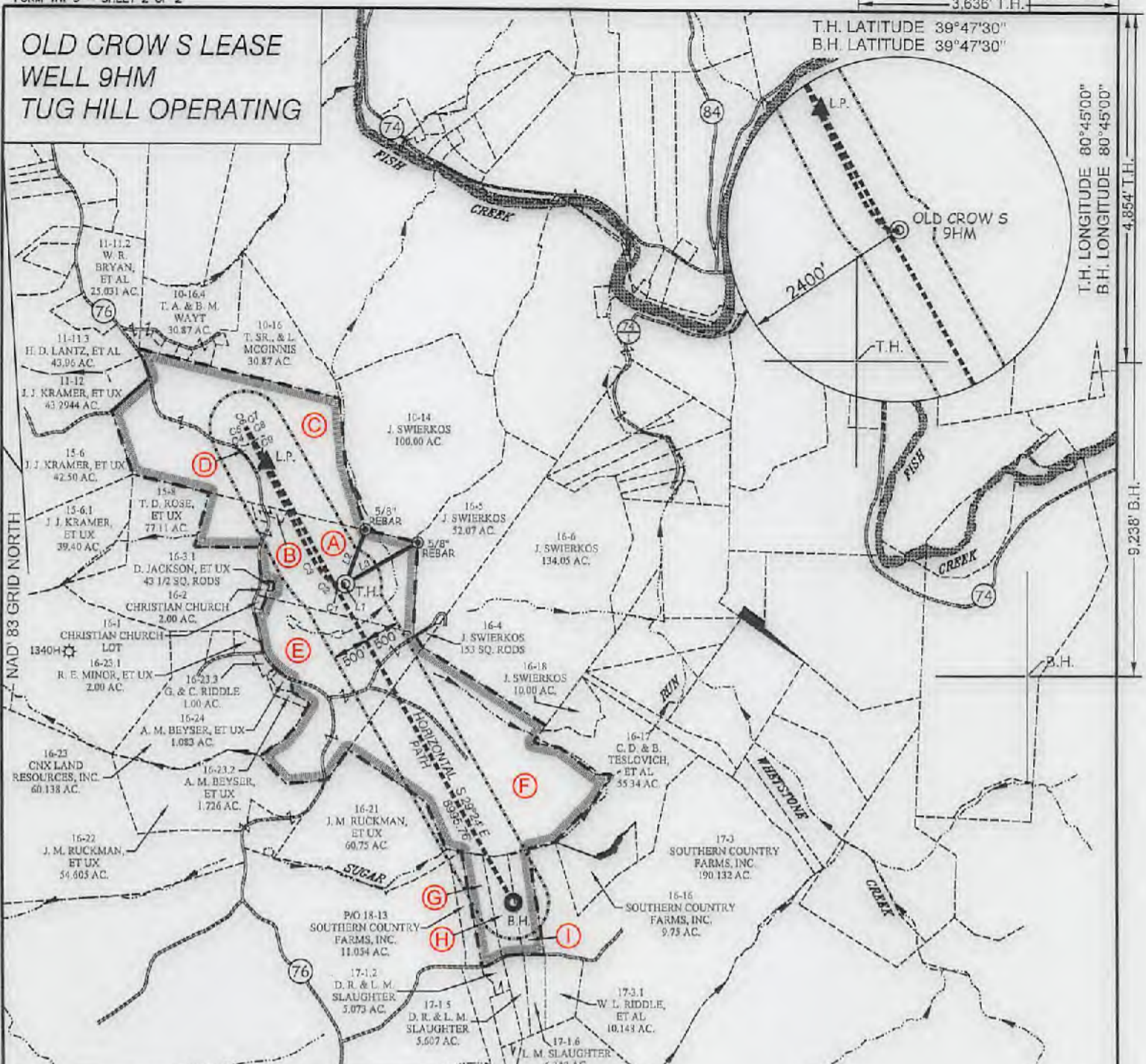


3,636' T.H. 1,247' B.H.

**OLD CROW S LEASE
WELL 9HM
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°45'00"

NAD 83 GRID NORTH

4,854' T.H.
9,238' B.H.

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	90.31'	181.12'	N 80°51' W	89.14'
C2	156.71'	440.01'	N 53°02' W	155.88'
C3	450.41'	1762.86'	N 34°19' W	449.19'
C4	128.44'	2933.94'	N 26°35' W	128.43'
C5	29.88'	173.65'	N 21°04' W	29.85'
C6	2.97'	1.17'	N 70°12' E	2.23'
C7	21.19'	101.93'	S 39°12' E	21.15'
C8	60.08'	1418.18'	S 33°13' E	60.08'
C9	480.78'	12249.49'	S 30°20' E	480.75'

TAG	SURFACE OWNER	PARCEL	ACRES
A	DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO	5-16-3	71.205
B	JIMMY OSTRANDER, SR., ET UX	5-16-3.2	1.435
C	PAUL ANDREW & DEBRA A. RINE	5-10-15	120.805
D	DONALD T. MILLER	5-10-15.1	2.095
E	JOHN SWIERKOS	5-16-25	79.04
F	BETHANY A. REDO & ROBERT W. RAHM	5-16-19	129.16
G	GLEN GUNTO	5-17-15	10.220
H	GLEN GUNTO	5-16-15.1	10.170
I	GLEN GUNTO	5-17-16	9.702

LINE	BEARING	DISTANCE
L1	S 80°57' W	62.62'
L2	N 20°00' E	798.12'
L3	N 60°14' E	1154.52'

SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 • 12 Vanhorn Drive • Glenville, WV 26031 • (304) 462-9834
www.slsurveyors.com



(+) 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)

06/22/2018

SCALE 1" = 2000' FILE NO. 8796P9HM.dwg

DATE MARCH 6, 2018

REVISED _____, 20__

OPERATORS WELL NO. OLD CROW S-9HM

API WELL NO. 47-051-02023
STATE COUNTY PERMIT

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



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

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

COUNTY NAME PERMIT

**OLD CROW S LEASE
WELL 9HM
TUG HILL OPERATING**

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

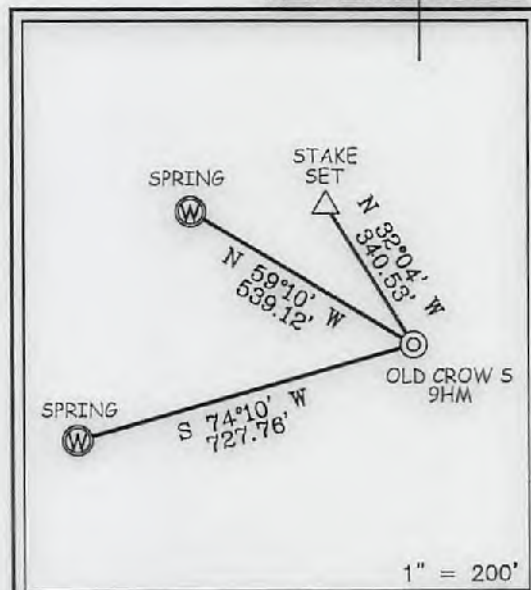
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)		
NAD'83 S.P.C. (FT)	N. 488,107.27	E. 1,613,561.45
NAD'83 GEO.	LAT-(N) 39.778344	LONG-(W) 80.762988
NAD'83 UTM (M)	N. 4,403,182.87	E. 520,800.80
LANDING POINT		
NAD'83 S.P.C. (FT)	N. 469,784.1	E. 1,612,455.9
NAD'83 GEO.	LAT-(N) 39.782904	LONG-(W) 80.766956
NAD'83 UTM (M)	N. 4,403,668.1	E. 519,955.5
BOTTOM HOLE		
NAD'83 S.P.C. (FT)	N. 463,689.1	E. 1,615,989.9
NAD'83 GEO.	LAT-(N) 39.768805	LONG-(W) 80.764435
NAD'83 UTM (M)	N. 4,401,848.7	E. 521,032.7

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

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'

REFERENCES



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 MARCH 6, 20 18
REVISED _____, 20 ____
OPERATORS WELL NO. OLD CROW S-9HM
API WELL NO. 47 - 051 - 02023
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P9HM.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 X LIQUID INJECTION _____ WASTE DISPOSAL _____ IF "GAS" PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X

LOCATION : GROUND = 1,286.00' PROPOSED = 1,265.49' 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 : LEASE NO. SEE WW-6A1
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: 6,681' / TMD: 14,723'

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

06/22/2018