

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

RECEIVED
Office of Oil and Gas

JUL 28 2020

API 47-051-02075 County Marshall District Franklin
Quad Powhatan Point 7.5' Pad Name Woodford Field/Pool Name _____
Farm name CNX RCPC, LLC Well Number Woodford 5HM
Operator (as registered with the OOG) Tug Hill Operating, LLC
Address 380 Southpointe Boulevard, Plaza II, Suite 200 City Canonsburg State PA Zip 15317
WV Department of Environmental Protection

As Drilled Location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,406,036.56 Easting 516,093.75
Landing Point of Curve Northing 4,406,473.78 Easting 516,230.28
Bottom Hole Northing 4,403,693.19 Easting 517,852.96

Elevation (ft) 1233.92' 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 9/12/2018 Date drilling commenced 4/4/2019 Date drilling ceased 8/15/2019
Date completion activities began 2/8/2020 Date completion activities ceased 2/27/2020
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 838' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1595' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 734-740', 832-838' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
Jan T. Woodford
8/6/2020

API 47-051 - 02075 Farm name CNX RCPC, LLC Well number Woodford 5HM

CASING STRINGS	Hole Size	Casing Size	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	36"	30"	NEW	94.5#	N/A	Y
Surface	17 1/2"	13 3/8"	NEW	54.5#	N/A	Y
Coal	17 1/2"	13 3/8"	NEW	54.5#	N/A	Y
Intermediate 1	12 1/4"	9 5/8"	NEW	36#	N/A	Y
Intermediate 2						
Intermediate 3						
Production	8 3/4"	5 1/2"	NEW	20#	N/A	Y
Tubing		2 3/8"	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	1007	15.6	1.19	1216	0	8
Coal	A	1007	15.6	1.19	1216	0	8
Intermediate 1	A	771	15.6	1.19	1063	0	8
Intermediate 2							
Intermediate 3							
Production	A	4587	14.5	1.17	5344	0	8
Tubing							

Drillers TD (ft) 17,911'

Deepest formation penetrated Marcellus

Plug back procedure n/a

Loggers TD (ft) n/a

Plug back to (ft) n/a

Kick off depth (ft) 5,915'

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 equal distance.

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.

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**

**WOODFORD 5HM
LITHOLOGY INFORMATION**

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	2024	2112	2026	2114	Sandstone
Big Lime	2112	2154	2114	2156	Limestone
Big Injun	2154	2500	2156	2504	Sandstone
Weir	2500	2626	2504	2631	Sandstone
Berea	2626	2849	2631	2854	Sandstone
Gordon	2849	2896	2854	2901	Sandstone
Fifty Foot	2896	3456	2901	3475	Sandstone
Speechley	3456	4828	3475	5228	Sandstone
Benson	4828	5197	5228	5702	Sandstone
Alexander	5197	5818	5702	6408	Siltstone
Rhinestreet	5818	6183	6408	6829	Black shale
Middlesex	6183	6267	6829	6949	Black shale
Geneseo/Burkett	6267	6297	6949	6999	Black shale
Tully	6297	6321	6999	7045	Limestone
Hamilton	6321	6339	7045	7085	Grey shale
Marcellus	6339	-	7085	-	Black shale

Woodford 5HM

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)
1	91	7518	5462	4231	439440	8541	0
2	89	7698	5204	4466	439700	8507	0
3	89	7577	5471	4871	435840	8416	0
4	89	7627	5336	4996	430500	8473	0
5	90	7594	5318	4984	433600	8492	0
6	89	7420	5064	4430	440100	8493	0
7	89	7375	5247	4642	437140	8540	0
8	88	8091	5292	4811	435240	8471	0
9	89	7462	5441	4407	439340	8537	0
10	90	7384	5492	4818	437560	8467	0
11	90	7372	5232	4581	439640	8450	0
12	88	7242	5209	4525	441700	8772	0
13	90	7422	5401	4386	440460	8508	0
14	90	7555	5244	4536	442400	8700	0
15	88	7432	5182	4769	440460	8611	0
16	90	7476	5441	4760	439440	8430	0
17	88	7281	5214	4526	438440	8702	0
18	87	7192	5170	4730	440780	8740	0
19	88	7265	5004	4819	440080	8484	0
20	90	7251	4930	4587	442260	8614	0
21	88	7374	4968	4845	444140	8540	0
22	89	7708	5352	4876	442800	8374	0
23	88	7181	5042	4754	441420	8648	0
24	89	7125	5079	4937	443760	8539	0
25	88	7147	5087	4643	449800	8418	0
26	90	7042	5013	5153	436780	8390	0
27	90	7269	5239	5316	440860	8311	0
28	88	6952	5102	4858	440300	8767	0
29	90	6837	4850	4875	440540	8197	0
30	88	6930	5265	4955	441420	8353	0
31	88	6868	5018	5031	439000	8533	0
32	89	6917	5206	5170	435660	8208	0

33	88	6839	5647	4769	435180	8235	0
34	90	6746	4733	4394	446200	8344	0
35	90	6839	5350	4535	439720	8297	0
36	88	6631	4887	4426	440920	8601	0
37	89	6634	4892	4464	446920	8751	0
38	88	6659	5185	5111	436020	8320	0
39	91	6630	4902	4622	445320	8390	0
40	90	6494	4800	4834	437260	8373	0
41	90	6490	4737	5269	442340	8305	0
42	89	6299	4831	4449	440420	8645	0
43	89	6366	5143	4557	440380	8255	0
44	90	6342	5048	5035	438040	8460	0
45	88	6271	4734	5260	439100	8300	0
46	90	6257	4685	4692	442120	8262	0
47	90	6446	4626	4505	440300	8179	0
48	90	6436	4738	4882	445600	8197	0
49	90	6392	4638	4832	440940	8194	0
50	90	7564	4579	4331	445660	8378	0
51	88	6485	4752	4193	439940	8336	0
52	89	6067	5677	4442	447180	8651	0
53	90	6062	4621	4719	437720	8189	0
54	90	6101	5145	4890	436480	8194	0
55	90	6235	4834	4384	441260	8142	0
56	90	6227	4858	4571	440780	8083	0
57	90	6237	5310	4690	440540	8078	0
58	89	6099	5189	4801	441440	8221	0
59	91	6079	5084	4789	440480	8210	0
60	90	6389	5051	4604	441800	8130	0

**Woodford 5HM
PERFORATION RECORD**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
1	2/8/2020	17497	17643	48	0
2	2/9/2020	17323	17469	48	0
3	2/9/2020	17149	17295	48	0
4	2/9/2020	16975	17121	48	0
5	2/9/2020	16801	16947	48	0
6	2/10/2020	16626	16772	48	0
7	2/10/2020	16452	16598	48	0
8	2/10/2020	16278	16424	48	0
9	2/11/2020	16104	16250	48	0
10	2/11/2020	15930	16076	48	0
11	2/12/2020	15755	15901	48	0
12	2/12/2020	15581	15727	48	0
13	2/12/2020	15407	15553	48	0
14	2/13/2020	15233	15379	48	0
15	2/13/2020	15059	15205	48	0
16	2/13/2020	14884	15030	48	0
17	2/14/2020	14710	14856	48	0
18	2/14/2020	14536	14682	48	0
19	2/14/2020	14362	14508	48	0
20	2/15/2020	14188	14334	48	0
21	2/15/2020	14013	14159	48	0
22	2/16/2020	13839	13985	48	0
23	2/16/2020	13665	13811	48	0
24	2/16/2020	13491	13637	48	0
25	2/17/2020	13317	13463	48	0
26	2/17/2020	13142	13288	48	0
27	2/17/2020	12968	13114	48	0
28	2/18/2020	12794	12940	48	0
29	2/18/2020	12620	12766	48	0
30	2/19/2020	12446	12592	48	0
31	2/19/2020	12271	12417	48	0
32	2/19/2020	12097	12243	48	0
33	2/20/2020	11923	12069	48	0
34	2/20/2020	11749	11895	48	0
35	2/20/2020	11575	11721	48	0
36	2/21/2020	11400	11546	48	0
37	2/21/2020	11226	11372	48	0
38	2/21/2020	11052	11198	48	0
39	2/22/2020	10878	11024	48	0
40	2/22/2020	10704	10850	48	0
41	2/22/2020	10529	10675	48	0
42	2/23/2020	10355	10501	48	0
43	2/23/2020	10181	10327	48	0
44	2/23/2020	10007	10153	48	0
45	2/23/2020	9833	9979	48	0
46	2/24/2020	9658	9804	48	0

47	2/24/2020	9484	9630	48	0
48	2/24/2020	9310	9456	48	0
49	2/24/2020	9136	9282	48	0
50	2/25/2020	8962	9108	48	0
51	2/25/2020	8787	8933	48	0
52	2/25/2020	8613	8759	48	0
53	2/25/2020	8439	8585	48	0
54	2/26/2020	8265	8411	48	0
55	2/26/2020	8091	8237	48	0
56	2/26/2020	7916	8062	48	0
57	2/26/2020	7742	7888	48	0
58	2/26/2020	7568	7714	48	0
59	2/27/2020	7394	7540	48	0
60	2/27/2020	7220	7366	48	0

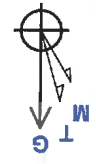


Well: Woodford 05HM (E)
Site: Woodford
Project: Marshall County, West Virginia
Design: rev3
Rig: Nabors X08

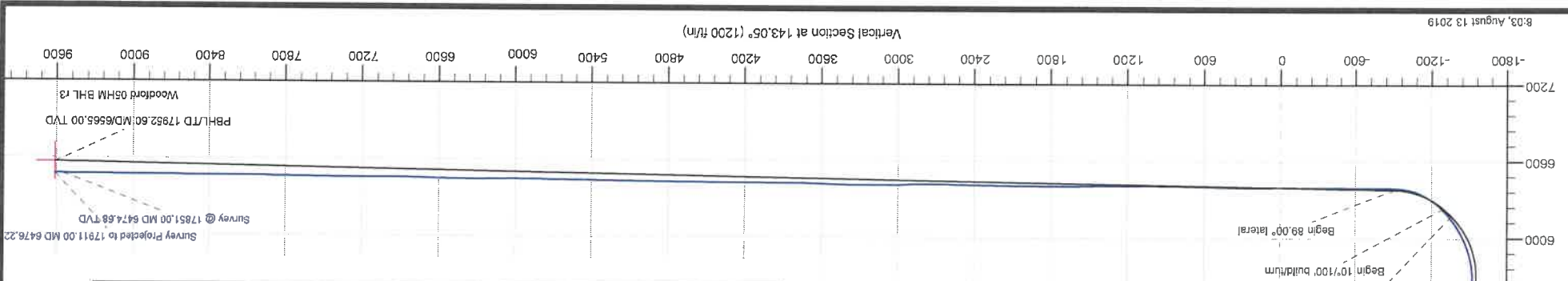
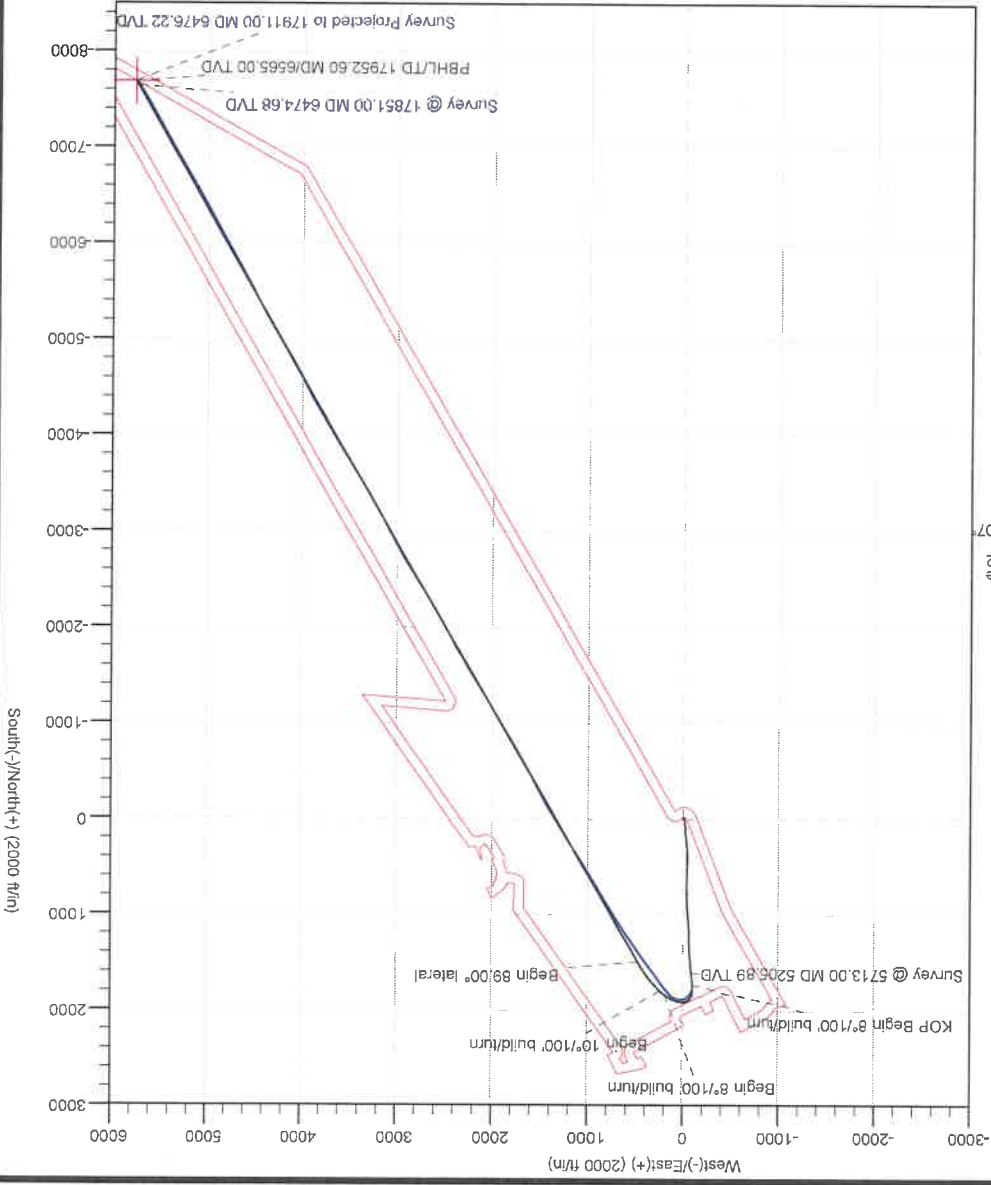
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Annotation
5713.00	36.88	354.13	5205.89	1618.81	-64.42	0.00	Survey @ 5713.00 MD 5205.89 TVD
5915.04	36.88	354.13	5367.60	1729.42	-96.82	0.00	KOP Begin 8°10'0" build/turn
6845.48	46.47	124.54	6177.14	1849.51	194.63	8.00	Begin 8°10'0" build/turn
6931.10	50.00	132.42	6234.21	1800.74	244.47	8.00	Begin 10°10'0" build/turn
7352.61	89.00	150.00	6380.00	1495.44	479.72	10.00	Begin 89.00° lateral
17952.60	89.00	150.00	6555.00	-7683.03	5778.89	0.00	PBHL/TD 17952.60 MD/6565.00 TVD

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD83 West Virginia - HARN
Ellipsoid: GRS 1980
Zone: Zone 17N (84 W to 78 W)
System Datum: Mean Sea Level
Depth Reference: RKB=1235+33 @ 1268.00ft (Nabors X08)
Latitude 39.80414463
Longitude -80.81199542
Northing 14455471.28
Easting 1693217.66
To convert a Magnetic Direction to a Grid Direction, Subtract 8.807



Magnetic Field
 Azimuths to Grid North
 True North: -0.12°
 Magnetic North: -8.81°
 Strength: 51948.79nT
 Dip Angle: 66.81°
 Date: 8/2/2019
 Model: IGRF2015



Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/8/2020
Job End Date:	2/27/2020
State:	West Virginia
County:	Marshall
API Number:	47-051-02075-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Woodford 5HM
Latitude:	39.80414463
Longitude:	-80.81199542
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,433
Total Base Water Volume (gal):	21,207,743
Total Base Non Water Volume:	0

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Tug Hill Operating	Carrier/Base Fluid	Water	7732-18-5	100.00000	69.14682	None
Sand (30/50 White Proppant)	Profrac	Proppant					
Sand (40/70 White Proppant)	Profrac	Proppant	Silica Substrate	14808-60-7	100.00000	20.96786	None
Sand (100 Mesh Proppant)	Profrac	Proppant	Silica Substrate	14808-60-7	100.00000	7.03221	None
Hydrochloric Acid (7.5%)	PVS	Acidizing					
ProSlick 710	Naico	Friction Reducer					
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.15168	None
			Hydrochloric Acid (Hydrogen Chloride)	7732-18-5	85.00000	0.34845	None
			Water	7732-18-5	100.00000		
			Silica Substrate	14808-60-7	100.00000	2.34238	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.15168	None
			Friction Reducer				
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.15168	None
			Hydrochloric Acid (Hydrogen Chloride)	7732-18-5	85.00000	0.34845	None
			Distillate	64742-47-8	30.00000	0.01843	None
			Organic salt		10.00000	0.00614	None
			Oxalkylated alcohol		5.00000	0.00307	None



MC MX 9-4743	Multi-Chem	Bioicide				
LD-7750W	Multi-Chem	Scale Inhibitor				
		Methanol	67-56-1	60.00000	0.00408	none
		Phosphonic Acid Salt	Proprietary	5.00000	0.00034	none
PROFE 105	Profrac	Iron Control				
		Citric Acid	77-92-9	100.00000	0.00156	none
PROhib 100	Profrac	Acid Inhibitor				
		2-Tropyn-1-ol compound w/ methylloxtrane	38172-91-7	15.00000	0.00019	none
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.						
		Other Chemical(s) Listed Above	See Trade Name(s) List			
		Water	7732-18-5	85.00000	0.34845	
		inorganic salt	PROPRIETARY	10.00000	0.00614	
		Oxyalkylated alcohol	PROPRIETARY	5.00000	0.00307	
		Phosphonic Acid Salt	Proprietary	5.00000	0.00034	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water. Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

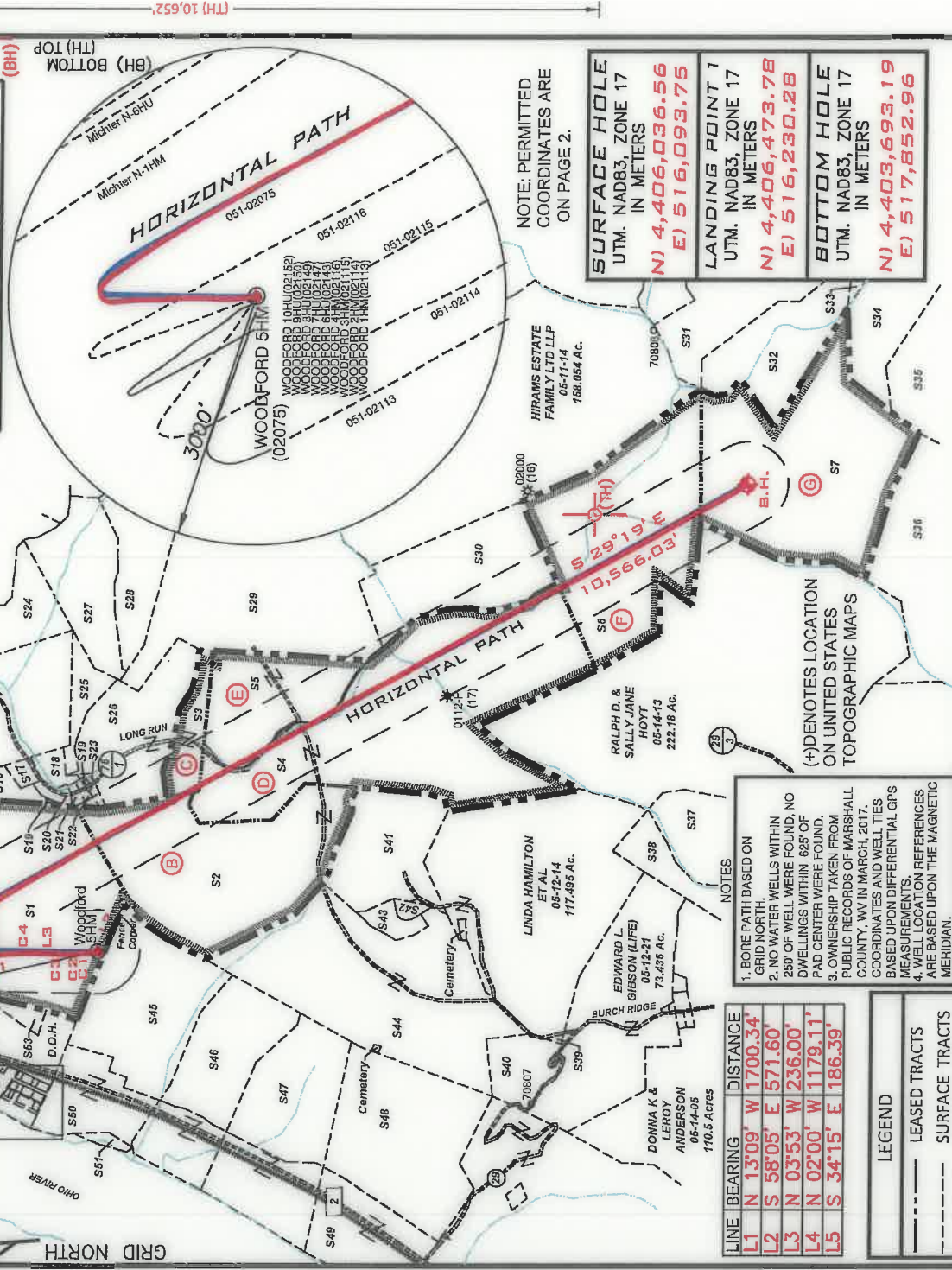
WOODFORD LEASE WELL 5HM 676.9119± ACRES

TOP HOLE LATITUDE: 39°50'00"
BOTTOM HOLE LATITUDE: 39°47'30"
HOLE LONGITUDE: 80°47'30"
(BH) BOTTOM (TH) TOP (BH) HOLE LONGITUDE: 80°47'30"

REFERENCES
SCALE 1"=400'
20" BLACK CHERRY
N 30°34'E 406.3'
S 63°18'E 324.9'
18" SUGER MAPLE
WOODFORD 5HM

DETAIL SKETCH "A"
SCALE 1"=100'

WOODFORD 10HU(02152)
WOODFORD 9HU(02150)
WOODFORD 8HU(02147)
WOODFORD 7HU(02143)
WOODFORD 6HU(02139)
WOODFORD 5HM(02135)
WOODFORD 4HM(02131)
WOODFORD 3HM(02127)
WOODFORD 2HM(02123)
WOODFORD 1HM(02119)



NOTE: PERMITTED COORDINATES ARE ON PAGE 2.

SURFACE HOLE
UTM. NAD83, ZONE 17
N) 4,406,036.56
E) 516,093.75

LANDING POINT 1
UTM. NAD83, ZONE 17
N) 4,406,473.78
E) 516,230.28

BOTTOM HOLE
UTM. NAD83, ZONE 17
N) 4,403,693.19
E) 517,852.96

LINE	BEARING	DISTANCE
L1	N 13°09'	W 1700.34
L2	S 58°05'	E 571.60
L3	N 03°53'	W 236.00
L4	N 02°00'	W 1179.11
L5	S 34°15'	E 186.39

LEGEND

--- LEASED TRACTS

--- SURFACE TRACTS

--- UNIT BOUNDARY

(A) LEASE # (SEE 6A1 FORM)

NOTES

- BORE PATH BASED ON GRID NORTH.
- NO WATER WELLS WITHIN 250' OF WELL WERE FOUND. NO DWELLINGS WITHIN 825' OF PAD CENTER WERE FOUND.
- OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017.
- COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
- WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.

CURVE	CHORD	BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 23°40' W	40.23	181.66	40.32	54
C2	N 03°21' W	62.74	162.33	63.14	63
C3	N 03°36' E	70.65	98.84	70.78	68
C4	N 02°13' E	244.30	2262.00	244.42	244
C5	N 72°43' E	227.47	176.92	282.01	176
C6	S 38°18' E	348.32	1812.99	348.65	348

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

David L Jackson



JACKSON SURVEYING INC.
P.O. Box 1460
Clarksburg, WV 26302
304-623-5651

FILE NUMBER _____

DRAWING NUMBER WOODFORD_WP_5HM

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

PROVEN SOURCE OF ELEVATION SUBMETER MAPPING

GRADE GPS

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET, SE
CHARLESTON, WV 25304

DATE: JULY 21, 2020

OPERATORS WELL NO. Woodford 5HM

API WELL NO. _____

47-051-02075

STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION ELEVATION 1233.92' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 Form

COUNTY NAME _____ PERMIT _____

SURFACE OWNER CNX RPC, LLC ACREAGE 155.7119

OIL & GAS ROYALTY OWNER HG ENERGY II APPALACHIA LC (TRACT 5-7-43) LEASE ACREAGE 155.7119

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___
PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) ASDRILLED

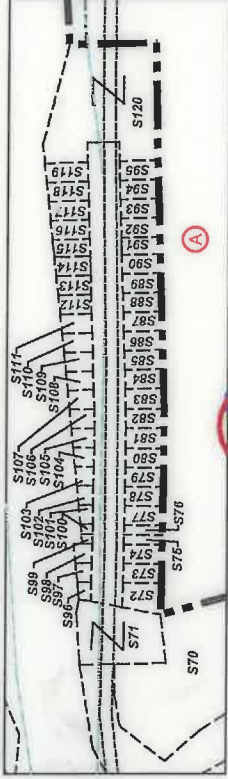
TARGET FORMATION MARCELLUS

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER

ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD
FORT WORTH, TX 76107 CHARLESTON, WV 25313

SEAL

**WOODFORD LEASE
WELL 5HM
676.9119± ACRES**



DETAIL "A"
Scale
1"=500'



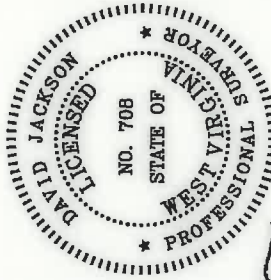
DETAIL "B"
Scale
1"=500'

Number	TAX MAP-PARCEL	ADJOINER OWNER	ACRES
S1	05-07-43	CNX RPC, LLC	155.7119
S2	05-12-08	Amita Rae Miller (Life)	100.35
S3	05-12-10	Consolidation Coal Co./ Murray Energy	13.76
S4	05-12-12.1	Lionel L. Persinger, Et Ux.	148.09
S5	05-12-12	Lionel L. Persinger, Et Ux.	45.0
S6	05-11-15	Lionel L. Persinger, Et Ux.	93.0
S7	05-15-01	Marcus Sharp & David Schlabach, Hrs.	121.0
S8	05-7B-49	Cassidy Rain Carpenter	1.1441
S9	05-7B-48	Cassidy Rain Carpenter	1.325
S10	05-07-43.3	Frank M. Mason	0.327
S11	05-07-43.2	Frank M. Mason	1.36
S12	05-07-38	John K. Persinger, Et Ux.	2.65
S13	05-07-36	John Persinger	4.329
S14	05-07-35	Samuel L. Persinger	10.708
S15	05-07-39	Lionel L. Persinger	57.0
S16	05-07-42.1	Holly Rice	5.99
S17	05-07-41	James A. Wade	1.0
S18	05-07-42.5	Matthew V. Conner, et al	3.791
S19	05-07-42	Tracy M. Kesterson	0.53
S20	05-07-44	Crystal B. Darrah	1.726
S21	05-07-42.2	Steven & Rhonda Lloyd	0.85
S22	05-07-42.3	Joshua David Hartley	0.886
S23	05-07-42.4	Jason Reed Hartley	0.94
S24	05-07-33	William N. Roupe	24.6
S25	05-12-09	Lionel & Mary Lee Persinger	10.15
S26	05-12-10.1	Consolidation Coal Co./ Murray Energy	38.48
S27	05-11-1.4	Larry W. Dunlap, et al	32.493
S28	05-11-1.1	Larry W. Dunlap & Charles Leroy Dunlap	34.405
S29	05-11-21	Karen Reed, et al	112.67
S30	05-12-11	Wesley R. Bryan & Wesley R. Bryan II	52.478
S31	05-15-04	Joseph J. Kramer, et ux	41.106
S32	05-15-03	Joseph J. Kramer, et ux	36.10
S33	05-15-02	John David Petrock, et ux	5.0
S34	05-15-14	John David Petrock, et ux	25.0
S35	05-15-12	John David Petrock, et ux	150.23
S36	05-15-15	Robert L. Shields, et al	49.0
S37	05-14-12	Dale R. Gallaher, et al	135.100
S38	05-14-10	Adam T. & Jesse L. Robinson	110.715
S39	05-12-15	Woodland Hills Church of God Trs.	0.375
S40	05-12-21.1	Robert W. Jr. & Wendy L. Riggenbach	14.222
S41	05-12-13	Linda Hamilton, et al	41.887
S42	05-12-7.1	Raymond K. Miller	1.609
S43	05-12-7.2	Raymond K. Miller	4.66
S44	05-12-02	Robert Wm. Riggenbach, et ux	104.231
S45	05-12-02	CNX RPC, LLC	60.68
S46	05-12-03	CNX RPC, LLC	62.30
S47	05-12-05	CNX RPC, LLC	61.883
S48	05-12-06	CNX RPC, LLC	70.81
S49	05-12-6.2	Consolidation Coal Co./ Murray Energy	25.50

SURFACE HOLE
UTM, NAD83, ZONE 17
IN METERS
N) 4,406,036.46
E) 516,093.78

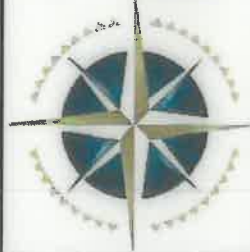
LANDING POINT 1
UTM, NAD83, ZONE 17
IN METERS
N) 4,406,492.27
E) 516,239.99

BOTTOM HOLE
UTM, NAD83, ZONE 17
IN METERS
N) 4,403,694.67
E) 517,855.18



David L. Jackson

P.S.
708



**TUG HILL
OPERATING**

OPERATOR'S

WELL #: WOODFORD 5HM

API #: 47-051-02075

DISTRICT: Franklin

COUNTY: Marshall

STATE: WV

WELL PLAT

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DATE: 07/21/2020

Number	TAX MAP-PARCEL	ADJOINER OWNER	ACRES
S50	05-12-2.1	Consolidation Coal Co./ Murray Energy	22.0
S51	05-12-01	U.S. of America	1.68
S52	05-07-43.4	Chalmers Campbell	0.295
S53	05-07-43.1	State Road Commission	1.48
S54	05-7A-17	Carol Martin & Harry L. Yoho	0.3067
S55	05-7A-18	Shelia R. Rutan	0.1530
S56	05-7A-19	Shelia R. Rutan	0.3060
S57	05-7A-20	Betty Sexton	0.1204
S58	05-7A-24	Rick A. Kosky	0.3152
S59	05-7A-23	Harold S. Young, et ux	0.3067
S60	05-7A-22	Richard Hyer, et ux	0.1530
S61	05-7A-21	David A. Beyser	0.1866
S62	05-7A-25	Rick A. Kosky	0.1638
S63	05-7A-26	Albert Joseph White, Est	0.4531
S64	05-7A-27	Paul W. Barrett	0.1495
S65	05-7A-28	Richard Hyer, et ux	0.1093
S66	05-7A-29	Richard Hyer, et ux	0.1085
S67	05-7A-30	Richard Hyer, et ux	1.9
S68	05-7A-31	WVA Dept. of Natural Resources	3.18
S69	05-7A-32	Dawn Thompson Tennant	0.3091
S70	05-7A-01	CNX RPC, LLC	2.23
S71	05-7A-02	Lucille Myers	0.529
S72	05-7B-25	Cindy D. Aliff	0.1673
S73	05-7B-26	Cindy D. Aliff	0.1148
S74	05-7B-27	Patricia A. Johnson	0.1148
S75	05-7B-28	Patricia A. Johnson	0.0574
S76	05-7B-28.1	Patricia A. Johnson	0.0574
S77	05-7B-29	Patricia A. Johnson	0.1148
S78	05-7B-30	Cindy D. Aliff, et al	0.1148
S79	05-7B-31	Cindy D. Aliff, et al	0.1148
S80	05-7B-32	Albert J. Anderson, Jr.	0.1148
S81	05-7B-33	Albert J. Anderson, Jr.	0.1182
S82	05-7B-34	Albert J. Anderson, Jr.	0.1148
S83	05-7B-35	Albert J. Anderson, Jr.	0.1217
S84	05-7B-36	Albert J. Anderson, Jr.	0.1148
S85	05-7B-37	Teresa & Thomas Gouldsberry	0.1148
S86	05-7B-38	Teresa & Thomas Gouldsberry	0.1148
S87	05-7B-39	Teresa & Thomas Gouldsberry	0.1148
S88	05-7B-40	Teresa & Thomas Gouldsberry	0.1148
S89	05-7B-41	Teresa & Thomas Gouldsberry	0.1148
S90	05-7B-42	Teresa & Thomas Gouldsberry	0.1194
S91	05-7B-43	Teresa & Thomas Gouldsberry	0.1148
S92	05-7B-44	Daniel D. & Mary E. Robinson	0.1148
S93	05-7B-45	Daniel D. & Mary E. Robinson	0.1148
S94	05-7B-46	Daniel D. Robinson, et ux	0.1148
S95	05-7B-47	Daniel D. Robinson, et ux	0.1148
S96	05-7B-24	Cindy D. Aliff	0.0354
S97	05-7B-23	Cindy D. Aliff	0.0471
S98	05-7B-22	Patricia A. Johnson	0.0505
S99	05-7B-21	Patricia A. Johnson	0.0287
S100	05-7B-21.1	Patricia A. Johnson	0.0296
S101	05-7B-20	Patricia A. Johnson	0.0826
S102	05-7B-19	Cindy D. Aliff, et al	0.0712
S103	05-7B-18	Cindy D. Aliff, et al	0.0763
S104	05-7B-17	Albert J. Anderson, Jr.	0.0849
S105	05-7B-16	Albert J. Anderson, Jr.	0.0903
S106	05-7B-15	Albert J. Anderson, Jr.	0.0970
S107	05-7B-14	Albert J. Anderson, Jr.	0.0991
S108	05-7B-13	Albert J. Anderson, Jr.	0.1067
S109	05-7B-12	Teresa & Thomas Gouldsberry	0.1113
S110	05-7B-11	Teresa & Thomas Gouldsberry	0.1159
S111	05-7B-10	Teresa & Thomas Gouldsberry	0.1199
S112	05-7B-09	Teresa & Thomas Gouldsberry	0.1240
S113	05-7B-08	Teresa & Thomas Gouldsberry	0.1286
S114	05-7B-07	Teresa & Thomas Gouldsberry	0.1331
S115	05-7B-06	Teresa & Thomas Gouldsberry	0.1377
S116	05-7B-05	Daniel D. & Mary E. Robinson	0.1418
S117	05-7B-04	Daniel D. & Mary E. Robinson	0.1458
S118	05-7B-03	Daniel D. Robinson, et ux	0.1504
S119	05-7B-02	Daniel D. Robinson, et ux	0.1550
S120	05-7B-01	Patricia L. Robinson	1.257