

**KEITH STERN N LEASE
WELL 3HM
TUG HILL OPERATING**

B.H.

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. 466,597.08	E. 1,633,455.00
NAD'83 GEO.	LAT-(N) 39.774944	LONG-(W) 80.692091
NAD'83 UTM (M)	N. 4,402,824.04	E. 526,369.16

LANDING POINT

NAD'83 S.P.C.(FT)	N. 465,649.6	E. 1,633,683.8
NAD'83 GEO.	LAT-(N) 39.772352	LONG-(W) 80.691232
NAD'83 UTM (M)	N. 4,402,536.5	E. 526,443.7

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 471,286.1	E. 1,630,606.7
NAD'83 GEO.	LAT-(N) 39.787712	LONG-(W) 80.702447
NAD'83 UTM (M)	N. 4,404,238.1	E. 525,477.5

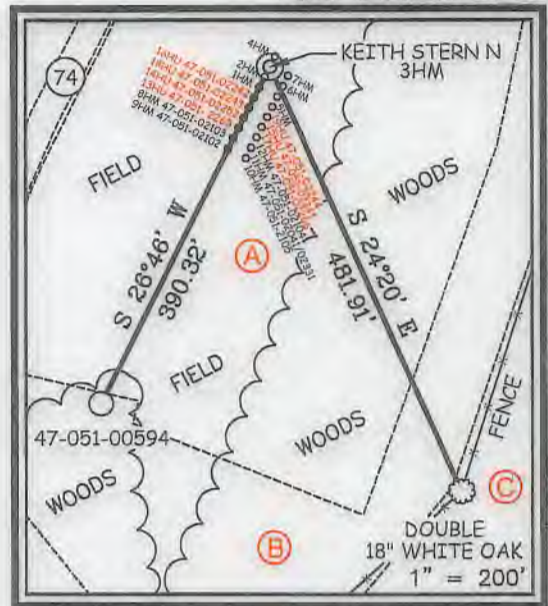
T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°40'00"

6,092' T.H.

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-13-11.1	SAMUEL & HEATHER SUDODOLSKI	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. BRAZMUS, 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.
9-14-21	ELANOR M. FOX EST	.99
9-14-11.1	PATRICK J. SCHELLHASE EST - TRUST	7.617
9-14-11.2	LOVE 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
9-14-26	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.

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.



12 Vanhorn Drive | P.O. Box 180 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 26601 | 304.255.5295
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-3HM
API WELL NO. 47 - 051 - 02374 WGA
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8811P3HMR.dwg
KEITH STERN N-3HM-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 = 741.50' 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

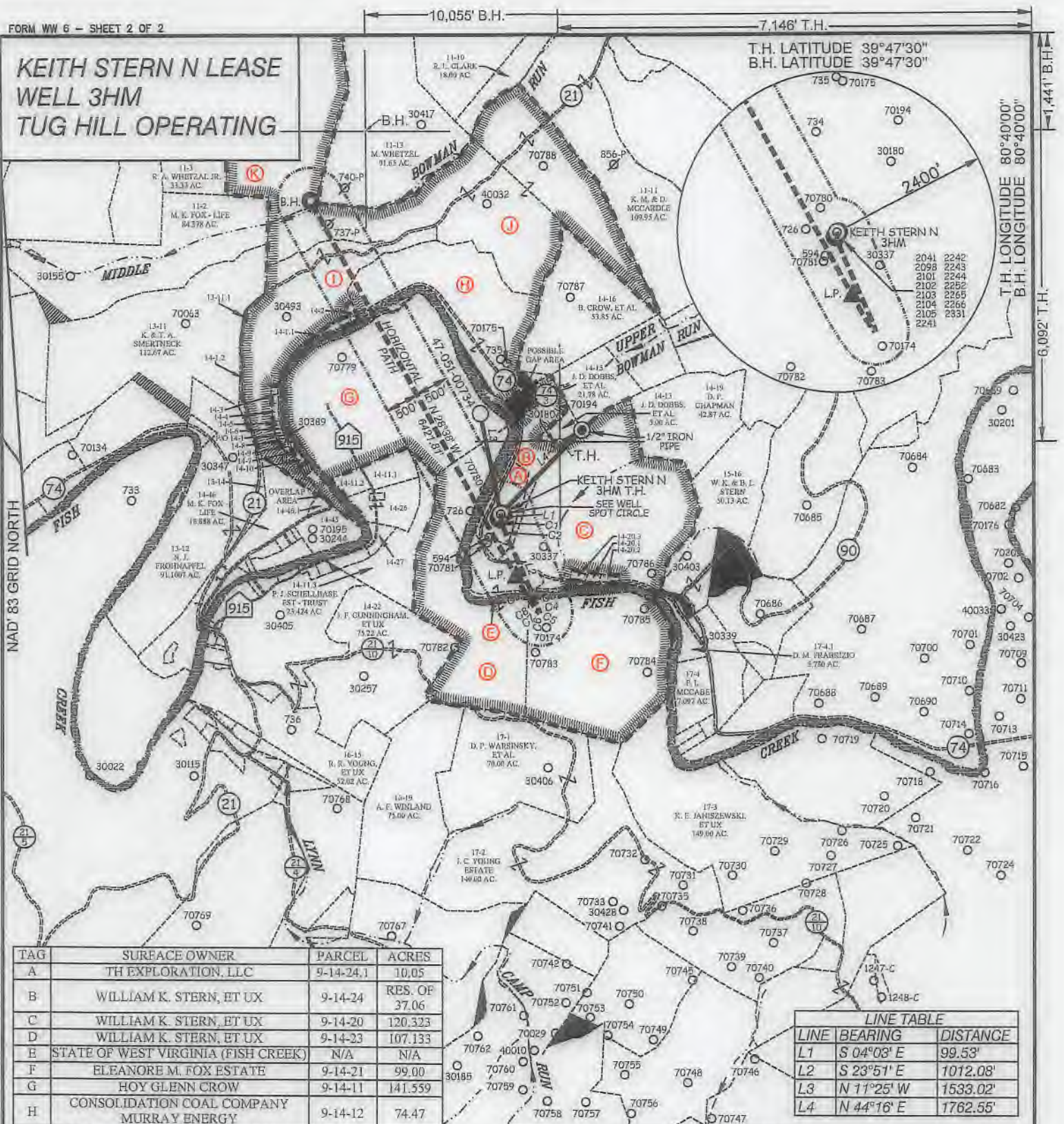
PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
ESTIMATED DEPTH TVD: 6,404' / TMD: 13,550'

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

COUNTY NAME PERMIT

04/16/2021

**KEITH STERN N LEASE
WELL 3HM
TUG HILL OPERATING**



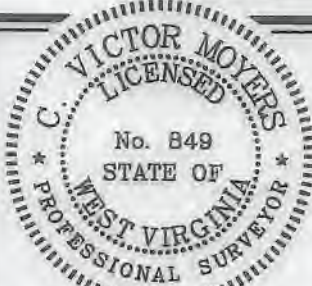
TAG	SURFACE OWNER	PARCEL	ACRES
A	TH EXPLORATION, LLC	9-14-24,1	10.05
B	WILLIAM K. STERN, ET UX	9-14-24	RES. OF 37.06
C	WILLIAM K. STERN, ET UX	9-14-20	120.323
D	WILLIAM K. STERN, ET UX	9-14-23	107.133
E	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
F	ELEANORE M. FOX ESTATE	9-14-21	99.00
G	HOY GLENN CROW	9-14-11	141.559
H	CONSOLIDATION COAL COMPANY MURRAY ENERGY	9-14-12	74.47
I	SAMUEL & HEATHER SUJODOLSKI	9-14-1	86.48
J	J. F. CROW ESTATE, ET AL.	9-11-12	162.88
K	RAY A. WHETZAL, JR.	9-11-5	106.89

LINE	BEARING	DISTANCE
L1	S 04°03' E	99.53'
L2	S 23°51' E	1012.08'
L3	N 11°25' W	1533.02'
L4	N 44°16' E	1762.55'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	66.08'	350.35'	S 13°36' E	65.98'
C2	251.24'	2809.39'	S 21°50' E	251.16'
C3	138.30'	1088.26'	S 21°02' E	138.20'
C4	27.07'	67.04'	S 08°04' E	26.89'
C5	8.14'	4.45'	S 67°49' W	7.05'
C6	16.33'	48.81'	N 53°57' W	16.25'
C7	29.13'	249.68'	N 42°03' W	29.11'
C8	138.44'	1397.32'	N 35°15' W	138.39'
C9	451.79'	5902.57'	N 30°33' W	451.68'



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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

P.S. *C. Victor Moyers*
 849

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. **8811P3HMR.dwg**
KEITH STERN N-3HM-REV1
 DATE **JULY 31**, 20 **18**
 REVISED **AUGUST 19**, 20 **20**
 OPERATORS WELL NO. **KEITH STERN N-3HM**
 API WELL NO. **47-051-02374 H4A**
 STATE COUNTY PERMIT

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



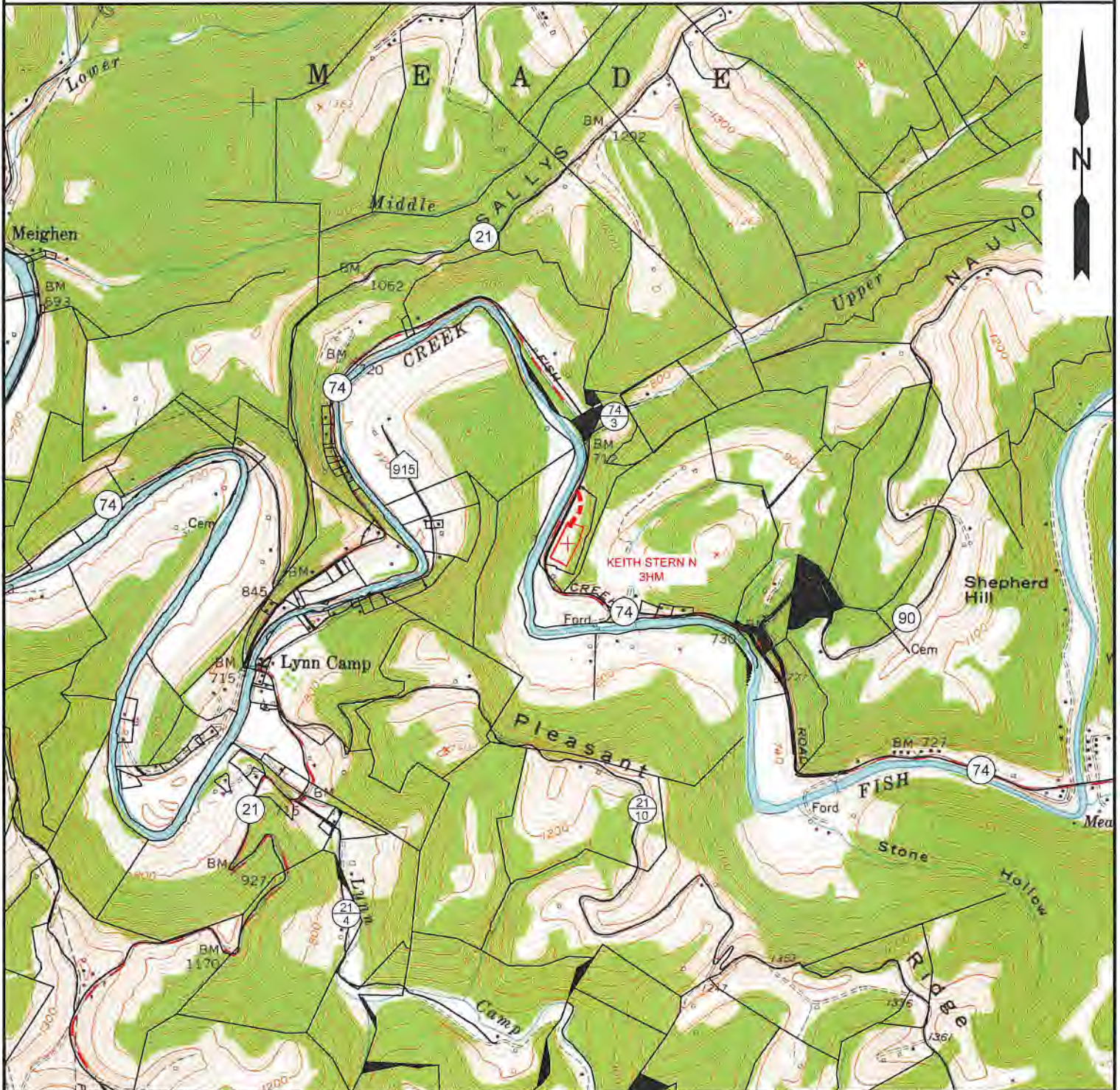
WELL OPERATOR **TUG HILL OPERATING, LLC**
 ADDRESS **1320 SOUTH UNIVERSITY DRIVE, SUITE 500
 FORT WORTH, TX 76107**

DESIGNATED AGENT **DIANNA STAMPER**
 ADDRESS **CT CORPORATION SYSTEM
 5400 D BIG TYLER ROAD
 CHARLESTON, WV 25313**

COUNTY NAME
 PERMIT

04/16/2021

PROPOSED KEITH STERN N - 3HM



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.



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slsvv.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