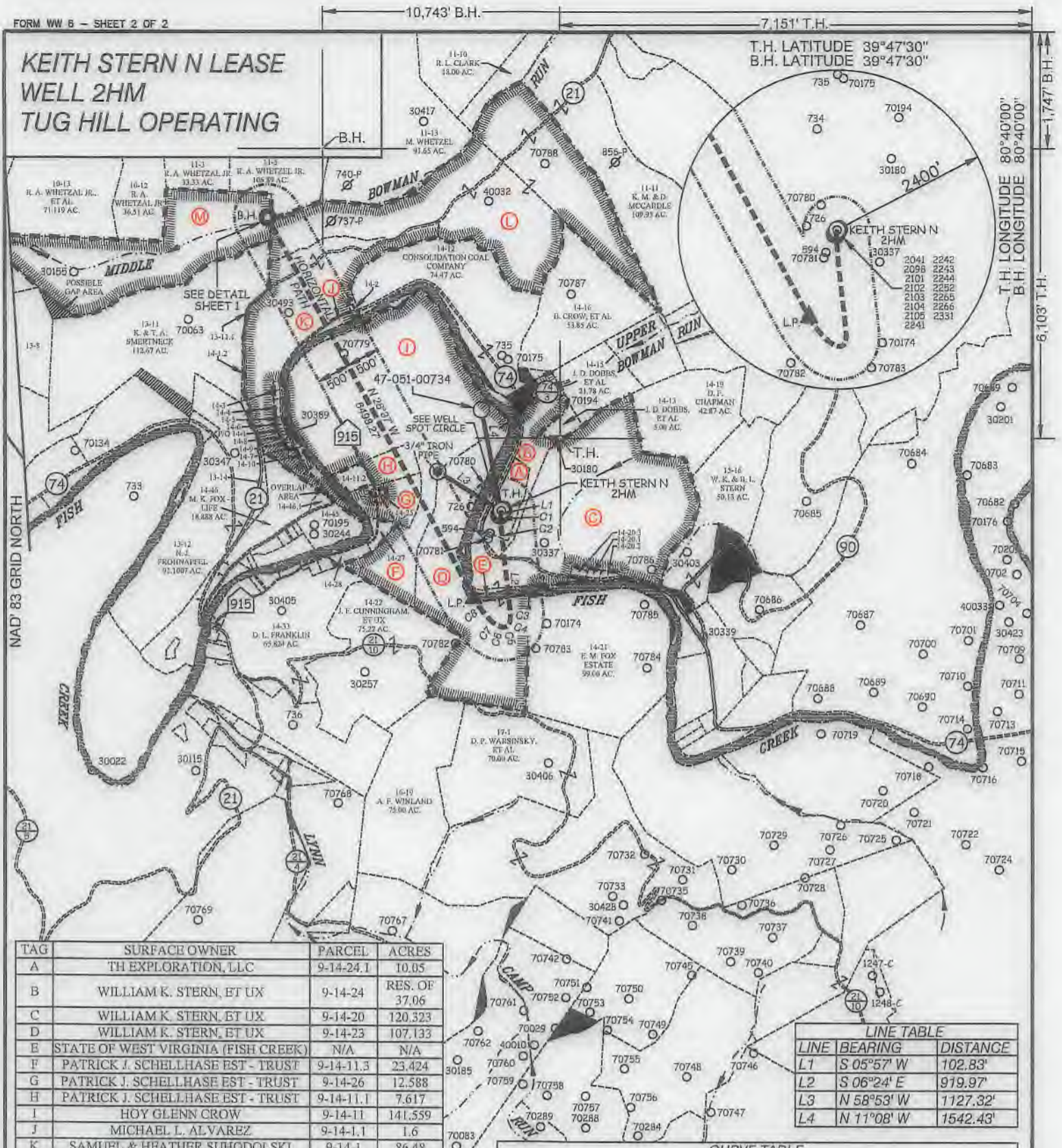


10,743' B.H.

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

**KEITH STERN N LEASE  
WELL 2HM  
TUG HILL OPERATING**



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

6,103' T.H.

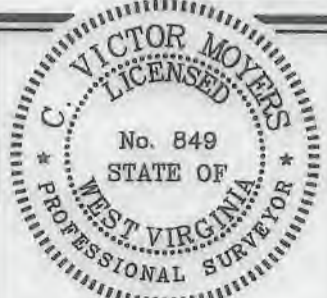
TAG	SURFACE OWNER	PARCEL	ACRES
A	TH EXPLORATION, LLC	9-14-24.1	10.05
B	WILLIAM K. STERN, ET UX	9-14-24	RES. OF 37.06
C	WILLIAM K. STERN, ET UX	9-14-20	120.323
D	WILLIAM K. STERN, ET UX	9-14-23	107.133
E	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
F	PATRICK J. SCHELLHASE EST - TRUST	9-14-11.3	23.424
G	PATRICK J. SCHELLHASE EST - TRUST	9-14-26	12.588
H	PATRICK J. SCHELLHASE EST - TRUST	9-14-11.1	7.617
I	HOY GLENN CROW	9-14-11	141.559
J	MICHAEL L. ALVAREZ	9-14-1.1	1.6
K	SAMUEL & HEATHER SUHODOLSKI	9-14-1	86.48
L	J. F. CROW ESTATE, ET AL	9-11-12	162.88
M	MARGARET K. FOX (LIFE)	9-11-2	84.378

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 05°57' W	102.83'
L2	S 06°24' E	919.97'
L3	N 58°53' W	1127.32'
L4	N 11°08' W	1542.43'

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	48.12'	447.92'	S 00°29' E	48.10'
C2	463.66'	10425.20'	S 05°29' E	463.62'
C3	132.05'	445.69'	S 01°13' W	131.57'
C4	80.75'	144.71'	S 26°18' W	79.71'
C5	69.45'	87.98'	S 69°25' W	67.66'
C6	90.92'	208.18'	N 73°26' W	90.20'
C7	165.91'	581.99'	N 52°50' W	165.35'
C8	405.60'	1418.52'	N 36°12' W	404.22'



12 Vinborn Drive | P.O. Box 150 | Glenville, WV 25351 | 304.462.5634  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5266  
sllwv.com



(+) 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. 8811P2HMR.dwg  
KEITH STERN N-2HM-REV1  
DATE JULY 31 20 18  
REVISED AUGUST 19 20 20  
OPERATORS WELL NO. KEITH STERN N-2HM  
API WELL NO. 47 - 051 - 02373 HGA  
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 CT CORPORATION SYSTEM ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

04/16/2024

COUNTY NAME PERMIT

**KEITH STERN N LEASE  
WELL 2HM  
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)

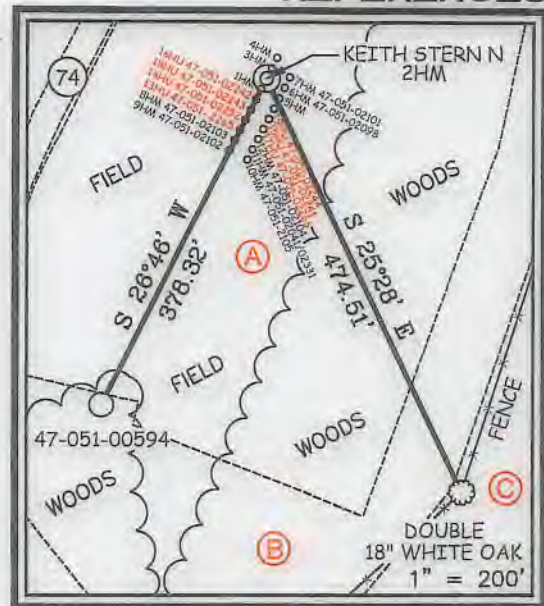
NAD'83 S.P.C.(FT)	N. 466,586.39	E. 1,633,449.53
NAD'83 GEO.	LAT-(N) 39.774915	LONG-(W) 80.692110
NAD'83 UTM (M)	N. 4,402,820.76	E. 526,367.55
<b>LANDING POINT</b>		
NAD'83 S.P.C.(FT)	N. 465,285.3	E. 1,633,027.8
NAD'83 GEO.	LAT-(N) 39.771328	LONG-(W) 80.693549
NAD'83 UTM (M)	N. 4,402,422.2	E. 526,245.7
<b>BOTTOM HOLE</b>		
NAD'83 S.P.C.(FT)	N. 470,989.4	E. 1,629,914.7
NAD'83 GEO.	LAT-(N) 39.786872	LONG-(W) 80.704895
NAD'83 UTM (M)	N. 4,404,144.2	E. 525,268.2

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

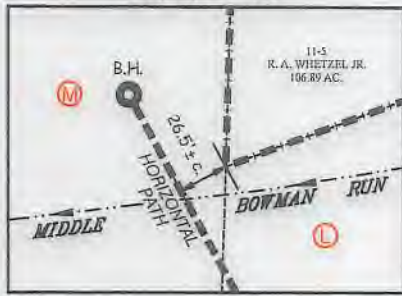
MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-13-11.1	SAMUEL & HEATHER SUHODOLSKI	0.49
9-13-14	MARGARET K. FOX - LIFE	3.00
9-14-1.2	KENNETH N. & TERESA A. SMERTNECK	1.02
9-14-2	MICHAEL L. ALVAREZ	0.75
9-14-3	MICHAEL L. ALVAREZ	NORTH P/O 3 PCLS
9-14-4	MICHAEL L. ALVAREZ	3 PCLS & 1/8 AC.
9-14-5	MICHAEL L. ALVAREZ	200 X 60 PCL.
9-14-6	MICHAEL L. ALVAREZ	120 X 200 PCL.
9-14-7	JOHN T. FRAZMUS, 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.
9-14-11.2	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
9-14-20.3	WILLIAM K. STERN, ET UX	0.831
9-14-25	PATRICIA A. DUGAS	0.559
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	MARIA JANE FAZZARO	1.512

T.H.

**REFERENCES**



DETAIL  
SCALE: 1" = 100'



12 Vankorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.6634  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3252  
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5295  
slswv.com

**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.

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-2HM  
API WELL NO. 47 - 051 - 02373 HGA  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8811P2HMR.dwg  
KEITH STERN N-2HM-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 = 742.10' 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  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: 6,401' / TMD: 13,740'

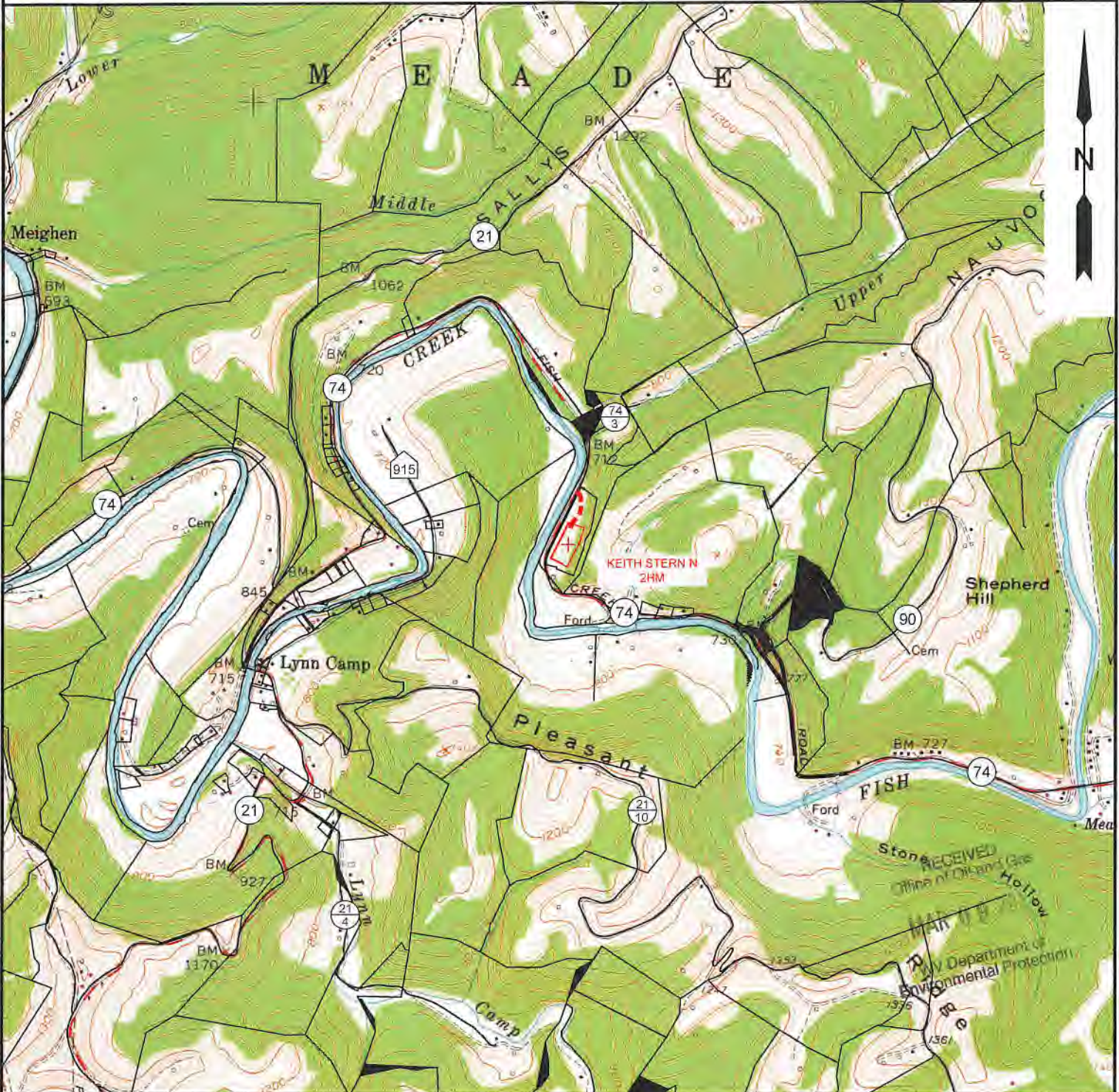
COUNTY NAME PERMIT

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 CHARLESTON, WV 25313

04/16/2024


4705102373

# PROPOSED KEITH STERN N - 2HM



NOTE: CLOSEST WATER PURVEYOR  
GRANDVIEW - DOOLIN PUBLIC SERVICE DISTRICT  
PROCTOR, WV

LAT: 39.7137712  
LON: -80.8258327  
LOCATED: S 60°11'49" W AT 43,719.31' FROM THE CENTER OF KEITH STERN N WELL PAD LOCATION.



12 Vestham Drive | P.O. Box 150 | Glenville, WV 26031 | 304.482.5634  
1419 Parkview Boulevard, East | Charleston, WV 25301 | 804.346.3922  
254 East Beckley Bypass | Beckley, WV 25801 | 804.255.5298  
sllw.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	MEADE	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8811	08/24/2020	1" = 2000'



**TUG HILL  
OPERATING**

**04/16/2021**