326631	-30.40
2,320.00	2.18	38.75	2,318.82	39.27	12.97	0.29	39.80876362	-80.69325764	-32.01
2,414.00	2.25	13.02	2,412.75	42.47	14.51	1.05	39.80877238	-80.69325213	-34.44
2,509.00	2.00	349.36	2,507.69	45.91	14.62	0.95	39.80878184	-80.69325168	-37.62
2,603.00	2.40	340.66	2,601.62	49.38	13.67	0.55	39.80879137	-80.69325504	-41.20
2,697.00	1.95	338.32	2,695.55	52.72	12.42	0.49	39.80880057	-80.69325942	-44.76
2,791.00	1.14	335.81	2,789.51	55.06	11.45	0.86	39.80880700	-80.69326286	-47.30
2,853.00	0.99	337.77	2,851.50	56.12	11.00	0.25	39.80880991	-80.69326447	-48.48
2,972.00	1.17	339.61	2,970.48	58.21	10.18	0.15	39.80881566	-80.69326734	-50.69

RECEIVED
 Office of Oil and Gas
 JUL 10 2020
 WV Department of
 Environmental Protection

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference:
 Well Heaven Hill 3-6 HU (E)
TVD Reference:
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference:
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference:
 Gnd
Survey Calculation Method:
 Minimum Curvature
 DB_Jul2216dt_v14
Database:

Survey	MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	EW (usft)	Dleg ("/100usft)	Latitude (")	Longitude (")	V. Sec (usft)
--------	-----------	---------	-------------------	------------	------------	-----------	------------------	--------------	---------------	---------------

3,067.00	0.57	111.54	144.74	3,159.45	58.95	10.28	1.69	39.80881768	-80.69326697	-51.34
3,161.00	1.93	144.74	144.74	3,159.45	57.48	11.63	1.58	39.80881365	-80.69326218	-49.49
3,256.00	2.30	150.62	3,254.39	54.52	13.49	13.49	0.45	39.80880548	-80.69325560	-46.05
3,351.00	1.75	180.04	3,349.33	51.40	14.43	14.43	1.22	39.80879692	-80.69325231	-42.82
3,447.00	1.65	204.81	3,445.29	48.68	13.85	13.85	0.77	39.80878946	-80.69325441	-40.48
3,541.00	1.75	203.59	3,539.25	46.14	12.70	12.70	0.11	39.80878248	-80.69325851	-38.52
3,636.00	2.19	199.89	3,634.19	43.10	11.51	11.51	0.48	39.80877416	-80.69326282	-36.11
3,731.00	0.96	238.06	3,729.16	40.98	10.21	10.21	1.63	39.80876833	-80.69326745	-34.59
3,826.00	1.15	352.22	3,824.15	41.50	9.41	9.41	1.87	39.80876977	-80.69327030	-35.37
3,921.00	1.23	0.28	3,919.13	43.46	9.28	9.28	0.20	39.80877517	-80.69327072	-37.25
4,015.00	1.40	358.60	4,013.10	45.62	9.26	9.26	0.19	39.80878109	-80.69327078	-39.27
4,110.00	1.68	359.39	4,108.07	48.17	9.22	9.22	0.30	39.80878810	-80.69327090	-41.67
4,204.00	1.00	20.01	4,202.04	50.32	9.48	9.48	0.88	39.80879400	-80.69326993	-43.58
4,299.00	0.40	38.35	4,297.03	51.36	9.97	9.97	0.67	39.80879685	-80.69326817	-44.37
4,394.00	0.60	326.14	4,392.03	52.03	9.90	9.90	0.64	39.80879870	-80.69326842	-45.03
4,488.00	0.33	294.74	4,486.03	52.56	9.38	9.38	0.38	39.80880013	-80.69327026	-45.70
4,583.00	0.41	244.74	4,581.03	52.53	8.83	8.83	0.34	39.80880006	-80.69327224	-45.87
4,678.00	0.95	324.74	4,676.02	53.02	8.06	8.06	1.02	39.80880143	-80.69327495	-46.61
4,773.00	1.52	214.90	4,771.01	52.63	6.89	6.89	2.16	39.80880037	-80.69327914	-46.66
4,868.00	2.71	201.06	4,865.94	49.50	5.36	49.50	1.35	39.80879179	-80.69328462	-44.29
4,963.00	2.26	188.61	4,960.85	45.56	4.27	4.27	0.74	39.80878096	-80.69328854	-41.00
5,057.00	1.07	147.37	5,054.81	42.98	4.47	4.47	1.72	39.80877389	-80.69328788	-38.52
5,152.00	1.31	109.27	5,149.80	41.88	5.97	5.97	0.85	39.80877084	-80.69328254	-36.96
5,248.00	1.88	113.89	5,245.76	40.88	8.45	8.45	0.61	39.80876807	-80.69327373	-35.13
5,342.00	1.03	125.22	5,339.73	39.77	10.55	10.55	0.95	39.80876500	-80.69326627	-33.34
5,437.00	0.39	229.88	5,434.72	39.07	11.00	11.00	1.25	39.80876307	-80.69326467	-32.53
5,532.00	2.21	215.99	5,529.69	37.38	9.67	9.67	1.93	39.80875844	-80.69326941	-31.42

RECEIVED
 Office of Oil and Gas
 JUL 10 2020
 WV Department of
 Environmental Protection

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference:
TVD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference: Ghd
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	Dleg ("/100usft)	Latitude (")	Longitude (")	V. Sec (usft)
-----------	---------	-------------------	------------	------------	------------	------------------	--------------	---------------	---------------

5,626.00	6.37	212.30	5,623.41	31.50	5.82	4.43	39.80874234	-80.69328320	-27.32
5,721.00	12.13	214.06	5,717.13	18.77	-2.59	6.07	39.80870745	-80.69331331	-18.45
5,816.00	17.25	216.20	5,809.00	-0.88	-16.51	5.42	39.80865362	-80.69336311	-5.09
5,911.00	21.13	214.79	5,898.70	-26.32	-34.61	4.11	39.80858393	-80.69342786	12.16
6,008.00	21.43	208.10	5,989.10	-56.32	-52.93	2.52	39.80850173	-80.69349348	33.59
6,103.00	23.51	202.38	6,076.90	-89.15	-68.32	3.17	39.80841169	-80.6934869	58.73
6,196.00	25.01	199.92	6,161.68	-124.79	-82.09	1.94	39.80831395	-80.69359812	87.07
6,288.00	23.63	202.48	6,245.52	-160.12	-95.76	1.89	39.80821707	-80.69364726	115.14
6,382.00	25.59	200.76	6,330.98	-196.51	-110.16	2.22	39.80811726	-80.69369898	143.95
6,476.00	26.25	202.07	6,415.52	-234.76	-125.17	0.93	39.80801236	-80.69375288	174.27
6,571.00	25.01	206.12	6,501.18	-272.26	-141.91	2.26	39.80790952	-80.69381293	203.28
6,665.00	24.40	208.74	6,586.58	-307.13	-159.99	1.33	39.80781394	-80.69387775	229.35
6,759.00	24.32	207.73	6,672.21	-341.29	-178.33	0.45	39.80772031	-80.69394348	254.66
6,854.00	25.04	207.50	6,758.53	-376.44	-196.72	0.76	39.80762396	-80.69400937	280.88
6,947.00	23.33	209.25	6,843.37	-409.96	-214.81	1.99	39.80753205	-80.69407419	305.69
7,040.00	23.36	210.76	6,928.75	-441.87	-233.24	0.64	39.80744459	-80.69414019	328.88
7,135.00	24.66	211.92	7,015.53	-474.88	-253.35	1.46	39.80735413	-80.69421221	352.48
7,230.00	25.94	208.95	7,101.42	-509.89	-273.89	1.90	39.80725819	-80.69428577	377.79
7,325.00	27.38	208.19	7,186.32	-547.33	-294.26	1.56	39.80715556	-80.69435878	406.44
7,419.00	27.70	208.68	7,269.67	-585.54	-314.96	0.42	39.80705080	-80.69443294	433.69
7,517.00	24.99	207.16	7,357.48	-623.95	-335.34	2.85	39.80694551	-80.69450599	462.24
7,611.00	24.80	207.43	7,442.75	-659.12	-353.49	0.24	39.80684911	-80.69457103	488.56
7,706.00	23.07	207.23	7,529.58	-693.35	-371.19	1.82	39.80675526	-80.69463446	514.18
7,801.00	22.25	205.64	7,617.24	-726.12	-387.49	1.08	39.80666543	-80.69469289	538.92
7,896.00	22.00	206.09	7,705.25	-758.31	-403.09	0.32	39.80657716	-80.69474886	563.38
7,989.00	21.84	206.14	7,791.52	-789.49	-418.38	0.17	39.80649169	-80.69480365	587.00
8,084.00	22.59	208.24	7,879.47	-821.43	-434.79	1.15	39.80640413	-80.69486250	610.93

RECEIVED
 Office of Oil and Gas
 JUL 1 0 2020
 WV Department of
 Environmental Protection

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference:
 TVD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
 MD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: DB_Jul2216dt_V14

MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	Dleg (°/100usft)	Latitude (")	Longitude (")	V. Sec (usft)
-----------	---------	-------------------	------------	------------	-----------	------------------	--------------	---------------	---------------

8,178.00	23.18	209.33	7,966.08	-853.46	-452.40	0.77	39.80631632	-80.69492558	634.52
8,271.00	23.31	206.79	8,051.53	-885.85	-469.66	1.09	39.80622755	-80.69498743	658.56
8,366.00	23.67	205.75	8,138.66	-919.80	-486.42	0.58	39.80613446	-80.69504750	684.25
8,460.00	23.63	207.35	8,224.76	-953.53	-503.27	0.68	39.80604199	-80.69510792	709.70
8,554.00	23.60	208.39	8,310.89	-986.82	-520.87	0.44	39.80595074	-80.69517100	734.46
8,649.00	23.58	205.19	8,397.96	-1,020.74	-538.00	1.35	39.80585773	-80.69523240	759.99
8,744.00	23.90	202.92	8,484.92	-1,055.66	-553.58	1.02	39.80576198	-80.69528831	787.00
8,838.00	23.86	202.18	8,570.87	-1,090.80	-568.18	0.32	39.80566560	-80.69534070	814.58
8,933.00	23.82	203.06	8,657.77	-1,126.25	-582.94	0.38	39.80556841	-80.69539371	842.37
9,027.00	25.18	201.72	8,743.30	-1,162.29	-597.78	1.56	39.80546956	-80.69544697	870.70
9,122.00	25.60	204.29	8,829.13	-1,199.77	-613.70	1.24	39.80536677	-80.69550412	899.98
9,217.00	24.99	204.87	8,915.02	-1,236.69	-630.58	0.69	39.80526555	-80.69556468	928.39
9,311.00	25.68	204.60	8,999.98	-1,273.22	-647.41	0.74	39.80516538	-80.69562504	956.46
9,408.00	25.92	207.99	9,085.51	-1,310.27	-665.73	1.57	39.80506380	-80.69569070	984.48
9,500.00	24.26	210.90	9,170.64	-1,344.99	-685.29	2.20	39.80496864	-80.69576077	1,009.87
9,595.00	24.87	211.64	9,257.04	-1,378.74	-705.79	0.72	39.80487614	-80.69583418	1,034.03
9,690.00	24.02	209.74	9,343.53	-1,412.54	-725.86	1.22	39.80478351	-80.69590606	1,059.39
9,785.00	24.54	208.38	9,430.13	-1,446.69	-744.83	0.80	39.80468991	-80.69597401	1,083.46
9,880.00	25.25	208.39	9,516.30	-1,481.87	-763.84	0.75	39.80459347	-80.69604213	1,109.49
9,975.00	26.39	208.72	9,601.81	-1,518.21	-783.62	1.21	39.80449385	-80.69611300	1,136.32
10,070.00	24.96	207.00	9,687.43	-1,554.59	-802.87	1.70	39.80439413	-80.69618196	1,163.38
10,164.00	24.23	204.61	9,772.91	-1,589.80	-819.91	1.31	39.80429759	-80.69624305	1,190.14
10,258.00	23.04	204.40	9,859.02	-1,624.09	-835.54	1.27	39.80420357	-80.69629913	1,216.55
10,353.00	22.06	206.39	9,946.76	-1,657.00	-851.15	1.31	39.80411333	-80.69635510	1,241.67
10,447.00	20.96	207.45	10,034.21	-1,687.73	-866.74	1.24	39.80402908	-80.69641101	1,264.77
10,540.00	21.20	205.41	10,120.99	-1,717.68	-881.63	0.83	39.80394697	-80.69646436	1,287.40
10,635.00	20.95	205.74	10,209.63	-1,748.50	-896.37	0.29	39.80386248	-80.69651724	1,310.87

RECEIVED
 Office of Oil and Gas
 JUL 10 2020
 WV Department of
 Environmental Protection

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole
Local Co-ordinate Reference: Well Heaven Hill 3-6 HU (E)
TVD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14

Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	EW (usft)	Dleg (°/100usft)	Latitude (")	Longitude (")	V. Sec (usft)
10,728.00	19.68	206.04	10,296.84	-1,777.54	-910.47	1.37	39.80378284	-80.69656778	1,332.94
10,821.00	18.44	205.61	10,384.74	-1,804.88	-923.70	1.34	39.80370789	-80.69661523	1,353.71
10,916.00	17.06	204.17	10,475.22	-1,831.14	-935.90	1.52	39.80363588	-80.69665899	1,373.85
10,985.00	17.50	203.40	10,541.11	-1,849.90	-944.17	0.72	39.80358845	-80.69668864	1,388.40
11,029.00	22.90	203.60	10,582.38	-1,863.82	-950.23	12.27	39.80354626	-80.69671038	1,399.23
11,076.00	24.20	207.60	10,625.47	-1,880.74	-958.35	4.38	39.80349988	-80.69673951	1,412.11
11,125.00	24.80	211.90	10,670.06	-1,898.37	-968.44	3.84	39.80345156	-80.69677563	1,424.95
11,172.00	27.60	212.30	10,712.23	-1,915.94	-979.47	5.97	39.80340340	-80.69681511	1,437.40
11,220.00	29.60	210.80	10,754.37	-1,935.53	-991.48	4.43	39.803354973	-80.69685812	1,451.37
11,267.00	30.50	210.90	10,795.05	-1,955.73	-1,003.55	1.92	39.80329436	-80.69690134	1,465.91
11,315.00	31.70	216.70	10,836.16	-1,976.30	-1,017.34	6.72	39.80323800	-80.69695070	1,480.16
11,362.00	31.50	217.80	10,876.19	-1,995.90	-1,032.25	1.30	39.80318430	-80.69700401	1,493.12
11,409.00	30.00	212.10	10,916.59	-2,015.57	-1,046.02	6.97	39.80313043	-80.69705329	1,506.53
11,456.00	29.30	205.90	10,957.45	-2,035.87	-1,057.29	6.69	39.80307478	-80.69709366	1,521.45
11,504.00	29.30	201.30	10,999.31	-2,057.38	-1,066.69	4.69	39.80301579	-80.69712738	1,538.16
11,551.00	29.40	195.70	11,040.29	-2,079.21	-1,073.99	5.84	39.80295592	-80.69715364	1,555.92
11,599.00	28.80	192.70	11,082.23	-2,101.83	-1,079.72	3.29	39.80289385	-80.69717432	1,574.98
11,646.00	28.70	188.70	11,123.44	-2,124.03	-1,083.92	4.10	39.80283292	-80.69718953	1,594.20
11,693.00	30.40	179.30	11,164.35	-2,147.09	-1,085.48	10.49	39.80276960	-80.69719537	1,615.17
11,740.00	30.00	172.80	11,204.98	-2,170.65	-1,083.86	7.01	39.80270490	-80.69718989	1,637.74
11,788.00	30.30	165.70	11,246.50	-2,194.29	-1,079.37	7.45	39.80263992	-80.69717416	1,661.42
11,835.00	31.70	160.70	11,286.79	-2,217.44	-1,072.35	6.23	39.80257626	-80.69714948	1,685.55
11,882.00	32.40	159.40	11,326.63	-2,240.88	-1,063.84	2.09	39.80251182	-80.69711945	1,710.48
11,929.00	31.80	155.60	11,366.45	-2,263.95	-1,054.30	4.48	39.80244839	-80.69708574	1,735.44
11,977.00	34.80	150.20	11,406.57	-2,287.36	-1,042.26	8.78	39.80238398	-80.69704316	1,761.61
12,024.00	38.90	149.00	11,444.17	-2,311.66	-1,027.99	8.86	39.80231711	-80.69699264	1,789.41
12,070.00	43.80	147.20	11,478.70	-2,337.44	-1,011.91	10.96	39.80224617	-80.69693573	1,819.24

RECEIVED
Office of Oil and Gas
JUL 1 0 2020
WV Department of Environmental Protection

RECEIVED
Office of Oil and Gas

JUL 10 2020

WV Department of
Environmental Protection

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	Dleg (/100usft)	Latitude (")	Longitude (")	V. Sec (usft)
12,117.00	47.20	146.80	11,511.64	-2,365.55	-993.66	7.26	39.80216881	-80.69687106	1,852.03
12,165.00	51.40	147.90	11,542.93	-2,396.19	-974.04	8.92	39.80208449	-80.69680158	1,887.66
12,212.00	55.00	148.10	11,571.08	-2,428.10	-954.10	7.67	39.80199666	-80.69673097	1,924.60
12,259.00	58.20	148.40	11,596.95	-2,461.46	-933.46	6.83	39.80190485	-80.69665787	1,963.14
12,306.00	62.30	148.80	11,620.27	-2,496.28	-912.20	8.75	39.80180902	-80.69658262	2,003.27
12,353.00	67.20	149.40	11,640.31	-2,532.75	-890.38	10.49	39.80170867	-80.69650538	2,045.14
12,400.00	69.90	150.00	11,657.49	-2,570.52	-868.32	5.87	39.80160475	-80.69642727	2,088.30
12,447.00	72.50	151.20	11,672.64	-2,609.28	-846.48	6.04	39.80149810	-80.69634999	2,132.32
12,494.00	75.60	153.40	11,685.56	-2,649.28	-825.48	7.98	39.80138803	-80.69627571	2,177.19
12,541.00	79.70	153.40	11,695.61	-2,690.33	-804.93	8.72	39.80127513	-80.69620303	2,222.88
12,588.00	83.50	152.30	11,702.47	-2,731.69	-783.72	8.41	39.80116133	-80.69612800	2,269.10
12,636.00	85.50	150.60	11,707.07	-2,773.66	-760.88	5.46	39.80104587	-80.69604721	2,316.46
12,683.00	88.30	149.00	11,709.61	-2,814.21	-737.28	6.86	39.80093428	-80.69596365	2,362.78
12,731.00	88.60	148.80	11,710.91	-2,855.30	-712.49	0.75	39.80082122	-80.69587591	2,410.02
12,752.00	90.10	148.60	11,711.15	-2,873.24	-701.58	7.21	39.80077184	-80.69583729	2,430.68
12,826.00	90.70	150.70	11,710.63	-2,937.09	-664.20	2.95	39.80059613	-80.69570494	2,503.69
12,920.00	90.50	150.60	11,709.65	-3,019.02	-618.12	0.24	39.80037070	-80.69554190	2,596.69
13,015.00	90.70	149.70	11,708.65	-3,101.41	-570.84	0.97	39.80014400	-80.69537456	2,690.56
13,110.00	90.10	151.90	11,707.99	-3,184.33	-524.50	2.40	39.79991584	-80.69521057	2,784.58
13,205.00	87.50	152.70	11,709.98	-3,268.42	-480.35	2.86	39.79988451	-80.69505442	2,878.91
13,299.00	87.50	152.60	11,714.08	-3,351.83	-437.21	0.11	39.79945503	-80.69490182	2,972.24
13,394.00	89.10	151.00	11,716.90	-3,435.51	-392.34	2.38	39.79922480	-80.69474308	3,066.45
13,489.00	89.20	151.00	11,718.31	-3,518.59	-346.29	0.11	39.79899621	-80.69458013	3,160.51
13,583.00	89.40	151.30	11,719.46	-3,600.92	-300.93	0.38	39.79876970	-80.69441966	3,253.63
13,677.00	88.70	149.70	11,721.01	-3,682.72	-254.66	1.86	39.79854462	-80.69425588	3,346.58
13,772.00	88.80	148.90	11,723.09	-3,764.39	-206.17	0.85	39.79831989	-80.69408424	3,440.20
13,867.00	88.70	148.00	11,725.16	-3,845.32	-156.47	0.95	39.79809715	-80.69390830	3,533.58

Survey

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia.
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference:
TVD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: DB_Jul2216dt_v14



RECEIVED
Office of Oil and Gas
JUL 10 2020
WV Department of
Environmental Protection

MD	Inc	Azi (azimuth)	TVD	N/S	EW	Dleg	Latitude	Longitude	V. Sec
(usft)	(")	(")	(usft)	(usft)	(usft)	(/100usft)	(")	(")	(usft)
13,962.00	89.40	150.30	11,726.73	-3,926.86	-107.77	2.53	39.79787276	-80.69373589	3,627.16
14,057.00	89.50	150.40	11,727.65	-4,009.42	-60.77	0.15	39.79764560	-80.69356958	3,721.08
14,152.00	89.40	149.40	11,728.56	-4,091.61	-13.13	1.06	39.79741945	-80.69340097	3,814.88
14,247.00	89.40	149.00	11,729.55	-4,173.29	35.51	0.42	39.79719491	-80.69322879	3,908.49
14,341.00	89.60	149.20	11,730.37	-4,253.86	83.78	0.30	39.79697296	-80.69305792	4,001.09
14,435.00	89.60	148.40	11,731.03	-4,334.26	132.48	0.85	39.79675169	-80.69288555	4,093.60
14,531.00	89.30	150.20	11,731.95	-4,416.80	181.48	1.90	39.79652456	-80.69271208	4,188.23
14,624.00	88.80	149.70	11,733.49	-4,497.29	228.05	0.76	39.79630308	-80.69254729	4,280.06
14,719.00	89.30	150.20	11,735.07	-4,579.50	275.61	0.74	39.79607684	-80.69237896	4,373.86
14,814.00	89.30	149.60	11,736.23	-4,661.69	323.25	0.63	39.79585069	-80.69221036	4,467.66
14,909.00	88.90	150.60	11,737.72	-4,744.03	370.60	1.13	39.79562411	-80.69204279	4,561.51
15,002.00	89.30	150.50	11,739.18	-4,825.00	416.32	0.44	39.79540131	-80.69188102	4,653.49
15,098.00	89.40	150.20	11,740.27	-4,908.43	463.81	0.33	39.79517175	-80.69171298	4,748.40
15,193.00	90.00	149.20	11,740.77	-4,990.45	511.74	1.23	39.79494605	-80.69154335	4,842.15
15,286.00	88.20	151.40	11,742.23	-5,071.21	557.80	3.06	39.79472382	-80.69138034	4,934.06
15,379.00	88.40	151.60	11,744.99	-5,152.91	602.16	0.30	39.79449904	-80.69122343	5,026.22
15,474.00	88.70	150.70	11,747.39	-5,236.09	647.98	1.00	39.79427017	-80.69106131	5,120.30
15,568.00	89.00	150.00	11,749.28	-5,317.76	694.48	0.81	39.79404543	-80.69089680	5,213.22
15,662.00	88.10	152.10	11,751.66	-5,399.99	739.96	2.43	39.79381920	-80.69073589	5,306.28
15,756.00	88.20	151.70	11,754.69	-5,482.86	784.21	0.44	39.79359118	-80.69057937	5,399.51
15,851.00	88.20	151.20	11,757.68	-5,566.27	829.59	0.53	39.79336169	-80.69041884	5,493.65
15,946.00	88.20	151.10	11,760.66	-5,649.44	875.41	0.11	39.79313286	-80.69025676	5,587.71
16,041.00	88.40	151.20	11,763.48	-5,732.61	921.23	0.24	39.79290401	-80.69009467	5,681.78
16,135.00	88.50	150.60	11,766.02	-5,814.71	966.93	0.65	39.79267809	-80.68993300	5,774.81
16,230.00	88.40	150.70	11,768.59	-5,897.49	1,013.47	0.15	39.79245033	-80.68976831	5,868.77
16,325.00	88.40	150.20	11,771.24	-5,980.10	1,060.31	0.53	39.79222301	-80.68960260	5,962.68
16,419.00	88.60	149.00	11,773.70	-6,061.15	1,107.86	1.29	39.79199999	-80.68943433	6,055.39

Survey

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference:
RKB=1326+26 @ 1352.00usft (Nabors B 28)
TVD Reference:
RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference:
RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference:
Gnd
Survey Calculation Method:
Minimum Curvature
Database:
DB_Jul2216dt_v14



Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Heaven Hill 3-6 HU (E)
TVD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: DB_Jul22 16dt_v14

Survey

MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	N/S	E/W (usft)	Dleg (°/100usft)	Latitude (")	Longitude (")	V. Sec (usft)
-----------	---------	-------------------	------------	-----	------------	------------------	--------------	---------------	---------------

16,514.00	88.50	147.90	11,776.11	-6,142.08	1,157.55	1.16	39.79177726	-80.68925843	6,148.76
16,608.00	90.50	148.70	11,776.93	-6,222.05	1,206.94	2.29	39.79155717	-80.68908360	6,241.12
16,703.00	89.30	149.50	11,777.09	-6,303.56	1,255.72	1.52	39.79133285	-80.68891093	6,334.70
16,798.00	89.20	149.50	11,778.34	-6,385.41	1,303.94	0.11	39.79110761	-80.68874032	6,428.39
16,892.00	88.00	150.50	11,780.63	-6,466.79	1,350.92	1.66	39.79088368	-80.68857406	6,521.21
16,987.00	87.90	149.80	11,784.03	-6,549.13	1,398.17	0.74	39.79065709	-80.68840686	6,615.02
17,082.00	88.10	151.50	11,787.35	-6,631.88	1,444.71	1.80	39.79042939	-80.68824224	6,708.95
17,176.00	88.60	151.50	11,790.06	-6,714.46	1,489.54	0.53	39.79020219	-80.68808366	6,802.11
17,271.00	89.10	152.40	11,791.96	-6,798.28	1,534.20	1.08	39.78997156	-80.68776257	6,896.38
17,365.00	88.70	151.10	11,793.77	-6,881.07	1,578.69	1.45	39.78974378	-80.68776838	6,989.61
17,460.00	88.30	150.60	11,796.25	-6,964.01	1,624.95	0.67	39.78951557	-80.68760474	7,083.62
17,554.00	88.70	150.10	11,798.71	-7,045.67	1,671.43	0.68	39.78929085	-80.68744027	7,176.52
17,649.00	89.10	149.70	11,800.54	-7,127.84	1,719.07	0.60	39.78906473	-80.68727172	7,270.31
17,744.00	89.40	151.20	11,801.78	-7,210.48	1,765.91	1.61	39.78883734	-80.68710599	7,364.24
17,838.00	87.90	151.20	11,804.00	-7,292.82	1,811.18	1.60	39.78861076	-80.68694586	7,457.35
17,933.00	88.60	150.40	11,806.90	-7,375.71	1,857.51	1.12	39.78838269	-80.68678198	7,551.33
18,028.00	88.60	150.40	11,809.22	-7,458.29	1,904.42	0.00	39.78815546	-80.68661602	7,645.24
18,122.00	88.40	151.00	11,811.68	-7,540.23	1,950.40	0.67	39.78792997	-80.68645335	7,738.22
18,217.00	89.10	148.70	11,813.75	-7,622.36	1,998.11	2.53	39.78770398	-80.68628457	7,831.99
18,312.00	89.20	148.50	11,815.16	-7,703.44	2,047.60	0.24	39.78748085	-80.68610941	7,925.42
18,406.00	89.10	148.30	11,816.56	-7,783.49	2,096.84	0.24	39.78726052	-80.68593509	8,017.81
18,501.00	88.40	150.30	11,818.63	-7,865.15	2,145.33	2.23	39.78703579	-80.68576351	8,111.43
18,596.00	87.40	149.60	11,822.11	-7,947.32	2,192.87	1.28	39.78680966	-80.68559532	8,205.18
18,690.00	87.30	149.20	11,826.46	-8,028.15	2,240.67	0.44	39.78668724	-80.68542618	8,297.77
18,785.00	89.10	149.40	11,829.44	-8,109.79	2,289.15	1.91	39.78646256	-80.68525465	8,391.36
18,879.00	88.70	149.50	11,831.24	-8,190.73	2,336.92	0.44	39.78623983	-80.68508561	8,484.05
18,973.00	90.20	150.40	11,832.15	-8,272.08	2,383.98	1.66	39.78591595	-80.68491909	8,576.87

RECEIVED
 Office of Oil and Gas
 JUL 1 0 2020
 WV Department of
 Environmental Protection

Company: Tug Hill Operating LLC
Project: Marshall County, West Virginia
Site: Heaven Hill 3
Well: Heaven Hill 3-6 HU (E)
Wellbore: Original Hole
Design: Surveys Original Hole
Local Co-ordinate Reference:
 Well Heaven Hill 3-6 HU (E)
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
TVD Reference:
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
MD Reference:
 RKB=1326+26 @ 1352.00usft (Nabors B 28)
North Reference:
 Gnd
Survey Calculation Method:
 Minimum Curvature
 DB_Jul2216dt_v14
Database:

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Dleg (°/100usft)	Latitude (°)	Longitude (°)	V. Sec (usft)
--------	-----------	---------	-------------------	------------	------------	------------	------------------	--------------	---------------	---------------

19,068.00	90.60		150.10	11,831.48	-8,354.56	2,431.12	0.53	39.78568899	-80.68475233	8,670.76
19,163.00	89.70		150.90	11,831.23	-8,437.24	2,477.90	1.27	39.78546147	-80.68458685	8,764.72
19,258.00	90.00		150.60	11,831.48	-8,520.13	2,524.32	0.45	39.78523339	-80.68442265	8,858.74
19,352.00	89.90		150.20	11,831.57	-8,601.86	2,570.75	0.44	39.78500849	-80.68425841	8,951.69
19,447.00	89.50		150.00	11,832.06	-8,684.22	2,618.11	0.47	39.78478186	-80.68409087	9,045.54
19,542.00	89.60		149.80	11,832.81	-8,766.40	2,665.75	0.24	39.78455569	-80.68392232	9,139.35
19,636.00	89.90		149.90	11,833.22	-8,847.69	2,712.96	0.34	39.78433202	-80.68375529	9,232.15
19,731.00	88.40		150.00	11,834.63	-8,929.90	2,760.53	1.58	39.78410576	-80.68358701	9,325.96
19,826.00	88.40		150.40	11,837.28	-9,012.31	2,807.72	0.42	39.78387899	-80.68342006	9,419.81
19,921.00	88.20		150.20	11,840.10	-9,094.79	2,854.77	0.30	39.78365202	-80.68325363	9,513.67
20,015.00	89.10		151.70	11,842.31	-9,176.94	2,900.40	1.86	39.78342597	-80.68309225	9,606.72
20,110.00	90.70		152.70	11,842.48	-9,260.97	2,944.70	1.99	39.78319477	-80.68293560	9,701.05
20,205.00	89.60		150.60	11,842.23	-9,344.57	2,989.81	2.50	39.78296474	-80.68277610	9,795.27
20,300.00	90.10		150.10	11,842.48	-9,427.13	3,036.81	0.74	39.78273756	-80.68260986	9,889.19
20,394.00	90.00		150.40	11,842.40	-9,508.74	3,083.45	0.34	39.78251298	-80.68244486	9,982.09
20,488.00	89.90		149.80	11,842.48	-9,590.23	3,130.31	0.65	39.78228874	-80.68227910	10,074.96
20,583.00	90.00		149.30	11,842.56	-9,672.13	3,178.45	0.54	39.78206336	-80.68210877	10,168.68
20,677.00	90.40		149.50	11,842.23	-9,753.04	3,226.30	0.48	39.78184069	-80.68193947	10,261.36
20,771.00	89.20		150.10	11,842.56	-9,834.28	3,273.58	1.43	39.78161713	-80.68177220	10,354.15
20,865.00	89.40		149.60	11,843.71	-9,915.55	3,320.79	0.57	39.78139346	-80.68160519	10,446.95
20,960.00	89.20		149.00	11,844.87	-9,997.23	3,369.29	0.67	39.78116867	-80.68143360	10,540.59
21,055.00	88.00		148.50	11,847.19	-10,078.42	3,418.56	1.37	39.78094522	-80.68126927	10,634.05
21,150.00	88.00		148.80	11,850.51	-10,159.50	3,467.95	0.32	39.78072207	-80.68108448	10,727.45
21,245.00	88.50		149.60	11,853.41	-10,241.07	3,516.57	0.99	39.78049760	-80.68091246	10,821.02
21,339.00	88.50		149.60	11,855.87	-10,322.12	3,564.12	0.00	39.78027424	-80.68074424	10,913.73
21,434.00	89.20		149.80	11,857.78	-10,404.12	3,612.04	0.77	39.78004886	-80.68057471	11,007.46
21,529.00	89.70		151.00	11,858.69	-10,486.72	3,658.97	1.37	39.77982159	-80.68040875	11,101.39

RECEIVED
 Office of Oil and Gas
 JUL 10 2020
 WV Department of
 Environmental Protection

RECEIVED
Office of Oil and Gas
JUL 10 2020
WV Department of
Environmental Protection

Design Annotations		Local Coordinates		Comment
Measured Depth (usft)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	
156.00	156.00	0.25	-0.30	MWD surveys
23,039.00	11,876.15	-11,801.93	4,400.10	Survey @ 23039.00 MD 11876.15 TVD

Survey @ 23039.00 MD 11876.15 TVD										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Dleg (°/100usft)	Latitude (°)	Longitude (°)	V. Sec (usft)	Survey
21,623.00	89.40	149.70	11,859.43	-10,568.41	3,705.47	1.42	39.77959680	-80.68024429	11,194.32	
21,717.00	90.70	151.30	11,859.34	-10,650.21	3,751.75	2.19	39.77937168	-80.68080858	11,287.28	
21,812.00	89.70	151.60	11,859.01	-10,733.66	3,797.15	1.10	39.77914207	-80.67992005	11,381.46	
21,906.00	89.30	151.30	11,859.83	-10,816.23	3,842.08	0.53	39.77891488	-80.67976120	11,474.64	
22,001.00	89.50	150.90	11,860.83	-10,899.39	3,887.99	0.47	39.77868604	-80.67958886	11,568.74	
22,095.00	88.70	151.40	11,862.30	-10,981.71	3,933.34	1.00	39.77845951	-80.67943849	11,661.85	
22,190.00	88.80	151.50	11,864.38	-11,065.14	3,978.73	0.15	39.77822995	-80.67927799	11,756.00	
22,285.00	87.70	151.20	11,867.28	-11,148.47	4,024.25	1.20	39.77800066	-80.67911702	11,850.12	
22,379.00	87.70	151.20	11,871.05	-11,230.78	4,069.50	0.00	39.77777418	-80.67895702	11,943.17	
22,474.00	89.50	149.80	11,873.37	-11,313.43	4,116.27	2.40	39.77754673	-80.67879163	12,037.10	
22,569.00	88.80	149.40	11,874.78	-11,395.36	4,164.33	0.85	39.77732126	-80.67862160	12,130.81	
22,661.00	90.00	150.10	11,875.74	-11,474.83	4,210.68	1.51	39.77710257	-80.67845767	12,221.61	
22,756.00	89.70	149.80	11,875.99	-11,557.06	4,258.25	0.45	39.77687628	-80.67828940	12,315.43	
22,850.00	89.90	149.70	11,876.32	-11,638.26	4,305.60	0.24	39.77665281	-80.67812190	12,408.21	
22,945.00	90.50	149.90	11,875.99	-11,720.36	4,353.39	0.67	39.77642686	-80.67795287	12,501.99	
23,039.00	89.30	150.50	11,876.15	-11,801.93	4,400.10	1.43	39.77620239	-80.67778765	12,594.88	

Company: Tug Hill Operating LLC	Project: Marshall County, West Virginia.	Site: Heaven Hill 3	Well: Heaven Hill 3-6 HU (E)	Wellbore: Original Hole	Design: Surveys Original Hole
Local Co-ordinate Reference: Well Heaven Hill 3-6 HU (E)					
TVD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)					
MD Reference: RKB=1326+26 @ 1352.00usft (Nabors B 28)					
North Reference: Gnd					
Survey Calculation Method: Minimum Curvature					
Database: DB_Jul2216dt_v14					

