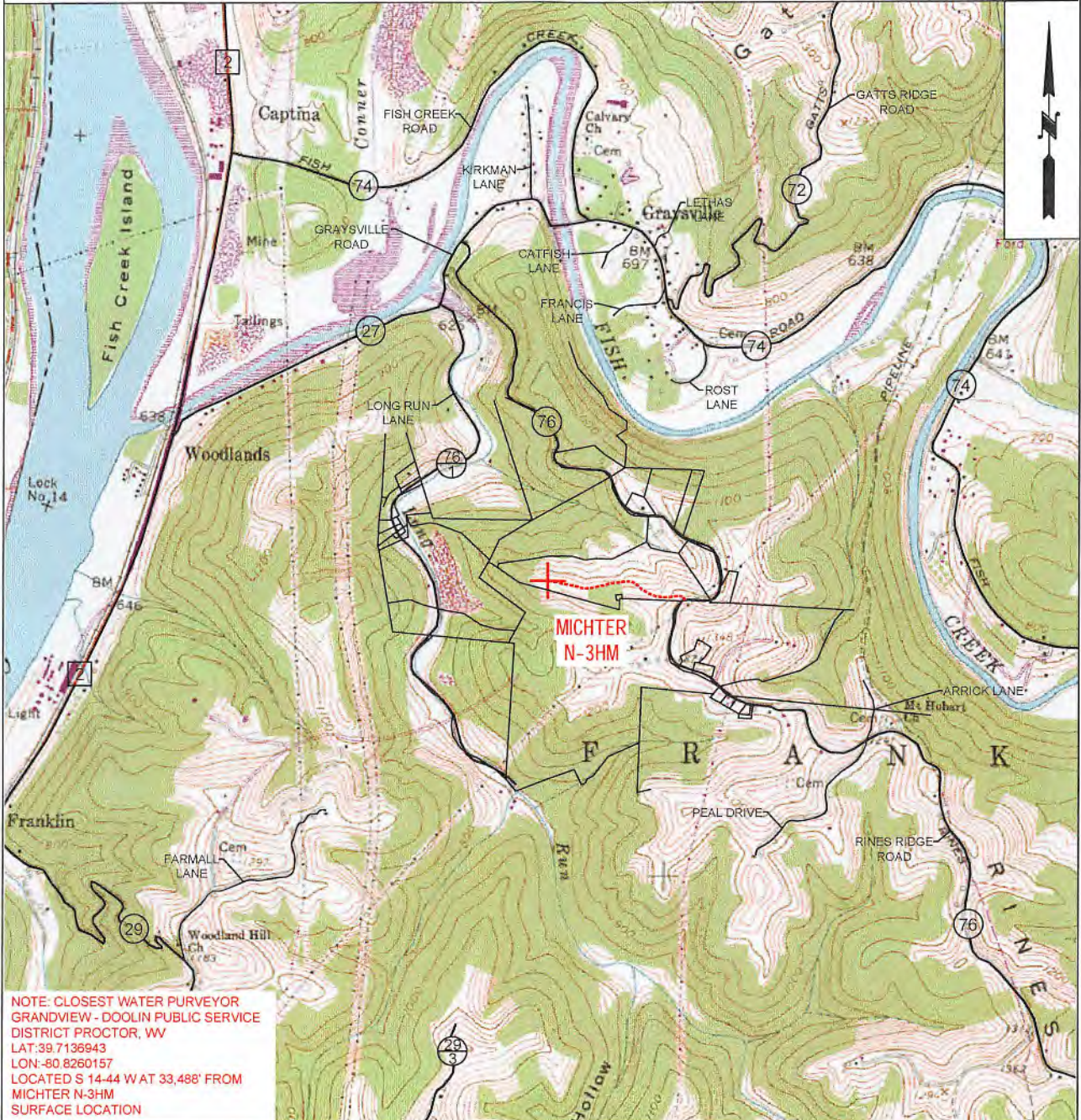


WW-9

SUPPLEMENT PG 2

# PROPOSED MICHTER N-3HM



NOTE: CLOSEST WATER PURVEYOR  
 GRANDVIEW - DOOLIN PUBLIC SERVICE  
 DISTRICT PROCTOR, WV  
 LAT: 39.7136943  
 LON: -80.8260157  
 LOCATED S 14-44 W AT 33,488' FROM  
 MICHTER N-3HM  
 SURFACE LOCATION



<b>OPERATOR</b>	494510851	<b>TOPO SECTION</b>	<b>LEASE NAME</b>
TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		POWHATAN POINT 7.5'	MICHTER
		<b>SCALE:</b>	<b>DATE:</b>
		1" = 2000'	DATE: 08-26-2019

Office of Oil and Gas

OCT 02 2019



# MICHTER LEASE WELL N-3HM 969,8489± ACRES

### REFERENCES

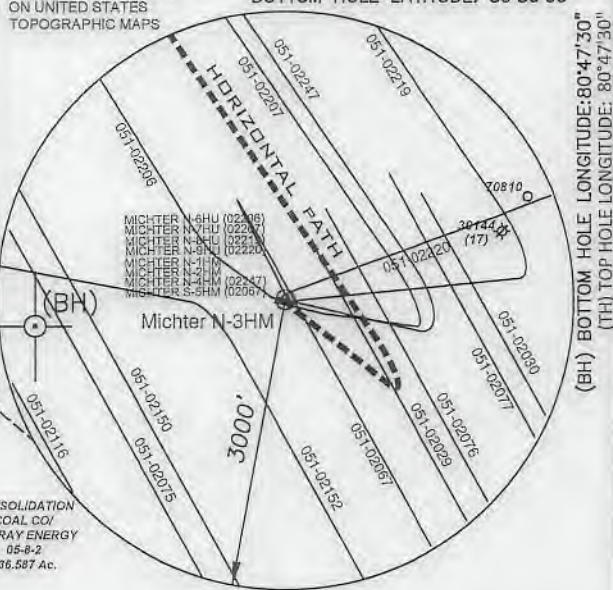
SCALE 1"=500'

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

TOP HOLE LATITUDE: 39°50'00"  
BOTTOM HOLE LATITUDE: 39°50'00"

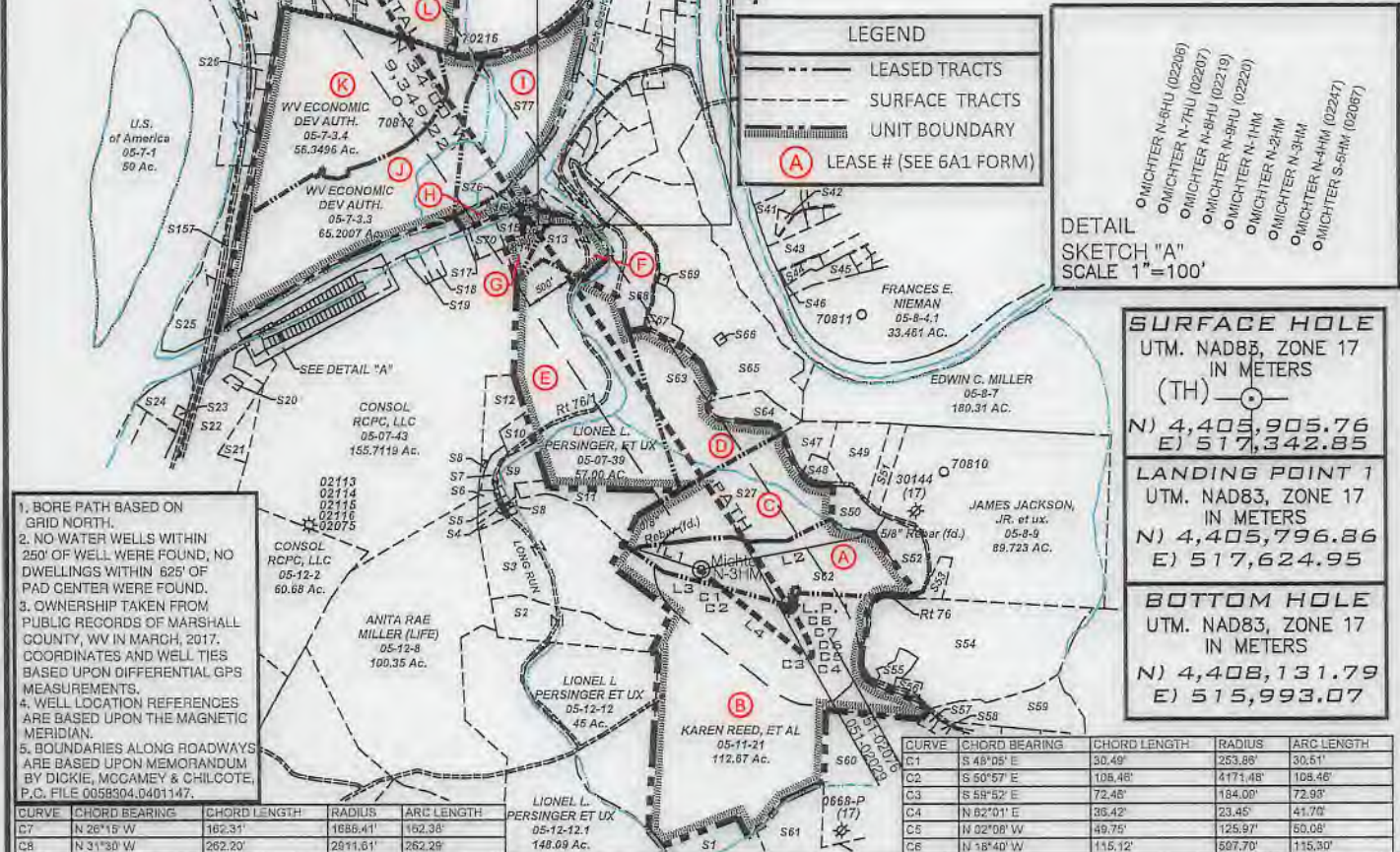


LINE	BEARING	DISTANCE
L1	N 72°28' W	865.38'
L2	N 78°18' E	1858.55'
L3	S 39°03' E	85.19'
L4	S 51°27' E	1165.92'



GRID NORTH

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



**LEGEND**

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

**DETAIL SKETCH "A" SCALE 1"=100'**

- MICHTER N-8HU (02206)
- MICHTER N-7HU (02207)
- MICHTER N-8HU (02210)
- MICHTER N-8HU (02220)
- MICHTER N-1HM
- MICHTER N-2HM
- MICHTER N-3HM
- MICHTER N-4HM (02247)
- MICHTER S-6HM (02207)

**SURFACE HOLE**  
UTM. NAD83, ZONE 17  
IN METERS  
(TH)

N) 4,405,905.76  
E) 517,342.85

**LANDING POINT 1**  
UTM. NAD83, ZONE 17  
IN METERS

N) 4,405,796.86  
E) 517,624.95

**BOTTOM HOLE**  
UTM. NAD83, ZONE 17  
IN METERS

N) 4,408,131.79  
E) 515,993.07

- BORE PATH BASED ON GRID NORTH.
- NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
- OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
- WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
- BOUNDARIES ALONG ROADWAYS ARE BASED UPON MEMORANDUM BY DICKIE, MCGAMEY & CHILCOTE, P.C. FILE 0058504.0401147.

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C7	N 26°15' W	162.31'	1888.41'	162.38'
C8	N 31°30' W	262.20'	2811.61'	262.29'

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	S 48°05' E	30.49'	263.89'	30.51'
C2	S 60°57' E	108.48'	4171.48'	108.46'
C3	S 58°52' E	72.46'	184.00'	72.93'
C4	N 62°01' E	36.42'	23.46'	41.70'
C5	N 32°08' W	49.75'	125.97'	60.08'
C6	N 18°40' W	115.12'	507.70'	115.30'

FILE NUMBER \_\_\_\_\_

DRAWING NUMBER MICHTER\_N-3HM\_REV1

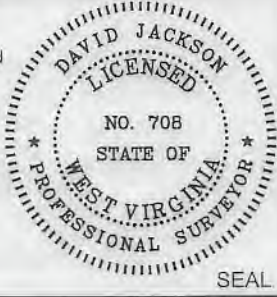
SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

PROVEN SOURCE OF ELEVATION SUBMETER MAPPING  
GRADE GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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

DATE: SEPTEMBER 27, 2019

OPERATORS WELL NO. MICHTER N-3HM

API WELL NO. 47-051-02277 H6A

STATE WV COUNTY MARSHALL PERMIT SEE WW-6A1 FORM

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

LOCATION ELEVATION 1127.11' 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, ET AL ACREAGE 34.405

OIL & GAS ROYALTY OWNER LARRY W. DUNLAP, ET AL 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) \_\_\_\_\_

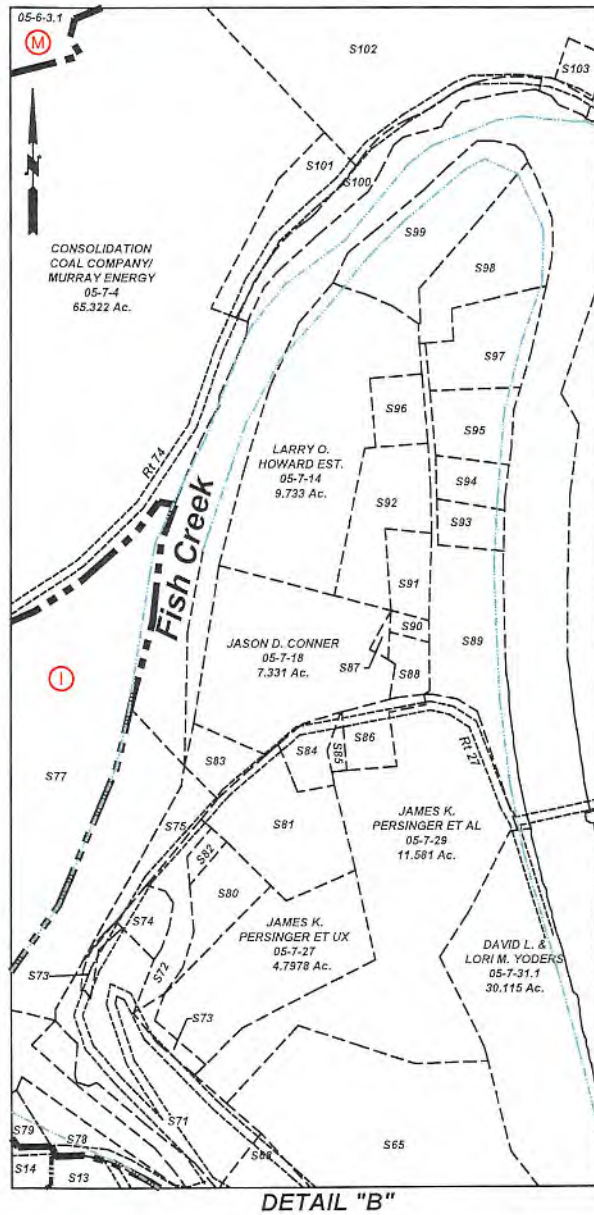
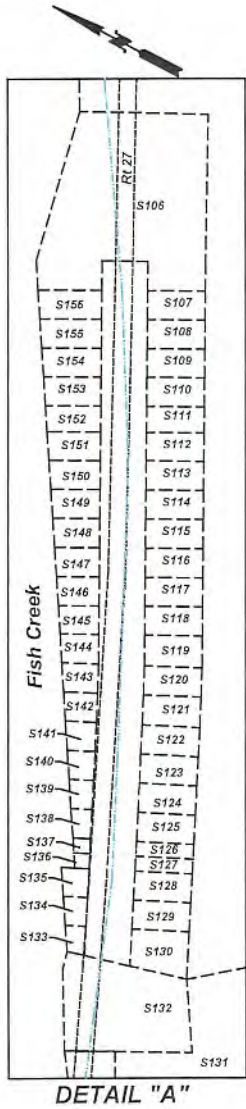
TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD: 6,419' TMD: 16,368'

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

COUNTY NAME  
PERMIT



PG 2 OF 3 MICTER LEASE  
WELL N-3HM  
969.8489± ACRES



P.S. 708 *David L Jackson*

Office of Oil and Gas

OCT 09 2019

Environmental Protection



**TUG HILL**  
**OPERATING**

OPERATOR'S  
WELL #: Michter N-3HM  
DISTRICT: Franklin  
COUNTY: Marshall  
STATE: WV  
API #: 47-051-

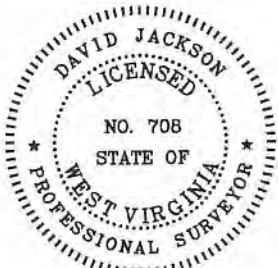
**WELL PLAT**  
**PAGE 2 OF 3**  
**DATE: 09/27/2019**



**MICHTER LEASE  
WELL N-3HM  
969.8489± 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	05-7B-48	Cassidy Rain Carpenter	1.325
S19	05-7B-49	Cassidy Rain Carpenter	1.1441
S20	05-07-43.4	Ida L. Campbell	0.403
S21	05-07-43.1	WW DOH	1.48
S22		State Road Commission	17.62 Cole
S23	05-7A-32	Dawn Thompson Tennant	0.3091
S24	05-7A-31	WW 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	05-11-1.4	Larry Dunlap, et al	32.493
S28	05-07-3.1	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	Cil Carbon, LLC	1.408
S32	05-06-13	Cil Carbon, LLC	0.318
S33	05-06-09	Cil Carbon, LLC	1.15
S34	05-06-12	Cil Carbon, LLC	0.43458
S35	05-06-18	Cil Carbon, LLC	0.2754
S36	05-06-1.2	Ohio Power Co.	0.693
S37	05-06-1.1	Cil 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. & Lariette 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	05-11-1.1	Larry W. Dunlap, et al	34.405
S63	05-07-33	William N. Roupe	24.60
S64	05-07-32	William N. & Virginia A. Roupe	4.2

Number	TAX MAP -PARCEL	ADJOINER OWNER	ACRES
S65	05-07-31	William N. Roupe, et ux	43.147
S66	05-07-31.4	Grandview-Doolen PSD	0.23
S67	05-07-31.2	William N. Roupe, et ux	3.304
S68	05-07-34	WW 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	05-07-26	James A. Wade	7.80
S72	05-07-23.1	WW DOH	2.37
S73	05-07-25	WW DOH	0.50
S74	05-07-24	James A. Wade	0.578
S75	05-07-45	Robert L. Henry (Life) & Jeffrey S. Henry	0.65
S76	H Fish Creek	State of WV	3.5388 Cole
S77	I 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. Riter, 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	Deborah L. Bennett	0.13
S88	05-07-17	Deborah L. Bennett	0.614
S89	05-07-15	William Roupe, et ux	6.631
S90	05-07-16	Deborah L. Bennett	0.235
S91	05-07-14.2	Robert L. Eyley, 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	L 05-07-02	Consolidation Coal Company/ Murray Energy	46.46
S105	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	Raymond M. & Amy A. Litman	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	0.0625
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
S157	Railroad	CSX Transportation	



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Office of Oil and Gas

OCT 02 2019

WV Department of  
Environmental Protection

P.S.  
708

*David L Jackson*



**TUG HILL  
OPERATING**

OPERATOR'S

WELL #: Michter N-3HM

DISTRICT: Franklin

COUNTY: Marshall

STATE: WV

API #: 47-051-

WELL PLAT

PAGE 3 OF 3

DATE: 09/27/2019