

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

API 47 - 051 - 02185 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-14HM
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 4,403,187.72 Easting 520,304.98
Landing Point of Curve Northing 4,404,010.2 Easting 521,098.1
Bottom Hole Northing 4,401,851.1 Easting 522,346.1

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 4/12/2019 Date drilling commenced 4/19/2019 Date drilling ceased 1/12/2020
Date completion activities began 3/8/2021 Date completion activities ceased 3/21/2021
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 _____
Salt water depth(s) ft 1346' Void(s) encountered (Y/N) depths _____
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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N

Reviewed by:
BJS
08/27/2021
0-11-21

API 47-051 - 02185 Farm name Donna Vivian Yoho (TOD) Gary Lance Yoho Well number Old Crow S-14HM

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"	969'	NEW	54.5#	N/A	Y
Coal	17 1/2"	13 3/8"	969'	NEW	54.5#	N/A	Y
Intermediate 1	12 1/4"	9 5/8"	3,085'	NEW	36#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8 3/4"	5 1/2"	16,730'	NEW	20#	N/A	Y
Tubing		2 3/8"	8,635'	NEW	4.7#	N/A	
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	A		15.6	1.19		0	8
Surface	A	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	854	15.6	1.19	1,176	0	8
Intermediate 2							
Intermediate 3							
Production	A	3,982	14.5	1.17	4,635	0	8
Tubing							

Drillers TD (ft) 16,766' Loggers TD (ft) n/a
 Deepest formation penetrated Marcellus Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 7,130'

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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**Old Crow S-14HM
PERFORATION RECORD**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
1	3/8/2021	16,547	16,595	48	Marcellus
2	3/9/2021	16,344	16,496	48	Marcellus
3	3/9/2021	16,170	16,322	48	Marcellus
4	3/9/2021	15,996	16,148	48	Marcellus
5	3/9/2021	15,822	15,974	48	Marcellus
6	3/10/2021	15,648	15,801	48	Marcellus
7	3/10/2021	15,474	15,627	48	Marcellus
8	3/10/2021	15,301	15,453	48	Marcellus
9	3/10/2021	15,127	15,279	48	Marcellus
10	3/11/2021	14,953	15,105	48	Marcellus
11	3/11/2021	14,779	14,931	48	Marcellus
12	3/11/2021	14,605	14,757	48	Marcellus
13	3/11/2021	14,431	14,583	48	Marcellus
14	3/12/2021	14,257	14,409	48	Marcellus
15	3/12/2021	14,083	14,235	48	Marcellus
16	3/12/2021	13,909	14,062	48	Marcellus
17	3/13/2021	13,735	13,888	48	Marcellus
18	3/13/2021	13,562	13,714	48	Marcellus
19	3/13/2021	13,388	13,540	48	Marcellus
20	3/13/2021	13,214	13,366	48	Marcellus
21	3/14/2021	13,040	13,192	48	Marcellus
22	3/14/2021	12,866	13,018	48	Marcellus
23	3/14/2021	12,692	12,844	48	Marcellus
24	3/15/2021	12,518	12,670	48	Marcellus
25	3/15/2021	12,344	12,496	48	Marcellus
26	3/15/2021	12,170	12,323	48	Marcellus
27	3/15/2021	11,996	12,149	48	Marcellus
28	3/15/2021	11,823	11,975	48	Marcellus
29	3/16/2021	11,649	11,801	48	Marcellus
30	3/16/2021	11,475	11,627	48	Marcellus
31	3/16/2021	11,301	11,453	48	Marcellus
32	3/17/2021	11,127	11,279	48	Marcellus
33	3/17/2021	10,953	11,105	48	Marcellus
34	3/17/2021	10,779	10,931	48	Marcellus
35	3/17/2021	10,605	10,757	48	Marcellus
36	3/17/2021	10,431	10,584	48	Marcellus
37	3/18/2021	10,257	10,410	48	Marcellus
38	3/18/2021	10,084	10,236	48	Marcellus
39	3/18/2021	9,910	10,062	48	Marcellus
40	3/19/2021	9,736	9,888	48	Marcellus
41	3/19/2021	9,562	9,714	48	Marcellus

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42	3/19/2021	9,388	9,540	48	Marcellus
43	3/19/2021	9,214	9,366	48	Marcellus
44	3/20/2021	9,040	9,192	48	Marcellus
45	3/20/2021	8,866	9,018	48	Marcellus
46	3/20/2021	8,692	8,845	48	Marcellus
47	3/21/2021	8,518	8,671	48	Marcellus
48	3/21/2021	8,345	8,497	48	Marcellus

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OLD CROW S-14HM
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 (un)
1	76	7535	5000	3,738	250140	6819	0
2	87	7509	5596	4,942	436840	8626	0
3	90	7605	5515	5,177	439380	8384	0
4	89	7471	5278	5,354	443880	8385	0
5	89	7387	5225	5,265	437380	8378	0
6	90	7449	5271	5,055	441100	8482	0
7	89	7444	5317	4,978	440920	8411	0
8	90	7493	5151	5,142	443260	8360	0
9	89	7443	5577	5,169	442660	8405	0
10	89	7384	5418	5,280	444460	8402	0
11	89	7315	5425	5,632	436880	8375	0
12	89	7135	5280	5,282	436180	8336	0
13	89	7118	5227	5,390	438200	8378	0
14	90	7349	5397	4,665	434609	8435	0
15	89	7220	5220	5,323	434800	8253	0
16	89	7227	5191	4,595	445980	8363	0
17	88	7171	5197	4,619	434660	8274	0
18	90	7147	5108	5,225	438360	8383	0
19	89	6987	5166	4,337	435240	8251	0
20	89	7016	5273	4,655	436240	8244	0
21	89	7085	5549	5,012	440700	8338	0
22	89	7003	5077	4,958	431260	8140	0
23	89	7044	5186	5,411	439840	8242	0
24	89	6987	5282	4,839	436920	8267	0
25	90	7069	5607	4,609	444740	8323	0
26	90	7038	5193	5,049	442020	8234	0
27	89	6992	5150	4,883	443740	8281	0
28	89	6877	5300	5,129	435480	8176	0
29	89	6973	5481	4,822	445100	8361	0
30	90	6978	5091	4,930	438980	8151	0
31	88	7019	5062	5,016	437420	8169	0
32	89	7018	5212	4,662	456280	8460	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	7069	5326	5,009	433580	8189	0
34	89	6991	5135	4,851	437080	8210	0
35	89	6939	5134	5,178	449420	8237	0
36	89	6932	5014	4,988	445180	8234	0
37	90	6925	5398	4,987	438740	8257	0
38	90	6890	5612	4,699	436420	8291	0
39	89	6933	5534	5,257	446400	8280	0
40	89	6896	4913	4,842	434620	8718	0
41	90	6811	5130	5,177	434520	8115	0
42	89	6844	5167	5,235	439900	8071	0
43	89	6701	5098	5,546	436880	8140	0
44	90	6850	4873	4,922	443880	8244	0
45	90	6789	5043	5,518	444160	8409	0
46	89	6454	4915	5,142	433300	8332	0
47	89	6620	6062	5,132	442000	8239	0
48	90	6513	5369	5,382	436040	8207	0

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OLD CROW S-14HM

LITHOLOGY/FORMATION	TOP DEPTH IN FT/ Name TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID
Maxton	2024	2114	2064	2166	Sandstone
Big Lime	2114	2184	2166	2249	Limestone
Big Injun	2184	2468	2249	2608	Sandstone
Weir	2468	2663	2608	2876	Sandstone
Berea	2663	3008	2876	3340	Sandstone
Gordon	3008	3062	3340	3413	Sandstone
Fifty Foot	3062	3610	3413	4127	Sandstone
Speechley	3610	5032	4127	6012	Sandstone
Benson	5032	5387	6012	5387	Sandstone
Alexander	5387	5981	5387	7249	Siltstone
Rhinestreet	5981	6387	7249	7784	Black shale
Middlesex	6387	6465	7784	7908	Black shale
Geneseo/Burkett	6465	6490	7908	7951	Black shale
Tully	6490	6530	7951	8024	Limestone
Hamilton	6530	6585	8024	8164	Grey shale
Marcellus	6585	-	8164	-	Black shale

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/8/2021
Job End Date:	3/21/2021
State:	West Virginia
County:	Marshall
API Number:	47-051-02185-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Old Crow S 14HM
Latitude:	39.77838716
Longitude:	-80.76288942
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,650
Total Base Water Volume (gal):	16,684,857
Total Base Non Water Volume:	0



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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	86.59779	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	8.59504	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	3.19983	None
Sand (30/50 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	1.21377	None
Hydrochloric Acid (7.5%)	PVS	Acidizing	Water	7732-18-5	85.00000	0.23403	None
			Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.10187	None
StimStream FR 9800	Chemstream	Friction Reducer	Alkanes, C16-20-iso-	90622-59-6	25.00000	0.01778	None
			Butene, homopolymer	9003-29-6	25.00000	0.01778	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00213	None

MC MX 9-4743	Multi-Chem	Biocide					
			Sodium Nitrate	7631-99-4	60.00000	0.02207	None
LD-7750W	Multi-Chem	Scale Inhibitor					
			Methanol	67-56-1	60.00000	0.00509	None
			Phosphonic Acid Salt	Proprietary	5.00000	0.00042	None
ProFE 105	ProFrac	Iron Control					
			Citric Acid	77-92-9	100.00000	0.00102	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	0.23403	
			Butene, homopolymer	9003-29-6	25.00000	0.01778	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00213	
			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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 MW Detailed Material Safety Data Sheet

8,648' B.H. A.D.

3,623' T.H. A.D.

**OLD CROW S LEASE
WELL 14HM
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. 468,122.95	E. 1,613,575.44
NAD'83 GEO.	LAT-(N) 39.778387	LONG-(W) 80.762889
NAD'83 UTM (M)	N. 4,403,187.72	E. 520,304.98

LANDING POINT

NAD'83 S.P.C.(FT)	N. 470,949.3	E. 1,616,099.7
NAD'83 GEO.	LAT-(N) 39.786243	LONG-(W) 80.754049
NAD'83 UTM (M)	N. 4,404,061.6	E. 521,059.6

BOTTOM HOLE

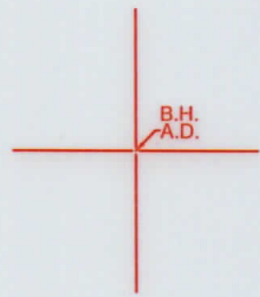
NAD'83 S.P.C.(FT)	N. 463,637.7	E. 1,620,209.3
NAD'83 GEO.	LAT-(N) 39.766328	LONG-(W) 80.739068
NAD'83 UTM (M)	N. 4,401,855.0	E. 522,348.9

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°42'30"
4,838' T.H. A.D.

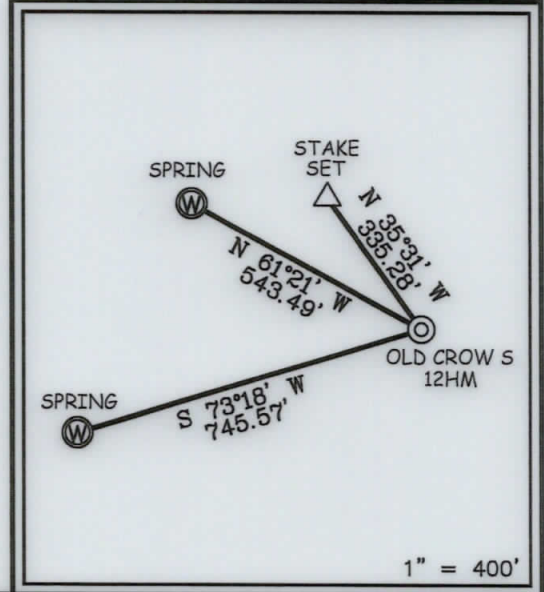
MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
5-10-5	WILLIAM F. RULONG, ET AL	27.50
5-10-6	WILLIAM F. RULONG, ET AL	P/O ACRE
5-10-7	WILLIAM F. RULONG, ET AL	22.872
5-10-8	WILLIAM F. RULONG, ET AL	70.6672
5-10-11	JOSEPH LEE CROW	P/O PCL 5
5-10-13.1	DAVID LEE QUIGLEY, JR.	2.88
5-10-19	BRADLEY L. & CONNIE L. HUBBARD	3.209
5-10-20	LOUIS AULENBACHER	3.554
5-10-21	LOUIS AULENBACHER	3.677
5-16-4	JOHN SWIERKOS	153 SQ. RODS
5-17-1.6	LOLA M. SLAUGHTER	6.347
5-17-3.1	WILBUR L. RIDDLE, ET UX	10.148
5-17-16	GLEN GUNTO	9.702

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 IS 1"=2000'
- 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
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. 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 S-14HM
API WELL NO. 47 - 051 - 2185
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P14HMAD.dwg
OLD CROW NORTH 14HM REV0
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 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 08/27/2021

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: 6,713' / TMD: 16,690'

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

8,648' B.H. A.D.

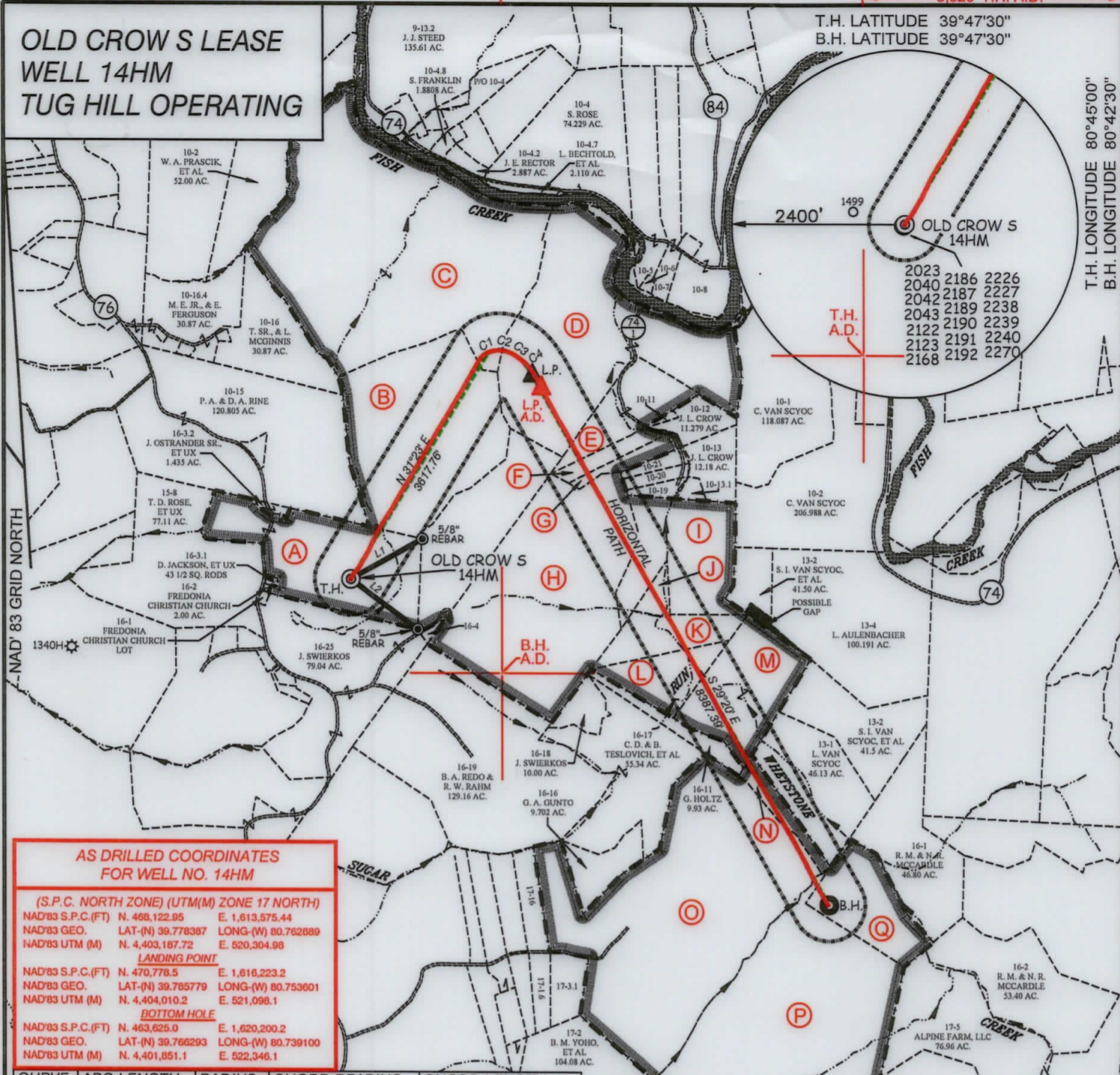
3,623' T.H. A.D.

**OLD CROW S LEASE
WELL 14HM
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"

NAD'83 GRID NORTH



**AS DRILLED COORDINATES
FOR WELL NO. 14HM**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'83 S.P.C.(FT)	N. 468,122.95	E. 1,613,575.44	
NAD'83 GEO.	LAT-(N) 39.778387	LONG-(W) 80.762889	
NAD'83 UTM (M)	N. 4,403,187.72	E. 520,304.98	
LANDING POINT			
NAD'83 S.P.C.(FT)	N. 470,778.5	E. 1,616,223.2	
NAD'83 GEO.	LAT-(N) 39.785779	LONG-(W) 80.753601	
NAD'83 UTM (M)	N. 4,404,010.2	E. 521,098.1	
BOTTOM HOLE			
NAD'83 S.P.C.(FT)	N. 463,625.0	E. 1,620,200.2	
NAD'83 GEO.	LAT-(N) 39.766293	LONG-(W) 80.739100	
NAD'83 UTM (M)	N. 4,401,851.1	E. 522,346.1	

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	181.65'	208.67'	N 58°41' E	175.96'
C2	173.36'	301.51'	S 79°17' E	170.98'
C3	214.70'	640.66'	S 54°20' E	213.70'
C4	247.69'	941.84'	S 36°58' E	246.97'

TAG	SURFACE OWNER	PARCEL	ACRES
A	DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO	5-16-3	71.205
B	JOHN SWIERKOS	5-10-14	100.00
C	HERBERT M. AULENBACHER, JR.	5-10-3	225.50
D	HERBERT M. AULENBACHER, JR.	5-10-9	141.43
E	LOUIS DELBERT VAN SCYOC	5-10-10	24.50
F	JOHN PAUL SMITH, JR., ET AL	5-10-12.1	8.86
G	LOUIS AULENBACHER	5-10-22	6-4.61
H	JOHN SWIERKOS	5-16-6	134.05
I	LOUIS AULENBACHER	5-16-7	50.00
J	FRANK P. LAUTER EST.	5-16-10	5.00
K	LOUIS AULENBACHER	5-16-8	21.00
L	LOUIS AULENBACHER	5-16-9	20.00
M	LOUIS VAN SCYOC	9-13-3	52.40
N	LOUIS VAN SCYOC	5-16-12	10.80
O	SOUTHERN COUNTRY FARMS, INC.	5-17-3	190.132
P	ALPINE FARM LLC	5-17-4	212.00
Q	DAVID ALAN RUBCICH, ET AL	5-16-13	33.31

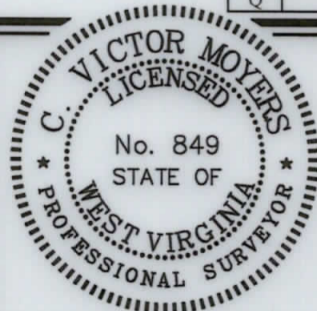
LEGEND



LINE	BEARING	DISTANCE
L1	N 60°34' E	1134.62'
L2	S 53°05' E	1156.27'



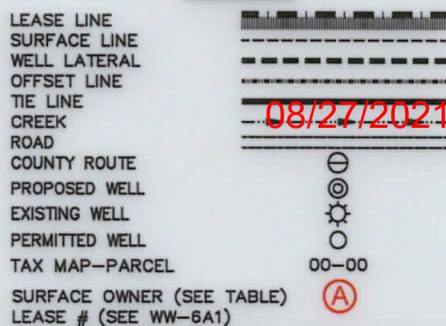
12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsw.com



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

P.S. 849 *C. Victor Moyers*

LEGEND



SCALE 1" = 2000' FILE NO. 8796P14HMAD.dwg
OLD CROW NORTH 14HM REV0

DATE JUNE 10, 20 20
REVISED, 20

OPERATORS WELL NO. OLD CROW S-14HM

API WELL NO. 47 - 051 - 2185
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
ADDRESS CT CORPORATION SYSTEM
5400 D BIG TYLER ROAD
CHARLESTON, WV 25313

COUNTY NAME
PERMIT