




---

 west virginia department of environmental protection
 

---

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)

Monday, September 17, 2018  
 WELL WORK PERMIT  
 Horizontal 6A / New Drill

CHEVRON APPALACHIA, LLC  
 700 CHERRINGTON PARKWAY

CORAOPOLIS, PA 15108

Re: Permit approval for LONGWORTH M01H  
 47-051-02078-00-00

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

Operator's Well Number: LONGWORTH M01H  
 Farm Name: GRAHAM H. LONGWORTH JR  
 U.S. WELL NUMBER: 47-051-02078-00-00  
 Horizontal 6A New Drill  
 Date Issued: 9/17/2018

# PERMIT CONDITIONS

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

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.

API Number:

~~09/21/2018~~  
4705102078

## PERMIT CONDITIONS

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).

WW-6B  
(04/15)

4705102078 <sup>09/21/2018</sup>

API NO. 47- \_\_\_\_\_ - \_\_\_\_\_  
OPERATOR WELL NO. M01H  
Well Pad Name: Longworth

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

1) Well Operator: Chevron Appalachia, LLC

<u>49449935</u>	<u>Marshall</u>	<u>Clay</u>	<u>Glen Easton, WV</u>
-----------------	-----------------	-------------	------------------------

  
Operator ID County District Quadrangle

2) Operator's Well Number: M01H Well Pad Name: Longworth

3) Farm Name/Surface Owner: Graham H Longworth Jr. Public Road Access: Roberts Ridge Road/WV-21

4) Elevation, current ground: 1294.18' Elevation, proposed post-construction: \_\_\_\_\_

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow  Deep \_\_\_\_\_

Horizontal

6) Existing Pad: Yes or No Yes

*JN 8/30/18*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):

Marcellus, 6531', 61' thick, 0.64 psi/ft gradient

8) Proposed Total Vertical Depth: 6,511'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 12,707'

11) Proposed Horizontal Leg Length: 5,398'

12) Approximate Fresh Water Strata Depths: 568'

13) Method to Determine Fresh Water Depths: 1 mile radius search around pad location

14) Approximate Saltwater Depths: 1279', 1883', 2134'

15) Approximate Coal Seam Depths: 520', 836'

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

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

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

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

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	20	New			60	60 ✓	CTS
Fresh Water	13.375	New	J-55	54.5	618	618 ✓	CTS
Coal							
Intermediate	9.625	New	L-80/N-80	40	2,206	2,206 ✓	CTS
Production	5.5	New	P110	20	12,707 ✓	12,707 ✓	2706 (500' below 9.625" shoe)
Tubing							
Liners							

*JV 2/5/18*

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	20	26"					
Fresh Water	13.375	17.5	0.38	2730	1911	Class A	
Coal							
Intermediate	9.625	12.375 & 12.25	0.395	5750	2768	Class A	
Production	5.5	8.75 & 8.5	0.361	14360	9975	Class A, G, or H	
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

RECEIVED  
Office of Oil and Gas

JUL 19 2018

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

Drill vertical depth to the Marcellus at an estimated total vertical depth of approximately 6,511 feet. Drill horizontal leg.

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

9,525 bbl fluid - 400,000 lb sand/stage - 9,400 anticipated max psi - 100 bpm anticipated max rate

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 38.9

22) Area to be disturbed for well pad only, less access road (acres): 19.3

23) Describe centralizer placement for each casing string:

Surface: bow spring - (1) on shoe track w/ stop collar & (1) per jt over coupling to surface; Intermediate: bow spring - (1) on shoe track w/ stop collar & (1) per 3 jts over coupling; Vertical Production: bow spring - (1) per every other jt over coupling; Curve and Lateral: solid composite (1) per jt of csg to KOP.

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

For the Water String the blend will contain class A cement, 3% CaCl<sub>2</sub>, and flake. The intermediate will contain class A cement, 3% CaCl<sub>2</sub>, Salt, and flake. The Production cement will have a lead and tail cement. The lead will contain class A, G, or H cement, KCl, dispersant, suspension agent, and retarder. The tail will contain class A, G, or H cement, Calcium Carbonate, KCl, dispersant, de-foamer, suspension agent, and friction reducer.

25) Proposed borehole conditioning procedures:

Air sections ensured to be clean via air circulation once TD is reached. Fluid sections will be circulated a minimum of 2 bottoms up once casing point has been reached and until uniform mud properties are achieved.

RECEIVED  
Office of Oil and Gas

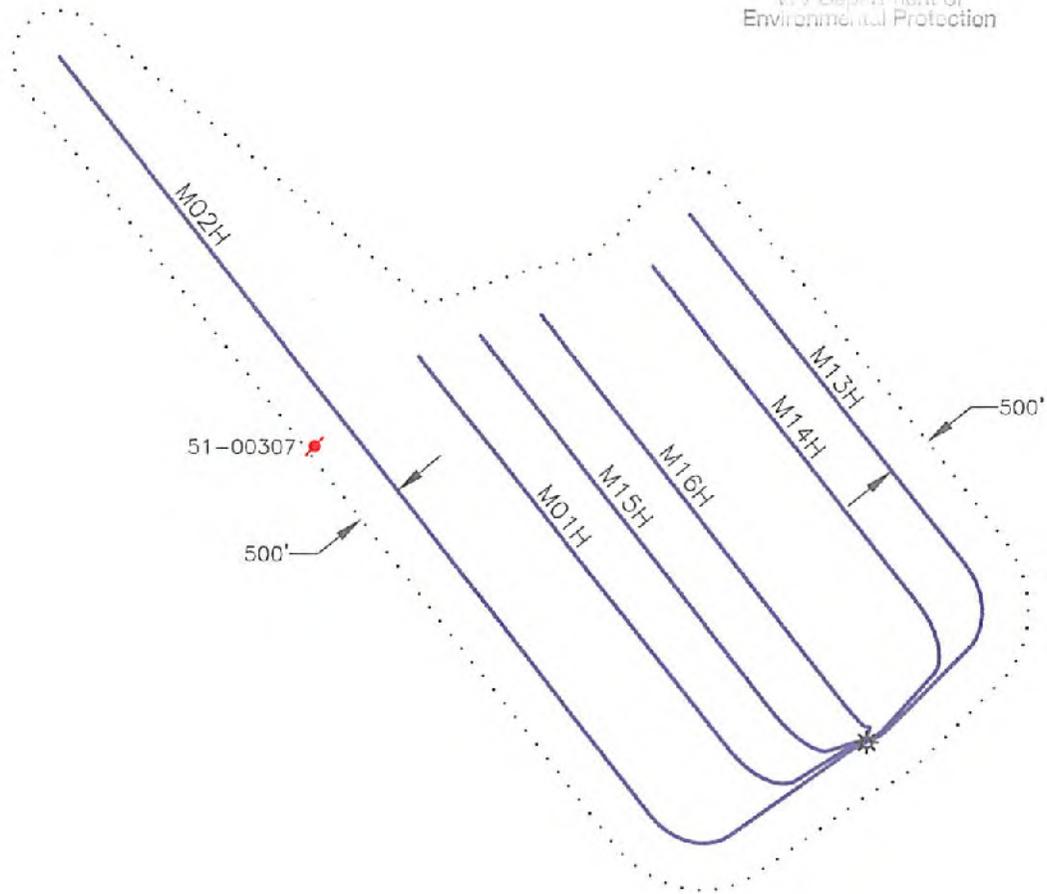
JUL 19 2018

\*Note: Attach additional sheets as needed.

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection



  
**Blue Mountain Inc.**  
 10125 MASON DIXON HIGHWAY  
 BURTON, WV 26562  
 PHONE: (304) 662-6486

PREPARED FOR:

CHEVRON APPALACHIA, LLC  
700 CHERRINGTON PARKWAY  
CORAOPLIS, PA 15108

LEGEND

-  - WELL LOCATION
-  - PLUGGED WELL

LONGWORTH BATCH #2  
AREA OF REVIEW MAP  
MARSHALL COUNTY  
CLAY DISTRICT  
WEST VIRGINIA

TOPO QUAD: GLEN EASTON, WV

SCALE: 1" = 2000'

DATE: JANUARY 3, 2018

4705102078

09/21/2018

Well ID	Prior Operator On Record	Operator - DEP	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones NOT Perforated
47-051-00307	Arrowhead Exploration Co.	Operator Unknown	Plugged	39.855780	-80.748193	3,000	Fourth	None
47-051-00553	Kentucky Central & Co.	Operator Unknown	Plugged	39.843735	-80.720930	1,168	Salt Sands	None

RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
WV Department of  
Environmental Protection

**Cement Additives**

The Water String the blend will contain class A cement, 3% CaCl<sub>2</sub>, and flake.

The intermediate will contain class A cement, 10% CaCl<sub>2</sub>, Salt, and flake.

4705 · 02079

The Production cement will have a lead and tail cement.

The lead will contain class A, G, or H cement, KCl, dispersant, suspension agent, and retarder.

The tail will contain class A, G, or H cement, Calcium Carbonate, KCl, dispersant, de-foamer, suspension agent, and friction reducer.

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

4705-02078

Chevron		Longworth M01H				Ground Level Elev. (ft above SL):		1270	
Clay Twp, Marshall Co, WV									
DRILLING FLUID / BIT TYPE / TFA	CENTRALIZER PROGRAM	CASING SIZE / FORMATION	DEPTH		WELLHEAD DESIGN		HOLE SIZE (IN)	CASING SPECS	CEMENT PROGRAM
			MD (FT)	TVD (FT)	INC	AZM			
Core Barrel / Auger	2 Bowstring per ft	20" Conductor	42	42			30	<b>Conductor</b> 20" 78.67# X-52 Minimum 40 ft from GL or at least 10 ft into bedrock	Grout to Surface
	<b>Bow Spring:</b> (1) on shoe track w/ stop collar & (1) per ft over coupling to surface	13-3/8" Casing	618	618			17.5	<b>Surface Casing</b> 13-3/8" 54.5# J-55 BTC 0.38" Wall Coupling OD (in) 14.375 ID (in) 12.615 Drift ID (in) 12.459 Burst (psi) 2730 Collapse (psi) 1,130 Yield (ft Strength 1,000 lbs) 853	<b>Surface Blend (Class A)</b> Cement to Surface
	<b>Bow Spring:</b> (1) on shoe track w/ stop collar & (1) per 3 fts over coupling	9-5/8" Casing	2,184	2,184			12.375 - 12.25	<b>Intermediate Casing</b> 9-5/8" 40# J-55 BTC 0.395" Wall Coupling OD (in) 10.625 ID (in) 8.835 Drift ID (in) 8.679 Burst (psi) 3,950 Collapse (psi) 2,570 Yield (ft Strength 1,000 lbs) 630	<b>Intermediate II Blend (Class A)</b> Cement to Surface
	<b>Vertical Bow Spring:</b> (1) per every other ft over coupling  <b>Curve and Lateral Solid Composite</b> (1) per ft of csg to KOP	Middlesex Burkert Shale Tully Limestone Hamilton shale Upper Marcellus  Lower Marcellus Baseal Marcellus	6,293				8.5 - 8.75	<b>Production Casing</b> 5-1/2" 20# P-110 EC, 0.361" Wall Coupling OD (in) 6.300 ID (in) 4.778 Drift ID (in) 4.653 Burst (psi) 14360 Collapse (psi) 12090 Yield (ft Strength 1,000 lbs) 729	<b>Production Lead Slurry</b> Cement to Surface
Non-Conservation	Float Equip. (2) fts of Csg	5-1/2" Casing	12,707	6,511				RECEIVED Office of Oil and Gas  JUL 19 2018  WV Department of Environmental Protection  <i>Ju</i> 2/2/18	<b>Production Tail Slurry</b> TOC minimum 200' above Marcellus

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

4705702078

Operator Name Chevron Appalachia, LLC OP Code 49449935

Watershed (HUC 10) Middle Grave Creek - Grave Creek Quadrangle Glen Easton, 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 (if selected provide a completed form WW-9-GPP)
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ at next anticipated well ✓)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Will closed loop system be used? If so, describe: Yes, we will be utilizing multiple open top tanks ✓

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

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

Additives to be used in drilling medium? Barite, fluid loss, emulsifiers, rheological control

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed offsite ✓

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

-Landfill or offsite name/permit number? Arden Landfill #100172; South Hills Landfill #100592; Short Creek Landfill #WV109517 ✓

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 April 1, 2016, 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

RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
WV Department of  
Environmental Protection

Subscribed and sworn before me this 19th day of January, 2018

Laura Savage Notary Public ✓

My commission expires September 17, 2018

Commonwealth of Pennsylvania  
County of Allegheny

Commonwealth of Pennsylvania - Notary Seal  
Laura Savage, Notary Public  
Allegheny County  
My commission expires September 17, 2018  
Commission number 1285773  
Member, Pennsylvania Association of Notaries

Proposed Revegetation Treatment: Acres Disturbed 14.2 Prevegetation pH 4.705 Per soil testing report 02078

Lime Per soil testing report Tons/acre or to correct to pH Per soil testing report

Fertilizer type See table C attached

Fertilizer amount 1,000 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

**Temporary**

**Permanent**

Seed Type lbs/acre

Seed Type lbs/acre

See table A attached

See table B attached

**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, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

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

Title: Oil & Gas / hydro Date: 2/5/18

Field Reviewed? (  ) Yes (  ) No

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

TABLE A - TEMPORARY SEEDING MIXTURES (FROM WV DOT DOH STANDARD SPECIFICATIONS)			
VARIETY OF SEED	SPRING MAR 1 - MAY 15 LBS/ ACRE	SUMMER MAY 16 - AUG 15 LBS/ ACRE	FALL AND WINTER AUG 16 - APR 30 LBS/ ACRE
ANNUAL RYEGRASS	10		10
BARLEY OF OATS (LOCAL SEEDS)	50		
MILLET (HUNGARIAN, GERMAN OR JAPANESE)		50	
CEREAL RYE OR CEREAL WHEAT			50
TOTAL	60	50	60

TABLE B - SEED MIXTURES (FROM WV DOT DOH STANDARD SPECIFICATIONS)		
VARIETY OF SEED	TYPE D* (CUT AND FILL SLOPES) LBS/ ACRE	TYPE L (ALL OTHER AREAS) LBS/ ACRE
KENTUCKY 31 FESCUE	20	
RED FESCUE (PENNLAWN)	20	41
CROWNVETCH	20	
HARD FESCUE MIXTURE **		63
ANNUAL RYEGRASS AUG 1 TO MAY 15 OR WEEPING LOVEGRASS MAY 15 TO AUGUST 1	7	12 5

\*30 LB OF CEREAL RYE OR WHEAT SHALL BE ADDED TO TYPE D MIXTURE WHEN WOOD CELLULOSE FIBER IS USED AS A MULCH

\*\*A COMBINATION OF APPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL HARD FESCUE

TABLE C - FERTILIZER		
TYPE	FORMULA	RATE (LBS/ ACRE)
MIXED GRASSES AND LEGUMES	10-10-20	1,000
LEGUME STANDS ONLY	5-20-10 (PREFERRED) OR 10-20-10	1,000
GRASS STANDS ONLY	10-10-20	1,000

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

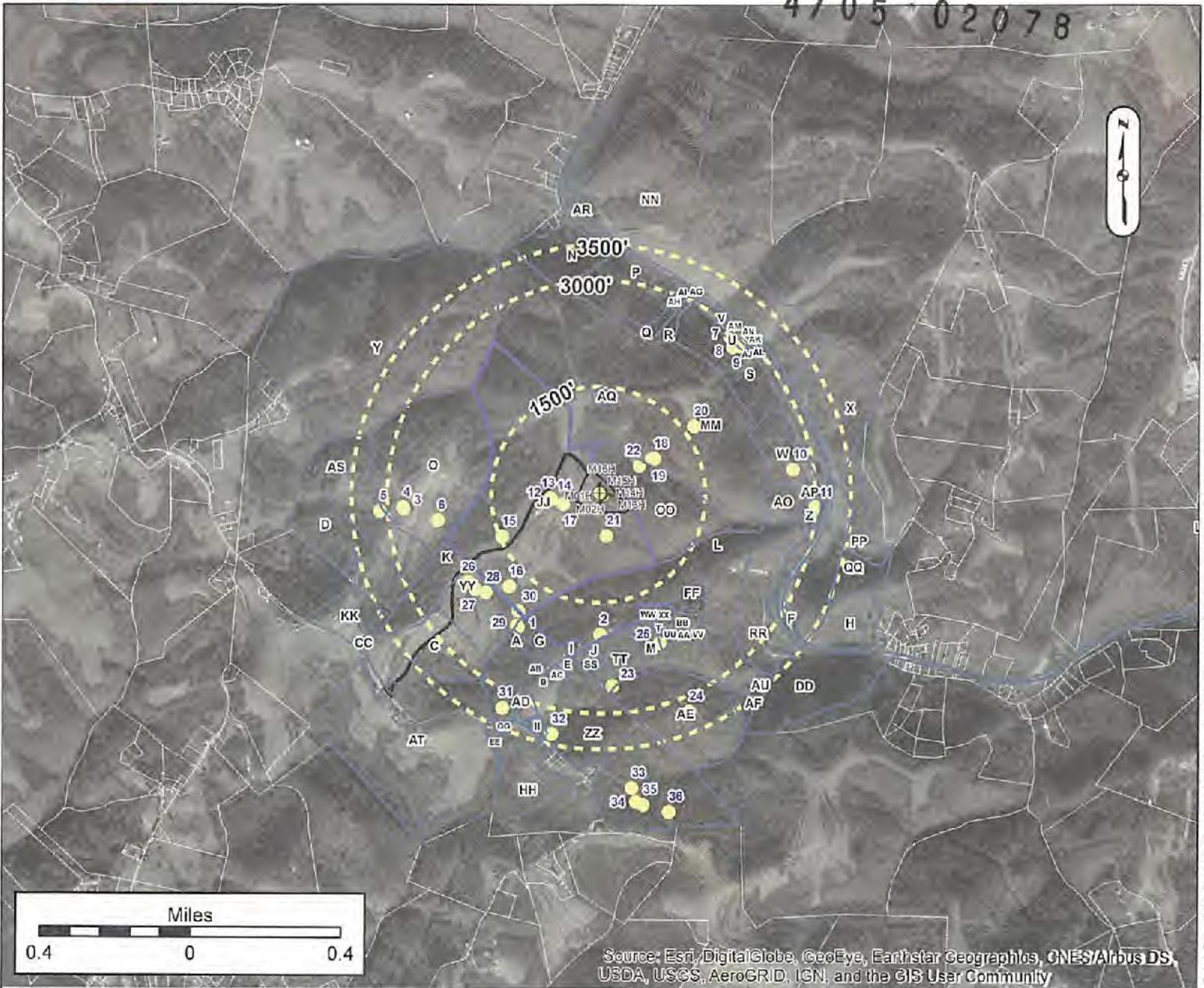
4705102078



# WATER SUPPLY EXHIBIT LONGWORTH BATCH #2

09/21/2018

4705 02078



## LOT OWNERS

Label	OWNER	TAX	Label	OWNER	TAX	Label	OWNER	TAX	Label	OWNER	TAX
A	MIDCAP RAYMOND I & DOROTHY L	25-04 1100560010000	P	JOHNS SHERRY M	25-04 1200220000000	EE	CATNEY GAREN M & ABRAHAM S	25-05 3001250026000	TT	LIGHTNER JOHN D ET UX	25-01 1100340004200
B	WHITLATCH KATHY ET UX	25-04 1100560040000	C	JOHNS KATHY	25-04 1200220000000	FF	YODIC JAMES E & LEILA A	25-04 1100560012000	UU	MIDCAP RAYMOND I ET UX	25-04 1100560002000
C	HOLMES MARY	25-04 1100350000000	R	JOHNS KATHY	25-04 1200220000000	GG	HUGGINS RICHARD M & CRYSTAL M	25-05 3001600000000	VV	STUEBEY JAMES A ET UX	25-04 1100560007000
D	HARTLEY LOREN E & PATRICIA A	25-04 1100350000000	S	MORRISON JAMES W ET UX	25-04 1200140000000	HH	CLARK GILBERT E JR & NITALE L	25-05 3004130000000	WW	WILLIAMS EDWARD ET UX	25-04 1100560010000
E	MIDCAP RAYMOND I ET UX	25-04 1100560010000	I	MIDCAP BRADY L ET UX	25-04 1100560005000	II	LONGWORTH GRAHAM JR	25-04 1100560000000	XX	WILLIAMS EDWARD ET UX	25-04 1100560010000
F	BRUSH DEAN ET UX	25-04 1100560010000	J	STEVEY HERBERT R ET UX	25-04 1200140001000	JJ	REBEKES DONALD A ET UX	25-04 1100560000000	YY	FLOWERS CLINT E & BRENT B	25-04 1100560000000
G	MIDCAP RAYMOND I & DOROTHY L	25-04 1100560010000	V	WHITE JOHN STANLEY ET UX	25-04 1200140003000	KK	CONSOLIDATION COAL COMPANY	25-04 1100560000000	ZZ	MIDCAP RAYMOND I & DOROTHY L	25-04 1100560010000
H	CORNER GLEN W ET UX	25-04 1100350000000	W	SHIFFER ROBERT SP ET UX	25-04 1200140000000	LL	CONSOLIDATION COAL COMPANY	25-04 1100560000000	AA	CONSOLIDATION COAL COMPANY	25-04 1100560010000
I	LIGHTNER JOHN D ET UX	25-01 1100340004200	X	ROUSH HARRY F ET UX	25-04 1100560000000	MM	FLANNERY WITH DANIEL C	25-04 1100560000000	BB	FLOWERS CLINT E & BRENT B	25-04 1100560010000
J	MIDCAP RAYMOND I DVID R	25-04 1100560008000	Y	JAMES TT CODY M	25-04 1100560000000	NN	MCL NERVILLE ET UX	25-04 1100560000000	CC	LIGHTNER CLINT E ET UX	25-04 1100560000000
K	HOLMES JEFFREY SCOTT ET AL	25-04 1100350001000	Z	WAINLAND KELLY BRUCE	25-04 1100560000000	OO	LONGWORTH GRAHAM JR	25-04 1100560000000	DD	TECH PARK NON-PROFIT	25-04 1100560000000
L	FOX DELORDES	25-05 1100540000000	AA	STUCHNY JAMES A ET UX	25-04 1100540000000	PP	ROUSH HARRY F	25-04 1100560000000	EE	JOHNS SHERRY M	25-04 1200220000000
M	MIDCAP BRADY EST ET UX	25-04 1100560000000	BB	THATHLER JAMES C & MELISSA S	25-04 1100540000000	QQ	ROUSH HARRY F ET UX	25-04 1100560000000	FF	JOHNS KATHY	25-04 1200220000000
N	BAUGH THOMAS J & KAREN A	25-04 1100350000000	CC	CELA KELLY ET UX	25-04 1100560000000	RR	TECH PARK NON-PROFIT	25-04 1100560000000	GG	JOHNS KATHY	25-04 1200220000000
O	CUNNINGHAM DALE & MARY	25-04 1100350000000	DD	TECH PARK NON-PROFIT	25-04 1100560000000	SS	MIDCAP RAYMOND I	25-04 1100560010000	HH	JOHNS KATHY	25-04 1200220000000

Surface Owner: GRAHAM H LONGWORTH, JR.

County: MARSHALL

Oil/Gas Owner: GRAHAM H LONGWORTH, JR.

Township: MOUNDSVILLE, WV

Well Operator: CHEVRON APPALACHIA, LLC

GROUNDWATER & ENVIRONMENTAL  
Surveyor: SERVICES, INC.

Address: 700 CHERRINGTON PARKWAY  
CORAOPOLIS, PA 15108

Address: 301 COMMERCE PARK DR  
CRANBERRY TOWNSHIP, PA 16066

Phone: 724-564-3700

Phone: 800-267-2549

NOTICE: THE INTENT OF THIS EXHIBIT IS TO IDENTIFY EXISTING WATER SUPPLIES IN THE VICINITY OF A PROPOSED GAS WELL, AND IS NOT A COMPLETE BOUNDARY SURVEY. PROPERTY LINES AND OWNER INFORMATION WERE OBTAINED FROM DEEDS, TAX RECORDS, AERIAL PHOTOGRAPHY, GIS, AND FIELD SURVEYED EVIDENCE.



WATER SUPPLY EXHIBIT  
LONGWORTH BATCH #2

RECEIVED  
Office of Oil and Gas

JUL 19 2018



4705 # 02078  
Wilderness of Environmental Protection

No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
1	MIDCAP RAYMOND L & DOROTHY L	Stream	1,148	163 Roberts Ridge	304-845-6114
2	ARNETT, SUSAN DUNCAN-ARNETT	Well	1,272	356 Wilson Hill Lane	304-639-2314
3	CUNNINGHAM DALE & MARY	Well	1,294	446 Cunningham Lane	304-845-0864
4	CUNNINGHAM DALE & MARY	Cistern	1,291	446 Cunningham Lane	304-845-0864
5	CUNNINGHAM DALE & MARY	Spring	1,241	446 Cunningham Lane	304-845-0864
6	CUNNINGHAM DALE & MARY	Spring	1,220	446 Cunningham Lane	304-845-0864
7	MORRISON JAMES W ET UX	Well	715	94 Big Grave Crk	304-845-1835
8	MORRISON JAMES W ET UX	Spring	727	94 Big Grave Crk	304-845-1835
9	MORRISON JAMES W ET UX	Pond	652	94 Big Grave Crk	304-845-1835
10	SHAFFER ROBERT L SR ET UX	Drilled Well	670	95 Big Grave Crk	304-845-6083
11	SHAFFER ROBERT L SR ET UX	Dug Well	679	95 Big Grave Crk	304-845-6083
12	LONGWORTH GRAHAM H JR	Dug Well	1,312	2527 Fork Ridge Road	304-281-4840
13	LONGWORTH GRAHAM H JR	Dug Well	1,303	2527 Fork Ridge Road	304-281-4840
14	LONGWORTH GRAHAM H JR	Cistern	1,309	2527 Fork Ridge Road	304-281-4840
15	LONGWORTH GRAHAM H JR	Pond	1,251	2527 Fork Ridge Road	304-281-4840

No.	SUPPLY COORDINATES	1H	2H	13H	14H	15H	16H			
1	39° 50' 31.99920"N 80° 43' 50.45880"W	2,152	2,152	2,180	2,181	2,182	2,182			
2	39° 50' 31.13880"N 80° 43' 35.65200"W	1,939	1,931	1,939	1,947	1,955	1,964			
3	39° 50' 47.99400"N 80° 44' 11.34600"W	2,736	2,748	2,790	2,779	2,767	2,755			
4	39° 50' 48.12000"N 80° 44' 11.46480"W	2,745	2,756	2,799	2,787	2,775	2,763			
5	39° 50' 47.55840"N 80° 44' 15.60840"W	3,071	3,083	3,125	3,114	3,102	3,090			
6	39° 50' 46.43880"N 80° 44' 05.11440"W	2,274	2,285	2,328	2,317	2,306	2,295			
7	39° 51' 12.27240"N 80° 43' 13.22040"W	2,865	2,864	2,831	2,832	2,834	2,835			
8	39° 51' 10.91160"N 80° 43' 12.61560"W	2,791	2,789	2,755	2,757	2,759	2,761			
9	39° 51' 10.99080"N 80° 43' 11.43120"W	2,859	2,856	2,822	2,824	2,827	2,829			
10	39° 50' 54.25800"N 80° 43' 01.44840"W	2,754	2,743	2,701	2,712	2,723	2,734			
11	39° 50' 49.15320"N 80° 42' 57.36240"W	3,046	3,033	2,992	3,005	3,017	3,030			
12	39° 50' 49.62840"N 80° 43' 44.71680"W	653	665	707	695	684	673			
13	39° 50' 49.76160"N 80° 43' 44.91480"W	667	679	721	709	698	686			
14	39° 50' 49.67160"N 80° 43' 44.91480"W	668	680	722	710	699	687			
15	39° 50' 44.37960"N 80° 43' 53.60520"W	1,470	1,478	1,520	1,512	1,504	1,496			

\*ELEVATIONS SHOWN ARE INTERPOLATED FROM LIDAR TOPO AND SUPPLY COORDINATES ARE FROM OTHERS.



WATER SUPPLY EXHIBIT  
LONGWORTH BATCH #2

Office of Oil and Gas  
RECORDED  
JUL 19 2018  
470510207  
09/21/2018  
WV Department of Environmental Protection



No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
16	LONGWORTH GRAHAM H JR	Spring	1,190	2527 Fork Ridge Road	304-281-4840
17	LONGWORTH GRAHAM H JR	Spring	1,288	2527 Fork Ridge Road	304-281-4840
18	LONGWORTH DANIEL C	Spring	1,148	812 Spindle Lane	304-845-0413
19	LONGWORTH DANIEL C	Spring	1,168	812 Spindle Lane	304-845-0413
20	LONGWORTH DANIEL C	Dug Well	1,201	812 Spindle Lane	304-845-0413
21	LONGWORTH GRAHAM H JR	Spring	1,217	2527 Fork Ridge Road	304-281-4840
22	LONGWORTH GRAHAM H JR	Pond	1,151	2527 Fork Ridge Road	304-281-4840
23	LIGHTNER JOHN D ET UX	Stream	984	264 Wilson Hill Lane	304-280-9370
24	LIGHTNER JOHN D ET UX	Dug Well	1,082	264 Wilson Hill Lane	304-280-9370
25	MIDCAP RAYMOND L ET UX	Stream	1,132	5655 Roberts Ridge	304-845-6114
26	HOLMES MARY	Pond	1,241	197 Spindle Lane	304-845-0703
27	HOLMES MARY	Pond	1,241	197 Spindle Lane	304-845-0703
28	HOLMES MARY	Pond	1,189	197 Spindle Lane	304-845-0703
29	HOLMES MARY	Stream	1,055	197 Spindle Lane	304-845-0703
30	HOLMES MARY	Stream	1,137	197 Spindle Lane	304-845-0703

No.	SUPPLY COORDINATES	1H	2H	13H	14H	15H	16H			
16	39° 50' 37.55040"N 80° 43' 52.09320"W	1,779	1,781	1,817	1,814	1,811	1,808			
17	39° 50' 48.94440"N 80° 43' 42.63240"W	506	516	558	548	539	529			
18	39° 50' 55.43520"N 80° 43' 26.41440"W	936	930	891	896	902	908			
19	39° 50' 55.37400"N 80° 43' 26.90760"W	900	895	856	861	867	872			
20	39° 51' 00.00360"N 80° 43' 19.33680"W	1,653	1,648	1,610	1,615	1,620	1,625			
21	39° 50' 44.70720"N 80° 43' 34.83480"W	578	568	570	579	590	600			
22	39° 50' 54.42000"N 80° 43' 29.10720"W	705	700	662	666	671	676			
23	39° 50' 24.18360"N 80° 43' 33.22560"W	2,654	2,644	2,649	2,659	2,668	2,677			
24	39° 50' 20.94000"N 80° 43' 19.41960"W	3,252	3,239	3,230	3,243	3,256	3,268			
25	39° 50' 30.21000"N 80° 43' 24.89880"W	2,221	2,209	2,200	2,212	2,225	2,238			
26	39° 50' 38.04720"N 80° 43' 59.52000"W	2,189	2,195	2,234	2,228	2,222	2,217			
27	39° 50' 37.13640"N 80° 43' 58.28520"W	2,166	2,170	2,209	2,204	2,199	2,194			
28	39° 50' 36.69360"N 80° 43' 56.34840"W	2,078	2,082	2,119	2,115	2,111	2,107			
29	39° 50' 32.17560"N 80° 43' 50.67840"W	2,146	2,145	2,174	2,175	2,175	2,176			
30	39° 50' 34.24200"N 80° 43' 50.41200"W	1,958	1,959	1,989	1,989	1,989	1,989			

\*ELEVATIONS SHOWN ARE INTERPOLATED FROM LIDAR TOPO AND SUPPLY COORDINATES ARE FROM OTHERS.



No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
31	FLOWERS CLINT E & BRENT B	Spring	1,272	6404 Roberts Ridge Road	304-639-4499
32	FLOWERS CLINT E & BRENT B	Spring	1,273	6404 Roberts Ridge Road	304-639-4499
33	FLOWERS CLINT E & BRENT B	Spring	1,284	6404 Roberts Ridge Road	304-639-4499
34	FLOWERS CLINT E & BRENT B	Spring	1,303	6404 Roberts Ridge Road	304-639-4499
35	FLOWERS CLINT E & BRENT B	Spring	1,297	6404 Roberts Ridge Road	304-639-4499
36	FLOWERS CLINT E & BRENT B	Spring	1,313	6404 Roberts Ridge Road	304-639-4499

No.	SUPPLY COORDINATES	1H	2H	13H	14H	15H	16H			
31	39° 50' 20.94360"N 80° 43' 53.01120"W	3,241	3,238	3,263	3,265	3,268	3,270			
32	39° 50' 17.44080"N 80° 43' 44.02560"W	3,377	3,372	3,387	3,393	3,399	3,405			
33	39° 50' 10.26600"N 80° 43' 29.49960"W	4,086	4,076	4,079	4,089	4,099	4,109			
34	39° 50' 08.39400"N 80° 43' 28.77240"W	4,281	4,271	4,274	4,284	4,294	4,304			
35	39° 50' 07.99800"N 80° 43' 27.40080"W	4,337	4,327	4,329	4,339	4,349	4,359			
36	39° 50' 07.10880"N 80° 43' 22.72800"W	4,498	4,487	4,485	4,496	4,507	4,518			

RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
WV Department of  
Environmental Protection

\*ELEVATIONS SHOWN ARE INTERPOLATED FROM LIDAR TOPO AND SUPPLY COORDINATES ARE FROM OTHERS.

4705 · 02078



**Chevron**

**Appalachian LLC  
WV Well Site Safety Plan  
Pad: Longworth Pad A  
Well # M01H**

*Don  
2/5/18*

**5962 Roberts Ridge Rd  
Moundsville, WV 26041  
Washington District  
Marshall County, WV**

**Access Point – [39.839575°N, 80.737044°W]**

**Well Site – [39.847350°N, 80.726939°W]**

**Marshall County, West Virginia**

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

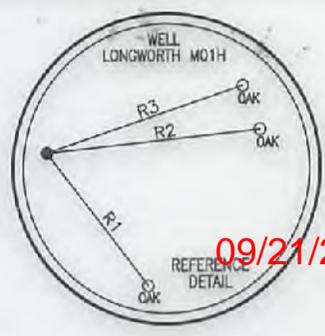
BHL is located on topo map 6,021 feet south of Latitude: 39° 52' 30"  
 SHL is located on topo map 10,088 feet south of Latitude: 39° 52' 30"

**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
- LESSORS
- SURFACE OWNERS
- GAS WELLS**
- EXISTING WELLS
- PLUGGED WELLS



- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
  - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
  - There are no native trout streams within 300' of proposed well.
  - Proposed well is greater than 1000' from surface groundwater intake or public water supply.
  - 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.
  - There are no existing buildings within 625' of proposed well.



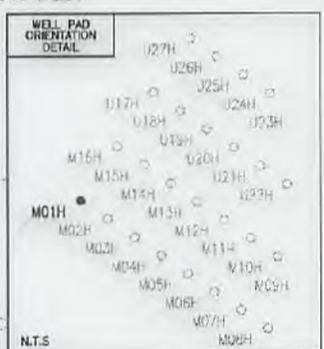
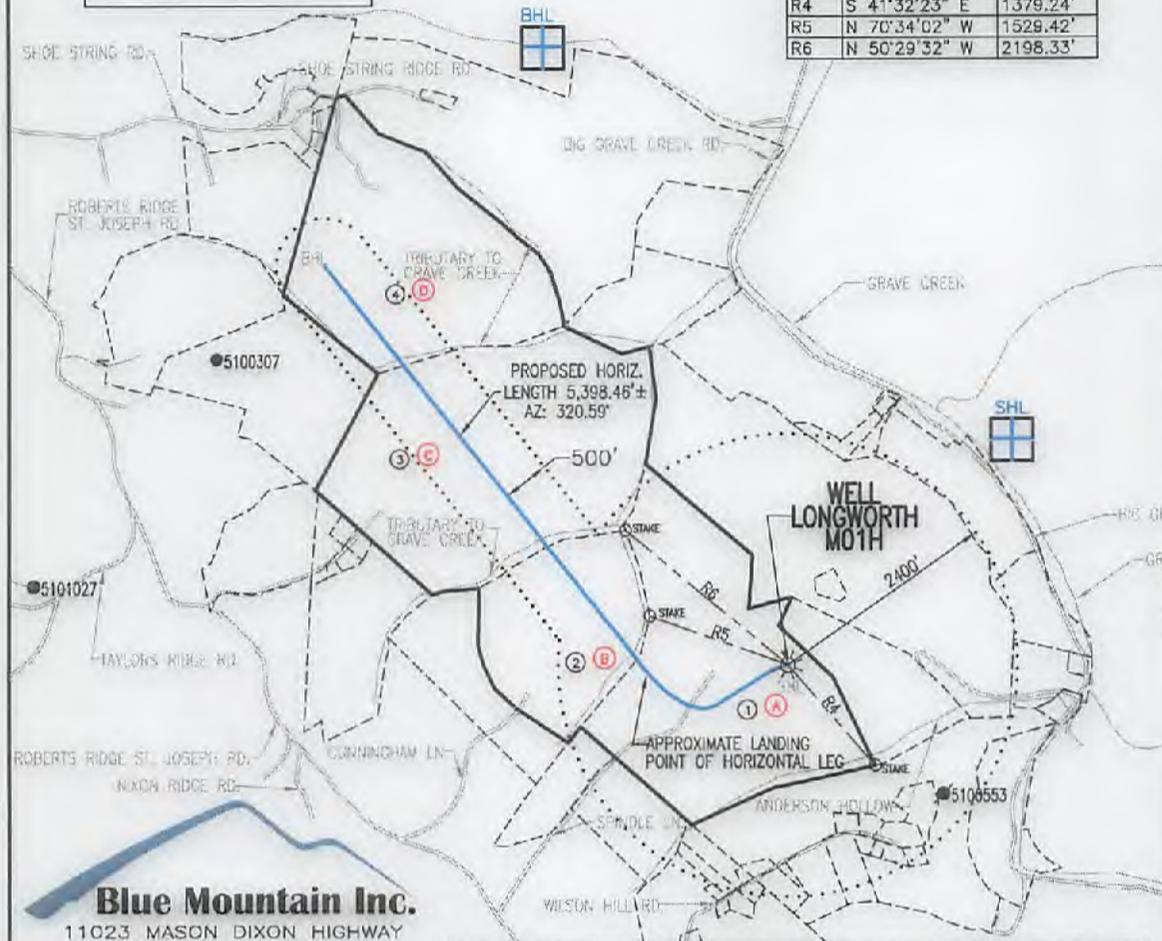
09/21/2018

LINE	BEARING	DISTANCE
R1	S 37°35'04" E	227.29'
R2	N 83°53'28" E	293.35'
R3	N 71°23'26" E	282.80'
R4	S 41°32'23" E	1379.24'
R5	N 70°34'02" W	1529.42'
R6	N 50°29'32" W	2198.33'

**SURFACE HOLE LOCATION (SHL)**  
**UTM 17-NAD83(M)**  
 N:4410845.48  
 E:523374.34  
 NAD83, WY NORTH  
 N:493083.529  
 E:1624067.410

**APPROX. LANDING POINT**  
**UTM 17-NAD83(M)**  
 N:4410812.85  
 E:522925.81  
 NAD83, WY NORTH  
 N:493001.008  
 E:1622593.799

**BOTTOM HOLE LOCATION (BHL)**  
**UTM 17-NAD83(M)**  
 N:4412080.49  
 E:521877.64  
 NAD83, WY NORTH  
 N:497218.295  
 E:1619223.730



**Blue Mountain Inc.**  
 11023 MASON DIXON HIGHWAY  
 BURTON, WV 26562  
 PHONE: (304) 662-6486

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

FILE #: LONGWORTH M01H  
 DRAWING #: LONGWORTH M01H  
 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: George D. Six  
 R.P.E.: \_\_\_\_\_ L.L.S.: P.S. No. 2000



PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304



DATE: DECEMBER 20, 2017  
 OPERATOR'S WELL #: LONGWORTH M01H  
 API WELL #: 47 51 0207846A  
 STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep  Gas  Liquid Injection  Storage  Shallow

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1294.18'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: GLEN EASTON, WV 7.5'

SURFACE OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 123.589±

OIL & GAS ROYALTY OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 456.706±

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: 6,600'± TMD: 12,707.15'±

WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY  
 Address 700 CHERRINGTON PARKWAY Address 500 LEE STREET, EAST SUITE 1600  
 City GORAOPOLIS State PA Zip Code 15108 City CHARLESTON State WV Zip Code 25301-3202

# LONGWORTH M01H PAGE 2 OF 2

4705102078

09/21/2018

	LESSOR	DIST-TM/PAR
A	GRAHAM H. LONGWORTH JR. ET AL	4-11/1
B	DALE CUNNINGHAM ET UX	4-13/33
C	BRETT A. ANDREWS ET UX	4-12/19
D	JMK IREV TRST	4-12/4
	PURPLEBURGH VENTURES LLC	
	MARCELLUS TX MINERAL PRTRNS LTD	

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M) N:4410845.48 E:523374.34 NAD83, WV NORTH N:493083.529 E:1624067.410

	SURFACE OWNER	DIST-TM/PAR
1	GRAHAM H. LONGWORTH JR.	4-11/1
2	DALE & MARY CUNNINGHAM	4-13/33
3	CODY M. JARRETT	4-12/19
4	MERLE L. CHAPLIN ET UX	4-12/4

APPROX. LANDING POINT
UTM 17-NAD83(M) N:4410812.83 E:522925.81 NAD83, WV NORTH N:493001.008 E:1622593.799

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M) N:4412080.49 E:521877.64 NAD83, WV NORTH N:497218.295 E:1619223.730

DECEMBER 20, 2017

BHL is located on topo map 6,021 feet south of Latitude: 39° 52' 30"  
 SHL is located on topo map 10,088 feet south of Latitude: 39° 58' 30"

4705402078

**LEGEND**

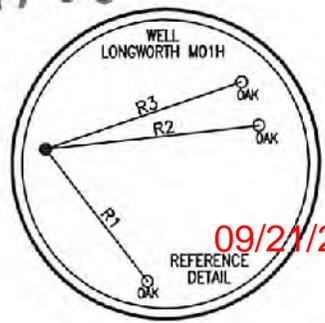
- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- LESSORS
- SURFACE OWNERS

**GAS WELLS**

- EXISTING WELLS
- PLUGGED WELLS



- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
  - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
  - There are no native trout streams within 300' of proposed well.
  - Proposed well is greater than 1000' from surface groundwater intake or public water supply.
  - 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.
  - There are no existing buildings within 625' of proposed well.



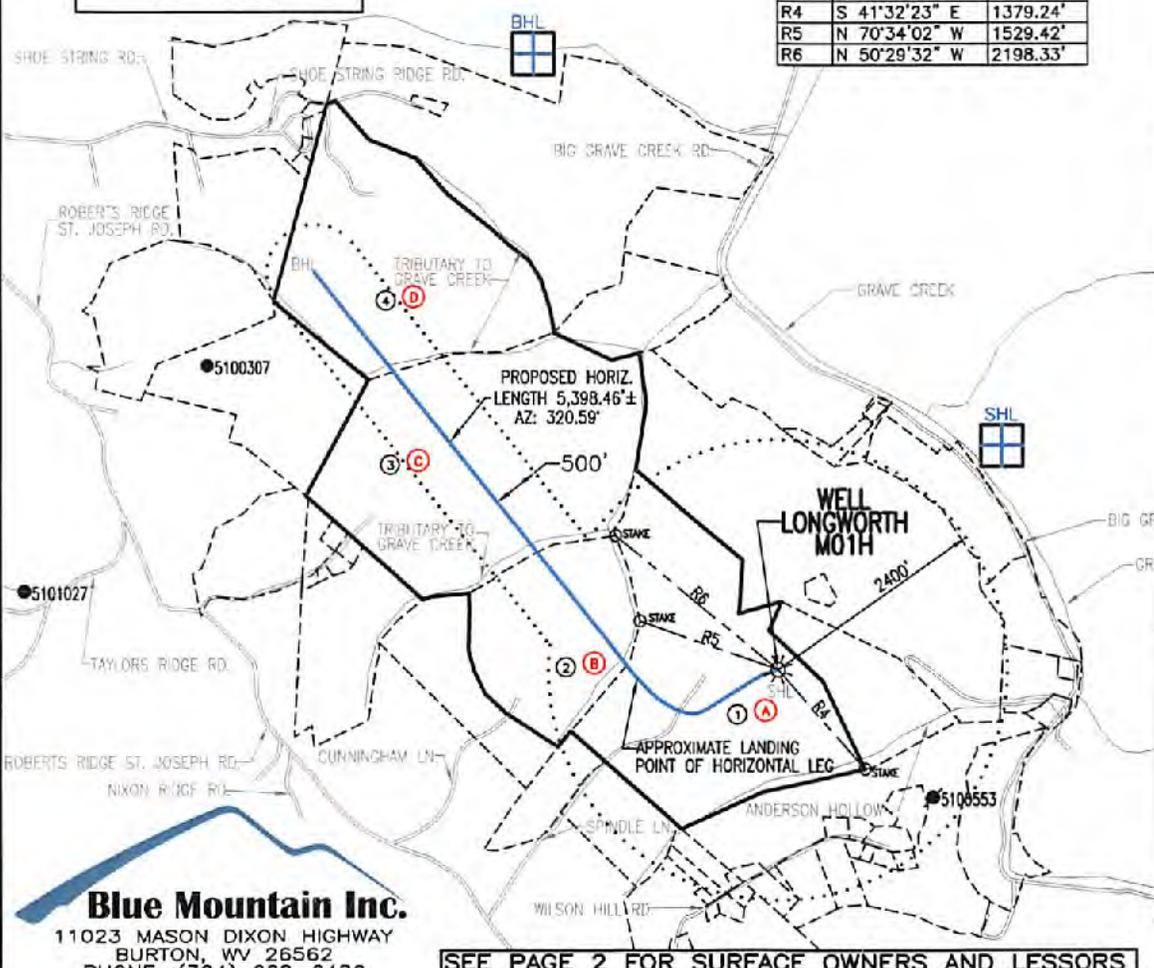
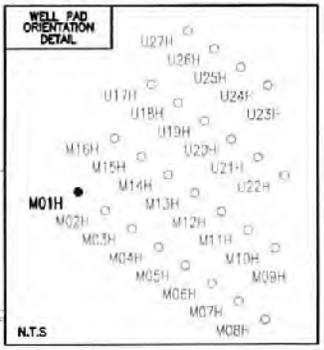
09/21/2018

LINE	BEARING	DISTANCE
R1	S 37°35'04" E	227.29'
R2	N 83°53'28" E	293.35'
R3	N 71°23'26" E	282.80'
R4	S 41°32'23" E	1379.24'
R5	N 70°34'02" W	1529.42'
R6	N 50°29'32" W	2198.33'

**SURFACE HOLE LOCATION (SHL)**  
 UTM 17-NAD83(M)  
 N:4410845.48  
 E:523374.34  
 NAD83\_WV NORTH  
 N:493083.529  
 E:1624067.410

**APPROX. LANDING POINT**  
 UTM 17-NAD83(M)  
 N:4410812.83  
 E:522925.81  
 NAD83\_WV NORTH  
 N:493001.008  
 E:1622593.799

**BOTTOM HOLE LOCATION (BHL)**  
 UTM 17-NAD83(M)  
 N:4412080.49  
 E:521877.64  
 NAD83\_WV NORTH  
 N:497218.295  
 E:1619223.730



**Blue Mountain Inc.**  
 11023 MASON DIXON HIGHWAY  
 BURTON, WV 26562  
 PHONE: (304) 662-6486

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

FILE #: LONGWORTH M01H  
 DRAWING #: LONGWORTH M01H  
 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: George D. Six  
 R.P.E.: \_\_\_\_\_ L.L.S.: P.S. No. 2000

**GEORGE D. SIX**  
 LICENSED  
 No. 2000  
 STATE OF  
 WEST VIRGINIA  
 PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304



DATE: DECEMBER 20, 2017  
 OPERATOR'S WELL #: LONGWORTH M01H  
 API WELL #: 47 51  
 STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep  Gas  Liquid Injection  Storage  Shallow

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1294.18'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: GLEN EASTON, WV 7.5'

SURFACE OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 123.589±

OIL & GAS ROYALTY OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 456.706±

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: 6,600'± TMD: 12,707.15'±

WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY  
 Address 700 CHERRINGTON PARKWAY Address 500 LEE STREET, EAST SUITE 1600  
 City CORAOPOLIS State PA Zip Code 15108 City CHARLESTON State WV Zip Code 25301-3202

**LONGWORTH**  
**M01H**  
**PAGE 2 OF 2**

470510207

09/21/2018

	LESSOR	DIST-TM/PAR
A	GRAHAM H. LONGWORTH JR. ET AL	4-11/1
B	DALE CUNNINGHAM ET UX	4-13/33
C	BRETT A. ANDREWS ET UX	4-12/19
D	JMK IREV TRST	4-12/4
	PURPLEBURGH VENTURES LLC	
	MARCELLUS TX MINERAL PRTNRS LTD	

SURFACE HOLE LOCATION (SHL)
<b>UTM 17-NAD83(M)</b>
<b>N:4410845.48</b>
<b>E:523374.34</b>
<b>NAD83, WV NORTH</b>
<b>N:493083.529</b>
<b>E:1624067.410</b>

	SURFACE OWNER	DIST-TM/PAR
1	GRAHAM H. LONGWORTH JR.	4-11/1
2	DALE & MARY CUNNINGHAM	4-13/33
3	CODY M. JARRETT	4-12/19
4	MERLE L. CHAPLIN ET UX	4-12/4

APPROX. LANDING POINT
<b>UTM 17-NAD83(M)</b>
<b>N:4410812.83</b>
<b>E:522925.81</b>
<b>NAD83, WV NORTH</b>
<b>N:493001.008</b>
<b>E:1622593.799</b>

BOTTOM HOLE LOCATION (BHL)
<b>UTM 17-NAD83(M)</b>
<b>N:4412080.49</b>
<b>E:521877.64</b>
<b>NAD83, WV NORTH</b>
<b>N:497218.295</b>
<b>E:1619223.730</b>

**DECEMBER 20, 2017**

RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
WV Department of  
Environmental Protection

WW-6A1  
(5/13)

Operator's Well No. Longworth M01H

**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				

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

**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

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: Chevron Appalachia, LLC  
 By: Jenny Hayes *Jenny Hayes*  
 Its: Permitting Team Lead

Longworth Unit #1H

Plat ID	Lessor	Lessee	Royalty	Book/Page	Assignment #1
4-11-1.0	LONGWORTH GRAHAM H JR ET AL	Chevron U.S.A. Inc.	0.14	BK 790 - PG 129	n/a
4-13-33.0	CUNNINGHAM DALE ET UX	Chesapeake Appalachia, LLC	0.15	BK 681 - PG 502	BK 30 - PG 392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.
4-12-19.0	ANDREWS BRETT A ET UX	Chevron U.S.A. Inc.	0.15	BK 773 - PG 43	n/a
4-12-4.0	JMK IREV TRST	Chevron U.S.A. Inc.	0.16	BK 797 - PG 336	n/a
	PURPLEBURGH VENTURES LLC	Chevron U.S.A. Inc.	0.16	BK 799 - PG 325	n/a
	MARCELLUS TX MINERAL PRTRNS LTD	Chevron U.S.A. Inc.	0.16	BK 794 - PG 561	n/a

RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
WV Department of  
Environmental Protection

09/21/2018



Luke Slagel  
Land Representative

4705 02078

February 1, 2018

West Virginia D.E.P.  
Office of Oil & Gas  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304-2345

RE: Longworth 1H, 2H, 13H, 14H, 15H, 16H

To whom it may concern:

This letter is to confirm that Chevron U.S.A. Inc. has the rights to access minerals under any road along the above referenced laterals. If you should have any further questions or need additional documentation, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Luke Slagel".

Luke Slagel  
Land Representative

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

Appalachian Mountain Business Unit  
Chevron North America Exploration and Production Company  
A Division of Chevron U.S.A. Inc.  
700 Chemington Parkway, Coraopolis, PA 15108  
Tel 412 865 1426  
Luke.Slagel@chevron.com

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

4705102078

Date of Notice Certification: 1/22/18

API No. 47- \_\_\_\_\_  
Operator's Well No. M01H  
Well Pad Name: Longworth

**Notice has been given:**

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>523374.34</u>
County: <u>Marshall</u>		Northing: <u>4410845.48</u>
District: <u>Clay</u>	Public Road Access: <u>Roberts Ridge Road/WW-21</u>	
Quadrangle: <u>Glen Easton, WV 7.5'</u>	Generally used farm name: <u>Longworth</u>	
Watershed: <u>Middle Grave Creek - Grave Creek</u>		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
---	---

**Required Attachments:**

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

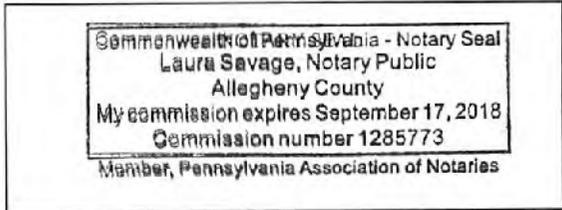
RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
West Virginia Department of Environmental Protection

**Certification of Notice is hereby given:**

THEREFORE, I Jenny Hayes, 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.

*Jenny Hayes*

Well Operator:	<u>Chevron Appalachia, LLC</u>	Address:	<u>700 Cherrington Parkway</u>
By:	<u>Jenny Hayes</u>		<u>Coraopolis, PA 15108</u>
Its:	<u>Permitting Team Lead</u>	Facsimile:	<u>412-865-2403</u>
Telephone:	<u>412-865-1533</u>	Email:	<u>JZYK@chevron.com</u>



Commonwealth of Pennsylvania  
 County of Allegheny  
 Subscribed and sworn before me this 7th day of March, 2018.  
Laura Savage Notary Public  
 My Commission Expires September 17, 2018

**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).

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

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: 1/23/18 Date Permit Application Filed: 7/18/18

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: Graham H Longworth Jr  
 Address: 2527 Fork Ridge Road  
Moundsville, WV 26041  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: Mary Holmes  
 Address: 197 Spindle Lane  
Moundsville, WV 26041  
 Name: The Estate of Barbara J Derrow  
 Address: 6247 Roberts Ridge Road  
Moundsville, WV 26041

SURFACE OWNER(s) (Impoundments or Pits)

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

COAL OWNER OR LESSEE

Name: Consolidated Coal Company  
 Address: 1000 Consol Energy Drive  
Cenonsburg, WV 15317

COAL OPERATOR

Name: Murray Energy Corporation  
 Address: 46226 National Road  
St Clairsville, OH 43950

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: Daniel C Longworth  
 Address: 812 Spindle Lane  
Moundsville, WV 26041

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

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

\*Please attach additional forms if necessary

RECEIVED  
Office of Oil and Gas  
  
JUL 19 2018  
  
WV Department of  
Environmental Protection

WW-6A  
(8-13)

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

4705102078

API NO. 47- -

OPERATOR WELL NO. MOH

Well Pad Name: Longworth

09/21/2018

**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).

**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

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, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the 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.

**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

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

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.

RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
WV Department of  
Environmental Protection

WW-6A  
(8-13)

API NO. 47- \_\_\_\_\_ - \_\_\_\_\_  
OPERATOR WELL NO. MO 09/21/2018  
Well Pad Name: Longworth

**4705 7 02078**

**Notice is hereby given by:**

Well Operator: Chevron Appalachia, LLC  
Telephone: 412-865-1533  
Email: jzyk@chevron.com

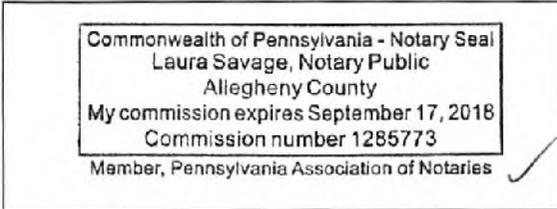
Address: 700 Cherrington Parkway  
Coraopolis, PA 15108  
Facsimile: 412-865-2403

*Jenny Hayes*

**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).

*Commonwealth of Pennsylvania  
County of Allegheny*



Subscribed and sworn before me this 19th day of January, 2...

*Laura Savage*

Notary Public

My Commission Expires September 17, 2018

RECEIVED  
Office of Oil and Gas

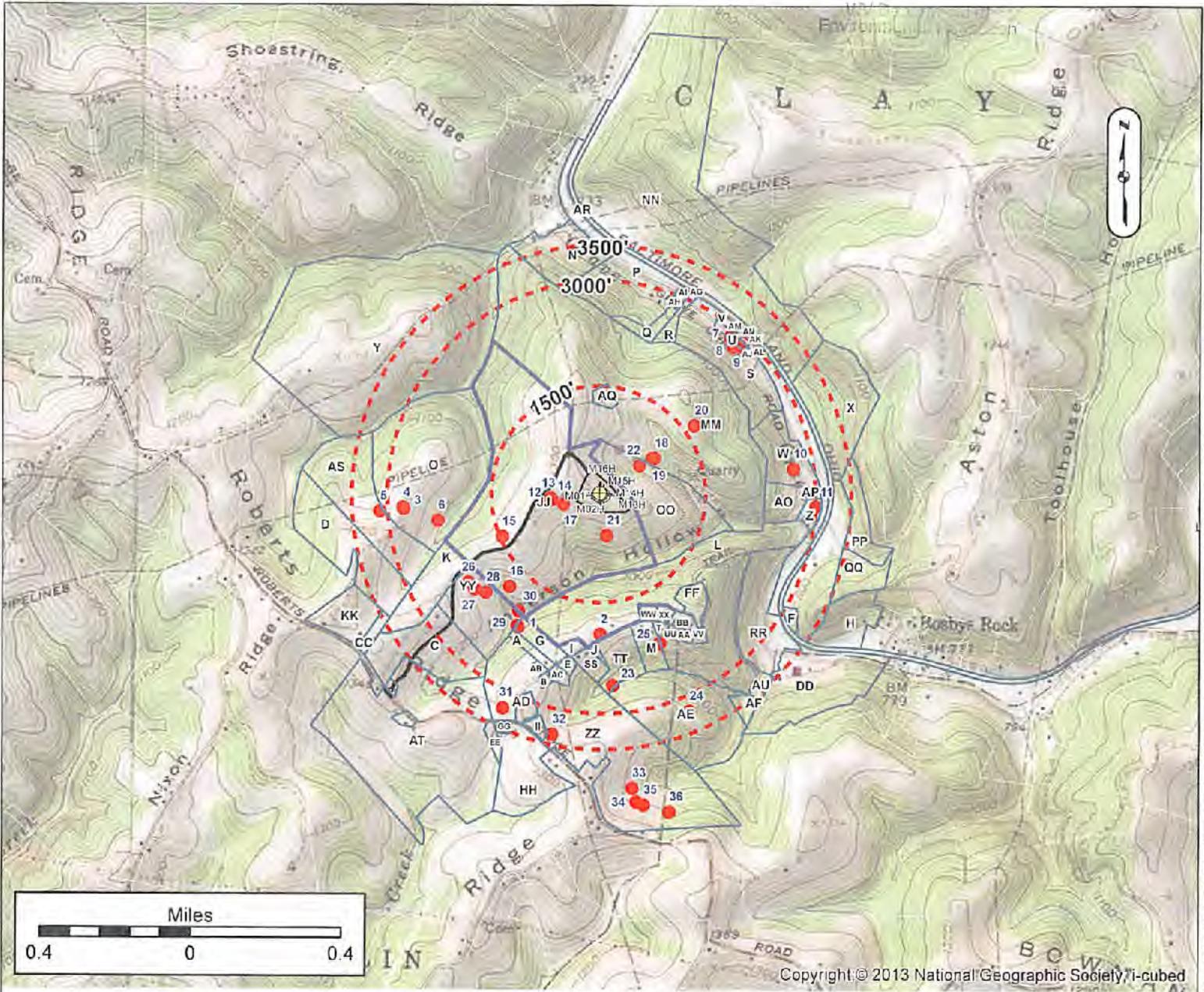
JUL 19 2018

WV Department of  
Environmental Protection



# WATER SUPPLY EXHIBIT LONGWORTH BATCH #2

4705102070  
69/27/2018  
JUL 19 2018



## LOT OWNERS

Label	Owner	TM	Label	Owner	TM	Label	Owner	TM	Label	Owner	TM
A	MIDCAP RAYMOND L & DOROTHY L	25-04 1100540010000	U	JOELS KATHY	25-04 1200113001000	TT	GEARNEY CAREN M & ABRAHAM S	25-04 1100540010000	AF	FRUNGER KERRIT E JR ET UX	25-04 1100540010000
B	WHITLATCH KENNETH E ET UX	25-04 1100540010000	V	JOELS KATHY	25-04 1200113001000	UU	YIP C JAMES E & LEAH A	25-04 1100540010000	AG	JOYNER MARY L	25-04 1100540010000
C	HOLMES MARY	25-04 1100540010000	W	JOELS KATHY	25-04 1200113001000	VV	HUGHES B CHARD M & CRYSTAL M	25-04 1100540010000	AL	MORRISON JAMES W ET UX	25-04 1200113001000
D	HARTLEY LOREN E & PATRICIA A	25-04 1100540010000	X	MORRISON JAMES W ET UX	25-04 1200113001000	WW	CLARK GILBERT E JR & ANITA L	25-04 1100540010000	AM	WHITE JOHN S ET UX	25-04 1200113001000
E	MIDCAP RAYMOND L & DOROTHY L	25-04 1100540010000	Y	MIDCAP BRADY E ET UX	25-04 1100540010000	XX	FLOWERS CLINT E & BRENTE B	25-04 1100540010000	AN	WHITE JOHN S ET UX	25-04 1200113001000
F	ROUSH DEAN ET UX	25-04 1100540010000	Z	STEVIE HERBERT B ET UX	25-04 1200113001000	YY	LONGWORTH GRAHAM H JR	25-04 1100540010000	AO	SHAFER ROBERT L SR ET UX	25-04 1100540010000
G	MIDCAP RAYMOND L & DOROTHY L	25-04 1100540010000	AA	WHITE CHR STANLEY L ET UX	25-04 1200113001000	ZZ	KERESZ FERNALD A ET UX	25-04 1100540010000	AP	STONE GENE FHYLLIS	25-04 1200113001000
H	EDNOR BRUCE W ET UX	25-04 1100540010000	AB	SHAFER ROBERT L SR ET UX	25-04 1200113001000	AAA	CONSOLIDATION COAL COMPANY	25-04 1100540010000	AQ	CONSOLIDATION COAL COMPANY	25-04 1200113001000
I	LIGHTNER JOHN D ET UX	25-04 1100540010000	AC	ROUSH MARY ET UX	25-04 1100540010000	BB	LONGWORTH DANIEL C	25-04 1100540010000	AR	CUNNINGHAM DALE & MARY	25-04 1100540010000
J	MIDCAP RAYMOND L & DOROTHY L	25-04 1100540010000	AD	FRANK LOUIS M	25-04 1200113001000	CC	LONGWORTH DANIEL C	25-04 1100540010000	AS	DEWIDOW BARBARA J ET UX	25-04 1100540010000
K	HOLMES JEFFREY SCOTT ET UX	25-04 1100540010000	AE	SHAWLAND KEITH BRUCE	25-04 1200113001000	DD	LONGWORTH GRAHAM H JR	25-04 1100540010000	AT	TECH PARK NON-PROFIT	25-04 1100540010000
L	HICK DELORIS	25-04 1100540010000	AF	STUCKEY JAMES C ET UX	25-04 1100540010000	EE	ROUSH MARY ET UX	25-04 1100540010000	AA	TECH PARK NON-PROFIT	25-04 1100540010000
M	MIDCAP BRADY E ET UX	25-04 1100540010000	AG	JOELS KATHY	25-04 1200113001000	FF	ROUSH MARY ET UX	25-04 1100540010000	BB	TECH PARK NON-PROFIT	25-04 1100540010000
N	MURPHY THOMAS L & CLARA J	25-04 1200113001000	AH	JOELS KATHY	25-04 1200113001000	GG	ROUSH MARY ET UX	25-04 1100540010000	CC	TECH PARK NON-PROFIT	25-04 1100540010000
O	CUNNINGHAM DALE & MARY	25-04 1100540010000	AI	JOELS KATHY	25-04 1200113001000	HH	MIDCAP RAYMOND L	25-04 1100540010000	DD	TECH PARK NON-PROFIT	25-04 1100540010000

Surface Owner: GRAHAM H LONGWORTH, JR.  
 Oil/Gas Owner: GRAHAM H LONGWORTH, JR.  
 Well Operator: CHEVRON APPALACHIA, LLC  
 Address: 700 CHERRINGTON PARKWAY  
CORAOPOLIS, PA 15108  
 Phone: 724-564-3700

County: MARSHALL  
 Township: MOUNDSVILLE, WV  
 GROUNDWATER & ENVIRONMENTAL  
 Surveyor: SERVICES, INC.  
 Address: 301 COMMERCE PARK DR  
CRANBERRY TOWNSHIP, PA 16066  
 Phone: 800-267-2549

NOTICE: THE INTENT OF THIS EXHIBIT IS TO IDENTIFY EXISTING WATER SUPPLIES IN THE VICINITY OF A PROPOSED GAS WELL, AND IS NOT A COMPLETE BOUNDARY SURVEY. PROPERTY LINES AND OWNER INFORMATION WERE OBTAINED FROM DEEDS, TAX RECORDS, AERIAL PHOTOGRAPHY, GIS, AND FIELD SURVEYED EVIDENCE.

WW-6A4  
(1/12)

Operator Well No. <sup>M01H</sup> Longworth  
4705102078

09/21/2018

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.

Date of Notice: 1/22/18 Date Permit Application Filed: 7/18/18

RECEIVED  
Office of Oil and Gas

JUL 19 2018

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

HAND DELIVERY  CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

WV Department of  
Environmental Protection

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Graham H Longworth Jr  
Address: 2527 Fork Ridge Road  
Moundsville, WV 26041

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

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 523374.34  
County: Marshall Northing: 4410845.48  
District: Clay Public Road Access: Roberts Ridge Road/WV-21  
Quadrangle: Glen Easton, WV 7.5' Generally used farm name: Longworth  
Watershed: Middle Grave Creek - Grave Creek

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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).

Notice is hereby given by:

Well Operator: Chevron Appalachia, LLC  
Address: 700 Cherrington Parkway  
Coraopolis, WV 15108  
Telephone: 412-865-1533  
Email: JZYK@chevron.com  
Facsimile: 412-865-2403

Authorized Representative: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

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).

WW-6A4  
(1/12)

Operator Well No. M011 Longworth **09/21/2018**

**4705102078**

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF INTENT TO DRILL**

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

**Notice Time Requirement:** Notice shall be provided at least TEN (10) days prior to filing a permit application.

**Date of Notice:** 1/22/18 **Date Permit Application Filed:** 7/18/18

RECEIVED  
Office of Oil and Gas

JUL 19 2018

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

HAND DELIVERY  CERTIFIED MAIL RETURN RECEIPT REQUESTED

WV Department of  
Environmental Protection

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

**Notice is hereby provided to the SURFACE OWNER(s):**

Name: Mary Holmes  
Address: 197 Spindle Lane  
Moundsville, WV 26041

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

**Notice is hereby given:**

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

State: West Virginia UTM NAD 83 Easting: 523374.34  
County: Marshall Northing: 4410845.48  
District: Clay Public Road Access: Roberts Ridge Road/WV-21  
Quadrangle: Glen Easton, WV 7.5 Generally used farm name: Longworth  
Watershed: Middle Grave Creek - Grave Creek

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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).

**Notice is hereby given by:**

Well Operator: Chevron Appalachia, LLC  
Address: 700 Cherrington Parkway  
Coraopolis, WV 15108  
Telephone: 412-865-1533  
Email: JZYK@chevron.com  
Facsimile: 412-855-2403

Authorized Representative: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

**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).

09/21/2018

WW-6A4  
(1/12)

Operator: West Virginia, MO1 Longworth  
4705-02078

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF INTENT TO DRILL**

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

**Notice Time Requirement:** Notice shall be provided at least TEN (10) days prior to filing a permit application.

Date of Notice: 1/22/18 Date Permit Application Filed: 7/18/18

RECEIVED  
Office of Oil and Gas

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

JUL 19 2018

HAND DELIVERY  CERTIFIED MAIL RETURN RECEIPT REQUESTED

WV Department of  
Environmental Protection

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

**Notice is hereby provided to the SURFACE OWNER(s):**

Name: The Estate of Barbara J. Derow  
Address: 6247 Roberts Ridge Road  
Moundsville, WV 26041

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

**Notice is hereby given:**

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

State: West Virginia UTM NAD 83 Easting: 523374.34  
County: Marshall Northing: 4410845.48  
District: Clay Public Road Access: Roberts Ridge Road/WV-21  
Quadrangle: Glen Easton, WV 7.5' Generally used farm name: Longworth  
Watershed: Middle Grave Creek - Grave Creek

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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).

**Notice is hereby given by:**

Well Operator: Chevron Appalachia, LLC  
Address: 700 Cherrington Parkway  
Coraopolis, WV 15108  
Telephone: 412-865-1533  
Email: JZYK@chevron.com  
Facsimile: 412-865-2403

Authorized Representative: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

**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  
(1/12)

09/21/2018

Operator Well No. M01H Longworth

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS 4705102078  
NOTICE OF PLANNED OPERATION

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

Date of Notice: 7/22/18 Date Permit Application Filed: 7/18/18

RECEIVED  
Office of Oil and Gas

JUL 19 2018

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

WV Department of  
Environmental Protection

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: Graham H Longworth Jr  
Address: 2527 Fork Ridge Road  
Moundsville, WV 26041

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

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: West Virginia UTM NAD 83 Easting: 523374.34  
County: Marshall Northing: 4410845.48  
District: Clay Public Road Access: Roberts Ridge Road/WV 21  
Quadrangle: Glen Easton 7.5 Generally used farm name: Longworth  
Watershed: Middle Grave Creek - Grave Creek

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: Chevron Appalachia, LLC  
Telephone: 412-865-1533  
Email: JZYK@chevron.com

Address: 700 Cherrington Parkway  
Coraopolis, PA 15108  
Facsimile: 412-865-2403

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  
(1/12)

09/21/2018

Operator Well No. M01H Longworth

4705102078

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: 1/22/18 Date Permit Application Filed: 7/18/18

RECEIVED  
Office of Oil and Gas

JUL 19 2018

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

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  HAND  
DELIVERY

WV Department of  
Environmental Protection

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: Mary Holmes  
Address: 197 Spindle Lane  
Moundsville, WV 26041

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

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: West Virginia UTM NAD 83 Easting: 523374.34  
County: Marshall Northing: 4410845.48  
District: Clay Public Road Access: Roberts Ridge Road/WV 21  
Quadrangle: Glen Easton 7.5' Generally used farm name: Longworth  
Watershed: Middle Grave Creek - Grave Creek

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: Chevron Appalachia, LLC  
Telephone: 412-885-1533  
Email: JZYK@chevron.com

Address: 700 Cherrington Parkway  
Corapolis, PA 15108  
Facsimile: 412-695-2403

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).

09/21/2018

WW-6A5  
(1/12)

Operator Well No. M01H Longworth  
**4705702078**

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: 1/22/18 Date Permit Application Filed: 7/18/18

RECEIVED  
Office of Oil and Gas

JUL 19 2018

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

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

HAND  
DELIVERY

WV Department of  
Environmental Protection

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: The Estate of Barbara J. Derrow  
Address: 6247 Roberts Ridge Road  
Moundsville, WV 26041

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

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: West Virginia UTM NAD 83 Easting: 523374.34  
County: Marshall Northing: 4410845.48  
District: Clay Public Road Access: Roberts Ridge Road/WV 21  
Quadrangle: Glen Easton 7.5' Generally used farm name: Longworth  
Watershed: Middle Grave Creek - Grave Creek

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: Chevron Appalachia LLC  
Telephone: 412-865-1533  
Email: JZYK@chevron.com

Address: 700 Cherrington Parkway  
Coraopolis, PA 15108  
Facsimile: 412-865-2403

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).

4705 + 02078

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Michael Wm Derron, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>523374.34</u>
County: <u>Marshall</u>	UTM NAD 83 Northing: <u>4410845.48</u>
District: <u>Clay</u>	Public Road Access: <u>Roberts Ridge Road / WW 21</u>
Quadrangle: <u>Glen Easton, WV 7.5'</u>	Generally used farm name: <u>Longworth</u>
Watershed: <u>Middle Grave Creek - Grave Creek</u>	

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

\*Please check the box that applies

- SURFACE OWNER
- SURFACE OWNER (Road and/or Other Disturbance)
- SURFACE OWNER (Impoundments/Pits)
- COAL OWNER OR LESSEE
- COAL OPERATOR
- WATER PURVEYOR
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD

**FOR EXECUTION BY A NATURAL PERSON**

Signature: Michael Wm Derron  
Print Name: Michael Wm Derron  
Date: 1-26-2018

**FOR EXECUTION BY A CORPORATION, ETC.**

Company: \_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**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).

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Marilyn Reitley, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 19 (?), including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>523374.34</u>
County:	<u>Marshall</u>	UTM NAD 83 Northing:	<u>4410845.48</u>
District:	<u>Clay</u>	Public Road Access:	<u>Roberts Ridge Road / WW 21</u>
Quadrangle:	<u>Glen Easton, WV 7 5'</u>	Generally used farm name:	<u>Longworth</u>
Watershed:	<u>Middle Grave Creek - Grave Creek</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

- \*Please check the box that applies
- SURFACE OWNER
  - SURFACE OWNER (Road and/or Other Disturbance)
  - SURFACE OWNER (Impoundments/Pits)
  - COAL OWNER OR LESSEE
  - COAL OPERATOR
  - WATER PURVEYOR
  - OPERATOR OF ANY NATURAL GAS STORAGE FIELD

**FOR EXECUTION BY A NATURAL PERSON**

Signature: Marilyn Reitley  
 Print Name: Marilyn Reitley  
 Date: 2-10-2018

**FOR EXECUTION BY A CORPORATION, ETC.**

Company: \_\_\_\_\_  
 By: \_\_\_\_\_  
 Its: \_\_\_\_\_

Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_

**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).

RECEIVED  
Office of Oil and Gas

JUL 19 2018

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Casey V. Saunders, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>523374.34</u>
County:	<u>Marshall</u>		Northing:	<u>4410845.48</u>
District:	<u>Clay</u>	Public Road Access:	<u>Roberts Ridge Road / WW 21</u>	
Quadrangle:	<u>Glen Easton, WW 7.5'</u>	Generally used farm name:	<u>Longworth</u>	
Watershed:	<u>Middle Grave Creek - Grave Creek</u>			

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input checked="" type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>Consol Energy</u></p> <p>By: <u>Casey V. Saunders</u></p> <p>Its: <u>Manager Coal/Gas Coordination</u></p> <p>Signature: <u>Casey V. Saunders</u></p> <p>Date: <u>02/24/18</u></p>

**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).

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**VOLUNTARY STATEMENT OF NO OBJECTION**

**Instructions to Persons Named on Page WW-6A**

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

**Comment and Waiver Provisions**

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.

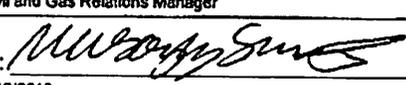
Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I, Mason Smith, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through \_\_\_\_\_, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>523374.336</u>
County: <u>Marshall</u>	Northing: <u>4410845.477</u>
District: <u>Clay</u>	Public Road Access: <u>Roberts Ridge Road</u>
Quadrangle: <u>Glen Easton 7.5'</u>	Generally used farm name: <u>Longworth</u>
Watershed: <u>Upper Ohio-Beaver</u>	

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input checked="" type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>Consolidation Coal Company</u></p> <p>By: <u>Mason Smith</u></p> <p>Its: <u>Coal, Oil and Gas Relations Manager</u></p> <p>Signature: <u></u></p> <p>Date: <u>07/18/2018</u></p>

**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).

Office of Oil and Gas

JUL 19 2018



09/21/2018  
4705-02078

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

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

Jim Justice  
Governor

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

January 10, 2018

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 Permit for the Longworth A Well Pad, Marshall County

Longworth M01H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2016-0411 for the subject site to Chevron Appalachia, LLC for access to the State Road for the well site located off of Marshall County Route 21 SLS.

The operator has signed a STATEWIDE 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 Oil & Gas Coordinator

Cc: Mandy Fordyce  
Chevron Appalachia, LLC  
CH, OM, D-6  
File

RECEIVED  
Office of Oil and Gas

JUL 19 2018

WV Department of  
Environmental Protection

09/21/2018

4705 + 02078

Hydraulic Fracturing Fluid Additives

Supplier	Name	Purpose
Universal	7.5% HCl Acid	Acid - To open perforations
Universal	Unislick ST50	Friction Reducer for Water and Brine (Anionic)
Universal	Scale Inhibitor A	Scale Inhibitor
Universal	Iron Control A	Iron Control
Universal	Unihib G	Corrosion Inhibitor for Acid
Universal	K-Bac 1020	Biocide/Bactericide
Universal	CMHPG (Polyfrac Gel)	Gel
Universal	LEB 10X	Gel Breaker
Universal	100 Mesh White Sand	Proppant
Universal	40-70 Mesh White Sand	Proppant

RECEIVED  
Office of Oil and Gas  
JUL 19 2018  
WV Department of  
Environmental Protection







