

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

API 47 - 051 - 02042 County Marshall District Franklin
Quad Powhatan Point 7.5' Pad Name Old Crow Field/Pool Name _____
Farm name Donna Vivian Yoho (TOD) Gary Lance Yoho Well Number Old Crow S-11HM
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 4,403,180.48 Easting 520,303.56
Landing Point of Curve Northing 4,403,816.6 Easting 520,406.2
Bottom Hole Northing 4,402,008.9 Easting 521,470.4

Elevation (ft) 1,265' 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 6/28/2018 Date drilling commenced 4/14/2019 Date drilling ceased 6/19/2019
Date completion activities began 3/22/2021 Date completion activities ceased 4/3/2021
Verbal plugging (Y/N) N Date permission granted N/A Granted by _____

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 _____
Salt water depth(s) ft 1346' 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

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Reviewed by:
B.S.
05/27/2021
8-11-21

API 47-051 - 02042 Farm name Donna Vivian Yoho (TOD) Gary Lance Yoho Well number Old Crow S-11HM

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	17 1/2"	13 3/8"	1,012'	NEW	54.5#	N/A	Y
Coal	17 1/2"	13 3/8"	1,012'	NEW	54.5#	N/A	Y
Intermediate 1	12 1/4"	9 5/8"	2,871'	NEW	36#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8 3/4"	5 1/2"	15,324'	NEW	20#	N/A	Y
Tubing		2 3/8"	7,662'	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		15.6	1.19		0	8
Surface	A	1,073	15.6	1.19	1,296	0	8
Coal	A	1,073	15.6	1.19	1,296	0	8
Intermediate 1	A	833	15.6	1.19	1,148	0	8
Intermediate 2							
Intermediate 3							
Production	A	3,650	14.5	1.17	4,252	0	8
Tubing							

Drillers TD (ft) 15,350' Loggers TD (ft) n/a
 Deepest formation penetrated Marcellus Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 6,528'

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 _____

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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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API 47- 051 - 02042 Farm name Donna Vivian Yoho (TOD) Gary Lance Yoho Well number Old Crow S-11HM

PRODUCING FORMATION(S)	DEPTHS	
MARCELLUS	6601'-6632'	TVD 8200'-15350' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1132 psi Bottom Hole _____ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 0 mcfpd Oil 0 bpd NGL 0 bpd Water 600 bpd GAS MEASURED BY Estimated Orifice Pilot

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 (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	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 Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Amy L. Morris Telephone 304-376-0111
Signature *Amy L. Morris* Title Permitting Specialist - Appalachia Region Date 4-15-2021



**Old Crow S-11HM
PEFORATION RECORD**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
1	3/22/2021	14,949	15,094	48	Marcellus
2	3/22/2021	14,775	14,935	48	Marcellus
3	3/23/2021	14,601	14,761	48	Marcellus
4	3/23/2021	14,427	14,587	48	Marcellus
5	3/23/2021	14,253	14,413	48	Marcellus
6	3/23/2021	14,079	14,239	48	Marcellus
7	3/24/2021	13,905	14,065	48	Marcellus
8	3/24/2021	13,731	13,891	48	Marcellus
9	3/24/2021	13,557	13,717	48	Marcellus
10	3/24/2021	13,383	13,543	48	Marcellus
11	3/25/2021	13,209	13,369	48	Marcellus
12	3/25/2021	13,035	13,195	48	Marcellus
13	3/25/2021	12,861	13,021	48	Marcellus
14	3/26/2021	12,687	12,847	48	Marcellus
15	3/26/2021	12,513	12,673	48	Marcellus
16	3/26/2021	12,339	12,499	48	Marcellus
17	3/26/2021	12,165	12,325	48	Marcellus
18	3/27/2021	11,991	12,151	48	Marcellus
19	3/27/2021	11,817	11,977	48	Marcellus
20	3/27/2021	11,643	11,803	48	Marcellus
21	3/27/2021	11,469	11,629	48	Marcellus
22	3/28/2021	11,295	11,455	48	Marcellus
23	3/28/2021	11,121	11,281	48	Marcellus
24	3/28/2021	10,947	11,107	48	Marcellus
25	3/28/2021	10,773	10,933	48	Marcellus
26	3/29/2021	10,599	10,759	48	Marcellus
27	3/29/2021	10,425	10,585	48	Marcellus
28	3/29/2021	10,251	10,411	48	Marcellus
29	3/30/2021	10,077	10,237	48	Marcellus
30	3/30/2021	9,903	10,063	48	Marcellus
31	3/30/2021	9,729	9,889	48	Marcellus
32	3/31/2021	9,555	9,715	48	Marcellus
33	3/31/2021	9,381	9,541	48	Marcellus
34	3/31/2021	9,207	9,367	48	Marcellus
35	4/1/2021	9,033	9,193	48	Marcellus
36	4/1/2021	8,859	9,019	48	Marcellus
37	4/2/2021	8,685	8,845	48	Marcellus
38	4/2/2021	8,511	8,671	48	Marcellus
39	4/2/2021	8,337	8,497	48	Marcellus
40	4/3/2021	8,163	8,323	48	Marcellus

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WELL NAME
Old Crow S-11HM

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	89	7431	5000	4,316	408160	8226	0
2	90	7500	5697	5,429	436060	8256	0
3	90	7484	5679	4,803	440800	8384	0
4	89	7374	5517	4,990	436140	8384	0
5	90	7361	5662	5,318	441580	8344	0
6	90	7388	5476	5,487	444260	8434	0
7	90	7386	5475	5,433	446120	8442	0
8	90	7358	5367	5,008	443420	8340	0
9	90	7313	5476	5,346	438800	8264	0
10	90	7243	5624	5,218	442940	8327	0
11	90	7260	5543	5,210	445180	8440	0
12	90	7304	5561	4,981	441380	8321	0
13	90	7355	5472	5,597	448300	8350	0
14	90	7378	6314	5,378	444080	9441	0
15	90	7310	5319	5,208	444220	8365	0
16	90	7509	5313	5,461	441260	8148	0
17	90	7217	5317	5,421	442020	8245	0
18	90	7467	5489	5,128	422560	7952	0
19	90	7220	5158	5,152	441160	8268	0
20	90	7312	5407	5,312	442260	8244	0
21	90	7299	5075	4,881	446800	8296	0
22	90	7279	5144	4,635	438040	8251	0
23	89	7206	5065	4,606	446760	9259	0
24	90	6983	5265	4,735	446480	8217	0
25	91	7093	5217	5,319	446900	8225	0
26	90	7016	5465	5,365	443540	8165	0
27	90	6997	5456	4,826	443180	8146	0
28	90	6897	5337	5,418	450200	8312	0
29	90	6771	5537	5,016	442520	8214	0
30	90	6755	5281	4,874	438920	8138	0
31	90	6800	5362	5,445	443380	8214	0
32	88	6749	5391	5,147	442080	8138	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	89	6682	5240	5,368	443570	8138	0
34	90	7169	5147	5,237	442460	8319	0
35	90	6861	5062	5,595	436560	9053	0
36	90	6861	5173	5,526	446000	8192	0
37	90	6863	5452	5,169	444860	8129	0
38	89	6751	5176	5,126	447240	8140	0
39	90	6717	5024	5,066	447220	8164	0
40	88	6653	5442	5,422	446040	8174	0

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OLD CROW S-11HM

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	2008	2098	2019	2112	Sandstone
Big Lime	2098	2168	2112	2183	Limestone
Big Injun	2168	2452	2183	2474	Sandstone
Weir	2452	2647	2474	2675	Sandstone
Berea	2647	2992	2675	3045	Sandstone
Gordon	2992	3046	3045	3107	Sandstone
Fifty Foot	3046	3594	3107	3807	Sandstone
Speechley	3594	5016	3807	5829	Sandstone
Benson	5016	5371	5829	6323	Sandstone
Alexander	5371	5965	6323	7087	Siltstone
Rhinestreet	5965	6372	7087	7564	Black shale
Middlesex	6372	6449	7564	7677	Black shale
Geneseo/Burkett	6449	6475	7677	7721	Black shale
Tully	6475	6519	7721	7808	Limestone
Hamilton	6519	6566	7808	7962	Grey shale
Marcellus	6566	-	7962	-	Black shale

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Environmental Conservation

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/22/2021
Job End Date:	4/3/2021
State:	West Virginia
County:	Marshall
API Number:	47-051-02042-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Old Crow S 11HM
Latitude:	39.77832202
Longitude:	-80.76290613
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,622
Total Base Water Volume (gal):	13,988,478
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	86.50062	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	8.80098	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	3.09535	None
Sand (30/50 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	1.19982	None
Hydrochloric Acid (7.5%)	ProFrac	Acidizing	Water	7732-18-5	85.00000	0.23521	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.10238	None
StimStream FR-9800	Chemstream	Friction Reducer	Butene, homopolymer	9003-29-6	25.00000	0.01992	None
			Alkanes, C16-20-iso-	90622-59-6	25.00000	0.01992	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00239	None

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MC MX 9-4743	Multi-Chem	Biocide					
			Sodium Nitrate	7631-99-4	60.00000	0.02198	None
LD-7750W	Multi-Chem	Scale Inhibitor					
			Methanol	67-56-1	60.00000	0.00501	None
			Phosphonic Acid Salt	Proprietary	5.00000	0.00042	None
ProFE 105	ProFrac	Iron Control					
			Citric Acid	77-92-9	100.00000	0.00101	None
ProHib 100	ProFrac	Acid Inhibitor					
			2-Propyn-1-ol compound w/ methyloxirane	38172-91-7	15.00000	0.00013	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	0.23521	
			Butene, homopolymer	9003-29-6	25.00000	0.01992	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00239	
			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 S LEASE
WELL 11HM
TUG HILL OPERATING**

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

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

NAD'83 S.P.C.(FT)	N. 468,099.29	E. 1,613,570.41
NAD'83 GEO.	LAT-(N) 39.778322	LONG-(W) 80.762906
NAD'83 UTM (M)	N. 4,403,180.46	E. 520,303.56

LANDING POINT

NAD'83 S.P.C.(FT)	N. 470,512.5	E. 1,613,767.8
NAD'83 GEO.	LAT-(N) 39.784954	LONG-(W) 80.762325
NAD'83 UTM (M)	N. 4,403,916.7	E. 520,351.4

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 464,185.5	E. 1,617,330.6
NAD'83 GEO.	LAT-(N) 39.767723	LONG-(W) 80.749335
NAD'83 UTM (M)	N. 4,402,007.3	E. 521,469.1

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°42'30"

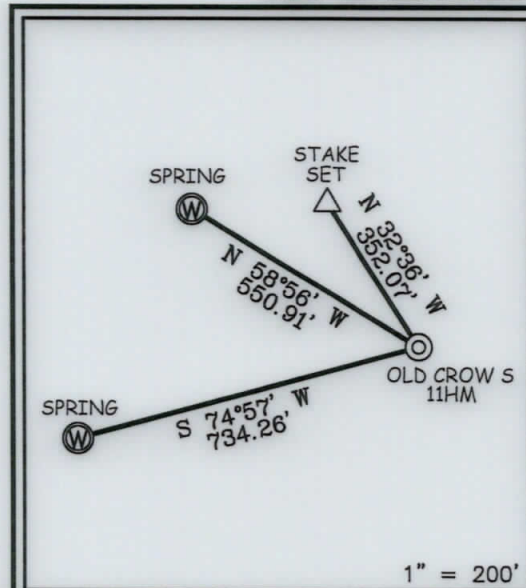
MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
5-10-12.1	JOHN PAUL SMITH, JR., ET AL	8.86
5-10-19	BRADLEY L. & CONNIE L. HUBBARD	3.209
5-10-20	LOUIS AULENBAUCHER	3.554
5-10-21	LOUIS AULENBAUCHER	3.677
5-10-22	LOUIS AULENBAUCHER	6.461
5-16-4	JOHN SWIERKOS	133 SQ. RODS
5-16-15.1	GLEN GUNTO	10.170
5-17-15	GLEN GUNTO	10.220
5-17-16	GLEN GUNTO	9.702



NOTES ON SURVEY

1. 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.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'
3. AS-DRILLED DATA PROVIDED BY TUG HILL OPERATING, LLC.
4. PLAT UPDATED TO SHOW AS-DRILLED PATH.

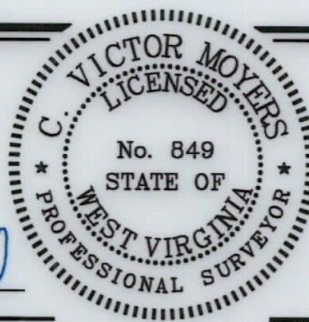
REFERENCES



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
slsvw.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*



STATES TOPOGRAPHIC MAPS.
DATE JUNE 10, 2020
REVISED _____, 20____
OPERATORS WELL NO. OLD CROW S-11HM
API WELL NO. 47 - 051 - 2042
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P11HMAD.dwg
SCALE 1" = 2000'
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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



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

LOCATION:
ELEVATION 1,265' 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 ACREAGE 71.205±

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

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
ESTIMATED DEPTH TVD: 6,693' / TMD: 15,101'

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

08/27/2021

11,521' B.H. A.D.

3,627' T.H. A.D.

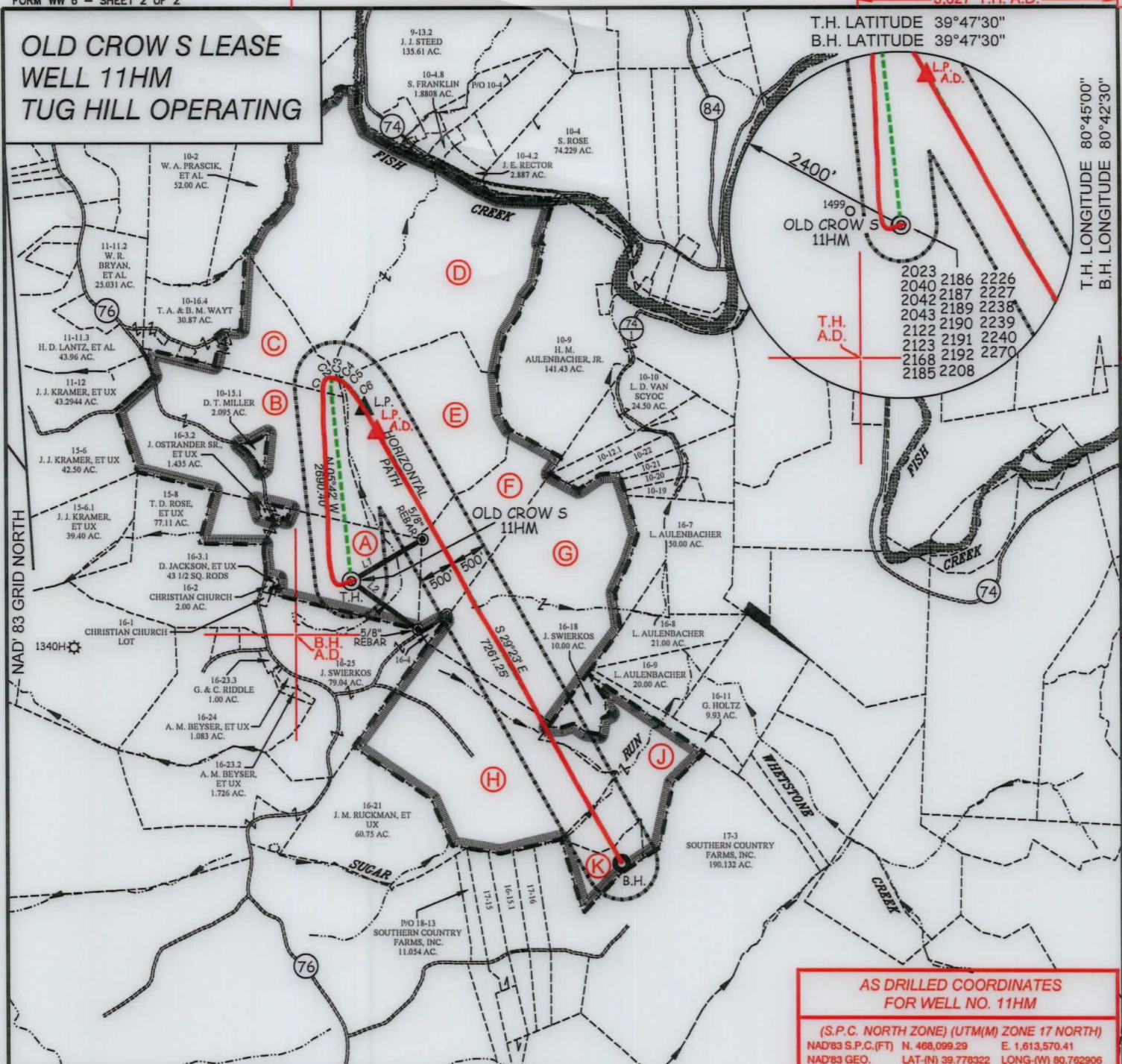
**OLD CROW S LEASE
WELL 11HM
TUG HILL OPERATING**

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

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°42'30"

8,716' B.H. A.D.

NAD'83 GRID NORTH



AS DRILLED COORDINATES FOR WELL NO. 11HM

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

NAD'83 S.P.C.(FT)	N. 468,099.29	E. 1,613,570.41
NAD'83 GEO.	LAT-(N) 39.778322	LONG-(W) 80.762906
NAD'83 UTM (M)	N. 4,403,180.48	E. 520,303.56

LANDING POINT

NAD'83 S.P.C.(FT)	N. 470,181.1	E. 1,613,942.1
NAD'83 GEO.	LAT-(N) 39.784051	LONG-(W) 80.761888
NAD'83 UTM (M)	N. 4,403,816.6	E. 520,406.2

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 464,190.8	E. 1,617,335.1
NAD'83 GEO.	LAT-(N) 39.767737	LONG-(W) 80.749319
NAD'83 UTM (M)	N. 4,402,008.9	E. 521,470.4

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	112.61'	229.05'	N 05°38' E	111.48'
C2	57.17'	57.80'	N 47°45' E	54.87'
C3	55.73'	106.09'	S 83°41' E	55.09'
C4	80.09'	319.07'	S 59°49' E	79.88'
C5	106.39'	750.12'	S 47°43' E	106.30'
C6	362.58'	1537.02'	S 35°39' E	361.74'

LEGEND

AS DRILLED ——— (Red line)
PROPOSED - - - - - (Green dashed line)

LINE	BEARING	DISTANCE
L1	N 59°40' E	1150.77'
L2	S 54°11' E	1146.29'

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
slsvw.com

TAG	SURFACE OWNER	PARCEL	ACRES
A	DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO	5-16-3	71.205
B	PAUL ANDREW & DEBRA A. RINE	5-10-15	120.805
C	TIMOTHY, SR., & LINDA MCGINNIS	5-10-16	30.87
D	HERBERT M. AULENBACHER, JR.	5-10-3	225.50
E	JOHN SWIERKOS	5-10-14	100.00
F	JOHN SWIERKOS	5-16-5	52.07
G	JOHN SWIERKOS	5-16-6	134.05
H	BETHANY A. REDO & ROBERT W. RAHM	5-16-19	129.16
J	CARA DAVIS & BRIAN TESLOVICH, ET AL	5-16-17	55.34
K	GLEN A. GUNTO	5-16-16	9.702

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

NAD'83 S.P.C.(FT)	N. 468,099.29	E. 1,613,570.41
NAD'83 GEO.	LAT-(N) 39.778322	LONG-(W) 80.762906
NAD'83 UTM (M)	N. 4,403,180.48	E. 520,303.56

LANDING POINT

NAD'83 S.P.C.(FT)	N. 470,512.5	E. 1,613,767.8
NAD'83 GEO.	LAT-(N) 39.784954	LONG-(W) 80.762325
NAD'83 UTM (M)	N. 4,403,916.7	E. 520,351.4

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 464,185.5	E. 1,617,330.6
NAD'83 GEO.	LAT-(N) 39.767723	LONG-(W) 80.749335
NAD'83 UTM (M)	N. 4,402,007.3	E. 521,469.1



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

P.S. 849 *C. Victor Moyers*

SCALE 1" = 2000' FILE NO. 8796P11HMAD.dwg

DATE JUNE 10, 20 20

REVISED _____, 20 _____

OPERATORS WELL NO. OLD CROW S-11HM

API WELL NO. 47 — 051 — 2042

NO. STATE COUNTY PERMIT

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

LEGEND

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

08/27/2021

COUNTY NAME PERMIT

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