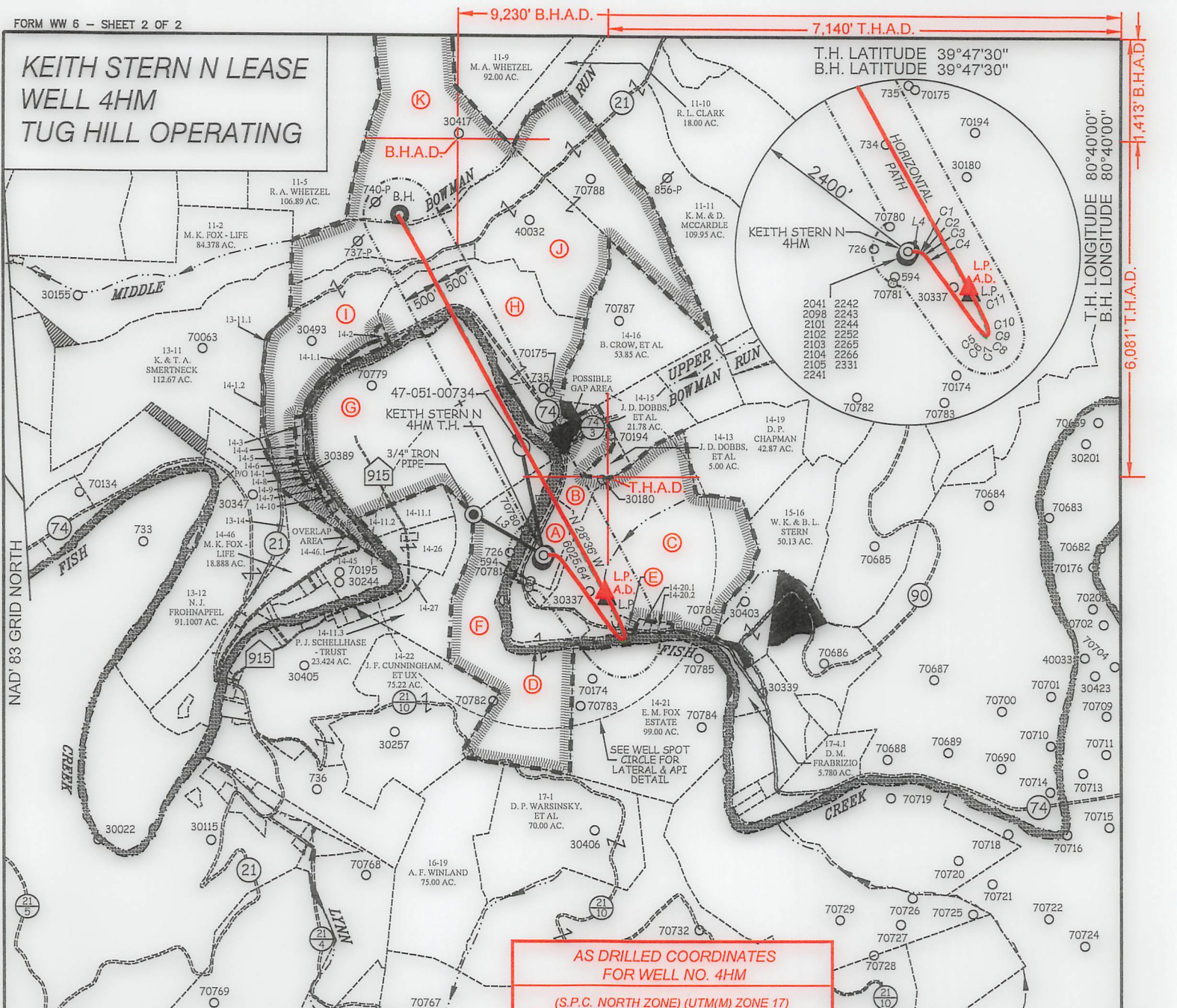


**KEITH STERN N LEASE
WELL 4HM
TUG HILL OPERATING**



**AS DRILLED COORDINATES
FOR WELL NO. 4HM**

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

NAD'83 S.P.C.(FT)	N. 466,607.76	E. 1,633,460.46
NAD'83 GEO.	LAT-(N) 39.774974	LONG-(W) 80.692072
NAD'83 UTM (M)	N. 4,402,827.33	E. 526,370.77

LANDING POINT

NAD'83 S.P.C.(FT)	N. 466,105.5	E. 1,634,304.6
NAD'83 GEO.	LAT-(N) 39.773626	LONG-(W) 80.689045
NAD'83 UTM (M)	N. 4,402,678.6	E. 526,630.5

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 471,303.1	E. 1,631,431.4
NAD'83 GEO.	LAT-(N) 39.787789	LONG-(W) 80.699513
NAD'83 UTM (M)	N. 4,404,247.5	E. 525,728.7

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 89°03' E	163.48'
L2	S 36°22' E	1093.25'
L3	N 60°06' W	1125.89'
L4	N 11°42' W	1523.65'

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	17.86'	27.12'	S 70°21' E	17.54'
C2	22.76'	167.62'	S 50°00' E	22.74'
C3	74.37'	707.84'	S 42°11' E	74.33'
C4	143.55'	2606.12'	S 37°36' E	143.53'
C5	125.44'	787.54'	S 40°30' E	125.31'
C6	39.31'	120.13'	S 55°05' E	39.14'
C7	13.83'	17.57'	N 88°32' E	13.47'
C8	14.60'	20.99'	N 28°22' E	14.31'
C9	24.67'	87.76'	N 00°01' E	24.59'
C10	85.59'	501.33'	N 13°42' W	85.48'
C11	523.44'	3139.20'	N 24°34' W	522.83'

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	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
E	WILLIAM K. STERN, ET UX	9-14-20.3	0.831
F	WILLIAM K. STERN, ET UX	9-14-23	107.133
G	HOY GLENN CROW	9-14-11	141.559
H	CONSOLIDATION COAL COMPANY MURRAY ENERGY	9-14-12	74.47
I	SAMUEL & HEATHER SUHODOLSKI	9-14-1	86.48
J	J. F. CROW ESTATE, ET AL	9-11-12	162.88
K	MICHAEL WHETZEL	9-11-13	91.65



LEGEND

AS DRILLED —

PROPOSED ---

12 Vanhorn Drive | P.O. Box 150 | Glenview, 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

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

NAD'83 S.P.C.(FT)	N. 466,607.76	E. 1,633,460.46
NAD'83 GEO.	LAT-(N) 39.774974	LONG-(W) 80.692072
NAD'83 UTM (M)	N. 4,402,827.33	E. 526,370.77

LANDING POINT

NAD'83 S.P.C.(FT)	N. 466,013.8	E. 1,634,339.8
NAD'83 GEO.	LAT-(N) 39.773375	LONG-(W) 80.688915
NAD'83 UTM (M)	N. 4,402,650.9	E. 526,641.7

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 471,304.0	E. 1,631,454.8
NAD'83 GEO.	LAT-(N) 39.787792	LONG-(W) 80.699430
NAD'83 UTM (M)	N. 4,404,247.8	E. 525,735.8



(+) 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 00-00

LEASE # (SEE WW-6A1) A

SURFACE OWNER (SEE TABLE)

SCALE 1" = 2000' FILE NO. 8811P4HMR-AD.dwg
 KEITH STERN N-4HM-REV1

DATE FEBRUARY 15, 2023
 REVISED _____, 20____

OPERATORS WELL NO. KEITH STERN N-4HM
 API WELL NO. **47-051-02375**
 NO. 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 DARREN BROWN - CT CORPORATION
 ADDRESS 5098 WASHINGTON ST. W, STE 407 CHARLESTON, WV 25313-1561

COUNTY NAME PERMIT

**KEITH STERN N LEASE
WELL 4HM
TUG HILL OPERATING**

B.H.A.D.

9,230' B.H.A.D.

7,140' T.H.A.D.

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

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

6,081' T.H.A.D.

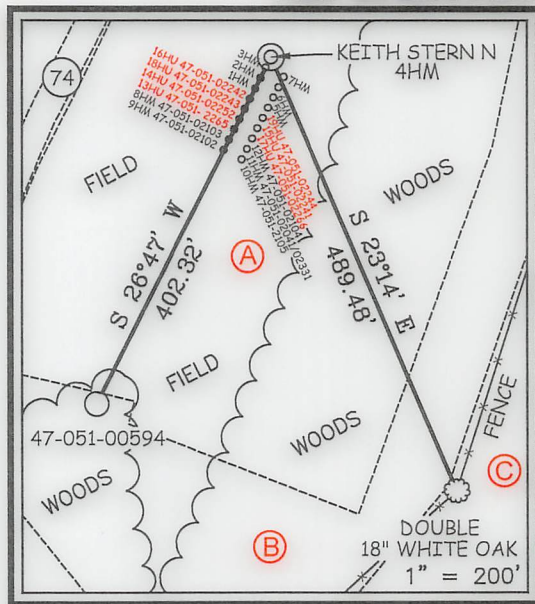
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17)

NAD'83 S.P.C.(FT)	N. 466,607.76	E. 1,633,460.46
NAD'83 GEO.	LAT-(N) 39.774974	LONG-(W) 80.692072
NAD'83 UTM (M)	N. 4,402,827.33	E. 526,370.77
<u>LANDING POINT</u>		
NAD'83 S.P.C.(FT)	N. 466,013.8	E. 1,634,339.8
NAD'83 GEO.	LAT-(N) 39.773375	LONG-(W) 80.688915
NAD'83 UTM (M)	N. 4,402,650.9	E. 526,641.7
<u>BOTTOM HOLE</u>		
NAD'83 S.P.C.(FT)	N. 471,304.0	E. 1,631,454.8
NAD'83 GEO.	LAT-(N) 39.787792	LONG-(W) 80.699430
NAD'83 UTM (M)	N. 4,404,247.8	E. 525,735.8

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-13-11.1	SAMUEL & HEATHER SUHODOLSKI	0.49
9-13-14	MARGARET K. FOX - LIFE	3.00
9-14-1.1	MICHAEL L. ALVAREZ	1.6
9-14-1.2	KENNETH N. & TERESA A. SMERTNECK	1.02
9-14-2	MICHAEL L. ALVAREZ	0.75
9-14-3	MICHAEL L. ALVAREZ	NORTH P/O 3 PCLS
9-14-4	MICHAEL L. ALVAREZ	3 PCLS & 1/8 AC.
9-14-5	MICHAEL L. ALVAREZ	200 X 60 PCL
9-14-6	MICHAEL L. ALVAREZ	120 X 200 PCL
9-14-7	JOHN T. ERAZMUS, III	0.25
9-14-8	JOHNNY C. HOLCOMB & JOHNNY C. HOLCOMB, II	2/5 AC.
9-14-9	JOHN E. DUFFY, ET UX	2/5 AC.
9-14-10	ROBERT I. DUFFY - LIFE	25/100 AC.
9-14-11.1	PATRICK J. SCHELLHASE EST - TRUST	7.617
9-14-11.2	LOYE A. BLAKE	4.00
9-14-20.1	WILLIAM K. STERN, ET UX	1.321
9-14-20.2	WILLIAM K. STERN, ET UX	1.525
9-14-26	PATRICK J. SCHELLHASE EST - TRUST	12.588
9-14-27	PATRICK J. SCHELLHASE EST - TRUST	3.004
9-14-28	CHARLES R. SCHELLHASE, ET UX	3.029
9-14-45	GEORGE R. TAYLOR, ET UX	10.98
9-14-46.1	MARHA JANE FAZZARO	1.512

T.H. A.D.

REFERENCES



NOTES ON SURVEY

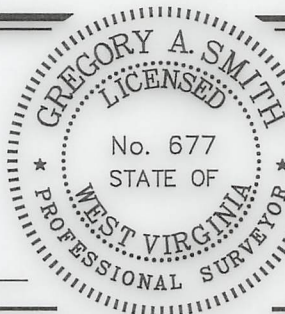
- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS OR DWELLINGS > 2500 SQ. FT. WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
- BASED ON WV DOT COUNTY ROUTE 74 IS A 40' STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS.
- PLAT UPDATED TO SHOW AS-DRILLED PATH.
- AS DRILLED DATA PROVIDED BY 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
slsww.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 FEBRUARY 15, 20 23
REVISED _____, 20 ____
OPERATORS WELL NO. KEITH STERN N-4HM
API WELL NO. 47 - 051 - 02375
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8811P4HMR-AD.dwg
KEITH STERN N-4HM-REV1
HORIZONTAL & VERTICAL SCALE 1" = 2000'
CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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 = 741.40' ELEVATION 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 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: 6,408' / TMD: 13,203'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN - CT CORPORATION
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

10/27/2023