

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

API 47 - 051 - 02123 County Marshall District Franklin
Quad Powhatan Point Pad Name Old Crow Field/Pool Name _____
Farm name Donna Vivian Yoho (TOD) Gary Lance Yoho Well Number Old Crow N-18HU
Operator (as registered with the OOG) Tug Hill Operating, LLC
Address 380 Southpointe Boulevard, Plaza II, Suite 200 City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,403,190.04 Easting 520,292.49
Landing Point of Curve Northing 4,403,541.4 Easting 520,657.1
Bottom Hole Northing 4,406,949.4 Easting 518,682.8

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Elevation (ft) 1286.70' 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 12/26/2018 Date drilling commenced 4/14/2019 Date drilling ceased 2/7/2020
Date completion activities began 6/26/2020 Date completion activities ceased 7/7/2020
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 912' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1595' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 814-820', 906-912' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by: John D. [Signature]
05/07/2021
12/7/2020

API 47-051 - 02123 Farm name Donna Vivian Yoho (TOD) Gary Lance Yoho Well number Old Crow N-18HU

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"	100'	NEW	94.5#	N/A	Y
Surface	26"	20"	985'	NEW	106.5#	N/A	Y
Coal							
Intermediate 1	17 1/2"	13 3/8"	2,823'	NEW	54.5#	N/A	Y
Intermediate 2	12 1/4"	9 5/8"	10,399'	NEW	47#	N/A	Y
Intermediate 3							
Production	8 1/2"	5 1/2"	24,927'	NEW	23#	N/A	Y
Tubing		2 7/8"	12,464'	NEW	4.7#	N/A	
Packer type and depth set							

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Comment Details _____

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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	1.2		0	8
Surface	A	1768	15.6	1.2	2136	0	8
Coal							
Intermediate 1	A	1976	14.5	1.19	2603	0	8
Intermediate 2	A	3913	14.5	1.19	4559	0	8
Intermediate 3							
Production	A	5570	16.5	1.17	6236	0	8
Tubing							

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Drillers TD (ft) 24,961' Loggers TD (ft) n/a
 Deepest formation penetrated Trenton Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 10,650'

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 _____

05/07/2021

API 47-051 - 02123 Farm name Donna Vivian Yoho (TOD) Gary Lance Yoho Well number Old Crow N-18HU

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	*see attached				

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	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)
	*attached							

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS	
POINT PLEASANT	11368'-11141' TVD	12081'-24961' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 8000 psi Bottom Hole _____ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas Oil NGL Water GAS MEASURED BY

500 mcfpd 0 bpd 0 bpd 550 bpd Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
*attached					

Please insert additional pages as applicable.

Drilling Contractor Nabors Drilling USA

Address 505 West Greens Road, Suite 1000 City Houston State TX Zip 77067

Logging Company n/a

Address _____ City _____ State _____ Zip _____

Cementing Company Halliburton Energy Services, Inc.

Address 121 Champion Way, Suite 200 City Canonsburg State PA Zip 15317

Stimulating Company PRO FRAC

Address 333 Shops Boulevard City Willow Park State TX Zip 76087

Please insert additional pages as applicable.

Completed by Amy L. Morris Telephone 304-376-0111

Signature *Amy L. Morris* Title Permitting Specialist Date _____

**OLD CROW N-18HU
PEFORATION RECORD**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
1	6/11/2020	24739	24787	48	Utica
2	6/11/2020	24512	24687	48	Utica
3	6/12/2020	24313	24488	48	Utica
4	6/12/2020	24114	24289	48	Utica
5	6/15/2020	23915	24090	48	Utica
6	6/15/2020	23716	23891	48	Utica
7	6/16/2020	23517	23692	48	Utica
8	6/16/2020	23318	23493	48	Utica
9	6/16/2020	23119	23294	48	Utica
10	6/17/2020	22920	23095	48	Utica
11	6/17/2020	22721	22896	48	Utica
12	6/18/2020	22522	22697	48	Utica
13	6/18/2020	22323	22498	48	Utica
14	6/19/2020	22124	22299	48	Utica
15	6/22/2020	21925	22100	48	Utica
16	6/22/2020	21726	21901	48	Utica
17	6/23/2020	21527	21702	48	Utica
18	6/23/2020	21328	21503	48	Utica
19	6/24/2020	21129	21304	48	Utica
20	6/24/2020	20930	21105	48	Utica
21	6/24/2020	20731	20906	48	Utica
22	6/24/2020	20532	20707	48	Utica
23	6/24/2020	20333	20508	48	Utica
24	6/24/2020	20134	20309	48	Utica
25	6/25/2020	19935	20110	48	Utica
26	6/25/2020	19736	19911	48	Utica
27	6/25/2020	19537	19712	48	Utica
28	6/25/2020	19338	19513	48	Utica
29	6/25/2020	19139	19314	48	Utica
30	6/26/2020	18940	19115	48	Utica
31	6/26/2020	18741	18916	48	Utica
32	6/26/2020	18542	18717	48	Utica
33	6/26/2020	18343	18518	48	Utica
34	6/26/2020	18144	18319	48	Utica
35	6/27/2020	17945	18120	48	Utica
36	6/27/2020	17746	17921	48	Utica
37	6/27/2020	17547	17722	48	Utica
38	6/29/2020	17348	17523	48	Utica
39	6/29/2020	17149	17324	48	Utica
40	6/30/2020	16950	17125	48	Utica
41	6/30/2020	16751	16926	48	Utica

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Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
42	6/30/2020	16552	16727	48	Utica
43	6/30/2020	16353	16528	48	Utica
44	7/1/2020	16154	16329	48	Utica
45	7/1/2020	15955	16130	48	Utica
46	7/1/2020	15756	15931	48	Utica
47	7/1/2020	15557	15732	48	Utica
48	7/1/2020	15358	15533	48	Utica
49	7/2/2020	15159	15334	48	Utica
50	7/2/2020	14960	15135	48	Utica
51	7/2/2020	14761	14936	48	Utica
52	7/2/2020	14562	14737	48	Utica
53	7/3/2020	14363	14538	48	Utica
54	7/3/2020	14164	14339	48	Utica
55	7/3/2020	13965	14140	48	Utica
56	7/3/2020	13766	13941	48	Utica
57	7/3/2020	13567	13742	48	Utica
58	7/4/2020	13368	13543	48	Utica
59	7/4/2020	13169	13344	48	Utica
60	7/6/2020	12970	13145	48	Utica
61	7/6/2020	12771	12946	48	Utica
62	7/6/2020	12572	12747	48	Utica
63	7/7/2020	12373	12548	48	Utica
64	7/7/2020	12174	12349	48	Utica
65	7/7/2020	11975	12150	48	Utica

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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	84	11278	8869	6963	244010	10415	0
2	86	11639	8173	7449	499975	10448	0
3	88	11942	8005	6944	500350	10388	0
4	90	11875	7870	7494	500100	12439	0
5	89	11932	9872	7200	499376	10744	0
6	87	11869	7673	7316	501690	10400	0
7	87	12004	7492	7320	500846	10504	0
8	89	11844	7547	7014	500789	10434	0
9	88	12095	8525	6936	501137	10407	0
10	87	11723	7738	7461	500864	10437	0
11	89	11811	8220	6477	501478	10377	0
12	89	11850	5659	7308	505288	10411	0
13	87	11618	9094	7505	499695	10372	0
14	81	10585	7650	7602	500414	10539	0
15	90	11466	9263	7564	499523	10327	0
16	90	11084	8368	7678	498958	10252	0
17	90	10970	8792	7603	500245	10205	0
18	89	11340	8701	7509	500020	10304	0
19	89	11579	9595	7179	496266	10250	0
20	90	11130	8753	7597	500535	10245	0
21	89	11191	7609	7646	500290	10157	0
22	90	10926	8598	7643	499440	10166	0
23	89	10813	7622	6950	497897	10195	0
24	89	10803	8618	7356	498643	10245	0
25	89	10829	9379	7985	500360	10155	0
26	89	10730	7905	7978	500450	10121	0
27	90	10756	9915	7533	500080	10121	0
28	90	10629	8811	8070	499232	10195	0
29	91	10604	8215	8161	497339	10283	0
30	90	10625	7796	6437	500210	10158	0
31	90	10694	8766	6376	500305	10234	0
32	89	10939	7892	7616	499690	10064	0

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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)
33	90	10841	9940	7753	499086	10181	0
34	90	10789	8318	7587	499417	10164	0
35	90	11106	7624	7418	500131	10111	0
36	90	10905	8739	7867	499960	10029	0
37	90	10709	8864	7747	500080	10011	0
38	89	10469	8241	7696	499319	10167	0
39	90	10558	8275	7754	499125	10057	0
40	89	10344	8623	7869	500205	11934	0
41	90	10397	8881	8079	500409	10079	0
42	91	10389	9881	7867	499789	10031	0
43	89	10240	8328	8039	500952	10025	0
44	90	10481	9046	6955	500829	9967	0
45	90	10426	7718	7333	500798	9965	0
46	90	10545	7686	7797	500618	9981	0
47	90	10307	7729	7778	499873	10144	0
48	88	10166	7773	7485	503544	10096	0
49	89	10246	8742	7160	500323	9965	0
50	90	10256	8167	7604	500299	9982	0
51	89	10283	8248	7836	498450	10717	0
52	90	10365	8345	7770	500301	10001	0
53	89	10204	8080	7805	500585	9890	0
54	90	10191	8116	6211	500379	9901	0
55	90	10222	8127	7502	501309	9920	0
56	90	10081	7977	7771	499778	9877	0
57	90	10146	8273	7981	500186	9919	0
58	90	10215	8113	7693	500820	9880	0
59	89	10316	7678	8239	498786	9896	0
60	87	10409	7739	7533	499772	9883	0
61	88	10494	8252	8179	501180	9959	0
62	89	10389	9350	8645	500365	9915	0
63	91	10586	9638	7795	498263	9960	0
64	91	10415	6268	7096	501251	9870	0
65	89	10386	9146	7511	499486	9783	0

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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	2031	2121	2031	2121	Sandstone
Big Lime	2121	2191	2121	2191	Limestone
Big Injun	2191	2475	2191	2475	Sandstone
Weir	2475	2669	2475	2670	Sandstone
Berea	2669	3015	2670	3016	Sandstone
Gordon	3015	3069	3016	3070	Sandstone
Fifty Foot	3069	3617	3070	3618	Sandstone
Speechley	3617	5039	3618	5042	Sandstone
Benson	5039	5394	5042	5397	Sandstone
Alexander	5394	5988	5397	5991	Siltstone
Rhinestreet	5988	6412	5991	6415	Black shale
Middlesex	6412	6478	6415	6481	Black shale
Geneseo/Burkett	6478	6513	6481	6516	Black shale
Tully	6513	6548	6516	6551	Limestone
Hamilton	6548	6574	6551	6577	Grey shale
Marcellus	6574	6626	6577	6629	Black shale
Onondaga	6626	6876	6629	6880	Limestone
Oriskany	6876	6978	6880	6983	Sandstone
Helderberg	6978	7344	6983	7356	Limestone
Salina	7344	8379	7356	8459	Salt/Anhydrite/LS
Lockport	8379	8750	8459	8852	Dolomite
Rose Hill	8750	9018	8852	9144	Shale
Packer Shell	9018	9221	9144	9362	Limestone
Clinton/Tuscarora	9221	9326	9362	9475	Sandstone
Juniata/Queenston	9326	10107	9475	10310	Red Shale
Reedsville	10107	11066	10310	11365	Grey Shale
Utica	11066	11333	11365	11836	Black Shale
Point Pleasant	11333	-	11836	-	Shale/Limestone

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/26/2020
Job End Date:	7/7/2020
State:	West Virginia
County:	Marshall
API Number:	47-051-02123-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Old Crow N 18HU
Latitude:	39.77840838
Longitude:	-80.76303514
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,258
Total Base Water Volume (gal):	27,898,584
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Service Abstract 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	87.38656	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	9.61695	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	2.48852	None
Hydrochloric Acid (7.5%)	PVS	Acidizing	Water	7732-18-5	85.00000	0.33173	None
SlimStream FR 9800	Chemstream	Friction Reducer	Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.14440	None
MC MX 9-4743	Multi-Chem	Biocide	Butene, homopolymer	9003-29-6	25.00000	0.01734	None
LD-7750W	Multi-Chem	Scale Inhibitor	Alkanes, C16-20-iso-	90622-59-6	25.00000	0.01734	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00208	None
			Sodium Nitrate	7631-99-4	60.00000	0.02224	None

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			Methanol	67-56-1	60.00000	0.00507	None
ProFE 105	ProFrac	Iron Control	Phosphonic Acid Salt	Proprietary	5.00000	0.00042	None
ProHib 100	ProFrac	Acid Inhibitor	Citric Acid	77-92-9	100.00000	0.00154	None
			2-Propyn-1-ol compound w/ methylolxirane	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	0.33173	
			Butene, homopolymer	9003-29-6	25.00000	0.01734	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00208	
			Phosphonic Acid Salt	Proprietary	5.00000	0.00042	

* 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)

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**OLD CROW N LEASE
UTICA UNIT - 439.09 AC ±
WELL 18HU
TUG HILL OPERATING**

T.H. LATITUDE 39°47'30"
B.H. LATITUDE 39°50'00"

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT)	N. 468,131.25	E. 1,613,534.59
NAD'83 GEO.	LAT-(N) 39.778408	LONG-(W) 80.763035
NAD'83 UTM (M)	N. 4,403,190.04	E. 520,292.49

LANDING POINT

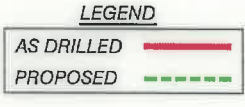
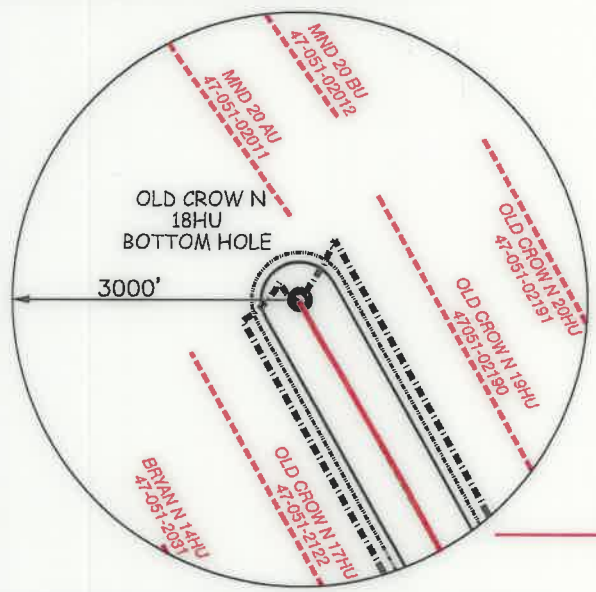
NAD'83 S.P.C.(FT)	N. 469,078.3	E. 1,614,843.1
NAD'83 GEO.	LAT-(N) 39.781058	LONG-(W) 80.758427
NAD'83 UTM (M)	N. 4,403,485.2	E. 520,686.3

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 480,570.6	E. 1,608,461.3
NAD'83 GEO.	LAT-(N) 39.812358	LONG-(W) 80.781716
NAD'83 UTM (M)	N. 4,406,953.9	E. 518,683.6

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°45'00"

7,656' B.H. A.D.

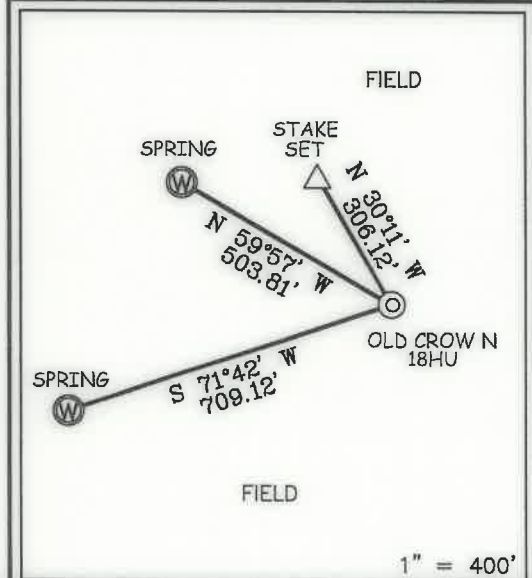


MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
5-9-17	DENNIS P. CADMUS	28.063
5-9-19	MARK STEPHEN STOCKLASK	2.38
5-9-23	DELBERT K. & LINDA K. MYERS	7.00
5-9-26	EDWIN C. MILLER	1.00
5-9-29.2	JAMES E. & AMY L. MCDONOUGH	2.807
5-9-30.1	DAVID JR., & MELISA LOVE	2.518
5-9-40	SHIRLEY A. HILL EST	368' X 425'
5-9-42	DENNIS P. CADMUS	5.42
5-11-5	KEVIN R. CORLEY, ET UX	10.36
5-11-5.3	ROBERT HARRIS ARRICK, ET UX	3.00
5-11-6	ROBERT & REBECCA ARRICK	1.29
5-11-7	MT. HOBART MISSIONARY BAPTIST CHURCH	0.25
5-11-8	MT. HOBART MISSIONARY BAPTIST CHURCH	LOT
5-11-9.2	MICHAEL R. BRYAN	3.143
5-11-9.3	JOSEPH M. & STEVEN HAUGHT	16.3
5-11-9.5	SOUTHERN COUNTRY FARMS INC.	2.559
5-11-9.6	SOUTHERN COUNTRY FARMS INC.	2.488
5-11-9.7	SEAN F. MOORE	2.026
5-11-9.8	SEAN F. MOORE	2.070
5-11-9.9	LEONARD L. PARSONS, ET UX	5.89
5-11-10	JOHN A. & JANET L. BEUCKE	2.348
5-11-11	BRAD M. & AMANDA J. BLAKE	5.00
5-11-11.1	NELLIE MARIE & ROBERT SPENCER	5.813
5-11-11.4	BRAD M. & AMANDA J. BLAKE	15.193

NOTES ON SURVEY

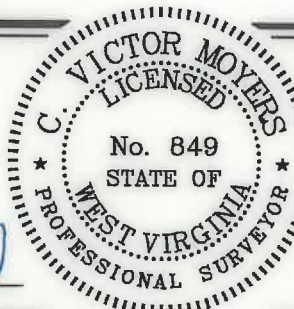
- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS > 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF OLD CROW N-18HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF EXISTING WELLS
BRYAN N 13HU (47-051-02030),
BRYAN N 14HU (47-051-02031),
OLD CROW N-17HU (47-051-02122),
OLD CROW N-18HU (47-051-02123),
OLD CROW N-19HU (47-051-02190),
MND20 AU (47-051-02011),
MND20 BU (47-051-02012),
MND20 CU (47-051-02013),
MND20 DU (47-051-02014) & PROPOSED OLD CROW N-20HU (47-051-02191).
- AS-DRILLED DATA PROVIDED BY TUG HILL OPERATING, LLC.
- PLAT UPDATED TO SHOW AS-DRILLED PATH.

REFERENCES



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsvv.com

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*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE JUNE 10, 20 20
REVISED _____, 20 _____
OPERATORS WELL NO. OLD CROW N-18HU
API WELL NO. 47 - 051 - 02123
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P18HUAD.dwg
OLD CROW NORTH 18HU REV3
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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

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

LOCATION: GROUND = 1286.70' ELEVATION PROPOSED = 1264.99' WATERSHED TRIBUTARY OF FISH CREEK (HUC-10)
DISTRICT FRANKLIN COUNTY MARSHALL QUADRANGLE POWHATAN POINT 7.5'

SURFACE OWNER DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO ACREAGE 71.205±
ROYALTY OWNER DONNA VIVIAN YOHO, ET AL - SEE ADDITIONAL SHEETS ACREAGE 71.205±

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 POINT PLEASANT
ESTIMATED DEPTH TVD: 11,531' / TMD: 24,961'

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

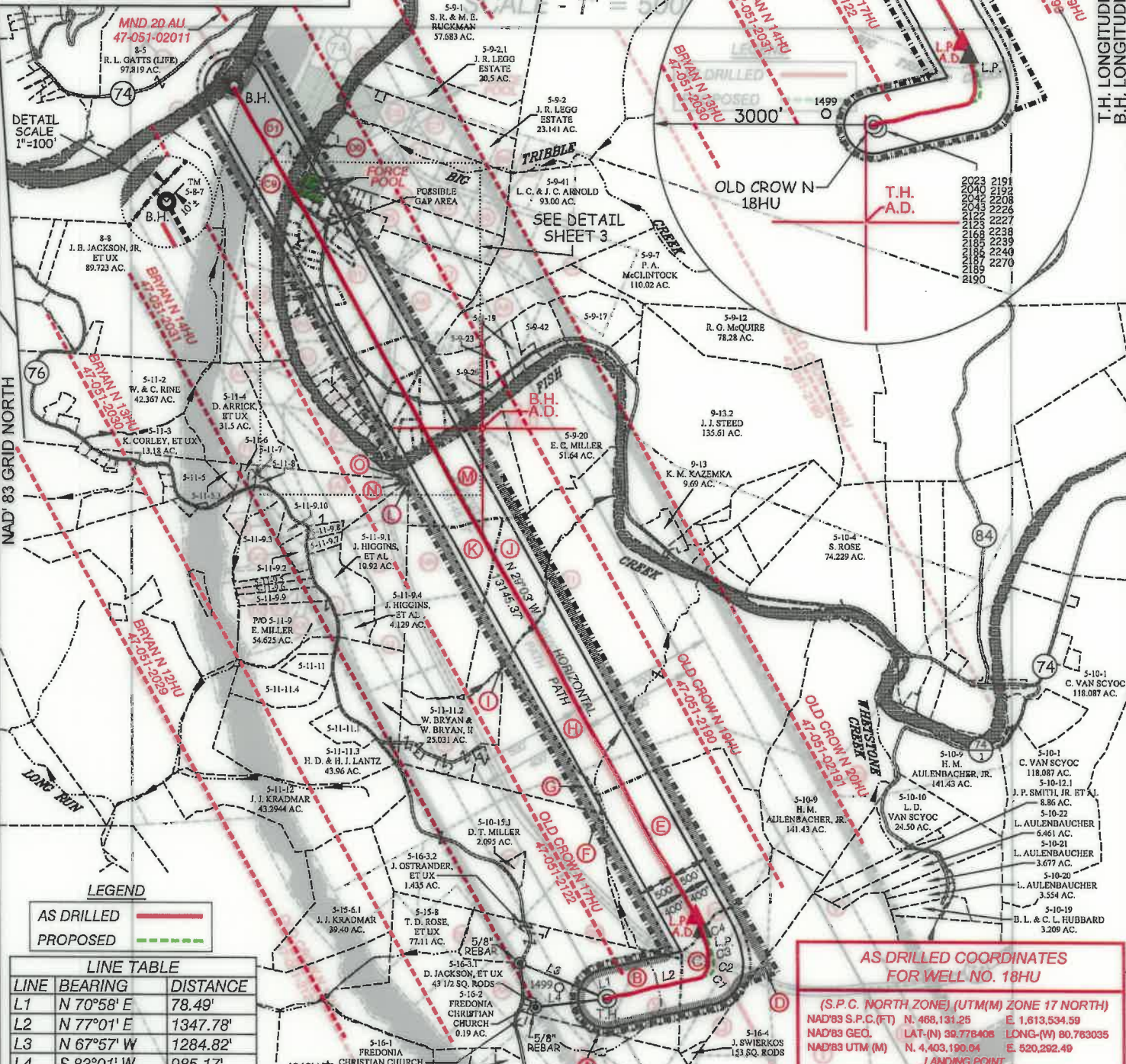
COUNTY NAME PERMIT

05/07/2022

**OLD CROW N LEASE
UTICA UNIT - 439.09 AC ±
WELL 18HU
TUG HILL OPERATING**

T.H. LATITUDE 39°47'30"
B.H. LATITUDE 39°50'00"

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°45'00"



DETAIL SCALE
1"=100'

NAD'83 GRID NORTH

LEGEND

AS DRILLED	
PROPOSED	

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 70°58' E	78.49'
L2	N 77°01' E	1347.78'
L3	N 67°57' W	1284.82'
L4	S 83°01' W	985.17'

AS DRILLED COORDINATES FOR WELL NO. 18HU

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT)	N. 468,131.25	E. 1,613,534.59
NAD'83 GEO.	LAT-(N) 39.778408	LONG-(W) 80.763035
NAD'83 UTM (M)	N. 4,403,190.04	E. 520,292.49

LANDING POINT

NAD'83 S.P.C.(FT)	N. 469,264.3	E. 1,614,750.4
NAD'83 GEO.	LAT-(N) 39.781565	LONG-(W) 80.758766
NAD'83 UTM (M)	N. 4,403,541.4	E. 520,657.1

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 480,565.9	E. 1,608,458.5
NAD'83 GEO.	LAT-(N) 39.812318	LONG-(W) 80.781725
NAD'83 UTM (M)	N. 4,406,949.4	E. 518,682.8

SLS
FROM THE GROUND UP

12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296

sflaw.com

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	84.35'	86.17'	N 47°06' E	81.02'
C2	143.96'	315.71'	N 04°40' E	142.72'
C3	351.75'	1126.17'	N 17°28' W	350.32'
C4	98.16'	1591.33'	N 27°16' W	98.15'

P.S. *C. Victor Moyers*
849

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

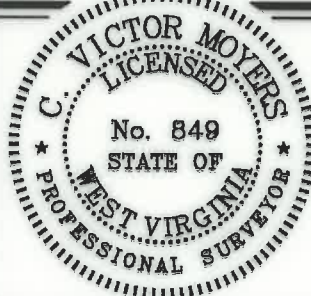
NAD'83 S.P.C.(FT)	N. 468,131.25	E. 1,613,534.59
NAD'83 GEO.	LAT-(N) 39.778408	LONG-(W) 80.763035
NAD'83 UTM (M)	N. 4,403,190.04	E. 520,292.49

LANDING POINT

NAD'83 S.P.C.(FT)	N. 469,078.3	E. 1,614,843.1
NAD'83 GEO.	LAT-(N) 39.781058	LONG-(W) 80.758427
NAD'83 UTM (M)	N. 4,403,485.2	E. 520,686.3

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 480,570.6	E. 1,608,461.3
NAD'83 GEO.	LAT-(N) 39.812358	LONG-(W) 80.781716
NAD'83 UTM (M)	N. 4,406,953.9	E. 518,683.8



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

LEGEND

UNIT BOUNDARY	
LEASED TRACTS INSIDE UNIT BOUNDARY	
SURFACE LINE	
PROPOSED UTICA	
WELL LATERAL	
400' OFFSET LINE	
500' OFFSET LINE	
TIE LINE	
CREEK	
ROAD	
COUNTY ROUTE	
PROPOSED WELL	
EXISTING WELL	
PERMITTED WELL	
SURFACE OWNER (SEE TABLE)	
LEASE # (SEE ADDITIONAL SHEETS)	

SCALE 1" = 2000' FILE NO. 8796P18HUAD.dwg
DATE JUNE 10, 20 20
REVISED, 20
OPERATORS WELL NO. OLD CROW N-18HU
API WELL NO. 47 - 051 - 02123
STATE COUNTY PERMIT

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

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

05/07/2022

COUNTY NAME PERMIT

**OLD CROW N LEASE
UTICA UNIT - 439.09 AC ±
WELL 18HU
TUG HILL OPERATING**



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254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
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SURFACE OWNERS

TAG	SURFACE OWNER	PARCEL	ACRES
A	JOHN SWIERKOS	5-16-25	79.04
B	DONNA VIVIAN YOHO - TOD	5-16-3	71.205
C	JOHN SWIERKOS	5-16-5	52.07
D	JOHN SWIERKOS	5-16-6	134.05
E	JOHN SWIERKOS	5-10-14	100.00
F	PAUL ANDREW & DEBRA A. RINE	5-10-15	120.80
G	TIMOTHY SR. & LINDA MCGINNIS	5-10-16	30.87
H	HERBERT M. AULENBAUCHER, JR.	5-10-3	225.50
I	MELVIN E. JR., & ELIZABETH FERGUSON	5-10-16.4	30.87
J	WILLIAM A. PRASCIK, ET AL	5-10-2	52.00
K	ALVIN A. YODER	5-10-17	57.28
L	ALVIN A. YODER	5-11-10	31.91
M	EDWIN C. MILLER	5-10-1	49.96
N	EDWIN C. & KIMBERLY A. MILLER	5-11-9	54.625
O	DALISON LUMBER COMPANY	5-9-31	32.10
P	FISH CREEK-WV DIVISION OF NATURAL RESOURCES	N/A	N/A
Q	JAMES M. & ROBERT L. STERN	5-9-29	3.1777
R	JAMES E. & AMY L. MCDONOUGH	5-9-29.2	2.807
S	JAMES E. & HARLEY J. MCDONOUGH	5-9-29.1	1.026
T	WILLIAM N. & DELORES E. MCDONOUGH - LIFE	5-9-28	4.01
U	JOHN F. KAZEMKA	5-9-27	4.02
V	DELBERT K. & LINDA K. MYERS	5-9-25	14.49
W	MATTHEW B. GRIFFITH	5-9-30.3	0.82
X	DAVID JR. & MELISSA LOVE	5-9-30.1	2.518
Y	TRUSTEES OF LIGHTHOUSE TABERNACLE CHURCH	5-9-30.2	1.954
Z	JOHN D. & MARSHA J. ROBERTS	5-9-38.7	0.795
AA	JOHN D. ROBERTS, ET UX	5-9-38.8	0.903
BB	SHIRLEY A. HILL ESTATE	5-9-40	368x425
CC	MATTHEW B. GRIFFITH	5-9-30	2.708
DD	DENNIS P. CADMUS	5-9-24	21AC 49P
EE	DENNIS P. CADMUS	5-9-39	9.50
FF	SHIRLEY A. HILL ESTATE	5-9-38	3.331
GG	JOHN D. ROBERTS, ET UX	5-9-38.9	1.017
HH	FRANK T. & ANNA M. WALKER	5-9-37	10.857
II	KEITH D. DANIELS, ET UX	5-9-33	40.331
JJ	FRANK T. & ANNA M. WALKER	5-9-36	1.55
KK	RUBY M. HENRY ESTATE (C/O GEORGE E. HENRY)	5-9-32.4	0.379
LL	RUBY M. HENRY ESTATE (C/O GEORGE E. HENRY)	5-9-32.3	0.552
MM	LIONEL E. HENRY, SR., ET AL	5-9-32.9	1.269
NN	DAVID D. & CHRISTINE S. DANIELS	5-9-33.4	1.025
OO	JOHN DRAKE ALBAUGH	5-9-32.12	1.09
PP	JOHN DRAKE ALBAUGH	5-9-32.2	0.231
QQ	RUBY M. HENRY ESTATE (C/O GEORGE E. HENRY)	5-9-32.6	0.474
RR	JOHN D. ALBAUGH	5-9-32.13	0.848
SS	JOHN D. ALBAUGH	5-9-32.7	0.729
TT	SANDRA J. BONETTE	5-9-32	2.321
UU	TIMOTHY Q. HOYT, ET UX	5-9-32.11	1.717
VV	TIMOTHY Q. HOYT, ET UX	5-9-32.10	0.588
WW	KEITH D. & BEVERLY A. DANIELS	5-9-33.1	1.0
XX	KEITH D. DANIELS, ET UX	5-9-33.2	1.534
YY	LLOYD C. & JUDITH C. ARNOLD	5-9-4	18.854
ZZ	SAMUEL L. CANTERBURY, ET UX	5-9-4.19	2.078
A0	TIMOTHY Q. HOYT, ET UX	5-9-32.8	0.711
A1	GARNET D. MIDCAP	5-9-32.5	270x390P
A2	MILLARD BONNETTE, ET UX	5-9-34.2	0.76
A3	EARL B. SUTER, JR., ET UX	5-9-34.6	0.085
A4	LOUIS D. & PATRICIA L. VAN SCYOC	5-9-34	0.850
A5	MILLARD BONNETTE, JR., ET UX	5-9-34.5	0.444
A6	RALPH EARL DUNLAP, LIFE	5-9-33.3	0.50
A7	SAMUEL LEE CANTERBURY, ET UX	5-9-4.13	0.9284
A8	GARY PORTER	5-9-4.11	1.00
A9	SAMUEL L. CANTERBURY, ET UX	5-9-4.17	0.500
B0	SAMUEL L. CANTERBURY, ET UX	5-9-4.16	0.517
B1	MILLARD BONNETTE, JR., ET UX	5-9-34.3	1.988
B2	LOUIS D. VAN SCYOC	5-9-34.1	0.556
B3	LOUIS D. VAN SCYOC	5-9-34.4	1.042
B4	LINDA J. SIMMONS	5-9-4.4	0.325
B5	DYLAN AULENBACHER	5-9-4.20	0.0596
B6	DYLAN AULENBACHER	5-9-4.5	0.991
B7	SAMUEL L. & DEBRA N. CANTERBURY	5-9-4.12	0.650
B8	PAUL G. BROWN	5-9-4.15	0.500
B9	PAUL G. BROWN	5-9-4.14	0.500
C0	DEBORAH S. MIDCAP	5-9-4.10	0.819
C1	THOMAS MIDCAP, ET UX	5-9-4.9	0.375
C2	HARRY E. JR., & MICHELA KARR	5-9-4.6	0.324
C3	LINDA J. SIMMONS	5-9-4.2	0.732
C4	HARRY E. JR., & MICHELA KARR	5-9-4.1	0.812
C5	HARRY E. JR., & MICHELA KARR	5-9-4.3	1.471
C6	FRANCIS D. BARR, ET UX	5-9-4.7	0.481
C7	THOMAS MIDCAP, ET UX	5-9-4.8	0.376
C8	LLOYD C. & JUDITH C. ARNOLD	5-9-35	47.00
C9	JAMES EDWARD FRANCIS, ET UX	5-8-8	28.3
D0	GEORGE F. MINOR, ET AL - LIFE	5-9-35.1	0.641
D1	EDWIN C. MILLER	5-8-7	180.31
D2	JOHN DRAKE ALBAUGH	5-9-32.1	1.002

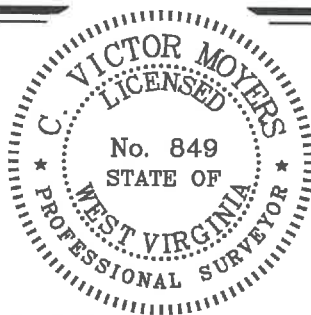
FILE NO. 8796P18HUAD.dwg
OLD CROW NORTH 18HU_REV3

DATE JUNE 10, 20 20

REVISED _____, 20 _____

OPERATORS WELL NO. OLD CROW N-18HU

API WELL NO. 47 — 051 — 02123
STATE COUNTY PERMIT



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



05/07/2021

P.S. 849 *C. Victor Moyers*

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FORT WORTH, TX 76107

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

COUNTY NAME PERMIT

OLD CROW N LEASE
UTICA UNIT - 439.09 AC±
WELL 18HU
TUG HILL OPERATING

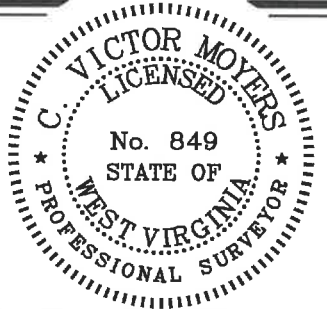


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Table with columns: NO., Lease ID, Tag, Parcel, Grantor, Lessor, Etc., Deed Book/Page. Contains 100 rows of lease data.

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FILE NO. 8796P18HUAD.dwg
OLD CROW NORTH 18HU_REV3
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OPERATORS WELL NO. OLD CROW N-18HU
API WELL NO. 47 — 051 — 02123
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STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
P.S. 849
C. Victor Moyers

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

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

COUNTY NAME PERMIT



05/07/2021

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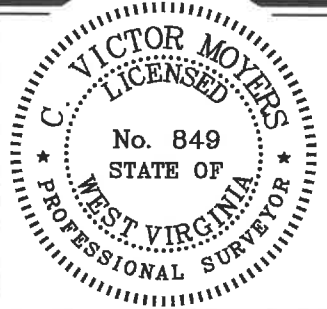


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STATE OF WEST VIRGINIA
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COUNTY NAME

OLD CROW N LEASE UTICA UNIT - 439.09 AC ± WELL 18HU TUG HILL OPERATING



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slnw.com

NO.	Lease ID	Tag	Parcel	Grantor, Lessor, Etc.	Deed Book/Page
405	CVX866959	JJ	5-9-36	PAUL SCHEIBELHOOD ET AL	695 629
406	CVX935273	KK	5-9-32.4	CHARLES W. MILLER AND ESTHER JEAN MILLER	853 59
407	CVX935273	KK	5-9-32.4	PAUL PARSONS ET UX	853 430
408	CVX935276	KK	5-9-32.4	SHARON LYN RUSSELL	853 422
409	CVX935969	KK	5-9-32.4	TIMOTHY HUFF ET UX	864 47
410	CVX936053	KK	5-9-32.4	LLOYD C. ARNOLD ET UX	864 39
411	CVX936054	KK	5-9-32.4	MARY JO CRONIN	864 43
412	CVX936058	KK	5-9-32.4	RICHARD KURPIL ET UX	863 594
413	CVX936061	KK	5-9-32.4	CLARA MAE CLIFTON	853 426
414	CVX936062	KK	5-9-32.4	GEORGE EDWARDS ET UX	853 418
415	CVX936112	KK	5-9-32.4	DONNA FAE KYLE	853 449
416	CVX936113	KK	5-9-32.4	JUDITH MAY CONNER	853 445
417	CVX866958	KK	5-9-32.4	ANITA L. SLOUGH AND WILLIAM O. JOBES	696 7
418	CVX866959	KK	5-9-32.4	PAUL SCHEIBELHOOD ET AL	695 629
419	CVX935273	LL	5-9-32.3	CHARLES W. MILLER AND ESTHER JEAN MILLER	853 59
420	CVX935273	LL	5-9-32.3	PAUL PARSONS ET UX	853 430
421	CVX935276	LL	5-9-32.3	SHARON LYN RUSSELL	853 422
422	CVX935969	LL	5-9-32.3	TIMOTHY HUFF ET UX	864 47
423	CVX936053	LL	5-9-32.3	LLOYD C. ARNOLD ET UX	864 39
424	CVX936054	LL	5-9-32.3	MARY JO CRONIN	864 43
425	CVX936058	LL	5-9-32.3	RICHARD KURPIL ET UX	863 594
426	CVX936061	LL	5-9-32.3	CLARA MAE CLIFTON	853 426
427	CVX936062	LL	5-9-32.3	GEORGE EDWARDS ET UX	853 418
428	CVX936112	LL	5-9-32.3	DONNA FAE KYLE	853 449
429	CVX936113	LL	5-9-32.3	JUDITH MAY CONNER	853 445
430	CVX866958	LL	5-9-32.3	ANITA L. SLOUGH AND WILLIAM O. JOBES	696 7
431	CVX866959	LL	5-9-32.3	PAUL SCHEIBELHOOD ET AL	695 629
432	CVX935273	MM	5-9-32.9	CHARLES W. MILLER AND ESTHER JEAN MILLER	853 59
433	CVX935273	MM	5-9-32.9	PAUL PARSONS ET UX	853 430
434	CVX935276	MM	5-9-32.9	SHARON LYN RUSSELL	853 422
435	CVX935969	MM	5-9-32.9	TIMOTHY HUFF ET UX	864 47
436	CVX935053	MM	5-9-32.9	LLOYD C. ARNOLD ET UX	864 39
437	CVX936054	MM	5-9-32.9	MARY JO CRONIN	864 43
438	CVX936058	MM	5-9-32.9	RICHARD KURPIL ET UX	863 594
439	CVX936061	MM	5-9-32.9	CLARA MAE CLIFTON	853 426
440	CVX936062	MM	5-9-32.9	GEORGE EDWARDS ET UX	853 418
441	CVX936112	MM	5-9-32.9	DONNA FAE KYLE	853 449
442	CVX936113	MM	5-9-32.9	JUDITH MAY CONNER	853 445
443	CVX866958	MM	5-9-32.9	ANITA L. SLOUGH AND WILLIAM O. JOBES	696 7
444	CVX866959	MM	5-9-32.9	PAUL SCHEIBELHOOD ET AL	695 629
445	PENDING	NN	5-9-33.4	STONE HILL MINERALS HOLDINGS LLC	1034 626
446	CVX935271	OO	5-9-32.12	CHARLES W. MILLER AND ESTHER JEAN MILLER	853 59
447	CVX935273	OO	5-9-32.12	PAUL PARSONS ET UX	853 430
448	CVX935276	OO	5-9-32.12	SHARON LYN RUSSELL	853 422
449	CVX935969	OO	5-9-32.12	TIMOTHY HUFF ET UX	864 47
450	CVX936053	OO	5-9-32.12	LLOYD C. ARNOLD ET UX	864 39
451	CVX936054	OO	5-9-32.12	MARY JO CRONIN	864 43
452	CVX936058	OO	5-9-32.12	RICHARD KURPIL ET UX	863 594
453	CVX936061	OO	5-9-32.12	CLARA MAE CLIFTON	853 426
454	CVX936062	OO	5-9-32.12	GEORGE EDWARDS ET UX	853 418
455	CVX936112	OO	5-9-32.12	DONNA FAE KYLE	853 449
456	CVX936113	OO	5-9-32.12	JUDITH MAY CONNER	853 445
457	CVX866958	OO	5-9-32.12	ANITA L. SLOUGH AND WILLIAM O. JOBES	696 7
458	CVX866959	OO	5-9-32.12	PAUL SCHEIBELHOOD ET AL	695 629
459	CVX935271	PP	5-9-32.2	CHARLES W. MILLER AND ESTHER JEAN MILLER	853 59
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471	CVX866959	PP	5-9-32.2	PAUL SCHEIBELHOOD ET AL	695 629
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NO.	Lease ID	Tag	Parcel	Grantor, Lessor, Etc.	Deed Book/Page
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523	CVX866959	TT	5-9-32	PAUL SCHEIBELHOOD ET AL	695 629
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525	CVX935273	UU	5-9-32.11	PAUL PARSONS ET UX	853 430
526	CVX935276	UU	5-9-32.11	SHARON LYN RUSSELL	853 422
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551	CVX868399	XX	5-9-33.2	KEITH D. DANIELS AND BEVERLY A. DANIELS	735 216
552	CVX939752	YY	5-9-4	LLOYD C. ARNOLD AND JUDITH C. ARNOLD	915 582
553	CVX936589	ZZ	5-9-4.19	LLOYD C. ARNOLD AND JUDITH C. ARNOLD	863 511
554	CVX936591	ZZ	5-9-4.19	CHARLES W. MILLER AND ESTHER JEAN MILLER	861 595
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558	CVX935969	AA	5-9-32.8	TIMOTHY HUFF ET UX	864 47
559	CVX936053	AA	5-9-32.8	LLOYD C. ARNOLD ET UX	864 39
560	CVX936054	AA	5-9-32.8	MARY JO CRONIN	864 43
561	CVX936058	AA	5-9-32.8	RICHARD KURPIL ET UX	863 594
562	CVX936061	AA	5-9-32.8	CLARA MAE CLIFTON	853 426
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572	CVX936053	A1	5-9-32.5	LLOYD C. ARNOLD ET UX	864 39
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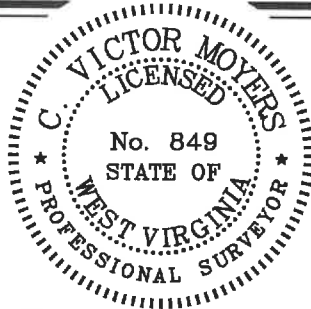
**OLD CROW N LEASE
UTICA UNIT - 439.09 AC ±
WELL 18HU
TUG HILL OPERATING**



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
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NO.	Lease ID	Tax#	Parcel	Grantor, Lessor, Etc.	Deed Book/Page
609	N/A	C2	5-9-4.6	HARRY E KARR JR	N/A N/A
610	N/A	C2	5-9-4.6	MICHAELA L KARR	N/A N/A
611	Q077357000	C3	5-9-4.2	LINDA J SIMMONS	805 575
612	N/A	C4	5-9-4.1	HARRY E KARR JR	N/A N/A
613	N/A	C4	5-9-4.1	MICHAELA L KARR	N/A N/A
614	N/A	C5	5-9-4.3	HARRY E KARR JR	N/A N/A
615	CVX868463	C6	5-9-4.7	FRANCIS D. BARR AND TERRI L BARR	737 252
616	CVX868688	C7	5-9-4.8	THOMAS E. MIDCAP FRED M MIDCAP	738 482
617	CVX935273	C8	5-9-35	CHARLES W. MILLER AND ESTHER JEAN MILLER	853 59
618	CVX935273	C8	5-9-35	PAUL PARSONS ET UX	853 430
619	CVX935276	C8	5-9-35	SHARON LYN RUSSELL	853 422
620	CVX935969	C8	5-9-35	TIMOTHY HUFF ET UX	864 47
621	CVX936053	C8	5-9-35	LLOYD C. ARNOLD ET UX	864 39
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623	CVX936058	C8	5-9-35	RICHARD KURPIL ET UX	853 426
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625	CVX936062	C8	5-9-35	GEORGE EDWARDS ET UX	853 449
626	CVX936112	C8	5-9-35	DONNA FAE KYLE	853 445
627	CVX936113	C8	5-9-35	JUDITH MAY CONNER	696 7
628	CVX866958	C8	5-9-35	ANITA L. SLOUGH AND WILLIAM O. JOBES	695 629
629	CVX866959	C8	5-9-35	PAUL SCHEIBELHOOD ET AL	695 629
630	10*25370	C9	5-8-8	JAMES EDWARD & LAURA J FRANCIS	1030 377
631	10*25487	C9	5-8-8	STONE HILL MINERALS HOLDINGS LLC	1031 538
632	CVX935271	D0	5-9-35.1	CHARLES W. MILLER AND ESTHER JEAN MILLER	853 59
633	CVX935273	D0	5-9-35.1	PAUL PARSONS ET UX	853 430
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644	CVX866959	D0	5-9-35.1	PAUL SCHEIBELHOOD ET AL	695 629
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647	10*21546	D1	5-8-7	EDWIN C MILLER AND KIMBERLY ANN MILLER	853 59
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649	CVX935273	D2	5-9-32.1	PAUL PARSONS ET UX	853 422
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651	CVX935969	D2	5-9-32.1	TIMOTHY HUFF ET UX	864 39
652	CVX936053	D2	5-9-32.1	LLOYD C. ARNOLD ET UX	863 594
653	CVX936054	D2	5-9-32.1	MARY JO CRONIN	853 426
654	CVX936058	D2	5-9-32.1	RICHARD KURPIL ET UX	853 418
655	CVX936061	D2	5-9-32.1	CLARA MAE CLIFTON	853 449
656	CVX936062	D2	5-9-32.1	GEORGE EDWARDS ET UX	853 445
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658	CVX936113	D2	5-9-32.1	JUDITH MAY CONNER	696 7
659	CVX866958	D2	5-9-32.1	ANITA L. SLOUGH AND WILLIAM O. JOBES	695 629
660	CVX866959	D2	5-9-32.1	PAUL SCHEIBELHOOD ET AL	695 629

FILE NO. 8796P18HUAD.dwg
OLD CROW NORTH 18HU_REV3
 DATE JUNE 10, 20 20
 REVISED _____, 20 _____
 OPERATORS WELL NO. OLD CROW N-18HU
 API WELL NO. 47 — 051 — 02123
 STATE COUNTY PERMIT



STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS
 P.S. 849 *C. Victor Moyers*
 COUNTY NAME PERMIT

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