

10,458' B.H. A.D.

3,650' T.H. A.D.

**OLD CROW N LEASE
WELL 19HU
TUG HILL OPERATING**

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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17)		
NAD'83 S.P.C.(FT)	N. 468,146.92	E. 1,613,548.58
NAD'83 GEO.	LAT-(N) 39.778452	LONG-(W) 80.762986
NAD'83 UTM (M)	N. 4,403,194.88	E. 520,296.67
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 470,948.2	E. 1,613,625.0
NAD'83 GEO.	LAT-(N) 39.786145	LONG-(W) 80.762854
NAD'83 UTM (M)	N. 4,404,048.7	E. 520,305.7
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 482,841.4	E. 1,606,945.8
NAD'83 GEO.	LAT-(N) 39.818532	LONG-(W) 80.787226
NAD'83 UTM (M)	N. 4,407,638.0	E. 518,210.3

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

5,395' B.H. A.D. 4,814' T.H. A.D.

B.H. A.D.

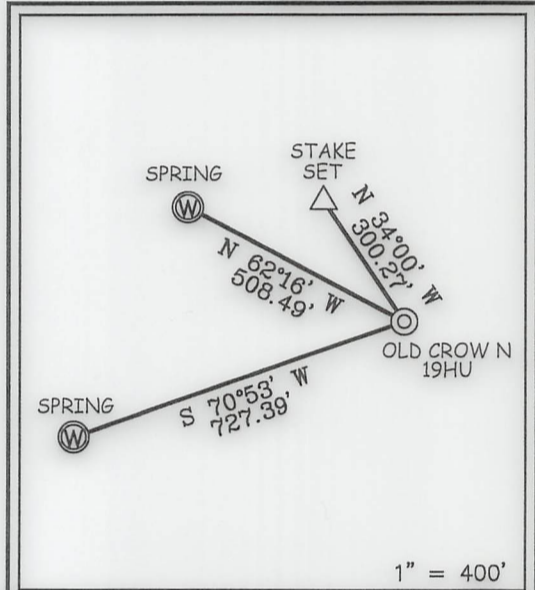
T.H. A.D.

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS OR DWELLINGS > 2500 SQ. FT. WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
- BASED ON WV DOT COUNTY ROUTE 74 IS A 40' STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS.
- THIS WELL PLAT PERTAINS TO A RE-PERMIT OF A PREVIOUSLY PROPOSED OLD CROW N-19HU, THAT WAS PARTIALLY DRILLED AND PLUGGED, AS SHOWN HEREON AND IDENTIFIED AS AN AS-DRILLED PATH. THIS CURRENT PROPOSED LATERAL RETAINS THE NAME OF THE PREVIOUSLY PERMITTED OLD CROW N-19HU LATERAL, HOWEVER THESE DESIGN PLANS INTEGRATE A NEW TOP HOLE LOCATION AS WELL AS PARTIAL LATERAL DESIGN OF A PREVIOUSLY PROPOSED OLD CROW N-03HM. THE TARGET FORMATION OF THIS PROPOSED OLD CROW N-19HU LATERAL IS MARCELLUS AND NOT POINT PLEASANT, AS PREVIOUSLY PERMITTED.
- ALL AS-DRILLED, LATERAL DESIGN AND RE-PERMIT INFORMATION PROVIDED TO SLS BY TUG HILL OPERATING, LLC.
- PLAT UPDATED TO SHOW AS-DRILLED PATH.

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
5-8A-13	LETHA I. RUCKMAN	2.993
5-8A-14	BOARD OF EDUCATION	137 SQ RODS
5-8A-34	NORMAN G. JOHNSON ET UX - LIFE	11,123 SQ. FT.
5-9-1.1	FRANK C. CLARK	0.52
5-9-1.4	SHELDON R. RUCKMAN ET AL - LIFE	4.49
5-9-4.2	LINDA J. SIMMONS	0.80
5-9-4.13	SAMUEL LEE CANTERBURY, ET UX	0.9284
5-9-25	DELBERT K. & LINDA K. MYERS	14.49
5-9-27	JOHN F. KAZEMKA	4.02
5-9-28	WILLIAM N. & DOLORES E. MCDONOUGH - LIFE	4.01
5-9-30	MATTHEW B. GRIFFITH	2.708
5-9-30.3	MATTHEW B. GRIFFITH	0.82
5-9-32	SANDRA J. BONNETTE	2.321
5-9-32.9	LIONEL E. HENRY, SR., ET AL	1.269
5-9-33.1	DANIELS FAMILY TRUST	1
5-9-33.2	DANIELS FAMILY TRUST	1.534
5-9-33.3	RALPH EARL DUNLAP - LIFE	0.50
5-9-34	LOUIS D. & PATRICIA L. VAN SCYOC	0.850
5-9-34.3	SANDRA J. BONNETTE	1.988
5-9-34.6	EARL B. SUTER, JR., ET UX	0.085
5-9-36	FRANK T. & ANNA M. WALKER	PARCEL
5-9-37	FRANK T. & ANNA M. WALKER	10.857
5-9-38	SHIRLEY A. HILL EST.	3.331

REFERENCES



1" = 400'



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
sllsvv.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 JANUARY 17, 20 23
REVISED _____
OPERATORS WELL NO. OLD CROW N-19HU
API WELL NO. 47 - 051 - 02270
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P19HUAD.dwg
OLD CROW NORTH 3HM REV3
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 = 1,288.00' ELEVATION PROPOSED = 1,264.99' 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 ACREAGE 71.205±
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 MARCELLUS ESTIMATED DEPTH TVD: 6,727' / TMD: 21,418'

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 PERMIT

03/17/2023

OLD CROW N LEASE WELL 19HU TUG HILL OPERATING

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

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	JOHN SWIERKOS	5-10-14	100.00
D	HERBERT M. AULENBACHER, JR.	5-10-3	225.50
E	WILLIAM A. PRASCIC, ET AL	5-10-2	52.00
F	ALVIN A. YODER	5-10-17	57.28
G	EDWIN C. MILLER	5-10-1	49.96
H	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
I	JAMES E. & HARLEY J. MCDONOUGH	5-9-29.1	1.026
J	JAMES E. & HARLEY J. MCDONOUGH	5-9-29.2	2.807
K	JAMES M. & ROBERTA L. STERN	5-9-29	3.1777
L	DAVID JR. & MELISSA LOVE	5-9-30.1	2.518
M	SHIRLEY A. HILL ESTATE	5-9-40	368'x425'
N	DENNIS P. CADMUS	5-9-39	9.5
O	KEITH D. DANIELS, ET UX	5-9-33	40.331
P	DAVID D. & CHRISTINE S. DANIELS	5-9-33.4	1.025
Q	TIMOTHY Q. HOYT, ET UX	5-9-32.11	1.717
R	TIMOTHY Q. HOYT, ET UX	5-9-32.10	0.588
S	TIMOTHY Q. HOYT, ET UX	5-9-32.8	0.711
T	GARNET D. MIDCAP	5-9-32.5	270'x390'
U	MILLARD BONETTE, ET UX	5-9-34.2	0.76
V	MILLARD BONETTE, JR., ET UX	5-9-34.5	0.444
W	LOUIS D. VAN SCYOC	5-9-34.1	0.556
X	LOUIS D. VAN SCYOC	5-9-34.4	1.042
Y	JAMES EDWARD FRANCIS, JR. ET UX	5-8-8	28.3
Z	EDWIN C. MILLER	5-8-7	180.31
AA	RICHARD L. GATTS - LIFE	5-8-5	98.819
BB	JOHN F. ARRUDA ET UX	5-5-4.1	1.399
CC	GENEVA BASSETT SANCHEZ	5-5-4	133.601
DD	TAMMY L. MITCHELL	5-8-3	35.07

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°45'00"
5,395' B.H. A.D.
4,814' T.H. A.D.

NAD'83 GRID NORTH

AS DRILLED COORDINATES FOR WELL NO. 19HU

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

NAD'83 S.P.C.(FT) N. 468,146.92 E. 1,613,548.58
NAD'83 GEO. LAT-(N) 39.778452 LONG-(W) 80.762986
NAD'83 UTM (M) N. 4,403,194.88 E. 520,296.67

LANDING POINT

NAD'83 S.P.C.(FT) N. 471,012.3 E. 1,613,592.3
NAD'83 GEO. LAT-(N) 39.786319 LONG-(W) 80.762974
NAD'83 UTM (M) N. 4,404,068.1 E. 520,295.4

BOTTOM HOLE

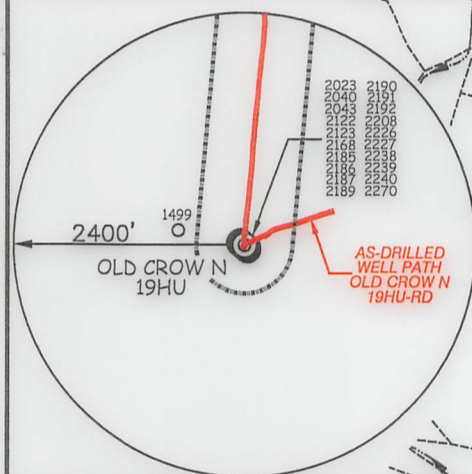
NAD'83 S.P.C.(FT) N. 482,838.1 E. 1,606,944.4
NAD'83 GEO. LAT-(N) 39.818523 LONG-(W) 80.787231
NAD'83 UTM (M) N. 4,407,637.0 E. 518,209.9

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	166.73'	628.24'	N 02°52' W	166.24'
C2	360.39'	1105.42'	N 20°32' W	358.79'

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 62°16' E	1146.74'
L2	S 52°57' E	1192.14'



SLS
FROM THE GROUND UP

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

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

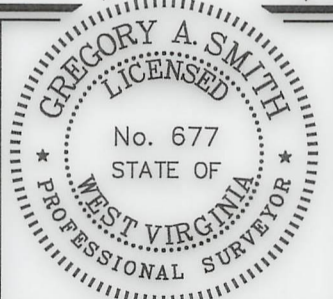
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

P.S. 677 *Gregory A. Smith*

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)

SCALE 1" = 2000' FILE NO. 8796P19HUAD.dwg
DATE JANUARY 17, 2023
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API WELL 47 — 051 — 02270
NO. STATE COUNTY PERMIT

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DIVISION OF ENVIRONMENTAL PROTECTION
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