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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

January 12, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-5101782, issued to CHEVRON APPALACHIA, LLC, 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 all 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: CURRY 5H  
Farm Name: CURRY, JAMES E.  
**API Well Number: 47-5101782**  
**Permit Type: Plugging**  
Date Issued: 01/12/2016

**Promoting a healthy environment.**

# PERMIT CONDITIONS

West Virginia Code §22-6-11 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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

5101702 P

WW-4B  
Rev. 2/01

1) Date \_\_\_\_\_, 20\_\_\_\_  
2) Operator's  
Well No. 5H  
3) API Well No. 47-51 - 01782

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil \_\_\_\_ / Gas X / Liquid injection \_\_\_\_ / Waste disposal \_\_\_\_ /  
(If "Gas, Production \_\_\_\_ or Underground storage \_\_\_\_ ) Deep \_\_\_\_ / Shallow X

5) Location: Elevation 1317' Watershed Middle Grave Creek - Grave Creek  
District Washington County Marshall Quadrangle Moundsville, WV 7.5'

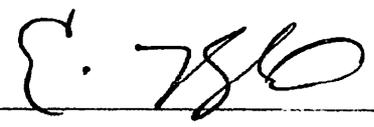
6) Well Operator Chevron Appalachia, LLC 7) Designated Agent \_\_\_\_\_  
Address 800 Mountain View Drive Address \_\_\_\_\_  
Smithfield, PA 15478

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Eric Blend Name \_\_\_\_\_  
Address P.O. Box 2115 Address \_\_\_\_\_  
Wheeling, WV 26003

10) Work Order: The work order for the manner of plugging this well is as follows:

See attached

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector 

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Date DEC 16 2015

WV Department of  
Environmental Protection

**Curry 5H P&A Procedure***CIBP set at 2,114'**Cement from 2109' to 65'*

1. N/U 10K BOP stack and test
2. TIH with work string to 5' above CIBP
3. Break circulation
4. Pressure test lines
5. Pump 6% Bentonite spacer
6. Pump 52.2 bbls of 16 ppg Class A with up to 3% Calcium Chloride from 2,109' to 1,421'
7. Drop wiper ball
8. Displace with 6% Bentonite spacer
9. POOH slowly (<30'/min) to right above planned TOC. Circulate and condition.
10. Pump 6% Bentonite spacer
11. Pump 52.2 bbls of 16 ppg Class A with up to 3% Calcium Chloride from 1,421' to 733'
12. Drop wiper ball
13. Displace with 6% Bentonite spacer
14. POOH slowly (<30'/min) to right above planned TOC. Circulate and condition.
15. Pump 6% Bentonite spacer
16. Pump 50.7 bbls of 16 ppg Class A with up to 3% Calcium Chloride from 733' to 65'
17. Drop wiper ball
18. Displace plug
19. POOH slowly (<30'/min)
20. Circulate hole clean above TOC--65'
21. POOH
22. Grout to surface as needed
23. N/D BOPE and skid rig

***Offline***

1. Cut off 30" landing ring, 20" hanger, and 13 5/8" UH2 WS.
2. Install permanent monument (pipe to surface)
  - Cement remaining wellbore to surface
  - Minimum diameter of 6"
  - Pipe shall extend to a depth of 10' below GL into well
  - Pipe shall extend to a depth of >30" above GL
  - Monument shall be sealed with concrete
  - API well identification number shall be stamped on monument with lettering no smaller than 1/2"

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# Curry GH P&A

Marshall Co. WV December 9, 2015		Casing & Cementing Details				Ground Level Elevation: 1,320' All depths from KB of: 32'	
Casing Formation	DEPTH		Inclination	HOLE SIZE	CASING SPECS	CEMENT INFO	GENERAL INFO
	MD	TVD					
Depth to bottom of 30" landing ring 30" Casing	37.76			36"	Conductor	grout to surface	
20.00" Casing				26"	Fresh Water Casing 20" 94# J-55 BTC 0.438" wall	Cement to surface	
13 3/8" Casing				17 1/2"	Coal Casing 13-3/8" 54.5# J-55 BTC 0.458" wall	Cement to surface	
9 5/8" Casing	CIBP 2,114' Float Collar 2,164' Float Shoe 2,205'			12 1/4"	Coal Casing 9-5/8" 40# J-55 BTC 0.395" wall	Cement to surface	

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### Curry 5H As Drilled

Marshall Co. WV December 9, 2015		Casing & Cementing Details			Ground Level Elevation: 1,320' All depths from KB of: 32'		
Casing Formation	DEPTH		Inclination	HOLE SIZE	CASING SPECS	CEMENT INFO	GENERAL INFO
	MD	TVD					
Depth to bottom of 30" landing ring 30" Casing	37.76			36"	Conductor	grout to surface	
20.00" Casing				25"	Fresh Water Casing 20" 94# J-55 BTC 0.438" wall	Cement to surface	
13 3/8" Casing				17 1/2"	Coal Casing 13-3/8" 54.5# J-55 BTC 0.458" wall	Cement to surface	
0 5/8" Casing				12 1/4"	Coal Casing 9-5/8" 40# J-55 BTC 0.395" wall	Cement to surface	
	CBP	2,114					
	Float Collar	2,164					
	Float Shoe	2,205					

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State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

JAN 20 2015

API 47 - 051 - 01782 County Marshall District Washington  
Quad Moundsville Pad Name Curry Field/Pool Name \_\_\_\_\_  
Farm name Curry Well Number 5H  
Operator (as registered with the OOG) Chevron Appalachia, LLC  
Address 800 Mountain View Drive City Smithfield State PA Zip 15478

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing \_\_\_\_\_ Easting \_\_\_\_\_

Elevation (ft) 1317' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
Synthetic -- Barite, Surfactant, Calcium Chloride

Date permit issued 1/14/2015 Date drilling commenced 3/18/2015 Date drilling ceased 12/4/2015  
Date completion activities began \_\_\_\_\_ Date completion activities ceased \_\_\_\_\_  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 370'MD Open mine(s) (Y/N) depths N  
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 848'MD Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:  
\_\_\_\_\_

WR-35  
Rev. 8/23/13

API 47-051 - 01782

Farm name Curry

Well number 5H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	36	30	80	New	X-42; 118.76		
Surface	26	20	410	New	J-55; 94		
Coal	17 1/2	13 3/8	871	New	J-55; 54.5		
Intermediate 1							
Intermediate 2	12 1/4	9 5/8	2173	New	J-55; 40		
Intermediate 3							
Production							
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Bulk	216					
Surface	Class A	752	15.6	1.2	15.6	Surface	8
Coal	Class A	90	15.6	1.2	108	Surface	8
Intermediate 1							
Intermediate 2	Class A	793	15.6	1.29	1023	Surface	8
Intermediate 3							
Production							
Tubing							

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Drillers TD (ft) <sup>2223</sup> \_\_\_\_\_

Loggers TD (ft) <sup>2223</sup> \_\_\_\_\_

Deepest formation penetrated \_\_\_\_\_

Plug back to (ft) \_\_\_\_\_

JAN 07 2016

Plug back procedure \_\_\_\_\_

Kick off depth (ft) \_\_\_\_\_

Check all wireline logs run

- caliper     density     deviated/directional     induction  
 neutron     resistivity     gamma ray     temperature     sonic

Well cored  Yes  No

Conventional  Sidewall

Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Bow spring centralizer every joint on the water string. centralizer every 2 joints for the rest

WAS WELL COMPLETED AS SHOT HOLE  Yes  No    DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No    DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No    TYPE OF TRACER(S) USED \_\_\_\_\_



WR-35  
Rev. 8/23/13

API 47- 051 - 01782 Farm name Curry Well number \_\_\_\_\_

PRODUCING FORMATION(S)	DEPTHS	
	_____ TVD	_____ MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas \_\_\_\_\_ mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd  
GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
Pittsburgh Coal	848	853	848	853	Coal
Salt Sands	1480	1705	1480	1705	sandstone with scattered traces of siltstone
Mauch Chunk	1705	1820	1705	1820	Mostly siltstone with sandstone at the base of the formation
Big Lime	1820	1860	1820	1860	Limey sandstone
Loyalhanna/Burgoon	1895	2145	1895	2145	Siltstone with traces of limestone, sandstone, and shale
Squaw	2145	N/A	2145	N/A	Mostly sandstone with siltstone and shale grading into siltstone with traces of sandstone and shale at the base

Please insert additional pages as applicable.

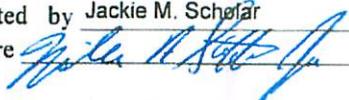
Drilling Contractor See Attached  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company Stratagraph NE Inc  
Address 116 Ellsworth Avenue City Marietta State OH Zip 45750

Cementing Company Baker Hughes  
Address 5373 West Alabama, Suite 300 City Houston State TX Zip 77056

Stimulating Company N/A  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please insert additional pages as applicable.

Completed by Jackie M. Schlar Telephone 724-564-3721  
Signature  Title Regulatory Compliance Team Lead Date 1/6/2016

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

API: 47-5101782	Well Name: Curry	Well Number: 5H
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DRILLING CONTRACTORS		
Driller	Driller	Driller
Name Rocky Mountain	Name Highlands Drilling LLC	Name Nabors Drilling USA
Address 185 North Vernal Avenue, Suite 2	Address 900 Virginia Street East	Address 10100 NW 10th Street
City - State - Zip Vernal, UT 84078	City - State - Zip Charlestown, WV 25301	City - State - Zip Oklahoma City, OK 73127

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5101702P

ACTUAL WELLPATH REPORT (CSV version)  
Prepared by Baker Hughes  
Software System: WellArchitect® 4.0.1

REFERENCE WELLPATH IDENTIFICATION

Operator CHEVRON APPALACHIA, LLC  
Area Marshall County, WV  
Field Marshall County  
Facility Curry Pad  
Slot Slot #05  
Well Curry 5H  
Wellbore Curry 5H AWB  
Wellpath Curry 5H AWP Proj: 2223'  
Sidetrack (none)

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REPORT SETUP INFORMATION

Projection NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet  
North Refe TRUE  
Scale 0.999953  
Convergence n/a  
Software WellArchitect® 4.0.1  
User Edsaryar  
Report Generated 05/Jan/2016 at 16:56  
Database/Path WA\_MPL\_EASTERNUS\_Defn/ev248249.xml

WELLPATH	Local North [ft]	Local East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Location	18.31	35.57	1641386	515665.6	39°54'35.7"	80°39'58.103"W
Facility Reference			1641351	515647.8	39°54'35.5"	80°39'58.560"W
Field Reference			1644569	516963.8	39°54'48.9"	80°39'17.476"W

WELLPATH DATUM

Calculation Minimum curvature  
Horizontal Slot  
Vertical Reference Nabors X07 (RKB)  
MD Reference Nabors X07 (RKB)  
Field Vertical Mean Sea Level  
Nabors X07 32.00ft  
Nabors X07 1352.00ft  
Nabors X07 32.00ft  
Section Orientation N 0.00, E 0.00 ft  
Section Azimuth 144.98°

5101782P

WELLPATH DATA † = interpolated/extrapolated station

	MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure [ft]	Dis [°]	Closure Dir [°/100ft]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
†	0	0	170.54	0	0	0	0	1641386	515665.6	39°54'35.7	80°39'58.1	0	0	0	0	0	0
	32	0	170.54	32	0	0	0	1641386	515665.6	39°54'35.7	80°39'58.1	0	0	0	0	0	0
	132	0.61	170.54	132	0.48	-0.53	0.09	1641387	515665.1	39°54'35.7	80°39'58.1	0.53	170.54	0.61	0.61	0	0
	232	0.63	165.08	231.99	1.48	-1.58	0.32	1641387	515664	39°54'35.7	80°39'58.0	1.61	168.681	0.06	0.02	-5.46	
	332	0.45	194.18	331.99	2.25	-2.49	0.36	1641387	515663.1	39°54'35.7	80°39'58.0	2.52	171.742	0.32	-0.18	29.1	
	432	0.32	226.19	431.99	2.55	-3.07	0.06	1641386	515662.5	39°54'35.7	80°39'58.1	3.07	178.802	0.25	-0.13	32.01	
	532	0.36	259.23	531.98	2.46	-3.32	-0.45	1641386	515662.3	39°54'35.7	80°39'58.1	3.35	187.652	0.2	0.04	33.04	
	632	0.21	229.06	631.98	2.35	-3.5	-0.89	1641386	515662.1	39°54'35.7	80°39'58.1	3.61	194.321	0.21	-0.15	-30.17	
	732	0.21	216.29	731.98	2.43	-3.77	-1.14	1641385	515661.9	39°54'35.6	80°39'58.1	3.93	196.841	0.05	0	-12.77	
	832	0.18	164.32	831.98	2.64	-4.06	-1.21	1641385	515661.6	39°54'35.6	80°39'58.1	4.24	196.524	0.17	-0.03	-51.97	
	845	0.11	150.62	844.98	2.67	-4.1	-1.19	1641385	515661.5	39°54'35.6	80°39'58.1	4.27	196.257	0.6	-0.54	-105.38	
	919	0.32	143.81	918.98	2.95	-4.32	-1.04	1641385	515661.3	39°54'35.6	80°39'58.1	4.45	193.491	0.29	0.28	-9.2	
	958	0.41	150.24	957.98	3.19	-4.53	-0.9	1641386	515661.1	39°54'35.6	80°39'58.1	4.62	191.276	0.25	0.23	16.49	
	1051	2.42	135.64	1050.95	5.46	-6.23	0.63	1641387	515659.4	39°54'35.6	80°39'58.0	6.26	174.184	2.18	2.16	-15.7	
	1146	5.17	132.23	1145.73	11.62	-10.54	5.21	1641392	515655	39°54'35.6	80°39'58.0	11.75	153.706	2.9	2.89	-3.59	
	1240	6.39	130.53	1239.25	20.81	-16.78	12.32	1641399	515648.7	39°54'35.5	80°39'57.9	20.82	143.722	1.31	1.3	-1.81	
	1335	4.65	135.55	1333.81	29.73	-22.97	19.03	1641405	515642.4	39°54'35.5	80°39'57.8	29.83	140.351	1.9	-1.83	5.28	
	1430	3.78	145.31	1428.55	36.66	-28.29	23.51	1641410	515637	39°54'35.4	80°39'57.8	36.79	140.271	1.18	-0.92	10.27	
	1524	2.74	146.5	1522.4	42.01	-32.71	26.52	1641413	515632.6	39°54'35.4	80°39'57.7	42.11	140.973	1.11	-1.11	1.27	
	1618	0.98	146.09	1616.34	45.06	-35.25	28.21	1641414	515630	39°54'35.3	80°39'57.7	45.15	141.339	1.87	-1.87	-0.44	
	1714	0.25	163.18	1712.34	46.08	-36.14	28.72	1641415	515629.1	39°54'35.3	80°39'57.7	46.16	141.52	0.78	-0.76	17.8	
	1809	0.47	201.59	1807.34	46.49	-36.7	28.64	1641415	515628.5	39°54'35.3	80°39'57.7	46.55	142.029	0.33	0.23	40.43	
	1903	0.71	191.95	1901.33	47.1	-37.63	28.38	1641414	515627.6	39°54'35.3	80°39'57.7	47.13	142.975	0.28	0.26	-10.26	
	1998	0.91	192.77	1996.32	48.01	-38.94	28.09	1641414	515626.3	39°54'35.3	80°39'57.7	48.01	144.193	0.21	0.21	0.86	
	2093	1.02	176.98	2091.31	49.23	-40.52	27.97	1641414	515624.7	39°54'35.3	80°39'57.7	49.23	145.384	0.3	0.12	-16.62	
	2160	1.07	164.91	2158.3	50.32	-41.72	28.16	1641414	515623.5	39°54'35.3	80°39'57.7	50.33	145.978	0.34	0.07	-18.01	
	2223	1.07	164.91	2221.29	51.43	-42.85	28.47	1641414	515622.4	39°54'35.3	80°39'57.7	51.45	146.403	0	0	0	

HOLE AND CASING SECTIONS Ref Wellbore: Curry 5H AWB Ref Wellpath: Curry 5H AWP Proj: 2223'

String/Dian	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
30in Condu	32	112	80	32	112	0	0	-0.34	0.06
20in Casing	32	442	410	32	441.99	0	0	-3.1	0.02
13.375in C	32	903	871	32	902.98	0	0	-4.26	-1.09

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	Comment
Curry 5H LP Rev-2		6575	-30.14	1148.82	1642535	515620.6	39°54'35.4	80°39'43.3	point	
Curry 5H LP Plat		6579	136.31	1032.14	1642420	515788.5	39°54'37.0	80°39'44.8	point	
Curry 5H LP Rev-1		6579	31.75	1105.45	1642492	515683	39°54'36.0	80°39'43.9	point	

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JAN 07 2010

5101782P

Curry 5H WP1 Rev-1	6594.02	-849.01	1722.6	1643098	514794.3	39°54'27.3"	80°39'35.9"	point
Curry 5H WP2 Rev-1	6609.38	-1749.79	2353.78	1643717	513885.5	39°54'18.4"	80°39'27.9"	point
Curry 5H WP3 Rev-1	6611.74	-2159.23	2640.67	1643999	513472.4	39°54'14.3"	80°39'24.2"	point
Curry 5H WP4 Rev-1	6631.22	-2732.44	3042.32	1644393	512894	39°54'08.7"	80°39'19.0"	point
Curry 5H BHL Rev-1	6633.98	-5127.51	4720.55	1646040	510477.5	39°53'45.0"	80°38'57.5"	point
Curry 5H WP5 Rev-1	6641.94	-3223.78	3386.6	1644731	512398.3	39°54'03.8"	80°39'14.6"	point
Curry 5H WP6 Rev-1	6653.44	-4206.44	4075.15	1645406	511406.8	39°53'54.1"	80°39'05.8"	point
Curry 5H BHL Rev-3	6666.41	-5094.76	4697.6	1646017	510510.6	39°53'45.3"	80°38'57.8"	point
Curry Pad Revised Buff	6900	-18.31	-35.57	1641351	515647.8	39°54'35.5"	80°39'58.5"	polygon
Curry Pad Revised LL	7000	-18.31	-35.57	1641351	515647.8	39°54'35.5"	80°39'58.5"	polygon

WELLPATH COMPOSITION Ref Wellbore: Curry 5H AWB Ref Wellpath: Curry 5H AWP Proj: 2223'

Log Name/	Start MD	End MD	Pos Unc	Model
	[ft]	[ft]		
01_Gyroda	32	845		Generic gyro - northseeking (Standard)
02_BHI MV	845	2160		NaviTrak (MagCorr)
Projection	2160			2223 Blind Drilling (std)

RECEIVED  
OFFICE OF OIL AND GAS  
JAN 07 2016

5101782P

WW-4A  
Revised 6-07

1) Date: 12/9/15  
2) Operator's Well Number  
5H \_\_\_\_\_  
3) API Well No.: 47 - 51 - 01782

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>James E. Curry</u> ✓	Name <u>Murray Energy Corporation</u> ✓
Address <u>3 Pioneer Lane</u>	Address <u>46226 National Road</u>
<u>Moundsville, WV 26041</u>	<u>St. Clairsville, OH 43950</u>
(b) Name _____	(b) Coal Owner(s) with Declaration ✓
Address _____	Name <u>Consolidated Coal Company</u> ✓
	Address <u>1000 Consol Energy Drive</u>
	<u>Canonsburg, PA 15317</u>
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Eric Blend</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 2115</u>	Name _____
<u>Wheeling, WV 26003</u>	Address _____
Telephone <u>(304)552-1179</u>	

**TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:**

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator Chevron Appalachia, LLC  
 By: Jenny Hayes  
 Its: Permitting Team Lead  
 Address 800 Mountain View Drive  
Smithfield, PA 15478  
 Telephone 724-564-3700

**COMMONWEALTH OF PENNSYLVANIA**  
**NOTARIAL SEAL**  
 Kristen Brooks, Notary Public  
 Smithfield Boro, Fayette County  
 My Commission Expires Sept. 2, 2018  
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Subscribed and sworn before me this 10th day of December, 2015  
Kristen Brooks Notary Public  
 My Commission Expires Sept 2, 2018

RECEIVED  
Office of Oil and Gas

DEC 17 2015

**Oil and Gas Privacy Notice**

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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 requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

WV Department of  
Environmental Protection

API Number 47 - 51 - 01782

Operator's Well No. 5H

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Chevron Appalachia, LLC OP Code 49449935

Watershed (HUC 10) Middle Grave Creek - Grave Creek Quadrangle Moundsville, WV 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: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- 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: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. NA Plugging Well

-If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

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

-Landfill or offsite name/permit number? \_\_\_\_\_

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 Jenny Hayes

Company Official (Typed Name) Jenny Hayes

Company Official Title Permitting Team Lead

Subscribed and sworn before me this 10th day of December, 2015

Kristen Brooks Notary Public

My commission expires Sept 2, 2018

RECEIVED  
Office of Oil and Gas  
COMMONWEALTH OF PENNSYLVANIA  
NOTARIAL SEAL  
Kristen Brooks, Notary Public  
Smithfield Boro, Fayette County  
My Commission Expires Sept 2, 2018  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES  
Environmental Protection

**Chevron Appalachia, LLC**

Proposed Revegetation Treatment: Acres Disturbed 19.5 Prevegetation pH 6.5-7.0

Lime 2,000 lb/ac Tons/acre or to correct to pH 6.5-7.0

Fertilizer type 10-20-20

Fertilizer amount 1,000 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

**Temporary**

**Permanent**

Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass Mixture	10 lb per acre (3/1-5/15) and (8/16-4/30)	Kentucky 31 Fescue	20 lb/ac Annual Rye Grass
Barley or Oats (local seed)	50 lb per acre (3/1-5/15)	Red Fescue (PENN LAWN)	20 lb/ac and 41 lb/ac
Millet (Hungarian, German, or Japanese)	50 lb per acre (5/16-8/15)	Crownvetch	20 lb/ac Hard Fescue Mixture 63 lb/ac
Cereal Rye or Cereal Wheat	50 lb per acre (8/16-4/30)	Hard Fescue Mx	63 lb/ac Annual Ryegrass (8/1-5/15) 7lb/ac (cut & fill slopes)
		Annual Ryegrass	(8/1-5/15) 12 lb/ac (all other areas) Weeping Lovegrass (5/15-8/1) 5lb/ac

**Attach:**

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

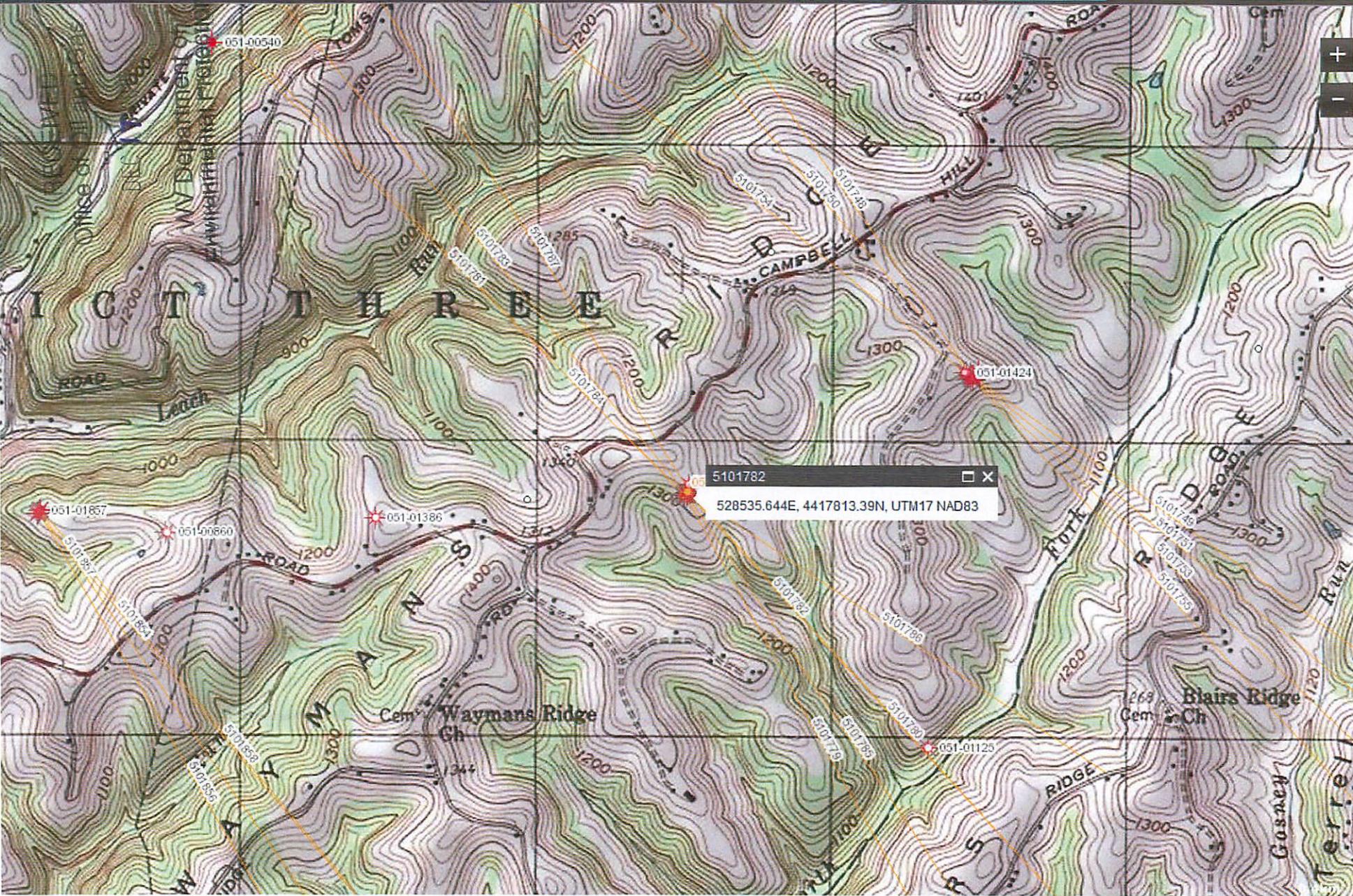
Plan Approved by: [Signature] 12/16/15

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: Oil & Gas Inspector Date: 12.16.15

Field Reviewed?  Yes  No

5101782P



5101782  
 528535.644E, 4417813.39N, UTM17 NAD83

Well is located on topo map 2,251 feet south of Latitude: 39° 55' 00"

LINE	BEARING	DISTANCE
R1	N 89°57'22" W	269.72'
R2	S 80°28'11" W	260.10'
R3	S 62°33'47" E	189.65'
R4	N 22°54'50" W	705.89'
R5	S 63°53'43" W	2083.27'
R6	S 37°31'29" E	2375.15'

NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
3. There are no native trout streams within 300' of proposed well.
4. Proposed well is greater than 1000' from surface groundwater intake or public water supply.
5. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

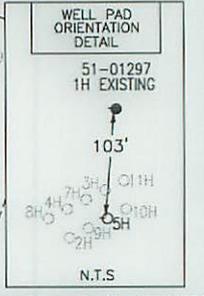
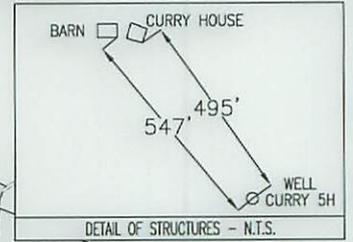
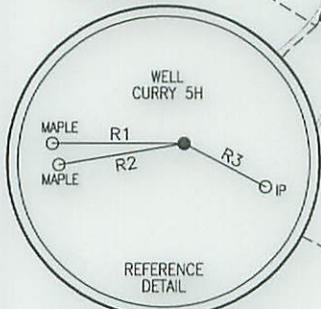
Well is located on topo map 1,146 feet west of Longitude: 80° 37' 30"



SEE DETAIL "A"

**LEGEND**

- ⊕ - TOPO MAP POINT
- ☼ - WELL
- - ALL ARE POINTS UNLESS OTHERWISE NOTED.
- - MINERAL TRACT BOUNDARY
- - - - - PARCEL LINES
- - - - - WELL REFERENCE
- - - - - PROPOSED HORIZONTAL WELL
- - - - - ROAD
- - - - - STREAM CENTER LINE
- (A) - LESSORS
- (1) - SURFACE OWNERS
- - LOCATE & AVOID
- GAS WELLS**
- - EXISTING WELLS
- ⦿ - PLUGGED WELLS



**SURFACE HOLE LOCATION (SHL)**

UTM 17-NAD83(M)

N:4417813.390

E:528535.644

NAD83, WV NORTH

N:515665.595

E:1641386.457

**APPROX. LANDING POINT**

UTM 17-NAD83(M)

N:4417856.10

E:528849.96

NAD83, WV NORTH

N:515788.499

E:1642420.233

**BOTTOM HOLE LOCATION (BHL)**

UTM 17-NAD83(M)

N:4416256.52

E:529979.74

NAD83, WV NORTH

N:510477.497

E:1646039.830

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

FILE #: CURRY 5H

DRAWING #: CURRY 5H

SCALE: 1" = 2000'

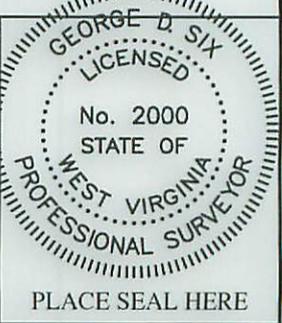
MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: *[Signature]*

R.P.E.: \_\_\_\_\_ L.L.S.: P.S. No. 2000



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

OFFICE OF OIL & GAS

601 57TH STREET

CHARLESTON, WV 25304



DATE: DECEMBER 8, 2015

OPERATOR'S WELL #: CURRY 5H

API WELL #: 47 51 01782 P

STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep

Gas  Liquid Injection  Storage  Shallow

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1317.13'

COUNTY/DISTRICT: MARSHALL / WASHINGTON QUADRANGLE: MOUNDSVILLE, WV 7.5'

SURFACE OWNER: JAMES E. CURRY ACREAGE: 45.01±

OIL & GAS ROYALTY OWNER: JAMES E. CURRY ACREAGE: 451.793±

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE

PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON

CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,556'± TMD: 13,760'±

WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY

Address 800 MOUNTAIN VIEW DRIVE Address 500 LEE STREET, EAST SUITE 1600

City SMITHFIELD State PA Zip Code 15478 City CHARLESTON State WV Zip Code 25301-3202

# CURRY

## 5H

### PAGE 2 OF 2

	LESSOR	DIST-TM/PAR
A	JAMES E. CURRY	14-10/15
B	JOHN J. & RENEE HART	14-10/18
C	VERNON, JR. & JUDITH E. KNOX	15-15/1
D	VERNON, JR. & JUDITH E. KNOX	15-15/13
E	VERNON, JR. & JUDITH E. KNOX	15-15/14
F	DWAIN E. GLOVER	15-16/12

SURFACE HOLE LOCATION (SHL)
<b>UTM 17-NAD83(M)</b>
N:4417813.390
E:528535.644
NAD83, WV NORTH
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<b>UTM 17-NAD83(M)</b>
N:4416256.52
E:529979.74
NAD83, WV NORTH
N:510477.497
E:1646039.830

	SURFACE OWNER	DIST-TM/PAR
1	DENNIS BLAKE ET UX	14-10/10
2	DENNIS & MICHELLE S. BLAKE	14-10/11.3
3	JOHN J. II & JENNA E. HART	14-10/11
4	JAMES E. BLAKE	14-10/11.1
5	JOHN J. & RENEE A. HART	14-10/19.1
6	JOHN J. & RENEE A. HART	14-10/19
7	JOHN J. HART ET UX	14-10/14
8	JAMES E. CURRY	14-10/13
9	DENNIS BLAKE ET UX	14-10/12
10	MICHAEL T. DAVIS	14-10/9
11	FREDA ELIZABETH BLAKE	14-10/9.1
12	RICHARD E. HITT	14-10/8.3
13	VALLIE JAMES WEST	14-10/8
14	VALLIE JAMES WEST	14-10/8.1
15	DAVID L. BLAKE	14-10/8.2
16	JOSEPH MICHAEL CROW	14-10/16
17	JAMES E. CURRY	14-10/15
18	JOSEPH MICHAEL CROW ET UX	14-10/17
19	DAVID E. HILL ET UX	14-11/7
20	DAVID E. HILL ET UX	14-11/6.10
21	DENNIS C. FISHER ET UX	14-11/6.4
22	DENNIS CLYDE FISHER	14-11/18
23	ILA F. MOORE ET AL	14-11/6
24	ROBERT H. BOWMAN JR.	14-11/8.1
25	PATRICIA SUE HOSKINS	14-11/8.6
26	MARY V. JAKO ET AL	14-11/8.2
27	JOHN J. & BELINDA R. BAKER	14-11/8.8
28	RICHARD W. HYETT ET UX	14-11/17
29	RICHARD W. HYETT ET UX	14-11/8.4
30	RICHARD W. HYETT ET UX	14-11/8.3
31	GREGORY SCOTT MCDONALD ET UX	14-11/8.9
32	DEBRA J. & RICHARD L. WAYT JR.	14-11/8.5
33	DAVID LAWRENCE WILSON ET UX	14-11/8
34	DAVID E. FRANKLIN	14-11/8.7
35	RAYMOND EUGENE FRANKLIN ET UX	14-11/9
36	JOHN J. HART ET UX	14-10/18
37	HEIKKI & TRISHA YEAGER	15-15/8.6
38	JOHN A. BIERCE II ET UX	15-15/3
39	JOHN A. BIERCE II ET UX	15-15/7
40	JOHN A. BIERCE II ET UX	15-15/6
41	JOHN A. BIERCE II ET UX	15-15/4
42	JOHN B. KESTNER ET UX	15-15/5
43	HONUS ADAIR STOLLAR	15-15/9
44	KANDY J. & ANTHONY E. BLATT	15-15/9.1
45	M E CHURCH	15-15/10
46	VERNON KNOX JR. ET UX	15-15/2
47	NATHAN J. & SHANEY M. LILLEY	15-15/12.3
48	MARK O. PETTIT	15-15/12.1
49	PAULINE LOU LILLEY - LIFE	15-15/15
50	VERNON KNOX JR. ET UX	15-15/14
51	VERNON KNOX JR. ET UX	15-15/13
52	VERNON KNOX JR. ET UX	15-15/1
53	RONALD A. STOLLAR	15-16/1
54	DWAIN E. GLOVER	15-16/12
55	JERRY I. & CAROLYN LILLEY	15-15/16
56	DWAIN E. GLOVER	15-16/11
57	DWAYNE A. BONDS JR.	15-16/10

DECEMBER 8, 2015