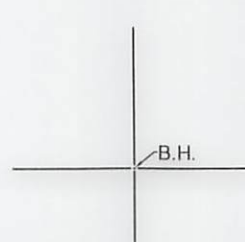
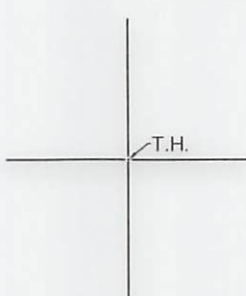


**KEITH STERN N LEASE
WELL 7HM
TUG HILL OPERATING**

7,439' B.H.
7,127' T.H.
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. 466,587.52	E. 1,633,473.69
NAD'83 GEO.	LAT-(N) 39.774919	LONG-(W) 80.692024
NAD'83 UTM (M)	N. 4,402,821.23	E. 526,374.90
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 466,858.9	E. 1,636,494.7
NAD'83 GEO.	LAT-(N) 39.775773	LONG-(W) 80.681289
NAD'83 UTM (M)	N. 4,402,919.3	E. 527,293.9
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 472,717.3	E. 1,633,241.3
NAD'83 GEO.	LAT-(N) 39.791737	LONG-(W) 80.693140
NAD'83 UTM (M)	N. 4,404,687.5	E. 526,272.9

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°40'00"
6,101' T.H.
15,152' B.H.



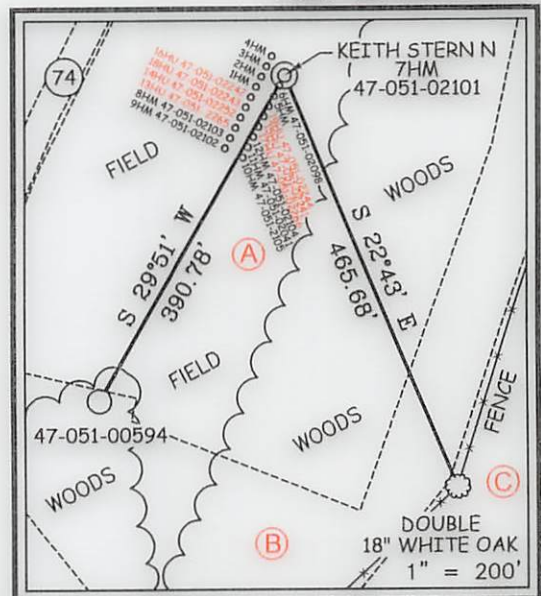
NOTES ON SURVEY

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'

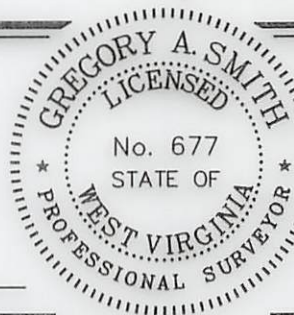


17 Madison Drive | P.O. Box 100 | Glenville, WV 26034 | 304-482-5854
1012 Kanawha Boulevard, East | Charleston, WV 25301 | 304-346-8952
254 East Rockway Avenue | Beckley, WV 25801 | 304-355-5266
slsw.com

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 JULY 31, 20 18
REVISED 4-9-2020 & 6-3-2022
OPERATORS WELL NO. KEITH STERN N-7HM
API WELL NO. 47 - 051 - 02101
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8811P7HMR2.dwg
KEITH STERN N-7HM-REV2
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: ELEVATION GROUND = 741.20' PROPOSED = 744.65' WATERSHED FISH CREEK (HUC 10) DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER TH EXPLORATION, LLC ACREAGE 10.05±
ROYALTY OWNER ISAAC CROW, ET AL - SEE WW-6A1 ACREAGE 10.05±

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: 6,417' / TMD: 14,479'

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

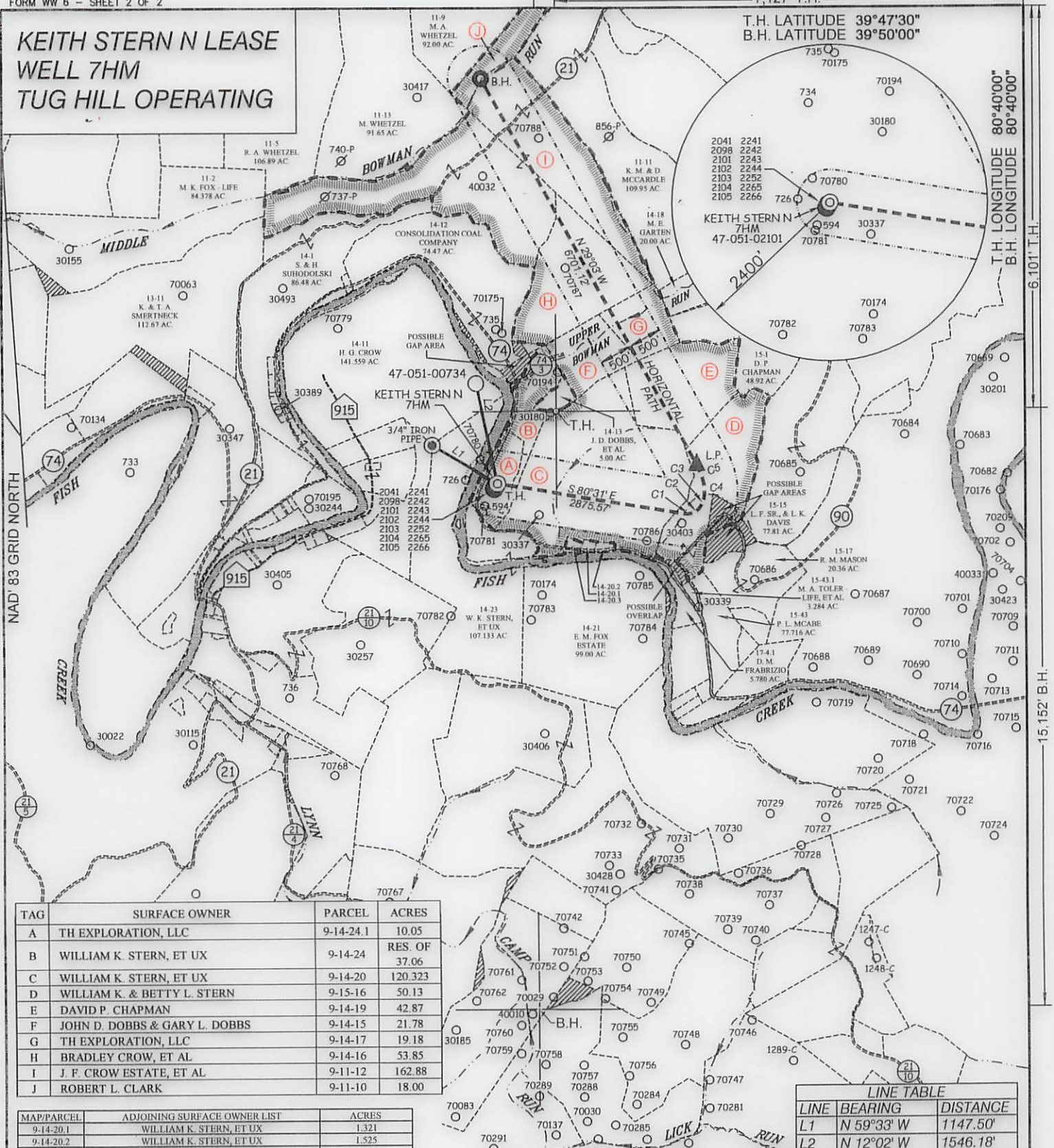
06/17/2022

COUNTY NAME PERMIT

**KEITH STERN N LEASE
WELL 7HM
TUG HILL OPERATING**

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

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°40'00"



TAG	SURFACE OWNER	PARCEL	ACRES
A	TH EXPLORATION, LLC	9-14-24.1	10.05
B	WILLIAM K. STERN, ET UX	9-14-24	RES. OF 37.06
C	WILLIAM K. STERN, ET UX	9-14-20	120.323
D	WILLIAM K. & BETTY L. STERN	9-15-16	50.13
E	DAVID P. CHAPMAN	9-14-19	42.87
F	JOHN D. DOBBS & GARY L. DOBBS	9-14-15	21.78
G	TH EXPLORATION, LLC	9-14-17	19.18
H	BRADLEY CROW, ET AL	9-14-16	53.85
I	J. F. CROW ESTATE, ET AL	9-11-12	162.88
J	ROBERT L. CLARK	9-11-10	18.00

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-14-20.1	WILLIAM K. STERN, ET UX	1.321
9-14-20.2	WILLIAM K. STERN, ET UX	1.525
9-14-20.3	WILLIAM K. STERN, ET UX	0.831

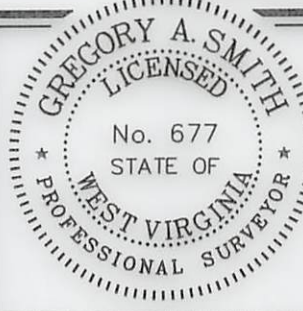
LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 59°33' W	1147.50'
L2	N 12°02' W	1546.18'

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	118.72'	271.59'	N 84°56' E	117.78'
C2	112.58'	228.17'	N 57°10' E	111.44'
C3	230.76'	372.08'	N 22°22' E	227.08'
C4	259.24'	656.21'	N 05°49' W	257.55'
C5	225.66'	1031.27'	N 22°37' W	225.21'



12 Mountain Drive | P.O. Box 450 | Glenwood, WV 26554 | 304-862-5634
142 Kanawha Boulevard, East | Charleston, WV 25304 | 204-546-9922
254 East Beckley Bypass | Beckley, WV 25801 | 304-255-5296
slsw.com

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
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P.S. 677 *Gregory A. Smith*

SCALE 1" = 2000' FILE NO. 8811P7HMR2.dwg
KEITH STERN N-7HM-REV2
DATE JULY 31, 2018
REVISED 4-9-2020 & 6-3-2022
OPERATORS WELL NO. KEITH STERN N-7HM
API WELL NO. 47-051-02101
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	00-00
LEASE # (SEE WW-6A1)	
SURFACE OWNER (SEE TABLE)	(A)

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5098 WASHINGTON ST. W, STE 407
FORT WORTH, TX 76107 CHARLESTON, WV 25313-1561

COUNTY NAME PERMIT

06/17/2022