

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-051-02015 County Marshall District Meade
Quad Glen Easton 7.5' Pad Name Heaven Hill 3 Field/Pool Name _____
Farm name Ricky L. Whitlatch Well Number Heaven Hill 3N-9HM
Operator (as registered with the OOG) Tug Hill Operating, LLC
Address 1320 S. University Drive, Suite 215 City Ft. Worth State TX Zip 76107

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,406,559.79 Easting 526,247.31
Landing Point of Curve Northing 4,405,857.0 Easting 525,820.5
Bottom Hole Northing 4,407,664.3 Easting 524,814.4

Elevation (ft) 1326' GL _____ Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other

Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s) _____

SOBM; Base oil, osmotic inhibitor, weighting agent, viscosifier, emulsifier, hardness buffer, fluid loss additive, LCM, Shale inhibitor, de-foamer, soaping agent, coagulant, flocculant; specific additives per WSSP and Permit.

Date permit issued 5/22/2018 Date drilling commenced 7/26/2018 Date drilling ceased 10/9/2018
Date completion activities began 4/12/2019 Date completion activities ceased 10/28/2019
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/O **RECEIVED**
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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug **JUL 10 2020**
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Freshwater depth(s) ft 1064' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1595' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 972-978', 1057-1063' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

Justin M. ...
7/27/2020

API 47-051 - 02015 Farm name Ricky L. Whitlatch Well number Heaven Hill 3N-9HM

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	36"	30"	120'	NEW	94.5#	N/A	Y
Surface	17 1/2"	13 3/8"	1132'	NEW	54.5#	N/A	Y
Coal	17 1/2"	13 3/8"	1132'	NEW	54.5#	N/A	Y
Intermediate 1	12 1/4"	9 5/8"	2993'	NEW	36#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8 3/4"	5 1/2"	15,191'	NEW	20#	N/A	Y
Tubing		2 3/6"	7,596'	NEW	4.7#	N/A	
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	A		15.6	1.19		0	8
Surface	A	1118	15.6	1.19	1397	0	8
Coal	A	1118	15.6	1.19	1397	0	8
Intermediate 1	A	2320	15.6	1.19	2900	0	8
Intermediate 2							
Intermediate 3							
Production	A	3707	14.5	1.17	4150	0	8
Tubing							

Drillers TD (ft) 15,275' Loggers TD (ft) n/a
 Deepest formation penetrated Marcellus Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 6,739'

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING 3 centralizers on surface casing at each joint and Gas Intermediate - 1 centralizer every other joint.

Production - one centralizer every other joint in lateral, one centralizer every joint through curve, one centralizer every other joint to surface.

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

**Heaven Hill 3N-9HM
PERFORATION RECORD**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
Toe	4/29/2019	15042	15095	N/A	Marcellus
1	4/30/2019	14819	14972	48	Marcellus
2	5/4/2019	14644	14797	48	Marcellus
3	5/5/2019	14469	14622	48	Marcellus
4	5/5/2019	14294	14447	48	Marcellus
5	5/5/2019	14119	14272	48	Marcellus
6	5/6/2019	13944	14097	48	Marcellus
7	5/6/2019	13769	13922	48	Marcellus
8	5/7/2019	13594	13747	48	Marcellus
9	5/7/2019	13419	13572	48	Marcellus
10	5/8/2019	13244	13397	48	Marcellus
11	5/9/2019	13069	13222	48	Marcellus
12	5/9/2019	12894	13047	48	Marcellus
13	5/9/2019	12719	12872	48	Marcellus
14	5/10/2019	12544	12697	48	Marcellus
15	5/10/2019	12369	12522	48	Marcellus
16	5/11/2019	12194	12347	48	Marcellus
17	5/11/2019	12019	12172	48	Marcellus
18	5/12/2019	11844	11997	48	Marcellus
19	5/13/2019	11669	11822	48	Marcellus
20	5/13/2019	11494	11647	48	Marcellus
21	5/13/2019	11319	11472	48	Marcellus
22	5/14/2019	11144	11297	48	Marcellus
23	5/14/2019	10969	11122	48	Marcellus
24	5/14/2019	10794	10947	48	Marcellus
25	5/15/2019	10619	10772	48	Marcellus
26	5/15/2019	10444	10597	48	Marcellus
27	5/15/2019	10269	10422	48	Marcellus
28	5/15/2019	10094	10247	48	Marcellus
29	5/16/2019	9919	10072	48	Marcellus
30	5/16/2019	9744	9897	48	Marcellus
31	5/16/2019	9569	9722	48	Marcellus
32	5/16/2019	9394	9547	48	Marcellus
33	5/17/2019	9219	9372	48	Marcellus
34	5/17/2019	9044	9197	48	Marcellus
35	5/17/2019	8869	9022	48	Marcellus
36	5/17/2019	8694	8847	48	Marcellus
37	5/18/2019	8519	8672	48	Marcellus
38	5/18/2019	8344	8497	48	Marcellus

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**Heaven Hill 3N-9HM
STIMULATION INFORMATION PER STAGE**

Stage No.	Ave. Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
Toe	24.3	6646	6646	4416	0	786	0
1	82.1	7185	7185	5065	527450	9293	0
2	86.9	8113	8113	4327	527570	9959	0
3	76.9	8091	8091	4987	278240	7912	0
4	87.8	7839	7839	4881	530350	9234	0
5	84.1	7087	7087	4573	527450	9469	0
6	82.3	7266	7266	4342	531000	9642	0
7	87.1	7446	7446	4746	531160	9465	0
8	88.3	7261	7261	4882	530285	9613	0
9	89.1	6996	6996	5031	528625	9011	0
10	89	7373	7373	5124	531815	9177	0
11	89.1	7397	7397	4492	531935	8880	0
12	86.2	7583	7583	4474	530290	9628	0
13	88.2	7405	7405	4658	530390	9012	0
14	89.6	7160	7160	4940	528720	9165	0
15	84.7	7451	7451	4974	532220	10059	0
16	85.7	7457	7457	5062	529700	9964	0
17	87.1	7101	7101	4615	527460	9563	0
18	87.6	7211	7211	4163	529340	9757	0
19	85.1	7158	7158	4660	503340	8566	0
20	87.8	7631	7631	4384	531260	9868	0
21	87.5	7203	7203	4593	530900	9766	0
22	88.3	7356	7356	4594	527300	9407	0
23	88.8	7122	7122	4911	527180	9510	0
24	87.2	7346	7346	4928	530585	9879	0
25	89.4	6998	6998	5184	531425	9568	0
26	89.4	6972	6972	4155	530825	9561	0
27	88.5	6831	6831	4952	528845	9686	0
28	89.7	6724	6724	4559	529140	9998	0
29	89.6	6817	6817	4715	530660	9702	0
30	89.3	6670	6670	4694	529720	9477	0
31	89.4	6756	6756	4823	529540	9427	0
32	89.4	6734	6734	4772	527830	9419	0

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33	89.5	6799	6799	4980	531130	9440	0
34	89.1	6907	6907	4849	531830	9618	0
35	89.2	6714	6714	4683	530550	9768	0
36	89.5	6593	6593	4981	531585	9489	0
37	89.6	6690	6690	4490	532625	9831	0
38	88	6872	6872	4513	534905	9881	0

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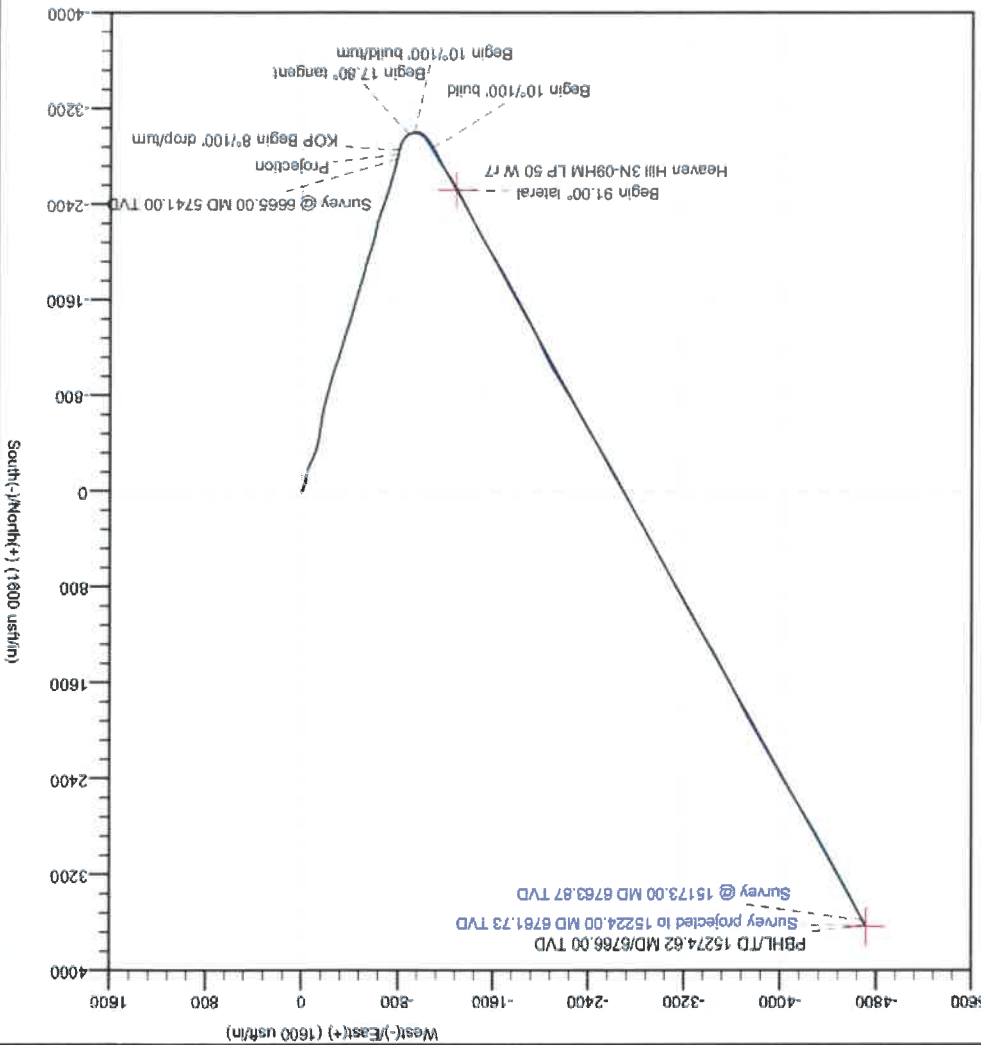
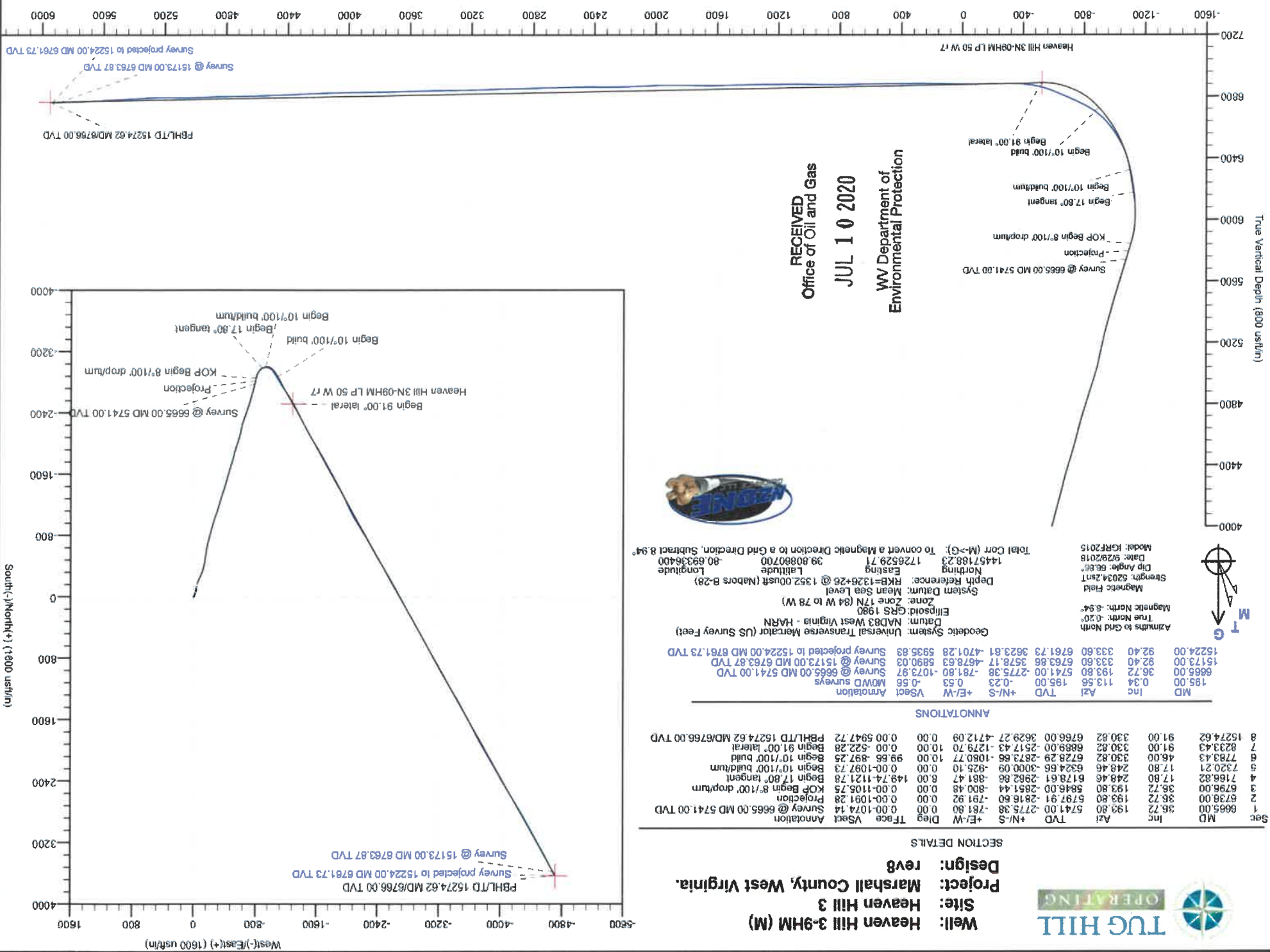
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HEAVEN HILL 3N-9HM

LITHOLOGY/FORMATION	TOP DEPTH IN FT/ Name TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID
Maxton	1944	2130	1960	2157	Sandstone
Big Lime	2130	2257	2157	2298	Limestone
Big Injun	2257	2553	2298	2662	Sandstone
Weir	2553	2751	2662	2907	Sandstone
Berea	2751	3008	2907	3225	Sandstone
Gordon	3008	3101	3225	3350	Sandstone
Fifty Foot	3101	3678	3350	4089	Sandstone
Speechley	3678	5165	4089	5949	Sandstone
Benson	5165	5517	5949	6386	Sandstone
Alexander	5517	6139	6386	7123	Siltstone
Rhinestreet	6139	6640	7123	7677	Black shale
Middlesex	6640	6721	7677	7813	Black shale
Geneseo/Burkett	6721	6747	7813	7870	Black shale
Tully	6747	6776	7870	7941	Limestone
Hamilton	6776	6852	7941	8153	Grey shale
Marcellus	6852	-	8153	-	Black shale

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MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Annotation
195.00	0.34	113.56	195.00	-0.23	0.53	0.56	MWD surveys
6665.00	36.72	193.80	5741.00	-2775.38	-781.80	-1073.97	Survey @ 6665.00 MD 5741.00 TVD
15173.00	92.40	333.60	6763.86	3578.17	-4678.63	5890.03	Survey @ 15173.00 MD 6763.87 TVD
16224.00	92.40	333.60	6761.73	3623.81	-4701.28	5935.83	Survey projected to 15224.00 MD 6761.73 TVD

MD	Inc	Azi	TVD	+N/-S	+E/-W	Deg	TFace	Vsect	Annotation
1	6665.00	36.72	193.80	5741.00	-2775.38	-781.80	0.00	-1074.14	Survey @ 6665.00 MD 5741.00 TVD
2	6738.00	36.72	193.80	5791.91	-2816.60	-791.92	0.00	-1091.28	Projection
3	6796.00	36.72	193.80	5848.00	-2851.44	-800.48	0.00	-1105.75	KOP Begin 8\'/100\' droplum
4	7166.82	17.80	248.46	6178.61	-2962.86	-881.47	8.00	-1121.78	Begin 17.80\' tangent
5	7320.21	17.80	248.46	6324.66	-3000.09	-925.10	0.00	-1097.73	Begin 10\'/100\' build
6	7783.43	46.00	330.82	6728.29	-2873.86	-1080.77	10.00	-897.25	Begin 10\'/100\' build
7	8233.43	91.00	330.82	6889.00	-2517.43	-1279.70	10.00	-522.28	Begin 91.00\' lateral
8	15274.62	91.00	330.82	6766.00	3629.27	-4712.09	0.00	5947.72	PBHLTD 15274.62 MD/6766.00 TVD

Admirals to Grid North
 True North: 0.20°
 Magnetic North: 4.54°

Magnetic Field
 Strength: 6203.25nT
 Dip Angle: 66.66°
 Date: 9/28/2018
 Model: IGRF2015

Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD83 West Virginia - HARN
 Ellipsoid: GRS 1980
 Zone: 17N (84 W to 78 W)
 Mean Sea Level

Depth Reference: RKB=1326+26 @ 1352.00usft (Nabors B-28)
 Northing: 14457188.23
 Easting: 1726529.71
 Longitude: -80.69336400
 Latitude: 39.80880700

Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.94°

Well: Heaven Hill 3-9HM (M)
Site: Heaven Hill 3
Project: Marshall County, West Virginia.
Design: rev8



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PBHLTD 15274.62 MD/6766.00 TVD
 Survey @ 15173.00 MD 6763.87 TVD
 Survey projected to 15224.00 MD 6761.73 TVD

Survey @ 6665.00 MD 5741.00 TVD
 Projection
 KOP Begin 8\'/100\' droplum
 Begin 17.80\' tangent
 Begin 10\'/100\' build
 Begin 91.00\' lateral

South(-)/North(+)
 (1600 usft/m)

True Vertical Depth (800 usft/m)

Sec

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/17/2019
Job End Date:	5/18/2019
State:	West Virginia
County:	Marshall
API Number:	47-051-02015-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Heaven Hill 3 9HM
Latitude:	39.80810000
Longitude:	-80.69340000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,750
Total Base Water Volume (gal):	15,083,014
Total Base Non Water Volume:	0

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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive** (% by mass)**	Maximum Ingredient Concentration in HF Fluid*** (% by mass)**	Comments
Fresh Water	Halliburton	Base Fluid					
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	85.79755	Density = 8.34
			Water	7732-18-5	100.00000	0.53203	

					Scale Control	MultiChem	LEGEND(TM) LD-7750W
			Listed Below				
			Listed Below		Proppant	Halliburton	Sand-Common White-100 Mesh, SSA-2
			Listed Below				
			Listed Below		Proppant	Halliburton	Sand-Premium White-40/70
			Listed Below				
			Listed Below		Acid Corrosion Inhibitor	Halliburton	FDP-S1296-17
			Listed Below				
			Listed Below		Friction Reducer	MultiChem	MC LD-2850
			Listed Below				
			Listed Below		Solvent	Halliburton	HYDROCHLORI C ACID
			Listed Below				
			Listed Below		Non-ionic Surfactant	Halliburton	OilPerm A
			Listed Below		Additive	MultiChem	MC MX 8-4743
			Listed Below				
			Listed Below		Friction Reducer	MultiChem	LD-2950

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	0.00052	1.00000	69011-36-5	Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega- hydroxy-, branched			
	0.00052	1.00000	Proprietary	Ethoxylated alcohols			
	0.00025	60.00000	64-17-5	Ethanol			
	0.00015	5.00000	Proprietary	Phosphoric Acid Salt			
	0.00012	30.00000	Proprietary	Oxalkylated nonyl phenolic resin			
	0.00012	30.00000	64742-94-5	Heavy aromatic petroleum naphtha			
	0.00012	30.00000	61790-12-3	Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil			
	0.00012	30.00000	Proprietary	Modified thiourea polymer			
	0.00004	10.00000	Proprietary	Oxalkylated phenolic resin			
	0.00004	0.10000	50-00-0	Formaldehyde			
	0.00003	0.10000	150-76-5	Hydroquinone monomethyl ether			
	0.00003	0.10000	2836-32-0	Sodium glycollate			
	0.00003	0.10000	5064-31-3	Nitrotriacetic acid, trisodium salt monohydrate			
	0.00003	0.10000	64-02-8	Ethylenediaminetetraacet ic acid, tetrasodium salt			
	0.00003	0.10000	111-42-2	Diethanolamine			
	0.00003	0.10000	123-91-1	1,4-Dioxane			
	0.00002	5.00000	127087-87-0	Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)- omega-hydroxy-, branched			
	0.00002	5.00000	91-20-3	Naphthalene			
	0.00002	5.00000	629-73-2	Hexadecene			
	0.00002	5.00000	Proprietary	Ethoxylated alcohols			
	0.00002	5.00000	107-19-7	Propargyl alcohol			
	0.00000	1.00000	95-63-6	1,2,4 Trimethylbenzene			

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Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%
*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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**HEAVEN HILL 3N LEASE
WELL 9HM
TUG HILL OPERATING**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD83 S.P.C.(FT) N. 478,862.82 E. 1,633,260.01
 NAD83 GEO. LAT.-(N) 39.808607 LONG-(W) 80.693864
 NAD83 UTM (M) N. 4,406,559.79 E. 526,247.31
LANDING POINT
 NAD83 S.P.C.(FT) N. 476,366.0 E. 1,631,938.0
 NAD83 GEO. LAT.-(N) 39.801705 LONG-(W) 80.697951
 NAD83 UTM (M) N. 4,405,792.5 E. 525,857.3
BOTTOM HOLE
 NAD83 S.P.C.(FT) N. 482,571.3 E. 1,628,607.6
 NAD83 GEO. LAT.-(N) 39.818617 LONG-(W) 80.710101
 NAD83 UTM (M) N. 4,407,666.0 E. 524,811.1

TAG	SURFACE OWNER	PARCEL	ACRES
A	RICKY L. WHITLATCH	9-7-30	72.82
B	RICKY L. WHITLATCH	9-7-21	42.22
C	KEVIN E. MCGILTON	9-7-18	14.00
D	KEVIN E. MCGILTON	9-7-20	13.39
E	KEVIN E. MCGILTON	9-7-19	23.00
F	BRENDA J. WHEITZEL	9-11-6.1	30.24
G	WILLIAM F. & JULIE A. KERNS	9-11-6.2	46.47
H	CONSOL MINING COMPANY LLC	9-7-2	116.12
I	CHARLES R. JR. & ANNE MARIE HAGEDORN	9-7-3	203.074
J	CHARLES R. JR. & ANNE MARIE HAGEDORN	9-7-3.1	4,579
K	TERRY L. SAMPSON, ET UX	9-5-1	111.71



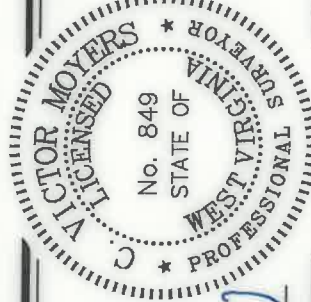
12 Vainhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
 1413 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.5952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.3296
 dsww.com

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'
- AS-DRILLED DATA PROVIDED BY TUG HILL OPERATING, LLC
- PLAT UPDATED TO SHOW AS-DRILLED PATH.

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 849
C. Victor Moyers



MINIMUM DEGREE OF ACCURACY 1 / 2500
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORP NETWORK)
 FILE NO. 8654P9HMADR.dwg
 SCALE 1" = 1000'

WELL TYPE: OIL GAS INJECTION WASTE LIQUID DISPOSAL "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION PROPOSED = 1,326.35' GROUND = 1,337.60'
 DISTRICT MEADE COUNTY MARSHALL WATERSHED LOWER BOWMAN RUN OF FISH CREEK (HUC 10)

SURFACE OWNER RICKY L. WHITLATCH ACREAGE 72.82±
 ROYALTY OWNER RICKY L. WHITLATCH, ET AL - SEE WW-6A1 ACREAGE 72.82±
 LEASE NO. SEE WW-6A1

PROPOSED WORK:
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TVD: 6,876' / TMD: 15,275'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 CT CORPORATION SYSTEM
 FORT WORTH, TX 76107 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

7,500' T.H.A.D.

486' B.H.A.D.

T.H. LATITUDE 39°50'00"
 B.H. LATITUDE 39°50'00"

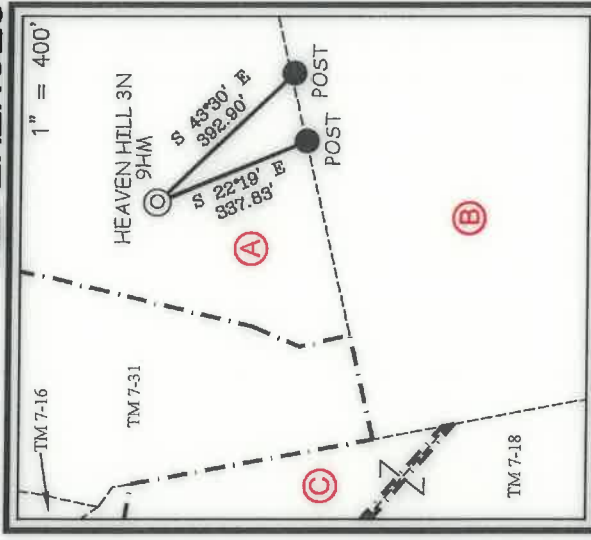
T.H. LONGITUDE 80°42'30"
 B.H. LONGITUDE 80°42'30"

B.H.A.D.

9,007' T.H.A.D.

T.H.
 A.D.

REFERENCES



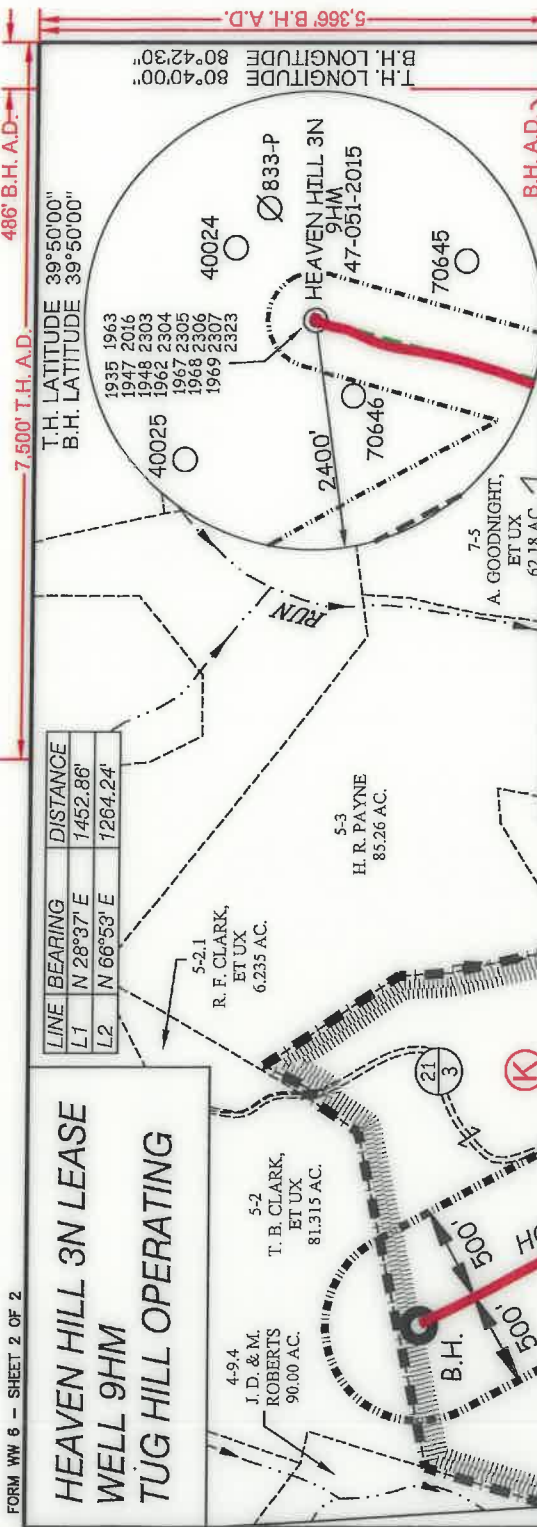
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE MAY 26, 2020
 REVISED JUNE 12, 2020
 OPERATORS WELL NO. HEAVEN HILL 3N-9HM
 API WELL NO. 47-051-02015
 STATE COUNTY PERMIT



HEAVEN HILL 3N LEASE WELL 9HM TUG HILL OPERATING

LINE BEARING	DISTANCE
L1 N 28°37' E	1452.86'
L2 N 66°53' E	1284.24'



CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	88.85'	126.06'	S 36°15' W	87.02'
C2	95.97'	120.33'	S 79°36' W	93.45'
C3	158.41'	356.12'	N 63°48' W	157.11'
C4	434.99'	1082.08'	N 38°45' W	432.07'

NAD'83 GRID NORTH

AS DRILLED COORDINATES FOR WELL NO. 9HM

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'83 S.P.C.(FT)	N. 478,862.82	E. 1,633,260.01	
NAD'83 GEO.	LAT-(N) 39.808607	LONG-(W) 80.693364	
NAD'83 UTM (M)	N. 4,406,559.79	E. 526,247.31	
LANDING POINT			
NAD'83 S.P.C.(FT)	N. 479,579.8	E. 1,631,821.0	
NAD'83 GEO.	LAT-(N) 39.802288	LONG-(W) 80.699378	
NAD'83 UTM (M)	N. 4,405,957.0	E. 525,820.5	
BOTTOM HOLE			
NAD'83 S.P.C.(FT)	N. 482,565.6	E. 1,628,616.4	
NAD'83 GEO.	LAT-(N) 39.818802	LONG-(W) 80.710093	
NAD'83 UTM (M)	N. 4,407,684.3	E. 524,814.4	



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.652.6564
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.246.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
 a1sxy.com

P.S. *C. Victor Moyers*
 849

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'83 S.P.C.(FT)	N. 478,862.82	E. 1,633,260.01	
NAD'83 GEO.	LAT-(N) 39.808607	LONG-(W) 80.693364	
NAD'83 UTM (M)	N. 4,406,559.79	E. 526,247.31	
LANDING POINT			
NAD'83 S.P.C.(FT)	N. 476,366.0	E. 1,631,938.0	
NAD'83 GEO.	LAT-(N) 39.801705	LONG-(W) 80.697951	
NAD'83 UTM (M)	N. 4,405,792.5	E. 525,857.3	
BOTTOM HOLE			
NAD'83 S.P.C.(FT)	N. 482,571.3	E. 1,628,607.6	
NAD'83 GEO.	LAT-(N) 39.818617	LONG-(W) 80.710101	
NAD'83 UTM (M)	N. 4,407,666.0	E. 524,811.1	

SCALE	1" = 1000'	FILE NO.	8654P9HMADR.dwg
DATE	MAY 26		20 20
REVISED	JUNE 12		20 20
OPERATORS WELL NO.	HEAVEN HILL 3N-9HM		
API WELL NO.	47-051-02015		
NO.	STATE	COUNTY	PERMIT

WELL OPERATOR TUG HILL OPERATING, LLC
 ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500
 FORT WORTH, TX 76107

DESIGNATED AGENT ADDRESS
 DIANNA STAMPER
 CT CORPORATION SYSTEM
 5400 D BIG TYLER ROAD
 CHARLESTON, WV 25313

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- TAX MAP-PARCEL
- LEASE # (SEE WW-6A1)
- SURFACE OWNER (SEE TABLE)

LEGEND
 AS DRILLED
 PROPOSED

COUNTY NAME PERMIT