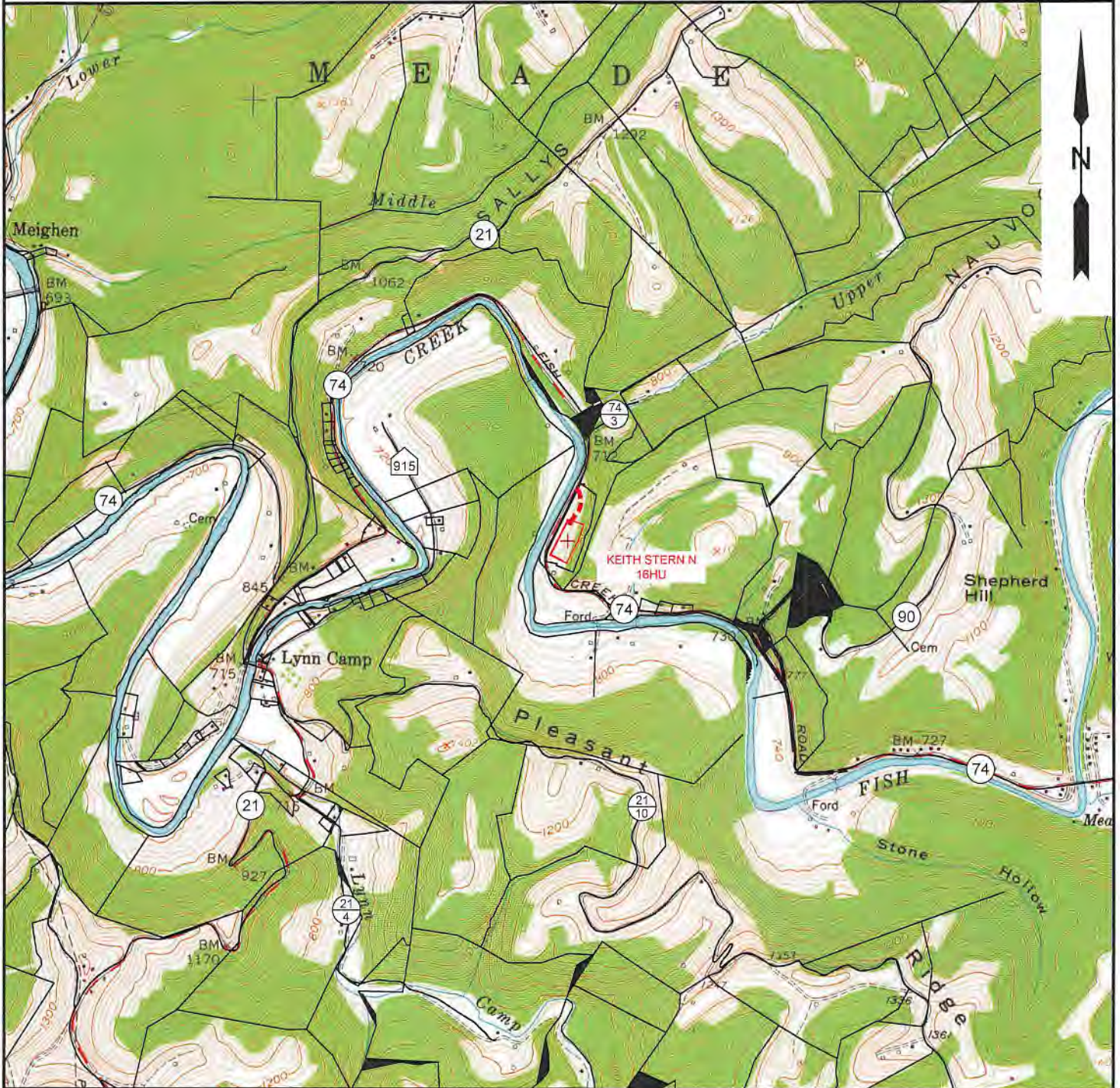


PROPOSED KEITH STERN N - 16HU



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.

SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 • 12 Vanhorn Drive • Glenville, WV 26351 • (304) 462-5634
www.slsurveys.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	05/29/2019	1" = 2000'



TUG HILL
RECEIVED
Office of Oil and Gas

JUN 13 2019

WV Department of
Environmental Protection

**KEITH STERN N LEASE
UTICA UNIT - 631.99 AC±
WELL 16HU
TUG HILL OPERATING**

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. 466,565.03	E. 1,633,438.61
NAD'83 GEO.	LAT-(N) 39.774656	LONG-(W) 80.692147
NAD'83 UTM (M)	N. 4,402,814.20	E. 526,364.33

LANDING POINT

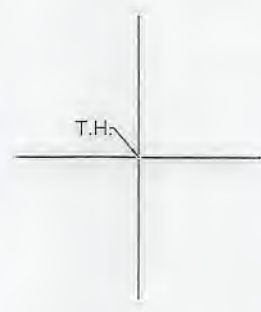
NAD'83 S.P.C.(FT)	N. 466,820.3	E. 1,636,132.1
NAD'83 GEO.	LAT-(N) 39.775654	LONG-(W) 80.692577
NAD'83 UTM (M)	N. 4,402,905.7	E. 527,183.6

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 472,750.3	E. 1,632,841.9
NAD'83 GEO.	LAT-(N) 39.791813	LONG-(W) 80.694563
NAD'83 UTM (M)	N. 4,404,695.5	E. 526,151.0

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

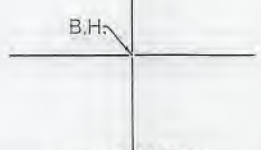
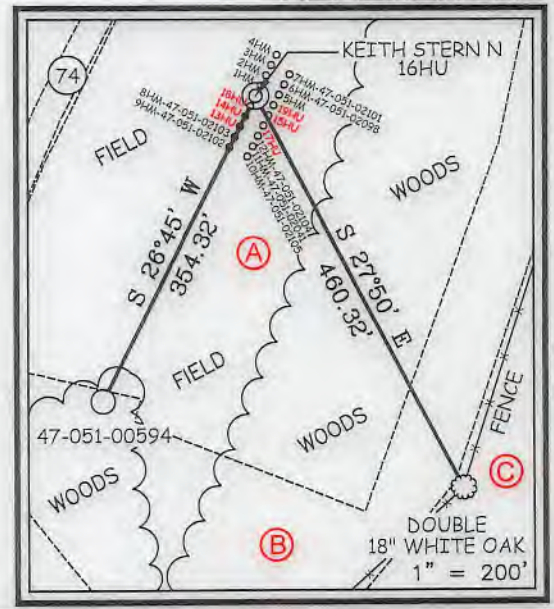
MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-13-11.1	SAMUEL & HEATHER SUHODOLSKI	0.49
9-13-14	MARGARET K. FOX - LIFE	3.00
9-14-1.1	MICHAEL L. ALVAREZ	1.6
9-14-1.2	KENNETH N. & TERESA A. SMERTINECK	1.02
9-14-2	MICHAEL L. ALVAREZ	0.75
9-14-3	MICHAEL L. ALVAREZ	NORTH P/O 3 PCLS
9-14-4	MICHAEL L. ALVAREZ	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 L. DUFFY - LIFE	25/100 AC.
9-14-11.1	PATRICK J. SCHELLHASE EST - TRUST	7.617
9-14-11.2	LOVE A. BLAKE	4.00
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
9-15-40	ROBERT WILLIAM BERISFORD	13.50
9-15-41	CHARLES RICHARD MCCOY, ET UX	4.50
9-15-42	ROBERT MATHEW MASON	2.63



NOTES ON SURVEY

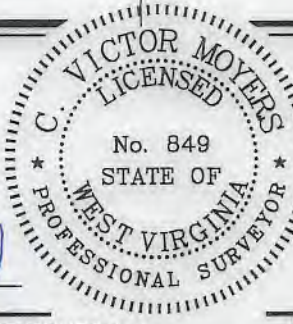
- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF KEITH STERN N-16HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF THE FOLLOWING:
PROPOSED KEITH STERN N-13HU, 14HU & 15HU,
PROPOSED KEITH STERN S-17HU, 18HU & 19HU,
PROPOSED KNOB CREEK N-13HU,
PROPOSED KNOB CREEK S-16HU,
PROPOSED HEAVEN HILL 3-6HU & 7HU,
HEAVEN HILL 2W-12HU (47-051-01952),
HEAVEN HILL 2-6HU (47-051-01910),
HEAVEN HILL 2-7HU (47-051-01911)
& HEAVEN HILL 2-8HU (47-051-01912)

REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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 MAY 29, 20 19

REVISED JUNE 10, 20 19

OPERATORS WELL NO. KEITH STERN N-16HU

API WELL NO. 47 - 051 - 02242

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500

FILE NO. 8811P16HUR2.dwg

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 TH EXPLORATION, LLC, 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 POINT PLEASANT

ESTIMATED DEPTH TVD: 11,413' / TMD: 19,148'

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

COUNTY NAME PERMIT

