

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

OCT 03 2022

API 47 - 051 - 02296 County Marshall District Meade WV Department of
Quad Glen Easton 7.5' Pad Name Hudson Field/Pool Name Environmental Protection
Farm name CNX Land, LLC Well Number Hudson S-11HU
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 4,408,796.11 Easting 528,006.75
Landing Point of Curve Northing 4,408,949.3 Easting 527,158.5
Bottom Hole Northing 4,405,583.8 Easting 529,098.2

Elevation (ft) 1334.81' 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 3/11/2020 Date drilling commenced ^{spud:3/18/2021 big rig: 5/9/2021} Date drilling ceased 10/29/2021
Date completion activities began 4/8/2022 Date completion activities ceased 7/3/2022
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 1013' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1477' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 921-927', 1007-1013' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED
Reviewed by:
SG
10/14/2022
STRAIDER GOWER

API 47- 051 - 02296 Farm name CNX Land, LLC Well number Hudson S-11HU

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	26"	20"	1,120'	NEW	106.5#	N/A	Y
Coal							
Intermediate 1	17 1/2"	13 3/8"	2,854'	NEW	54.5#	N/A	Y
Intermediate 2	12 1/4"	9 5/8"	11,173'	NEW	47#	N/A	Y
Intermediate 3							
Production	8 1/2"	5 1/2"	25,582'	NEW	23#	N/A	Y
Tubing		2 7/8"	12,791'	NEW	4.7#	N/A	Y
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	1170	15.6	1.18	1380	0	8
Surface	A	1979	15.6	1.18	2335.22	0	8
Coal							
Intermediate 1	A	2441	15.6	1.18	2880.38	0	8
Intermediate 2	A	4116	14.5	1.4	5762.4	0	8
Intermediate 3							
Production	A	6205	16.5	1.03	6391.15	0	8
Tubing							

Drillers TD (ft) 25,630' Loggers TD (ft) n/a
 Deepest formation penetrated Trenton Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 11,400'

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 _____

HUDSON S-11HU
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	86.67	12258	11545	7711	314840	9,069	0
2	87.09	12317	8886	7315	508940	9,440	0
3	90.08	12148	9184	7771	499760	9,249	0
4	87.75	11678	9640	7757	501100	9,312	0
5	87.31	12187	8497	7615	508600	9,379	0
6	88.33	12247	8415	7604	508240	9,327	0
7	89.41	12294	9008	8637	495440	9,176	0
8	85.14	11999	9148	8148	506100	9,336	0
9	82.82	12155	9557	8192	500260	9,415	0
10	84.78	12415	10060	8069	503320	9,307	0
11	84.76	12225	9506	7717	491740	9,225	0
12	87.24	12182	9364	7807	496480	9,183	0
13	87.20	12117	9718	8123	506440	9,482	0
14	85.41	12016	9979	8176	508340	9,295	0
15	86.71	12189	11277	7762	504740	9,301	0
16	85.40	12069	9951	8223	506680	9,332	0
17	86.52	12191	9834	7124	508400	9,353	0
18	81.75	11601	10247	8099	508800	9,247	0
19	85.57	11822	9115	8287	503500	9,232	0
20	87.34	11835	9227	8738	508760	9,332	0
21	86.38	11505	9384	8437	497380	9,159	0
22	88.79	11731	8868	8650	510120	9,337	0
23	88.45	11892	8830	8300	498540	9,198	0
24	87.29	11488	9021	8205	494620	9,102	0
25	88.23	11526	8920	8398	504780	9,160	0
26	86.16	11650	9407	8360	501760	9,080	0
27	86.04	11744	9262	8033	495820	9,097	0
28	80.04	11655	9255	7613	501060	9,075	0
29	83.36	11717	10325	8415	502760	9,315	0
30	81.76	11668	9256	8485	493860	10,610	0
31	82.41	11706	9804	8697	475520	8,889	0
32	85.80	11752	8894	8052	500900	9,050	0

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	82.57	11527	9618	8284	502280	9,104	0
34	84.99	11638	9646	8384	505220	9,100	0
35	83.93	11657	9088	8474	504460	9,004	0
36	84.66	11504	9584	7891	504360	9,090	0
37	87.56	11524	9305	8390	495420	8,956	0
38	84.12	11473	8591	7824	504300	9,651	0
39	85.40	11717	9567	7891	505660	9,101	0
40	86.25	11721	10027	8364	505180	8,980	0
41	86.58	11213	9649	8042	498260	8,972	0
42	88.17	11673	8750	8816	509700	9,319	0
43	89.90	11524	9216	7842	506420	9,014	0
44	85.87	11003	9289	8222	510940	8,974	0
45	87.83	11244	9255	8530	491860	8,845	0
46	87.58	11108	9285	8958	458000	8,653	0
47	89.00	11217	9275	11262	496600	8,990	0
48	88.27	10927	8887	7618	509920	9,057	0
49	87.61	11107	9258	7906	506400	8,977	0
50	88.30	11290	8835	7464	504060	8,965	0
51	87.98	11164	9501	8197	498200	8,889	0
52	87.16	11079	9830	7661	506260	8,960	0
53	87.55	11245	8956	8385	494600	8,891	0
54	88.21	11152	9553	7557	505300	8,931	0
55	88.82	10887	8860	8207	510860	8,956	0
56	89.63	11066	8423	8076	500240	10,012	0
57	85.13	10802	9187	8000	499720	8,885	0
58	89.02	11163	9223	7944	503660	8,984	0
59	87.82	10835	9615	7620	498540	8,787	0
60	89.43	10918	9908	8221	503320	8,884	0
61	89.73	10879	9330	8182	495660	8,860	0
62	88.06	10412	8965	7761	504900	8,912	0
63	89.89	10470	9007	8019	503040	9,185	0

**HUDSON S-11HU
PEFORATION RECORD**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
1	4/8/2022	25,183	25,360	48	Utica
2	4/9/2022	24,982	25,159	48	Utica
3	4/9/2022	24,781	24,958	48	Utica
4	4/10/2022	24,580	24,757	48	Utica
5	6/4/2022	24,379	24,556	48	Utica
6	6/5/2022	24,178	24,355	48	Utica
7	6/5/2022	23,977	24,154	48	Utica
8	6/6/2022	23,776	23,953	48	Utica
9	6/6/2022	23,575	23,752	48	Utica
10	6/6/2022	23,374	23,551	48	Utica
11	6/7/2022	23,173	23,350	48	Utica
12	6/7/2022	22,972	23,149	48	Utica
13	6/8/2022	22,771	22,948	48	Utica
14	6/8/2022	22,570	22,747	48	Utica
15	6/9/2022	22,369	22,546	48	Utica
16	6/9/2022	22,168	22,345	48	Utica
17	6/10/2022	21,967	22,144	48	Utica
18	6/10/2022	21,766	21,943	48	Utica
19	6/11/2022	21,565	21,742	48	Utica
20	6/11/2022	21,364	21,541	48	Utica
21	6/12/2022	21,163	21,340	48	Utica
22	6/12/2022	20,962	21,139	48	Utica
23	6/13/2022	20,761	20,938	48	Utica
24	6/13/2022	20,560	20,737	48	Utica
25	6/15/2022	20,359	20,536	48	Utica
26	6/15/2022	20,158	20,335	48	Utica
27	6/16/2022	19,957	20,134	48	Utica
28	6/16/2022	19,756	19,933	48	Utica
29	6/16/2022	19,555	19,732	48	Utica
30	6/17/2022	19,354	19,531	48	Utica
31	6/17/2022	19,153	19,330	48	Utica
32	6/18/2022	18,952	19,129	48	Utica
33	6/18/2022	18,751	18,928	48	Utica
34	6/19/2022	18,550	18,727	48	Utica
35	6/19/2022	18,349	18,526	48	Utica
36	6/20/2022	18,148	18,325	48	Utica
37	6/20/2022	17,947	18,124	48	Utica
38	6/20/2022	17,746	17,923	48	Utica
39	6/21/2022	17,545	17,722	48	Utica
40	6/21/2022	17,344	17,521	48	Utica
41	6/21/2022	17,143	17,320	48	Utica

10/14/2022

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
42	6/22/2022	16,942	17,119	48	Utica
43	6/22/2022	16,741	16,918	48	Utica
44	6/23/2022	16,540	16,717	48	Utica
45	6/23/2022	16,339	16,516	48	Utica
46	6/24/2022	16,138	16,315	48	Utica
47	6/25/2022	15,937	16,114	48	Utica
48	6/25/2022	15,736	15,913	48	Utica
49	6/26/2022	15,535	15,712	48	Utica
50	6/26/2022	15,334	15,511	48	Utica
51	6/27/2022	15,133	15,310	48	Utica
52	6/27/2022	14,932	15,109	48	Utica
53	6/28/2022	14,731	14,908	48	Utica
54	6/28/2022	14,530	14,707	48	Utica
55	6/29/2022	14,329	14,506	48	Utica
56	6/30/2022	14,128	14,305	48	Utica
57	6/30/2022	13,927	14,104	48	Utica
58	7/1/2022	13,726	13,903	48	Utica
59	7/1/2022	13,525	13,702	48	Utica
60	7/2/2022	13,324	13,501	48	Utica
61	7/2/2022	13,123	13,300	48	Utica
62	7/3/2022	12,922	13,099	48	Utica
63	7/3/2022	12,721	12,898	48	Utica

Hudson S-11HU

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	1905	2104	1906	2106	Sandstone
Big Lime	2104	2226	2106	2228	Limestone
Big Injun	2226	2525	2228	2528	Sandstone
Weir	2525	2721	2528	2724	Sandstone
Berea	2721	2974	2724	2978	Sandstone
Gordon	2974	3075	2978	3080	Sandstone
Fifty Foot	3075	3648	3080	3666	Sandstone
Speechley	3648	5111	3666	5228	Sandstone
Benson	5111	5492	5228	5640	Sandstone
Alexander	5492	6102	5640	6293	Siltstone
Rhinestreet	6102	6570	6293	6782	Black Shale
Middlesex	6570	6635	6782	6849	Black Shale
Geneseo/Burkett	6635	6668	6849	6882	Black Shale
Tully	6668	6699	6882	6914	Limestone
Hamilton	6699	6781	6914	6998	Gray Shale
Marcellus	6781	6831	6998	7049	Black Shale
Onondaga	6831	7058	7049	7282	Limestone
Oriskany	7058	7184	7282	7412	Sandstone
Helderberg	7184	7528	7412	7781	Limestone
Salina	7528	8634	7781	9016	Salt/Anhydrite/LS
Lockport	8634	9009	9016	9431	Dolomite
Rose Hill	9009	9286	9431	9747	Shale
Packer Shell	9286	9490	9747	9979	Limestone
Clinton/Tuscarora	9490	9599	9979	10102	Sandstone
Juniata/Queenston	9599	10421	10102	11021	Red Shale
Reedsville	10421	11411	11021	12117	Gray Shale
Utica	11411	11650	12117	12547	Black Shale
Point Pleasant	11650	-	12547	-	Shale/Limestone

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/8/2022
Job End Date:	7/3/2022
State:	West Virginia
County:	Marshall
API Number:	47-051-02296-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Hudson S 11HU
Latitude:	39.82870000
Longitude:	-80.67471400
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,803
Total Base Water Volume (gal):	24,231,984
Total Base Non Water Volume:	0



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
Water	Tug Hill Operating	Carrier/Base Fluid	Water	7732-18-5	100.00000	86.23983	None
Sand (40/70 White Proppant)	Tug Hill Operating	Proppant	Silica Substrate	14808-60-7	100.00000	10.58668	None
Sand (100 Mesh Proppant)	Tug Hill Operating	Proppant	Silica Substrate	14808-60-7	100.00000	2.80927	None
Hydrochloric Acid (7.5%)	CNR	Acidizing	Water	7732-18-5	85.00000	0.19763	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.08603	None
StimStream FR 9800	Chemstream	Friction Reducer	Alkanes, C16-20-iso-	90622-59-6	25.00000	0.02126	None
			Butene, homopolymer	9003-29-6	25.00000	0.02126	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00255	None
MC MX 9-4743	Multi-Chem	Biocide	Sodium Nitrate	7631-99-4	60.00000	0.02189	None
LD-7750W	Multi-Chem	Scale Inhibitor					

			Methanol	67-56-1	60.00000	0.00497	None
			Phosphonic Acid Salt	Proprietary	5.00000	0.00041	None
ProHib 100	CNR	Acid Inhibitor					
			2-Butoxyethanol	111-76-2	60.00000	0.00052	None
			Proprietary material	Proprietary	30.00000	0.00026	None
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00017	None
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00009	None
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00009	None
ProFE 105	CNR	Iron Control					
			Citric Acid	77-92-9	20.00000	0.00021	None
			Acetic Acid	64-19-7	5.00000	0.00005	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	0.19763	
			Butene, homopolymer	9003-29-6	25.00000	0.02126	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00255	
			Phosphonic Acid Salt	Proprietary	5.00000	0.00041	
			Proprietary material	Proprietary	30.00000	0.00026	
			Proprietary non-ionic surfactant	Proprietary	20.00000	0.00017	
			Proprietary ethoxylated alcohol	Proprietary	10.00000	0.00009	
			Proprietary corrosion inhibitor	Proprietary	10.00000	0.00009	
			Acetic Acid	64-19-7	5.00000	0.00005	

* 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)

HUDSON S LEASE UTICA UNIT - 463.24 AC± WELL 11HU TUG HILL OPERATING

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

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°37'30"

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-2-9.1	CONSOLIDATION COAL CO.	1.00
9-2-9.2	CONSOLIDATION COAL CO.	1.00
9-3-1.2	CONSOLIDATION COAL CO.	1.00
9-5-6	NANCY L. SNYDER (LIFE ESTATE)	82.858
9-5-6.1	JON B. CRAWFORD	4.679
9-5-6.9	CNX LAND CO. LLC	22.39
9-5-7	ME CHURCH	81.5 POLES (6 AC. ASSD)
9-5-8.1	ISACC MCKINNEY, ET UX	2.875
9-5-8.2	MISTY CROW W/ ROBERT & ELSIE WHETZEL (LIFE ESTATE)	1.973
9-5-11.1	MARK H. FOX	2.619
9-5-11.3	MARK H. FOX	1.94
9-5-13	SHELLY ANN JORDAN	5.51
9-5-14.1	SAVANNA N & MATTHEW WEST	2.819
9-5-14.4	BETTY R. OTT	10.501
9-5-16	LARRY L. CONKLE, JR.	2.365
9-5-16.1	SCOTT A. HOSTUTLER	0.142
9-5-21	RALPH E. WELLMAN, ET UX	1.00
9-5-22	RALPH E. WELLMAN, ET UX	0.5
9-7-9	CNX LAND CO. LLC	2.00
9-7-10	DONALD M. & THERESA L. HARRIS	3.00
9-7-11.1	WV DEPT. OF HIGHWAYS	3.63
9-7-27	LOGAN M TOLER & ASHLEY N. BERARDI	1.005
9-7-28	VICTOR & CLAIRE CAMERON	1.983
9-7-28.1	NATHAN WILLIAMS	2.768
9-8-1	CNX LAND CO. LLC	2.908
9-8-2	CNX LAND CO. LLC	6000 SQ. FT.

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

NAD'83 S.P.C.(FT)	N. 486,104.49	E. 1,639,156.22
NAD'83 GEO.	LAT-(N) 39.828700	LONG-(W) 80.672714
NAD'83 UTM (M)	N. 4,408,796.11	E. 528,006.75

LANDING POINT

NAD'83 S.P.C.(FT)	N. 486,747.8	E. 1,636,321.9
NAD'83 GEO.	LAT-(N) 39.830364	LONG-(W) 80.682835
NAD'83 UTM (M)	N. 4,408,977.7	E. 527,140.0

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 475,511.3	E. 1,642,560.1
NAD'83 GEO.	LAT-(N) 39.799742	LONG-(W) 80.660108
NAD'83 UTM (M)	N. 4,405,586.2	E. 529,097.7

AS DRILLED COORDINATES FOR WELL NO. 11HU

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

NAD'83 S.P.C.(FT)	N. 486,104.49	E. 1,639,156.22
NAD'83 GEO.	LAT-(N) 39.828700	LONG-(W) 80.672714
NAD'83 UTM (M)	N. 4,408,796.11	E. 528,006.75

LANDING POINT

NAD'83 S.P.C.(FT)	N. 486,653.8	E. 1,636,321.2
NAD'83 GEO.	LAT-(N) 39.830108	LONG-(W) 80.682620
NAD'83 UTM (M)	N. 4,408,949.3	E. 527,158.5

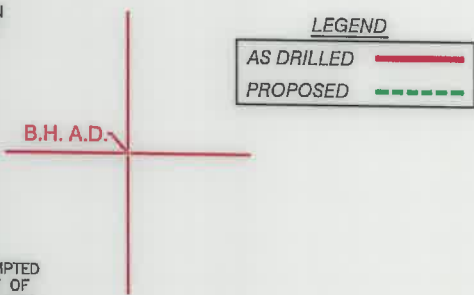
BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 475,503.4	E. 1,642,561.7
NAD'83 GEO.	LAT-(N) 39.799720	LONG-(W) 80.660102
NAD'83 UTM (M)	N. 4,405,583.8	E. 529,098.2

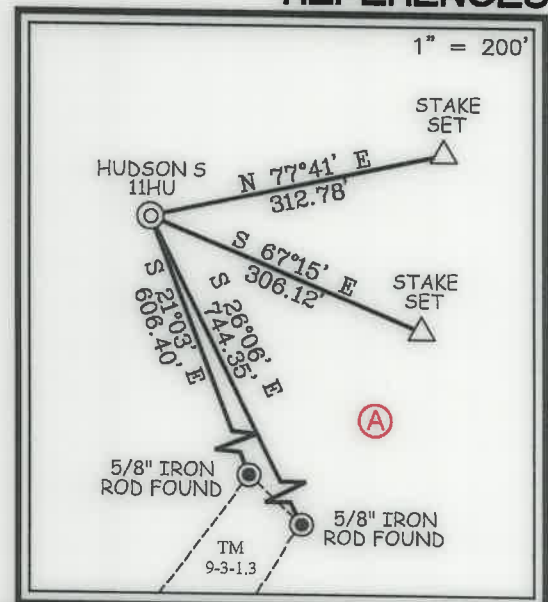
NOTES ON SURVEY

- 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 HUDSON S-11HU (47-051-02296) IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF HUDSON S-12HU (47-051-02292), HUDSON S-13HU (47-051-02293), HUDSON S-14HU (47-051-02327), HUDSON S-15HU (47-051-02328), HUDSON S-16HU (47-051-02329), TEN HIGH 1N-13HU (47-051-01965), TEN HIGH 1N-20HU (47-051-02021), TEN HIGH 1S-16HU (47-051-02028), TEN HIGH 1S-17HU (47-051-02033), FITZGERALD S-17HU (47-051-02324), FITZGERALD S-18HU (47-051-02325), FITZGERALD S-19HU (47-051-02326).
- MINIMUM OFFSET SPACING REQUIREMENTS EXEMPTED BY WAIVER WITH THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS AND OFFSET LEASEHOLDER AGREEMENTS AS PROVIDED BY TUG HILL OPERATING.

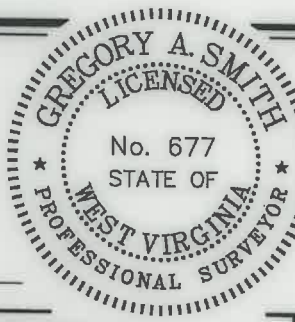
- PLAT UPDATED TO SHOW AS DRILLED PATH.
- AS DRILLED DATA PROVIDED BY TUG HILL OPERATING.



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
 slswv.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. 677 Gregory A. Smith

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE SEPTEMBER 30, 20 22
 REVISED _____
 OPERATORS WELL NO. HUDSON S-11HU
 API WELL NO. 47 - 051 - 02296
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8911P11HUAD.dwg
HUDSON S-11HU REV6
 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 LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: GROUND = 1,370.20' ELEVATION PROPOSED = 1,344.81' WATERSHED GRAVE CREEK (HUC 10)
 DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CNX LAND LLC ACREAGE 106.935±
 ROYALTY OWNER CHARLENE L. BAKER, ET AL ACREAGE 106.935±

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: 11,901' / TMD: 25,605'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN - CT CORPORATION
 ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107 ADDRESS 5098 WASHINGTON ST. W, STE 407 CHARLESTON, WV 25313-1561

COUNTY NAME PERMIT

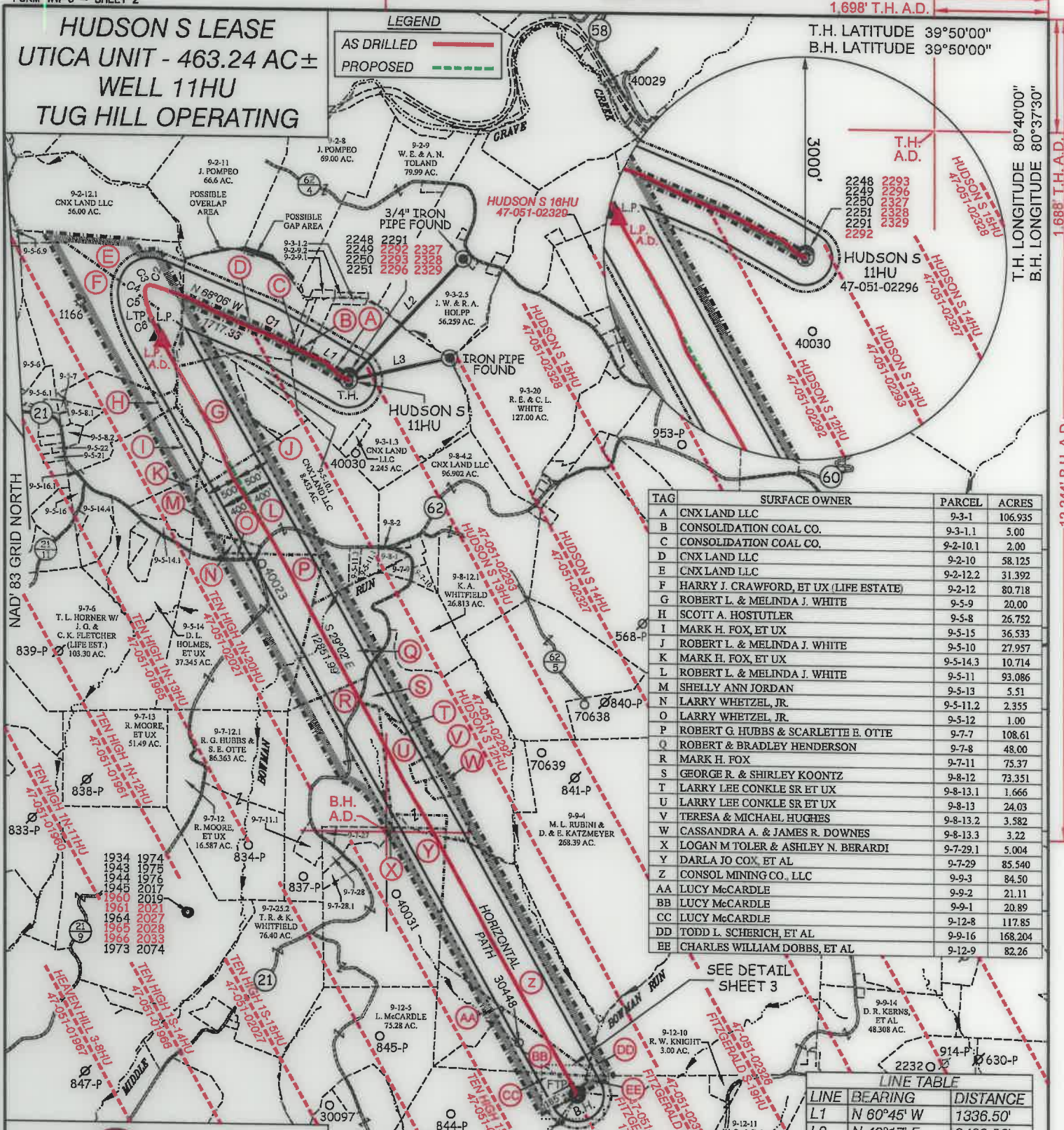
10/14/2022

**HUDSON S LEASE
UTICA UNIT - 463.24 AC ±
WELL 11HU
TUG HILL OPERATING**

LEGEND
AS DRILLED ———
PROPOSED - - - - -

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

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°37'30"



TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND LLC	9-3-1	106.935
B	CONSOLIDATION COAL CO.	9-3-11	5.00
C	CONSOLIDATION COAL CO.	9-2-10-1	2.00
D	CNX LAND LLC	9-2-10	58.125
E	CNX LAND LLC	9-2-12-2	31.392
F	HARRY J. CRAWFORD, ET UX (LIFE ESTATE)	9-2-12	80.718
G	ROBERT L. & MELINDA J. WHITE	9-5-9	20.00
H	SCOTT A. HOSTUTLER	9-5-8	26.752
I	MARK H. FOX, ET UX	9-5-15	36.533
J	ROBERT L. & MELINDA J. WHITE	9-5-10	27.957
K	MARK H. FOX, ET UX	9-5-14-3	10.714
L	ROBERT L. & MELINDA J. WHITE	9-5-11	93.086
M	SHELLY ANN JORDAN	9-5-13	5.51
N	LARRY WHETZEL, JR.	9-5-11-2	2.355
O	LARRY WHETZEL, JR.	9-5-12	1.00
P	ROBERT G. HUBBS & SCARLETTE E. OTTE	9-7-8	48.00
Q	ROBERT & BRADLEY HENDERSON	9-7-7	108.61
R	MARK H. FOX	9-7-8	48.00
S	GEORGE R. & SHIRLEY KOONTZ	9-7-11	75.37
T	LARRY LEE CONKLE SR ET UX	9-8-12	73.351
U	LARRY LEE CONKLE SR ET UX	9-8-13-1	1.666
V	TERESA & MICHAEL HUGHES	9-8-13	24.03
W	CASSANDRA A. & JAMES R. DOWNES	9-8-13-2	3.582
X	LOGAN M TOLER & ASHLEY N. BERARDI	9-8-13-3	3.22
Y	DARLA JO COX, ET AL	9-7-29-1	5.004
Y	DARLA JO COX, ET AL	9-7-29	85.540
Z	CONSOL MINING CO, LLC	9-9-3	84.50
AA	LUCY McCARDLE	9-9-2	21.11
BB	LUCY McCARDLE	9-9-1	20.89
CC	LUCY McCARDLE	9-12-8	117.85
DD	TODD L. SCHERICH, ET AL	9-9-16	168.204
EE	CHARLES WILLIAM DOBBS, ET AL	9-12-9	82.26

LINE TABLE

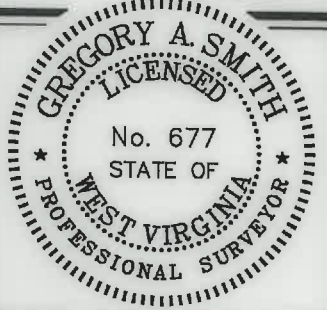
LINE	BEARING	DISTANCE
L1	N 60°45' W	1336.50'
L2	N 43°17' E	2489.96'
L3	N 76°53' E	1546.87'

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	155.41'	991.43'	N 64°38' W	155.25'
C2	63.83'	142.24'	N 79°47' W	63.30'
C3	62.66'	69.86'	S 58°50' W	60.58'
C4	82.01'	169.99'	S 16°16' W	81.22'
C5	232.23'	708.65'	S 08°30' E	231.19'
C6	425.69'	1954.16'	S 23°18' E	424.85'

12 Vanhorn Drive | P.O. Box 180 | Glenville, WV 26031 | 304.462.5624
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254 East Beckley Bypass | Beckley, WV 25801 | 304.258.5295
slswv.com

P.S. 677 *Gregory A. Smith*



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

NAD'83 S.P.C. (FT)	N. 486,104.49	E. 1,639,156.22
NAD'83 GEO.	LAT-(N) 39.828700	LONG-(W) 80.672714
NAD'83 UTM (M)	N. 4,408,796.11	E. 528,006.75

LANDING POINT

NAD'83 S.P.C. (FT)	N. 486,747.8	E. 1,636,321.9
NAD'83 GEO.	LAT-(N) 39.830364	LONG-(W) 80.682835
NAD'83 UTM (M)	N. 4,408,977.7	E. 527,140.0

BOTTOM HOLE

NAD'83 S.P.C. (FT)	N. 475,511.3	E. 1,642,560.1
NAD'83 GEO.	LAT-(N) 39.799742	LONG-(W) 80.680108
NAD'83 UTM (M)	N. 4,405,586.2	E. 529,097.7

(+) 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
- PROPOSED FIRST TAKE POINT
- PROPOSED LAST TAKE POINT
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE ADDITIONAL SHEETS)

SCALE 1" = 2000' FILE NO. 8911P11HUAD.dwg
HUDSON S-11HU REV6
DATE SEPTEMBER 30, 2022
REVISED _____
OPERATORS WELL NO. HUDSON S-11HU
API WELL NO. 47 — 051 — 02296
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 DARREN BROWN - CT CORPORATION ADDRESS 5098 WASHINGTON ST. W, STE 407 CHARLESTON, WV 25313-1561

10/14/2022

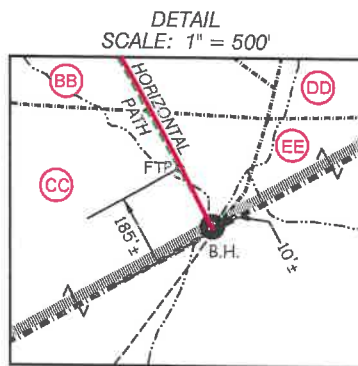
COUNTY NAME PERMIT

**HUDSON S LEASE
UTICA UNIT - 463.24 AC±
WELL 11HU
TUG HILL OPERATING**



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254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsw.com

NO.	Lease ID	Parcel	Tags	Grantor, Lessor, Etc.	Deed Book/Page
1	10*26041	9-3-1	A	FREDDIE C WHITE AND VIOLET L WHITE, ET AL	728 527
2	10*26044	9-3-1.1	B	JOYCE A WALLACE, ET AL	863 296
3	10*26711	9-2-10.1	C	CNX GAS COMPANY LLC	1074 593
4	10*26001	9-2-10	D	FREDDIE C WHITE AND VIOLET L WHITE	655 555
5	10*26000	9-2-12.2	E	HARRY J CRAWFORD AND DONNA JEAN CRAWFORD, LIFE ESTATE, ET AL	661 156
6	10*26000	9-2-12	F	HARRY J CRAWFORD AND DONNA JEAN CRAWFORD, LIFE ESTATE, ET AL	661 156
7	10*26001	9-5-9	G	FREDDIE C WHITE AND VIOLET L WHITE	655 555
8	10*19206	9-5-8	H	SCOTT A HOSTUTLER	724 208
9	10*19005	9-5-15	I	MARK H. FOX AND RETTA J. FOX, HIS WIFE	687 598
10	10*26001	9-5-10	J	FREDDIE C WHITE AND VIOLET L WHITE	655 555
11	10*19005	9-5-14.3	K	MARK H. FOX AND RETTA J. FOX, HIS WIFE	687 598
12	10*24424	9-5-11	L	THE FAYE A SKOEN REVOCABLE TRUST, ET AL	1024 291
13	10*26002	9-5-13	M	GEORGIA JORDAN LIFE ESTATE AND SHELLY ANN JORDAN REMAINDERMAN	687 616
14	10*24424	9-5-11.2	N	THE FAYE A SKOEN REVOCABLE TRUST	1024 291
15	10*47051.188.0	9-5-12	O	LARRY J WHETZEL JR	869 216
16	10*15503	9-7-7	P	ROBERT HUBBS	677 521
17	10*26003	9-7-8	Q	ROBERT HENDERSON AND DEBRA HENDERSON, HUSBAND & WIFE, AND BRADLEY HENDERSON	697 215
18	10*47051.094.0	9-7-11	R	MARK H FOX	864 163
19	10*47051.208.0	9-8-12	S	SHIRLEY KOONTZ POA KELLI KOONTZ BENLINE	869 222
20	10*28169	9-8-13.1	T	LARRY L CONKLE AND DONNA D CONKLE	1068 299
21	10*28169	9-8-13	U	LARRY L CONKLE AND DONNA D CONKLE	1068 299
22	10*47051.150.1	9-8-13.2	V	MICHAEL J HUGHES & TERESA A HUGHES	866 309
23	10*28169	9-8-13.3	W	LARRY L CONKLE AND DONNA D CONKLE	1068 299
24	10*15524	9-7-29.1	X	CAROL J ANDERSON ETAL	901 563
25	10*15524	9-7-29	Y	CAROL J ANDERSON ETAL	901 563
26	10*47051.304.0	9-9-3	Z	UNITED BANK INC	905 5
27	10*23386	9-9-2	AA	UNK HEIRS OF EDITH CARMICHAEL BY HERMAN LANTZ, ESQ AS SPEC COMMISSIONER, ET AL	1008 68
28	10*23386	9-9-1	BB	UNK HEIRS OF EDITH CARMICHAEL BY HERMAN LANTZ, ESQ AS SPEC COMMISSIONER, ET AL	1008 68
29	10*47051.289.1	9-12-8	CC	JANICE M HIXSON AND HARRY C HIXSON, ET AL	898 461
30	10*19987	9-9-16	DD	LESLEY D BALLA, ET AL	955 103
31	10*15999	9-12-9	EE	CHARLES W DOBBS AND JUDITH M DOBBS, ET AL	702 171



FILE NO. 8911P11HUAD.dwg
HUDSON S-11HU REV6

DATE SEPTEMBER 30, 20 22

REVISED _____

OPERATORS WELL NO. HUDSON S-11HU

API WELL NO. 47 — 051 — 02296
STATE COUNTY PERMIT



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

10/14/2022

P.S. 677 *Gregory A. Smith*

COUNTY NAME
PERMIT

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