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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Tuesday, October 23, 2018  
WELL WORK PERMIT  
Horizontal 6A / New Drill

TUG HILL OPERATING, LLC  
380 SOUTHPOINTE BLVD

CANONSBURG, PA 15317

Re: Permit approval for WOODFORD 4HM  
47-051-02116-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

A handwritten signature in blue ink, appearing to read 'James A. Martin', is positioned to the right of the printed name and title.

Operator's Well Number: WOODFORD 4HM  
Farm Name: CNX RCPC, LLC  
U.S. WELL NUMBER: 47-051-02116-00-00  
Horizontal 6A New Drill  
Date Issued: 10/23/2018

# PERMIT CONDITIONS 4705102116

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

## CONDITIONS

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1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

# PERMIT CONDITIONS

4705102116

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov).

4705 02116

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: Tug Hill Operating, LLC      494510851      Marshall      Franklin      Powhatan Point 7  
Operator ID      County      District      Quadrangle

2) Operator's Well Number: Woodford 4HM      Well Pad Name: Woodford

3) Farm Name/Surface Owner: CNX RCPC, LLC      Public Road Access: Burch Ridge Road (County Route 29)

4) Elevation, current ground: 1250'      Elevation, proposed post-construction: 1233.51

5) Well Type (a) Gas  Oil  Underground Storage   
Other

(b) If Gas Shallow  Deep   
Horizontal

*JW*  
*8/8/18*

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus is the target formation at a depth of 6330' - 6380', thickness of 50' and an anticipated approx. pressure of 3800 psi.

8) Proposed Total Vertical Depth: 6480'

9) Formation at Total Vertical Depth: Onondaga

10) Proposed Total Measured Depth: 17,178'

11) Proposed Horizontal Leg Length: 9,836.85'

12) Approximate Fresh Water Strata Depths: 70' ; 805'

13) Method to Determine Fresh Water Depths: Use shallow offset wells to determine deepest freshwater. Or determine using prodrill tests, testing while drilling or petrophysical evaluation of resistivity

14) Approximate Saltwater Depths: 1,740'

15) Approximate Coal Seam Depths: Sewickley Coal - 701' and Pittsburgh Coal - 799'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

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17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes  No

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(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

4705 02116

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	NEW	BW	BW	120'	120'	259ft^3(CTS)
Fresh Water	13 3/8"	NEW	J55	54.5#	905'	905'	979ft^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	905'	905'	979ft^3(CTS)
Intermediate	9 5/8"	NEW	J55	36#	2700'	2700'	895ft^3(CTS)
Production	5 1/2"	NEW	P110	20#	17,178'	17,178'	3864ft^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#	6,865'		
Liners							

*8/8/18*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	13 3/8"	17.5"	.33	2,740	2,192	SEE#24	1.2
Coal	13 3/8"	17.5"	.33	2,740	2,192	SEE #24	1.2
Intermediate	9 5/8"	12 1/4"	.352	3,520	2,816	SEE #24	1.19
Production	5 1/2"	8 7/8_8 3/4	.361	12,640	10,112	SEE #24	1.17/1.19
Tubing	2 3/8"		.19	11,200	8,960		
Liners							

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PACKERS

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Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			



WW-6B  
(10/14)

API NO. 47-051 - \_\_\_\_\_  
OPERATOR WELL NO. Woodford 4HM  
Well Pad Name: Woodford  
**4705102116**  
*JW 8/8/18*

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill through the Marcellus tagging less than 100' from the top of the Onondaga to get depths and log data. Plug back to proposed kick off point. Drill the horizontal section to planned and proposed TD. Run casing and cement to surface. Run Bond Log from app. 60 deg to surface. Make clean out run and stimulate.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well to be completed with approximately 24,857,500 lb. proppant and 380,141 barrels of water. Max rate = 80bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 44.34 acres

22) Area to be disturbed for well pad only, less access road (acres): 6.01 acres

23) Describe centralizer placement for each casing string:

Will run 3 centralizers on surface casing at equal distance. Intermediate will have 1 centralizer every other joint. Production casing will have one centralizer every other joint in lateral, one centralizer every joint through curve, one centralizer every other joint to surface.

24) Describe all cement additives associated with each cement type:

\*See attachment

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25) Proposed borehole conditioning procedures:

Will circulate a minimum of 3 hours at TD, short trip to curve, circulate bottoms up, check for flow, POOH.

\*Note: Attach additional sheets as needed.

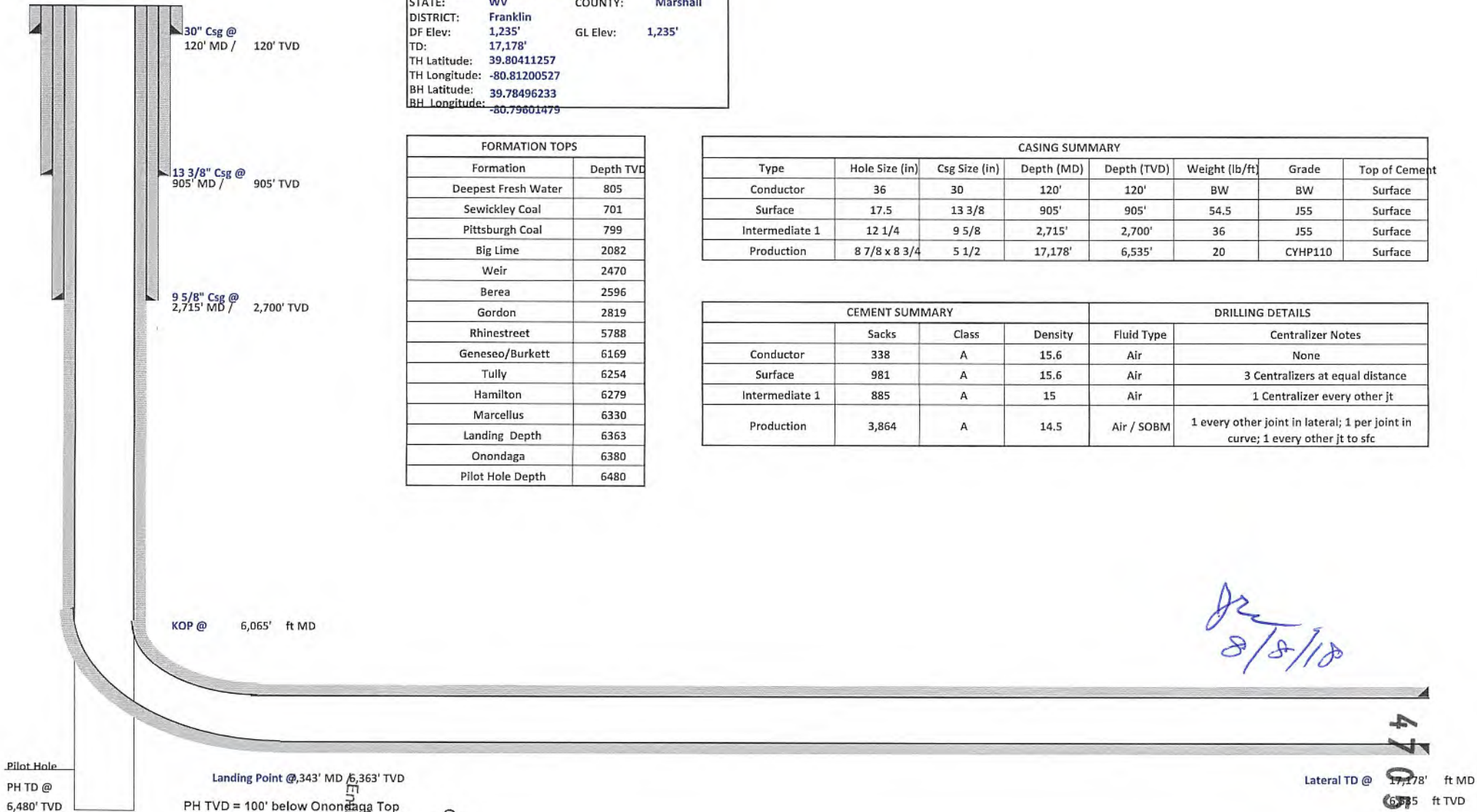


**WELL NAME:** Woodford-4HM  
**STATE:** WV **COUNTY:** Marshall  
**DISTRICT:** Franklin  
**DF Elev:** 1,235' **GL Elev:** 1,235'  
**TD:** 17,178'  
**TH Latitude:** 39.80411257  
**TH Longitude:** -80.81200527  
**BH Latitude:** 39.78496233  
**BH Longitude:** -80.79601479

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	805
Sewickley Coal	701
Pittsburgh Coal	799
Big Lime	2082
Weir	2470
Berea	2596
Gordon	2819
Rhinestreet	5788
Geneseo/Burkett	6169
Tully	6254
Hamilton	6279
Marcellus	6330
Landing Depth	6363
Onondaga	6380
Pilot Hole Depth	6480

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	BW	BW	Surface
Surface	17.5	13 3/8	905'	905'	54.5	J55	Surface
Intermediate 1	12 1/4	9 5/8	2,715'	2,700'	36	J55	Surface
Production	8 7/8 x 8 3/4	5 1/2	17,178'	6,535'	20	CYHP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	981	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	885	A	15	Air	1 Centralizer every other jt
Production	3,864	A	14.5	Air / SOBMs	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to sfc



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## Tug Hill Operating, LLC Casing and Cement Program

### Woodford-4HM

#### Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	13 3/8"	J55	17 1/2"	905'	CTS
Intermediate	9 5/8"	J55	12 1/4"	2,715'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4	17,178'	CTS

#### Cement

Conductor: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Conductor Cement mixed at 15.6 ppg, Y=1.2

Surface: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.6 ppg, Y=1.2

Intermediate: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.19

Kick Off Plug: Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L - KOP Plug

Production: 50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L – Production Cement mixed at 15.2ppg, Y = 1.19

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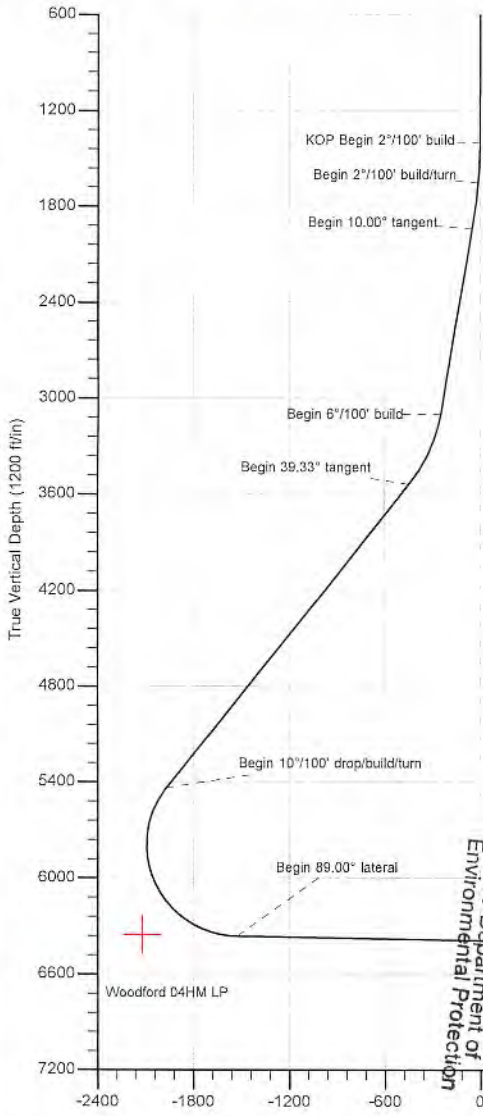




Well: Woodford 04HM (D)  
 Site: Woodford  
 Project: Marshall County, West Virginia.  
 Design: rev1

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	1650.00	5.00	315.00	1649.68	7.71	-7.71	2.00	315.00	-10.66	Begin 2°/100' build/turn
4	1939.84	10.00	339.00	1937.02	40.16	-25.67	2.00	44.37	-47.67	Begin 10.00° tangent
5	3120.77	10.00	339.00	3100.00	231.61	-99.16	0.00	0.00	-248.31	Begin 6°/100' build
6	3609.55	39.33	339.01	3539.36	419.96	-171.43	6.00	0.02	-445.70	Begin 39.33° tangent
7	6065.45	39.33	339.01	5439.11	1873.13	-728.86	0.00	0.00	-1968.53	Begin 10°/100' drop/build/turn
8	7343.03	89.00	150.00	6363.36	1552.75	-409.93	10.00	168.57	-1526.28	Begin 89.00° lateral
9	17178.03	89.00	150.00	6535.00	-6963.32	4506.82	0.00	0.00	8294.53	PBHL/TD 17178.03 MD/6535.00 TVD



Azimuths to Grid North  
 True North: -0.12°  
 Magnetic North: -8.77°

Magnetic Field  
 Strength: 52090.3snT  
 Dip Angle: 66.91°  
 Date: 5/12/2018  
 Model: IGRF2015

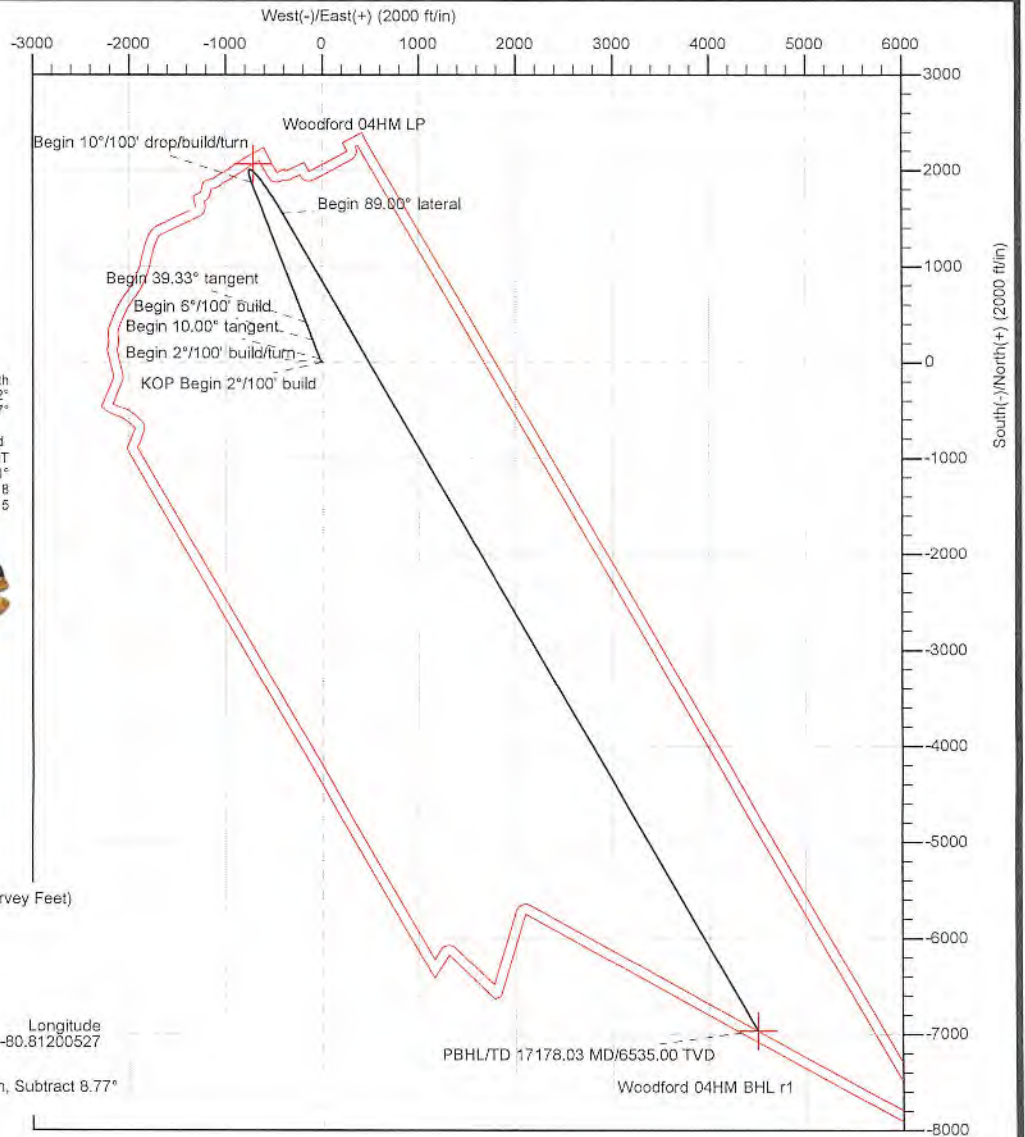


Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD83 West Virginia - HARN  
 Ellipsoid: GRS 1980  
 Zone: Zone 17N (84 W to 78 W)

System Datum: Mean Sea Level  
 Depth Reference: GL @ 1235.00ft

Northing: 14455459.60    Easting: 1693214.92    Latitude: 39.80411257    Longitude: -80.81200527

Total Corr (M-TG) Convert a Magnetic Direction to a Grid Direction, Subtract 8.77°



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Vertical Section at 147.09° (12000 ft/in)





Planning Report - Geographic

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Woodford 04HM (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1235.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1235.00ft
Site:	Woodford	North Reference:	Grid
Well:	Woodford 04HM (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Origina Hole		
Design:	rev1		

4705 02116

Project	Marshall County, West Virginia.		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 West Virginia - HARN		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Woodford				
Site Position:		Northing:	14,455,471.78 usft	Latitude:	39.80414597
From:	Lat/Long	Easting:	1,693,217.70 usft	Longitude:	-80.81199526
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.12 °

Well	Woodford 04HM (D)					
Well Position	+N/-S	0.00 ft	Northing:	14,455,459.61 usft	Latitude:	39.80411257
	+E/-W	0.00 ft	Easting:	1,693,214.92 usft	Longitude:	-80.81200527
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	1,235.00 ft	

Wellbore	Origina Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/12/2018	-8.65	66.91	52,090.29592058

Design	rev1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	147.09

Plan Survey Tool Program	Date 5/19/2018			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,178.03 rev1 (Origina Hole)	MWD	
			MWD - Standard	

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Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,650.00	5.00	315.00	1,649.68	7.71	-7.71	2.00	2.00	0.00	315.00	
1,939.84	10.00	339.00	1,937.02	40.16	-25.67	2.00	1.73	8.28	44.37	
3,120.77	10.00	339.00	3,100.00	231.61	-99.16	0.00	0.00	0.00	0.00	
3,609.55	39.33	339.01	3,539.36	419.96	-171.43	6.00	6.00	0.00	0.02	
6,065.45	39.33	339.01	5,439.11	1,873.13	-728.86	0.00	0.00	0.00	0.00	
7,343.03	89.00	150.00	6,363.36	1,552.75	-409.93	10.00	3.89	13.38	168.57	
17,178.03	89.00	150.00	6,535.00	-6,963.32	4,506.82	0.00	0.00	0.00	0.00	Woodford 04HM BHL



**Database:** DB\_Jul2216dt\_v14  
**Company:** Tug Hill Operating LLC  
**Project:** Marshall County, West Virginia.  
**Site:** Woodford  
**Well:** Woodford 04HM (D)  
**Wellbore:** Origina Hole  
**Design:** rev1

**Local Co-ordinate Reference:** Well Woodford 04HM (D)  
**TVD Reference:** GL @ 1235.00ft  
**MD Reference:** GL @ 1235.00ft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

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Planned Survey										AUG 14 2018
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	WV Department of Environmental Protection		
								Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
100.00	0.00	0.00	100.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
200.00	0.00	0.00	200.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
300.00	0.00	0.00	300.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
400.00	0.00	0.00	400.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
500.00	0.00	0.00	500.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
600.00	0.00	0.00	600.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
700.00	0.00	0.00	700.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
800.00	0.00	0.00	800.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
900.00	0.00	0.00	900.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,455,459.61	1,693,214.92	39.80411257	-80.81200527	
<b>KOP Begin 2°/100' build</b>										
1,500.00	2.00	315.00	1,499.98	1.23	-1.23	14,455,460.84	1,693,213.68	39.80411597	-80.81200966	
1,600.00	4.00	315.00	1,599.84	4.93	-4.93	14,455,464.54	1,693,209.98	39.80412615	-80.81202280	
1,650.00	5.00	315.00	1,649.68	7.71	-7.71	14,455,467.32	1,693,207.21	39.80413379	-80.81203266	
<b>Begin 2°/100' build/turn</b>										
1,700.00	5.76	321.99	1,699.46	11.23	-10.79	14,455,470.83	1,693,204.12	39.80414346	-80.81204362	
1,800.00	7.45	331.41	1,798.80	20.87	-16.98	14,455,480.47	1,693,197.93	39.80416998	-80.81206559	
1,900.00	9.26	337.26	1,897.74	33.98	-23.19	14,455,493.58	1,693,191.72	39.80420601	-80.81208761	
1,939.84	10.00	339.00	1,937.02	40.16	-25.67	14,455,499.77	1,693,189.24	39.80422301	-80.81209638	
<b>Begin 10.00° tangent</b>										
2,000.00	10.00	339.00	1,996.26	49.91	-29.42	14,455,509.52	1,693,185.50	39.80424982	-80.81210964	
2,100.00	10.00	339.00	2,094.74	66.13	-35.64	14,455,525.73	1,693,179.28	39.80429437	-80.81213168	
2,200.00	10.00	339.00	2,193.22	82.34	-41.86	14,455,541.94	1,693,173.05	39.80433893	-80.81215371	
2,300.00	10.00	339.00	2,291.70	98.55	-48.09	14,455,558.16	1,693,166.83	39.80438349	-80.81217575	
2,400.00	10.00	339.00	2,390.18	114.76	-54.31	14,455,574.37	1,693,160.61	39.80442805	-80.81219779	
2,500.00	10.00	339.00	2,488.66	130.97	-60.53	14,455,590.58	1,693,154.38	39.80447260	-80.81221982	
2,600.00	10.00	339.00	2,587.15	147.18	-66.76	14,455,606.79	1,693,148.16	39.80451716	-80.81224186	
2,700.00	10.00	339.00	2,685.63	163.39	-72.98	14,455,623.00	1,693,141.94	39.80456172	-80.81226390	
2,800.00	10.00	339.00	2,784.11	179.61	-79.20	14,455,639.21	1,693,135.71	39.80460627	-80.81228593	
2,900.00	10.00	339.00	2,882.59	195.82	-85.42	14,455,655.42	1,693,129.49	39.80465083	-80.81230797	
3,000.00	10.00	339.00	2,981.07	212.03	-91.65	14,455,671.64	1,693,123.27	39.80469539	-80.81233001	
3,100.00	10.00	339.00	3,079.55	228.24	-97.87	14,455,687.85	1,693,117.05	39.80473994	-80.81235204	
3,120.77	10.00	339.00	3,100.00	231.61	-99.16	14,455,691.21	1,693,115.75	39.80474920	-80.81235662	
<b>Begin 6°/100' build</b>										
3,200.00	14.75	339.01	3,177.37	247.46	-105.25	14,455,707.06	1,693,109.67	39.80479276	-80.81237816	
3,300.00	20.75	339.01	3,272.56	275.91	-116.16	14,455,735.52	1,693,098.75	39.80487097	-80.81241683	
3,400.00	26.75	339.01	3,364.05	313.50	-130.59	14,455,773.11	1,693,084.33	39.80497429	-80.81246790	
3,500.00	32.75	339.01	3,450.83	359.82	-148.35	14,455,819.43	1,693,066.56	39.80510158	-80.81253082	
3,600.00	38.75	339.01	3,531.94	414.35	-169.27	14,455,873.96	1,693,045.64	39.80525146	-80.81260489	
3,609.55	39.33	339.01	3,539.36	419.96	-171.43	14,455,879.57	1,693,043.49	39.80526689	-80.81261252	
<b>Begin 39.33° tangent</b>										
3,700.00	39.33	339.01	3,609.33	473.48	-191.96	14,455,933.09	1,693,022.96	39.80541399	-80.81268522	
3,800.00	39.33	339.01	3,686.68	532.65	-214.65	14,455,992.26	1,693,000.26	39.80557662	-80.81276560	
3,900.00	39.33	339.01	3,764.04	591.82	-237.35	14,456,051.43	1,692,977.56	39.80573924	-80.81284598	
4,000.00	39.33	339.01	3,841.39	650.99	-260.05	14,456,110.60	1,692,954.87	39.80590187	-80.81292636	
4,100.00	39.33	339.01	3,918.75	710.16	-282.75	14,456,169.77	1,692,932.17	39.80606450	-80.81300674	
4,200.00	39.33	339.01	3,996.10	769.33	-305.44	14,456,228.94	1,692,909.47	39.80622713	-80.81308712	
4,300.00	39.33	339.01	4,073.45	828.50	-328.14	14,456,288.11	1,692,886.77	39.80638975	-80.81316750	
4,400.00	39.33	339.01	4,150.81	887.68	-350.84	14,456,347.28	1,692,864.08	39.80655238	-80.81324788	



Database: DB\_Jul2216dt\_v14  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia.  
 Site: Woodford  
 Well: Woodford 04HM (D)  
 Wellbore: Origina Hole  
 Design: rev1

Local Co-ordinate Reference: Well Woodford 04HM (D)  
 TVD Reference: GL @ 1235.00ft  
 MD Reference: GL @ 1235.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
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AUG 14 2018

Planned Survey

WV Department of Environmental Protection

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,500.00	39.33	339.01	4,228.16	946.85	-373.54	14,456,406.45	1,692,841.38	39.80671501	-80.81332826
4,600.00	39.33	339.01	4,305.52	1,006.02	-396.23	14,456,465.62	1,692,818.68	39.80687763	-80.81340864
4,700.00	39.33	339.01	4,382.87	1,065.19	-418.93	14,456,524.79	1,692,795.98	39.80704026	-80.81348902
4,800.00	39.33	339.01	4,460.23	1,124.36	-441.63	14,456,583.96	1,692,773.29	39.80720289	-80.81356940
4,900.00	39.33	339.01	4,537.58	1,183.53	-464.33	14,456,643.13	1,692,750.59	39.80736552	-80.81364978
5,000.00	39.33	339.01	4,614.94	1,242.70	-487.03	14,456,702.30	1,692,727.89	39.80752814	-80.81373016
5,100.00	39.33	339.01	4,692.29	1,301.87	-509.72	14,456,761.47	1,692,705.19	39.80769077	-80.81381055
5,200.00	39.33	339.01	4,769.64	1,361.04	-532.42	14,456,820.64	1,692,682.50	39.80785340	-80.81389093
5,300.00	39.33	339.01	4,847.00	1,420.21	-555.12	14,456,879.81	1,692,659.80	39.80801602	-80.81397131
5,400.00	39.33	339.01	4,924.35	1,479.38	-577.82	14,456,938.98	1,692,637.10	39.80817865	-80.81405170
5,500.00	39.33	339.01	5,001.71	1,538.55	-600.51	14,456,998.15	1,692,614.40	39.80834128	-80.81413208
5,600.00	39.33	339.01	5,079.06	1,597.72	-623.21	14,457,057.32	1,692,591.71	39.80850390	-80.81421246
5,700.00	39.33	339.01	5,156.42	1,656.89	-645.91	14,457,116.49	1,692,569.01	39.80866653	-80.81429285
5,800.00	39.33	339.01	5,233.77	1,716.06	-668.61	14,457,175.66	1,692,546.31	39.80882916	-80.81437323
5,900.00	39.33	339.01	5,311.13	1,775.23	-691.30	14,457,234.83	1,692,523.61	39.80899178	-80.81445362
6,000.00	39.33	339.01	5,388.48	1,834.40	-714.00	14,457,294.00	1,692,500.92	39.80915441	-80.81453401
6,065.45	39.33	339.01	5,438.11	1,873.13	-728.86	14,457,332.73	1,692,486.06	39.80926085	-80.81458662
<b>Begin 10°/100' drop/build/turn</b>									
6,100.00	35.95	340.18	5,466.47	1,892.89	-736.22	14,457,352.50	1,692,478.70	39.80931518	-80.81461269
6,200.00	26.25	345.00	5,552.00	1,941.99	-751.94	14,457,401.60	1,692,462.98	39.80945011	-80.81466830
6,300.00	16.89	354.76	5,644.93	1,977.91	-759.01	14,457,437.52	1,692,455.91	39.80954879	-80.81469321
6,400.00	8.95	23.61	5,742.41	1,999.56	-757.21	14,457,459.16	1,692,457.71	39.80960822	-80.81468666
6,500.00	8.60	93.28	5,841.49	2,006.27	-746.61	14,457,465.88	1,692,468.31	39.80962661	-80.81464885
6,600.00	16.33	124.53	5,939.16	1,997.85	-727.52	14,457,457.46	1,692,487.40	39.80960338	-80.81458093
6,700.00	25.66	134.85	6,032.45	1,974.56	-700.52	14,457,434.16	1,692,514.40	39.80953924	-80.81448496
6,800.00	35.34	139.84	6,118.52	1,937.09	-666.43	14,457,396.69	1,692,548.48	39.80943615	-80.81436387
6,900.00	45.15	142.89	6,194.77	1,886.59	-626.30	14,457,346.19	1,692,588.62	39.80929724	-80.81422132
7,000.00	55.01	145.04	6,258.87	1,824.59	-581.33	14,457,284.20	1,692,633.59	39.80912672	-80.81406165
7,100.00	64.90	146.73	6,308.88	1,752.98	-532.90	14,457,212.58	1,692,682.02	39.80892978	-80.81388972
7,200.00	74.81	148.16	6,343.27	1,673.93	-482.47	14,457,133.53	1,692,732.45	39.80871240	-80.81371074
7,300.00	84.73	149.46	6,361.00	1,589.84	-431.58	14,457,049.45	1,692,783.34	39.80848118	-80.81353016
7,343.03	89.00	150.00	6,363.36	1,552.74	-409.93	14,457,012.35	1,692,804.99	39.80837918	-80.81345334
<b>Begin 89.00° lateral</b>									
7,400.00	89.00	150.00	6,364.35	1,503.41	-381.45	14,456,963.02	1,692,833.47	39.80824354	-80.81335229
7,500.00	89.00	150.00	6,366.10	1,416.83	-331.45	14,456,876.43	1,692,883.46	39.80800546	-80.81317492
7,600.00	89.00	150.00	6,367.84	1,330.24	-281.46	14,456,789.84	1,692,933.45	39.80776737	-80.81299755
7,700.00	89.00	150.00	6,369.59	1,243.65	-231.47	14,456,703.25	1,692,983.45	39.80752929	-80.81282018
7,800.00	89.00	150.00	6,371.33	1,157.06	-181.48	14,456,616.66	1,693,033.44	39.80729120	-80.81264282
7,900.00	89.00	150.00	6,373.08	1,070.47	-131.49	14,456,530.07	1,693,083.43	39.80705312	-80.81246545
8,000.00	89.00	150.00	6,374.82	983.88	-81.49	14,456,443.48	1,693,133.42	39.80681503	-80.81228809
8,100.00	89.00	150.00	6,376.57	897.29	-31.50	14,456,356.90	1,693,183.42	39.80657695	-80.81211072
8,200.00	89.00	150.00	6,378.31	810.70	18.49	14,456,270.31	1,693,233.41	39.80633886	-80.81193336
8,300.00	89.00	150.00	6,380.06	724.11	68.48	14,456,183.72	1,693,283.40	39.80610078	-80.81175600
8,400.00	89.00	150.00	6,381.80	637.52	118.48	14,456,097.13	1,693,333.39	39.80586269	-80.81157864
8,500.00	89.00	150.00	6,383.55	550.93	168.47	14,456,010.54	1,693,383.38	39.80562460	-80.81140129
8,600.00	89.00	150.00	6,385.29	464.34	218.46	14,455,923.95	1,693,433.38	39.80538652	-80.81122393
8,700.00	89.00	150.00	6,387.04	377.75	268.45	14,455,837.36	1,693,483.37	39.80514843	-80.81104658
8,800.00	89.00	150.00	6,388.78	291.16	318.45	14,455,750.77	1,693,533.36	39.80491034	-80.81086922
8,900.00	89.00	150.00	6,390.53	204.57	368.44	14,455,664.18	1,693,583.35	39.80467226	-80.81069187
9,000.00	89.00	150.00	6,392.27	117.99	418.43	14,455,577.59	1,693,633.35	39.80443417	-80.81051452
9,100.00	89.00	150.00	6,394.02	31.40	468.42	14,455,491.00	1,693,683.34	39.80419608	-80.81033717
9,200.00	89.00	150.00	6,395.76	-55.19	518.42	14,455,404.41	1,693,733.33	39.80395799	-80.81015982
9,300.00	89.00	150.00	6,397.51	-141.78	568.41	14,455,317.83	1,693,783.32	39.80371990	-80.80998247
9,400.00	89.00	150.00	6,399.25	-228.37	618.40	14,455,231.24	1,693,833.31	39.80348181	-80.80980512





Database: DB\_Jul2216dt\_v14  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia.  
 Site: Woodford  
 Well: Woodford 04HM (D)  
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 Design: rev1

Local Co-ordinate Reference: Well Woodford 04HM (D)  
 TVD Reference: GL @ 1235.00ft  
 MD Reference: GL @ 1235.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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Planned Survey										WV Department of Environmental Protection
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,500.00	89.00	150.00	6,401.00	-314.96	668.39	14,455,144.65	1,693,883.31	39.80324372	-80.80962778	
9,600.00	89.00	150.00	6,402.75	-401.55	718.39	14,455,058.06	1,693,933.30	39.80300563	-80.80945043	
9,700.00	89.00	150.00	6,404.49	-488.14	768.38	14,454,971.47	1,693,983.29	39.80276754	-80.80927309	
9,800.00	89.00	150.00	6,406.24	-574.73	818.37	14,454,884.88	1,694,033.28	39.80252945	-80.80909575	
9,900.00	89.00	150.00	6,407.98	-661.32	868.36	14,454,798.29	1,694,083.28	39.80229136	-80.80891841	
10,000.00	89.00	150.00	6,409.73	-747.91	918.35	14,454,711.70	1,694,133.27	39.80205327	-80.80874107	
10,100.00	89.00	150.00	6,411.47	-834.50	968.35	14,454,625.11	1,694,183.26	39.80181518	-80.80856373	
10,200.00	89.00	150.00	6,413.22	-921.09	1,018.34	14,454,538.52	1,694,233.25	39.80157709	-80.80838639	
10,300.00	89.00	150.00	6,414.96	-1,007.68	1,068.33	14,454,451.93	1,694,283.25	39.80133900	-80.80820906	
10,400.00	89.00	150.00	6,416.71	-1,094.27	1,118.32	14,454,365.34	1,694,333.24	39.80110091	-80.80803172	
10,500.00	89.00	150.00	6,418.45	-1,180.85	1,168.32	14,454,278.76	1,694,383.23	39.80086282	-80.80785439	
10,600.00	89.00	150.00	6,420.20	-1,267.44	1,218.31	14,454,192.17	1,694,433.22	39.80062472	-80.80767706	
10,700.00	89.00	150.00	6,421.94	-1,354.03	1,268.30	14,454,105.58	1,694,483.21	39.80038663	-80.80749973	
10,800.00	89.00	150.00	6,423.69	-1,440.62	1,318.29	14,454,018.99	1,694,533.21	39.80014854	-80.80732240	
10,900.00	89.00	150.00	6,425.43	-1,527.21	1,368.28	14,453,932.40	1,694,583.20	39.79991044	-80.80714507	
11,000.00	89.00	150.00	6,427.18	-1,613.80	1,418.28	14,453,845.81	1,694,633.19	39.79967235	-80.80696774	
11,100.00	89.00	150.00	6,428.92	-1,700.39	1,468.27	14,453,759.22	1,694,683.18	39.79943426	-80.80679042	
11,200.00	89.00	150.00	6,430.67	-1,786.98	1,518.26	14,453,672.63	1,694,733.18	39.79919616	-80.80661309	
11,300.00	89.00	150.00	6,432.41	-1,873.57	1,568.26	14,453,586.04	1,694,783.17	39.79895807	-80.80643577	
11,400.00	89.00	150.00	6,434.16	-1,960.16	1,618.25	14,453,499.45	1,694,833.16	39.79871997	-80.80625845	
11,500.00	89.00	150.00	6,435.90	-2,046.75	1,668.24	14,453,412.86	1,694,883.15	39.79848188	-80.80608113	
11,600.00	89.00	150.00	6,437.65	-2,133.34	1,718.23	14,453,326.27	1,694,933.15	39.79824378	-80.80590381	
11,700.00	89.00	150.00	6,439.40	-2,219.93	1,768.23	14,453,239.69	1,694,983.14	39.79800569	-80.80572649	
11,800.00	89.00	150.00	6,441.14	-2,306.52	1,818.22	14,453,153.10	1,695,033.13	39.79776759	-80.80554917	
11,900.00	89.00	150.00	6,442.89	-2,393.11	1,868.21	14,453,066.51	1,695,083.12	39.79752950	-80.80537185	
12,000.00	89.00	150.00	6,444.63	-2,479.70	1,918.20	14,452,979.92	1,695,133.11	39.79729140	-80.80519454	
12,100.00	89.00	150.00	6,446.38	-2,566.28	1,968.19	14,452,893.33	1,695,183.11	39.79705331	-80.80501723	
12,200.00	89.00	150.00	6,448.12	-2,652.87	2,018.19	14,452,806.74	1,695,233.10	39.79681521	-80.80483991	
12,300.00	89.00	150.00	6,449.87	-2,739.46	2,068.18	14,452,720.15	1,695,283.09	39.79657711	-80.80466260	
12,400.00	89.00	150.00	6,451.61	-2,826.05	2,118.17	14,452,633.56	1,695,333.08	39.79633901	-80.80448529	
12,500.00	89.00	150.00	6,453.36	-2,912.64	2,168.16	14,452,546.97	1,695,383.08	39.79610092	-80.80430798	
12,600.00	89.00	150.00	6,455.10	-2,999.23	2,218.16	14,452,460.38	1,695,433.07	39.79586282	-80.80413068	
12,700.00	89.00	150.00	6,456.85	-3,085.82	2,268.15	14,452,373.79	1,695,483.06	39.79562472	-80.80395337	
12,800.00	89.00	150.00	6,458.59	-3,172.41	2,318.14	14,452,287.20	1,695,533.05	39.79538662	-80.80377606	
12,900.00	89.00	150.00	6,460.34	-3,259.00	2,368.13	14,452,200.62	1,695,583.04	39.79514852	-80.80359876	
13,000.00	89.00	150.00	6,462.08	-3,345.59	2,418.13	14,452,114.03	1,695,633.04	39.79491042	-80.80342146	
13,100.00	89.00	150.00	6,463.83	-3,432.18	2,468.12	14,452,027.44	1,695,683.03	39.79467232	-80.80324416	
13,200.00	89.00	150.00	6,465.57	-3,518.77	2,518.11	14,451,940.85	1,695,733.02	39.79443423	-80.80306686	
13,300.00	89.00	150.00	6,467.32	-3,605.36	2,568.10	14,451,854.26	1,695,783.01	39.79419613	-80.80288956	
13,400.00	89.00	150.00	6,469.06	-3,691.95	2,618.10	14,451,767.67	1,695,833.01	39.79395803	-80.80271226	
13,500.00	89.00	150.00	6,470.81	-3,778.54	2,668.09	14,451,681.08	1,695,883.00	39.79371992	-80.80253496	
13,600.00	89.00	150.00	6,472.55	-3,865.12	2,718.08	14,451,594.49	1,695,932.99	39.79348182	-80.80235767	
13,700.00	89.00	150.00	6,474.30	-3,951.71	2,768.07	14,451,507.90	1,695,982.98	39.79324372	-80.80218037	
13,800.00	89.00	150.00	6,476.05	-4,038.30	2,818.07	14,451,421.31	1,696,032.98	39.79300562	-80.80200308	
13,900.00	89.00	150.00	6,477.79	-4,124.89	2,868.06	14,451,334.72	1,696,082.97	39.79276752	-80.80182579	
14,000.00	89.00	150.00	6,479.54	-4,211.48	2,918.05	14,451,248.13	1,696,132.96	39.79252942	-80.80164850	
14,100.00	89.00	150.00	6,481.28	-4,298.07	2,968.04	14,451,161.55	1,696,182.95	39.79229132	-80.80147121	
14,200.00	89.00	150.00	6,483.03	-4,384.66	3,018.04	14,451,074.96	1,696,232.94	39.79205321	-80.80129392	
14,300.00	89.00	150.00	6,484.77	-4,471.25	3,068.03	14,450,988.37	1,696,282.94	39.79181511	-80.80111663	
14,400.00	89.00	150.00	6,486.52	-4,557.84	3,118.02	14,450,901.78	1,696,332.93	39.79157701	-80.80093935	
14,500.00	89.00	150.00	6,488.26	-4,644.43	3,168.01	14,450,815.19	1,696,382.92	39.79133891	-80.80076206	
14,600.00	89.00	150.00	6,490.01	-4,731.02	3,218.00	14,450,728.60	1,696,432.91	39.79110080	-80.80058478	
14,700.00	89.00	150.00	6,491.75	-4,817.61	3,268.00	14,450,642.01	1,696,482.91	39.79086270	-80.80040750	
14,800.00	89.00	150.00	6,493.50	-4,904.20	3,317.99	14,450,555.42	1,696,532.90	39.79062459	-80.80023022	
14,900.00	89.00	150.00	6,495.24	-4,990.79	3,367.98	14,450,468.83	1,696,582.89	39.79038649	-80.80005294	





Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Woodford 04HM (D)
Company:	Tug Hill Operating LLC	TVD Reference:	GL @ 1235.00ft
Project:	Marshall County, West Virginia.	MD Reference:	GL @ 1235.00ft
Site:	Woodford	North Reference:	Grid
Well:	Woodford 04HM (D)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Origina Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
15,000.00	89.00	150.00	6,496.99	-5,077.38	3,417.97	14,450,382.24	1,696,632.88	39.79014839	-80.79987566	
15,100.00	89.00	150.00	6,498.73	-5,163.97	3,467.97	14,450,295.65	1,696,682.88	39.78991028	-80.79969838	
15,200.00	89.00	150.00	6,500.48	-5,250.55	3,517.96	14,450,209.06	1,696,732.87	39.78967218	-80.79952111	
15,300.00	89.00	150.00	6,502.22	-5,337.14	3,567.95	14,450,122.47	1,696,782.86	39.78943407	-80.79934383	
15,400.00	89.00	150.00	6,503.97	-5,423.73	3,617.94	14,450,035.89	1,696,832.85	39.78919596	-80.79916656	
15,500.00	89.00	150.00	6,505.71	-5,510.32	3,667.94	14,449,949.30	1,696,882.84	39.78895786	-80.79898929	
15,600.00	89.00	150.00	6,507.46	-5,596.91	3,717.93	14,449,862.71	1,696,932.84	39.78871975	-80.79881202	
15,700.00	89.00	150.00	6,509.20	-5,683.50	3,767.92	14,449,776.12	1,696,982.83	39.78848165	-80.79863475	
15,800.00	89.00	150.00	6,510.95	-5,770.09	3,817.91	14,449,689.53	1,697,032.82	39.78824354	-80.79845748	
15,900.00	89.00	150.00	6,512.70	-5,856.68	3,867.91	14,449,602.94	1,697,082.81	39.78800543	-80.79828021	
16,000.00	89.00	150.00	6,514.44	-5,943.27	3,917.90	14,449,516.35	1,697,132.81	39.78776732	-80.79810294	
16,100.00	89.00	150.00	6,516.19	-6,029.86	3,967.89	14,449,429.76	1,697,182.80	39.78752922	-80.79792568	
16,200.00	89.00	150.00	6,517.93	-6,116.45	4,017.88	14,449,343.17	1,697,232.79	39.78729111	-80.79774842	
16,300.00	89.00	150.00	6,519.68	-6,203.04	4,067.88	14,449,256.58	1,697,282.78	39.78705300	-80.79757115	
16,400.00	89.00	150.00	6,521.42	-6,289.63	4,117.87	14,449,169.99	1,697,332.77	39.78681489	-80.79739389	
16,500.00	89.00	150.00	6,523.17	-6,376.22	4,167.86	14,449,083.40	1,697,382.77	39.78657678	-80.79721663	
16,600.00	89.00	150.00	6,524.91	-6,462.81	4,217.85	14,448,996.82	1,697,432.76	39.78633867	-80.79703937	
16,700.00	89.00	150.00	6,526.66	-6,549.39	4,267.84	14,448,910.23	1,697,482.75	39.78610057	-80.79686212	
16,800.00	89.00	150.00	6,528.40	-6,635.98	4,317.84	14,448,823.64	1,697,532.74	39.78586246	-80.79668486	
16,900.00	89.00	150.00	6,530.15	-6,722.57	4,367.83	14,448,737.05	1,697,582.74	39.78562435	-80.79650760	
17,000.00	89.00	150.00	6,531.89	-6,809.16	4,417.82	14,448,650.46	1,697,632.73	39.78538624	-80.79633035	
17,100.00	89.00	150.00	6,533.64	-6,895.75	4,467.81	14,448,563.87	1,697,682.72	39.78514813	-80.79615310	
17,178.03	89.00	150.00	6,535.00	-6,963.32	4,506.82	14,448,496.31	1,697,721.73	39.78496233	-80.79601479	

PBHL/TD 17178.03 MD/6535.00 TVD

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Woodford 04HM LP - hit/miss target - Shape - Point	0.00	0.00	6,353.00	2,067.21	-706.95	14,457,526.81	1,692,507.96	39.80979372	-80.81450719	
- plan misses target center by 253.04ft at 6897.05ft MD (6192.69 TVD, 1888.25 N, -627.56 E)										
Woodford 04HM BHL r1 - plan hits target center - Point	0.00	0.00	6,535.00	-6,963.32	4,506.82	14,448,496.31	1,697,721.73	39.78496233	-80.79601479	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,400.00	1,400.00	0.00	0.00	KOP Begin 2°/100' build	
1,650.00	1,649.68	7.71	-7.71	Begin 2°/100' build/turn	
1,939.84	1,937.02	40.16	-25.67	Begin 10.00° tangent	
3,120.77	3,100.00	231.61	-99.16	Begin 6°/100' build	
3,609.55	3,539.36	419.96	-171.43	Begin 39.33° tangent	
6,065.45	5,439.11	1,873.13	-728.86	Begin 10°/100' drop/build/turn	
7,343.03	6,363.36	1,552.74	-409.93	Begin 89.00° lateral	
17,178.03	6,535.00	-6,963.32	4,506.82	PBHL/TD 17178.03 MD/6535.00 TVD	

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## Area of Review

### Sources of information to Support 35CSR8 - 5.11: 9.3 et seq.

Description of process to identify potential pathways for well communication during hydraulic fracturing activities.

#### Data Sources Reviewed:

1. IHS Well Data service: Public nationwide data service that pulls directly from State agency Oil and Gas databases
2. Farm Maps
3. Topo Maps: Recent and older (contact WVGES)
4. Check with DPS

Contacted Devin Ducoeur 724-705-0444, [dducoeur@dpslandservices.com](mailto:dducoeur@dpslandservices.com) DPS GIS (7/2/2018) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it as the best publicly available. See attached map he provided.

#### Request maps for:

1. Wellbore with IHS All Wells Layer
2. Map with Farm lines overlain and any well spots identified on Farm Maps
3. More recent (1970s vintage) topos and older topos

#### Discussion with Phil Dinterman WVGES GIS Department (7/15/2016)

- WVGES has plotted every well spot they have access to and are aware of with that contains a coordinate. 30000, 70000, and 90000 series wells are available via the WVGES online map. Some locations aren't great due to vintage and manipulation of maps through time
- 30000 series – any well drilled prior to 1929 – APIs were not assigned to original wells
- 70000 series – Well spots pulled from old Farm line maps that the WVGES has access to
- 90000 series – Any sources that the WVGES has access that shows a well spot but has no additional supporting information. DEP does not have 90000 series on their maps.
- There can be duplication between wells in the 3 series
- Phil indicated that other Operators are providing a screenshot of the WVGES map with their planned well and using that for permits

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Permit well - Woodford-4HM


Wells within 500' Buffer

Note: Well spots depicted on Area of Review map (page 3) are derived from State held coordinates. The spots may differ from those depicted on the Well Plat because the Plat locations represent actual field surveyed locations. Please refer to the Plat for surveyed well spots

API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705100112	J.T. McIntire	1,485'	Big Injun Sd	Unknown	No, the well is not deep enough to be within the expected fracture propagation from a Marcellus stimulation.	Plugged in 1940

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**WVGES**  
"Pipeline"

Select County: (051) Marshall    Select datatypes: (Check All)

Enter Permit #: 00112

Location     Production     Plugging  
 Owner/Completion     Stratigraphy     Sample  
 Pay/ShowWater     Logs     Blm Hole Loc

Get Data    Reset

Table Descriptions  
[County Code Translations](#)  
[Permit Numbering Series](#)  
[Usage Notes](#)  
[Contact Information](#)  
[Disclaimer](#)  
[WVGES Main](#)  
[Pipeline Plus New](#)

**Well: County = 51 Permit = 00112**

WV Geological & Economic Survey

Location information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4705100112	Marshall	112	Franklin	Powhatan Point	Clarington	39.792953	-80.60069	517054.3	4404796.4

There is no Bottom Hole Location data for this well

Owner information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PRDP_VD	PROP_TRGT_FM	TFM_EST_PR
4705100112	11/5/1940	Original Loc	Completed	William C Slicer	1			9	William C Slicer	McIntire, J T			

Completion information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD
4705100112	11/5/1940	10/11/1940	720	Ground Level	Unnamed	Price Fm & equivs	Price Fm & equivs	Development Well	Unsuccessful	Dry w/ Gas Show	unintentional	None/Open H	1485			

Pay/ShowWater information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4705100112	11/5/1940	Water	Fresh Water	Vertical			40						0
4705100112	11/5/1940	Water	Salt Water	Vertical			440						0

There is no Production Gas data for this well

There is no Production Oil data for this well    \*\* some operators may have reported NGL under Oil

There is no Production NGL data for this well    \*\* some operators may have reported NGL under Oil

There is no Production Water data for this well

Stratigraphy information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4705100112	Original Loc	Sewickley coal	Well Record	211	Reasonable	3	Reasonable	720	Ground Level
4705100112	Original Loc	Pittsburgh coal	Well Record	230	Reasonable	4	Reasonable	720	Ground Level
4705100112	Original Loc	Salt Sands (undist)	Well Record	975	Reasonable	40	Reasonable	720	Ground Level
4705100112	Original Loc	Greenbrier Group	Well Record	1330	Reasonable	66	Reasonable	720	Ground Level
4705100112	Original Loc	Big Lime	Well Record	1330	Reasonable	66	Reasonable	720	Ground Level
4705100112	Original Loc	Big Injun (PriceSen)	Well Record	1360	Reasonable	0	Reasonable	720	Ground Level

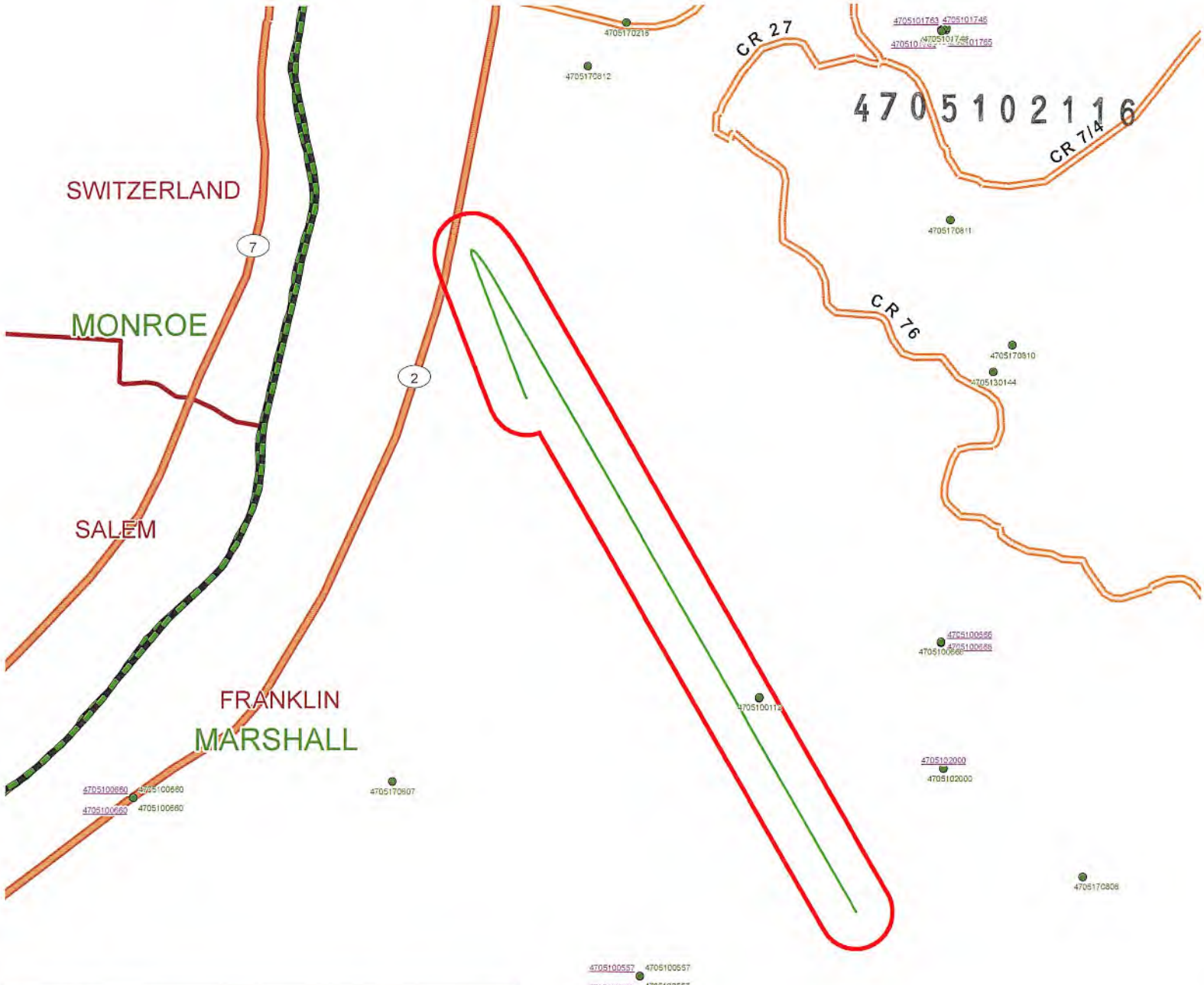
There is no Wireline (E-Log) data for this well

Plugging information:

API	PLG_DT	DEPTH_PBT
4705100112	11/5/1940	0

There is no Sample data for this well

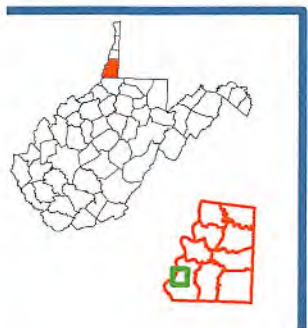
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**Legend**

- Well Locations (ims.wvgs.wvnet.edu)
- WVDEP O & G Permits (tagis.dep.wv.gov)
- 500 Ft. Buffer
- Woodford - 4HM
- Major Highways
- Major Roads
- ▭ Counties
- ▭ Districts

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# Woodford - 4HM Franklin District Marshall County, WV



Map Created: July 3, 2018

Notes:  
All locations are approximate and are for visualization purposes only.



WW-9  
(4/16)

API Number 47 - 051 - \_\_\_\_\_

Operator's Well No. Woodford 4HM

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION **47 05 \* 02 1 16**  
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Tug Hill Operating, LLC OP Code 494510851

Watershed (HUC 10) French Creek - Ohio River Quadrangle Powhatan Point 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: AST Tanks with proper containment will be used for staging fresh water for frac and flow back water

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? AST Tanks will be used with proper containment

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number UIC 2459, UIC 965, UIC 359, UIC 2D0732540, UIC 2D0732523 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Will closed loop system be used? If so, describe: Yes - For Vertical and Horizontal Drilling

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air for vertical / Oil for Horizontal

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Base

Additives to be used in drilling medium? Barite for weight

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. All drill cuttings to be disposed of in a Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021 / WV0109185) and Westmoreland Sanitary Landfill, LLC (SAN1405 / PA DEP EC#1388426)

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature James A. Pancake  
Company Official (Typed Name) Jim Pancake  
Company Official Title Vice President - Geoscience

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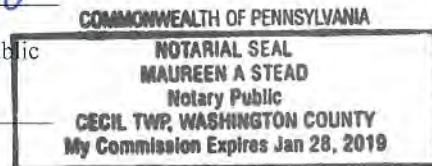
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Subscribed and sworn before me this 7 day of AUG., 20 18

Maureen A Stead  
Notary Public

My commission expires 4/20/19



Tug Hill Operating, LLC

Proposed Revegetation Treatment: Acres Disturbed 44.34 acres Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Orchard Grass	12
Spring Oats	96	Ladino	3
		White Clover	2

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Jim Trudish*  
Comments: \_\_\_\_\_

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Title: Oil and Gas Inspector

Date: 8/8/18

Field Reviewed?  Yes  No



WW-9

PROPOSED WOODFORD 4HM  
SHEET 1

SUPPLEMENT PG 1

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.

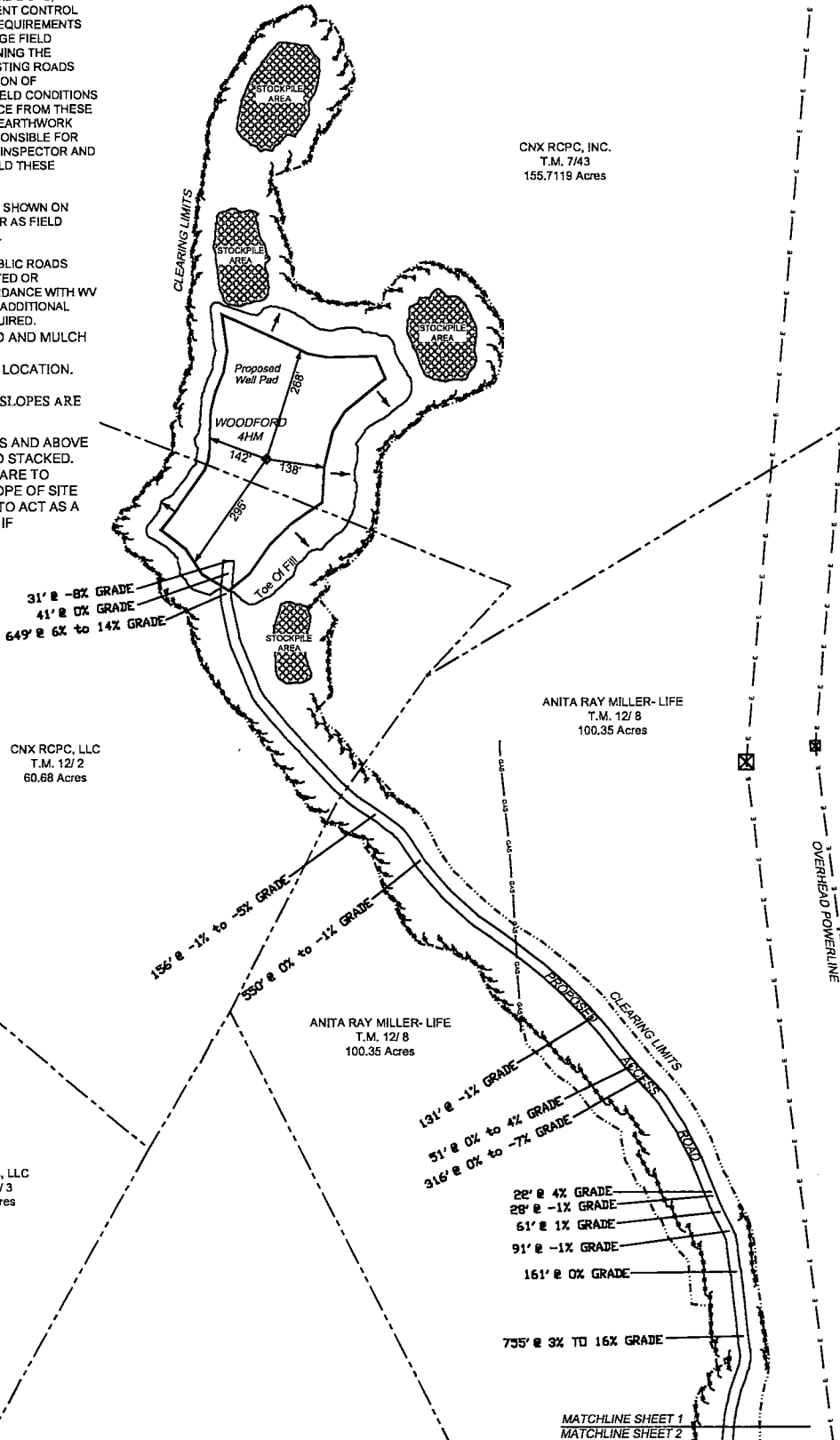
INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED. TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.

ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.

CNX RCPC, INC.  
T.M. 7/43  
155.7119 Acres



CNX RCPC, LLC  
T.M. 12/2  
60.68 Acres

ANITA RAY MILLER-LIFE  
T.M. 12/8  
100.35 Acres

ANITA RAY MILLER-LIFE  
T.M. 12/8  
100.35 Acres

CNX RCPC, LLC  
T.M. 12/3  
62.30 Acres

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LEGEND

- Note:
- ⊙ Denotes existing culvert with appropriate sediment outlet control (Rip Rap splash pad).
  - Silt Fence and/or Sediment and Erosion Control Measure.
  - - - - - Surface Boundary

MATCHLINE SHEET 1  
MATCHLINE SHEET 2

DATE: 07-27-2018

PROJECT NO: 494510851

DRAWN BY: J.A.H.

DRAWING NOT  
TO SCALE

WW-9

**PROPOSED WOODFORD 4HM  
SHEET 2**

MATCHLINE SHEET 1  
MATCHLINE SHEET 2

SUPPLEMENT PG 1

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.

INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED. TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.

ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.

ROBERT WM RIGGENBACH ET UX  
T.M. 12/ 7  
104.231 Acres

LINDA HAMILTON ET AL  
T.M. 12/ 13  
41.887 Acres

RAYMOND K MILLER  
T.M. 12/ 7.2  
4.66 Acres

RAYMOND K MILLER  
T.M. 12/ 7.1  
1.609 Acres

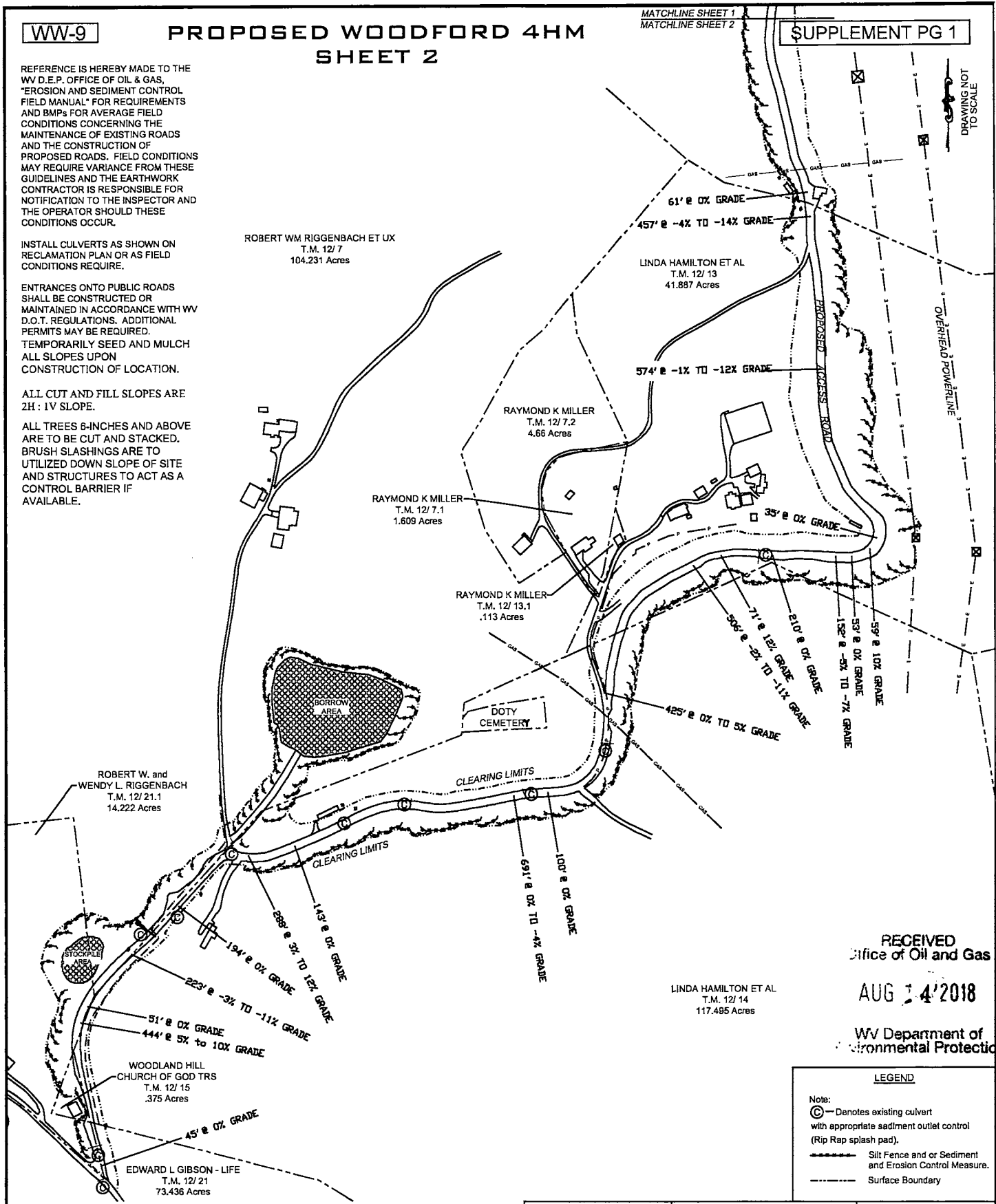
RAYMOND K MILLER  
T.M. 12/ 13.1  
.113 Acres

ROBERT W. and  
WENDY L. RIGGENBACH  
T.M. 12/ 21.1  
14.222 Acres

LINDA HAMILTON ET AL  
T.M. 12/ 14  
117.485 Acres

WOODLAND HILL  
CHURCH OF GOD TRS  
T.M. 12/ 15  
.375 Acres

EDWARD L GIBSON - LIFE  
T.M. 12/ 21  
73.436 Acres



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**LEGEND**

Note:  
 (C) --- Denotes existing culvert with appropriate sadlment outlet control (Rip Rap splash pad).  
 - - - - Silt Fence and/or Sediment and Erosion Control Measure.  
 - - - - Surface Boundary

4705102116



**Well Site Safety Plan**  
Tug Hill Operating, LLC

*ju*  
*8/18/18*

Well Name: Woodford 4HM

Pad Location: Woodford Pad

Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

Northing: 4,406,032.90

Easting: 516,092.94

August 2018

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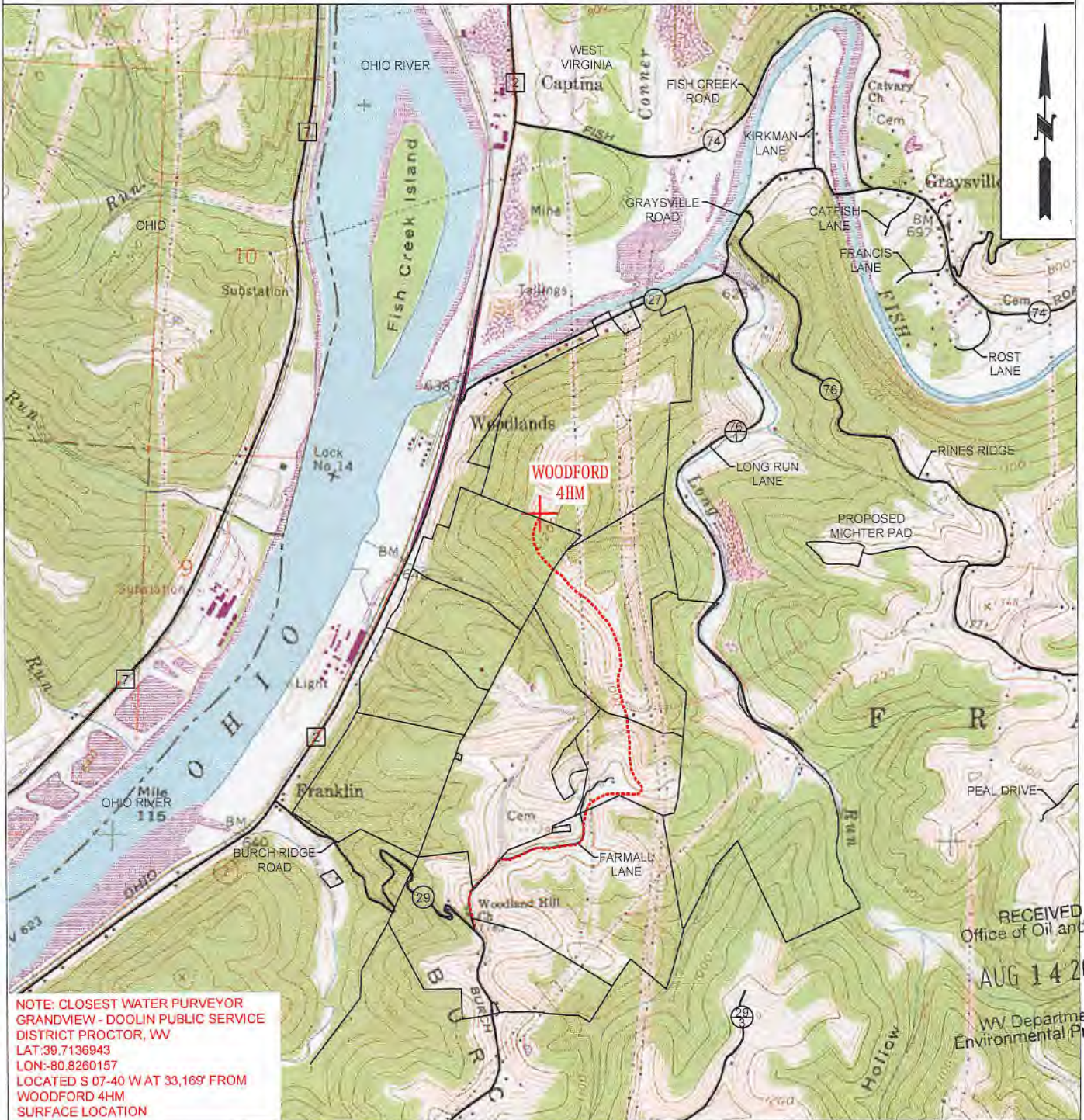
WV Department of  
Environmental Protection



WW-9


# PROPOSED WOODFORD 4HM

SUPPLEMENT PG 2



NOTE: CLOSEST WATER PURVEYOR  
GRANDVIEW - DOOLIN PUBLIC SERVICE  
DISTRICT PROCTOR, WV  
LAT: 39.7136943  
LON: -80.8260157  
LOCATED S 07-40 W AT 33,169' FROM  
WOODFORD 4HM  
SURFACE LOCATION

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 <b>TUG HILL OPERATING</b>	<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'	WOODFORD
			<b>SCALE:</b> 1" = 2000'	<b>DATE:</b> DATE: 07-27-2018



Form ww6

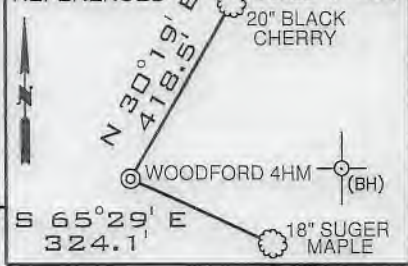
**WOODFORD LEASE  
WELL 4HM  
743.6209± ACRES**

TOP HOLE LATITUDE: 39°50'00"  
BOTTOM HOLE LATITUDE: 39°47'30"

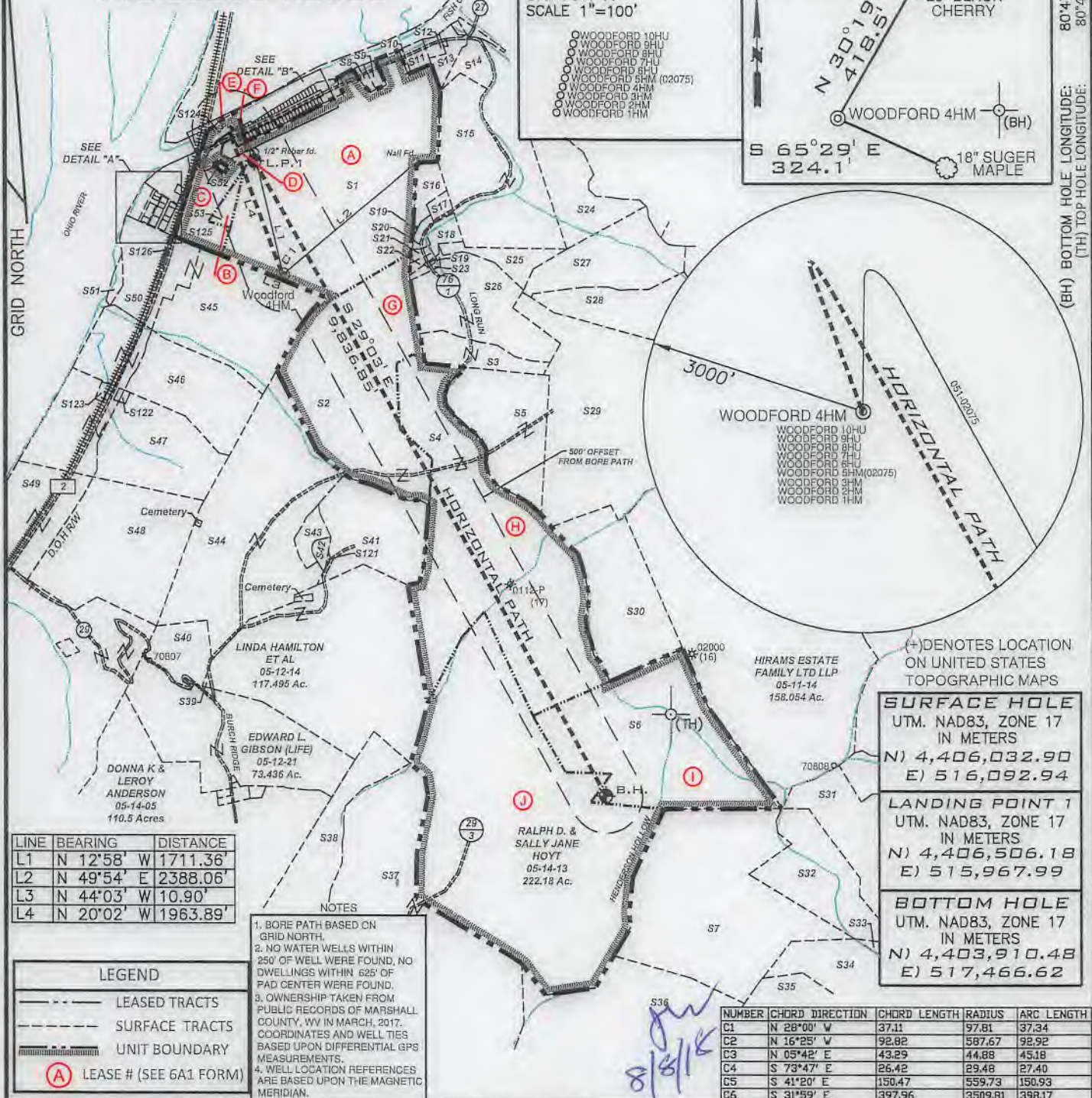
DETAIL SKETCH "A"  
SCALE 1"=100'

REFERENCES

SCALE 1"=400'



- WOODFORD 10HU
- WOODFORD 9HU
- WOODFORD 8HU
- WOODFORD 7HU
- WOODFORD 6HU
- WOODFORD 5HM (02075)
- WOODFORD 4HM
- WOODFORD 3HM
- WOODFORD 2HM
- WOODFORD 1HM



LINE	BEARING	DISTANCE
L1	N 12°58' W	1711.36'
L2	N 49°54' E	2388.06'
L3	N 44°03' W	10.90'
L4	N 20°02' W	1963.89'

**LEGEND**

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

**NOTES**

- 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.

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

SURFACE HOLE	
UTM. NAD83, ZONE 17	IN METERS
N) 4,406,032.90	E) 516,092.94

LANDING POINT 1	
UTM. NAD83, ZONE 17	IN METERS
N) 4,406,506.18	E) 515,967.99

BOTTOM HOLE	
UTM. NAD83, ZONE 17	IN METERS
N) 4,403,910.48	E) 517,466.62

NUMBER	CHORD DIRECTION	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 28°00' W	37.11	97.81	37.34
C2	N 16°25' W	92.82	587.67	92.92
C3	N 05°42' E	43.29	44.88	45.18
C4	S 73°47' E	26.42	29.48	27.40
C5	S 41°20' E	150.47	559.73	150.93
C6	S 31°59' E	397.96	3509.81	398.17

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

DRAWING NUMBER WOODFORD\_WP\_4HM

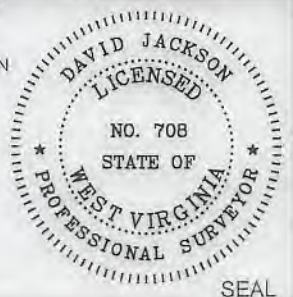
SCALE 1" = 2000'

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: AUGUST 02, 2018

OPERATORS WELL NO. Woodford 4HM

API WELL NO. 47-051-02116

STATE WV COUNTY MARSHALL PERMIT 81818

LOCATION ELEVATION 1233.51' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 Form

SURFACE OWNER CNX RCPC, LLC ACREAGE 155.7119

OIL & GAS ROYALTY OWNER HG ENERGY II APPALACHIA LC (TRACT 5-7-43) LEASE ACREAGE 155.7119

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE (SPECIFY) \_\_\_\_\_

TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD: 6,480' TMD: 17,178'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER CT CORPORATION SYSTEM

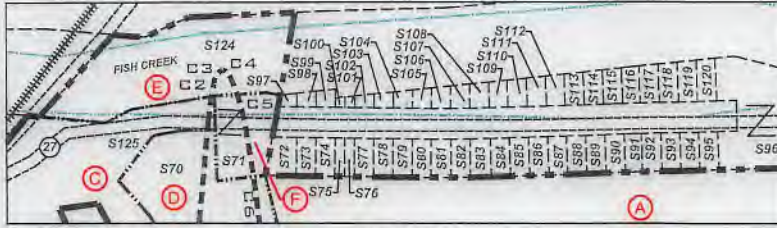
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

COUNTY NAME  
PERMIT



form: WVG

**WOODFORD LEASE  
WELL 4HM  
743.6209± ACRES**



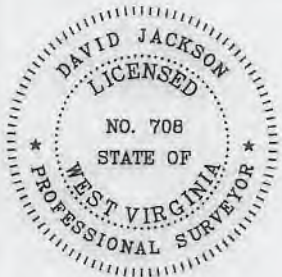
DETAIL "A"  
Scale  
1"=500'



DETAIL "B"  
Scale  
1"=500'

Number	TAX MAP-PARCEL	ADJOINER OWNER	ACRES
S1	05-07-43	CNX RCPC, LLC	155.7119
S2	05-12-08	Amita Rae Miller (Life)	100.35
S3	05-12-10	Consolidation Coal Co./ Murray Energy	13.76
S4	05-12-12.1	Lionel L. Persinger, Et Ux.	148.09
S5	05-12-12	Lionel L. Persinger, Et Ux.	45
S6	05-11-15	Lionel L. Persinger, Et Ux.	93
S7	05-15-01	Marcus Sharp & David Schlabach, Hrs.	121
S8	05-7B-49	Cassidy Rain Carpenter	1.1441
S9	05-7B-48	Cassidy Rain Carpenter	1.325
S10	05-07-43.3	M. Frank Mason	0.327
S11	05-07-43.2	M. Frank Mason	1.36
S12	05-07-38	John K. Persinger, Et Ux.	2.65
S13	05-07-36	John K. Persinger	4.329
S14	05-07-35	Samuel L. Persinger	10.708
S15	05-07-39	Lionel L. Persinger, et ux	57
S16	05-07-42.1	Holly Rice	5.99
S17	05-07-41	James A. Wade	1
S18	05-07-42.5	Matthew V. Conner, et al	3.791
S19	05-07-42	Tracy M. Kesterson	0.53
S20	05-07-44	Crystal B. Darrah	1.726
S21	05-07-42.2	Steven & Rhonda Lloyd	0.85
S22	05-07-42.3	Joshua David Hartley	0.886
S23	05-07-42.4	Jason Reed Hartley	0.94
S24	05-07-33	William N. Roupe	24.6
S25	05-12-09	Lionel & Mary Lee Persinger	10.15
S26	05-12-10.1	Consolidation Coal Co./ Murray Energy	38.48
S27	05-11-1.4	Larry W. Dunlap, et al	32.493
S28	05-11-1.1	Larry W. Dunlap & Charles Leroy Dunlap	34.405
S29	05-11-21	Karen Reed, et al	112.67
S30	05-12-11	Wesley B. Bryan & Wesley R. Bryan II	52.478
S31	05-15-04	Joseph J. Kramer, et ux	41.106
S32	05-15-03	Joseph J. Kramer, et ux	36.10
S33	05-15-02	John David Petrock, et ux	5
S34	05-15-14	John David Petrock, et ux	25
S35	05-15-12	John David Petrock, et ux	150.23
S36	05-15-15	Robert L. Shields, et al	49
S37	05-14-12	Dale R. Gallaher, et al	135.100
S38	05-14-10	Wanda P. Rine (Life)	107.372
S39	05-12-15	Woodland Hills Church of God Trs.	0.375
S40	05-12-21.1	Robert W. Jr. & Wendy L. Riggenbach	14.222
S41	05-12-13	Linda Hamilton, et al	41.887
S42	05-12-7.1	Raymond K. Miller	1.609
S43	05-12-7.2	Raymond K. Miller	4.66
S44	05-12-07	Robert Wm. Riggenbach, et ux	104.231
S45	05-12-02	CNX RCPC, LLC	60.68
S46	05-12-03	CNX LAND, LLC	62.30
S47	05-12-05	CNX LAND, LLC	61.883
S48	05-12-06	CNX RCPC, LLC	70.81
S49	05-12-6.2	Consolidation Coal Co./ Murray Energy	25.50
S50	05-12-2.1	Consolidation Coal Co./ Murray Energy	22

Number	TAX MAP-PARCEL	ADJOINER OWNER	ACRES
S51	05-12-01	US of America	1.68
S52	05-07-43.4	Ida Campbell	0.403
S53	05-07-43.1	State Road Commission	1.48
S54	05-7A-17	Carol Martin & Harry L. Yoho	0.3067
S55	05-7A-18	Barbara Anderson	0.1530
S56	05-7A-19	Barbara Anderson	0.3060
S57	05-7A-20	Betty Sexton	0.1204
S58	05-7A-24	Rick A. Kosky	0.3152
S59	05-7A-23	Harold S. Young, et ux	0.3067
S60	05-7A-22	Richard Hyer, et ux	0.1530
S61	05-7A-21	David A. Beyser	0.1866
S62	05-7A-25	Rick A. Kosky	0.1638
S63	05-7A-26	Lance Clark	0.4531
S64	05-7A-27	Paul W. Barrett	0.1495
S65	05-7A-28	Richard Hyer, et ux	0.1093
S66	05-7A-29	Richard Hyer, et ux	0.1085
S67	05-7A-30	Richard Hyer, et ux	1.9
S68	05-7A-31	WVA Dept. of Natural Resources	3.18
S69	05-7A-32	Dawn Thompson Tennant	0.3091
S70	05-7A-02	CNX RCPC, LLC	2.23
S71	05-7A-01	Lucille Myers	0.529
S72	05-7B-25	Cindy D. Aliff	0.1673
S73	05-7B-26	Cindy D. Aliff	0.1148
S74	05-7B-27	Patricia A. Johnson	0.1148
S75	05-7B-28	Patricia A. Johnson	0.0574
S76	05-7B-28.1	Patricia A. Johnson	0.0574
S77	05-7B-29	Patricia A. Johnson	0.1148
S78	05-7B-30	Cindy D. Aliff, et al	0.1148
S79	05-7B-31	Cindy D. Aliff, et al	0.1148
S80	05-7B-32	Albert J. Anderson, Jr.	0.1148
S81	05-7B-33	Albert J. Anderson, Jr.	0.1182
S82	05-7B-34	Albert J. Anderson, Jr.	0.1148
S83	05-7B-35	Albert J. Anderson, Jr.	0.1217
S84	05-7B-36	Albert J. Anderson, Jr.	0.1148
S85	05-7B-37	Teresa & Thomas Gouldsberry	0.1148
S86	05-7B-38	Teresa & Thomas Gouldsberry	0.1148
S87	05-7B-39	Teresa & Thomas Gouldsberry	0.1148
S88	05-7B-40	Teresa & Thomas Gouldsberry	0.1148
S89	05-7B-41	Teresa & Thomas Gouldsberry	0.1148
S90	05-7B-42	Teresa & Thomas Gouldsberry	0.1194
S91	05-7B-43	Teresa & Thomas Gouldsberry	0.1148
S92	05-7B-44	Daniel D. & Mary E. Robinson	0.1148
S93	05-7B-45	Daniel D. & Mary E. Robinson	0.1148
S94	05-7B-46	Daniel D. Robinson, et ux	0.1148
S95	05-7B-47	Daniel D. Robinson, et ux	0.1148
S96	05-7B-24	Cindy D. Aliff	0.0354
S97	05-7B-23	Cindy D. Aliff	0.0471
S98	05-7B-22	Patricia A. Johnson	0.0505
S99	05-7B-21	Patricia A. Johnson	0.0287
S100	05-7B-21.1	Patricia A. Johnson	0.0296
S101	05-7B-20	Patricia A. Johnson	0.0626
S102	05-7B-19	Cindy D. Aliff, et al	0.0712
S103	05-7B-18	Cindy D. Aliff, et al	0.0763
S104	05-7B-17	Albert J. Anderson, Jr.	0.0849
S105	05-7B-16	Albert J. Anderson, Jr.	0.0903
S106	05-7B-15	Albert J. Anderson, Jr.	0.0970
S107	05-7B-14	Albert J. Anderson, Jr.	0.0991
S108	05-7B-13	Albert J. Anderson, Jr.	0.1067
S109	05-7B-12	Teresa & Thomas Gouldsberry	0.1113
S110	05-7B-11	Teresa & Thomas Gouldsberry	0.1159
S111	05-7B-10	Teresa & Thomas Gouldsberry	0.1199
S112	05-7B-09	Teresa & Thomas Gouldsberry	0.1240
S113	05-7B-08	Teresa & Thomas Gouldsberry	0.1286
S114	05-7B-07	Teresa & Thomas Gouldsberry	0.1331
S115	05-7B-06	Teresa & Thomas Gouldsberry	0.1377
S116	05-7B-05	Daniel D. & Mary E. Robinson	0.1418
S117	05-7B-04	Daniel D. & Mary E. Robinson	0.1458
S118	05-7B-03	Daniel D. Robinson, et ux	0.1504
S119	05-7B-02	Daniel D. Robinson, et ux	0.1550
S120	05-7B-01	Patricia L. Robinson	1.257
S121	05-12-13.1	Raymond K. Miller	0.113
S122	05-12-5.1	CNX RCPC, LLC	0.52
S123	05-12-04	CNX RCPC, LLC	0.93
S124	Fish Creek	State of W.V.	2.43(Calc.)
S125	Rt. 2	State Road Commission	17.62(Calc.)
S126	R.R.	CSX Transportation	4.99(Calc.)



P.S. 708 *David L Jackson*



**TUG HILL  
OPERATING**

OPERATOR'S  
WELL #: WOODFORD 4HM  
DISTRICT: Franklin  
COUNTY: Marshall  
STATE: WV

WELL PLAT  
PAGE 2 OF 2  
DATE: 08/02/2018



WW-6A1  
(5/13)

Operator's Well No. Woodford 4HM

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
-------------------------	-----------------------	-----------------------	---------	-----------

\*See attached pages

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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Office of Oil and Gas

AUG 14 2018

WV Department of  
Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Tug Hill Operating, LLC

By: Amy L. Miller 

Its: Permitting Specialist



Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee,	Interest	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment
041112	5-7-43	A	COLUMBIAN CHEMICAL COMPANY	CNX LAND RESOURCES INC	1/8+	691	363	CNX Land Resources Inc to CNX Gas Company LLC: 745/117	CNX Gas Company LLC to Noble Energy Inc: 752/66	CNX Gas Company LLC to Noble Energy Inc: 909/94	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q075763000	5-7-43.1	B	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	NOBLE ENERGY INC	1/8+	797	642	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q088417001	STATE ROAD COMMISSION	C	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	NOBLE ENERGY INC	1/8+	845	332	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/407	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
041112	5-7A-2	D	COLUMBIAN CHEMICAL COMPANY	CNX LAND RESOURCES INC	1/8+	691	363	CNX Land Resources Inc to CNX Gas Company LLC: 745/117	CNX Gas Company LLC to Noble Energy Inc: 752/66	CNX Gas Company LLC to Noble Energy Inc: 909/94	Noble Energy Inc to HG Energy II Appalachia LLC: 931/43	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q091960000	FISH CREEK - WV	E	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	NOBLE ENERGY INC	1/8+	865	558	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286
Q074927000	5-7A-1	F	LUCILLE MYERS	NOBLE ENERGY INC		794	497	N/A	N/A	N/A	Noble Energy Inc to HG Energy II Appalachia LLC: 39/1	Memorandum of Operating Agreement between TH Exploration LLC and HG Energy II Appalachia, LLC: 988/286

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 Environmental Protection

4705 \* 02116

WW-6A1 Supplement

Operator's Well No. Woodford - 4HM

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WV Department of  
Environmental Protection

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book	Page	Assignment	Assignment	Assignment	Assignment
10*18827	5-12-8	G	ERIN E SCHOLL	TH EXPLORATION LLC	1/8+	937	286	N/A	N/A	N/A	N/A
10*18885	5-12-8	G	REBECCA LYNN KIER AND ERIC JAMES KIER	TH EXPLORATION LLC	1/8+	937	285	N/A	N/A	N/A	N/A
10*18968	5-12-8	G	E SHIELA PAVLOVICH	TH EXPLORATION LLC	1/8+	940	291	N/A	N/A	N/A	N/A
10*18969	5-12-8	G	JEANNE MARIE VAN GROL AND RICHARD ARTHUR VAN GROL	TH EXPLORATION LLC	1/8+	941	289	N/A	N/A	N/A	N/A
10*18980	5-12-8	G	JAMES CONTRERAS AND CATHERINE CONTRERAS	TH EXPLORATION LLC	1/8+	942	608	N/A	N/A	N/A	N/A
10*19825	5-12-8	G	THOMAS A POWDERLY	TH EXPLORATION LLC	1/8+	945	639	N/A	N/A	N/A	N/A
10*19826	5-12-8	G	TERRANCE V POWDERLY SR	TH EXPLORATION LLC	1/8+	945	637	N/A	N/A	N/A	N/A
10*19827	5-12-8	G	CORINNE E VERNA AND JONATHAN C VERNA SR	TH EXPLORATION LLC	1/8+	945	635	N/A	N/A	N/A	N/A
10*19828	5-12-8	G	ANNE M AND JOHN LEACH	TH EXPLORATION LLC	1/8+	945	633	N/A	N/A	N/A	N/A
10*19829	5-12-8	G	MARGARET J WHITFORD AND LANCE W WHITFORD	TH EXPLORATION LLC	1/8+	945	631	N/A	N/A	N/A	N/A
10*19830	5-12-8	G	DAVID POWDERLY AND NANCY A POWDERLY	TH EXPLORATION LLC	1/8+	945	629	N/A	N/A	N/A	N/A
10*21002	5-12-8	G	STANLEY EUGENE STOWE	TH EXPLORATION LLC	1/8+	951	215	N/A	N/A	N/A	N/A
10*21045	5-12-8	G	SANDRA J HARMON AND WALTER D HARMON	TH EXPLORATION LLC	1/8+	951	217	N/A	N/A	N/A	N/A
10*21190	5-12-8	G	MARGARET CLICKNER	TH EXPLORATION LLC	1/8+	941	283	N/A	N/A	N/A	N/A
10*21223	5-12-8	G	EUGENE C GRIEB AND SHIRLEY K GRIEB	TH EXPLORATION LLC	1/8+	961	468	N/A	N/A	N/A	N/A
10*21607	5-12-8	G	SHERLEY R STOWE & KAREN M STOWE	TH EXPLORATION LLC	1/8+	959	474	N/A	N/A	N/A	N/A
10*21924	5-12-8	G	BEVERLY A MILLER	TH EXPLORATION LLC	1/8+	953	533	N/A	N/A	N/A	N/A
10*21926	5-12-8	G	VIOLA JANE BREON AND JAMES RONALD BREON	TH EXPLORATION LLC	1/8+	953	360	N/A	N/A	N/A	N/A
10*21929	5-12-8	G	BENNY MILLER	TH EXPLORATION LLC	1/8+	960	177	N/A	N/A	N/A	N/A
10*21930	5-12-8	G	JAMES A GRENOBLE AND MARY JANE GRENOBLE	TH EXPLORATION LLC	1/8+	953	263	N/A	N/A	N/A	N/A
10*21938	5-12-8	G	SEAN M GRENOBLE AND CHERYL A GRENOBLE	TH EXPLORATION LLC	1/8+	960	91	N/A	N/A	N/A	N/A
10*21939	5-12-8	G	ULA F NELSON	TH EXPLORATION LLC	1/8+	960	96	N/A	N/A	N/A	N/A
10*22051	5-12-8	G	NOEL A PARKS	TH EXPLORATION LLC	1/8+	960	509	N/A	N/A	N/A	N/A
10*22309	5-12-8	G	AARON D LITMAN AND BETTY J LITMAN	TH EXPLORATION LLC	1/8+	963	408	N/A	N/A	N/A	N/A
10*22311	5-12-8	G	WILLIAM L LITMAN AND VICKIE L LITMAN	TH EXPLORATION LLC	1/8+	963	404	N/A	N/A	N/A	N/A
10*22312	5-12-8	G	RICHARD WOOD AND VICKI WOOD	TH EXPLORATION LLC	1/8+	962	528	N/A	N/A	N/A	N/A
10*22349	5-12-8	G	ANITA RAE MILLER	AMERICAN PETROLEUM PARTNERS LLC	1/8+	910	152	N/A	N/A	N/A	American Petroleum Partners Operating LLC to TH Exploration LLC: 42/109
10*22408	5-12-8	G	REBECCA S TARR	TH EXPLORATION LLC	1/8+	962	578	N/A	N/A	N/A	N/A
10*22548	5-12-8	G	SHARON TOLER WILLIAMS & HERVY WILLIAMS	TH EXPLORATION LLC	1/8+	966	194	N/A	N/A	N/A	N/A
10*22604	5-12-8	G	WILLIAM LEESON	TH EXPLORATION LLC	1/8+	966	499	N/A	N/A	N/A	N/A
10*22605	5-12-8	G	MICHAEL R LEESON AND BRENDA R LEESON	TH EXPLORATION LLC	1/8+	966	496	N/A	N/A	N/A	N/A
10*22744	5-12-8	G	BRIDGET A POWDERLY	TH EXPLORATION LLC	1/8+	968	206	N/A	N/A	N/A	N/A
10*22858	5-12-8	G	THOMAS C DAVIS AND MARY ELLEN DAVIS	TH EXPLORATION LLC	1/8+	977	63	N/A	N/A	N/A	N/A
10*23004	5-12-8	G	KLOVA A MORRIS	TH EXPLORATION LLC	1/8+	977	382	N/A	N/A	N/A	N/A
10*16918	5-12-12.1	H	LIONEL L AND MARY LEE PERSINGER	TH EXPLORATION LLC	1/8+	976	617	N/A	N/A	N/A	N/A

RECEIVED  
Office of Oil and Gas  
AUG 14 2018  
WV Department of Environmental Protection

Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Grantee, Lessee, Etc.	Royalty	Deed Book/Page	Assignment	Assignment	Assignment	Assignment		
10*14911	5-11-15	I	FORREST MILLER	GASTAR EXPLORATION USA, INC.	1/8+	819 316	N/A		Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Merger - Gastar Exploration USA Inc into Gastar Exploration Inc: 21/41	Gastar Exploration nc to TH Exploration II LLC: 36/9	
10*16913	5-11-15	I	LIONEL L AND MARY LEE PERSINGER	TH EXPLORATION LLC	1/8+	976 626	N/A		N/A	N/A	N/A	
10*17329	5-11-15	I	JOHN P AND REVA J ICARD	TH EXPLORATION LLC	1/8+	943 524	N/A		N/A	N/A	N/A	
10*18045	5-11-15	I	KLOVA A MORRIS	TH EXPLORATION LLC	1/8+	927 114	N/A		N/A	N/A	N/A	
10*18174	5-11-15	I	THE ESTATE F ROY JOSEPH LEACH	TH EXPLORATION LLC	1/8+	927 647	N/A		N/A	N/A	N/A	
10*19642	5-11-15	I	NOEL A PARKS	TH EXPLORATION LLC	1/8+	944 92	N/A		N/A	N/A	N/A	
10*21455	5-11-15	I	MELISSA MILLER GIBSON & JAMES GIBSON	TH EXPLORATION LLC	1/8+	953 308	N/A		N/A	N/A	N/A	
10*21903	5-11-15	I	WILLIAM R VOLTZ & SHARON VOLTZ	TH EXPLORATION LLC	1/8+	960 182	N/A		N/A	N/A	N/A	
10*21904	5-11-15	I	MARY S MAGERS & WILLIAM MAGERS	TH EXPLORATION LLC	1/8+	960 158	N/A		N/A	N/A	N/A	
10*21905	5-11-15	I	DAVID F VOLTZ AND LINDA VOLTZ	TH EXPLORATION LLC	1/8+	961 444	N/A		N/A	N/A	N/A	
10*21906	5-11-15	I	MICHAEL P VOLTZ	TH EXPLORATION LLC	1/8+	960 164	N/A		N/A	N/A	N/A	
10*21910	5-11-15	I	J THOMAS VOLTZ AKA JOHN THOMAS VOLTZ	TH EXPLORATION LLC	1/8+	960 179	N/A		N/A	N/A	N/A	
10*21939	5-11-15	I	ULA F NELSON	TH EXPLORATION LLC	1/8+	960 96	N/A		N/A	N/A	N/A	
10*22134	5-11-15	I	JACK M FOREMAN	TH EXPLORATION LLC	1/8+	961 449	N/A		N/A	N/A	N/A	
10*22309	5-11-15	I	AARON D LITMAN AND BETTY J LITMAN	TH EXPLORATION LLC	1/8+	963 408	N/A		N/A	N/A	N/A	
10*22311	5-11-15	I	WILLIAM L LITMAN AND VICKIE L LITMAN	TH EXPLORATION LLC	1/8+	963 404	N/A		N/A	N/A	N/A	
10*22312	5-11-15	I	RICHARD WOOD AND VICKI WOOD	TH EXPLORATION LLC	1/8+	962 528	N/A		N/A	N/A	N/A	
10*22438	5-11-15	I	JULIE FOREMAN SPRINGWATER	TH EXPLORATION LLC	1/8+	964 231	N/A		N/A	N/A	N/A	
10*22559	5-11-15	I	SHARON TOLER WILLIAMS & HERVY WILLIAMS	TH EXPLORATION LLC	1/8+	966 94	N/A		N/A	N/A	N/A	
10*14067	5-14-13	J	REVA FRANZE	GASTAR EXPLORATION USA, INC.	1/8+	666 51	N/A		N/A	Gastar Exploration USA Inc to Atinum Marcellus I LLC: 23/353	Merger - Gastar Exploration USA Inc into Gastar Exploration Inc: 21/41	Gastar Exploration nc to TH Exploration II LLC: 36/9



AFFIDAVIT

COPY 02116

STATE OF TEXAS §
COUNTY OF TARRANT § SS

On this 18th day of October, 2016, before me, the undersigned authority, personally appeared David D. Kalish ("Affiant") who being first duly sworn under oath, deposes and saith:

- 1. TH Exploration, LLC, TH Exploration II, LLC and TH Exploration III, LLC are wholly owned subsidiaries of THQ Appalachia I, LLC.
2. Tug Hill Operating, LLC provides oil and gas operations services to THQ Appalachia I, LLC under an Operating Services Agreement dated July 23, 2014.
3. David D. Kalish, the Affiant, is the Vice President of Tug Hill Operating, LLC, THQ Appalachia I, LLC, TH Exploration, LLC, TH Exploration II, LLC and TH Exploration III, LLC, and;
3. Tug Hill Operating, LLC is authorized to operate and maintain the assets owned by THQ Appalachia I, LLC, including, as referenced above, TH Exploration, LLC, TH Exploration II, LLC, and TH Exploration III, LLC, including oil and gas leases, wells, pipelines, surface facilities, and other all other assets that support the business of THQ Appalachia I, LLC, and;
4. Specifically, Tug Hill Operating, LLC is authorized to submit and obtain well work permits and carry out all activities pursuant to such work permits for assets owned by TH Exploration, LLC, TH Exploration II, LLC, TH Exploration III, LLC.

FURTHER, AFFIANT SAITH NOT.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 18th day of October, 2016.

David D. Kalish
Affiant: David D. Kalish

JURAT

STATE OF TEXAS §
COUNTY OF TARRANT § SS

Jan Pest
MARSHALL County 03:44:28 PM
Instrument No 1416299
Date Recorded 10/19/2016
Document Type HIS
Pages Recorded 1
Book-Page 28-62
Recording Fee \$5.00
Additional \$6.00

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Office of Oil and Gas
AUG 14 2018
WV Department of Environmental Protection

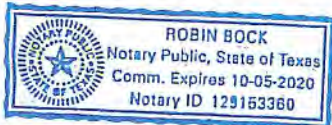
Sworn and subscribed to (or affirmed) before me on this, the 18th day of October, 2016, by David D. Kalish

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: 10-05-2020

Signature/Notary Public: Robin Bock

Name/Notary Public (Print): Robin Bock



4705102116

**MEMORANDUM OF OPERATING AGREEMENT AND FINANCING STATEMENT**

This Memorandum of Operating Agreement and Financing Statement (hereinafter referred to as "Memorandum") is executed to be effective concurrently with that certain Operating Agreement (the "Operating Agreement") by and between TH Exploration, LLC, as Operator, and HG Energy II Appalachia, LLC and TH Exploration II, LLC, as Non-Operators, covering, among other things, the development and production of crude oil, natural gas and associated substances from the leases (hereinafter called the "Contract Area") described on Exhibit "A-1" and Exhibit "A-2" attached hereto and owned by Operator and Non-Operator in the respective percentages of shares indicated on Exhibit "A" to the Operating Agreement.

The Operating Agreement contains an Accounting Procedure, along with provisions giving the parties hereto mutual liens and security interests where one or more parties hereto are or may become Debtors to one or more other parties hereto. This Memorandum incorporates by reference all of the terms and conditions of the Operating Agreement, including but not limited to the lien and security interest provisions.

The purpose of this Memorandum is to place third parties on notice of the Operating Agreement, and to secure and perfect the mutual liens and security interests of the parties hereto.

The Operating Agreement specifically provides and the parties do hereby confirm and agree that:

1. The Operator shall conduct and direct and have full control of all operations on the Contract Area as permitted and required by, and within the limits of, the Operating Agreement.
2. The liability of the parties under the Operating Agreement shall be several, not joint or collective. Each party shall be responsible only for its obligations and shall be liable only for its proportionate share of costs.
3. Each Non-Operator grants to Operator a lien upon its oil and gas rights, oil and gas leases and mineral interests in the Contract Area, and a security interest in its share of oil and/or gas when extracted and its interest in all fixtures, inventory, personal property and equipment located on or used on the Contract Area and in all its contract rights and receivables related thereto and arising therefrom to secure payment of its present and future share of costs and expenses, together with interest thereon at the rate provided in the Accounting Procedure referred to above. To the extent that Operator has a security interest under the Uniform Commercial Code ("Code") of the state or states in which the Contract Area is located, Operator without prejudice and in addition to all other legal, equitable and contractual remedies which are expressly reserved, shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the obtaining of judgment by Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the rights or security interests for the payment thereof.
4. The Operator grants to Non-Operator a lien and security interest equivalent to that granted to Operator as described in Paragraph 3 above, to secure payment by Operator of its own share of costs and expenses when due.

As reflected above, either or both Operator and Non-Operator may become Debtors if they default in their payment obligations under the terms of the Operating Agreement. On default, the non-defaulting party(ies) will be considered secured party(ies).

The Operating Agreement contains other provisions which do not conflict but supplement the above-described provisions, including, but not limited to, non-consent provisions which provide that parties who elect not to participate in certain operations shall be deemed to have relinquished their interest until the consenting parties are able to recover their costs of such operations plus a specified amount. Should any person or firm desire additional information regarding the Operating Agreement or wish to inspect a copy of the Operating Agreement, said person or firm should contact the Operator.

For purposes of protecting said liens and security interest, the undersigned parties agree that this Memorandum covers all right, title and interest of the Debtors in:

Property Subject to Security Interests:

- (A) All personal property located upon or used in connection with the Contract Area.
- (B) All fixtures on the Contract Area.
- (C) All oil, gas and associated substances of value in, on or under the Contract Area, or which may be extracted therefrom.
- (D) All accounts and receivables resulting from the sale of the items described in subparagraph (C) at the wellhead of every well located on the Contract Area or on lands pooled therewith.
- (E) All items used, useful, or purchased for the production, treatment, handling, storage, transportation, processing, manufacture, or sale of the items described in subparagraph (C).
- (F) All accounts, contract rights, rights under any gas balancing agreement, general intangibles, equipment, inventory, farmout rights, option farmout rights, acreage and/or cash contributions, and conversions rights, whether now owned or existing or hereafter acquired or arising, including but not limited to all interest in any enterprise that holds, owns, or controls any interest in the Contract Area or in any property encumbered by this Memorandum.
- (G) All severed and extracted oil, gas and associated substances now or hereafter produced from or attributable to the Contract Area, including without limitation, oil, gas and associated substances in tanks or pipelines or otherwise held by any person or entity for treatment, storage, transportation, manufacture, processing or sale.
- (H) All the proceeds and products of the items described in the foregoing paragraphs now existing or hereafter arising, and all substitutions therefore, improvements and enhancements thereto, replacements thereof, or accessions thereto.
- (I) All personal property and fixtures now and hereafter acquired in furtherance of the purposes of this Operating Agreement. Certain of the above-described items are, or are to become, fixtures on the Contract Area.
- (J) The proceeds and products of collateral are also specifically covered.



Property Subject to Liens:

- (A) All real property, within the Contract Area, including all oil, gas and associated substances of value in, on or under the Contract Area, or which may be extracted therefrom.
- (B) All fixtures within the Contract Area.
- (C) All real property and fixtures now and hereafter acquired in furtherance of the purposes of this Operating Agreement.

The above items will be financed at the wellhead of the well or wells located on the Contract Area, and this Memorandum is to be filed for record in the real estate records of the county and in the Uniform Commercial Code records in which the Contract Area is located.

On default of any covenant or condition of the Operating Agreement, in addition to any other remedy afforded by law, each party to the Operating Agreement and any successor to such party by assignment, operation of law, or otherwise, shall have, and is hereby given and vested with, the power and authority to take possession of and sell any interest which the defaulting party has in property identified above securing the obligations provided in the Operating Agreement and to foreclose this lien and security interest in the manner provided by law.

Upon expiration of the Operating Agreement and the satisfaction of all debts and outstanding interest, the Operator shall file of record a release and termination on behalf of all parties concerned. Upon the filing of such release and termination, all benefits and obligations under this Memorandum shall terminate as to all parties who have executed or ratified this Memorandum. In addition, the Operator shall have the right to file a continuation statement on behalf of all parties who have executed or ratified this Memorandum when Operator.

It is understood and agreed by the parties hereto that if any part, term or provision of this Memorandum is held to be illegal or in conflict with any applicable state or federal law or regulation, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Memorandum did not contain the particular part, term or provision held to be invalid.

This Memorandum shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns.


A party having an interest in the Contract Area can ratify this Memorandum by execution hereof or a separate counterpart hereof or by execution and delivery of an instrument of ratification, adopting the provisions of this Memorandum or agreeing to be bound by the terms hereof. Any such ratification shall have the same effect as if the ratifying party had executed this Memorandum or a counterpart thereof. By execution or ratification of this Memorandum, such party hereby consents to its ratification and adoption by any party who may have or may acquire any interest in the Contract Area.

The parties hereto agree to execute, acknowledge and deliver or cause to be executed, acknowledged and delivered any instrument, or take any action necessary or appropriate to effectuate the terms of the Operating Agreement or any Exhibit, instrument, certificate or other document pursuant thereto.

This Memorandum may be executed or ratified in one or more counterparts and all of the executed or ratified counterparts shall together constitute one instrument. For purpose of recording, only one copy of this Memorandum with individual signature pages attached thereto needs to be filed of record.

Executed this 1st day of July, 2018.

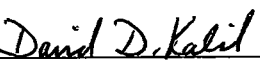
**OPERATOR: TH Exploration, LLC**

By:   
Name: Sean Willis  
Title: Sr. Vice President

**NON-OPERATOR: HG Energy II Appalachia, LLC**

By: \_\_\_\_\_  
Name: Jared Hall  
Title: President

**NON-OPERATOR: TH Exploration II, LLC**

By:   
Name: David Kalish  
Title: Sr. Vice President - Land



ACKNOWLEDGEMENT

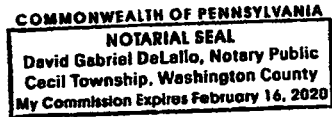
COMMONWEALTH OF PENNSYLVANIA )  
 ) SS:  
COUNTY OF WASHINGTON )

On this the 11th day of July 2018, before me, a notary public, the undersigned authority, personally appeared Sean Willis, who acknowledged his self to be the Sr. Vice President of TH Exploration, LLC, a limited liability company, and that he as such Sr. Vice President being authorized to do so, executed the foregoing instrument for the purposed therein contained by signing the name of the limited liability company by his self as Sr. Vice President.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: 2/16/2020 Signature/Notary Public: [Signature]

Name/Notary Public (print): DAVID G. DELALLO



ACKNOWLEDGEMENT

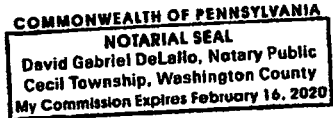
COMMONWEALTH OF PENNSYLVANIA )  
 ) SS:  
COUNTY OF WASHINGTON )

On this the 11th day of July 2018, before me, a notary public, the undersigned authority, personally appeared David D. Kalish, who acknowledged his self to be the Sr. Vice President - Land of TH Exploration II, LLC, a limited liability company, and that he as such Sr. Vice President - Land being authorized to do so, executed the foregoing instrument for the purposed therein contained by signing the name of the limited liability company by his self as Sr. Vice President - Land.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: 2/16/2020 Signature/Notary Public: [Signature]

Name/Notary Public (print): DAVID G. DELALLO



ACKNOWLEDGEMENT

STATE OF WEST VIRGINIA )  
 ) SS:  
COUNTY OF WOOD )

This instrument was acknowledged before me on the \_\_\_ day of \_\_\_\_\_, 2018 by Jared Hall, as President of HG Energy II Appalachia, LLC, a Delaware limited liability company, on behalf of said company.

Given under my hand and seal this the \_\_\_ day of \_\_\_\_\_, 2018.

\_\_\_\_\_  
Notary Public, State of \_\_\_\_\_

Prepared by and please return to:  
TH Exploration, LLC  
380 Southpointe Boulevard, Suite 200  
Canonsburg, PA 15317

The parties hereto agree to execute, acknowledge and deliver or cause to be executed, acknowledged and delivered any instrument, or take any action necessary or appropriate to effectuate the terms of the Operating Agreement or any Exhibit, instrument, certificate or other document pursuant thereto.

This Memorandum may be executed or ratified in one or more counterparts and all of the executed or ratified counterparts shall together constitute one instrument. For purpose of recording, only one copy of this Memorandum with individual signature pages attached thereto needs to be filed of record.

Executed this 1st day of July, 2018.

**OPERATOR: TH Exploration, LLC**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**NON-OPERATOR: HG Energy II Appalachia, LLC**

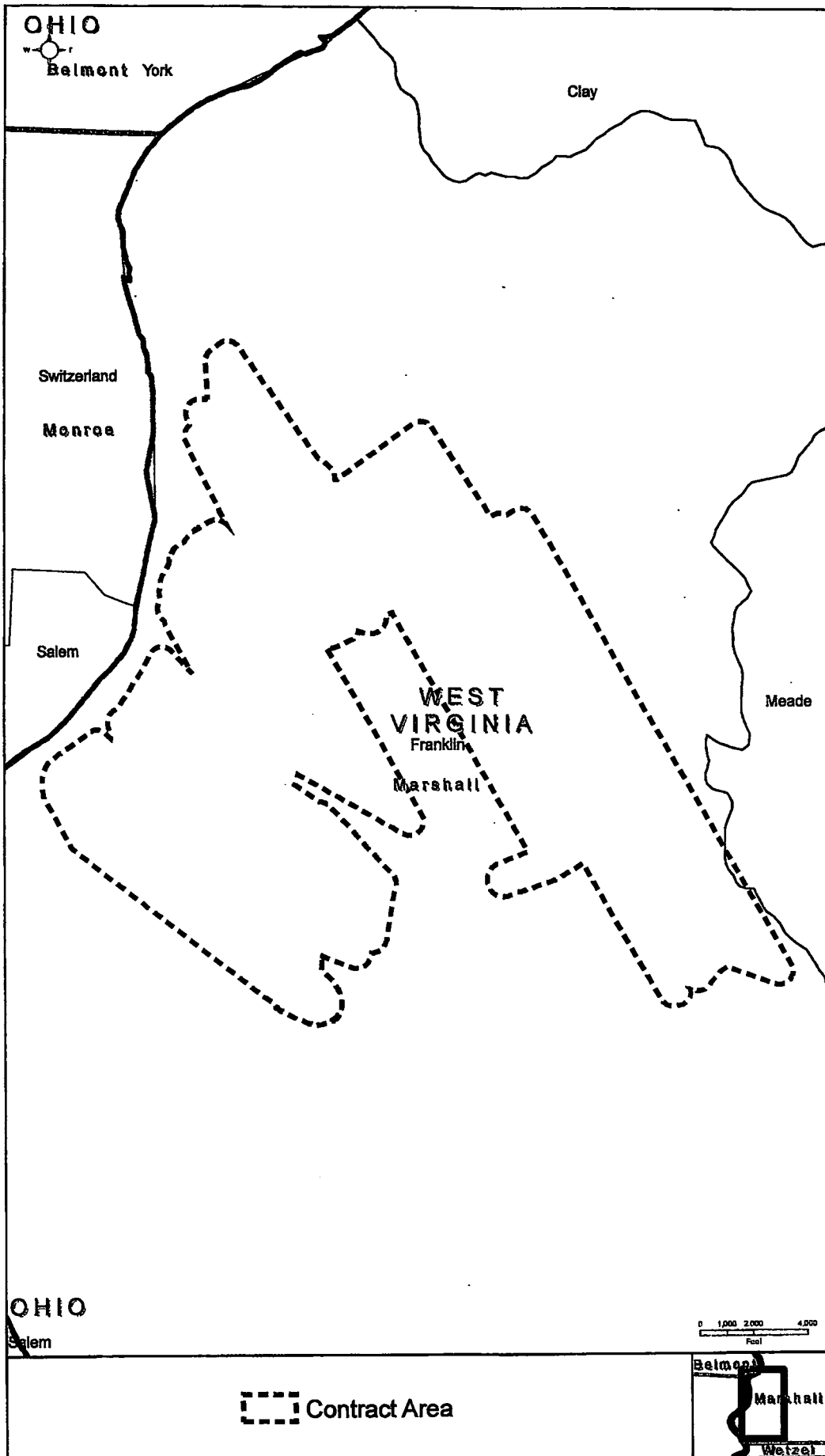
By: Jared Hall  
Name: Jared Hall  
Title: President

**NON-OPERATOR: TH Exploration II, LLC**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_







OHIO

Salem

0 1,000 2,000 4,000  
Feet

 Contract Area

Belmont  
Marshall  
Wetzel



**Exhibit "A-2"**  
**TH Exploration, LLC**  
**TH Exploration II, LLC**

**SPECIFIC LEASES SUBJECT TO THIS AGREEMENT**

Lease ID	Lessor	Lease Date	County	State	Book	Page
10*14042	RALPH B TAYLOR	12/4/2007	Marshall	WV	665	487
10*14043	PATRICK R. WALSH	1/4/2011	Marshall	WV	725	566
10*14044	JOSEPH WESLEY GALLAHER, II	1/4/2011	Marshall	WV	724	232
10*14045	LAMOYNE BAKER	1/4/2011	Marshall	WV	724	236
10*14046	CHARLES THOMPSON GALLAHER, II	1/4/2011	Marshall	WV	724	234
10*14047	LESLIE ANN BLYTHE	2/2/2011	Marshall	WV	726	645
10*14048	BRYANNA FLYNN RANKIN	1/11/2011	Marshall	WV	727	3
10*14049	WILDA WINTERS	1/25/2011	Marshall	WV	726	643
10*14050	JUDITH L. CHAMBERS	1/4/2011	Marshall	WV	726	647
10*14051	AMANDA L. SMITH	1/4/2011	Marshall	WV	727	572
10*14052	MAY ELIZABETH GALLAHER BROWNIN	1/4/2011	Marshall	WV	727	568
10*14053	LARRY D. MCWHORTER	2/2/2011	Marshall	WV	727	570
10*14054	RUDOLPH RAUKAR, JR.	2/22/2011	Marshall	WV	730	189
10*14055	VICTOR PEDDICORD	1/11/2011	Marshall	WV	730	193
10*14056	WALLACE T. BERRY	4/5/2011	Marshall	WV	731	156
10*14057	THE SAMUEL MILTON SHEETS TRUST	4/7/2011	Marshall	WV	732	624
10*14058	NANCY HOFSTATTER	4/5/2011	Marshall	WV	732	628
10*14059	LAURA BERRY MCGLYNN	4/5/2011	Marshall	WV	732	622
10*14060	SUSAN E GORE	5/2/2012	Marshall	WV	768	488
10*14061	LINDA TAYLOR	5/2/2012	Marshall	WV	770	476
10*14062	REBECCA MCMILLAN	9/4/2011	Marshall	WV	803	482
10*14063	DAVID BURKETT	9/4/2011	Marshall	WV	803	480
10*14064	CIRRUS MINERALS LLC	6/1/2011	Marshall	WV	843	452
10*14067	REVA FRANZE	1/25/2008	Marshall	WV	666	51
10*14099	SOUTHERN COUNTRY FARMS INC	1/18/2008	Marshall	WV	666	489
10*14100	SAMMY EDWARD WHITLATCH	11/9/2007	Marshall	WV	665	369
10*14101	RICHARD P WHITLATCH	11/9/2007	Marshall	WV	665	366
10*14102	GLORIA TERRILL	3/18/2010	Marshall	WV	698	633
10*14103	ROSE R DAUGHERTY AND JAMES N	3/18/2010	Marshall	WV	698	635
10*14104	GLENNA ANDERSON AND DALE ANDER	3/18/2010	Marshall	WV	698	625
10*14105	WENDELL RINE AND CAROLYN RINE	3/18/2010	Marshall	WV	698	627
10*14106	GARY E RINE	3/18/2010	Marshall	WV	698	629
10*14107	ARCHIE WAYNE WHIPKEY	3/18/2010	Marshall	WV	698	631
10*14108	LOIS M MYERS	3/18/2010	Marshall	WV	698	637
10*14110	RONA LEE MCCARDLE	5/28/2008	Marshall	WV	670	472

10*14111	HAYHURST COMPANY, A FLORIDA PA	9/17/2010	Marshall	WV	720	236
10*14112	DONALD SHIELDS	3/10/2008	Marshall	WV	669	374
10*14113	CHESTNUT HOLDINGS INC	3/25/2014	Marshall	WV	827	566
10*14116	DONALD SHIELDS	3/10/2008	Marshall	WV	669	367
10*14117	ROBERT L SHIELDS AND WIFE	3/10/2008	Marshall	WV	669	360
10*14118	RITA A. RUSH	11/15/2013	Marshall	WV	813	450
10*14119	CHARLES W. SNYDER & JUDITH A.	11/15/2013	Marshall	WV	813	452
10*14120	CAROL D. HABERLE & ABRAM HABER	11/15/2013	Marshall	WV	813	448
10*14121	JACK D. SNYDER & GRETA A. SNYD	11/15/2013	Marshall	WV	813	446
10*14122	ERIC L STOLTZFUS	6/1/2014	Marshall	WV	833	525
10*14123	TEESHA L HOLMES	6/1/2014	Marshall	WV	836	96
10*14124	BETSY G STOLTZFUS	6/1/2014	Marshall	WV	836	94
10*14125	SHIBEN ESTATES INC	1/26/2010	Marshall	WV	695	460
10*14141	DAVID TAKACH AND WIFE DEBORAH	12/20/2010	Marshall	WV	720	233
10*14297	MARK E. YOHO AND DAVID E. YOHO	9/15/2006	Marshall	WV	655	547
10*14420	ELLIS V. RINE AND WANDA P. RIN	1/25/2011	Marshall	WV	725	141
10*14423	OLAN V RUTAN AND PATRICIA E	1/27/2011	Marshall	WV	727	1
10*14522	HENRY WILSON PLUNKERT JR	10/26/2011	Marshall	WV	749	532
10*14553	VERNIE RINE AND JODY K. RINE	3/22/2012	Marshall	WV	764	302
10*14568	LEROY ANDERSON & DONNA K ANDE	7/13/2012	Marshall	WV	772	69
10*14571	MATTHEW S ANDERSON AND BRENDA	7/1/2014	Marshall	WV	840	165
10*14579	ERNIE L ANDERSON AND TAMMY L A	1/9/2009	Marshall	WV	681	507
10*14580	ERNIE L ANDERSON AND TAMMY L A	1/20/2009	Marshall	WV	681	515
10*14612	HAYHURST COMPANY	3/29/2010	Marshall	WV	708	107
10*14613	CHESTNUT HOLDINGS INC	3/25/2014	Marshall	WV	827	556
10*14619	SHIRLEY R MILLER	6/10/2010	Marshall	WV	715	414

10*14620	ANITA R MILLER	6/10/2010	Marshall	WV	715	416
10*14621	WILLIAM DALE AND NOREEN G MILL	6/10/2010	Marshall	WV	715	415



10*14622	KELLY D MILLER	6/29/2010	Marshall	WV	713	606
10*14623	DUANE D MILLER	6/29/2010	Marshall	WV	717	149

10*14624	DOUGLAS E MILLER	7/6/2010	Marshall	WV	725	559
10*14625	JACQUELYN J JOHNSON	8/4/2010	Marshall	WV	715	616

10*14626	STEVEN POND	8/13/2010	Marshall	WV	715	622
10*14627	BRIAN AND LENA POND	7/28/2010	Marshall	WV	717	51



10*14628	TEYN L AND GEORGIA A MILLER	7/22/2010	Marshall	WV	715	514
10*14629	GERALD R AND LEE A MILLER	7/22/2010	Marshall	WV	717	1

10*14630	BARBARA K BURLEY	7/22/2010	Marshall	WV	716	637
10*14631	LISA ANN MILLER	8/13/2010	Marshall	WV	715	520
10*14632	DELORES J. MYERS	8/21/2010	Marshall	WV	716	643

10*14633	MARIA T. FLORES	7/22/2010	Marshall	WV	719	318
10*14634	RUSSELL BLAKE & MARY BLAKE	7/9/2012	Marshall	WV	773	568
10*14635	COMMERCIAL OPTICAL MANUFACTURING INC	4/18/2012	Marshall	WV	775	21
10*14636	WANDA RIDING	4/5/2013	Marshall	WV	794	503
10*14637	KIMBERLY S. DENNY	4/4/2013	Marshall	WV	794	511
10*14638	HUGH YOHO	4/4/2013	Marshall	WV	794	478
10*14639	GARY PARSONS	4/4/2013	Marshall	WV	794	521
10*14640	SHERRI SNYDER	5/13/2013	Marshall	WV	799	545
10*14641	LORA LANGLEY	6/6/2013	Marshall	WV	800	621
10*14642	MARY B. FERRIS BY REBECCA R. F	7/27/2013	Marshall	WV	808	457
10*14643	MARTHA RENEE ROBINSON	5/3/2013	Marshall	WV	809	541
10*14644	CHERYL HILL	9/25/2013	Marshall	WV	809	517



10*14645	RANDY BERISFORD	9/5/2013	Marshall	WV	810	328
10*14646	PENNY ELAINE MENENDEZ	3/12/2014	Marshall	WV	822	266
10*14647	JAMES W ROBINSON III	7/3/2014	Marshall	WV	836	102
10*14648	LORI ANN ROBINSON	7/3/2014	Marshall	WV	836	104
10*14649	DONALD GARY GROVES II	7/18/2014	Marshall	WV	842	382
10*14650	TIMOTHY DWIGHT GROVES	9/8/2014	Marshall	WV	842	384
10*14651	DAVID V CALDWELL	7/3/2014	Marshall	WV	842	386
10*14652	CANDICE GUTIERREZ	9/26/2013	Marshall	WV	842	388
10*14653	KRISTIN DOUGLAS	9/4/2014	Marshall	WV	842	390
10*14654	KATHY JO RUNYON AND ROBERT PAT	2/11/2015	Marshall	WV	854	607
10*14655	RONALD R JOHNSON	3/17/2011	Marshall	WV	737	483
10*14688	DEBBIE RICHMOND	11/30/2012	Marshall	WV	786	398
10*14690	DANA HAMBEL	1/10/2013	Marshall	WV	789	289
10*14692	BARBARA ANN DEEM	8/21/2013	Marshall	WV	804	247
10*14693	CHARLES DOWNS	8/30/2013	Marshall	WV	809	501
10*14694	MARY FUNK	2/5/2014	Marshall	WV	821	36
10*14695	KATHY MITCHELL	2/6/2014	Marshall	WV	822	258
10*14696	MCKENZIE ANN ADAMS	2/6/2014	Marshall	WV	827	224
10*14697	ANGELA ADAMS WILHITE	1/23/2014	Marshall	WV	839	533
10*14698	JASON ADAMS	9/5/2014	Marshall	WV	842	372

10*14699	CNX GAS COMPANY LLC AND NOBLE	6/11/2014	Marshall	WV	833	514
10*14701	ROSEITA THORNTON	11/19/2015	Marshall	WV	885	600
10*14702	BOUNTY MINERALS LLC	4/2/2010	Marshall	WV	708	71
10*14778	RALPH RANDY HOYT	4/4/2013	Marshall	WV	794	507
10*14892	DEBORAH BLOUGH	10/1/2013	Marshall	WV	808	489
10*14893	ROBERT CRAIG MONTGOMERY	10/1/2013	Marshall	WV	808	487
10*14894	MARILYN JEAN NOEL	9/27/2013	Marshall	WV	808	485
10*14895	DENISE ANN GALE	10/23/2013	Marshall	WV	815	242
10*14896	DEBRA JANE GALE	10/23/2013	Marshall	WV	818	566

10*14898	SHERLEY RAY STOWE	11/19/2013	Marshall	WV	813	444
10*14899	SANDRA J HARMON AND WALTER D HARMON	11/19/2013	Marshall	WV	813	442



10*14900	STANLEY EUGENE STOWE	11/19/2013	Marshall	WV	813	440
10*14901	MARGARET CLICKNER	12/5/2013	Marshall	WV	815	244

10*14902	BENNY MILLER	7/10/2014	Marshall	WV	836	98
10*14903	SUE PRUITT	7/10/2014	Marshall	WV	836	100

10*14904	LEROY MILLER	10/21/2014	Marshall	WV	846	398
10*14905	JAMES K MILLER	3/5/2015	Marshall	WV	854	610



10*14906	MARY LOU MILLER-HORTON	3/5/2015	Marshall	WV	862	417
10*14911	FORREST MILLER	2/4/2014	Marshall	WV	819	316
10*14914	CHESTNUT HOLDINGS, INC.	3/25/2014	Marshall	WV	827	548
10*14915	CHESTNUT HOLDINGS, INC.	3/25/2014	Marshall	WV	827	552
10*14918	CHESTNUT HOLDINGS INC	7/1/2014	Marshall	WV	836	115
10*14919	CHESTNUT HOLDINGS INC	7/1/2014	Marshall	WV	836	117
10*14920	CHESTNUT HOLDINGS INC	7/1/2014	Marshall	WV	836	119
10*14925	MOUNTAIN TOP PRODUCTIONS LLC	3/27/2014	Marshall	WV	840	444
10*14928	JOSEPH D PARRIOTT AND NELLIE B	3/29/2007	Marshall	WV	660	517
10*14938	CHARLES F HAYNES AND DIANA L H	7/30/2010	Marshall	WV	711	306
10*14941	HILDA DELORIS BAXTER	7/12/2012	Marshall	WV	775	53
10*14942	AARON PAUL HOLDREN	9/23/2010	Marshall	WV	720	132
10*14945	LEROY ANDERSON AND DONNA K AND	2/17/2011	Marshall	WV	735	433
10*16609	C PATRICIA WOBIG	10/3/2016	Marshall	WV	916	118
10*16610	RICHARD B SMITH SR AND EVELYN MARIE SMITH	10/3/2016	Marshall	WV	916	120
10*16735	ROBERT L SHIELDS AND REBECCA A SHIELDS	1/25/2017	Marshall	WV	942	27
10*16873	LUCILLE R YOUNG	1/25/2017	Marshall	WV	917	93

10*16875	CHRISTOPHER M EARICH AND BREA D EARICH	2/17/2017	Marshall	WV	917	99
10*16877	RENEE E CAIN AND GERALD D CAIN JR	2/18/2017	Marshall	WV	917	89
10*16878	DIANE L GOODE	2/18/2017	Marshall	WV	917	91
10*16908	LIONEL L AND MARY LEE PERSINGER	12/10/2016	Marshall	WV	910	51
10*16913	LIONEL L AND MARY LEE PERSINGER	12/10/2016	Marshall	WV	910	57
10*16914	LIONEL L AND MARY LEE PERSINGER	12/10/2016	Marshall	WV	910	54
10*16918	LIONEL L AND MARY LEE PERSINGER	12/10/2016	Marshall	WV	910	60
10*16940	PATRICIA A RICHMOND	2/28/2017	Marshall	WV	915	127
10*16994	MARTHA M RUTAN	2/22/2017	Marshall	WV	942	31
10*17329	JOHN P ICARD AND REVA J ICARD	1/3/2017	Marshall	WV	943	524
10*17454	MARGARET A BONNETT	1/12/2017	Marshall	WV	940	431
10*17492	DIANA L WELLMAN	1/14/2017	Marshall	WV	940	434
10*17493	DENNIS D CALDWELL AND APRIL N CALDWELL	1/21/2017	Marshall	WV	942	409
10*17512	BONNIE LOU POSTLEWAIT	2/20/2017	Marshall	WV	917	68
10*17530	WOODROW N WARD AND HILDA A WARD	2/7/2017	Marshall	WV	916	208

10*17547	JAMES CONTRERAS AND CATHERINE CONTRERAS	2/15/2017	Marshall	WV	942	400
10*17548	RICHARD ARTHUR VAN GROL AND JEANNE MARIE VAN GROL	2/23/2017	Marshall	WV	942	398
10*17600	KENNETH ALLEN AND CARLA JO ALLEN	3/6/2017	Marshall	WV	916	129
10*17627	NATHAN D YODER	3/17/2017	Marshall	WV	917	62
10*17635	SARAH K SCHNEIDER AND DANIEL K SCHEIDER	3/13/2017	Marshall	WV	942	414
10*17643	DONALD R SLAUGHTER AND LOLA SLAUGHTER	3/11/2017	Marshall	WV	940	445

10*17718	MARY ELLEN & THOMAS C DAVIS	3/16/2017	Marshall	WV	TBD	TBD
10*17812	POTOMAC MINERAL GROUP LLC	4/3/2017	Marshall	WV	940	437
10*17826	ALLDALE MINERALS II LP	4/7/2017	Marshall	WV	940	439
10*17916	MARY E BISHOP	4/17/2017	Marshall	WV	927	167





10*17968	IDA RUTAN	3/9/2017	Marshall	WV	958	402
10*18045	KLOVA ANN MORRIS	4/25/2017	Marshall	WV	927	114
10*18046	BRIAN A & CHARLOTTIE MULL	4/27/2017	Marshall	WV	TBD	TBD
10*18051	WILLIAM R LEVASSEUR JR	3/24/2017	Marshall	WV	919	257
10*18054	TOM KROL AND DAWN E KROL	3/24/2017	Marshall	WV	923	434
10*18068	CHRISTINA BOARDWINE AND BOBBY W BOARDWINE	3/24/2017	Marshall	WV	919	247
10*18121	LAWRENCE EUGENE ANDERSON AND NICOLE M ANDERSON	5/5/2017	Marshall	WV	927	68
10*18124	DAVID E YOHO	4/26/2017	Marshall	WV	927	70
10*18126	BARBARA ANN ADKINS JOHNSON	5/12/2017	Marshall	WV	929	556
10*18174	THE ESTATE OF ROY JOSEPH LEACH	5/18/2017	Marshall	WV	927	647
10*18202	TERRANCE V POWDERLY SR	5/1/2017	Marshall	WV	929	85

10*18209	CORRINE E VERNA & JONATHAN C VERNA	5/9/2017	Marshall	WV	929	82
10*18210	DAVID F POWEDERLY JR AND NANCY A POWDERLY	5/11/2017	Marshall	WV	929	87

10*18211	REBECCA LYNN KIER AND ERIC JAMES KIER	5/19/2017	Marshall	WV	929	90
10*18212	THOMAS C DAVIS AND MARY ELLEN DAVIS	4/26/2017	Marshall	WV	929	92

10*18213	THOMAS A POWDERLY	5/11/2017	Marshall	WV	929	94
10*18214	ANNE M AND JOHN LEACH	5/10/2017	Marshall	WV	929	96



10*18215	MARGARET J WHITFORD AND LANCE W WHITFORD	5/5/2017	Marshall	WV	929	103
10*18217	JODY LANE ANDERSON AND MICHELE MARIE ANDERSON	5/2/2017	Marshall	WV	929	101
10*18218	ERIN E SCHOLL	5/11/2017	Marshall	WV	929	106

10*18270	GERALD L BISHOP III	5/26/2017	Marshall	WV	943	10
10*18280	DEBRA L RICHEY AND JAMES F RICHEY SR	5/12/2017	Marshall	WV	929	108
10*18335	MEGAN HAGERTY	6/2/2017	Marshall	WV	TBD	TBD *
10*18339	RESOURCE MINERALS HEADWATER I LP	6/9/2017	Marshall	WV	940	448
10*18373	SARAH K SCHNEIDER AND DANIEL K SCHEIDER	6/2/2017	Marshall	WV	931	391
10*18375	DENNIS D CALDWELL AND APRIL N CALDWELL	5/26/2017	Marshall	WV	931	394
10*18396	LOUIS AULENBAUCHER	6/22/2017	Marshall	WV	932	468
10*18403	ANGELA B CRAWFORD AND DANA ALAN CRAWFORD	6/27/2017	Marshall	WV	932	536
10*18454	IMALEE D LLOYD AND GARY R LLOYD	6/29/2017	Marshall	WV	933	186
10*18455	DEBRA HARTLEY AND RICHARD HARTLEY	6/28/2017	Marshall	WV	933	183
10*18526	ANN TURNER YOUNG SHRIVER	7/7/2017	Marshall	WV	933	591
10*18549	BARBARA ANN ADKINS JOHNSON	7/7/2017	Marshall	WV	935	74
10*18571	JUDITH R GADE AND WILLIAM S GADE	6/29/2017	Marshall	WV	935	72

10*18597	MARK ALLEN LENENBERG	7/5/2017	Marshall	WV	934	638
10*18636	CHERYL STEFFEN AND GREGORY STEFFEN	7/18/2017	Marshall	WV	936	240
10*18637	THOMAS RICHMOND YOUNG ANITA A YOUNG	7/14/2017	Marshall	WV	936	244
10*18638	TAMMY L MITCHELL AND ADAM J MITCHELL	7/24/2017	Marshall	WV	936	248
10*18666	LESLIE A RUBCICH	7/13/2017	Marshall	WV	936	83
10*18672	CARLA D RAKOSKIE	7/14/2017	Marshall	WV	936	87
10*18680	SAMANTHA A RADER	7/19/2017	Marshall	WV	936	137
10*18689	THE ESTATE OF ROY JOSEPH LEACH	7/19/2017	Marshall	WV	936	141
10*18722	HIRAMS ESTATE FAMILY LIMITED LIABILITY LIMITED PARTNERSHIP	7/30/2017	Marshall	WV	938	523
10*18724	TRACY M KESTERSON	7/31/2017	Marshall	WV	938	521
10*18730	TOM KROL AND DAWN E KROL	6/7/2017	Marshall	WV	935	129
10*18731	CHRISTINA BOARDWINE AND BOBBY W BOARDWINE	6/7/2017	Marshall	WV	935	124
10*18737	PHYLLIS R CLARK AND PAUL R CLARK	7/28/2017	Marshall	WV	938	259
10*18738	DAVID W. GOULDSBERRY AND DARLENE M. GOULDSBERRY	7/28/2017	Marshall	WV	938	253
10*18739	CHERYL A SEARS AND JOHN SEARS	7/28/2017	Marshall	WV	938	251
10*18740	JOHN F CUNNINGHAM AND BERNEICE K CUNNINGHAM	7/29/2017	Marshall	WV	938	249
10*18741	RONALD GOULDSBERRY AND NANCY GOULDSBERRY	7/28/2017	Marshall	WV	938	255
10*18742	HARLEY E GOULDSBERRY	7/28/2017	Marshall	WV	938	257
10*18743	DONALD K KIDD AND CAROLYN E KIDD	7/29/2017	Marshall	WV	938	263
10*18744	JAMES H CUNNINGHAM AND CARLENE K CUNNINGHAM	7/27/2017	Marshall	WV	938	265
10*18745	MARTA J RUBCICH	7/25/2017	Marshall	WV	938	454
10*18760	DAVID HAMBEL	7/25/2017	Marshall	WV	938	452
10*18796	DWG OIL & GAS ACQUISITIONS LLC	7/28/2017	Marshall	WV	938	476
10*18804	WILLIAM R LEVASSEUR JR	6/9/2017	Marshall	WV	935	78

10*18806	E SHIELA PAVLOVICH	6/2/2017	Marshall	WV	929	576
10*18812	PATRICIA L KULAVIK AND JOHN KULAVIK	7/31/2017	Marshall	WV	938	19
10*18813	RICKY JOE KIDD AND SUSAN KIDD	7/29/2017	Marshall	WV	938	21
10*18827	ERIN E SCHOLL	7/27/2017	Marshall	WV	937	626
10*18835	REBECCA LYNN KIER AND ERIC JAMES KIER	7/28/2017	Marshall	WV	937	405
10*18836	JOHN W MIDCAP AND ELDA FAYE MIDCAP	7/28/2017	Marshall	WV	941	450
10*18945	DAVID E GRAY	8/12/2017	Marshall	WV	939	386
10*18946	OWEN MICHAEL BARR AND TARA C BARR	8/12/2017	Marshall	WV	939	388
10*18968	E SHIELA PAVLOVICH	8/17/2017	Marshall	WV	940	291
10*18969	JEANNE MARIE VAN GROL AND RICHARD ARTHUR VAN GROL	8/16/2017	Marshall	WV	941	289
10*18970	DONALD E BERISFORD	8/8/2017	Marshall	WV	941	287
10*18971	WONETTA V JOHNSON & NORMAN G JOHNSON	8/17/2017	Marshall	WV	941	285
10*18972	MARGARET CLICKNER	8/14/2017	Marshall	WV	941	281
10*18998	STEPHEN M CUNNINGHAM	8/18/2017	Marshall	WV	940	353
10*18999	DENNIS E KIDD AND KIMBERLEY KIDD	8/17/2017	Marshall	WV	940	351
10*19009	LAMOYNE BAKER	12/28/2007	Marshall	WV	665	554
10*19012	RAYMOND K MILLER MICHELE A MILLER	1/8/2013	Marshall	WV	TBD	TBD
10*19017	PAUL A RINE AND DEBRA A RINE	4/3/2013	Marshall	WV	TBD	TBD
10*19021	MARCELLUS TX MINERAL PARTNERS LTD	6/1/2013	Marshall	WV	800	216
10*19030	KATHLEEN R CUSTEAD	9/4/2013	Marshall	WV	806	39
10*19034	JMK IRREVOCABLE TRUST	10/20/2013	Marshall	WV	813	145
10*19035	PURPLEBURGH VENTURES, LLC	10/20/2013	Marshall	WV	813	138
10*19036	HAROLD W HOWARD JR	10/23/2013	Marshall	WV	813	91
10*19037	NEVELLE SEELEY	10/23/2013	Marshall	WV	813	116
10*19038	PHYLLIS L PARSONS	10/23/2013	Marshall	WV	814	379
10*19039	RALPH B RUSSELL MARY ANN RUSSELL	10/24/2013	Marshall	WV	813	106
10*19040	RUTHANNE RUSSELL TOPPING	10/24/2013	Marshall	WV	813	79
10*19041	CHERYL L HILL	10/25/2013	Marshall	WV	813	101
10*19043	JACK R BERISFORD LINDA JO BERISFORD	10/30/2013	Marshall	WV	813	96
10*19045	JOHN W MURDOCK HELEN CAROLINA MURDOCK	10/30/2013	Marshall	WV	814	327
10*19046	CAROL J WEINSTEIN	10/31/2013	Marshall	WV	813	33
10*19047	DEBORAH CROSTEN-PURCELL	11/4/2013	Marshall	WV	813	28
10*19048	JANET FRANKHAUSER WILSON	11/4/2013	Marshall	WV	817	627
10*19049	RUTH ANN FERRIS	11/5/2013	Marshall	WV	814	313
10*19050	LARRY F JEFFERSON CATHY L JEFFERSON	11/5/2013	Marshall	WV	814	473
10*19054	MARSHA BERISFORD	11/13/2013	Marshall	WV	813	630
10*19055	DONNA J GORDYAN	11/18/2013	Marshall	WV	814	468



10*19056	LESLIE R KEYS	11/20/2013	Marshall	WV	814	463
10*19057	JACK MICHAEL FOREMAN	11/21/2013	Marshall	WV	817	640
10*19059	MARY VANESSA GILSON	11/26/2013	Marshall	WV	815	464
10*19060	ALYSIA JORDAN	12/2/2013	Marshall	WV	815	135
10*19061	ANN WOLLSCHLEGER	12/2/2013	Marshall	WV	817	615
10*19063	JULIE SPRINGWATER	12/18/2013	Marshall	WV	818	120
10*19066	MICHAEL L FRANKHAUSER	1/7/2014	Marshall	WV	818	29
10*19067	TIMOTHY M BROWN	1/10/2014	Marshall	WV	818	39
10*19068	LINDA L RUPERT	1/14/2014	Marshall	WV	820	229
10*19069	SCOTT D FRANKHAUSER	1/24/2014	Marshall	WV	822	446
10*19071	DONNA L CLAPPER	2/3/2014	Marshall	WV	820	191
10*19074	PHILIP G FRANKHAUSER	2/6/2014	Marshall	WV	822	441
10*19076	FRANKHAUSER LIVING TRUST SUSAN LIVINGSTON, TRUSTEE	2/19/2014	Marshall	WV	826	495
10*19077	DAVID RUBCICH LESLIE A RUBCICH ET AL	2/26/2014	Marshall	WV	681	512
10*19080	REVOCABLE TRUST AGREEMENT CHARLES S HAMEL	3/25/2014	Marshall	WV	835	266
10*19081	RUDINA A FRANKHAUSER	4/12/2014	Marshall	WV	831	457
10*19098	DAVID H ARRICK AND LELAH M ARRICK	6/19/2013	Marshall	WV	800	505
10*19107	ALBERT F KAZEMKA	9/4/2014	Marshall	WV	853	73
10*19109	JOHN W. MILLER AND MARY ALICE MILLER, HUSBAND AND WIFE	10/8/2014	Marshall	WV	863	275
10*19121	JOE PAUL WELLMAN MARGARET ANN BONNETT ET AL	11/10/2011	Marshall	WV	773	518
10*19126	KEVIN R. CORLEY AND ANITA L. CORLEY, HUSBAND AND WIFE	12/8/2014	Marshall	WV	859	44
10*19127	WALTER C RINE AND CHERYL A RINE	12/8/2014	Marshall	WV	956	49
10*19128	RUDOLPH G FANKHAUSER	12/16/2014	Marshall	WV	860	258
10*19129	VERLA FLORENCE SHUTLER	12/19/2011	Marshall	WV	761	366
10*19130	FRANCES O HALL	1/4/2012	Marshall	WV	763	641
10*19132	KLOVA ANN MORRIS	1/19/2012	Marshall	WV	764	28
10*19134	REVA JUNE ICARD	1/21/2012	Marshall	WV	TBD	TBD
10*19136	WILLIAM L LITMAN	2/21/2012	Marshall	WV	772	90
10*19138	AARON DEAN LITMAN	3/13/2012	Marshall	WV	769	52
10*19139	HIRAM V MOORE	3/14/2010	Marshall	WV	699	53
10*19141	ROBERT W SPENCER JR NELLIE MARIE SPENCER	5/1/2010	Marshall	WV	706	468
10*19142	GLEN Y MILLER	4/5/2012	Marshall	WV	772	518
10*19146	RAY E MINOR CATHY L MINOR	4/19/2010	Marshall	WV	706	293
10*19150	ROBERT W. RIGGENBACH & SHARON RIGGENBACH, HUSBAND AND WIFE	4/22/2010	Marshall	WV	706	301
10*19151	RAYMOND K MILLER MICHELE A MILLER	4/23/2010	Marshall	WV	702	423
10*19152	BETTY J PARRIOTT	4/24/2012	Marshall	WV	772	192
10*19153	JACK S HUGGINS JR	4/27/2010	Marshall	WV	700	396
10*19154	ROBERT H FISH PATSY C FISH	4/29/2010	Marshall	WV	706	631
10*19158	LEONARD PARSONS CONNIE R PARSONS	5/24/2010	Marshall	WV	705	125
10*19159	FRANKLIN C FRANCIS	6/9/2010	Marshall	WV	709	41
10*19164	KATHERINE A STALNAKER	7/15/2014	Marshall	WV	839	486
10*19165	VICKI LYNN WOOD	7/17/2012	Marshall	WV	775	73
10*19167	JAY A CONNER PATTY LOUISE CONNER	7/20/2010	Marshall	WV	724	156
10*19168	PAUL WHITT AND SANDY WHITT	7/20/2010	Marshall	WV	715	565
10*19169	DANIEL L RINE	7/21/2014	Marshall	WV	839	260
10*19170	SUSAN M SMITH	7/24/2010	Marshall	WV	706	583
10*19172	SEAN F MOORE LINDA MOORE	8/3/2010	Marshall	WV	706	581
10*19173	RANDLYN MOORE LINDA G MOORE	8/11/2010	Marshall	WV	717	46
10*19174	WILLIAM S ADAMS MARY K ADAMS	8/17/2010	Marshall	WV	711	318

10*19176	MAUNA MAXINE BEYSER	9/8/2010	Marshall	WV	710	602
10*19177	NINA L KOVACS	9/29/2010	Marshall	WV	TBD	TBD
10*19178	JOSEPH HAUGHT	9/9/2010	Marshall	WV	710	69
10*19179	KEITH HAUGHT BEVERLY HAUGHT	9/9/2010	Marshall	WV	710	587
10*19180	STEVEN HAUGHT	9/9/2010	Marshall	WV	710	67
10*19184	RANDI L PECK	9/22/2010	Marshall	WV	716	26
10*19185	HARRIETT LODUTH FOLEY	9/22/2010	Marshall	WV	710	598
10*19186	JOEL GLOVER	9/22/2010	Marshall	WV	710	600
10*19187	DAVID E GRAY	9/22/2010	Marshall	WV	710	610
10*19189	SHERRY ANN MCPHERON	9/28/2010	Marshall	WV	710	606

10*19190	SALLY LEE RIVERA	9/28/2010	Marshall	WV	710	590
10*19191	SHARLA BETH WEAVER	9/28/2010	Marshall	WV	710	608
10*19192	JAMES E YOHO	9/28/2010	Marshall	WV	714	129
10*19193	LARRY A GUMP	9/29/2010	Marshall	WV	717	488
10*19201	DANIEL K YOHO	10/13/2010	Marshall	WV	714	125
10*19202	DEBORAH L WOOLEY	10/18/2010	Marshall	WV	714	131
10*19203	CAROL M YOHO	10/18/2010	Marshall	WV	713	205

10*19204	DAYNA MARLENE YOHO	10/18/2010	Marshall	WV	714	127
10*19205	JEFFREY C YOHO	10/18/2010	Marshall	WV	713	203
10*19207	MARY VOLTZ	10/24/2012	Marshall	WV	786	296
10*19211	PATRICIA F PARRIOTT	11/8/2012	Marshall	WV	TBD	TBD
10*19213	KIMBERLY LAKE	11/11/2012	Marshall	WV	784	280
10*19217	JAY DEE DALLISON EDDIE D DALLISON	12/15/2008	Marshall	WV	676	463
10*19219	SCOTT E JACKSON	1/12/2011	Marshall	WV	731	102
10*19221	ROBERT H ARRICK REBECCA L ARRICK	2/19/2011	Marshall	WV	737	240
10*19223	DONALD T MILLER	3/16/2011	Marshall	WV	737	284
10*19224	AMYSUE G BAHL	3/31/2011	Marshall	WV	731	166
10*19225	LOIS BURNS	3/31/2011	Marshall	WV	731	174
10*19226	THOMAS RAY GATTS	3/31/2011	Marshall	WV	731	162
10*19227	CONNIE KRESS KNAPP	3/31/2011	Marshall	WV	734	451
10*19228	CAROLE J LAMBERT	3/31/2011	Marshall	WV	737	225
10*19229	PATRICIA A LAMBERT	3/31/2011	Marshall	WV	731	158
10*19230	MARIANN VIRGINIA MUNN	3/31/2011	Marshall	WV	731	160
10*19231	DALE F RADCLIFF	4/5/2011	Marshall	WV	734	462
10*19232	SANDRA J HARMON AND WALTER D HARMON	4/7/2011	Marshall	WV	731	149
10*19233	SHERLEY R STOWE	4/7/2011	Marshall	WV	731	170
10*19234	STANLEY EUGENE STOWE	4/7/2011	Marshall	WV	732	631
10*19235	ROSE EDGE	4/11/2011	Marshall	WV	731	164
10*19236	TAMMIE S JACKSON	5/2/2011	Marshall	WV	749	213
10*19237	MARION L JACKSON	5/10/2011	Marshall	WV	735	427
10*19238	ANITA RAE MILLER	5/12/2011	Marshall	WV	742	66
10*19239	WILLIAM DALE MILLER	5/19/2011	Marshall	WV	TBD	TBD
10*19240	KELLY D MILLER	5/20/2011	Marshall	WV	753	595
10*19241	BARBARA K BURLEY	5/24/2011	Marshall	WV	753	631
10*19242	TEXYN L MILLER AND GEORGIA A MILLER	5/27/2011	Marshall	WV	751	228
10*19244	JERRY L BLOOD	6/3/2011	Marshall	WV	736	177
10*19245	GERALD R MILLER	6/16/2011	Marshall	WV	743	423
10*19246	SHIRLEY R MILLER	6/23/2011	Marshall	WV	745	433
10*19247	JUANITA MCVEY	9/8/2011	Marshall	WV	TBD	TBD
10*19248	ALBERT F KAZEMKA	9/4/2014	Marshall	WV	TBD	TBD
10*19249	HERBERT M AULENBACHER	10/3/2014	Marshall	WV	914	551
10*19251	RAE SUZETTE BAKER	10/11/2011	Marshall	WV	748	315



10*19252	JOHN WILSON	10/11/2011	Marshall	WV	749	522
10*19254	JOANNE LABRY	1/23/2014	Marshall	WV	820	320
10*19255	ROBERT W. RIGGENBACH & SHARON RIGGENBACH, HUSBAND AND WIFE	5/1/2012	Marshall	WV	772	450
10*19293	JOSEPH I. KRAMAR, SR. JO ANN KRAMAR	10/18/2006	Marshall	WV	TBD	TBD
10*19294	MICHAEL R. BRYAN BRENDA K. BRYAN	12/5/2007	Marshall	WV	TBD	TBD
10*19295	KEVIN J. KELLY PAMELA MARXEN-KELLY	3/16/2015	Marshall	WV	TBD	TBD
10*19296	MARISSA C MARXEN	2/27/2010	Marshall	WV	TBD	TBD
10*19297	PHILIP LEONARD MARXEN	2/27/2010	Marshall	WV	TBD	TBD
10*19298	BETTY J MARXEN SLEZAK	2/10/2014	Marshall	WV	TBD	TBD
10*19299	ANNETTE CONWAY MARXEN	12/3/2013	Marshall	WV	TBD	TBD
10*19300	DEBORAH F HAGEMAN HUPPERT	11/30/2013	Marshall	WV	TBD	TBD
10*19301	SANDRA HAGEMAN KANGAS	12/2/2013	Marshall	WV	TBD	TBD
10*19302	JEFFREY C MARXEN SAMANTHA L MARXEN	12/11/2013	Marshall	WV	TBD	TBD
10*19303	THOMAS O MARXEN	11/19/2013	Marshall	WV	TBD	TBD
10*19304	DEAN L. RINE, JR. PAMELA F. RINE	11/13/2013	Marshall	WV	TBD	TBD
10*19305	KAREN MARXEN SONDROL	11/12/2013	Marshall	WV	TBD	TBD
10*19306	RICHARD L. TATE MARCELINE RINE TATE	11/15/2013	Marshall	WV	TBD	TBD
10*19307	MARY SUE RINE-WALTER	11/19/2013	Marshall	WV	TBD	TBD
10*19308	WILLIAM WEBER	11/18/2013	Marshall	WV	TBD	TBD
10*19336	BONNIE JEAN DAWSON	10/16/2007	Marshall	WV	665	397
10*19337	JACK PETROCK HATTIE PETROCK	7/18/2007	Marshall	WV	663	498
10*19338	JAMES M. RUCKMAN KIMBERLY L. RUCKMAN	12/11/2007	Marshall	WV	TBD	TBD
10*19340	DONNA VIVIAN YOHO	12/3/2007	Marshall	WV	665	407
10*19350	JANE A TOLER FOREMAN	8/2/2017	Marshall	WV	939	329
10*19353	KATHLEEN TOLER CLEMENTS AND DAN CLEMENTS	8/17/2017	Marshall	WV	939	322
10*19374	BARBARA ANN ADKINS JOHNSON	8/10/2017	Marshall	WV	938	387
10*19388	MARY LOU CUNNINGHAM	8/18/2017	Marshall	WV	940	355
10*19420	REBECCA L RICHMOND	8/4/2017	Marshall	WV	940	264
10*19467	ROBERT R FISHER AND AUDREY L IRVIN	8/23/2017	Marshall	WV	942	592
10*19472	DAVID RUBCICH AND CYNTHIA Y RUBCICH	6/29/2017	Marshall	WV	933	83
10*19473	DANIEL JACOB ALLMAN	8/23/2017	Marshall	WV	942	567
10*19500	JAMES CONTRERAS AND CATHERINE CONTRERAS	8/1/2017	Marshall	WV	942	608

10*19502	SUSAN BLANCHE BEYSER	8/30/2017	Marshall	WV	942	623
10*19503	FRANK DALE BERISFORD AND KATHLEEN BERISFORD	8/29/2017	Marshall	WV	942	625
10*19546	SANDRA R KEECH	8/24/2017	Marshall	WV	942	51
10*19551	KAREN A JOSEPH	8/22/2017	Marshall	WV	937	359
10*19552	LISA ANN JACKSON	8/22/2017	Marshall	WV	937	362
10*19553	PAUL D LAUTAR AND JUDY B LAUTAR	8/23/2017	Marshall	WV	937	356
10*19554	LESLIE KAYE HARCLERODE	8/25/2017	Marshall	WV	945	205
10*19572	DOUGLAS R BISHOP	8/22/2017	Marshall	WV	943	12
10*19608	CLIFFORD VAN SCYOC AND DENISE VAN SCYOC	9/7/2017	Marshall	WV	953	252
10*19610	BRENT BERISFORD AND JEAN MARIE COSTA	9/1/2017	Marshall	WV	944	207
10*19642	NOEL A PARKS	7/29/2017	Marshall	WV	944	92
10*19673	CHESTNUT HOLDINGS INC	9/18/2017	Marshall	WV	836	115
10*19751	THOMAS L ROBINSON	9/14/2017	Marshall	WV	944	426
10*19752	PATRICIA ANKROM	9/14/2017	Marshall	WV	944	447
10*19787	JOSEPH N POWDERLY III	7/24/2017	Marshall	WV	935	47
10*19788	REX B FISHER AND DEBORAH FISHER	7/15/2017	Marshall	WV	948	295
10*19825	THOMAS A POWDERLY	9/12/2017	Marshall	WV	945	639
10*19826	TERRANCE V POWDERLY SR	9/16/2017	Marshall	WV	945	637
10*19827	CORINNE E VERNA AND JONATHAN C VERNA SR	9/21/2017	Marshall	WV	945	635
10*19828	ANNE M AND JOHN LEACH	9/20/2017	Marshall	WV	945	633
10*19829	MARGARET J WHITFORD AND LANCE W WHITFORD	9/6/2017	Marshall	WV	945	631
10*19830	DAVID POWDERLY AND NANCY A POWDERLY	9/19/2017	Marshall	WV	945	629
10*19841	CAROLYN JEAN FERGUSON	9/25/2017	Marshall	WV	945	641
10*19842	JAMES E ROBINSON AND CAMILLA L ROBINSON	9/21/2017	Marshall	WV	945	643
10*19843	JOHN S ROBINSON AND SHERRIE J ROBINSON	9/22/2017	Marshall	WV	945	646

10*19851	PATRICK W JENNINGS AND SUSAN PACKER-JENNINGS	8/17/2017	Marshall	WV	946	24
10*19852	JEFFREY A AND SHANNON M JENNINGS	8/24/2017	Marshall	WV	946	22
10*19853	TIMOTHY B AND MICHELE P JENNINGS	8/28/2017	Marshall	WV	946	20
10*19854	CHRISTOPHER M JENNINGS	8/24/2017	Marshall	WV	946	18
10*19857	SUSAN H WALKER	9/28/2017	Marshall	WV	946	48
10*19893	WINIFRED G TURNER AND EDDIE G TURNER	10/2/2017	Marshall	WV	948	277
10*19916	RALPH M RICHMOND & WENDY L RICHMOND	9/26/2017	Marshall	WV	948	595
10*19945	JANE A TOLER FOREMAN	10/9/2017	Marshall	WV	949	356
10*19961	HERMAN KING AND KATHERINE KING	10/4/2017	Marshall	WV	947	587
10*19962	JAMES GILLARD AND SUSAN GILLARD	10/5/2017	Marshall	WV	947	575
10*19963	RODGER ELLINGSON AND JOAN ELLINGSON	10/2/2017	Marshall	WV	948	304
10*19975	CHARLES F STEWART	10/2/2017	Marshall	WV	948	270
10*21002	STANLEY EUGENE STOWE	10/19/2017	Marshall	WV	951	215
10*21006	WILLIAM DICKEY	10/17/2017	Marshall	WV	951	625
10*21009	JOY DENEAN GARTMAN	9/28/2017	Marshall	WV	951	595
10*21014	JAMES P MCLAUGHLIN & ALICE W MCLAUGHLIN	9/26/2017	Marshall	WV	946	29
10*21015	ROBERT L MCLAUGHLIN	9/27/2017	Marshall	WV	946	339
10*21017	CATHERINE R KLUG PAUL FOX - POWER OF ATTORNEY	8/28/2017	Marshall	WV	938	299
10*21041	SHERY RITCHEA AND RANDEN D RITCHEA	10/27/2017	Marshall	WV	949	365
10*21042	REBECCA L ASPERY	10/8/2017	Marshall	WV	952	428
10*21043	BRENDA HOYLE	10/25/2017	Marshall	WV	951	598
10*21044	RITA COX	10/25/2017	Marshall	WV	951	600
10*21045	SANDRA J HARMON AND WALTER D HARMON	10/16/2017	Marshall	WV	951	217
10*21046	KELLY R DUNN	10/17/2017	Marshall	WV	951	591
10*21047	RACHAEL D DONAHUE	10/16/2017	Marshall	WV	951	589
10*21048	MICHAEL P OLSON	10/11/2017	Marshall	WV	951	593
10*21133	MATTHEW V AND CINDY L CONNER	8/30/2017	Marshall	WV	951	602
10*21189	NATALIE GIBBS	8/15/2017	Marshall	WV	941	261
10*21190	MARGARET CLICKNER	8/14/2017	Marshall	WV	941	283

10*21223	EUGENE C GRIEB AND SHIRLEY K GRIEB	11/13/2017	Marshall	WV	961	468
10*21224	RICKEY LYNN CROSS & VICTORIA ROSE CROSS	9/7/2017	Marshall	WV	939	589
10*21253	MARY ANN STURGILL	11/7/2017	Marshall	WV	952	430
10*21267	JAMES E NICHOLAS AND BEVERLY D NICHOLAS	8/24/2017	Marshall	WV	943	513
10*21277	DALE E BERSIFORD	8/25/2017	Marshall	WV	939	259
10*21281	HELEN BERISFORD STEWART	8/31/2017	Marshall	WV	941	241
10*21330	KATHLEEN TOLER CLEMENTS AND DAN CLEMENTS	11/16/2017	Marshall	WV	952	173
10*21414	CHARLES R STOCKTON AND BETTY M HUDSON	12/13/2017	Marshall	WV	959	310
10*21455	MELISSA MILLER GIBSON AND JAMES GIBSON	11/14/2017	Marshall	WV	953	308
10*21460	MAGGY D ASTON AND ROBERT H RICHARDS	11/15/2017	Marshall	WV	954	125
10*21462	MAGGY D ASTON AND ROBERT H RICHARDS	11/15/2017	Marshall	WV	954	128

10*21463	MOLLY D ASTON & HOWARD PRIOR	11/17/2017	Marshall	WV	954	131
10*21465	MOLLY D ASTON & HOWARD PRIOR	11/17/2017	Marshall	WV	954	134
10*21468	JOHN A SWIERKOS	11/20/2017	Marshall	WV	953	317
10*21470	CHRIS STEWART AND MARY D STEWART	9/29/2017	Marshall	WV	TBD	TBD
10*21473	MARY E BISHOP	12/8/2017	Marshall	WV	957	232
10*21475	WOODROW N WARD AND HILDA A WARD	11/8/2017	Marshall	WV	957	124
10*21476	JANICE BERISFORD STEWART	8/31/2017	Marshall	WV	TBD	TBD
10*21478	CHILDRENS HOME SOCIETY OF WEST VIRGINIA	1/9/2018	Marshall	WV	960	173



10*21504	PAULETA LINDA CHEATHAM AND CARL WOHLERS	9/28/2017	Marshall	WV	951	142
10*21546	EDWIN C MILLER AND KIMBERLY ANN MILLER	10/14/2017	Marshall	WV	957	257
10*21547	GARY A MILLER AND MARCELLE T MILLER	10/15/2017	Marshall	WV	952	370
10*21548	JEANNE M MILLER	10/15/2017	Marshall	WV	952	386
10*21587	ALYSIA JORDAN & TERRY M JORDAN	10/26/2017	Marshall	WV	TBD	TBD
10*21607	SHERLEY R STOWE & KAREN M STOWE	10/24/2017	Marshall	WV	959	474
10*21608	BONNIE LOU POSTLEWAIT	12/11/2017	Marshall	WV	959	313
10*21623	ROBERT R FISHER AND AUDREY L IRVIN	1/12/2018	Marshall	WV	TBD	TBD
10*21638	THE MILDRED Y MILLS TRUST JULY 5TH 2007	9/26/2017	Marshall	WV	954	332
10*21709	THOMAS YOUNG AND JANE CLAIRE YOUNG	1/5/2018	Marshall	WV	959	350
10*21710	PENELOPE A JONES	1/5/2018	Marshall	WV	959	355

10*21719	ROBERT A MILLER	10/4/2017	Marshall	WV	952	389
10*21769	BETTY HAMILTON	12/26/2017	Marshall	WV	957	419
10*21770	SUSAN WINLAND AND PAUL MICHAEL WINLAND	12/26/2017	Marshall	WV	957	421
10*21776	LINDA HAMILTON	12/26/2017	Marshall	WV	957	417
10*21823	ELLEN RUTH STERLING & JAMES ROGER DAVIS	1/15/2018	Marshall	WV	960	198
10*21835	KENNETH ALLEN AND CARLA JO ALLEN	12/26/2017	Marshall	WV	962	572
10*21903	WILLIAM R VOLTZ AND SHARON VOLTZ	1/23/2018	Marshall	WV	960	182
10*21904	MARY S MAGERS AND WILLIAMS MAGERS	1/15/2018	Marshall	WV	960	158
10*21905	DAVID F VOLTZ AND LINDA VOLTZ	1/11/2018	Marshall	WV	961	444
10*21906	MICHAEL P VOLTZ	1/14/2018	Marshall	WV	960	164
10*21910	J THOMAS VOLTZ AND NANCY VOLTZ	1/23/2018	Marshall	WV	960	179
10*21917	ROBERT W RAHM AND BETHANY A RAHM	4/10/2014	Marshall	WV	827	142
10*21920	JOHN R MAUPIN	11/10/2017	Marshall	WV	952	630
10*21924	BEVERLY A MILLER	11/18/2017	Marshall	WV	953	533
10*21926	VIOLA JANE BREON AND JAMES RONALD BREON	11/18/2017	Marshall	WV	953	360

10*21929	BENNY MILLER	1/8/2018	Marshall	WV	960	177
10*21930	JAMES A GRENOBLE AND MARY JANE GRENOBLE	11/18/2017	Marshall	WV	953	263
10*21934	BERNETTA D BROWN AND DOUGLAS M BROWN	1/17/2018	Marshall	WV	960	167
10*21936	CHRISTOPHER L PARSONS & LAURA A PARSONS	1/21/2018	Marshall	WV	960	170
10*21937	WHEELING SOCIETY FOR CRIPPLED CHILDREN JAY E PRAGER PRESIDENT	1/18/2018	Marshall	WV	960	33
10*21938	SEAN M GRENOBLE AND CHERYL A GRENOBLE	12/9/2017	Marshall	WV	960	91
10*21939	ULA F NELSON	1/19/2018	Marshall	WV	960	96
10*21943	THOMAS J STERLING JR AND STEPHANIE ANN STERLING	1/22/2018	Marshall	WV	960	99

10*21952	VICTORIA A PAKROVSKY AND STEPHEN W PAKROVSKY	1/10/2018	Marshall	WV	959	478
10*21953	LORNA MARIE LEW	1/10/2018	Marshall	WV	959	480
10*21954	CHARLES E BLUE IV AND ALLA RABINOVICH	12/30/2017	Marshall	WV	959	482
10*21955	DWG OIL & GAS ACQUISITIONS LLC	12/20/2017	Marshall	WV	959	484
10*22001	GREGORY K GLOVER	11/30/2017	Marshall	WV	953	271
10*22043	CHILDRENS HOME SOCIETY OF WV	12/11/2017	Marshall	WV	TBD	TBD
10*22044	MICHAEL A BISHOP	1/16/2018	Marshall	WV	960	421
10*22045	DOUGLAS R BISHOP	1/16/2018	Marshall	WV	961	417
10*22046	PHYLLIS E HARVEY AND STEVEN E HARVEY	1/23/2018	Marshall	WV	960	398
10*22051	NOEL A PARKS	1/31/2018	Marshall	WV	960	509
10*22065	WESLEY R BRYAN II	2/2/2018	Marshall	WV	960	417
10*22066	WESLEY R BRYAN	2/2/2018	Marshall	WV	960	419

10*22132	WILLIAM H WILD AND RUTH N WILD	1/19/2018	Marshall	WV	959	486
10*22133	LAURENCE MYERS EVANS II AND PENNY EVANS	1/19/2018	Marshall	WV	961	439
10*22134	JACK MICHAEL FOREMAN	1/31/2018	Marshall	WV	961	449
10*22156	ROBERTA MURPHY	12/29/2017	Marshall	WV	TBD	TBD
10*22267	MARJORIE B KIDD AND ROBERT C KIDD	1/22/2018	Marshall	WV	959	488
10*22270	ARTHUR ALVIN ANDERSON	1/31/2018	Marshall	WV	961	437
10*22282	MICHAEL A STERLING AND MEREDITH STERLING	2/8/2018	Marshall	WV	962	230
10*22292	JACQUELYN J JOHNSON AND SAMMY R JOHNSON	1/3/2018	Marshall	WV	957	113
10*22293	ROBERT W PARSONS AND LINDA B PARSONS	1/20/2018	Marshall	WV	962	197
10*22295	RACHEL B OSTRANDER	2/27/2014	Marshall	WV	822	210



10*22296	NOAH BAKER AND ALISA BAKER	2/1/2018	Marshall	WV	962	200
10*22302	DONNA K ANDERSON AND LEROY ANDERSON	12/23/2017	Marshall	WV	957	122
10*22309	AARON D LITMAN AND BETTY J LITMAN	1/18/2018	Marshall	WV	963	408
10*22310	THE MOST REVEREND MICHAEL J BRANSFIELD BISHOP ROMAN CATHOLIC DIOCESE	1/2/2018	Marshall	WV	964	520
10*22311	WILLIAM L LITMAN AND VICKIE L LITMAN	1/18/2018	Marshall	WV	963	404
10*22312	RICHARD WOOD AND VICKI WOOD	1/16/2018	Marshall	WV	962	528
10*22319	SHARON G VAN SCYOC	2/27/2014	Marshall	WV	822	204
10*22326	RACHEL SONDA AND SCOTT SONDA	2/22/2018	Marshall	WV	962	532
10*22349	ANITA RAE MILLER	11/17/2016	Marshall	WV	910	152
10*22404	REBECCA S LUKATS AND ELMER M LUKATS	1/23/2018	Marshall	WV	962	566

10*22407	BRADLEY MURPHY	2/17/2018	Marshall	WV	962	575
10*22408	REBECCA STARR	2/9/2018	Marshall	WV	962	578
10*22417	RONALD L PARSONS AND PAULA J PARSONS	2/26/2018	Marshall	WV	963	386
10*22430	DEBORAH VANVRANKEN	2/20/2018	Marshall	WV	964	510
10*22433	TERESA RANDOLPH	2/5/2018	Marshall	WV	964	218
10*22438	JULIE SPRINGWATER	1/30/2018	Marshall	WV	964	231
10*22442	SANDRA J HARMON AND WALTER D HARMON	2/15/2018	Marshall	WV	966	106

10*22449	MARGARET CLICKNER	2/15/2018	Marshall	WV	963	644
10*22451	GERALD L BISHOP III	1/31/2018	Marshall	WV	964	31
10*22492	FAITH MARIE FREESTONE AND ERIC FREESTONE	3/6/2018	Marshall	WV	972	50
10*22500	DEBRA MORRIS	5/23/2013	Marshall	WV	797	617
10*22511	SHERLEY R STOWE & KAREN M STOWE	2/27/2018	Marshall	WV	966	104

10*22512	MARILYN NOEL	3/2/2018	Marshall	WV	964	436
10*22513	DEBORAH BLOUGH	3/1/2018	Marshall	WV	964	438
10*22533	HARRY LEROY AND NANCY S PARRIOTT	4/11/2014	Marshall	WV	829	153
10*22534	DEBORAH D AND CALVIN P MERCER	4/11/2014	Marshall	WV	828	639
10*22535	TRUDY B AND DANNY SAMPSON	4/11/2014	Marshall	WV	828	637
10*22536	TIMOTHY SCOTT AND AMY C LEMASTERS	4/11/2014	Marshall	WV	829	630
10*22537	BRIAN EDWIN LEMASTERS AND BEVERLY J LEMASTERS	4/22/2014	Marshall	WV	831	44
10*22538	RANDY K PARRIOTT	4/11/2014	Marshall	WV	836	455
10*22547	LAWRENCE EDWARD MURPHY AND JOAN MARIE MURPHY	3/6/2018	Marshall	WV	966	628
10*22548	SHARON TOLER WILLIAMS & HERVEY WILLIAMS	3/19/2018	Marshall	WV	966	194
10*22550	SHARON TOLER WILLIAMS & HERVEY WILLIAMS	3/19/2018	Marshall	WV	966	124
10*22559	SHARON TOLER WILLIAMS & HERVEY WILLIAMS	3/19/2018	Marshall	WV	966	94

10*22566	KENNETH A MILLER	2/12/2018	Marshall	WV	964	233
10*22583	THE RANDOLPH FAMILY TRUST MARY MARIE SPITLER RANDOLPH TRUSTEE	3/7/2018	Marshall	WV	965	602
10*22584	RICHARD P BACHMAN AND JEANETTE M BACHMAN	2/23/2018	Marshall	WV	965	604
10*22604	WILLIAM LEESON	2/19/2018	Marshall	WV	966	499
10*22605	MICHAEL R LEESON AND BRENDA R LEESON	2/26/2018	Marshall	WV	966	496
10*22606	ROBERT B MURPHY AND LINDA MURPHY	3/14/2018	Marshall	WV	966	469
10*22612	KATHARINE EVANS COFFEY	3/26/2018	Marshall	WV	966	525
10*22636	CHANDA WILSON AND DANIEL WILSON	3/29/2018	Marshall	WV	968	226
10*22637	HOWARD T CONNER AND NANETTE CONNER	4/6/2018	Marshall	WV	968	219
10*22639	EDWIN MARK KNABENSHUE	4/6/2018	Marshall	WV	968	217
10*22640	JESSICA M CREMEANS	4/6/2018	Marshall	WV	TBD	TBD
10*22641	CHRISTOPHER STALEY & MICHAEL ANNE STALEY	4/6/2018	Marshall	WV	968	221



10*22645	STANLEY EUGENE STOWE	4/4/2018	Marshall	WV	TBD	TBD	*
10*22665	JAMES R ANDERSON AND MELODY A ANDERSON	10/14/2013	Marshall	WV	812	31	
10*22667	REBEKAH DRAYER ELDRIDGE AND CHRISTOPHER ELDRIDGE	11/4/2014	Marshall	WV	850	157	
10*22744	BRIDGET A POWDERLY	4/6/2018	Marshall	WV	TBD	TBD	*
10*22747	MARY E MUMFORD	4/3/2018	Marshall	WV	TBD	TBD	*
10*22751	WILLIAM N AND VIRGINIA ROUPE	3/27/2018	Marshall	WV	TBD	TBD	*
10*22753	JAMES AND DIANA MIDCAP	7/17/2013	Marshall	WV	803	615	
10*22772	BILLIE J AND APRIL STALEY	4/21/2018	Marshall	WV	TBD	TBD	*
10*22773	CHRISTA DRAYER STALEY AND JOSHUA STALEY	11/20/2014	Marshall	WV	851	3	
10*22777	BOYD BUESKING	11/14/2014	Marshall	WV	850	159	
10*22780	BRENDA FAYE THOMAS PETRACK	11/4/2014	Marshall	WV	850	161	
10*22786	GUY YATES	11/4/2014	Marshall	WV	848	206	
10*22787	GAIL ANN YATES WOOD AND WESLEY J WOOD	11/4/2014	Marshall	WV	848	208	
10*22788	GENIE SUE THOMAS HOLMES AND JOHN L HOLMES	10/31/2014	Marshall	WV	848	204	
10*22801	BOYD DAIL YATES JR AND MARLA YATES	11/4/2014	Marshall	WV	848	210	
10*22808	SHIRLEY YATES HARTSELL AND FREDDIE LEE HARTSELL	11/4/2014	Marshall	WV	848	212	
10*22810	CLYDE V. & KAREN S REED	4/7/2015	Marshall	WV	864	190	
10*22858	THOMAS C AND MARY ELLEN DAVIS	4/25/2018	Marshall	WV	TBD	TBD	*
10*22862	VERA VAN LAW TRUST BY ERIC M G	5/1/2018	Marshall	WV	TBD	TBD	
10*22865	JAMES H CAMPBELL	5/9/2018	Marshall	WV	977	60	

10*22866	MARGARET R DONOFRIO	5/8/2018	Marshall	WV	977	57
10*22974	PAMELA B TURNER	5/3/2018	Marshall	WV	TBD	TBD
10*22980	DEBRA L DANIEL	5/3/2018	Marshall	WV	TBD	TBD
10*23004	KLOVA A MORRIS	5/17/2018	Marshall	WV	TBD	TBD
10*23035	DEAN S CARR	5/2/2018	Marshall	WV	TBD	TBD
10*23037	CHARLES EDWARD FURBEE	4/7/2018	Marshall	WV	TBD	TBD
10*23040	MARY L WHITTINGTON	3/29/2018	Marshall	WV	977	300
10*23109	MARTHA C AND RICHARD D JR HYRE	5/11/2018	Marshall	WV	TBD	TBD
10*23116	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS	5/30/2018	Marshall	WV	TBD	TBD
10*23121	ROBERT L BERISFORD	5/3/2018	Marshall	WV	TBD	TBD
10*23129	BONNIE S SMITH	5/7/2018	Marshall	WV	TBD	TBD
10*23130	HOLLINS N AND AMY J RANDOLPH	5/5/2018	Marshall	WV	TBD	TBD
10*47051.089.0	LARRY W DUNLAP AND BARBARA E DUNLAP	11/3/2014	Marshall	WV	864	148
10*47051.105.0	JAMES B JACKSON JR AND MARION L JACKSON	11/6/2014	Marshall	WV	859	478
10*47051.127.1	EDWIN C MILLER AND KIMBERLY ANN MILLER	11/6/2014	Marshall	WV	885	61
10*47051.127.2	JANE S BLANEY	10/26/2015	Marshall	WV	898	547
10*47051.127.3	JOANNE SCHALL FOSTER	10/26/2015	Marshall	WV	895	29
10*47051.127.4	RAYMOND E SCHALL	10/26/2015	Marshall	WV	898	550
10*47051.127.5	FIRST CHRISTIAN CHURCH OF MOUNDSVILLE BY ROGER FRANCIS AND ROBERT ALBERT TRUSTEES	12/2/2015	Marshall	WV	898	600
10*47051.127.6	BARBARA GODWIN AND CHARLES RODNEY GODWIN	12/18/2015	Marshall	WV	902	419
10*47051.162.0	KAREN M WILSON	11/7/2014	Marshall	WV	873	150
10*47051.170.0	JASON J STEED	11/7/2014	Marshall	WV	865	344
10*47051.260.0	WILLIAM A PRASCIK	6/15/2015	Marshall	WV	879	302

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10*47051.261.1	WILLIAM HUBBARD	1/5/2015	Marshall	WV	882	536
10*47051.261.2	BONNIE G ZELIC	1/5/2015	Marshall	WV	882	539
10*47051.261.3	JOHN P SMITH JR	1/5/2015	Marshall	WV	882	542
10*47051.261.4	BRADLEY L HUBBARD AND CONNIE L HUBBARD	1/5/2015	Marshall	WV	898	573
10*47051.307.0	JASON J STEED	2/4/2016	Marshall	WV	894	508
10*47051.308.0	KAREN M WILSON	2/4/2016	Marshall	WV	894	511
10*47051.331.1	LEEANN M LEMONOVICH	5/12/2016	Marshall	WV	910	136

Lease Number	Original Lessor	Original Lessee	Lease Date	Lease Gross Acres	State	County	Book Number	Page Number	Instrument Number
TH19175	WILLIAM N. ROUPE ET UX	TRIENERGY HOLDINGS, LLC	08/26/2010	5.23	WV	MARSHALL	711	503	1294408
TH19101	FRANCES E. NIEMAN	AB RESOURCES LLC	07/15/2009	66.92	WV	MARSHALL	685	288	1274227
TH19101	FRANCES E. NIEMAN	AB RESOURCES LLC	07/15/2009	66.92	WV	MARSHALL	685	288	1274227
Q083734000	JAMES A WADE SR	TRIENERGY HOLDINGS LLC	05/20/2010	8.38	WV	MARSHALL	707	371	1291389
Q083831000	JAMES K PERSINGER ET UX	TRIENERGY HOLDINGS LLC	07/27/2010	16.3788	WV	MARSHALL	711	359	
Q083689000	CLAYTON LEE PERSINGER ET UX	TRIENERGY HOLDINGS LLC	08/31/2010	1.54	WV	MARSHALL	714	97	1295326
Q083716000	KEVIN W WALLACE	TRIENERGY HOLDINGS LLC	09/02/2010	0.323	WV	MARSHALL	715	193	1295959
Q083704000	ANNE C KLEM	TRIENERGY HOLDINGS LLC	10/12/2010	1.4	WV	MARSHALL	719	352	1297992
Q083671000	JESUS BUSTAMANTE ET UX	TRIENERGY HOLDINGS LLC	11/09/2010	0.99	WV	MARSHALL	734	263	1305627
Q083768092	GEORGE A KNUTH ET UX	NOBLE ENERGY INC	07/12/2013	2.743	WV	MARSHALL	803	345	1348496
Q080154001	KENNETH EUGENE WHITE ET UX	NOBLE ENERGY INC	11/05/2013	0.359	WV	MARSHALL	815	533	1355092
Q081124001	JAMES REDMAN LEGG II ET AL	NOBLE ENERGY INC	11/05/2013	72.141	WV	MARSHALL	816	548	1355996
Q081123001	JEFFREY L LEGG	NOBLE ENERGY INC	11/05/2013	20.5	WV	MARSHALL	816	530	1355925
Q088946000	LETHA I RUCKMAN	TRIENERGY HOLDINGS LLC	11/29/2011	0.612	WV	MARSHALL	765	219	1923191
Q088946000	LETHA I RUCKMAN	TRIENERGY HOLDINGS LLC	11/29/2011	0.612	WV	MARSHALL	765	219	1923191
Q092606000	EDUCATION OF COUNTY OF MARSHALL	NOBLE ENERGY INC	06/09/2015	0.8594	WV	MARSHALL	896	501	1407102
Q063860000	MARY D RUCKMAN	TRIENERGY HOLDINGS LLC	12/01/2011	0.135	WV	MARSHALL	765	224	1323193
Q083860000	MARY D RUCKMAN	TRIENERGY HOLDINGS LLC	12/01/2011	0.135	WV	MARSHALL	765	224	1323193
CVX066629	FRANCES E NIEMAN ET AL	AB RESOURCES LLC	07/15/2009	23.355	WV	MARSHALL	685	283	1274225
CVX066958	ANITA L SLOUGH ET AL	CHEVRON U.S.A., INC.	12/13/2009	320.491	WV	MARSHALL	696	7	1282651
CVX066959	PAUL SCHEIBELHOOD ET AL	CHEVRON U.S.A., INC.	12/13/2009	320.491	WV	MARSHALL	695	629	1282635
CVX068463	FRANCIS D. BARR ET UX	TRIENERGY HOLDINGS, LLC	03/04/2011	0.57	WV	MARSHALL	737	252	1307508
CVX068468	DEBORAH S. MIDCAP	TRIENERGY HOLDINGS, LLC	03/04/2011	0.9381	WV	MARSHALL	737	260	1307514
CVX068399	KETH D. DANIELS ET UX	TRIENERGY HOLDINGS, LLC	03/24/2011	1.53	WV	MARSHALL	735	216	1306241
CVX068337	RALPH DUNLAP	TRIENERGY HOLDINGS, LLC	03/25/2011	1.5	WV	MARSHALL	737	433	1307736
CVX068688	THOMAS E. MIDCAP ET UX	TRIENERGY HOLDINGS, LLC	04/01/2011	0.751	WV	MARSHALL	738	482	1308133
CVX093569	TIMOTHY HUFF ET UX	CHEVRON U.S.A., INC.	10/06/2014	317.467	WV	MARSHALL	864	47	1379827
CVX0936054	MARY JO CRONIN	CHEVRON U.S.A., INC.	10/15/2014	317.467	WV	MARSHALL	864	43	1379826
CVX0936058	RICHARD KURPIL ET UX	CHEVRON U.S.A., INC.	10/16/2014	317.467	WV	MARSHALL	863	594	1379775
CVX0936061	CLARA MAE CLIFTON	CHEVRON U.S.A., INC.	10/18/2014	317.467	WV	MARSHALL	853	426	1374815
CVX0935273	PAUL PARSONS ET UX	CHEVRON U.S.A., INC.	10/18/2014	317.467	WV	MARSHALL	853	430	1374816
CVX0935276	SHARON LYN RUSSELL	CHEVRON U.S.A., INC.	10/22/2014	317.467	WV	MARSHALL	853	422	1374813
CVX0936062	GEORGE EDWARDS ET UX	CHEVRON U.S.A., INC.	10/22/2014	317.467	WV	MARSHALL	853	418	1374812
CVX0935271	CHARLES W. MILLER	CHEVRON U.S.A., INC.	10/29/2014	317.467	WV	MARSHALL	853	39	1374515
CVX0936113	JUDITH MAY CONNER	CHEVRON U.S.A., INC.	11/07/2014	317.467	WV	MARSHALL	853	445	1374823
CVX0936112	DONNA FAE KYLE	CHEVRON U.S.A., INC.	11/07/2014	317.467	WV	MARSHALL	853	449	1374824
CVX0947093	RICHARD J. GATTS	CHEVRON USA INC	11/02/2016	98.819	WV	MARSHALL	899	479	1411787
Q074011009	MARY WITTEN HART EHLERS	NOBLE ENERGY INC	02/14/2013	113.6	WV	MARSHALL	789	552	1339871
Q074011010	CATHY HART PRICE	NOBLE ENERGY INC	02/14/2013	113.6	WV	MARSHALL	789	534	1339858
Q074011011	DONALD R HART JR	NOBLE ENERGY INC	02/14/2013	113.6	WV	MARSHALL	789	554	1339872
Q074011002	DOROTHY ANN NEAL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	547	1339868
Q074011002	DOROTHY ANN NEAL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	547	1339868
Q074011003	JOSEPH MOORE NEAL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	545	1339867
Q074011003	JOSEPH MOORE NEAL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	545	1339867
Q074011004	MARGERY J WITTEN	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	543	1339866
Q074011004	MARGERY J WITTEN	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	543	1339866
Q074011005	ANN ALEXANDER	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	541	1339865
Q074011005	ANN ALEXANDER	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	541	1339865
Q074011006	FRANCES GALE NEAL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	536	1339862
Q074011006	FRANCES GALE NEAL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	536	1339862
Q074011007	SUSAN WITTEN NEAL MEYERS ET AL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	794/789	352/538	1342848-1339863
Q074011007	SUSAN WITTEN NEAL MEYERS ET AL	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	794/789	352/538	1342848-1339863
Q074011008	JANE WITTEN VOTH	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	559	1339874
Q074011008	JANE WITTEN VOTH	NOBLE ENERGY INC	02/14/2013	231.35	WV	MARSHALL	789	559	1339874
Q075237000	MALISSA A MASON	NOBLE ENERGY INC	12/28/2012	2.846	WV	MARSHALL	787	59	1337288
Q074947000	EDWIN C MILLER ET UX	NOBLE ENERGY INC	03/11/2013	180.31	WV	MARSHALL	792	606	1341694
Q075763000	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	NOBLE ENERGY INC	03/13/2013	1.48	WV	MARSHALL	797	642	1345054
Q075484005	ELIZABETH J STEWART	NOBLE ENERGY INC	03/20/2013	10.88	WV	MARSHALL	796	132	1344250
Q075434001	JAMES E ROBINSON ET UX	NOBLE ENERGY INC	03/22/2013	10.88	WV	MARSHALL	795	188	1343574
Q075434002	THOMAS L ROBINSON	NOBLE ENERGY INC	03/22/2013	10.88	WV	MARSHALL	795	190	1343575
Q075434003	PATRICIA A ANKROM	NOBLE ENERGY INC	03/22/2013	10.88	WV	MARSHALL	795	184	1343572
Q075434004	JOHN S ROBINSON ET UX	NOBLE ENERGY INC	03/22/2013	10.88	WV	MARSHALL	795	185	1343573
Q074927000	LUCILLE MYERS	NOBLE ENERGY INC	04/09/2013	1.089	WV	MARSHALL	794	497	1343233
Q076001000	LIONEL L PERSINGER ET UX	NOBLE ENERGY INC	05/15/2013	1.37	WV	MARSHALL	797	430	1344812
Q076643000	JOHN JOSEPH GOUDY	NOBLE ENERGY INC	05/28/2013	1	WV	MARSHALL	803	941	1348494
Q075905000	GARY E GIBSON ET AL	NOBLE ENERGY INC	05/30/2013	0.25	WV	MARSHALL	797	614	1345040

Q07669000	EDWARD DAVID KNUTH ET AL	NOBLE ENERGY INC	06/10/2013	1.605	WV	MARSHALL	803	598	1348775
Q076644000	JAMES B MIDCAP ET UX	NOBLE ENERGY INC	06/12/2013	0.852	WV	MARSHALL	803	336	1348492
Q076469000	JUNE MORRIS	NOBLE ENERGY INC	06/27/2013	2.06	WV	MARSHALL	802	275	1347909
Q077348000	JAMES B MIDCAP ET UX	NOBLE ENERGY INC	07/09/2013	0.1	WV	MARSHALL	806	358	1350771
Q077350000	ROBERT SHIELDS ET AL	NOBLE ENERGY INC	07/16/2013	0.3	WV	MARSHALL	806	355	1350769
Q076872002	DAVID E RIEL	NOBLE ENERGY INC	07/17/2013	9.188	WV	MARSHALL	806	362	1350773
Q076767001	RAYMOND E CONNER SR ET UX	NOBLE ENERGY INC	07/17/2013	1.277	WV	MARSHALL	803	631	1348792
Q076872003	ALICE E DUNLAP	NOBLE ENERGY INC	08/01/2013	9.188	WV	MARSHALL	805	587	1350438
Q076872004	LARRY W DUNLAP ET UX	NOBLE ENERGY INC	08/01/2013	9.188	WV	MARSHALL	805	582	1350437
Q076872001	WILLIAM R DUNLAP	NOBLE ENERGY INC	08/04/2013	9.188	WV	MARSHALL	806	636	1348795
Q078626001	LUCILLE F WINGROVE	NOBLE ENERGY INC	08/08/2013	12.485	WV	MARSHALL	810	80	1352555
Q077358001	JON DAVID FROMHART	NOBLE ENERGY INC	08/15/2013	2	WV	MARSHALL	805	580	1350435
Q077357000	LINDA J SIMMONS	NOBLE ENERGY INC	08/16/2013	0.732	WV	MARSHALL	805	575	1350433
Q078778000	SAMUEL L CANTERBURY ET UX	NOBLE ENERGY INC	08/16/2013	0.65	WV	MARSHALL	810	68	1352547
Q078775000	MILLARD BONNETTE JR ET UX	NOBLE ENERGY INC	08/22/2013	3.192	WV	MARSHALL	810	70	1352548
Q076872005	LINDA DIANE BROWN ET VIR	NOBLE ENERGY INC	08/27/2013	9.188	WV	MARSHALL	816	192	1355476
Q076872006	PATRICIA ANN BELCH ET VIR	NOBLE ENERGY INC	08/27/2013	9.188	WV	MARSHALL	816	306	1355658
Q077562000	ELIZABETH ANNE MOORE	NOBLE ENERGY INC	08/28/2013	35.265	WV	MARSHALL	806	302	1350735
Q077913000	RICK A KOSKY	NOBLE ENERGY INC	09/03/2013	0.5	WV	MARSHALL	806	353	1350757
Q078779000	ROBERT SIDNEY ANDERSON ET UX	NOBLE ENERGY INC	09/04/2013	0.991	WV	MARSHALL	810	74	1352551
Q079184000	GLORIA JEAN WHITE ET AL	NOBLE ENERGY INC	09/18/2013	0.525	WV	MARSHALL	808	392	1351624
Q078651000	JUNE M MORRIS	NOBLE ENERGY INC	09/19/2013	0.115	WV	MARSHALL	806	388	1351622
Q079517000	EARL B SUTER JR ET UX	NOBLE ENERGY INC	09/26/2013	0.085	WV	MARSHALL	809	640	1352496
Q079757000	MILLARD JUNIOR BONNETTE ET UX	NOBLE ENERGY INC	10/01/2013	2.321	WV	MARSHALL	813	181	1353567
Q079588001	PATRICIA Y DARRAH	NOBLE ENERGY INC	10/09/2013	1.617	WV	MARSHALL	813	183	1353569
Q079588002	STANLEY DARRAH ET UX	NOBLE ENERGY INC	10/09/2013	1.617	WV	MARSHALL	816	283	1355649
Q079588003	RICHARD DARRAH	NOBLE ENERGY INC	10/09/2013	1.617	WV	MARSHALL	816	302	1355656
Q080156001	DARLA JACKSON ET VIR	NOBLE ENERGY INC	10/24/2013	1.679	WV	MARSHALL	815	531	1355091
Q080156002	LISA SCHULTZ ET VIR	NOBLE ENERGY INC	10/24/2013	1.679	WV	MARSHALL	816	166	1355439
Q079588006	BERNADINE MORGAN	NOBLE ENERGY INC	10/26/2013	1.617	WV	MARSHALL	816	265	1355637
Q079725000	DANEIL D ROBINSON ET UX	NOBLE ENERGY INC	10/28/2013	0.925	WV	MARSHALL	812	38	1353102
Q079518000	JOHN H LONG ET UX	NOBLE ENERGY INC	10/28/2013	0.815	WV	MARSHALL	809	636	1352494
Q079516000	DAWN THOMPSON TENANT ET VIR	NOBLE ENERGY INC	10/22/2013	0.3091	WV	MARSHALL	809	632	1352491
Q079588005	DAVID A TAKACH ET UX	NOBLE ENERGY INC	10/24/2013	1.617	WV	MARSHALL	816	304	1355657
Q079588004	DONNA SIDROPOULIS ET VIR	NOBLE ENERGY INC	10/24/2013	1.1617	WV	MARSHALL	816	546	1355933
Q081116000	SHELVA G SMITH ET UX	NOBLE ENERGY INC	11/07/2013	1.441	WV	MARSHALL	816	275	1355643
Q085265001	FORREST O MILLER	NOBLE ENERGY INC	11/13/2013	49.96	WV	MARSHALL	815	529	1355090
Q078626006	BARBARA F DANIELS	NOBLE ENERGY INC	11/15/2013	3.545	WV	MARSHALL	813	246	1353654
Q078626007	JEFFREY BROOKS	NOBLE ENERGY INC	11/15/2013	3.545	WV	MARSHALL	813	540	1353908
Q078626008	ELAINE WILLIS	NOBLE ENERGY INC	11/15/2013	3.545	WV	MARSHALL	813	542	1353909
Q081130000	CLARA B YOHO	NOBLE ENERGY INC	12/04/2013	0.32	WV	MARSHALL	820	514	1357742
Q081144000	HOWARD N WAYNE ET UX	NOBLE ENERGY INC	12/04/2013	0.31	WV	MARSHALL	816	592	1355926
Q081139001	WILLEY K NICE	NOBLE ENERGY INC	12/11/2013	0.474	WV	MARSHALL	816	297	1355654
Q090332006	DELBERT K MYERS JR ET UX	NOBLE ENERGY INC	12/12/2013	21.49	WV	MARSHALL	821	34	1357758
Q081864001	CATHERINE R KLUG	NOBLE ENERGY INC	12/12/2013	32.317	WV	MARSHALL	819	349	1356969
Q081864002	DEBRA L RICHEY ET VIR	NOBLE ENERGY INC	12/13/2013	32.317	WV	MARSHALL	819	347	1356968
Q081033000	TAMMY L MITCHELL ET VIR	NOBLE ENERGY INC	12/17/2013	35.7	WV	MARSHALL	816	176	1355446
Q078626019	FRANCES O HALL	NOBLE ENERGY INC	12/18/2013	3.94	WV	MARSHALL	825	258	1358678
Q097976002	ROBERT M WHITE ET UX	NOBLE ENERGY INC	12/19/2013	7.23	WV	MARSHALL	821	30	1357756
Q097976003	CHARLES G STEIN ET UX	NOBLE ENERGY INC	12/19/2013	0.35	WV	MARSHALL	821	28	1357755
Q081864003	PATRICIA LOUISE CROW ET VIR	NOBLE ENERGY INC	12/20/2013	32.317	WV	MARSHALL	819	351	1356970
Q078626010	MARILYN ULBRICH CHALMERS ET VIR	NOBLE ENERGY INC	12/31/2013	16.545	WV	MARSHALL	820	506	1357738
Q078626011	BLYE ULBRICH-JENSCHKE ET VIR	NOBLE ENERGY INC	12/31/2013	16.545	WV	MARSHALL	819	305	1356907
Q078626023	BRYCE E ULBRICH ET UX	NOBLE ENERGY INC	12/31/2013	16.545	WV	MARSHALL	825	298	1358697
Q078626009	H JAY ULBRICH	NOBLE ENERGY INC	12/31/2013	16.54	WV	MARSHALL	819	309	1356910
Q078626013	ROBERT LEE SMITH ET UX	NOBLE ENERGY INC	12/31/2013	16.545	WV	MARSHALL	819	303	1356906
Q078626012	JUSTIN SMITH	NOBLE ENERGY INC	12/31/2013	16.545	WV	MARSHALL	819	307	1356909
Q078626036	MARTHA FRANCES ULCAK	NOBLE ENERGY INC	01/02/2014	16.545	WV	MARSHALL	822	588	1362907
Q082085000	JOHN D ALBAUGH	NOBLE ENERGY INC	01/09/2014	0.729	WV	MARSHALL	825	347	1358705
Q078626021	MARY L PARRIOTT	NOBLE ENERGY INC	01/14/2014	6	WV	MARSHALL	827	164	1359514
Q078626014	HARRY LEROY PARRIOTT ET UX	NOBLE ENERGY INC	01/14/2014	6	WV	MARSHALL	820	508	1357739
Q078626017	SOUTHEASTERN GUIDE DOGS INC	NOBLE ENERGY INC	01/17/2014	14.485	WV	MARSHALL	820	516	1357743
Q078626018	KIMBERLY D LAKE	NOBLE ENERGY INC	01/17/2014	6	WV	MARSHALL	825	272	1358689
Q078626025	COURTNEY D HALL	NOBLE ENERGY INC	01/27/2014	15.985	WV	MARSHALL	829	147	1361206
Q078626015	DEBORAH D MERCER ET VIR	NOBLE ENERGY INC	01/30/2014	6	WV	MARSHALL	821	22	1357752
Q078626020	TRUDY B SAMPSON ET VIR	NOBLE ENERGY INC	01/30/2014	6	WV	MARSHALL	825	260	1358679
Q078626016	BRIAN EDWIN LEMASTERS ET UX	NOBLE ENERGY INC	01/30/2014	6	WV	MARSHALL	821	24	1357759
Q078626022	TIMOTHY SCOTT LEMASTERS ET UX	NOBLE ENERGY INC	01/30/2014	6	WV	MARSHALL	827	162	1359513
Q082348000	MARK L RITER ET AL	NOBLE ENERGY INC	02/04/2014	3.427	WV	MARSHALL	821	26	1357754
Q081864009	MARY L PARRIOTT	NOBLE ENERGY INC	02/04/2014	32.317	WV	MARSHALL	827	156	1359510



Q081864010	HARRY LEROY PARRIOTT ET UX	NOBLE ENERGY INC	02/04/2014	32.317	WV	MARSHALL	827	166	1359515
Q081864004	TRUDY B SAMPSON ET VIR	NOBLE ENERGY INC	02/04/2014	32.317	WV	MARSHALL	825	345	1358704
Q081864006	DEBORAH D MERCER ET VIR	NOBLE ENERGY INC	02/04/2014	32.317	WV	MARSHALL	825	423	1358721
Q081864005	BRIAN EDWIN LEMASTERS ET UX	NOBLE ENERGY INC	02/04/2014	32.317	WV	MARSHALL	825	421	1358720
Q081864011	TIMOTHY SCOTT LEMASTERS ET VIR	NOBLE ENERGY INC	02/04/2014	32.317	WV	MARSHALL	827	158	1359511
Q082345001	REGINA D GRAY	NOBLE ENERGY INC	02/12/2014	0.715	WV	MARSHALL	827	154	1359509
Q081864012	PATRICIA PARRIOTT	NOBLE ENERGY INC	02/14/2014	32.317	WV	MARSHALL	829	143	1361204
Q078626028	PATRICIA PARRIOTT	NOBLE ENERGY INC	02/14/2014	6	WV	MARSHALL	828	270	1360711
Q078626027	BETTY JANE PARRIOTT	NOBLE ENERGY INC	02/18/2014	5.44	WV	MARSHALL	828	265	1360708
Q082463000	DANNY LEE DARRAH ET UX	NOBLE ENERGY INC	02/20/2014	0.788	WV	MARSHALL	827	160	1359512
Q081864013	RAYMOND W WOODS ET UX	NOBLE ENERGY INC	02/27/2014	32.317	WV	MARSHALL	829	145	1361205
Q081864014	RICHARD W WOODS ET UX	NOBLE ENERGY INC	02/27/2014	32.317	WV	MARSHALL	829	125	1361199
Q078626024	SHRINERS HOSPITALS FOR CHILDREN	NOBLE ENERGY INC	03/04/2014	15.985	WV	MARSHALL	829	141	1361203
Q081864007	CAROLE S MYERS ET VIR	NOBLE ENERGY INC	03/04/2014	32.317	WV	MARSHALL	827	93	1359426
Q081864008	WILLIAM H WILSON ET UX	NOBLE ENERGY INC	03/05/2014	32.317	WV	MARSHALL	827	91	1359425
Q081864015	PENNIE S HOWE ET VIR	NOBLE ENERGY INC	03/05/2014	32.317	WV	MARSHALL	829	121	1361197
Q081864016	HUGH M WENDELL	NOBLE ENERGY INC	03/05/2014	32.317	WV	MARSHALL	829	119	1361196
Q081864030	BETTY JANE PARRIOTT	NOBLE ENERGY INC	03/06/2014	32.317	WV	MARSHALL	829	634	1361583
Q078626029	SOUTHEASTERN GUIDE DOGS INC	NOBLE ENERGY INC	03/06/2014	1.5	WV	MARSHALL	828	305	1360725
Q081864017	PATRICIA M VARGO	NOBLE ENERGY INC	03/07/2014	32.317	WV	MARSHALL	829	123	1361198
Q081864018	WILLIAM D WENDELL ET UX	NOBLE ENERGY INC	03/07/2014	32.317	WV	MARSHALL	829	115	1361193
Q081864021	MAVIS D KIME ET VIR	NOBLE ENERGY INC	03/07/2014	32.317	WV	MARSHALL	828	299	1360722
Q078626030	FRANCES O HALL	NOBLE ENERGY INC	03/13/2014	1.5	WV	MARSHALL	839	133	1366317
Q081864026	MARTHA L HUMMEL	NOBLE ENERGY INC	03/14/2014	32.317	WV	MARSHALL	829	151	1361208
Q081864022	ANNA I WILSON	NOBLE ENERGY INC	03/14/2014	32.317	WV	MARSHALL	828	301	1360724
Q081864020	WALTER C WILSON III ET UX	NOBLE ENERGY INC	03/14/2014	32.317	WV	MARSHALL	829	111	1361187
Q081864046	ESTHER L ALLEN ET VIR	NOBLE ENERGY INC	03/14/2014	32.317	WV	MARSHALL	836	469	1365393
Q081864034	JOHN A WILSON	NOBLE ENERGY INC	03/14/2014	32.317	WV	MARSHALL	832	283	1362655
Q081864019	KATHRYN B NOLTE	NOBLE ENERGY INC	03/18/2014	32.317	WV	MARSHALL	829	113	1361192
Q081864023	WONEDA D ROTH	NOBLE ENERGY INC	03/19/2014	32.317	WV	MARSHALL	829	107	1361185
Q081864040	MARY EILEEN PALMER ET VIR	NOBLE ENERGY INC	03/19/2014	32.317	WV	MARSHALL	832	289	1362659
Q081864045	PATRICIA F DANIELS ET VIR	NOBLE ENERGY INC	03/22/2014	32.317	WV	MARSHALL	836	40	1364934
Q081864036	ELIZABETH J WEEKLEY	NOBLE ENERGY INC	03/22/2014	32.317	WV	MARSHALL	832	293	1362662
Q078626026	BLASE JOSEPH ULCAK JR	NOBLE ENERGY INC	03/25/2014	16.545	WV	MARSHALL	829	127	1361200
Q081864024	KIMBERLY F TRAVIS ET VIR	NOBLE ENERGY INC	03/25/2014	32.317	WV	MARSHALL	829	101	1361182
Q081864027	H ROBERT PHILLIPS ET UX	NOBLE ENERGY INC	03/25/2014	32.317	WV	MARSHALL	831	62	1361953
Q081864025	DAVID W HALL	NOBLE ENERGY INC	03/26/2014	32.317	WV	MARSHALL	829	99	1361181
Q081864041	BARBARA L CARNA	NOBLE ENERGY INC	03/27/2014	32.317	WV	MARSHALL	833	454	1363474
Q081864028	JODI ANN WILSON	NOBLE ENERGY INC	03/31/2014	32.317	WV	MARSHALL	828	260	1360706
Q081864028	MADDOX ET VIR	NOBLE ENERGY INC	03/31/2014	32.317	WV	MARSHALL	833	576	1363592
Q081864034	MARJORIE J BEAVON	NOBLE ENERGY INC	04/11/2014	32.317	WV	MARSHALL	835	606	1364890
Q081864044	JERRY R BEAVON	NOBLE ENERGY INC	04/11/2014	32.317	WV	MARSHALL	829	165	1361213
Q078626031	JAMES B MIDCAP ET UX	NOBLE ENERGY INC	04/11/2014	0.5	WV	MARSHALL	829	165	1361213
Q081864031	WENDY JO WARSINSKY ET VIR	NOBLE ENERGY INC	04/18/2014	32.317	WV	MARSHALL	832	236	1362587
Q081864032	XIP LAYNE WILSON ET UX	NOBLE ENERGY INC	04/18/2014	32.317	WV	MARSHALL	832	234	1362585
Q081864029	MARVIN C WILSON ET UX	NOBLE ENERGY INC	04/18/2014	32.317	WV	MARSHALL	829	632	1361582
Q081864037	BERTHA LYNN KLUG ET VIR	NOBLE ENERGY INC	04/18/2014	32.317	WV	MARSHALL	832	285	1362657
Q082345002	JOSEPH M GRAY ET AL	NOBLE ENERGY INC	04/22/2014	0.715	WV	MARSHALL	829	16	1361107
Q083451000	HAROLD S YOUNG ET UX	NOBLE ENERGY INC	04/22/2014	0.92	WV	MARSHALL	828	252	1360702
Q078626033	LUCILLE E WINGROVE	NOBLE ENERGY INC	04/22/2014	1.5	WV	MARSHALL	829	45	1361113
Q078626032	KENNETH MORRIS ET UX	NOBLE ENERGY INC	04/22/2014	1.5	WV	MARSHALL	829	43	1361111
Q078626034	JANICE R CROOK ET VIR	NOBLE ENERGY INC	04/22/2014	1.5	WV	MARSHALL	831	60	1361952
Q078626035	NANCY L SNYDER	NOBLE ENERGY INC	04/22/2014	1.5	WV	MARSHALL	831	56	1361951
Q077358002	JUNE MORRIS	NOBLE ENERGY INC	04/22/2014	2	WV	MARSHALL	829	26	1361110
Q083768004	FERN A PICKENPAUGH	NOBLE ENERGY INC	04/25/2014	100.7	WV	MARSHALL	831	167	1362097
Q083768029	MARY E VOLTZ ET VIR	NOBLE ENERGY INC	04/25/2014	100.7	WV	MARSHALL	841	82	1367521
Q083768001	SANDRA WINSLOW	NOBLE ENERGY INC	04/25/2014	100.7	WV	MARSHALL	831	54	1361948
Q083768016	BETTY JUNE CAMPBELL ET VIR	NOBLE ENERGY INC	04/25/2014	100.7	WV	MARSHALL	834	632	1364223
Q083768025	JUDY ANN MCCHESEY ET VIR	NOBLE ENERGY INC	04/25/2014	100.7	WV	MARSHALL	840	291	1367198
Q083442000	AEP GENERATION RESOURCES INC ET AL	NOBLE ENERGY INC	04/30/2014	1078.9103	WV	MARSHALL	829	157	1361211
Q083768015	NORMAN L DERRROW ET UX	NOBLE ENERGY INC	04/30/2014	100.7	WV	MARSHALL	832	580	1362894
Q081864035	ETTA J WEEKLEY ET VIR	NOBLE ENERGY INC	05/02/2014	32.317	WV	MARSHALL	832	291	1362661
Q083768017	LAMOYNE S BAKER	NOBLE ENERGY INC	05/05/2014	100.7	WV	MARSHALL	834	634	1364224
Q083768019	MARTHA J JAMISON ET VIR	NOBLE ENERGY INC	05/06/2014	100.7	WV	MARSHALL	836	38	1364933
Q081864038	DEBORAH L LATHROP	NOBLE ENERGY INC	05/07/2014	32.317	WV	MARSHALL	832	287	1362658
Q083768002	KERMIT REED HUBBS ET UX	NOBLE ENERGY INC	05/08/2014	100.7	WV	MARSHALL	831	163	1362095
Q083768003	DOUGLAS G DERRROW	NOBLE ENERGY INC	05/08/2014	100.7	WV	MARSHALL	831	165	1362096
Q083768020	SARA BRADLEY	NOBLE ENERGY INC	05/09/2014	100.7	WV	MARSHALL	839	206	1366470
Q083768021	MARY S FOGLESONG ET VIR	NOBLE ENERGY INC	05/09/2014	100.7	WV	MARSHALL	837	352	1365788

Q083768030	ELLIOTT L THRASHER II ET UX	NOBLE ENERGY INC	05/09/2014	100.7	WV	MARSHALL	842	510	1368693
Q083768006	SONDRA SUE RULONG ET VIR	NOBLE ENERGY INC	05/13/2014	100.7	WV	MARSHALL	832	230	1362583
Q083768010	JAMES A KOLL	NOBLE ENERGY INC	05/13/2014	100.7	WV	MARSHALL	832	584	1362897
Q083768011	MICHAEL W DENROW	NOBLE ENERGY INC	05/13/2014	100.7	WV	MARSHALL	833	464	1363479
Q083768028	STEVEN S DENROW	NOBLE ENERGY INC	05/13/2014	100.7	WV	MARSHALL	842	24	1368129
Q083768005	JEAN GAUTHIER	NOBLE ENERGY INC	05/14/2014	100.7	WV	MARSHALL	832	228	1362581
Q081864064	MARY E LAMBERT ET VIR	NOBLE ENERGY INC	05/14/2014	32.317	WV	MARSHALL	851	202	1373171
Q083768009	PHYLLIS JEAN OSTRANDER	NOBLE ENERGY INC	05/15/2014	100.7	WV	MARSHALL	833	472	1363483
Q083768012	WILLIAM L WILLIAMS ET UX	NOBLE ENERGY INC	05/15/2014	100.7	WV	MARSHALL	833	574	1363591
Q081864039	EULA MARIE JOHNSON	NOBLE ENERGY INC	05/15/2014	32.317	WV	MARSHALL	832	582	1362896
Q081864042	EMMA LOU HIGGS	NOBLE ENERGY INC	05/21/2014	32.317	WV	MARSHALL	833	578	1363593
Q081864033	SHARON S WILSON	NOBLE ENERGY INC	05/21/2014	32.317	WV	MARSHALL	832	295	1362563
Q083768008	CHARLOTTE A MERSELS ET VIR	NOBLE ENERGY INC	05/22/2014	100.7	WV	MARSHALL	833	14	1363063
Q083768024	JIMMIE WILLIAMS ET UX	NOBLE ENERGY INC	05/22/2014	100.7	WV	MARSHALL	837	143	1365610
Q083768007	VERA SHIRLENE WORKMAN ET VIR	NOBLE ENERGY INC	05/28/2014	100.7	WV	MARSHALL	832	232	1362584
Q085150022	ROBERT ROSS ET UX	NOBLE ENERGY INC	05/29/2014	0.48	WV	MARSHALL	833	501	1363491
Q085150003	ERMA CARNIEY	NOBLE ENERGY INC	05/30/2014	0.48	WV	MARSHALL	839	496	1363490
Q085150001	MICKEY L WHITE ET UX	NOBLE ENERGY INC	06/03/2014	0.48	WV	MARSHALL	833	503	1363493
Q083768013	KELLY KERN	NOBLE ENERGY INC	06/04/2014	100.7	WV	MARSHALL	863	189	1379355
Q083768014	SHIRLEY G BUR	NOBLE ENERGY INC	06/04/2014	100.7	WV	MARSHALL	863	191	1379356
Q089768026	PENNY S SCHAUER ET VIR	NOBLE ENERGY INC	06/05/2014	100.7	WV	MARSHALL	842	7	1368122
Q083768027	TRACI L WILLIAMS	NOBLE ENERGY INC	06/05/2014	100.7	WV	MARSHALL	842	9	1368123
Q085150004	TWILA ADAMS	NOBLE ENERGY INC	06/12/2014	0.48	WV	MARSHALL	833	486	1363487
Q085150005	CONNIE CURRENT	NOBLE ENERGY INC	06/18/2014	0.48	WV	MARSHALL	834	127	1363790
Q083768018	HONLUS ADAIR STOLLAR	NOBLE ENERGY INC	06/25/2014	100.7	WV	MARSHALL	836	36	1364932
Q085232000	PAUL W BARRETT	NOBLE ENERGY INC	06/25/2014	0.16	WV	MARSHALL	838	469	1366019
Q085438001	JUNE MORRIS	NOBLE ENERGY INC	06/26/2014	0.379	WV	MARSHALL	863	187	1379354
Q085438005	JOHN PERSINGER ET UX	NOBLE ENERGY INC	06/26/2014	0.379	WV	MARSHALL	834	628	1364221
Q085438007	JAMES PERSINGER ET UX	NOBLE ENERGY INC	06/30/2014	0.379	WV	MARSHALL	834	630	1364222
Q085438002	EARNIE RUSSELL JOHNSON	NOBLE ENERGY INC	07/03/2014	0.379	WV	MARSHALL	835	602	1364887
Q085438003	ROONEY PERSINGER	NOBLE ENERGY INC	07/03/2014	0.379	WV	MARSHALL	835	504	1364888
Q085438008	KATHY WENDEL	NOBLE ENERGY INC	07/03/2014	0.379	WV	MARSHALL	834	626	1364220
Q085438004	RONALD R JOHNSON ET UX	NOBLE ENERGY INC	07/08/2014	0.379	WV	MARSHALL	835	612	1364892
Q081864047	FRANCIS GLEN WILSON BARBARA SUE SHANK	NOBLE ENERGY INC	07/08/2014	32.317	WV	MARSHALL	839	208	1366471
Q085438006	NICE ET VIR	NOBLE ENERGY INC	07/08/2014	0.379	WV	MARSHALL	835	592	1364885
Q085150006	NANCY BRUMBAUGH	NOBLE ENERGY INC	07/10/2014	0.48	WV	MARSHALL	836	451	1365386
Q085438009	WILLIAM MICHAEL ANDERSON ET UX	NOBLE ENERGY INC	07/10/2014	0.379	WV	MARSHALL	836	471	1365394
Q085438011	ROBERT PATRICK ANDERSON ET UX	NOBLE ENERGY INC	07/10/2014	0.379	WV	MARSHALL	839	225	1366498
Q085150008	NORA RICH WOOD	NOBLE ENERGY INC	07/13/2014	0.48	WV	MARSHALL	839	196	1366465
Q078626037	DEBRA ANN BUTCHER ET VIR	NOBLE ENERGY INC	07/17/2014	3.44	WV	MARSHALL	839	215	1366493
Q081864048	GARY F RIST	NOBLE ENERGY INC	07/17/2014	32.317	WV	MARSHALL	841	478	1367964
Q081864049	MARY E RIST	NOBLE ENERGY INC	07/17/2014	32.317	WV	MARSHALL	841	476	1367963
Q081864050	PENNY JO ADAMS	NOBLE ENERGY INC	07/17/2014	32.317	WV	MARSHALL	841	474	1367960
Q081864051	WILLIAM RIST	NOBLE ENERGY INC	07/17/2014	32.317	WV	MARSHALL	841	472	1367859
Q081864058	PATRICIA A LIBB ET VIR	NOBLE ENERGY INC	07/17/2014	32.317	WV	MARSHALL	844	462	1369580
Q085150012	BOBBIE SUE WOOD	NOBLE ENERGY INC	07/17/2014	0.48	WV	MARSHALL	839	204	1366469
Q081864060	JOHN DALE ANDERSON ET UX	NOBLE ENERGY INC	07/18/2014	32.317	WV	MARSHALL	843	238	1368858
Q085150007	CECIL A TRUAX	NOBLE ENERGY INC	07/18/2014	0.48	WV	MARSHALL	836	453	1365387
Q085438010	ERNEST BLAKE ET UX	NOBLE ENERGY INC	07/18/2014	0.379	WV	MARSHALL	839	222	1366497
Q085150013	NIKA WOOD	NOBLE ENERGY INC	07/18/2014	0.48	WV	MARSHALL	839	220	1366496
Q085150009	JOSEPH WOOD	NOBLE ENERGY INC	07/23/2014	0.48	WV	MARSHALL	839	198	1366466
Q085150011	SAM NICKI WOOD ET UX	NOBLE ENERGY INC	07/24/2014	0.48	WV	MARSHALL	839	202	1366468
Q081864052	MARY E TINGLER ET VIR	NOBLE ENERGY INC	07/25/2014	32.317	WV	MARSHALL	843	229	1368855
Q087970009	WILLIAM R DUNLAP	NOBLE ENERGY INC	07/25/2014	0.886	WV	MARSHALL	842	30	1368132
Q087970011	PATRICIA ANN BELCH ET VIR	NOBLE ENERGY INC	07/25/2014	0.886	WV	MARSHALL	841	78	1367519
Q087970012	LINDA DIANE BROWN ET VIR	NOBLE ENERGY INC	07/25/2014	0.886	WV	MARSHALL	841	468	1367956
Q085150010	CHARLES JAN WOOD	NOBLE ENERGY INC	07/30/2014	0.48	WV	MARSHALL	839	200	1366467
Q085150014	BILL LEANNE WOOD ET UX	NOBLE ENERGY INC	07/31/2014	0.48	WV	MARSHALL	841	360	1367825
Q087970007	DAVID E RIEL	NOBLE ENERGY INC	08/05/2014	0.886	WV	MARSHALL	842	40	1368137
Q087970008	ALICE E DUNLAP	NOBLE ENERGY INC	08/05/2014	0.886	WV	MARSHALL	842	36	1368135
Q087970010	LARRY W DUNLAP ET UX	NOBLE ENERGY INC	08/05/2014	0.886	WV	MARSHALL	842	32	1368133
Q087970014	DAVID E RIEL	NOBLE ENERGY INC	08/12/2014	0.94	WV	MARSHALL	842	5	1368121
Q087970015	ALICE E DUNLAP	NOBLE ENERGY INC	08/12/2014	0.94	WV	MARSHALL	842	26	1368130
Q087970013	LARRY W DUNLAP ET UX	NOBLE ENERGY INC	08/12/2014	0.94	WV	MARSHALL	841	25	1367463
Q086805002	MARY F BASSETT	NOBLE ENERGY INC	08/14/2014	135	WV	MARSHALL	841	362	1367826
Q086805004	CHARLES HOWARD BASSETT JR ET UX	NOBLE ENERGY INC	08/14/2014	135	WV	MARSHALL	842	1	1368119
Q086805011	BARBARA KAY EWING ET VIR	NOBLE ENERGY INC	08/14/2014	135	WV	MARSHALL	842	34	1368134
Q087970016	LINDA DIANE BROWN ET VIR	NOBLE ENERGY INC	08/15/2014	0.94	WV	MARSHALL	841	470	1367958
Q087970017	PATRICIA ANN BELCH ET VIR	NOBLE ENERGY INC	08/15/2014	0.94	WV	MARSHALL	841	464	1367952
Q087970018	WILLIAM R DUNLAP	NOBLE ENERGY INC	08/15/2014	0.94	WV	MARSHALL	848	214	1371478
Q085150019	THOMAS BETH WOOD ET UX	NOBLE ENERGY INC	08/15/2014	0.48	WV	MARSHALL	844	464	1369582
Q086805001	ROGER B ROSE ET UX	NOBLE ENERGY INC	08/19/2014	135	WV	MARSHALL	841	358	1367824

Q086805003	RUTH ANN WALLACE ET VIR	NOBLE ENERGY INC	08/19/2014	135	WV	MARSHALL	841	364	1367827
Q086805006	ROBERT B THOMAS ET UX	NOBLE ENERGY INC	08/19/2014	135	WV	MARSHALL	842	28	1368131
Q086805010	JEAN C THOMAS	NOBLE ENERGY INC	08/20/2014	135	WV	MARSHALL	841	449	1367942
Q086805005	RUTH E BASSETT MEADOWS ET VIR	NOBLE ENERGY INC	08/20/2014	135	WV	MARSHALL	842	38	1368136
Q086805007	ELIZABETH A STRAUSBAUGH ET VIR	NOBLE ENERGY INC	08/20/2014	135	WV	MARSHALL	841	370	1367833
Q086805009	JANET BLANKENSHIP ET VIR	NOBLE ENERGY INC	08/20/2014	135	WV	MARSHALL	841	368	1367830
Q083768031	JACK M FOREMAN	NOBLE ENERGY INC	08/21/2014	100.7	WV	MARSHALL	844	131	1368935
Q081864053	JESSE A WILSON	NOBLE ENERGY INC	08/23/2014	32.317	WV	MARSHALL	842	47	1368140
Q081864055	TROY T WILSON	NOBLE ENERGY INC	08/23/2014	32.317	WV	MARSHALL	842	51	1368144
Q081864056	ELLA J MCCARDLE ET VIR	NOBLE ENERGY INC	08/23/2014	32.317	WV	MARSHALL	842	55	1368146
Q081864057	KIMBERLY S PIERSON ET VIR	NOBLE ENERGY INC	08/23/2014	32.317	WV	MARSHALL	842	53	1368120
Q081864059	BLAINE M SCHON ET UX	NOBLE ENERGY INC	08/26/2014	32.317	WV	MARSHALL	843	236	1368966
Q085150015	RONALD L NESTOR	NOBLE ENERGY INC	08/29/2014	0.48	WV	MARSHALL	842	347	1368586
Q085150016	KAREN L RIDENOUR ET UX	NOBLE ENERGY INC	08/29/2014	0.48	WV	MARSHALL	842	349	1368587
Q086805008	CYNTHIA P HOPKINS REVOCABLE TRUST UTA	NOBLE ENERGY INC	09/03/2014	135	WV	MARSHALL	841	366	1367828
Q081864054	APRIL D HOGAN ET VIR	NOBLE ENERGY INC	09/03/2014	32.317	WV	MARSHALL	842	49	1368143
Q085150017	CRYSTAL KOSKY ET VIR	NOBLE ENERGY INC	09/05/2014	0.48	WV	MARSHALL	842	351	1368588
Q087970006	LARRY W DUNLAP ET UX WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	NOBLE ENERGY INC	09/08/2014	1.826	WV	MARSHALL	846	17	1370410
Q088417001	DAVID E RIEL	NOBLE ENERGY INC	09/09/2014	23.53	WV	MARSHALL	845	392	1370109
Q087970001	ALICE E DUNLAP	NOBLE ENERGY INC	09/09/2014	1.826	WV	MARSHALL	842	514	1368695
Q087970003	PEGGIANN E MOGHER ET VIR	NOBLE ENERGY INC	09/09/2014	1.826	WV	MARSHALL	842	486	1368686
Q074648004	LOIS J LAND ET VIR	NOBLE ENERGY INC	09/10/2014	24.6	WV	MARSHALL	842	508	1368692
Q074648003	JAMES N OLIVER	NOBLE ENERGY INC	09/10/2014	24.6	WV	MARSHALL	842	500	1368688
Q074648005	JOHN N OLIVER ET UX	NOBLE ENERGY INC	09/10/2014	24.6	WV	MARSHALL	842	502	1368689
Q085150018	TERRY GRAY	NOBLE ENERGY INC	09/10/2014	0.48	WV	MARSHALL	842	458	1368687
Q087970002	PATRICIA ANN BELCH ET VIR	NOBLE ENERGY INC	09/11/2014	0.48	WV	MARSHALL	842	361	1368594
Q087970004	WILLIAM R DUNLAP	NOBLE ENERGY INC	09/12/2014	1.826	WV	MARSHALL	842	504	1368690
Q087970005	LINDA DIANE BROWN ET VIR	NOBLE ENERGY INC	09/12/2014	1.826	WV	MARSHALL	844	530	1369702
Q083768034	JULIE SPRINGWATER	NOBLE ENERGY INC	09/17/2014	100.7	WV	MARSHALL	850	491	1372583
Q083768036	JACK M FOREMAN	NOBLE ENERGY INC	09/18/2014	100.7	WV	MARSHALL	850	509	1372589
Q083768039	MARY ELIZABETH VOLTZ ET VIR	NOBLE ENERGY INC	09/24/2014	100.7	WV	MARSHALL	850	648	1372811
Q083768033	REVA J ICARD ET VIR	NOBLE ENERGY INC	09/24/2014	100.7	WV	MARSHALL	844	526	1369700
Q081864062	DINA A VOLTZ ET VIR	NOBLE ENERGY INC	09/27/2014	32.317	WV	MARSHALL	850	497	1372586
Q081864061	C RICHARD WILSON	NOBLE ENERGY INC	10/07/2014	32.317	WV	MARSHALL	850	493	1372584
Q083768043	ROY JOSEPH LEACH	NOBLE ENERGY INC	10/10/2014	100.7	WV	MARSHALL	859	487	1377698
Q074648006	CRISTI LANAGHAN ET VIR	NOBLE ENERGY INC	10/14/2014	24.6	WV	MARSHALL	846	327	1370567
Q074648007	JANET MILLER ET VIR	NOBLE ENERGY INC	10/14/2014	24.6	WV	MARSHALL	846	325	1370566
Q074648008	JOAN KIDD ET VIR	NOBLE ENERGY INC	10/14/2014	24.6	WV	MARSHALL	846	329	1370570
Q074648009	KENNETH E OLIVER ET UX LAWRENCE K OLIVER II ET UX	NOBLE ENERGY INC	10/14/2014	24.6	WV	MARSHALL	846	323	1370565
Q074648011	DOUGLAS E MILLER	NOBLE ENERGY INC	10/16/2014	100.7	WV	MARSHALL	849	645	1372129
Q083768032	JULIE SPRINGWATER	NOBLE ENERGY INC	11/07/2014	100.7	WV	MARSHALL	850	499	1372587
Q083768041	JACK M FOREMAN	NOBLE ENERGY INC	11/08/2014	100.7	WV	MARSHALL	854	178	1375607
Q081864063	SUSAN J BURK ET VIR	NOBLE ENERGY INC	11/19/2014	32.317	WV	MARSHALL	851	204	1373172
Q074648013	NICHOLAS A OLIVER ET UX	NOBLE ENERGY INC	11/20/2014	24.6	WV	MARSHALL	850	153	1372250
Q074648015	DEVIN J OLIVER	NOBLE ENERGY INC	11/20/2014	24.6	WV	MARSHALL	851	426	1373450
Q074648010	CHAD I OLIVER	NOBLE ENERGY INC	11/20/2014	24.6	WV	MARSHALL	849	649	1372132
Q074648012	WILLIAM N KIDD	NOBLE ENERGY INC	11/25/2014	24.6	WV	MARSHALL	850	155	1372251
Q074648014	JARED K KIDD	NOBLE ENERGY INC	11/25/2014	24.6	WV	MARSHALL	851	424	1373449
Q090332001	WILLIAM E MILLER ET UX	NOBLE ENERGY INC	12/09/2014	35.45	WV	MARSHALL	858	256	1376988
Q083768040	SCOTT C HARRIS ET UX	NOBLE ENERGY INC	12/12/2014	100.7	WV	MARSHALL	851	394	1373422
Q083768037	ANITA M MASON	NOBLE ENERGY INC	12/18/2014	100.7	WV	MARSHALL	851	5	1372816
Q083768038	BONNIE H GRISSELL ET VIR	NOBLE ENERGY INC	12/18/2014	100.7	WV	MARSHALL	850	646	1372810
Q091220005	GEORGE EARNEST HENRY JODI ANN WILSON-	NOBLE ENERGY INC	01/09/2015	1.269	WV	MARSHALL	863	214	1379364
Q081864065	MADDOX ET VIR	NOBLE ENERGY INC	01/09/2015	32.317	WV	MARSHALL	863	223	1379368
Q089614000	JUNE M MORRIS	NOBLE ENERGY INC	01/20/2015	0.322	WV	MARSHALL	852	947	1374048
Q091220004	GEORGE E HENRY	NOBLE ENERGY INC	01/20/2015	1.269	WV	MARSHALL	863	211	1379363
Q091220002	CONNIE S HENRY	NOBLE ENERGY INC	01/22/2015	1.269	WV	MARSHALL	863	217	1379365
Q091220001	LIONEL E HENRY JR	NOBLE ENERGY INC	01/23/2015	1.269	WV	MARSHALL	863	220	1379366
Q091220003	PAULA ANN HENRY	NOBLE ENERGY INC	01/23/2015	1.269	WV	MARSHALL	863	208	1379362
Q091220006	BONNIE L WOOD	NOBLE ENERGY INC	01/23/2015	1.269	WV	MARSHALL	865	571	1380536
Q090307000	DAVID A BEYSER ET UX	NOBLE ENERGY INC	01/28/2015	0.2	WV	MARSHALL	858	260	1376990
Q090625000	CRYSTAL B DARBAH	NOBLE ENERGY INC	02/03/2015	1.726	WV	MARSHALL	858	252	1376986
Q090800000	STEVEN LLOYD ET UX	NOBLE ENERGY INC	02/03/2015	0.85	WV	MARSHALL	853	314	1374588
Q087970019	JOSHUA DAVID HARTLEY	NOBLE ENERGY INC	02/05/2015	0.886	WV	MARSHALL	853	318	1374602
Q091280000	BARBARA ANDERSON	NOBLE ENERGY INC	02/05/2015	0.48	WV	MARSHALL	860	498	1378209
Q090391011	MARTHA FRANCES ULCAK	NOBLE ENERGY INC	02/10/2015	1.68	WV	MARSHALL	858	315	1377177
Q090391008	NANCY L SNYDER	NOBLE ENERGY INC	02/10/2015	1.68	WV	MARSHALL	858	317	1377182
Q090391003	KENNETH MORRIS ET UX	NOBLE ENERGY INC	02/10/2015	1.68	WV	MARSHALL	857	529	1376586
Q090391007	JANICE R CROOK ET VIR	NOBLE ENERGY INC	02/10/2015	1.68	WV	MARSHALL	858	319	1377184
Q090391004	JUNE MORRIS	NOBLE ENERGY INC	02/10/2015	1.68	WV	MARSHALL	857	531	1376588

Q090391002	SOUTHWESTERN GUIDE DOGS INC	NOBLE ENERGY INC	02/10/2015	1.68	WV	MARSHALL	858	265	1376994
Q090391005	COURTNEY D HALL	NOBLE ENERGY INC	02/10/2015	1.68	WV	MARSHALL	857	595	1376589
Q085150021	DONNA S DIMARCO ET VIR	NOBLE ENERGY INC	02/12/2015	0.48	WV	MARSHALL	859	502	1377708
Q085150020	ANNA LEE HAKR	NOBLE ENERGY INC	02/12/2015	0.48	WV	MARSHALL	859	498	1377706
Q085150022	CLARENCE BURGE ET UX	NOBLE ENERGY INC	02/12/2015	0.48	WV	MARSHALL	860	504	1378212
Q083768044	LESLIE ANN BLYTHE ET VIR	NOBLE ENERGY INC	02/14/2015	100.7	WV	MARSHALL	860	535	1378222
Q083768049	LARRY DEAN MCWHORTER ET AL	NOBLE ENERGY INC	02/14/2015	100.7	WV	MARSHALL	860	529	1378220
Q091091000	RICHARD HYER ET UX	NOBLE ENERGY INC	02/18/2015	2.28	WV	MARSHALL	859	500	1377707
Q090391001	H JAY ULBRICH	NOBLE ENERGY INC	02/19/2015	1.68	WV	MARSHALL	858	258	1376989
Q090391006	MARILYN ULBRICH CHALMERS ET VIR	NOBLE ENERGY INC	02/19/2015	1.68	WV	MARSHALL	858	254	1376987
Q090391010	BLYE ULBRICH JENSCHKE ET VIR	NOBLE ENERGY INC	02/19/2015	1.68	WV	MARSHALL	858	323	1377188
Q090391013	BRUCE E ULBRICH ET UX	NOBLE ENERGY INC	02/19/2015	1.68	WV	MARSHALL	860	501	1378211
Q090391012	ROBERT LEE SMITH ET UX	NOBLE ENERGY INC	02/19/2015	1.68	WV	MARSHALL	859	504	1377709
Q090391009	JUSTIN SMITH	NOBLE ENERGY INC	02/19/2015	1.68	WV	MARSHALL	858	321	1377187
Q083768042	JACQUELYN JOHNSON ET VIR	NOBLE ENERGY INC	02/26/2015	100.7	WV	MARSHALL	860	523	1378218
Q090332003	PATTY BEINSFORD ET VIR	NOBLE ENERGY INC	02/27/2015	70.45	WV	MARSHALL	860	555	1378228
Q090332002	LORETTA JEAN RIGGLE ET VIR	NOBLE ENERGY INC	02/27/2015	70.45	WV	MARSHALL	860	538	1378223
Q090332007	ROBERT RANDOLPH WOODBURN ET UX	NOBLE ENERGY INC	02/27/2015	70.45	WV	MARSHALL	860	568	1378234
Q083768050	LEROY MILLER	NOBLE ENERGY INC	03/04/2015	100.7	WV	MARSHALL	860	532	1378221
Q083768047	REBECCA L CULLEN ET VIR	NOBLE ENERGY INC	03/07/2015	100.7	WV	MARSHALL	860	558	1378229
Q083768048	FRANCES E RUTLEDGE ET VIR	NOBLE ENERGY INC	03/07/2015	100.7	WV	MARSHALL	860	513	1378215
Q083768052	STEVEN POND ET UX	NOBLE ENERGY INC	03/08/2015	100.7	WV	MARSHALL	860	574	1378236
Q083768046	GREGORY S MILLER ET UX	NOBLE ENERGY INC	03/12/2015	100.7	WV	MARSHALL	860	517	1378216
Q083768055	HEATHER D MALO ET VIR	NOBLE ENERGY INC	03/12/2015	100.7	WV	MARSHALL	866	336	1380976
Q083768064	TIMOTHY HOWARD MANCHEGO	NOBLE ENERGY INC	03/12/2015	100.7	WV	MARSHALL	873	104	1386926
Q083768094	MURIEL ANNE MILLER ET VIR	NOBLE ENERGY INC	03/14/2015	168	WV	MARSHALL	860	541	1378224
Q083768045	MURIEL ANNE MILLER ET VIR	NOBLE ENERGY INC	03/14/2015	100.7	WV	MARSHALL	860	545	1378225
Q083768053	IAN KIPP HAGEMANN	NOBLE ENERGY INC	03/16/2015	100.7	WV	MARSHALL	860	520	1378217
Q091288001	PATRICIA Y DARRAH	NOBLE ENERGY INC	03/17/2015	3.081	WV	MARSHALL	860	549	1378226
Q091288004	STANLEY DARRAH ET UX	NOBLE ENERGY INC	03/17/2015	3.081	WV	MARSHALL	860	571	1378235
Q091288006	RICHARD DARRAH	NOBLE ENERGY INC	03/17/2015	3.081	WV	MARSHALL	860	562	1378231
Q083768084	CLARK D CHASE ET UX	NOBLE ENERGY INC	03/19/2015	100.7	WV	MARSHALL	878	357	1390991
Q091593000	PATRICIA Y DARRAH	NOBLE ENERGY INC	03/23/2015	2.37	WV	MARSHALL	860	552	1378227
Q091288002	DAVID A TAKACH ET UX	NOBLE ENERGY INC	03/24/2015	3.081	WV	MARSHALL	860	507	1378213
Q091288005	DONNA L SIDIROPOULIS ET VIR	NOBLE ENERGY INC	03/24/2015	3.081	WV	MARSHALL	860	510	1378214
Q083768093	DAVID LEE EVANS JR ET UX	NOBLE ENERGY INC	03/25/2015	168	WV	MARSHALL	864	180	1379920
Q083768051	DAVID LEE EVANS JR ET UX	NOBLE ENERGY INC	03/25/2015	100.7	WV	MARSHALL	864	187	1379923
Q091288003	RICHARD MORGAN	NOBLE ENERGY INC	03/31/2015	3.081	WV	MARSHALL	860	565	1378232
Q091664000	JOSEPH H JACKSON JR ET UX	NOBLE ENERGY INC	04/04/2015	0.5	WV	MARSHALL	860	526	1378219
Q07872007	TRACY M KESTERSON	NOBLE ENERGY INC	04/10/2015	2.198	WV	MARSHALL	860	579	1378238
Q091524003	TRACY M KESTERSON	NOBLE ENERGY INC	04/10/2015	2	WV	MARSHALL	860	577	1378237
Q091524001	DEBRA HARTLEY ET VIR	NOBLE ENERGY INC	04/14/2015	2	WV	MARSHALL	862	251	1378748
Q091524002	MATTHEW V CONNER ET UX	NOBLE ENERGY INC	04/14/2015	2	WV	MARSHALL	862	259	1378749
Q091524004	ANGELA CRAWFORD ET VIR	NOBLE ENERGY INC	04/14/2015	2	WV	MARSHALL	862	255	1378750
Q091524005	IMALLEE LLOYD ET VIR	NOBLE ENERGY INC	04/14/2015	2	WV	MARSHALL	862	257	1378751
Q083768054	MELISSA MILLER GIBSON ET VIR	NOBLE ENERGY INC	04/22/2015	100.7	WV	MARSHALL	869	100	1382833
Q091576000	WOODLAND HILL CHURCH OF GOD	NOBLE ENERGY INC	04/25/2015	0.38	WV	MARSHALL	864	183	1379921
Q091633000	ROBERT W RIGGENBACH JR ET UX	NOBLE ENERGY INC	04/27/2015	14.222	WV	MARSHALL	864	185	1379922
Q092567000	RAYMOND K MILLER ET UX	NOBLE ENERGY INC	05/05/2015	1.722	WV	MARSHALL	866	340	1380977
Q091960000	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	NOBLE ENERGY INC	05/07/2015	134.14	WV	MARSHALL	865	558	1380535
Q083768098	RODNEY F PETERSON	NOBLE ENERGY INC	05/11/2015	168	WV	MARSHALL	870	380	1384207
Q083768056	RODNEY F PETERSON	NOBLE ENERGY INC	05/11/2015	100.7	WV	MARSHALL	866	342	1380978
Q083768062	HAROLD B CROW ET UX	NOBLE ENERGY INC	05/19/2015	100.7	WV	MARSHALL	869	102	1382834
Q083768059	RICHARD S MULLEN ET UX	NOBLE ENERGY INC	05/19/2015	100.7	WV	MARSHALL	869	98	1382832
Q083768063	BRIAN K CROW	NOBLE ENERGY INC	05/21/2015	100.7	WV	MARSHALL	869	104	1382835
Q092215000	DAVID D DANIELS ET UX	NOBLE ENERGY INC	05/22/2015	1.369	WV	MARSHALL	869	354	1383138
Q083768060	JAMES B CROW ET UX	NOBLE ENERGY INC	05/22/2015	100.7	WV	MARSHALL	869	108	1382837
Q083768061	GREGORY S CROW	NOBLE ENERGY INC	05/22/2015	100.7	WV	MARSHALL	869	106	1382836
Q083768066	DAVID C MULLEN ET UX	NOBLE ENERGY INC	05/25/2015	100.7	WV	MARSHALL	869	358	1383142
Q083768057	PRISCILLA ANN MILLER HADEN	NOBLE ENERGY INC	05/27/2015	100.7	WV	MARSHALL	873	545	1387040
Q090391014	SHRINERS HOSPITALS FOR CHILDREN	NOBLE ENERGY INC	05/27/2015	1.68	WV	MARSHALL	878	352	1390928
Q083768058	DANIEL O HOBBS ET UX	NOBLE ENERGY INC	05/29/2015	100.7	WV	MARSHALL	873	543	1387038
Q083768065	KATHLEEN HOBBS YOUNG	NOBLE ENERGY INC	05/30/2015	100.7	WV	MARSHALL	869	356	1383141
Q083768070	JOYCE A FIORILLI ET VIR	NOBLE ENERGY INC	06/15/2015	100.7	WV	MARSHALL	873	114	1386336
Q083768071	BARBARA L VOGLER ET VIR	NOBLE ENERGY INC	06/15/2015	100.7	WV	MARSHALL	873	112	1386334

Q083768095	KATHLEEN A SULLIVAN ET VIR	NOBLE ENERGY INC	06/16/2015	168	WV	MARSHALL	870	364	1384194
Q083768096	FRANCIS F FISCHER ET UX	NOBLE ENERGY INC	06/16/2015	168	WV	MARSHALL	870	366	1384195
Q083768097	DENNIS FISCHER ET UX	NOBLE ENERGY INC	06/16/2015	168	WV	MARSHALL	870	358	1384191
Q083768103	NORA C POWDERLY	NOBLE ENERGY INC	06/16/2015	168	WV	MARSHALL	873	83	1386310
Q083178000	CATHERINE P RINE	NOBLE ENERGY INC	06/16/2015	0.13	WV	MARSHALL	871	490	1384784
Q083768067	DENNIS FISCHER ET UX	NOBLE ENERGY INC	06/16/2015	100.7	WV	MARSHALL	870	360	1384192
Q083768068	KATHLEEN A SULLIVAN ET VIR	NOBLE ENERGY INC	06/16/2015	100.7	WV	MARSHALL	870	362	1384193
Q089768069	FRANCIS F FISCHER ET UX	NOBLE ENERGY INC	06/16/2015	100.7	WV	MARSHALL	871	494	1384787
Q083768076	NORA C POWDERLY	NOBLE ENERGY INC	06/16/2015	100.7	WV	MARSHALL	873	89	1386313
Q083768109	ANTHONY T POWDERLY ET UX	NOBLE ENERGY INC	06/20/2015	168	WV	MARSHALL	878	368	1390936
Q083768080	ANTHONY T POWDERLY ET UX	NOBLE ENERGY INC	06/20/2015	100.7	WV	MARSHALL	878	363	1390933
Q083768104	EUGENIA A KERR	NOBLE ENERGY INC	06/24/2015	168	WV	MARSHALL	873	120	1386343
Q083768105	MARY F WEILAND	NOBLE ENERGY INC	06/24/2015	168	WV	MARSHALL	873	126	1386350
Q083768073	EUGENIA A KERR	NOBLE ENERGY INC	06/24/2015	100.7	WV	MARSHALL	873	118	1386341
Q083768078	MARY F WEILAND	NOBLE ENERGY INC	06/24/2015	100.7	WV	MARSHALL	873	124	1386348
Q083768100	HARRIET C HERMAN ET VIR	NOBLE ENERGY INC	06/29/2015	168	WV	MARSHALL	873	122	1386345
Q089768072	HARRIET C HERMAN ET VIR	NOBLE ENERGY INC	06/29/2015	100.7	WV	MARSHALL	873	116	1386338
Q083768102	EDWARD P POWDERLY ET UX	NOBLE ENERGY INC	06/30/2015	168	WV	MARSHALL	873	85	1386311
Q083768075	EDWARD P POWDERLY ET UX	NOBLE ENERGY INC	06/30/2015	100.7	WV	MARSHALL	873	91	1386316
Q083768106	JANE H BARNSTEINER ET UX	NOBLE ENERGY INC	07/06/2015	168	WV	MARSHALL	873	132	1386356
Q083768074	JANE H BARNSTEINER ET UX	NOBLE ENERGY INC	07/06/2015	100.7	WV	MARSHALL	873	93	1386318
Q095637000	NORMAN GALE JOHNSON ET UX	NOBLE ENERGY INC	07/07/2015	1.255	WV	MARSHALL	878	370	1390937
Q095122000	GRANTVIEW-DODLIN PUBLIC SCHOOL SERVICE DISTRICT	NOBLE ENERGY INC	07/08/2015	0.23	WV	MARSHALL	873	107	1386329
Q083768099	EILEEN T POWDERLY	NOBLE ENERGY INC	07/10/2015	100.7	WV	MARSHALL	873	81	1386309
Q083768077	EILEEN T POWDERLY	NOBLE ENERGY INC	07/10/2015	100.7	WV	MARSHALL	873	87	1386312
Q083768101	JAMES E HERMAN	NOBLE ENERGY INC	07/18/2015	168	WV	MARSHALL	873	128	1386351
Q083768079	JAMES E HERMAN	NOBLE ENERGY INC	07/18/2015	100.7	WV	MARSHALL	873	128	1386351
Q091524006	WILLIAM R LEVASSEUR JR	NOBLE ENERGY INC	07/22/2015	2	WV	MARSHALL	873	101	1386323
Q083768108	JAMES T SCHOLL	NOBLE ENERGY INC	07/24/2015	168	WV	MARSHALL	878	365	1390934
Q083768110	SHARON L SCHOLL	NOBLE ENERGY INC	07/24/2015	168	WV	MARSHALL	878	36	1390932
Q083768081	SHARON L SCHOLL	NOBLE ENERGY INC	07/24/2015	100.7	WV	MARSHALL	878	379	1390940
Q083768082	JAMES T SCHOLL	NOBLE ENERGY INC	07/24/2015	100.7	WV	MARSHALL	878	376	1390939
Q083768107	ANNE GALBALLY ET VIR	NOBLE ENERGY INC	07/28/2015	168	WV	MARSHALL	878	373	1390938
Q083768083	ANNE GALBALLY ET VIR	NOBLE ENERGY INC	07/28/2015	100.7	WV	MARSHALL	878	354	1390930
Q091524007	TOM KROL ET UX	NOBLE ENERGY INC	07/30/2015	2	WV	MARSHALL	873	98	1386321
Q083768114	MARY S SCHOLL	NOBLE ENERGY INC	07/31/2015	168	WV	MARSHALL	890	572	1401944
Q083768116	SUSANNE S QUARTERMAN CHRISTINA BOARDWINE ET VIR	NOBLE ENERGY INC	07/31/2015	168	WV	MARSHALL	890	606	1401960
Q091524008	ET VIR	NOBLE ENERGY INC	07/31/2015	2	WV	MARSHALL	873	95	1386320
Q083768088	MARY S SCHOLL	NOBLE ENERGY INC	07/31/2015	100.7	WV	MARSHALL	890	569	1401943
Q083768090	SUSANNE S QUARTERMAN	NOBLE ENERGY INC	07/31/2015	100.7	WV	MARSHALL	890	560	1401937
Q083768115	BRIAN P POWDERLY ET UX	NOBLE ENERGY INC	08/24/2015	168	WV	MARSHALL	890	566	1401941
Q083768089	BRIAN P POWDERLY ET UX	NOBLE ENERGY INC	08/24/2015	100.7	WV	MARSHALL	890	563	1401940
Q083768111	BRIDGET A POWDERLY	NOBLE ENERGY INC	09/03/2015	168	WV	MARSHALL	881	26	1392439
Q083768085	BRIDGET A POWDERLY	NOBLE ENERGY INC	09/03/2015	100.7	WV	MARSHALL	881	29	1392440
Q083768112	NORA C POWDERLY	NOBLE ENERGY INC	09/08/2015	168	WV	MARSHALL	881	32	1392441
Q083768086	NORA C POWDERLY	NOBLE ENERGY INC	09/08/2015	100.7	WV	MARSHALL	881	23	1392438
Q096159000	MARTHA F POWELL	NOBLE ENERGY INC	09/28/2015	1.435	WV	MARSHALL	881	21	1392437
Q097423000	ROBERT L HENRY JR ET AL	NOBLE ENERGY INC	10/04/2015	0.906	WV	MARSHALL	890	613	1401962
Q083768113	KEVIN M POWDERLY	NOBLE ENERGY INC	10/08/2015	168	WV	MARSHALL	890	515	1401925
Q083768087	KEVIN M POWDERLY	NOBLE ENERGY INC	10/08/2015	100.7	WV	MARSHALL	890	518	1401927
Q097976006	VICTORIA A PAKROVSKY ET VIR	NOBLE ENERGY INC	10/31/2015	11.4215	WV	MARSHALL	890	599	1401958
Q097976005	MARJORIE B KIDD ET VIR	NOBLE ENERGY INC	11/05/2015	11.4215	WV	MARSHALL	890	596	1401957
Q097976001	SARA B ANDERSON ET VIR	NOBLE ENERGY INC	11/17/2015	11.4215	WV	MARSHALL	890	310	1401663
Q097976004	LORNA MARIE LEW	NOBLE ENERGY INC	12/09/2015	11.4215	WV	MARSHALL	890	602	1401959
Q097976007	CHARLES EDWIN BLUE IV	NOBLE ENERGY INC	02/12/2016	11.4215	WV	MARSHALL	890	316	1401665
Q074648001	WILLIAM N ROUPE ET UX	NOBLE ENERGY INC	02/21/2013	71.051	WV	MARSHALL	792	603	1341693
Q074648001	WILLIAM N ROUPE ET UX	NOBLE ENERGY INC	02/21/2013	71.051	WV	MARSHALL	792	603	1341693
Q078626003	JUNE MORRIS	NOBLE ENERGY INC	08/01/2013	12.485	WV	MARSHALL	808	301	1351576
Q078626003	JUNE MORRIS	NOBLE ENERGY INC	08/01/2013	12.485	WV	MARSHALL	808	301	1351576
Q078626004	NANCY L SNYDER	NOBLE ENERGY INC	08/14/2013	14.485	WV	MARSHALL	808	309	1351581
Q078626004	NANCY L SNYDER	NOBLE ENERGY INC	08/14/2013	14.485	WV	MARSHALL	808	309	1351581
Q078626002	KENNETH R MORRIS ET UX	NOBLE ENERGY INC	08/16/2013	14.485	WV	MARSHALL	808	303	1351577
Q078626002	KENNETH R MORRIS ET UX	NOBLE ENERGY INC	08/16/2013	14.485	WV	MARSHALL	808	303	1351577
Q078626005	JANICE R CROOK ET VIR	NOBLE ENERGY INC	08/20/2013	14.485	WV	MARSHALL	808	305	1351579
Q078626005	JANICE R CROOK ET VIR	NOBLE ENERGY INC	08/20/2013	14.485	WV	MARSHALL	808	305	1351579
Q088417002	WANDA MAE BLAKE	NOBLE ENERGY INC	02/03/2015	26.062	WV	MARSHALL	583	316	1374601
Q088417003	JOAN JANE PARSONS ET VIR	NOBLE ENERGY INC	02/03/2015	26.062	WV	MARSHALL	859	506	1377710
Q088417004	IDA L CAMPBELL	NOBLE ENERGY INC	02/03/2015	26.062	WV	MARSHALL	859	496	1377704
Q088417002	WANDA MAE BLAKE	NOBLE ENERGY INC	02/03/2015	26.062	WV	MARSHALL	583	316	1374601

Q088417003	JOAN JANE PARSONS ET VIR	NOBLE ENERGY INC	02/03/2015	26.062	WV	MARSHALL	859	506	1377710
Q088417004	IDA L CAMPBELL	NOBLE ENERGY INC	02/03/2015	26.062	WV	MARSHALL	859	496	1377704
Q083768091	HARRIET C VENTURA ET VIR	NOBLE ENERGY INC	02/18/2016	268.7	WV	MARSHALL	894	541	1403682
Q083768091	HARRIET C VENTURA ET VIR	NOBLE ENERGY INC	02/18/2016	268.7	WV	MARSHALL	894	541	1403682
Q095360000	CSX TRANSPORTATION INC	NOBLE ENERGY INC	08/05/2015	28.574	WV	MARSHALL	879	251	1391401
CVX918645	GENEVA A BASSETT SANCHEZ	CHEVRON U.S.A., INC.	06/20/2012	133.601	WV	MARSHALL	814	399	1354110
CVX920045	GENEVA BASSETT SANCHEZ	CHEVRON U.S.A., INC.	10/26/2013	1.399	WV	MARSHALL	813	593	1353969
CVX947094	LOIS ZWOLENSKY-SFX	CHEVRON U.S.A., INC.	11/02/2016	98.819	WV	MARSHALL	899	476	1411786
CVX946510	NICOLE GATTS-SFX	CHEVRON U.S.A., INC.	11/02/2016	98.819	WV	MARSHALL	899	470	1411784
CVX936053	LLOYD C. ARNOLD ET UX	CHEVRON U.S.A., INC.	10/14/2014	317.467	WV	MARSHALL	864	39	1379825
CVX936589	LLOYD C. ARNOLD	CHEVRON U.S.A., INC.	11/13/2014	6.74	WV	MARSHALL	863	511	1379748
CVX936591	CHARLES W. MILLER ET UX	CHEVRON U.S.A., INC.	11/19/2014	6.74	WV	MARSHALL	861	595	1378411
CVX939752	LLOYD C. ARNOLD ET UX	CHEVRON U.S.A., INC.	02/19/2015	18.854	WV	MARSHALL	915	582	1422075

Fee Number	Original Grantor	Original Grantee	Effective Date	Mineral Fee Gross Acres	State	County	Book	Page	Inst. No.
Q097217000	MILLER, ADAM & MARY LOUICKS, CHARLES H; KEISTER, FENTON O, JR, ET AL	CONSOLIDATION COAL COMPANY	01/05/1956	3.99	WV	MARSHALL	311	333	
624061	GATTS, ALICE	CONSOLIDATION COAL COMPANY	08/17/1950	2817.784	WV	MARSHALL	273	326	
624074	GATTS, ALICE	CONSOLIDATION COAL COMPANY	01/09/1952	76.28	WV	MARSHALL	282	394	
624083	GATTS, LLOYD Q & MARY WOLFE	CONSOLIDATION COAL COMPANY	01/01/1953	132.2	WV	MARSHALL	290	94	
624081	COX, HANNAH O & J FRANK	CONSOLIDATION COAL COMPANY	01/01/1953	36.96	WV	MARSHALL	290	110	
624080	GATTS, ELIZABETH R J & HARLEY	CONSOLIDATION COAL COMPANY	01/01/1953	21.67	WV	MARSHALL	290	97	
Q097216000	WOLFE, BLAINE & VIVIAN ET AL	CONSOLIDATION COAL COMPANY	01/24/1956	1.775	WV	MARSHALL	312	100	
624150	RINE, G W & BESSIE J	CONSOLIDATION COAL COMPANY	04/09/1956	98.01	WV	MARSHALL	313	200	
624145	MILLER, LESTER ET AL	CONSOLIDATION COAL COMPANY	01/07/1957	82.68	WV	MARSHALL	319	326	
624146	OHIO POWER COMPANY	CONSOLIDATION COAL COMPANY	04/30/1957	93.89	WV	MARSHALL	321	319	
624302	HOWE, NEVA J; LANDERS, LENA M & RICHARD O	CONSOLIDATION COAL COMPANY	01/30/1958	248.21	WV	MARSHALL	328	275	
624160	WOLFF, DELBERT & HELEN ET AL	CONSOLIDATION COAL COMPANY	03/27/1967	136.587	WV	MARSHALL	390	167	
624169	FRANK, ALICE LEONA & BEN	CONSOLIDATION COAL COMPANY	01/21/1972	38.48	WV	MARSHALL	425	232	
041111	EDWARD DOUGLAS GUIRE ET AL	CNX LAND RESOURCES INC	09/19/2007	248.6	WV	MARSHALL	663	91	121423
041112	COLUMBIAN CHEMICALS COMPANY	CNX LAND RESOURCES INC	12/07/2009	704.035	WV	MARSHALL	691	363	1278968
Q090236002	JOE PAUL WELLMAN ET UX	NOBLE ENERGY INC	08/05/2014	2	WV	MARSHALL	842	516	1368697
Q099899000	THOMAS DANIEL BLUE ET UX	NOBLE ENERGY INC	04/17/2016	11.4215	WV	MARSHALL	898	584	1410657

Marshall County  
Jan Pest, Clerk  
Instrument 1443137  
07/19/2018 @ 02:57:34 PM  
AGREEMENT  
Book 988 @ Page 286  
Pages Recorded 65  
Recording Cost \$ 77.00

STATE OF WEST VIRGINIA, MARSHALL COUNTY, SCT.:

I, JAN PEST, Clerk of the County Commission of said County, do hereby certify that the annexed writing, bearing date on the 1st day of July, 2018, was presented for and by me, admitted to record in my office upon the above certificate as to the parties therein named this 19th day of July, 2018 at 2:57 o'clock P. M.

TESTE: Jan Pest Clerk.



47 05 102116

STATE OF WEST VIRGINIA §  
§  
COUNTY OF MARSHALL §

ASSIGNMENT AND CONVEYANCE

THIS ASSIGNMENT AND CONVEYANCE (the "Assignment") is made and entered into this 18th day of May, 2018, and made effective December 12, 2017 (the "Effective Date"), by and between AMERICAN PETROLEUM PARTNERS OPERATING, LLC, (hereinafter "Assignor") and TH EXPLORATION, LLC (hereinafter "Assignee") pursuant to the terms of that certain Acreage Trade Agreement between the Assignor and the Assignee dated December 12, 2017. (the "Acreage Trade Agreement"). Capitalized terms used but not defined herein and defined in the Acreage Trade Agreement shall have the meanings given to such terms in the Acreage Trade Agreement.

WITNESSETH:

**WHEREAS**, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to those certain Oil and Gas Leases situated in Marshall County, West Virginia, as described in Exhibit "A", attached hereto and made a part hereof (hereinafter the "Leases"); and

**WHEREAS**, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to the Leases as described below.

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and subject to the limited warranties, restrictions and conditions hereinafter mentioned, the parties hereto, intending to be legally bound, do covenant and agree as follows:

1. **Assignment**. Assignor does hereby grant, bargain, sell, convey, deliver, assign, set over and transfer, as of the Effective Date, to Assignee, its respective successors and assigns, forever, all of Assignor's right, title and interest in and to the Leases, and the lands covered thereby, together with all rights incident thereto and appurtenances thereon.

**TO HAVE AND TO HOLD** such right, title and interest in and to the Leases unto Assignee or its designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. **Special Warranty**. Assignor represents and warrants that Assignor has not conveyed or otherwise encumbered (other than Permitted Encumbrances) its interest in the

Marshall County  
Jan Pest, Clerk  
Instrument 1440860  
05/25/2018 @ 02:36:09 PM  
ASSIGNMENTS  
Book 42 @ Page 109  
Pages Recorded 9  
Recording Cost \$ 15.00

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WV Department of  
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WV-ACR-0009

Jan Post 4705902116  
MARSHALL County 01:22:38 PM  
Instrument No 1403489  
Date Recorded 04/27/2016  
Document Type AEN  
Pages Recorded 77  
Book-Page 36-9  
Recording Fee \$77.00  
Additional \$13.00

WHEN RECORDED RETURN TO:  
TE Exploration II, LLC  
1320 South University Drive, Suite 500  
Fort Worth, Texas 76107  
Attn: David Kalish

Execution Version

ASSIGNMENT AND BILL OF SALE

STATE OF WV

§  
§  
§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF MARSHALL

THIS ASSIGNMENT AND BILL OF SALE (this "Assignment"), dated April 7, 2016, but effective as of 7:00 A.M. Houston time on January 1, 2016 (the "Effective Time"), is between Gaslar Exploration Inc., a Delaware corporation, whose address is 1331 Lamar Street, Suite 520 Houston, Texas 77010 ("Assignor"), and TE Exploration II, LLC, a Texas limited liability company, whose address is 1320 South University Drive, Suite 500, Fort Worth, Texas 76107 ("Assignee"). Assignor and Assignee are each, individually, referred to herein as a "Party" and, collectively, as the "Parties".

Capitalized terms used but not defined herein shall have the respective meanings set forth in that certain Purchase and Sale Agreement (the "Purchase Agreement"), dated as of February 19, 2016, by and between Assignor and Assignee (as successor-in-interest).

Section 1. Assignment. The conveyance and assignment herein shall be deemed effective as of the Effective Time.

For Ten Dollars (\$10.00) and other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged), Assignor does hereby GRANT, BARGAIN, SELL, CONVEY, ASSIGN, TRANSFER, SET OVER AND DELIVER unto Assignee, all of Assignor's right, title and interest in and to the following interests and properties (such right, title and interest described in subsections (a) through (b) of this Section 1, less and except the Excluded Assets, collectively, the "Conveyed Interests"):

(a) all oil, gas and/or mineral leases of Assignor, together with any and all other right, title and interest of Assignor in and to the leasehold estates created thereby, including subleases, royalties, overriding royalties, net profits interest, carried interests or similar rights or interests in such leases, and together with all rights, privileges, benefits and powers conferred upon Assignor with respect to the use and occupation of the lands covered thereby that may be necessary, convenient or incidental to the possession and enjoyment of such leases, located in Marshall, Wetzell, Doddridge, Harrison, Lewis, Marion, and Monongalia Counties, West Virginia and Greene, Butler, Fayette, Somerset, and Clearfield Counties, Pennsylvania, including those described on Exhibit A—Part 1 attached hereto (subject to any reservations, limitations or depth restrictions described on Exhibit A—Part 1), (Assignor's interest in such leases and other right, title and interest as so limited, the "Leases");

(b) all rights and interests in, under or derived from all unitization agreements in effect with respect to any of the Leases and the units created thereby, including those described

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Environmental Protection



August 13, 2018

WV Department of Environmental Protection  
Office of Oil & Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Attention: Laura Adkins

RE: Wooford 4HM

Subject: County Route 27 Road Crossing Letter

Dear Laura:

Tug Hill Operating, LLC (THO) hereby submits this letter as confirmation that THO has obtained the right to drill, extract and produce the minerals under County Route 27 in the area reflected on the Woodford 4HM well plat. THO has conducted a full title search in the relevant Court House to confirm its ownership under said County Routes and is not currently aware of any recorded document that would suggest an ownership other than THO.

If your office has any questions or concerns regarding the contents of this letter, please do not hesitate to contact me directly at 304-376-0111, or by email at [amiller@tug-hilop.com](mailto:amiller@tug-hilop.com).

Sincerely,

A handwritten signature in blue ink that reads "Amy Miller".

Amy Miller  
Permit Specialist – Appalachia Region  
Cell 304-376-0111  
Email: [amiller@tug-hilop.com](mailto:amiller@tug-hilop.com)

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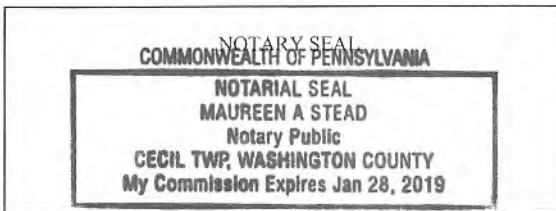
WV Department of  
Environmental Protection



**Certification of Notice is hereby given:**

THEREFORE, I Amy L. Miller, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>Tug Hill Operating, LLC</u>	Address:	<u>380 Southpointe Boulevard, Plaza II, Suite 200</u>
By:	<u>Amy L. Miller <i>Amy Miller</i></u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Permitting Specialist</u>	Facsimile:	<u>724-338-2030</u>
Telephone:	<u>724-749-8388</u>	Email:	<u>amiller@tug-hilop.com</u>



Subscribed and sworn before me this 13 day of AUG 2018.  
Maureen A Stead Notary Public  
 My Commission Expires 1/28/19

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).

4705 \* 02116

WW-6A  
(9-13)

API NO. 47-051 -  
OPERATOR WELL NO. Woodford 4HM  
Well Pad Name: Woodford

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 8/9/2018 **Date Permit Application Filed:** 8/10/2018

**Notice of:**

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

**Delivery method pursuant to West Virginia Code § 22-6A-10(b)**

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice  WSSP Notice  E&S Plan Notice  Well Plat Notice is hereby provided to:

SURFACE OWNER(s)  
 Name: CNX Land Resources, LLC Attn: Casey Saunders  
 Address: 1000 Consol Energy Drive  
Canonsburg, PA 15318 (Well Pad)

Name: Woodland Hill Church of God c/o Margirene W. Keefe, Trustee  
 Address: 8669 Kossuth Amanda Road  
Spencerville, OH 45887 (Access Road)

SURFACE OWNER(s) (Road and/or Other Disturbance)  
 Name: Linda E. Hamilton (Access Road) \* See attached list  
 Address: 651 Farnall Lane  
Proctor, WV 26055 (\*See attached list)

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
 Name: Murray Energy Corporation  
 Address: 46226 National Park Road W  
St. Clairsville, OH 43950 (\*See attached list)

COAL OPERATOR  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
 Name: \*See attached list  
 Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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WV Department of  
Environmental Protection



**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

**This Notice Shall Include:**

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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**Well Location Restrictions**

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

WW-6A  
(8-13)

API NO. 47-051 - \_\_\_\_\_  
OPERATOR WELL NO. Woodford 4HM  
Well Pad Name: Woodford

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

**Water Well Testing:**

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

**Water Testing Laboratories:**

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

**Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:**

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of a well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

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**Written Comment:**

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**



**Time Limits and Methods for Filing Comments.**

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

**Comment Requirements**

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

**Permit Denial or Condition**

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WW-6A  
(8-13)

API NO. 47-051 -  
OPERATOR WELL NO. Woodford 4HM  
Well Pad Name: Woodford

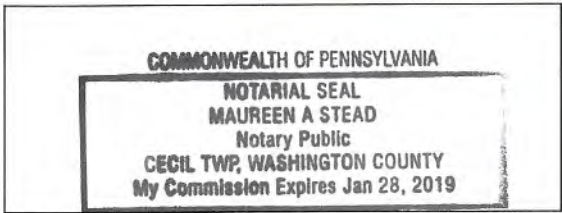
**Notice is hereby given by:**

Well Operator: Tug Hill Operating, LLC  
Telephone: 724-749-8388  
Email: amiller@tug-hillop.com *amy miller*

Address: 380 Southpointe Boulevard, Plaza II, Suite 200  
Canonsburg, PA 15317  
Facsimile: 724-338-2030

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).



Subscribed and sworn before me this 9 day of Aug., 2018.  
Maureen A Stead Notary Public  
My Commission Expires 1/28/19

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**WW-6A Additional Parties to Notice Information****Well: Woodford 4HM****Surface Owners (Access Road)**

Edward L. Gibson (Life) Gary E. Gibson (Remainder) 1200 Burch Ridge Road Proctor, WV 26055	Susan Winland and Paul M. Winland 18 Happy Trails Lane Moundsville, WV 26041
Betty J. Hamilton 622 Farmall Lane Proctor, WV 26055	Robert W. Jr. and Wendy L. Rigggenbach 1048 Burch Ridge Road Proctor, WV 26055
Robert W. and Sharon Rigggenbach 228 Farmall Lane Proctor, WV 26055	Raymond K. and Michele A. Miller 554 Farmall Lane Proctor, WV 26055
Anita Rae Miller – Life Estate 400 Filbert Avenue Moundsville, WV 26041	Raymond K. Miller (Remainder) 554 Farmall Lane Proctor, WV 26055
Gregg A. Miller (Remainder) 304 W. Brentwood Avenue Moundsville, WV 26041	Gerald L. Miller (Remainder) 95 Bills Lane Moundsville, WV 26041

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WW-6A

Supplement Pg. 1A

Tug Hill Operating, LLC  
 380 Southpointe BLVD, Suite 200  
 Canonsburg, PA 15317

## WATER WELL REPORT

Well: WOODFORD 4HM  
 District: Franklin  
 County: Marshall  
 State: WV

There appears to be Seventeen (17) possible water sources within 2,000 feet of the above referenced well location.

Topo Spot # 1 TM 7A Par. 26 Albert Joseph White Est. c/o Orpha Ross 304-845-4130 201 Tomlinson Ave. Moundsville, WV 26041	Topo Spot # 2 TM 7A Par. 27 Paul W. Barrett 304-312-1975 101 Washington Lands Rd. (Apt. E6) Moundsville, WV 26041	Topo Spot # 3 TM 7A Par. 21 David A. Beyser 304-845-4347 76 Rolling Acres Moundsville, WV 26041
Topo Spot # 4 TM 7A Par. 20 Betty Sexton 208-888-1776 41 Dixie Ln. Wellsburg, WV 26070	Topo Spot # 5 TM 7A Par. 19 Shelia R. Rutan 304-905-4379 411 Magnolia Ave. Moundsville, WV 26041	Topo Spot # 6 TM 7A Par. 17 Carol Martin & Harry Yoho 843-384-3277 8724 Proctor Creek Rd. Proctor, WV 26055
Topo Spot # 7 TM 7A Par. 2 CNX RCPC, LLC 724-485-4000 1000 Consol Energy Dr. Canonsburg, PA 15317	Topo Spot # 8 TM 7A Par. 1 Lucille Meyers 139 Graysville Rd. Proctor, WV 26055	Topo Spot # 9 TM 7B Par. 25 Cindy D. Aliff 304-771-1088 34 Steelton St. New Martinsville, WV 26155
Topo Spot # 10 TM 7B Par. 26 Cindy D. Aliff 304-771-1088 34 Steelton St. New Martinsville, WV 26155	Topo Spot # 11 TM 7B Par. 29 Patricia A. Johnson 304-376-1338 171 Graysville Rd. Proctor, WV 26055	Topo Spot # 12 TM 7 Par. 42.1 Holly Rice 304-843-2212 657 Long Run Rd. Proctor, WV 26055

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Topo Spot # 13 TM 7 Par. 44 Crystal B. Darrah 304-280-6747 733 Long Run Lane Proctor, WV 26055	Topo Spot # 14 TM 7 Par. 44 Crystal B. Darrah 304-280-6747 733 Long Run Lane Proctor, WV 26055	Topo Spot # 15 TM 7 Par. 42.2 Steven & Rhonda Lloyd 304-843-0171 743 Long Run Ln. Proctor, WV 26055
Topo Spot # 16 TM 7 Par. 42.3 Joshua David Hartley 304-845-1399 759 Long Run Ln, Proctor, WV 26055	Topo Spot # 17 TM 7 Par. 42 Tracy M. Kesterson 304-830-7356 773 Long Run Ln Proctor, WV	

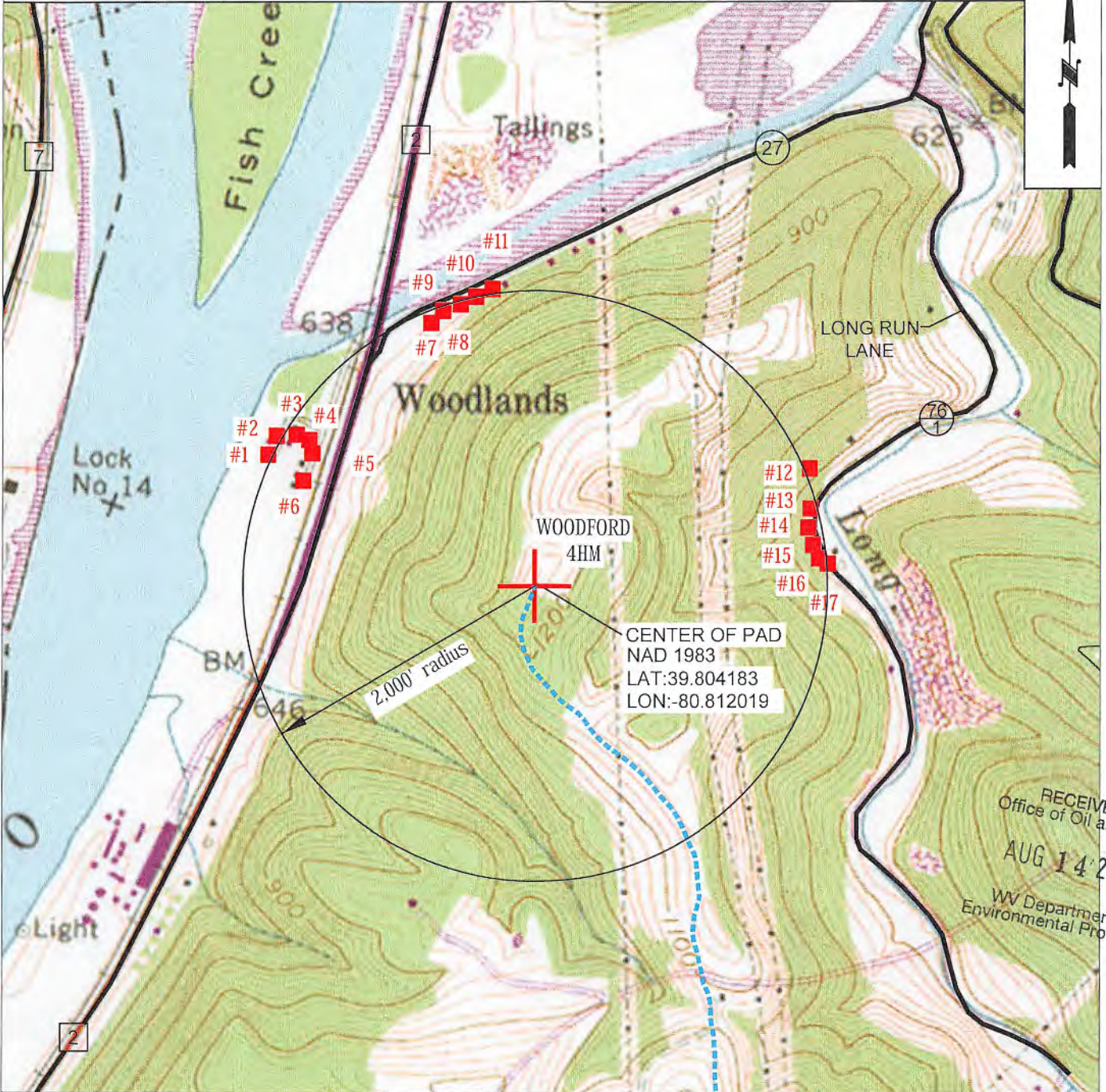
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# PROPOSED WOODFORD 4HM

SUPPLEMENT PG 1

*There appears to be Seventeen (17) possible water sources within 2,000'.*



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 <b>TUG HILL OPERATING</b>	OPERATOR	494510851	TOPO SECTION	LEASE NAME
	TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		POWHATAN POINT 7.5'	WOODFORD
			SCALE:	DATE:
			1" = 1000'	DATE: 07-27-2018



WW-6A3  
(1/12)

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF ENTRY FOR PLAT SURVEY**

**Notice Time Requirement:** Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

**Date of Notice:** 6/11/2018      **Date of Planned Entry:** 6/18/2018

**Delivery method pursuant to West Virginia Code § 22-6A-10a**

- PERSONAL SERVICE       REGISTERED MAIL       METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

**Notice is hereby provided to:**

SURFACE OWNER(s)  
Name: CNX Land Resources, LLC Attn: Casey Saunders  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15318 (Well Pad)  
Name: Woodland Hill Church of God c/o Margirene W. Keefe, Trustee  
Address: 8669 Kossuth Amanda Road  
Spencerville, OH 45887 (Access Road)  
Name: Linda E. Hamilton (Access Road)  
Address: 651 Farmall Lane  
Proctor, WV 26055 (\*See attached list)

COAL OWNER OR LESSEE  
Name: Murray Energy Corporation  
Address: 46226 National Park Road W  
St. Clairsville, OH 43950 (\*See attached list)

MINERAL OWNER(s)  
Name: HG Energy II Appalachia, LLC  
Address: 5260 Dupont Road  
Parkersburg, WV 26101 (\*See attached list)  
\*please attach additional forms if necessary

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**Environmental Protection**

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.80419523 ; -80.81200643</u>
County: <u>Marshall</u>	Public Road Access: <u>Burch Ridge Road - County Route 29</u>
District: <u>Franklin</u>	Watershed: <u>Fish Creek - Ohio River (HUC 10)</u>
Quadrangle: <u>Powhatan Point</u>	Generally used farm name: _____

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: <u>Tug Hill Operating, LLC</u>	Address: <u>380 Southpointe Boulevard, Plaza II, Suite 200</u>
Telephone: <u>724-749-8388</u>	<u>Canonsburg, PA 15317</u>
Email: <u>amiller@tug-hillop.com</u>	Facsimile: <u>724-338-2030</u>

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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4705102116

**WW-6A3 Additional Parties to Notice Information**

**Well: Woodford 4HM**

**Surface Owners (Access Road)**

Edward L. Gibson (Life) Gary E. Gibson (Remainder) 1200 Burch Ridge Road Proctor, WV 26055	Susan Winland and Paul M. Winland 18 Happy Trails Lane Moundsville, WV 26041
Betty J. Hamilton 622 Farmall Lane Proctor, WV 26055	Robert W. Jr. and Wendy L. Rigggenbach 1048 Burch Ridge Road Proctor, WV 26055
Robert W. and Sharon Rigggenbach 228 Farmall Lane Proctor, WV 26055	Raymond K. and Michele A. Miller 554 Farmall Lane Proctor, WV 26055
Anita Rae Miller – Life Estate 400 Filbert Avenue Moundsville, WV 26041	Raymond K. Miller (Remainder) 554 Farmall Lane Proctor, WV 26055
Gregg A. Miller (Remainder) 304 W. Brentwood Avenue Moundsville, WV 26041	Gerald L. Miller (Remainder) 95 Bills Lane Moundsville, WV 26041

**Mineral Owners (Well Pad)**

CNX Land Resources, LLC  
Attn: Casey Saunders  
1000 Consol Energy Drive  
Canonsburg, PA 15318

**Coal Owners (Well Pad)**

CNX Land Resources, LLC  
Attn: Casey Saunders  
1000 Consol Energy Drive  
Canonsburg, PA 15318

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WW-6A5  
(1/12)

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF PLANNED OPERATION**

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 08/10/2018      **Date Permit Application Filed:** 08/13/2018

**Delivery method pursuant to West Virginia Code § 22-6A-16(c)**

CERTIFIED MAIL                                       HAND  
RETURN RECEIPT REQUESTED                                      DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

**Notice is hereby provided to the SURFACE OWNER(s)**  
(at the address listed in the records of the sheriff at the time of notice):

Name: CNX Land Resources, LLC Attn: Casey Saunders  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317 (Well Pad)

Name: Woodland Hill Church of God c/o Margirene W. Keefe, Trustee  
Address: 8669 Kossuth Amanda Road  
Spencerville, OH (Access Road) \* See Attached List

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>516,092.94</u>
County:	<u>Marshall</u>		Northing:	<u>4,406,032.90</u>
District:	<u>Franklin</u>	Public Road Access:	<u>Burch Ridge Road (County Route 29)</u>	
Quadrangle:	<u>Powhatan Point 7.5'</u>	Generally used farm name:	<u>CNX RCPC, LLC</u>	
Watershed:	<u>French Creek - Ohio River (HUC 10)</u>			

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: Tug Hill Operating, LLC  
Telephone: 724-749-8388  
Email: amiller@tug-hillop.cm

Address: 380 Southpointe Boulevard, Plaza II, Suite 200  
Canonsburg, PA 15317  
Facsimile: 724-749-8388

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**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).



**WW-6A5 Additional Parties to Notice Information****Well: Woodford 1HM, Woodford 2HM, Woodford 3HM and Woodford 4HM****Surface Owners (Access Road)**

Edward L. Gibson (Life) Gary E. Gibson (Remainder) 1200 Burch Ridge Road Proctor, WV 26055	Susan Winland and Paul M. Winland 18 Happy Trails Lane Moundsville, WV 26041
Betty J. Hamilton 622 Farmall Lane Proctor, WV 26055	Robert W. Jr. and Wendy L. Riggerbach 1048 Burch Ridge Road Proctor, WV 26055
Robert W. and Sharon Riggerbach 228 Farmall Lane Proctor, WV 26055	Raymond K. and Michele A. Miller 554 Farmall Lane Proctor, WV 26055
Anita Rae Miller – Life Estate 400 Filbert Avenue Moundsville, WV 26041	Raymond K. Miller (Remainder) 554 Farmall Lane Proctor, WV 26055
Gregg A. Miller (Remainder) 304 W. Brentwood Avenue Moundsville, WV 26041	Gerald L. Miller (Remainder) 95 Bills Lane Moundsville, WV 26041
Linda E. Hamilton 651 Farmall Lane Proctor, WV 26055	

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110  
Charleston, West Virginia 25305-0430 • (304) 558-3505

Thomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

June 19, 2018

Jill M. Newman  
Deputy Commissioner

James A. Martin, Chief  
Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

Subject: DOH Permits for the Woodford Well Pad, Marshall County

Woodford 4HM

Dear Mr. Martin,

This well site will be accessed from Permit #06-2018-0460 issued to Tug Hill Operating for access to the State Road for a well site located off of Marshall County Route 29 SLS.

The operator has signed a DISTRICT WIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton, P.E.  
Regional Maintenance Engineer  
Central Office O&G Coordinator

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Cc: Jonathan White  
Tug Hill Operating  
CH, OM, D-6  
File

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PLANNED ADDITIVES TO BE USED IN FRACTURING OR STIMULATION

Well No. Woodford 4HM

PRODUCT NAME:	CHEMICAL DESCRIPTION:	PRODUCT USE:	HAZARDOUS COMPONENT:
GBW-20C	Hemicellulase Breaker	Breaker - Water	None
ALPHA 1427		Biocide	Glutaraldehyde – CAS#000111-30-8 Quaternary ammonium chloride CAS# 007173-51-5 Alky dimethyl benzyl ammonium Chloride (C12-16) – CAS#068424-85-1 Ethanol – CAS# 000064-17-5 Water – CAS# 007732-18-5
FRAC SAND	Silica Sand (various Mesh sizes)	Proppant	Crystalline silica (quartz) CAS# 14808-60-7
S-8C, Sand	Silica Sand (100 mesh)	Sand	Silica – CAS# 14808-60-7
GW-3LDF		Gellant - Water	Petroleum Distillate Blend – Proprietary, (Not Associated with Diesel Fuel) Guar gum – CAS# 009000-30-0
FRW-18		Friction Reducer	Hydrotreated light distillate CAS# 064742-47-8
Scaletrol		Scale Inhibitor	Ethylene glycol – CAS# 000107-21-1 Diethylene glycol – CAS# 000111-46-6

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WEST VIRGINIA COUNTY MAP



PROJECT LOCATION

APPROVED WVDEP OOG 8/15/2018

Woodford Well Site

Site Design, Construction Plan, & Erosion and Sediment Control Plans

Tug Hill Operating Marshall County Franklin District

Latitude 39.80418270° Longitude -80.81201864°

French Creek - Ohio River & Fish Creek Watershed

Pertinent Site Information Woodford Well Site Emergency Number: 304-895-1920 Franklin District, Marshall County, WV Watershed: French Creek - Ohio River & Fish Creek Watershed Tug Hill Contact Number: 1-817-623-2400

Table with 5 columns: Property Owner, Parcel Number, Area, etc. Title: Property Owner Information - Woodford Well Site

Exhibit A: Final Design: Issue for Permitting

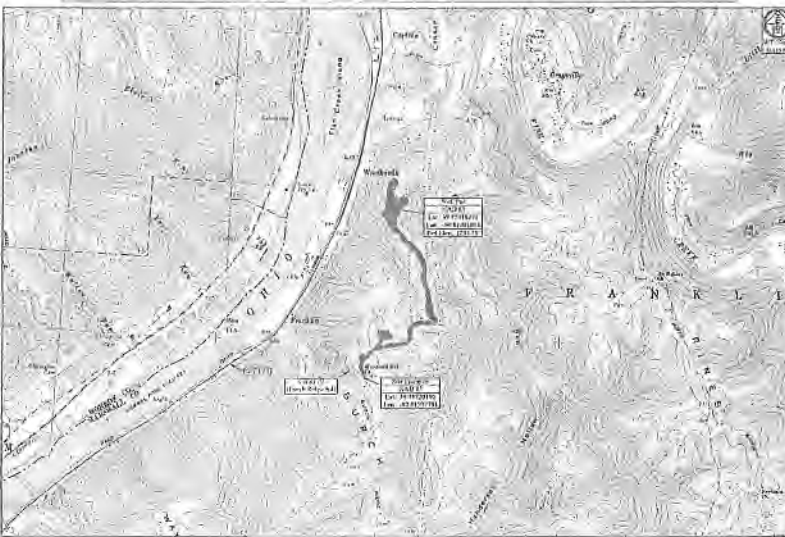


Table with 2 columns: Item, Value. Title: Blended Area

Table with 3 columns: Access Road, Length, Type. Title: Access Road

Table with 4 columns: Description, Quantity, Unit, Price. Title: Woodford Well Site Quantities

Table with 5 columns: Item, Quantity, Unit, Price, Total. Title: Interim Street Impact (1 Year First)

Handwritten signature and date: 8/15/18

Table with 2 columns: Description, Quantity. Title: Site Details

Table with 2 columns: Description, Quantity. Title: Site Details

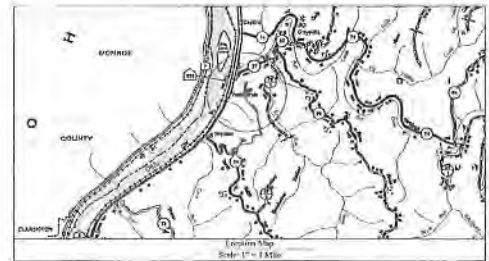
Table with 5 columns: Description, Quantity, Unit, Price, Total. Title: Site Details

1:2500 Scale Quadrangle - Parkman Field, Marshall - French Creek - Ohio River & Fish Creek

Table with 2 columns: Site Location (ROAD 27), Site Location (ROAD 39). Title: Site Locations

Table with 2 columns: Project Contacts, Project Information. Title: Project Contacts

Approach Routes: From the intersection of WV Rt. 2 and US Rt. 7 east, then... Right turn to 307 (French Hill Rd). Follow to the 27th + 11th. The site entrance will be on the left (north) side of the road.



- 1. All easements shall be... 2. All easements shall be... 3. All easements shall be...



Table with 2 columns: Sheet, Description. Title: Sheet

MISS UTILITY OF WEST VIRGINIA... 811 Know what's below. Call before you dig.

Tug Hill Operating is a... The WV Mine Waste Act... WVDEP Waste Bins...

Table with 2 columns: Description, Quantity. Title: Erosion and Sediment Control

TUG HILL OPERATING



THIS DOCUMENT PREPARED FOR TUG HILL OPERATING



Woodford Well Site Roadside Delineation

Scale: As Shown, Drawn by: JES, Date: 8/15/18, Sheet 1 of 2

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