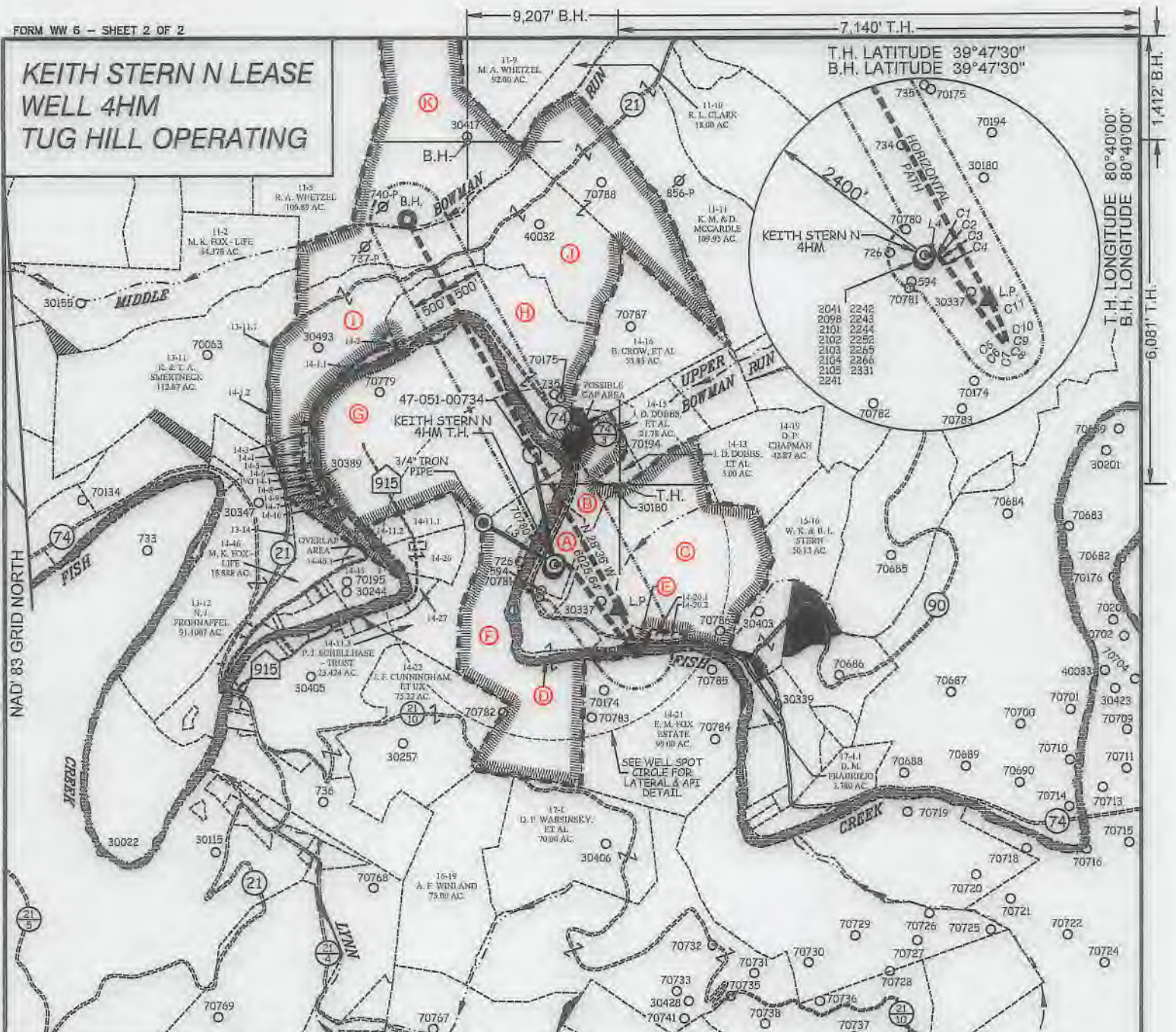


**KEITH STERN N LEASE
WELL 4HM
TUG HILL OPERATING**



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

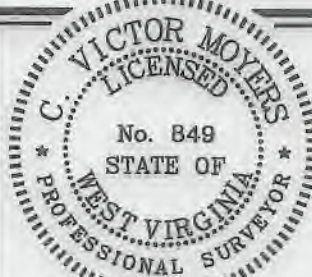
LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 89°03' E	163.48'
L2	S 36°22' E	1093.25'
L3	N 60°06' W	1125.89'
L4	N 11°42' W	1523.65'

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'	2806.12'	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'	87.78'	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'



12 Vanhorn Drive | P.O. Box 150 | Glenfields, WV 26031 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3992
 254 East Beckley Bypass | Beckley, WV 26801 | 304.255.5296
 slsvw.com

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 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. 4,402,850.9 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. 849 *C. Victor Moyers*

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- TAX MAP-PARCEL
- LEASE # (SEE WW-6A1)
- SURFACE OWNER (SEE TABLE)

SCALE 1" = 2000' FILE NO. 9811P4HMR.dwg
 KEITH STERN N-4HM-REV1
 DATE JULY 31, 2018
 REVISED AUGUST 19, 2020
 OPERATORS WELL NO. KEITH STERN N-4HM
 API WELL NO. 47-051-02375 WCA
 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 DIANNA STAMPER
 ADDRESS 5400 D BIG TYLER ROAD
 CHARLESTON, WV 25313

COUNTY NAME PERMIT

04/16/2024

9,207' B.H.

7,140' T.H.

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

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

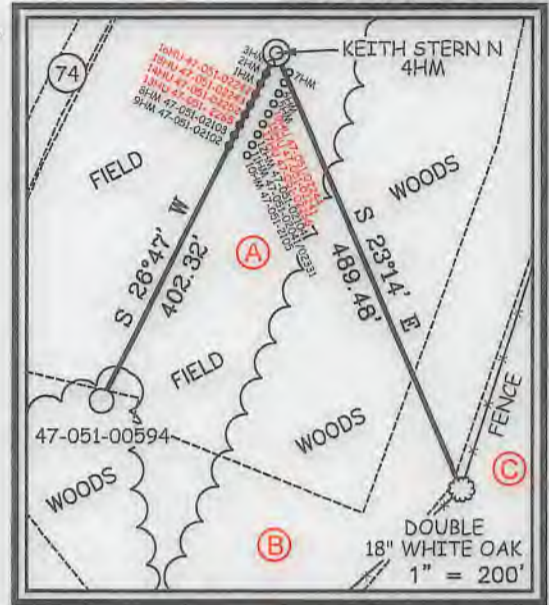
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT)	N. 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. 466,018.8	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

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°40'00"
1,412' B.H.
6,081' T.H.

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 - 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	12.538
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

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.



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254 East Beckley Bypass | Beckley, WV 25801 | 304.355.5296
slsvv.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 JULY 31, 20 18
REVISED AUGUST 19, 20 20

OPERATORS WELL NO. KEITH STERN N-4HM
API WELL NO. 47 - 051 - 02375 HGA
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8811P4HMR.dwg
KEITH STERN N-4HM-REV1
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 = 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 WV-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: 6,408' / TMD: 13,203'

COUNTY NAME PERMIT

04/16/2024

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