

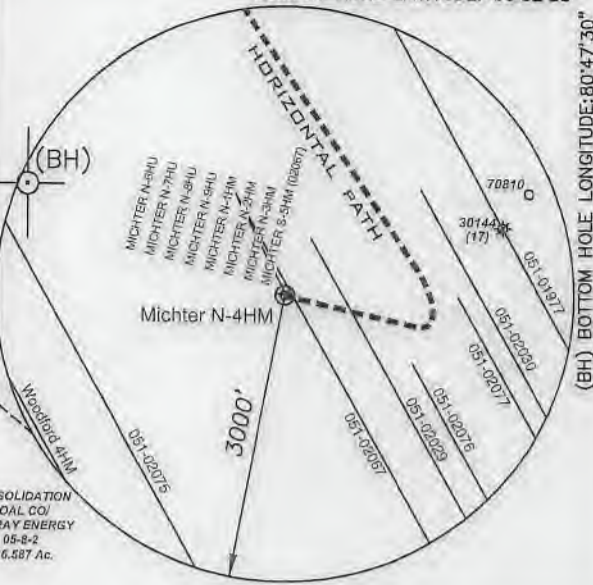
MIGHTER LEASE WELL N-4HM
1 196.8618 ± ACRES

REFERENCES SCALE 1"=500'



LINE	BEARING	DISTANCE
L1	N 72°31' W	877.36'
L2	N 78°08' E	1847.73'
L3	S 44°01' E	3.93'
L4	S 76°56' E	1405.83'

(BH) 6,149'
 (TH) 1,652'
 TOP HOLE LATITUDE: 39°50'00"
 BOTTOM HOLE LATITUDE: 39°52'30"



GRID NORTH

U.S. of America 05-7-1 50 Ac.

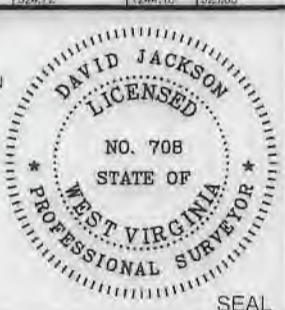
NOTES
 (+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS
 1. BORE PATH BASED ON GRID NORTH.
 2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 825' OF PAD CENTER WERE FOUND.
 3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 4. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.

FILE NUMBER _____
 DRAWING NUMBER MIGHTER_N-4HM_REV1
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION



David L Jackson
 JACKSON SURVEYING INC.
 P.O. Box 1460
 Clarksburg, WV 26302
 304-623-5851



WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET, SE
 CHARLESTON, WV 25304

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION ELEVATION 1130.2' WATERSHED (HUC 10) FISH CREEK
 DISTRICT FRANKLIN COUNTY MARSHALL
 QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 FORM

SURFACE OWNER LARRY W. DUNLAP & CHARLES LEROY DUNLAP ACREAGE 34.405
 OIL & GAS ROYALTY OWNER LARRY W. DUNLAP & CHARLES LEROY DUNLAP LEASE ACREAGE 34.405
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___
 PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) _____
 PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD: 6,421' TMD: 17,318'
 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

LEGEND
 - - - - - LEASED TRACTS
 - - - - - SURFACE TRACTS
 - - - - - UNIT BOUNDARY
 (A) LEASE # (SEE 6A1 FORM)

DETAIL SKETCH "A" SCALE 1"=100'

- MIGHTER N-5HM
- MIGHTER N-7HU
- MIGHTER N-8HU
- MIGHTER N-9HU
- MIGHTER N-1HM
- MIGHTER N-2HM
- MIGHTER N-3HM
- MIGHTER N-4HM
- MIGHTER S-5HM (02067)

SURFACE HOLE
 UTM. NAD83, ZONE 17
 IN METERS
 (TH) 1,652
 N) 4,405,904.95
 E) 517,346.42

LANDING POINT 1
 UTM. NAD83, ZONE 17
 IN METERS
 N) 4,406,005.97
 E) 517,757.20

BOTTOM HOLE
 UTM. NAD83, ZONE 17
 IN METERS
 N) 4,408,560.19
 E) 515,970.62

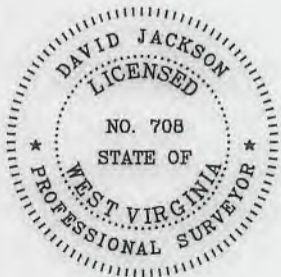
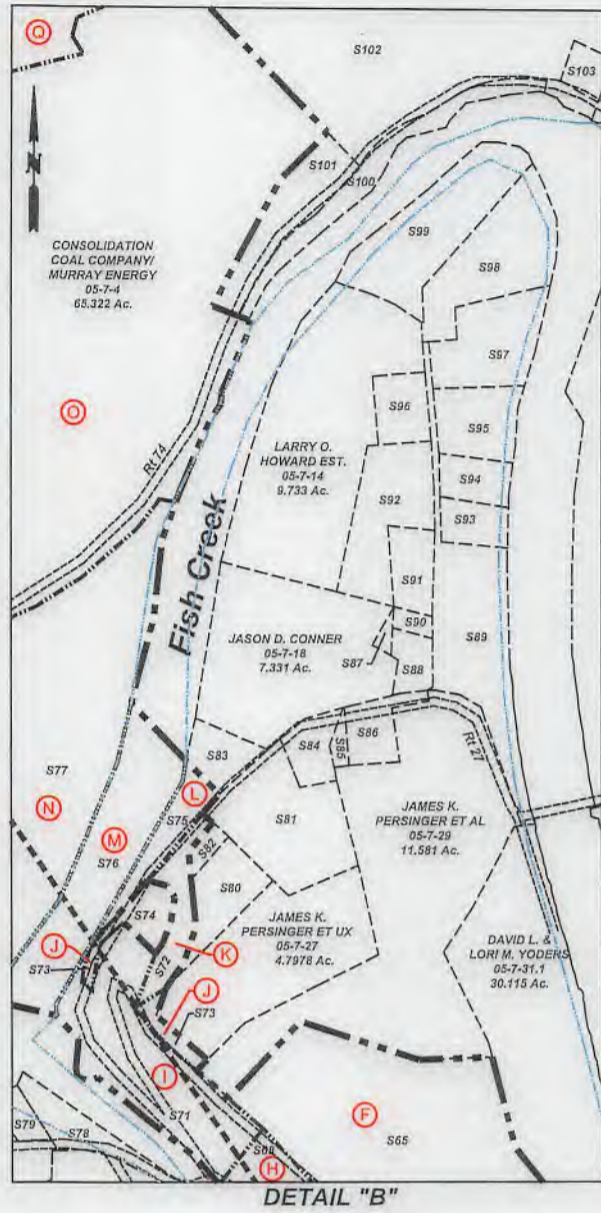
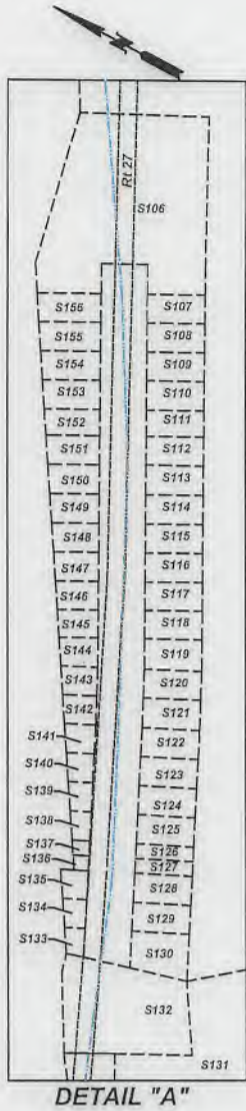
NUMBER	CHORD DIRECTION	CHORD LENGTH	RADIUS	ARC LENGTH
C1	S 60°27' E	4.28	7.36	4.33
C2	S 88°50' E	71.9'	180.04	72.53
C3	N 45°31' E	104.63	110.46	109.00
C4	N 05°32' E	116.78	277.50	117.84
C5	N 72°28' W	158.28	882.76	158.84
C6	N 28°48' W	324.72	1244.48	325.65

COUNTY NAME
 PERMIT

(BH) 6,149'
 (TH) 1,652'

(BH) BOTTOM HOLE LONGITUDE: 80°47'30"
 (TH) TOP HOLE LONGITUDE: 80°47'30"

PG 2 OF 3
MICHTER LEASE
WELL N-4HM
 1196.8618± ACRES



P.S. 708 *David L Jackson*



TUG HILL
OPERATING

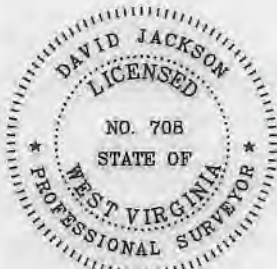
OPERATOR'S
 WELL #: Michter N-4HM
 DISTRICT: Franklin
 COUNTY: Marshall
 STATE: WV

WELL PLAT
 PAGE 2 OF 3
 DATE: 01/04/2019

PG 3 OF 3 MICTHER LEASE
WELL N-4HM
1196.8618± ACRES

Number	TAX MAP - PARCEL	ADJOINER OWNER	ACRES
S1	05-12-11	Wesley Bryan & Wesley Bryan II	52.478
S2	05-12-10	Consolidation Coal Company/ Murray Energy c/o Land Dept	13.76
S3	05-12-10.1	Consolidation Coal Company/ Murray Energy	38.48
S4	05-07-42.4	Jason Reed Hartley	0.94
S5	05-07-42.3	Joshua David Hartley	0.886
S6	05-07-42.2	Steven & Rhonda Lloyd	0.85
S7	05-07-44	Crystal B. Darrah	1.726
S8	05-07-42	Tracy M. Kesterson	0.54
S9	05-07-42.5	Matthew V. Conner, et al	3.791
S10	05-07-41	James A. Wade	1.00
S11	05-12-09	Lionel & Mary Lee Persinger	10.15
S12	05-07-42.1	Lionel L. & Mary Lee Persinger	5.99
S13	05-07-35	Samuel L. Persinger	10.708
S14	05-07-36	John Persinger	4.329
S15	05-07-38	John K. Persinger, et ux	2.65
S16	05-07-37	John K. Persinger, et ux	0.133
S17	05-07-43.3	M. Frank Mason	0.327
S18	05-78-48	Cassidy Rain Carpenter	1.325
S19	05-78-49	Cassidy Rain Carpenter	1.1441
S20	05-07-43.4	Ida L. Campbell	0.403
S21	05-07-43.1	WV DOH	1.48
S22		State Road Commission	17.62 Cole
S23	05-7A-32	Dawn Thompson Tennant	0.3091
S24	05-7A-31	WV Dept. of Natural Resources	3.18
S25	05-07-03	Consolidation Coal Company/ Murray Energy	12.2641
S26	05-07-3.5	Wheeling Power Company	1.5004
S27 C	05-11-1.4	Larry Dunlap, et al	32.493
S28	05-06-3.1	Ohio Power Co.	28.9966
S29	05-06-16	Appalachian Power CP	0.61
S30	05-06-11	Consolidation Coal Company/ Murray Energy	1.05
S31	05-06-14	CII Carbon, LLC	1.408
S32	05-06-13	CII Carbon, LLC	0.318
S33	05-06-09	CII Carbon, LLC	1.15
S34	05-06-12	CII Carbon, LLC	0.43458
S35	05-06-18	CII Carbon, LLC	0.2754
S36	05-06-1.2	Ohio Power Co.	0.693
S37	05-06-1.1	CII Carbon, LLC	13.269
S38	05-06-06	Consolidation Coal Company/ Murray Energy	18.50
S39	05-06-05	Consolidation Coal Company/ Murray Energy	17.159
S40	05-06-04	Consolidation Coal Company/ Murray Energy	5.47
S41	05-8A-39	Barbara L. Daniels & Elaine Wills	3.223
S42	05-8A-40	Barbara L. Daniels & Elaine Wills	0.627
S43	05-8A-42	Robert M. White	7.23
S44	05-8A-46	Barbara L. Rose & Mary L. Rose	1.5
S45	05-8A-47	Barbara L. Rose & Mary L. Rose	3.0
S46	05-8A-45	Raymond A. Jr. & Larriette Scott	0.305
S47	05-11-01	William N. & Virginia A. Roupe	4.527
S48	05-11-1.6	Debra Morris	2.093
S49	05-11-1.7	William S. & Mary K. Adams	8.00
S50	05-11-1.3	Jay A. Conner, et ux	4.256
S51	05-11-1.5	Paul & Sandy Witt	3.507
S52	05-11-1.2	Jay A. Conner, et ux	5.824
S53	05-08-9.1	Scott E. Jackson, Tammy S. South & Marion Jackson	1.957
S54	05-11-02	Walter C. & Cheryl A. Rine	42.36
S55	05-11-2.2	Joshua A. Myers	2.193
S56	05-11-2.1	Walter C. & Cheryl A. Rine	1.19
S57	05-11-20	David E. Gray	0.569
S58	05-11-19	David E. Gray	0.532
S59	05-11-03	Kevin R. Corley, et ux	13.18
S60	05-11-17	Kevin R. Corley, et ux	36.13
S61	05-11-14	Hiram's Estate Family, LTD LLP	158.054
S62 A	05-11-1.1	Larry W. Dunlap & Charles Leroy Dunlap	34.405
S63 D	05-07-33	William N. Roupe	24.60
S64 E	05-07-32	William N. & Virginia A. Roupe	4.2

Number	TAX MAP - PARCEL	ADJOINER OWNER	ACRES
S65 F	05-07-31	William N. Roupe, et ux	43.147
S66	05-07-31.4	Grandview-Doolen PSD	0.23
S67 G	05-07-31.2	William N. Roupe, et ux	3.304
S68 H	05-07-34	WV DOH	10.88
S69	05-07-31.3	William N. & Virginia A. Roupe	0.230
S70	05-07-43.2	M. Frank Mason	1.36
S71 I	05-07-26	James A. Wade	7.80
S72 K	05-07-23.1	WV DOH	2.37
S73 J	05-07-25	WV DOH	0.50
S74	05-07-24	James A. Wade	0.578
S75 L	05-07-45	Robert L. Henry (Life) & Jeffrey S. Henry	0.65
S76 M	Fish Creek	State of WV	4.92 Calc.
S77 N	05-07-3.2	Ohio Power Company	45.5348
S78	05-07-35.1	Lionel L. & Marylee Persinger	0.812
S79	05-07-36.1	Lionel L. & Mary Lee Persinger	0.5579
S80	05-07-23	Arlie L. Powell	1.435
S81	05-07-27.1	Mark L. Ritter, et ux	3.427
S82	05-07-23.2	Robert L. Henry (Life) & Jeffrey S. Henry	0.256
S83	05-07-21	Aaron S. Meyer	1.775
S84	05-07-22	Jesus & Mary Bustamante	0.782
S85	05-07-28.1	Jesus & Mary Bustamante	0.200
S86	05-07-28	Thelma M. Roupe	0.940
S87	05-07-18.1	Debra L. Bennett	0.13
S88	05-07-17	Debra L. Bennett	0.614
S89	05-07-15	William Roupe, et ux	6.631
S90	05-07-16	Debra L. Bennett	0.235
S91	05-07-14.2	Robert L. Eyles, Sr. & Jessica L. Bennett	0.998
S92	05-07-14.3	Steven H. Howard	2.669
S93	05-07-15.1	Woodland Hills Recreation Club	1.016
S94	05-07-13	Woodland Hills Recreation Club	1.109
S95	05-07-12	Carol A. & Shelva G. Smith	2.01
S96	05-07-14.1	Larry O. Howard, Est.	1.00
S97	05-07-11	Roy S. & Cynthia M. Meadows	2.90
S98	05-07-10.1	Sandra Kay Beymer & Chad M. Wright	4.237
S99	05-07-10	Darren Edward Thacker	4.737
S100	05-07-5.1	George A. Knuth	2.95
S101	05-07-05	CNX Gas Company, LLC	1.407
S102	05-07-06	CNX Gas Company, LLC	21.171
S103	05-07-07	Consolidation Coal Company/ Murray Energy	1.00
S104 P	05-07-02	Consolidation Coal Company/ Murray Energy	46.46
S105 R	05-06-03	Ohio Power Co.	281.046
S106	05-7B-01	Patricia L. Robinson	1.257
S107	05-7B-47	Daniel D. Robinson, et ux	0.1148
S108	05-7B-46	Daniel D. Robinson, et ux	0.1148
S109	05-7B-45	Daniel D. & Mary E. Robinson	0.1148
S110	05-7B-44	Daniel D. & Mary E. Robinson	0.1148
S111	05-7B-43	Teresa & Thomas Gouldsberry	0.1148
S112	05-7B-42	Teresa & Thomas Gouldsberry	0.1194
S113	05-7B-41	Teresa & Thomas Gouldsberry	0.1148
S114	05-7B-40	Teresa & Thomas Gouldsberry	0.1148
S115	05-7B-39	Teresa & Thomas Gouldsberry	0.1148
S116	05-7B-38	Teresa & Thomas Gouldsberry	0.1148
S117	05-7B-37	Teresa & Thomas Gouldsberry	0.1148
S118	05-7B-36	Albert J. Anderson, Jr.	0.1148
S119	05-7B-35	Albert J. Anderson, Jr.	0.1217
S120	05-7B-34	Albert J. Anderson, Jr.	0.1148
S121	05-7B-33	Albert J. Anderson, Jr.	0.1182
S122	05-7B-32	Albert J. Anderson, Jr.	0.1148
S123	05-7B-31	Cindy D. Aliff, et al	0.1148
S124	05-7B-30	Cindy D. Aliff, et al	0.1148
S125	05-7B-29	Cindy D. Aliff	0.1148
S126	05-7B-28.1	Cindy D. Aliff	0.0574
S127	05-7B-28	Cindy D. Aliff	0.0574
S128	05-7B-27	Patricia A. Johnson	0.1148
S129	05-7B-26	Cindy D. Aliff	0.1148
S130	05-7B-25	Cindy D. Aliff	0.1673
S131	05-7A-02	CNX Land Resources, Inc.	2.23
S132	05-7A-01	Lucille Myers	0.529
S133	05-7B-24	Cindy D. Aliff	0.0354
S134	05-7B-23	Cindy D. Aliff	0.0471
S135	05-7B-22	Cindy D. Aliff	0.0505
S136	05-7B-21	Cindy D. Aliff	0.0287
S137	05-7B-21.1	Cindy D. Aliff	0.0296
S138	05-7B-20	Cindy D. Aliff	0.0626
S139	05-7B-19	Cindy D. Aliff	0.0712
S140	05-7B-18	Cindy D. Aliff	0.0763
S141	05-7B-17	Albert J. Anderson, Jr.	0.0849
S142	05-7B-16	Albert J. Anderson, Jr.	0.0903
S143	05-7B-15	Albert J. Anderson, Jr.	0.0970
S144	05-7B-14	Albert J. Anderson, Jr.	0.0991
S145	05-7B-13	Albert J. Anderson, Jr.	0.1067
S146	05-7B-12	Teresa & Thomas Gouldsberry	0.1113
S147	05-7B-11	Teresa & Thomas Gouldsberry	0.1159
S148	05-7B-10	Teresa & Thomas Gouldsberry	0.1199
S149	05-7B-09	Teresa & Thomas Gouldsberry	0.1240
S150	05-7B-08	Teresa & Thomas Gouldsberry	0.1286
S151	05-7B-07	Teresa & Thomas Gouldsberry	0.1331
S152	05-7B-06	Teresa & Thomas Gouldsberry	0.1377
S153	05-7B-05	Daniel D. & Mary E. Robinson	0.1418
S154	05-7B-04	Daniel D. & Mary E. Robinson	0.1458
S155	05-7B-03	Daniel D. Robinson, et ux	0.1504
S156	05-7B-02	Daniel D. Robinson, et ux	0.1550



P.S. 708 *David L Jackson*

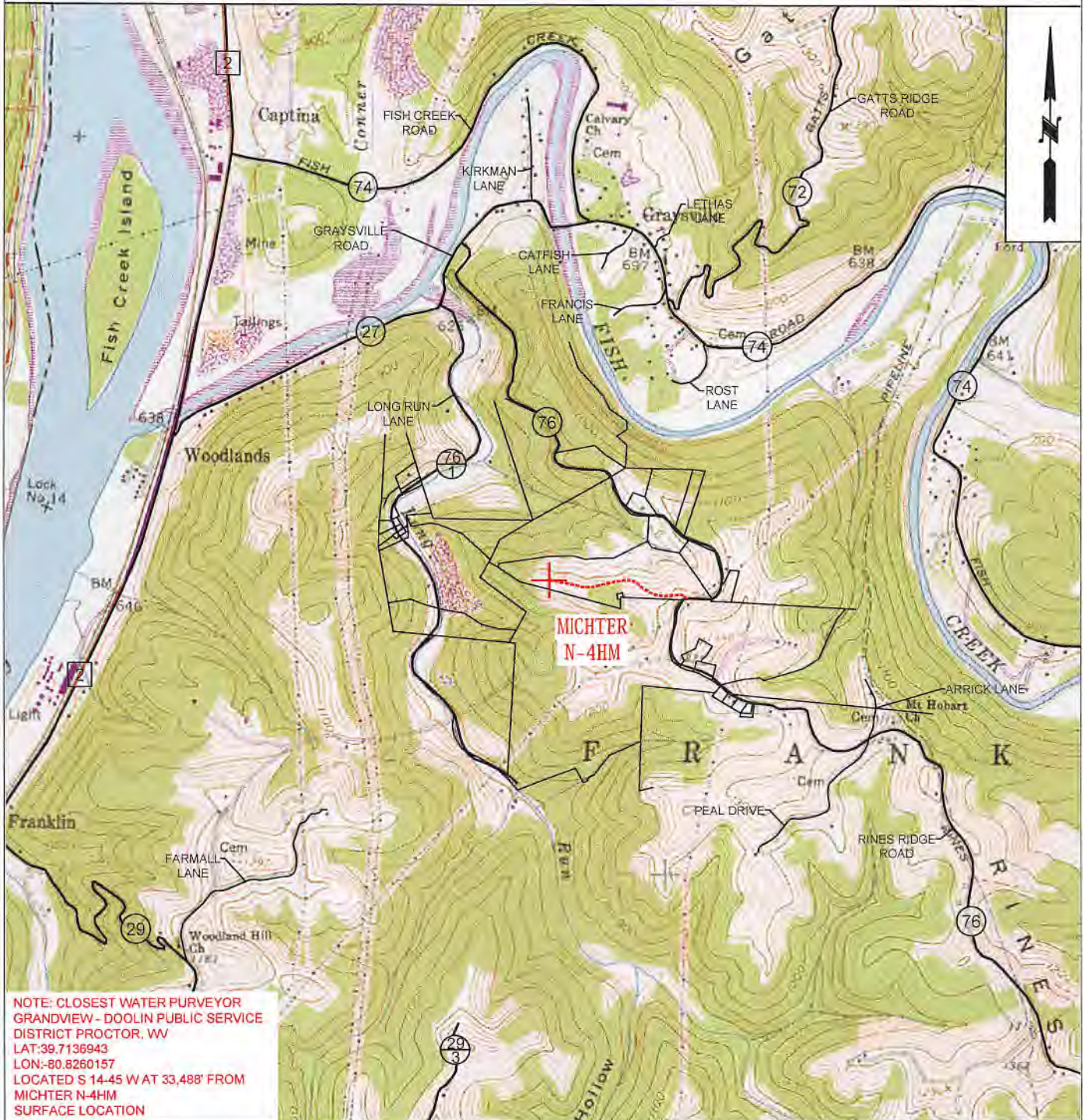


OPERATOR'S
WELL #: Michter N-4HM WELL PLAT
DISTRICT: Franklin PAGE 3 OF 3
COUNTY: Marshall DATE: 01/04/2019
STATE: WV


WW-9

PROPOSED MICHTER N-4HM

SUPPLEMENT PG 2



NOTE: CLOSEST WATER PURVEYOR
GRANDVIEW - DOOLIN PUBLIC SERVICE
DISTRICT PROCTOR, WV
LAT: 39.7136943
LON: -80.8260157
LOCATED S 14.45 W AT 33,488' FROM
MICHTER N-4HM
SURFACE LOCATION

 TUG HILL OPERATING	OPERATOR	494510851	TOPO SECTION	LEASE NAME
	TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		POWHATAN POINT 7.5'	MICHTER
			SCALE: 1" = 2000'	DATE: RECEIVED Office of DATE: 12-19-2018 JUN 11