

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

WV Department of
Environmental Protection

API 47 - 051 - 02329 County Marshall District Meade
Quad Glen Easton 7.5' Pad Name Hudson Field/Pool Name _____
Farm name CNX Land, LLC Well Number Hudson S-16HU
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 4,408,792.03 Easting 528,012.84
Landing Point of Curve Northing 4,409,362.0 Easting 529,131.7
Bottom Hole Northing 4,404,730.6 Easting 531,790.2

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 2/23/2021 Date drilling commenced spud: 3/20/2021 big rig: 8/1/2021 Date drilling ceased 2/27/2022
Date completion activities began 4/15/2022 Date completion activities ceased 5/28/2022
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 10-11-22
STRADAL VAUTE
10/14/2022

API 47- 051 - 02329 Farm name CNX Land, LLC Well number Hudson S-16HU

| 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" | 1,128' | NEW | 106.5# | N/A | Y |
| Coal | | | | | | | |
| Intermediate 1 | 17 1/2" | 13 3/8" | 2,870' | NEW | 54.5# | N/A | Y |
| Intermediate 2 | 12 1/4" | 9 5/8" | 11,379' | NEW | 47# | N/A | Y |
| Intermediate 3 | | | | | | | |
| Production | 8 1/2" | 5 1/2" | 30,669' | NEW | 23# | N/A | Y |
| Tubing | | 2 7/8" | 15,335' | 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 | 2027 | 15.6 | 1.18 | 2214.86 | 0 | 8 |
| Coal | | | | | | | |
| Intermediate 1 | A | 2304 | 15.6 | 1.18 | 2718.72 | 0 | 8 |
| Intermediate 2 | A | 3948 | 14.5 | 1.4 | 5527.2 | 0 | 8 |
| Intermediate 3 | | | | | | | |
| Production | A | 7440 | 16.5 | 1.03 | 7663.2 | 0 | 8 |
| Tubing | | | | | | | |

Drillers TD (ft) 30,735' Loggers TD (ft) n/a
 Deepest formation penetrated Trenton Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 11,707'

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 _____

API 47- 051 - 02329 Farm name CNX Land, LLC Well number Hudson S-16HU

| <u>PRODUCING FORMATION(S)</u> | <u>DEPTHS</u> | |
|-------------------------------|--------------------------|-------------------------|
| <u>POINT PLEASANT</u> | <u>11769'-12052'</u> TVD | <u>13123'-30735'</u> MD |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 8039 psi Bottom Hole _____ psi DURATION OF TEST 4 hrs

OPEN FLOW Gas 1708.00 mcfpd Oil 0 bpd NGL 0 bpd Water 576 bpd GAS MEASURED BY 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 | |
| | <u>0</u> | | <u>0</u> | | |
| <u>*attached</u> | | | | | |
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Please insert additional pages as applicable.

Drilling Contractor Nabors Drilling USA
Address 05 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 - Appalachia Date 9-30-2022

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

**HUDSON S-16HU
PEFORATION RECORD**

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD. Ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|-----------------------|------------------------|--------------|
| 1 | 4/14/2022 | 30486 | 30532 | 48 | Utica |
| 2 | 4/25/2022 | 30259 | 30435 | 48 | Utica |
| 3 | 4/26/2022 | 30060 | 30235 | 48 | Utica |
| 4 | 4/26/2022 | 29,861 | 30,036 | 48 | Utica |
| 5 | 4/26/2022 | 29,661 | 29,837 | 48 | Utica |
| 6 | 4/26/2022 | 29,462 | 29,637 | 48 | Utica |
| 7 | 4/27/2022 | 29,263 | 29,438 | 48 | Utica |
| 8 | 4/28/2022 | 29,063 | 29,239 | 48 | Utica |
| 9 | 5/1/2022 | 28,864 | 29,039 | 48 | Utica |
| 10 | 5/1/2022 | 28,665 | 28,840 | 48 | Utica |
| 11 | 5/2/2022 | 28,465 | 28,641 | 48 | Utica |
| 12 | 5/2/2022 | 28,266 | 28,442 | 48 | Utica |
| 13 | 5/2/2022 | 28,067 | 28,242 | 48 | Utica |
| 14 | 5/3/2022 | 27,868 | 28,043 | 48 | Utica |
| 15 | 5/6/2022 | 27,668 | 27,844 | 48 | Utica |
| 16 | 5/6/2022 | 27,469 | 27,644 | 48 | Utica |
| 17 | 5/7/2022 | 27,270 | 27,445 | 48 | Utica |
| 18 | 5/7/2022 | 27,070 | 27,246 | 48 | Utica |
| 19 | 5/7/2022 | 26,871 | 27,046 | 48 | Utica |
| 20 | 5/8/2022 | 26,672 | 26,847 | 48 | Utica |
| 21 | 5/8/2022 | 26,472 | 26,648 | 48 | Utica |
| 22 | 5/8/2022 | 26,273 | 26,449 | 48 | Utica |
| 23 | 5/8/2022 | 26,074 | 26,249 | 48 | Utica |
| 24 | 5/9/2022 | 25,875 | 26,050 | 48 | Utica |
| 25 | 5/9/2022 | 25,675 | 25,851 | 48 | Utica |
| 26 | 5/9/2022 | 25,476 | 25,651 | 48 | Utica |
| 27 | 5/10/2022 | 25,277 | 25,452 | 48 | Utica |
| 28 | 5/10/2022 | 25,077 | 25,253 | 48 | Utica |
| 29 | 5/10/2022 | 24,878 | 25,053 | 48 | Utica |
| 30 | 5/11/2022 | 24,679 | 24,854 | 48 | Utica |

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD. Ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|-----------------------|------------------------|--------------|
| 31 | 5/11/2022 | 24,479 | 24,655 | 48 | Utica |
| 32 | 5/11/2022 | 24,280 | 24,456 | 48 | Utica |
| 33 | 5/12/2022 | 24,081 | 24,256 | 48 | Utica |
| 34 | 5/12/2022 | 23,882 | 24,057 | 48 | Utica |
| 35 | 5/12/2022 | 23,682 | 23,858 | 48 | Utica |
| 36 | 5/12/2022 | 23,483 | 23,658 | 48 | Utica |
| 37 | 5/13/2022 | 23,284 | 23,459 | 48 | Utica |
| 38 | 5/13/2022 | 23,084 | 23,260 | 48 | Utica |
| 39 | 5/13/2022 | 22,885 | 23,060 | 48 | Utica |
| 40 | 5/13/2022 | 22,686 | 22,861 | 48 | Utica |
| 41 | 5/14/2022 | 22,486 | 22,662 | 48 | Utica |
| 42 | 5/14/2022 | 22,287 | 22,463 | 48 | Utica |
| 43 | 5/14/2022 | 22,088 | 22,263 | 48 | Utica |
| 44 | 5/15/2022 | 21,889 | 22,064 | 48 | Utica |
| 45 | 5/15/2022 | 21,689 | 21,865 | 48 | Utica |
| 46 | 5/15/2022 | 21,490 | 21,665 | 48 | Utica |
| 47 | 5/15/2022 | 21,291 | 21,466 | 48 | Utica |
| 48 | 5/16/2022 | 21,091 | 21,267 | 48 | Utica |
| 49 | 5/16/2022 | 20,892 | 21,067 | 48 | Utica |
| 50 | 5/16/2022 | 20,693 | 20,868 | 48 | Utica |
| 51 | 5/17/2022 | 20,493 | 20,669 | 48 | Utica |
| 52 | 5/17/2022 | 20,294 | 20,470 | 48 | Utica |
| 53 | 5/17/2022 | 20,095 | 20,270 | 48 | Utica |
| 54 | 5/18/2022 | 19,896 | 20,071 | 48 | Utica |
| 55 | 5/18/2022 | 19,696 | 19,872 | 48 | Utica |
| 56 | 5/18/2022 | 19,497 | 19,672 | 48 | Utica |
| 57 | 5/19/2022 | 19,298 | 19,473 | 48 | Utica |
| 58 | 5/19/2022 | 19,098 | 19,274 | 48 | Utica |
| 59 | 5/19/2022 | 18,899 | 19,074 | 48 | Utica |
| 60 | 5/19/2022 | 18,700 | 18,875 | 48 | Utica |
| 61 | 5/20/2022 | 18,500 | 18,676 | 48 | Utica |
| 62 | 5/20/2022 | 18,301 | 18,477 | 48 | Utica |

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD. Ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|-----------------------|------------------------|--------------|
| 63 | 5/20/2022 | 18,102 | 18,277 | 48 | Utica |
| 64 | 5/20/2022 | 17,903 | 18,078 | 48 | Utica |
| 65 | 5/21/2022 | 17,703 | 17,879 | 48 | Utica |
| 66 | 5/21/2022 | 17,504 | 17,679 | 48 | Utica |
| 67 | 5/21/2022 | 17,305 | 17,480 | 48 | Utica |
| 68 | 5/22/2022 | 17,105 | 17,281 | 48 | Utica |
| 69 | 5/22/2022 | 16,906 | 17,081 | 48 | Utica |
| 70 | 5/22/2022 | 16,707 | 16,882 | 48 | Utica |
| 71 | 5/22/2022 | 16,507 | 16,683 | 48 | Utica |
| 72 | 5/23/2022 | 16,308 | 16,484 | 48 | Utica |
| 73 | 5/23/2022 | 16,109 | 16,284 | 48 | Utica |
| 74 | 5/23/2022 | 15,910 | 16,085 | 48 | Utica |
| 75 | 5/23/2022 | 15,710 | 15,886 | 48 | Utica |
| 76 | 5/24/2022 | 15,511 | 15,686 | 48 | Utica |
| 77 | 5/24/2022 | 15,312 | 15,487 | 48 | Utica |
| 78 | 5/24/2022 | 15,112 | 15,288 | 48 | Utica |
| 79 | 5/24/2022 | 14,913 | 15,088 | 48 | Utica |
| 80 | 5/25/2022 | 14,714 | 14,889 | 48 | Utica |
| 81 | 5/25/2022 | 14,514 | 14,690 | 48 | Utica |
| 82 | 5/25/2022 | 14,315 | 14,491 | 48 | Utica |
| 83 | 5/26/2022 | 14,116 | 14,291 | 48 | Utica |
| 84 | 5/26/2022 | 13,917 | 14,092 | 48 | Utica |
| 85 | 5/27/2022 | 13,717 | 13,893 | 48 | Utica |
| 86 | 5/27/2022 | 13,518 | 13,693 | 48 | Utica |
| 87 | 5/27/2022 | 13,319 | 13,494 | 48 | Utica |
| 88 | 5/28/2022 | 13,119 | 13,295 | 48 | Utica |

Hudson S-16HU

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 | 1927 | 2126 | 1928 | 2129 | Sandstone |
| Big Lime | 2126 | 2248 | 2129 | 2251 | Limestone |
| Big Injun | 2248 | 2547 | 2251 | 2553 | Sandstone |
| Weir | 2547 | 2744 | 2553 | 2751 | Sandstone |
| Berea | 2744 | 2996 | 2751 | 3004 | Sandstone |
| Gordon | 2996 | 3097 | 3004 | 3107 | Sandstone |
| Fifty Foot | 3097 | 3670 | 3107 | 3701 | Sandstone |
| Speechley | 3670 | 5133 | 3701 | 5256 | Sandstone |
| Benson | 5133 | 5514 | 5256 | 5661 | Sandstone |
| Alexander | 5514 | 6124 | 5661 | 6308 | Siltstone |
| Rhinestreet | 6124 | 6592 | 6308 | 6806 | Black Shale |
| Middlesex | 6592 | 6657 | 6806 | 6875 | Black Shale |
| Geneseo/Burkett | 6657 | 6690 | 6875 | 6911 | Black Shale |
| Tully | 6690 | 6721 | 6911 | 6944 | Limestone |
| Hamilton | 6721 | 6803 | 6944 | 7032 | Gray Shale |
| Marcellus | 6803 | 6853 | 7032 | 7086 | Black Shale |
| Onondaga | 6853 | 7070 | 7086 | 7318 | Limestone |
| Oriskany | 7070 | 7201 | 7318 | 7458 | Sandstone |
| Helderberg | 7201 | 7548 | 7458 | 7841 | Limestone |
| Salina | 7548 | 8674 | 7841 | 9135 | Salt/Anhydrite/LS |
| Lockport | 8674 | 9047 | 9135 | 9557 | Dolomite |
| Rose Hill | 9047 | 9334 | 9557 | 9902 | Shale |
| Packer Shell | 9334 | 9542 | 9902 | 10146 | Limestone |
| Clinton/Tuscarora | 9542 | 9650 | 10146 | 10270 | Sandstone |
| Juniata/Queenston | 9650 | 10511 | 10270 | 11245 | Red Shale |
| Reedsville | 10511 | 11488 | 11245 | 12392 | Gray Shale |
| Utica | 11488 | 11729 | 12392 | 12894 | Black Shale |
| Point Pleasant | 11729 | - | 12894 | - | Shale/Limestone |

Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|--------------------------------|-------------------------|
| Job Start Date: | 4/15/2022 |
| Job End Date: | 5/28/2022 |
| State: | West Virginia |
| County: | Marshall |
| API Number: | 47-051-02329-00-00 |
| Operator Name: | Tug Hill Operating, LLC |
| Well Name and Number: | Hudson S 16HU |
| Latitude: | 39.82863300 |
| Longitude: | -80.67264300 |
| Datum: | NAD27 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 11,909 |
| Total Base Water Volume (gal): | 33,782,658 |
| 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 | 86.24653 | None |
| Sand (40/70 White Proppant) | Tug Hill Operating | Proppant | | | | | |
| | | | Silica Substrate | 14808-60-7 | 100.00000 | 10.51734 | None |
| Sand (100 Mesh Proppant) | Tug Hill Operating | Proppant | | | | | |
| | | | Silica Substrate | 14808-60-7 | 100.00000 | 2.85009 | None |
| Hydrochloric Acid (7.5%) | CNR | Acidizing | | | | | |
| | | | Water | 7732-18-5 | 85.00000 | 0.20513 | None |
| | | | Hydrochloric Acid (Hydrogen Chloride) | 7647-01-0 | 37.00000 | 0.08929 | None |
| StimStream FR 9800 | Chemstream | Friction Reducer | | | | | |
| | | | Butene, homopolymer | 9003-29-6 | 25.00000 | 0.02451 | None |
| | | | Alkanes, C16-20-iso- | 90622-59-6 | 25.00000 | 0.02451 | None |
| | | | Ethoxylated alcohols (C12-18) | 68213-23-0 | 3.00000 | 0.00294 | None |
| MC MX 9-4743 | Multi-Chem | Biocide | | | | | |
| | | | Sodium Nitrate | 7631-99-4 | 60.00000 | 0.02201 | None |
| LD-7750W | Multi-Chem | Scale Inhibitor | | | | | |

| | | | | | | | |
|--|--------------|---------------------------|----------------------------------|-------------|----------|---------|------|
| | | | Methanol | 67-56-1 | 60.00000 | 0.00498 | None |
| | | | Phosphonic Acid Salt | Proprietary | 5.00000 | 0.00042 | None |
| ProHib 100 | CNR | Acid Inhibitor | | | | | |
| | | | 2-Butoxyethanol | 111-76-2 | 60.00000 | 0.00045 | None |
| | | | Proprietary material | Proprietary | 30.00000 | 0.00023 | None |
| | | | Proprietary non-ionic surfactant | Proprietary | 20.00000 | 0.00015 | None |
| | | | Proprietary corrosion inhibitor | Proprietary | 10.00000 | 0.00008 | None |
| | | | Proprietary ethoxylated alcohol | Proprietary | 10.00000 | 0.00008 | None |
| ProFE 105 | CNR | Iron Control | | | | | |
| | | | Citric Acid | 77-92-9 | 20.00000 | 0.00018 | 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 | 0.20513 | |
| | | | Butene, homopolymer | 9003-29-6 | 25.00000 | 0.02451 | |
| | | | Ethoxylated alcohols (C12-18) | 68213-23-0 | 3.00000 | 0.00294 | |
| | | | Phosphonic Acid Salt | Proprietary | 5.00000 | 0.00042 | |
| | | | Proprietary material | Proprietary | 30.00000 | 0.00023 | |
| | | | Proprietary non-ionic surfactant | Proprietary | 20.00000 | 0.00015 | |
| | | | Proprietary ethoxylated alcohol | Proprietary | 10.00000 | 0.00008 | |
| | | | Proprietary corrosion inhibitor | Proprietary | 10.00000 | 0.00008 | |
| | | | 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%

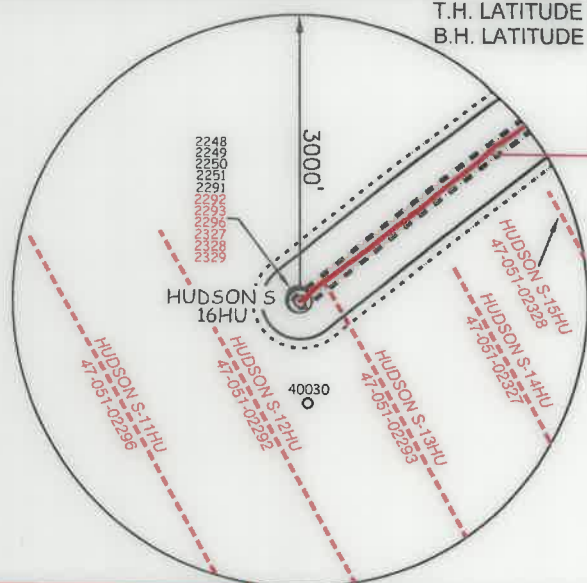
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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 - 591.18 AC ±
WELL 16HU
TUG HILL OPERATING**

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

| MAP/PARCEL | ADJOINING SURFACE OWNER LIST | ACRES |
|------------|---------------------------------|--------|
| 9-2-9.2 | CONSOLIDATION COAL CO. | 1.00 |
| 9-2-9.3 | RAYMOND E. & CINDY WHITE, ET AL | 1.008 |
| 9-3-1.1 | CONSOLIDATION COAL CO. | 5.00 |
| 9-3-1.2 | CONSOLIDATION COAL CO. | 1.00 |
| 9-3-1.3 | CNX LAND CO. LLC | 2.245 |
| 9-3-2.2 | JOHN W. & RACHEL A. HOLPP | 0.483 |
| 9-3-4.3 | JOHN W. & RACHEL A. HOLPP | 0.870 |
| 9-3-4.4 | JIM & GINGER REGIEC | 1.004 |
| 9-3-6.1 | JOSEPH L. MILETO, II | 1.0468 |
| 9-3-18.2 | RAYMOND E. & CINDY WHITE, ET AL | 2.103 |
| 9-3-18.3 | RAYMOND & CINDY WHITE | 0.086 |
| 9-3-19 | CNX LAND CO. LLC | 0.5 |
| 9-5-10 | ROBERT J. & MELINDA J. WHITE | 27.957 |
| 9-5-10.1 | CNX LAND CO. LLC | 8.453 |
| 9-8-5.1 | CNX LAND CO. LLC | 1.040 |
| 9-8-5.2 | CNX LAND CO. LLC | 4.586 |
| 9-8-6.1 | MARK E. WOOD & SUNNI H. HARTLEY | 1.423 |



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 | JOHN W. & RACHEL A. HOLPP | 9-3-2.5 | 56.259 |
| C | STEPHEN W. JOHNSON | 9-3-2.3 | 0.591 |
| D | KENNETH F. LIGHTNER, ET UX | 9-3-2.1 | 0.940 |
| E | JAMES & GINGER REGIEC | 9-3-2 | 29.49 |
| F | JAMES & GINGER REGIEC | 9-3-4.7 | 25.025 |
| G | LISA A. MOWRY | 9-3-3 | 68.30 |
| H | JIM & GINGER REGIEC | 9-3-4.4 | 1.044 |
| I | GRANT M. & MALISSA D. CARTER | 9-3-1.5 | 50.543 |
| J | GRANT M. & MALISSA D. CARTER | 9-3-4 | 7.507 |
| K | GRANT M. & MALISSA D. CARTER | 9-3-4.2 | 0.720 |
| L | DAVID E. WEST, ET UX | 9-3-4.6 | 12.035 |
| M | RAYMOND E. & CINDY L. WHITE | 9-3-20 | 127.00 |
| N | DANIEL WEST, ET UX | 9-3-4.1 | 0.986 |
| O | JOHN & RACHEL HOLPP | 9-3-4.3 | 0.870 |
| P | JOSEPH L. MILETO II | 9-3-6.1 | 1.0468 |
| Q | ALVIN D. & CAROL D. BARRETT | 9-3-6 | 29.9702 |
| R | LLOYD ANDREW BEE, ET UX | 9-3-18.1 | 1.010 |
| S | LLOYD ANDREW BEE, ET UX | 9-3-18 | 19.921 |
| T | ALVIN D. & CAROL D. BARRETT | 9-3-7 | 27.19 |
| U | CNX LAND LLC | 9-3-17 | 77.66 |
| V | KENNETH L. & CAROL J. NEELY - TOD | 9-8-7 | 8.613 |
| W | CNX LAND LLC | 9-8-6 | 27.596 |
| X | LARRY S. NEELY | 9-8-7.1 | 76.055 |
| Y | JAMES RICHARD BLAKE, ET UX | 9-8-9 | 42.49 |
| Z | JAMES RICHARD BLAKE, ET UX | 9-8-8 | 49.86 |
| AA | GLEN G. GORCZYCA | 9-9-6 | 25.12 |
| BB | MARY LOU RUBINI, ET AL | 9-9-4 | 268.39 |
| CC | JOSEPH B. & JUDITH PATRELLO | 9-9-9.1 | 149.924 |
| DD | MARVIN D. & ADA C. DOBBS (LIFE) ET AL | 9-9-5 | 76.25 |
| EE | MARTIN DAVIS | 9-9-10 | 6.00 |
| FF | GARY W. MORRIS | 9-9-12 | 54.74 |
| GG | GARY W. MORRIS | 9-9-11 | 14.00 |
| HH | DANNY R. & FRANCES V. KERNS ESTATE | 9-9-14 | 48.308 |
| II | DANNY R. & FRANCES V. KERNS ESTATE | 7-1-3 | 58.00 |
| JJ | DANNY R. & FRANCES V. KERNS ESTATE | 7-8-1 | 27.00 |
| KK | DANNY R. & FRANCES V. KERNS ESTATE | 7-8-2 | 94.00 |
| LL | GEO A. BURRIS | 7-8-14 | 95.44 |
| MM | BLAINE E. STERN, JR. | 7-8-13 | 104.92 |
| NN | BLAINE E. STERN, JR. | 7-8-11 | 60.62 |
| OO | CONSOLIDATION COAL COMPANY | 7-1-4 | 52.00 |

AS DRILLED COORDINATES FOR WELL NO. 16HU

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

| NAD'83 S.P.C. (FT) | N | E |
|--------------------|-------------------|--------------------|
| NAD'83 S.P.C. (FT) | N 486,090.76 | E 1,639,175.98 |
| NAD'83 GEO. | LAT-(N) 39.828663 | LONG-(W) 80.672643 |
| NAD'83 UTM (M) | N 4,408,792.03 | E 528,012.84 |

LANDING POINT

| NAD'83 S.P.C. (FT) | N | E |
|--------------------|-------------------|--------------------|
| NAD'83 S.P.C. (FT) | N 487,899.8 | E 1,642,878.8 |
| NAD'83 GEO. | LAT-(N) 39.831915 | LONG-(W) 80.663464 |
| NAD'83 UTM (M) | N 4,409,362.0 | E 529,131.7 |

BOTTOM HOLE

| NAD'83 S.P.C. (FT) | N | E |
|--------------------|-------------------|--------------------|
| NAD'83 S.P.C. (FT) | N 472,556.2 | E 1,651,348.6 |
| NAD'83 GEO. | LAT-(N) 39.791937 | LONG-(W) 80.628698 |
| NAD'83 UTM (M) | N 4,404,730.6 | E 531,790.2 |

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

| NAD'83 S.P.C. (FT) | N | E |
|--------------------|-------------------|--------------------|
| NAD'83 S.P.C. (FT) | N 486,090.76 | E 1,639,175.98 |
| NAD'83 GEO. | LAT-(N) 39.828663 | LONG-(W) 80.672643 |
| NAD'83 UTM (M) | N 4,408,792.03 | E 528,012.84 |

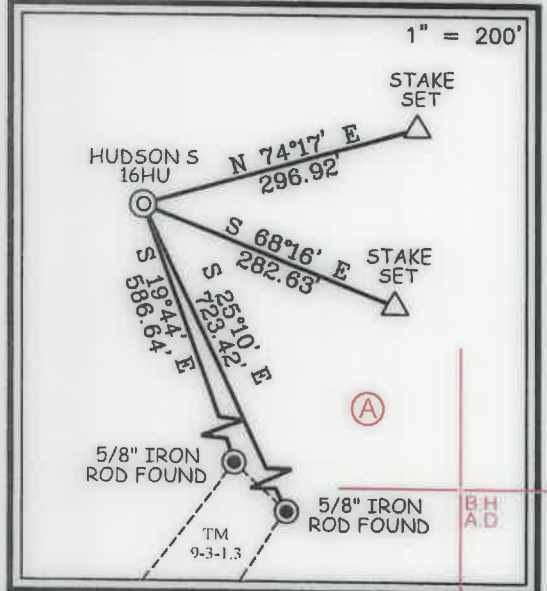
LANDING POINT

| NAD'83 S.P.C. (FT) | N | E |
|--------------------|-------------------|--------------------|
| NAD'83 S.P.C. (FT) | N 488,000.2 | E 1,642,809.7 |
| NAD'83 GEO. | LAT-(N) 39.834034 | LONG-(W) 80.659794 |
| NAD'83 UTM (M) | N 4,409,392.03 | E 529,110.1 |

BOTTOM HOLE

| NAD'83 S.P.C. (FT) | N | E |
|--------------------|-------------------|--------------------|
| NAD'83 S.P.C. (FT) | N 472,556.1 | E 1,651,353.5 |
| NAD'83 GEO. | LAT-(N) 39.791937 | LONG-(W) 80.628681 |
| NAD'83 UTM (M) | N 4,404,730.6 | E 531,791.7 |

REFERENCES

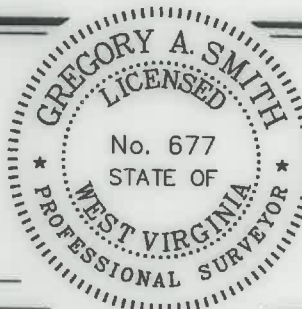


NOTES ON SURVEY

- 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-16HU (47-051-02329) IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF HUDSON S-11HU (47-051-02296), HUDSON S-12HU (47-051-02292), HUDSON S-13HU (47-051-02293), HUDSON S-14HU (47-051-02327), HUDSON S-15HU (47-051-02328).
- 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.

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 _____, 20 _____

OPERATORS WELL NO. HUDSON S-16HU

API WELL NO. 47 - 051 - 02329

STATE WV COUNTY MARSHALL PERMIT 10/14/2022

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8911P16HUAD.dwg

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 = 1,366.80' ELEVATION PROPOSED = 1,344.81' WATERSHED HOT HOLLOW OF 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: 12,001' / TMD: 30,760'

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

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

**HUDSON S LEASE
UTICA UNIT - 591.18 AC±
WELL 16HU
TUG HILL OPERATING**

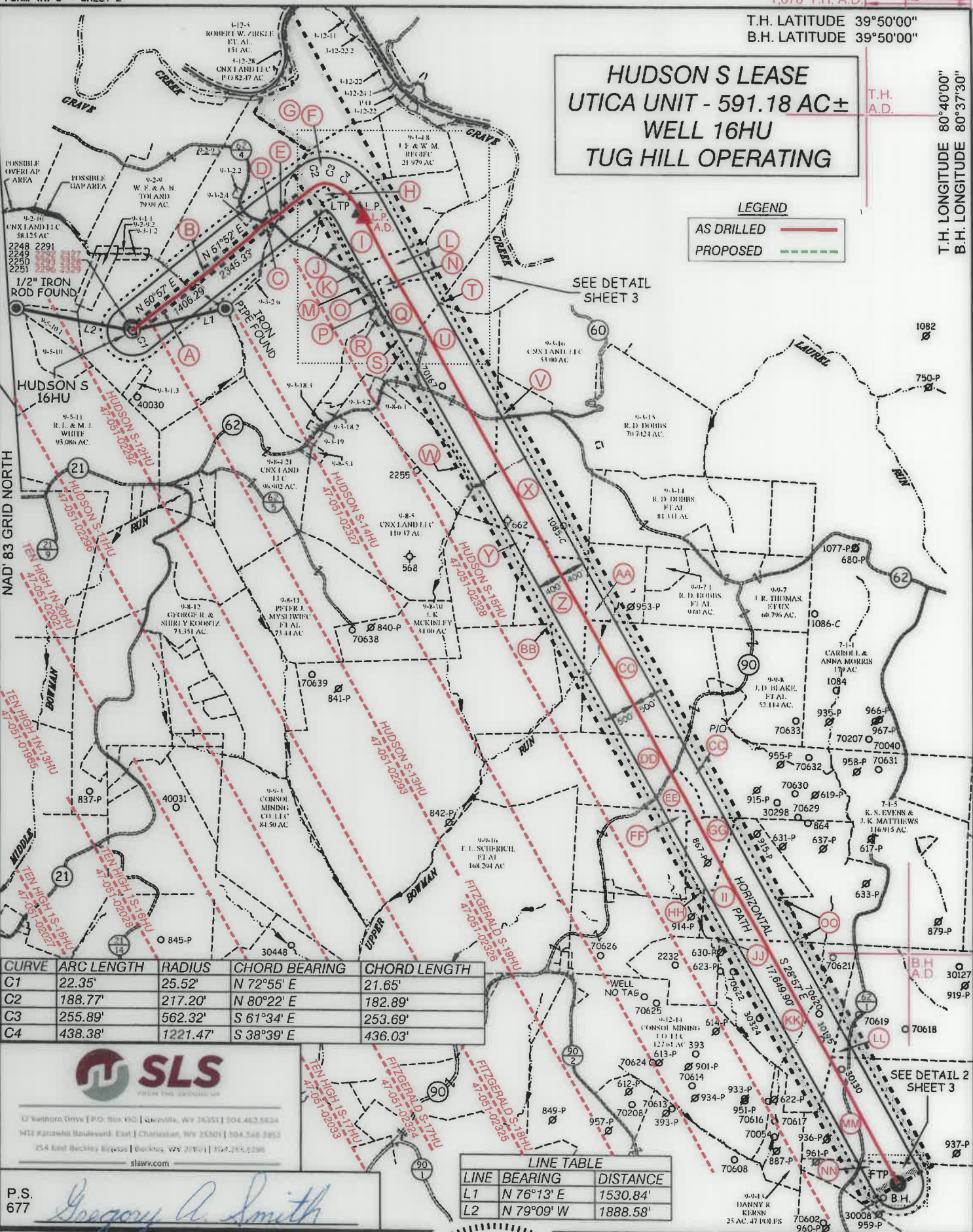
T.H. A.D.

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

LEGEND

AS DRILLED ———
PROPOSED - - - - -

SEE DETAIL SHEET 3



| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH |
|-------|------------|----------|---------------|--------------|
| C1 | 22.35' | 25.52' | N 72°55' E | 21.65' |
| C2 | 188.77' | 217.20' | N 80°22' E | 182.89' |
| C3 | 255.89' | 562.32' | S 61°34' E | 253.69' |
| C4 | 438.38' | 1221.47' | S 38°39' E | 436.03' |

SLS
FROM THE EXPERTS UP

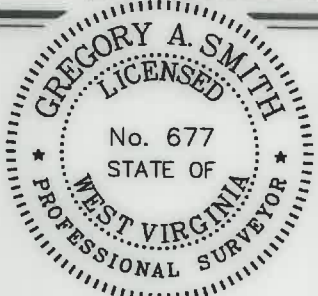
12 Vinton Drive | P.O. Box 950 | Greenville, WV 26351 | 504.462.5824
 1412 Kanawha Boulevard East | Charleston, WV 25301 | 304.546.3952
 254 Ford Beckley Express | Beckley, WV 26011 | 304.255.0296

slswv.com

P.S. 677
Gregory A. Smith

LINE TABLE

| LINE | BEARING | DISTANCE |
|------|------------|----------|
| L1 | N 76°13' E | 1530.84' |
| L2 | N 79°09' W | 1888.58' |




(+) 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. 8911P16HUAD.dwg
 HUDSON S-16HU REV7
 DATE SEPTEMBER 30, 2022
 REVISED _____, 20____
 OPERATORS WELL NO. HUDSON S-16HU
 API WELL NO. **47 - 051 - 02329**
 NO. STATE COUNTY PERMIT

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



DESIGNATED AGENT DARREN BROWN - CT CORPORATION
 ADDRESS 5098 WASHINGTON ST. W, STE 407
 CHARLESTON, WV 25313-1561

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

10/14/2022

COUNTY NAME
PERMIT

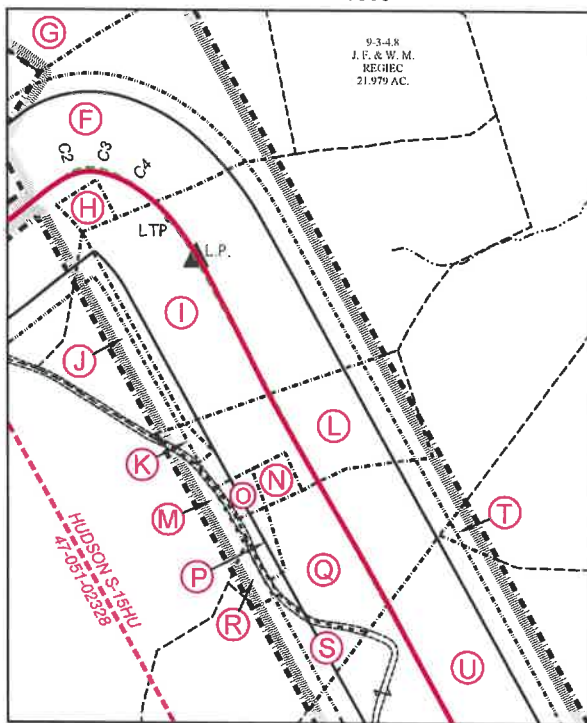
**HUDSON S LEASE
UTICA UNIT - 591.18 AC±
WELL 16HU
TUG HILL OPERATING**



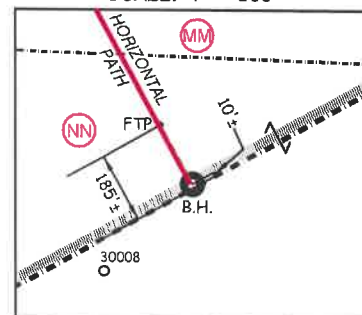
12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsvv.com

| 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*28190 | 9-3-2.5 | B | J RUSSELL LOGSDON, ET AL | 1068 | 309 |
| 3 | 10*28190 | 9-3-2.3 | C | J RUSSELL LOGSDON, ET AL | 1068 | 309 |
| 4 | 10*28190 | 9-3-2.1 | D | J RUSSELL LOGSDON, ET AL | 1068 | 309 |
| 5 | 10*28190 | 9-3-2 | E | J RUSSELL LOGSDON, ET AL | 1068 | 309 |
| 6 | 10*31219 | 9-3-4.7 | F | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 7 | 10*18339 | 9-3-3 | G | RESOURCE MINERALS HEADWATER I LP | 940 | 448 |
| 8 | 10*31219 | 9-3-4.4 | H | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 9 | 10*31219 | 9-3-4.5 | I | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 10 | 10*31219 | 9-3-4 | J | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 11 | 10*31219 | 9-3-4.2 | K | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 12 | 10*31219 | 9-3-4.6 | L | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 13 | 10*21345 | 9-3-20 | M | AARON PARRY SR AND JANA PARRY TRUSTEES AARON PARRY SR & JANA PARRY REV LIV TRUS | 957 | 280 |
| 14 | 10*31219 | 9-3-4.1 | N | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 15 | 10*31219 | 9-3-4.3 | O | DONNA FAYE EARNEST, ET AL | 690 | 341 |
| 16 | 10*28454 | 9-3-6.1 | P | TRAVIS J POSTLETHWAIT | 1072 | 379 |
| 17 | 10*31225 | 9-3-6 | Q | ALVIN D. BARRETT | 727 | 112 |
| 18 | 10*21412 | 9-3-18.1 | R | GARY DOBBS AND SUSAN DOBBS | 957 | 270 |
| 19 | 10*21412 | 9-3-18 | S | GARY DOBBS AND SUSAN DOBBS | 957 | 270 |
| 20 | NA | 9-3-7 | T | ALVIN D. BARRETT | 726 | 464 |
| 21 | 10*21602 | 9-3-17 | U | CAROL STACY SAUNDERS, ET AL | 959 | 289 |
| 22 | 10*28092 | 9-8-7 | V | WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, ET AL | 1073 | 370 |
| 23 | 10*21602 | 9-8-6 | W | CAROL STACY SAUNDERS, ET AL | 959 | 289 |
| 24 | 10*28092 | 9-8-7.1 | X | WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, ET AL | 1073 | 370 |
| 25 | 10*22055 | 9-8-9 | Y | STONE HILL MINERALS HOLDINGS LLC, ET AL | 1010 | 226 |
| 26 | 10*22055 | 9-8-8 | Z | STONE HILL MINERALS HOLDINGS LLC, ET AL | 1010 | 226 |
| 27 | 10*19634 | 9-9-6 | AA | JANICE L PIETERSE, ET AL | 960 | 153 |
| 28 | 10*31001 | 9-9-4 | BB | ERIC KATZMEYER, ET AL | 791 | 226 |
| 29 | 10*22615 | 9-9-9.1 | CC | DAVID D MURRAY AND MARY ANN MURRAY, ET AL | 965 | 591 |
| 30 | 10*28244 | 9-9-5 | DD | MICHAEL D DOBBS AND STEPHANIE J DOBBS, ET AL | 1068 | 569 |
| 31 | 10*27304 | 9-9-10 | EE | H3 LLC | 1058 | 559 |
| 32 | 10*21859 | 9-9-12 | FF | GARY WAYNE MORRIS | 960 | 192 |
| 33 | 10*21859 | 9-9-11 | GG | GARY WAYNE MORRIS | 960 | 192 |
| 34 | 10*28697 | 9-9-14 | HH | DANNY S KERNS, ET AL | 1075 | 134 |
| 35 | 10*17969 | 7-1-3 | II | BOUNTY MINERALS LLC, ET AL | 928 | 424 |
| 36 | 10*25518 | 7-8-1 | JJ | DANNY S KERNS, ET AL | 1010 | 532 |
| 37 | 10*25518 | 7-8-2 | KK | DANNY S KERNS, ET AL | 1010 | 532 |
| 38 | 10*25508 | 7-8-14 | LL | THE AMY M TOUPS FAMILY TRUST OF 2013 DATED JUNE 14, 2013 | 827 | 119 |
| 39 | 10*25501 | 7-8-13 | MM | AMP FUND III LP, ET AL | 925 | 459 |
| 40 | 10*23026 | 7-8-11 | NN | BLAINE E STERN JR AND CONNIE J STERN | 977 | 339 |
| 41 | 10*26562 | 7-1-4 | OO | MARTHA SUE FORBES | 1038 | 510 |

DETAIL
SCALE: 1" = 1000'



DETAIL 2
SCALE: 1" = 500'



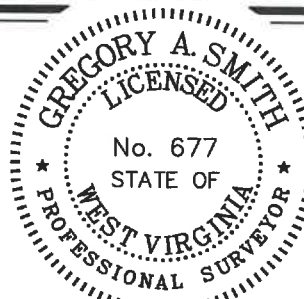
FILE NO. 8911P16HUAD.dwg
HUDSON S-16HU REV7

DATE SEPTEMBER 30, 2022

REVISED _____, 20__

OPERATORS WELL NO. HUDSON S-16HU

API WELL NO. 47 — 051 — 02329
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

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

COUNTY NAME
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