

**OLD CROW N LEASE
UTICA UNIT - 494.33 AC±
WELL 17HU
TUG HILL OPERATING**

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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
NAD'83 S.P.C.(FT) N. 468,139.24 E. 1,613,525.64
NAD'83 GEO. LAT-(N) 39.778430 LONG-(W) 80.763067
NAD'83 UTM (M) N. 4,403,192.43 E. 520,289.72

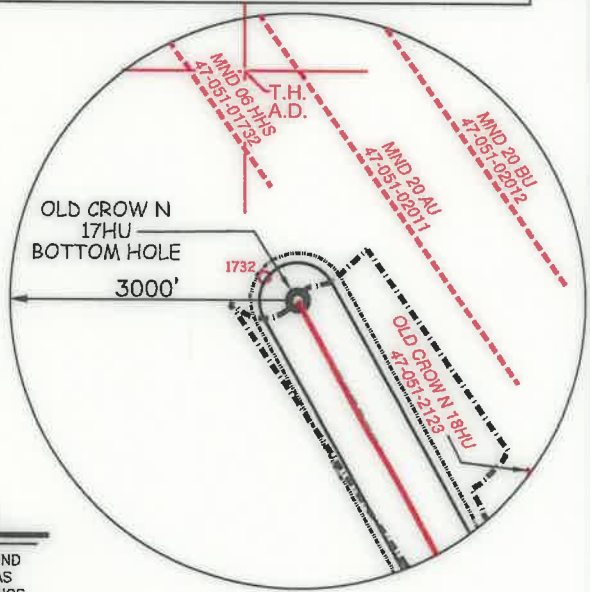
LANDING POINT
NAD'83 S.P.C.(FT) N. 468,471.2 E. 1,613,749.9
NAD'83 GEO. LAT-(N) 39.779350 LONG-(W) 80.762286
NAD'83 UTM (M) N. 4,403,294.7 E. 520,356.4

BOTTOM HOLE
NAD'83 S.P.C.(FT) N. 482,294.4 E. 1,606,073.6
NAD'83 GEO. LAT-(N) 39.816996 LONG-(W) 80.790303
NAD'83 UTM (M) N. 4,407,466.9 E. 517,947.4

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

TAG	SURFACE OWNER	PARCEL	ACRES
A	JOHN SWIERKOS	5-16-25	79.04
B	DONNA VIVIAN YOHO - TOD	5-16-3	71.205
C	JOHN SWIERKOS	5-16-5	52.07
D	JOHN SWIERKOS	5-10-14	100.00
E	JIMMY OSTRANDER, SR., ET UX	5-16-3.2	1.435
F	PAUL ANDREW & DEBRA A. RINE	5-10-15	120.80
G	DONALD T. MILLER	5-10-15.1	2.095
H	TIMOTHY SR. & LINDA MCGINNIS	5-10-16	30.87
I	MELVIN E. JR., & ELIZABETH FERGUSON	5-10-16.4	30.87
J	WILLIAM A. PRASCIK, ET AL	5-10-2	52.00
K	ALVIN A. YODER	5-10-17	57.28
L	WESLEY R. BRYAN & WESLEY R. BRYAN, II	5-11-11.2	25.03
M	ALVIN A. YODER	5-11-10	31.91
N	JACK S. HUGGINS, ET UX	5-11-9.4	4.129
O	JACK SHEPHARD HUGGINS, JR., ET AL	5-11-9.1	10.92
P	EDWIN C. MILLER	5-10-1	49.96
Q	SEAN F. MOORE	5-11-9.7	2.03
R	EDWIN C. & KIMBERLY A. MILLER	5-11-9	54.625
S	SEAN F. MOORE	5-11-9.8	2.070
T	JAMES M. & ROBERT L. STERN	5-9-29	3.1777
U	TRUSTEES OF LIGHTHOUSE TABERNACLE CHURCH	5-9-30.2	1.954
V	JOHN D. & MARSHA J. ROBERTS	5-9-38.6	0.719
W	JOHN D. & MARSHA J. ROBERTS	5-9-38.7	0.795
X	JOHN D. & MARSHA J. ROBERTS	5-9-38.5	0.619
Y	JOHN D. & MARSHA J. ROBERTS	5-9-38.4	0.669
Z	FISH CREEK-WV DIVISION OF NATURAL RESOURCES	N/A	N/A
AA	DAVID ARRICK, ET UX	5-11-4	31.5
BB	SHELVA G. SMITH, ET UX	5-9-38.3	0.706
CC	SHELVA G. SMITH, ET UX	5-9-38.2	0.735
DD	JOHN H. LONG, ET UX	5-9-38.1	0.815
EE	ROBERT S. COWGILL	5-9-38.10	0.920
FF	DALISON LUMBER COMPANY	5-9-31	32.10
GG	JOHN D. ROBERTS, ET UX	5-9-38.8	0.903
HH	JOHN D. ROBERTS, ET UX	5-9-38.9	1.017
II	SHIRLEY A. HILL ESTATE	5-9-38	3.331
JJ	FRANK T. & ANNA M. WALKER	5-9-37	10.857
KK	RUBY M. HENRY ESTATE (C/O GEORGE E. HENRY)	5-9-32.4	0.379
LL	JOHN DRAKE ALBAUGH	5-9-32.12	1.09
MM	JOHN DRAKE ALBAUGH	5-9-32.1	1.002
NN	JOHN DRAKE ALBAUGH	5-9-32.2	0.231
OO	RUBY M. HENRY ESTATE (C/O GEORGE E. HENRY)	5-9-32.6	0.474
PP	JOHN D. ALBAUGH	5-9-32.13	0.848
QQ	JOHN D. ALBAUGH	5-9-32.7	0.729
RR	SANDRA J. BONETTE	5-9-32	2.321
SS	JAMES EDWARD FRANCIS, ET UX	5-8-8	28.3
TT	JAMES B. JACKSON, JR., ET UX	5-8-9	89.723
UU	EDWIN C. MILLER	5-8-7	180.31
VV	RICHARD L. GAITS (LIFE)	5-8-5	97.819
WW	WAYNE C. BERISFORD	5-8-4	23.355
XX	JARED C. SELLS	5-8A-35	2.78
YY	JOHN F. ARRUDA, ET UX	5-5-4.1	1.399
ZZ	TAMMY L. MITCHELL	5-8-3	35.07
A1	ROBERT L. & DONALD SHIELDS	5-8-23	48 POLES
A2	BOARD OF EDUCATION	5-8A-14	137 SQ. RODS
A3	LETHA I. RUCKMAN	5-8A-13	2.993
A4	MARY D. RUCKMAN	5-8A-12	1.137

B.H. A.D.



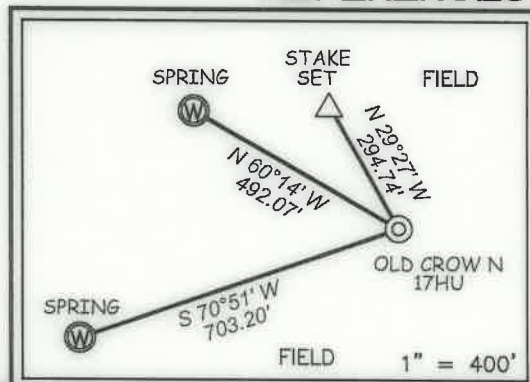
NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS > 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF OLD CROW N-17HU (47-051-02122) IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF EXISTING WELLS BRYAN N 13HU (47-051-02030), BRYAN N 14HU (47-051-02031), OLD CROW N-18HU (47-051-02123), & PROPOSED OLD CROW N-19HU (47-051-02190), MND 06 HHS (47-051-01732), MND 20AU (47-051-02011), MND 20BU (47-051-02012).
- AS-DRILLED DATA PROVIDED BY TUG HILL OPERATING, LLC.
- PLAT UPDATED TO SHOW AS-DRILLED PATH.

LEGEND

AS DRILLED —
PROPOSED ---

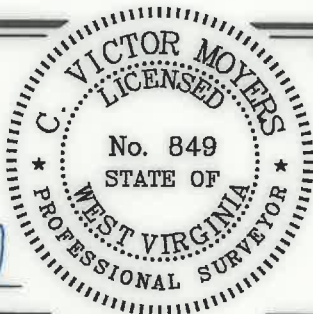
REFERENCES



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 _____
OPERATORS WELL NO. OLD CROW N-17HU
API WELL NO. 47 - 051 - 02122
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P17HUAD.dwg
OLD CROW NORTH 17HU_REV7

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 INJECTION _____ WASTE DISPOSAL _____ IF "GAS" PRODUCTION X STORAGE _____ DEEP X SHALLOW _____

LOCATION: GROUND = 1286.73' ELEVATION PROPOSED = 1264.99' WATERSHED _____ TRIBUTARY OF FISH CREEK (HUC-10)

DISTRICT FRANKLIN COUNTY MARSHALL QUADRANGLE POWHATAN POINT 7.5'

SURFACE OWNER DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO ACREAGE 71.205±

ROYALTY OWNER DONNA VIVIAN YOHO, ET AL - SEE ADDITIONAL SHEETS ACREAGE 71.205±

PROPOSED WORK: DRILL 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 POINT PLEASANT

ESTIMATED DEPTH TVD: 11,592' / TMD: 27,771'

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

05/07/2021

COUNTY NAME PERMIT

**OLD CROW N LEASE
UTICA UNIT - 494.33 AC ±
WELL 17HU
TUG HILL OPERATING**

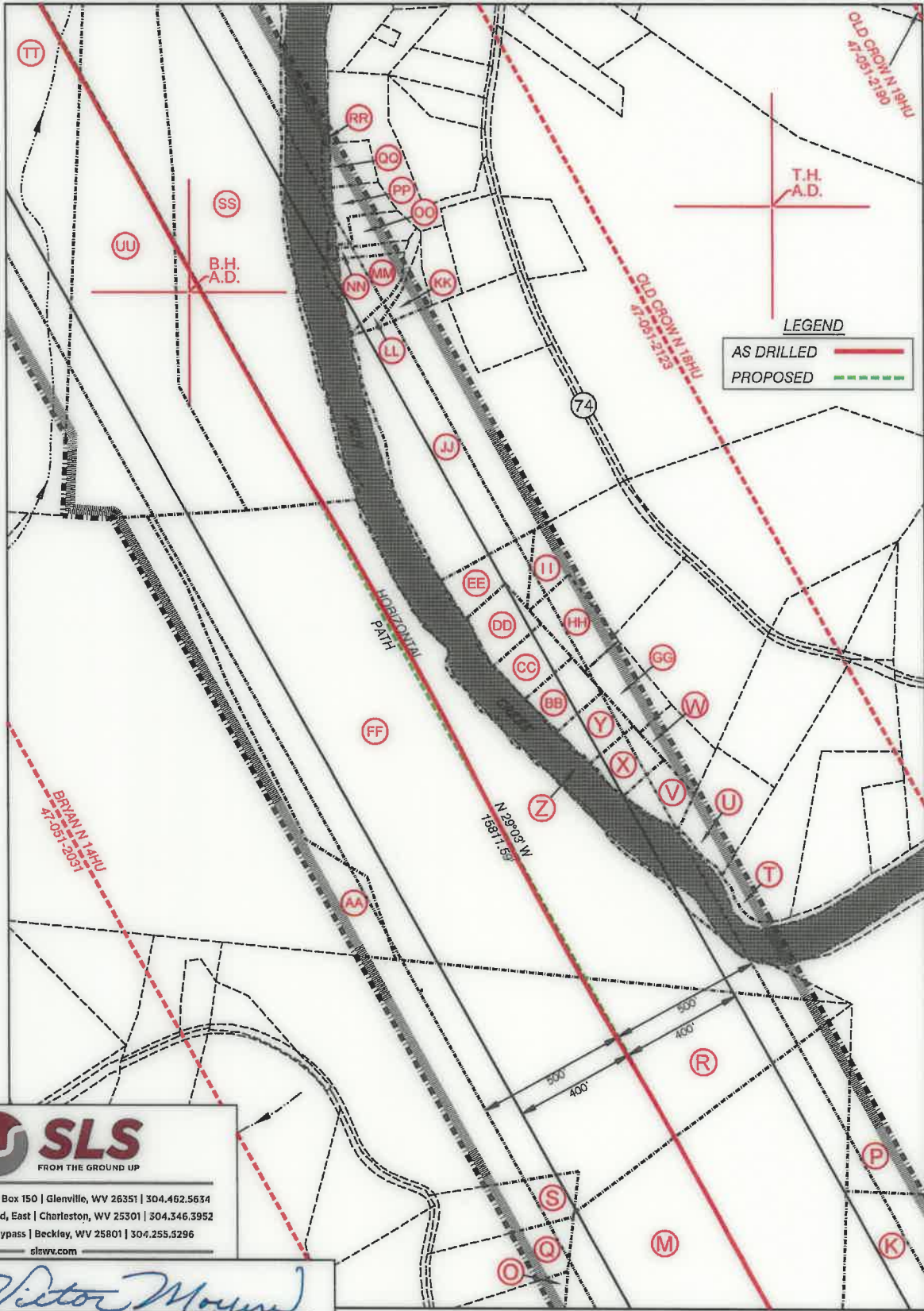
T.H. LATITUDE 39°47'30"
B.H. LATITUDE 39°50'00"

**SHEET 2 DETAIL
SCALE - 1" = 500'**

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

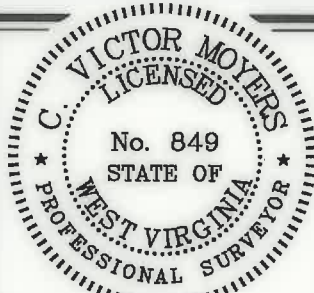
4,822' T.H. A.D.
5,954' B.H. A.D.

NAD '83 GRID NORTH



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

P.S. 849 *C. Victor Moyers*



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

LEGEND

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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'83 S.P.C.(FT)	N. 468,139.24	E. 1,613,525.64	
NAD'83 GEO.	LAT-(N) 39.778430	LONG-(W) 80.763067	
NAD'83 UTM (M)	N. 4,403,192.43	E. 520,289.72	
LANDING POINT			
NAD'83 S.P.C.(FT)	N. 468,471.2	E. 1,613,749.9	
NAD'83 GEO.	LAT-(N) 39.779350	LONG-(W) 80.762286	
NAD'83 UTM (M)	N. 4,403,294.7	E. 520,356.4	
BOTTOM HOLE			
NAD'83 S.P.C.(FT)	N. 482,294.4	E. 1,606,073.6	
NAD'83 GEO.	LAT-(N) 39.816996	LONG-(W) 80.790303	
NAD'83 UTM (M)	N. 4,407,466.9	E. 517,947.4	

SCALE 1" = 2000' FILE NO. 8796P17HUAD.dwg
 DATE JUNE 10, 2020 OLD CROW NORTH 17HU REV7
 OPERATORS WELL NO. OLD CROW N-17HU
 API WELL NO. 47 — 051 — 02122
 NO. STATE COUNTY PERMIT

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



05/07/2021

COUNTY NAME
PERMIT

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

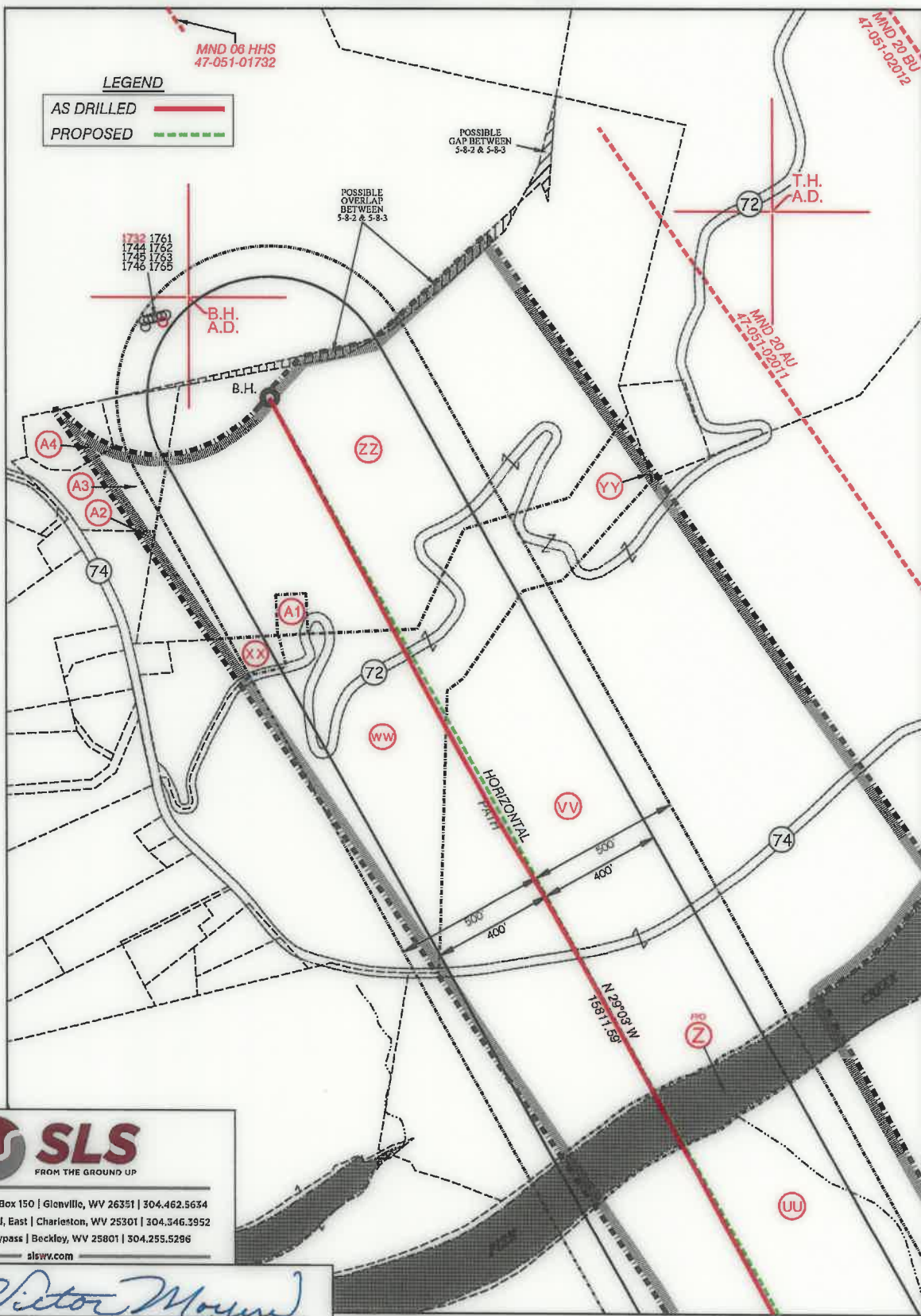
DESIGNATED AGENT DIANNA STAMPER
ADDRESS CT CORPORATION SYSTEM
5400 D BIG TYLER ROAD
CHARLESTON, WV 25313

**OLD CROW N LEASE
UTICA UNIT - 494.33 AC±
WELL 17HU
TUG HILL OPERATING**

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

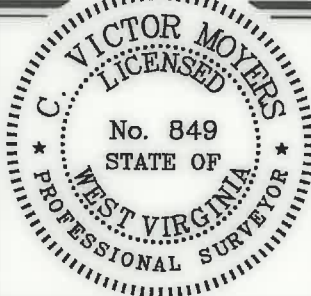
T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°45'00"

**SHEET 2 DETAIL
SCALE - 1" = 500'**



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 Deckley Bypass | Beckley, WV 25801 | 304.255.5296
slsrv.com

P.S. 849 *C. Victor Moyers*



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

LEGEND

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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)		
NAD'83 S.P.C.(FT)	N. 468,139.24	E. 1,613,525.64
NAD'83 GEO.	LAT-(N) 39.778430	LONG-(W) 80.763067
NAD'83 UTM (M)	N. 4,403,192.43	E. 520,289.72
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 468,471.2	E. 1,613,749.9
NAD'83 GEO.	LAT-(N) 39.779950	LONG-(W) 80.762286
NAD'83 UTM (M)	N. 4,403,294.7	E. 520,356.4
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 482,294.4	E. 1,606,073.6
NAD'83 GEO.	LAT-(N) 39.816996	LONG-(W) 80.790303
NAD'83 UTM (M)	N. 4,407,466.9	E. 517,947.4

SCALE 1" = 2000' FILE NO. 8796P17HUAD.dwg
OLD CROW NORTH 17HU REV7
DATE JUNE 10, 20 20
REVISED _____
OPERATORS WELL NO. OLD CROW N-17HU
API WELL NO. 47 — 051 — 02122
STATE COUNTY PERMIT

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



05/07/2021

COUNTY NAME PERMIT

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

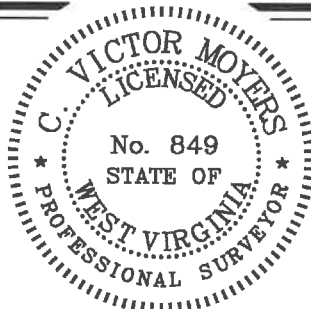
**OLD CROW N LEASE
UTICA UNIT - 494.33 AC ±
WELL 17HU
TUG HILL OPERATING**



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
slswv.com

NO.	Lease ID	Tag	Parcel	Grantor, Lessor, Etc.	Deed Book/Page	
1	10*21468	A	5-16-25	JOHN A SWIERKOS	953	317
2	10*19340	B	5-16-3	DONNA V YOHO	665	407
3	10*14919	C	5-16-5	CHESTNUT HOLDINGS INC	836	117
4	10*14920	D	5-10-14	CHESTNUT HOLDINGS INC	836	119
5	10*19340	E	5-16-3.2	DONNA V YOHO	665	407
6	10*19017	F	5-10-15	PAUL A RINE AND DEBRA A RINE	796	24
7	10*19223	G	5-10-15.1	DONALD T MILLER	737	284
8	10*19126	H	5-10-16	KEVIN R. CORLEY AND ANITA L. CORLEY, HUSBAND AND WIFE	859	44
9	10*19109	I	5-10-16.4	JOHN W. MILLER AND MARY ALICE MILLER, HUSBAND AND WIFE	863	275
10	10*47051.260.0	J	5-10-2	WILLIAM A PRASCIK, ET AL	879	302
11	10*19021	K	5-10-17	MARCELLUS TX MINERAL PARTNERS LTD, et al	800	216
12	10*19336	L	5-11-11.2	BONNIE JEAN DAWSON	665	397
13	10*19021	M	5-11-10	MARCELLUS TX MINERAL PARTNERS LTD, et al	800	216
14	10*19153	N	5-11-9.4	JACK S HUGGINS JR AND TERRY L HUGGINS	700	396
15	10*19153	O	5-11-9.1	JACK S HUGGINS JR	700	396
16	10*18970	P	5-10-1	DONALD E BERISFORD, et al	941	287
17	10*14099	Q	5-11-9.7	SOUTHERN COUNTRY FARMS INC	666	489
18	10*14099	R	5-11-9	SOUTHERN COUNTRY FARMS INC	666	489
19	10*19172	S	5-11-9.8	SEAN F MOORE LINDA MOORE	706	581
20	10*17512	T	5-9-29	BONNIE LOU POSTLEWAIT, et al	917	68
21	10*21547	U	5-9-30.2	GARY A MILLER AND MARCELLE T MILLER, et al	952	370
22	CVX935271	V	5-9-38.6	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
23	CVX935271	W	5-9-38.7	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
24	CVX935271	X	5-9-38.5	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
25	CVX935271	Y	5-9-38.4	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
26	Q091960000	Z	FISH CREEK	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	865	558
27	10*19098	AA	5-11-4	DAVID HARRICK AND LELAH MARRICK, et al	800	505
28	CVX935271	BB	5-9-38.3	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
29	CVX935271	CC	5-9-38.2	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
30	CVX935271	DD	5-9-38.1	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
31	CVX935271	EE	5-9-38.10	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
32	10*19217	FF	5-9-31	JAY DEE DALLISON EDDIE D DALLISON	676	463
33	CVX935271	GG	5-9-38.8	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
34	CVX935271	HH	5-9-38.9	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
35	CVX935271	II	5-9-38	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
36	CVX935271	JJ	5-9-37	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
37	CVX935271	KK	5-9-32.4	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
38	CVX935271	LL	5-9-32.12	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
39	CVX935271	MM	5-9-32.1	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
40	CVX935271	NN	5-9-32.2	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
41	CVX935271	OO	5-9-32.6	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
42	CVX935271	PP	5-9-32.13	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
43	CVX935271	QQ	5-9-32.7	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
44	CVX935271	RR	5-9-32	CHARLES W. MILLER AND ESTHER JEAN MILLER, et al	853	59
45	10*25370	SS	5-8-8	JAMES EDWARD & LAURA J FRANCIS et al	1030	377
46	10*47051.105.0	TT	5-8-9	JAMES B JACKSON JR AND MARION L JACKSON	859	478
47	10*21546	UU	5-8-7	EDWIN C MILLER AND KIMBERLY ANN MILLER	957	257
48	CVX946510	VV	5-8-5	NICOLE GATTS-SFX	899	470
49	CVX866629	WW	5-8-4	FRANCES E NIEMAN ET AL	685	283
50	10*26024	XX	5-8A-35	WILLIAM MCGLUMPHY	752	370
51	CVX920045	YY	5-5-4.1	GENEVA BASSETT SANCHEZ AKA GENEVA A BASSETT SANCHEZ	813	593
52	Q081033000	ZZ	5-8-3	TAMMY L MITCHELL ET VIR	816	176
53	Q077350000	A1	5-8-23	ROBERT SHIELDS AND REBECCA A SHIELDS	806	355
54	Q092606000	A2	5-8A-14	THE BOARD OF EDUCATION OF COUNTY OF MARSHALL	896	501
55	Q088946000	A3	5-8A-13	LETHA I RUCKMAN	765	219
56	Q083860000	A4	5-8A-12	MARY D RUCKMAN	765	224

FILE NO. 8796P17HUAD.dwg
OLD CROW NORTH 17HU_REV7
DATE JUNE 10, 20 20
REVISED _____
OPERATORS WELL NO. OLD CROW N-17HU
API WELL NO. 47 — 051 — 02122
STATE COUNTY PERMIT



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

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

COUNTY NAME
PERMIT