

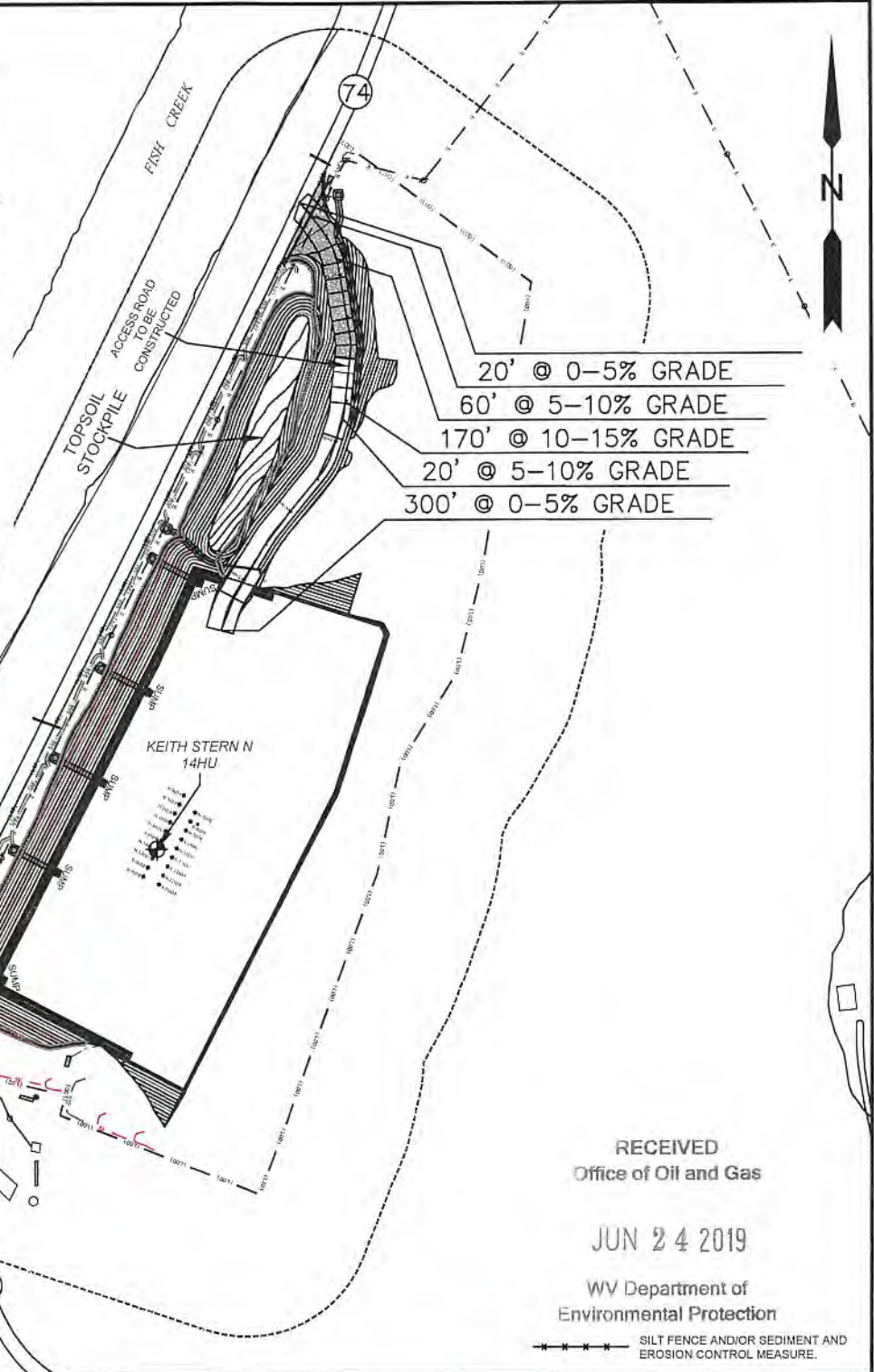
WW-9

PROPOSED KEITH STERN N - 14HU

SUPPLEMENT PG. 1

NOTES:

1. -- DENOTES INSTALL 18" PVC CULVERT AND APPLY APPROPRIATE SEDIMENT OUTLET CONTROL (RIP RAP SPLASH PAD)
2. DRAWING NOT TO SCALE
3. REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.
4. INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.
5. ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.
6. TEMPORARILY SEED AND MULCH ALL SLOPS UPON CONSTRUCTION OF LOCATION.
7. ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.
8. ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO BE UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.
9. SEE KEITH STERN N SITE PLAN PREPARED BY KELLEY SURVEYING. FOR COMPLETE CONSTRUCTION & EROSION AND SEDIMENT CONTROL DETAILS.



RECEIVED
Office of Oil and Gas

JUN 24 2019

WV Department of
Environmental Protection

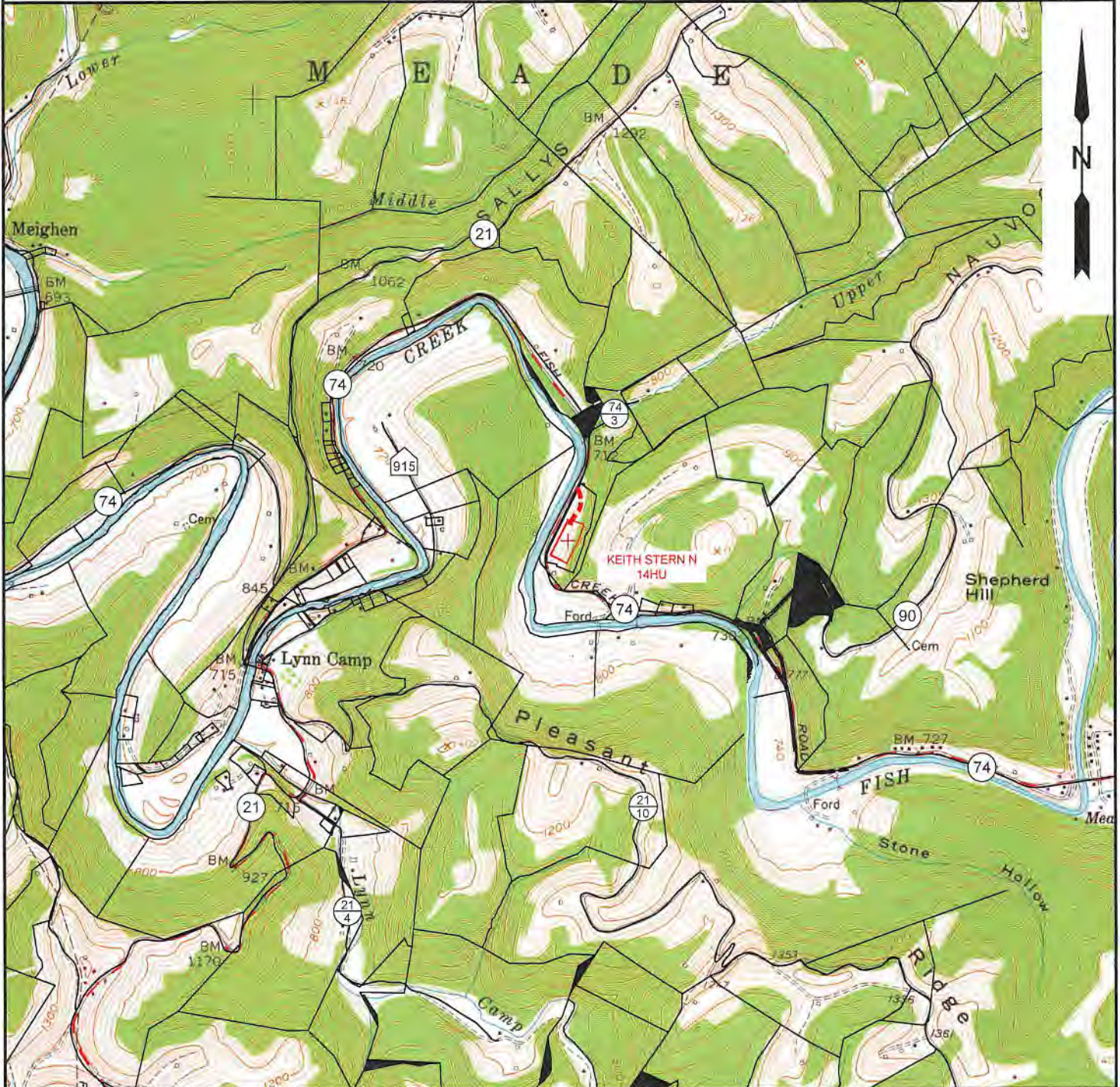
---S--- SILT FENCE AND/OR SEDIMENT AND EROSION CONTROL MEASURE.

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: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	MEADE		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8811	05/29/2019	NONE

TUG HILL
OPERATING

PROPOSED KEITH STERN N - 14HU



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.

RECEIVED
Office of Oil and Gas

SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 • 12 Vanhorn Drive • Glenville, WV 26351 • (304) 462-5934
www.slsurveys.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	MEADE	380 SOUTHPOINTE BLVD	
DRAWN BY		SUITE 200	
K.G.M.		CANONSBURG, PA 15317	
JOB NO.	DATE	SCALE	
8811	05/29/2019	1" = 2000'	

JUN 24 2019
TUG HILL
WV Department of
Environmental Protection

**KEITH STERN N LEASE
UTICA UNIT - 452.76 AC±
WELL 14HU
TUG HILL OPERATING**

10,054' B.H.

7,172' T.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. 466,543.66	E. 1,633,427.68
NAD'83 GEO.	LAT-(N) 39.774797	LONG-(W) 80.692185
NAD'83 UTM (M)	N. 4,402,807.63	E. 526,361.11
<u>LANDING POINT</u>		
NAD'83 S.P.C.(FT)	N. 465,724.3	E. 1,633,818.3
NAD'83 GEO.	LAT-(N) 39.772562	LONG-(W) 80.690757
NAD'83 UTM (M)	N. 4,402,560.0	E. 526,484.3
<u>BOTTOM HOLE</u>		
NAD'83 S.P.C.(FT)	N. 471,656.9	E. 1,630,612.5
NAD'83 GEO.	LAT-(N) 39.788730	LONG-(W) 80.702444
NAD'83 UTM (M)	N. 4,404,351.1	E. 525,477.4

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°40'00"
1,070' T.H.
6,146' B.H.

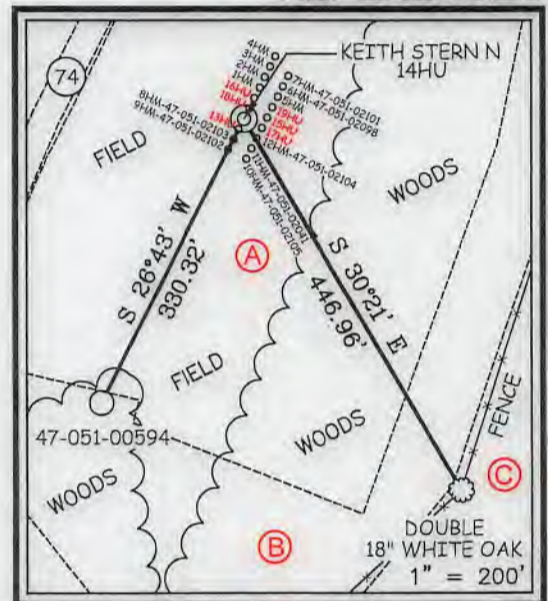
MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-10-12	RAY A. WHETZAL, JR., ET AL.	36.51
9-11-3	RAY A. WHETZAL, JR., ET AL.	33.33
9-13-11.1	SAMUEL & HEATHER SUHODOLSKI	0.49
9-13-14	MARGARET K. FOX - LIFE	3.00
9-14-12	KENNETH N. & TERESA A. SMERTNECK	1.02
9-14-3	MICHAEL L. ALVAREZ	NORTH P/O 3 PCLS
9-14-4	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 L. DUFFY - LIFE	25/100 AC.
9-14-11.1	PATRICK J. SCHELLHASE - TRUST	7.617
9-14-11.2	LOYE A. BLAKE	4.00
9-14-20.2	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
9-15-40.1	ADAM WALTER BARTOSZEWICZ	13.50
9-15-43	PHILLIP L. MCCABE	11.716
9-17-4.1	DAVID M. FRABRIZIO	5.780
9-17-4.4	MARGARET A. TOLER - LIFE	1.318

T.H.

NOTES ON SURVEY

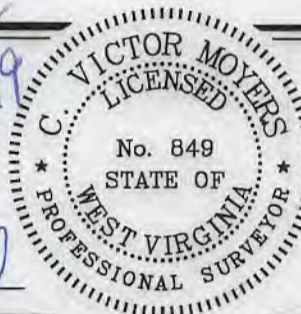
- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF KEITH STERN N-14HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF THE FOLLOWING:
PROPOSED KEITH STERN N-13HU, 15HU & 16HU,
PROPOSED KEITH STERN S-17HU, 18HU & 19HU,
PROPOSED KNOB CREEK N-13HU,
PROPOSED KNOB CREEK S-16HU,
HEAVEN HILL 2W-12HU (47-051-01952),
HEAVEN HILL 2W-13HU (47-051-01957),
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 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 MAY 29, 20 19
REVISED JUNE 10, 2019 & JUNE 17, 2019
OPERATORS WELL NO. KEITH STERN N-14HU
API WELL NO. 47 - 51 - 02252
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8811P14HUR3.dwg
KEITH STERN N-14HU-REV3
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 = 739.30' 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±

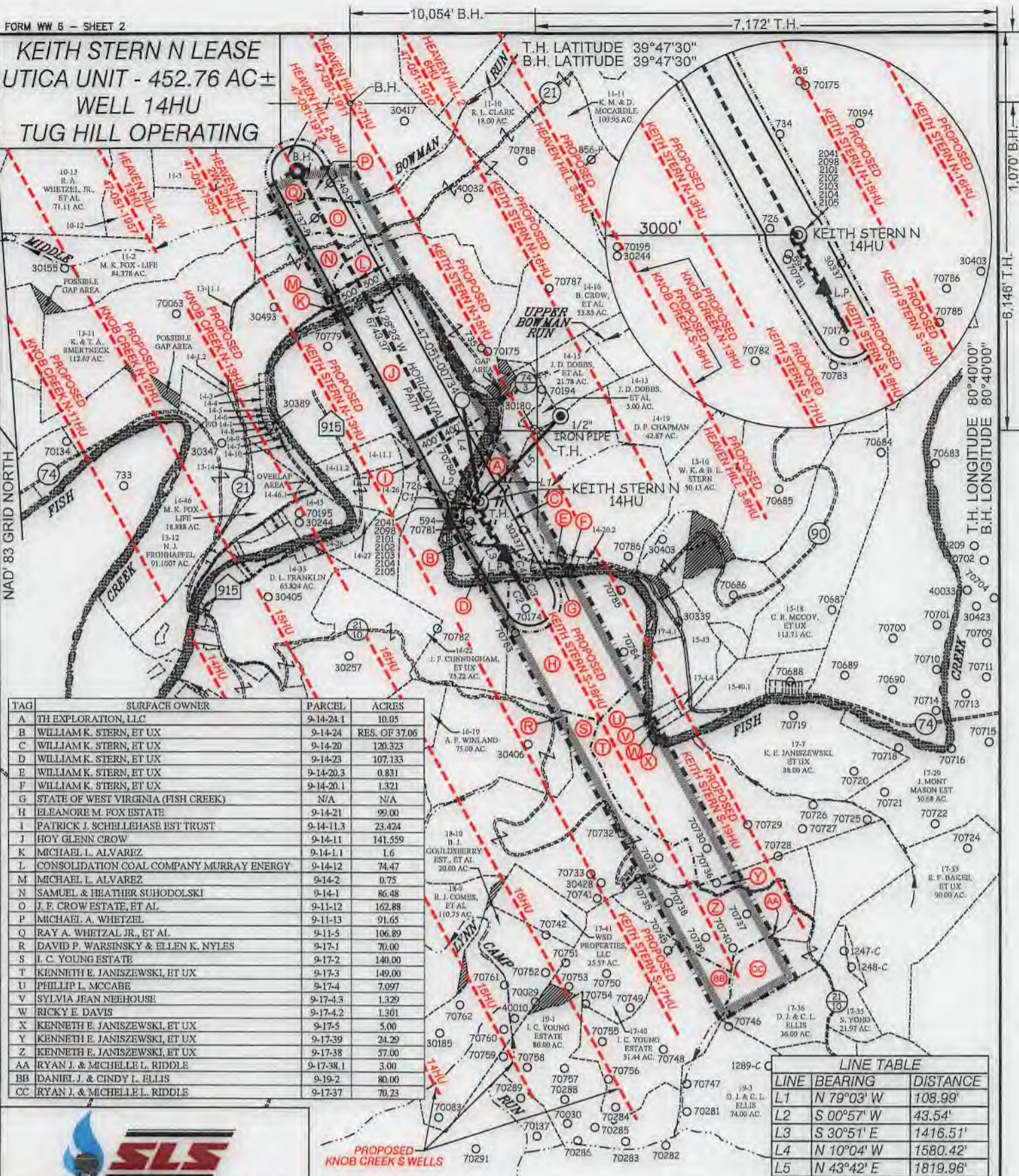
PROPOSED WORK: LEASE NO. SEE WW-6A1
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION POINT PLEASANT
ESTIMATED DEPTH TVD: 11,381' / TMD: 18,819'

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

**KEITH STERN N LEASE
UTICA UNIT - 452.76 AC±
WELL 14HU
TUG HILL OPERATING**



TAG	SURFACE OWNER	PARCEL	ACRES
A	ITH 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	WILLIAM K. STERN, ET UX	9-14-20.3	0.831
F	WILLIAM K. STERN, ET UX	9-14-20.1	1.321
G	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
H	ELEANORE M. FOX ESTATE	9-14-21	99.00
I	PATRICK J. SCHELLEHASE EST TRUST	9-14-11.3	23.424
J	HOY GLENN CROW	9-14-11	141.559
K	MICHAEL L. ALVAREZ	9-14-1.1	1.6
L	CONSOLIDATION COAL COMPANY MURRAY ENERGY	9-14-12	74.47
M	MICHAEL L. ALVAREZ	9-14-2	0.75
N	SAMUEL & HEATHER SUHODOLSKI	9-14-1	86.48
O	J. F. CROW ESTATE, ET AL	9-11-12	162.88
P	MICHAEL A. WHETZEL	9-11-13	91.65
Q	RAY A. WHETZAL JR., ET AL	9-11-5	106.89
R	DAVID P. WARNSKY & ELLEN K. NYLES	9-17-1	70.00
S	L. C. YOUNG ESTATE	9-17-2	140.00
T	KENNETH E. JANISZEWSKI, ET UX	9-17-3	149.00
U	PHILLIP L. MCCABE	9-17-4	7.097
V	SYLVIA JEAN NEEHOUSE	9-17-4.3	1.329
W	RICKY E. DAVIS	9-17-4.2	1.301
X	KENNETH E. JANISZEWSKI, ET UX	9-17-5	5.00
Y	KENNETH E. JANISZEWSKI, ET UX	9-17-39	24.29
Z	KENNETH E. JANISZEWSKI, ET UX	9-17-38	57.00
AA	RYAN J. & MICHELLE L. RIDDLER	9-17-38.1	3.00
BB	DANIEL J. & CINDY L. ELLIS	9-19-2	80.00
CC	RYAN J. & MICHELLE L. RIDDLER	9-17-37	70.23

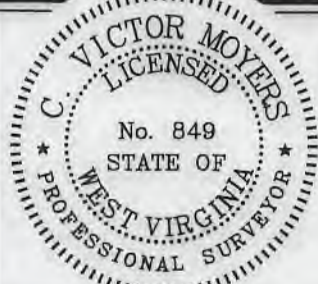
LINE	BEARING	DISTANCE
L1	N 79°03' W	108.99'
L2	S 00°57' W	43.54'
L3	S 30°51' E	1416.51'
L4	N 10°04' W	1580.42'
L5	N 43°42' E	1819.96'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	84.12'	164.03'	S 17°59' E	83.20'
C2	227.15'	14242.55'	S 31°05' E	227.15'
C3	229.82'	4998.06'	N 27°35' W	229.80'
C4	556.47'	110908342.44'	N 28°23' W	556.47'

SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 • 52 Vannom Drive • Glenville, WV 26031 • (804) 462-5634
www.slsww.com

P.S. *C. Victor Moyers*
849

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
NAD'83 S.P.C.(FT)	N. 466,543.66	E. 1,633,427.68	
NAD'83 GEO.	LAT-(N) 39.774797	LONG-(W) 80.692185	
NAD'83 UTM (M)	N. 4,402,807.63	E. 526,361.11	
LANDING POINT			
NAD'83 S.P.C.(FT)	N. 465,724.3	E. 1,633,818.3	
NAD'83 GEO.	LAT-(N) 39.772562	LONG-(W) 80.690757	
NAD'83 UTM (M)	N. 4,402,560.0	E. 526,484.3	
BOTTOM HOLE			
NAD'83 S.P.C.(FT)	N. 471,656.9	E. 1,630,612.5	
NAD'83 GEO.	LAT-(N) 39.788730	LONG-(W) 80.702444	
NAD'83 UTM (M)	N. 4,404,351.1	E. 525,477.4	



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

LEGEND	
UNIT BOUNDARY	—
LEASED TRACTS INSIDE	—
UNIT BOUNDARY	—
SURFACE LINE	—
PROPOSED UTICA	—
WELL LATERAL	—
400' OFFSET LINE	—
500' OFFSET LINE	—
TIE LINE	—
CREEK	—
ROAD	—
COUNTY ROUTE	—
PROPOSED WELL	⊙
EXISTING WELL	⊙
PERMITTED WELL	⊙
SURFACE OWNER (SEE TABLE)	⊙
LEASE # (SEE ADDITIONAL SHEETS)	⊙

SCALE 1" = 2000' FILE NO. 8811P14HUR3.dwg
KEITH STERN N-14HU-REV3
DATE MAY 29 20 19
REVISED JUNE 10, 2019 & JUNE 17, 2019
OPERATORS WELL NO. KEITH STERN N-14HU
API WELL 47
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
---	--