

west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary www.dep.wv.gov

Tuesday, September 18, 2018 WELL WORK PERMIT Horizontal 6A / New Drill

CHEVRON APPALACHIA, LLC 700 CHERRINGTON PARKWAY

CORAOPOLIS, PA 15108

Re: Permit approval for LONGWORTH M15H 47-051-02082-00-00

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 M15H Farm Name: GRAHAM H. LONGWORTH JR U.S. WELL NUMBER: 47-051-02082-00-00 Horizontal 6A New Drill Date Issued: 9/18/2018

Promoting a healthy environment.

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. <u>Failure to adhere to the specified permit</u> conditions may result in enforcement action.

CONDITIONS

- 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
- 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.

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, sending an email to DEPOOGNotify@wv.gov.

47051022/6182218

WW-6B (04/15)

API NO. 47-____

OPERATOR WELL NO. M15H Well Pad Name: Longworth

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

I) Well Operator: Chevron App	alachia, LLC	49449935	Marshall	Clay	Glen Easton, WV
		Operator ID	County	District	Quadrangle
2) Operator's Well Number: M15	iΗ	Well Pac	Name: Long	worth	
3) Farm Name/Surface Owner: G	iraham H Longwo	rth Jr. Public Roa	d Access: Rol	perts Ridge	Road/WV-21
4) Elevation, current ground: <u>1</u>	294.18' Ele	evation, proposed	post-constructi	on:	
5) Well Type (a) Gas X Other	Oil	Unde	erground Stora	ge	
(b)If Gas Shall Horiz	ow <u>X</u> zontal X	Deep		······	<u> </u>
6) Existing Pad: Yes or No Yes				Jn	8 30 18
7) Proposed Target Formation(s), Marcellus, 6,531, 61' thick, 0.64		pated Thickness a	nd Expected P		
8) Proposed Total Vertical Depth:	6,511'				
9) Formation at Total Vertical De	pth: Marcellus				
10) Proposed Total Measured Dep	oth: 12,240'				
11) Proposed Horizontal Leg Len	gth: 5,131'				
12) Approximate Fresh Water Str	ata Depths:	568'			
13) Method to Determine Fresh W	ater Depths: 1	mile radius sear	ch around pac	d location	
14) Approximate Saltwater Depth	s: <u>1279', 1883'</u>	, 2134'			
15) Approximate Coal Seam Dept	hs: 520', 836'				
16) Approximate Depth to Possib	le Void (coal mi	ne, karst, other):	None		
17) Does Proposed well location of directly overlying or adjacent to a		ns Yes	No	X	
(a) If Yes, provide Mine Info:	Name:				
	Depth:				
	Seam:	· · · · · · · · · · · · · · · · · · ·			
	Owner:				

API NO. 47-_

OPERATOR WELL NO 에/한1/2018 Well Pad Name: Longworth 4705 1020

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WW-6B

(04/15)

CASING AND TUBING PROGRAM

ТҮРЕ	Size (in)	<u>New</u> <u>or</u> <u>Used</u>	Grade	<u>Weight per ft.</u> (lb/ft)	<u>FOOTAGE: For</u> <u>Drilling (ft)</u>	INTERVALS: Left in Well (ft)	<u>CEMENT:</u> <u>Fill-up</u> (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	12,240	12,240	2706 (500' below 9.625" shoe)
Tubing							
Liners							

ТҮРЕ	Size (in)	<u>Wellbore</u> <u>Diameter (in)</u>	<u>Wall</u> <u>Thickness</u> <u>(in)</u>	<u>Burst Pressure</u> (psi)	Anticipated Max. Internal Pressure (psi)	<u>Cement</u> <u>Type</u>	<u>Cement</u> <u>Yield</u> (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:		

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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% CaCl2, and flake. The intermediate will contain class A cement, 3% CaCl2, 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.

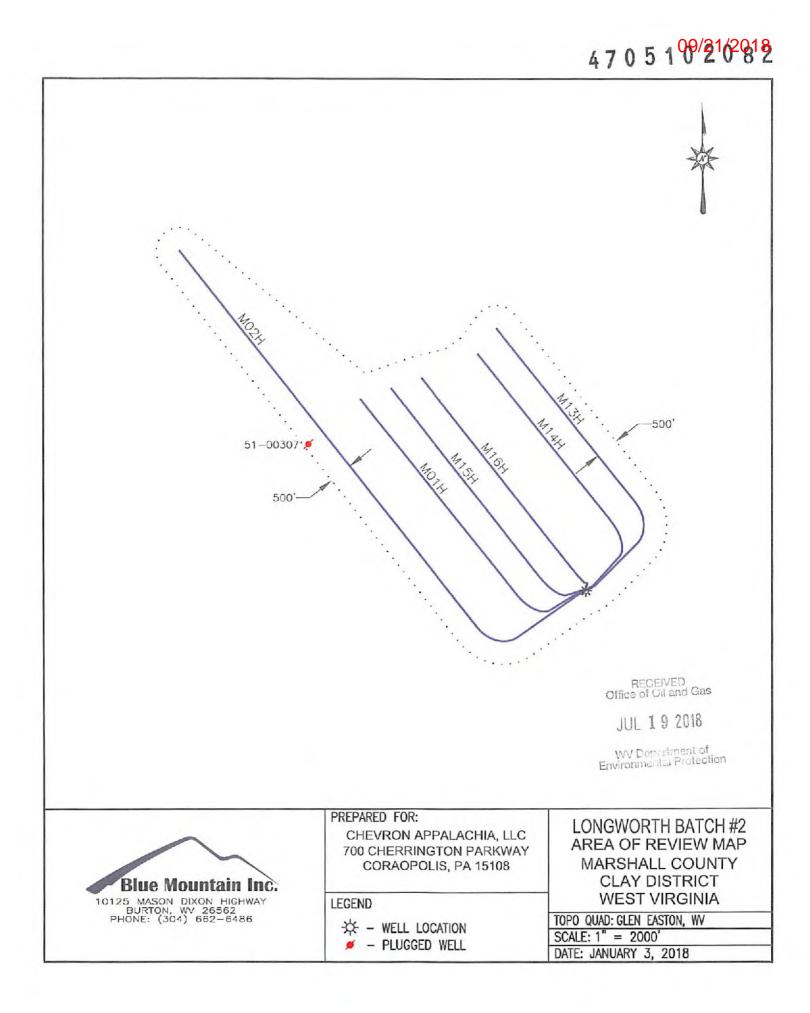
25) Proposed borehole conditioning procedures:

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.

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*Note: Attach additional sheets as needed.



					77	05				47-0	Well ID
							0	9/2	Kentycky Central & Co.	Arrown and Exploration Co.	Rrier Operator On Record
										Operator L	Operator - DEP
									Plugged	Plugged	Status
									39.843735	39.855780	Latitude
									-80.720930		
									1,168	3,000	Vertical TD
									Salt Sands	Fourth	Producing Formation
				Office of JUL WV De Environme	1 9 201	8			None	None	Producing Zones NOT Perforated

4705 102 09822/2018

Cement Additives

The Water String the blend will contain class A cement, 3% CaCl2, and flake.

The intermediate will contain class A cement, 10% CaCl2, 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, KCI, dispersant, de-foamer, suspension agent, and friction reducer.

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09/21/2018

				Lor	worth M15H	1	
wp, Marshall Co, WV			-			Ground Level Elev. (ft above SL):	1270
			-				
BIT TYPE / TFA	CENTRAUZER PROGRAM	CASING SIZE / FORMATION			WELLHEAD DESIGN HOLE SIZE (IN)	CASING SPECS	CEMENT PROGRAM
Core Barrel / Auger	2 Bowspring per it	20" Conductor	42	42	INC A2M	Conductor 20" 78.674 X-52 Minimum 40 ft from GL or at le-	Grout to Surface
	Bow Spring: (1) on the track with stap caller R (1) per it ever coupling to surface					Surface Casing 13-3/8" 54.54 / 55 BTC 0,33" Wall Coupling DD (in) 14.375 ID (in) 12.615 Defit. ID (in) 12.615 Defit. ID (in) 12.615 Burst (basi) 2736 Collapse (psi) 1.300 Vield (If Strength 1.000 lbs) 853	Surface Mend (Class A) Comont to Surface
		13-3/8* Casing	618	618	17.5	Minimum 50 ft past drepest i	mown fresh water
	Bow Spring: (1) on shake trace w/ stop coller & (1) per 3 (is over coupling			• • • •		Intermediate Casing 9-5/8* 40# J-55 BTC 0.395" Wall Coupling CD (in) 10.525 DD (in) 8.835 Drift ID (in) 8.679 Burst (ps) 3.350 Collapse (ssi) 2.570 Yield (Jt Strength 1.000 lbs) 630	Intermediate II Blend (Class A Cerrent to Surface
	Vertical.	9-5/8" Casing	2,184	2,184	12.375		
	Bow Spring: (1) per-excepting: Coupling: <u>Coupling</u> <u>Coupling</u> <u>Solid Composite</u> (1) per yill of cigita KUP					Production Casing 5-1/2* 230* P100EC, 0.351" Wall Coupling OD (in) 6.300 ID (in) 4.778 Dritt ID (in) 4.653 Burst (psi) 14360 Collapse (psi) 12090 Yield uit Strength 1 000 bs) 729	Production Lead Stury. Coment to Surface
	6 - 2	Middlesex		6.293			
		Burkett Shale Tully Limestone		6 369 6 389		-	
		Hamilton shale		6,423			
		Upper Marcellus		6,491			Production Tail Slurry TOC minimum 200° above Marcel
		Lower Marcellus Basal Marcellus		6,522 6,547		the	1
	Float Equip. (2) As of Csg					2/	5/18

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WW-9		09/21/2018
(5/16)	API Number 47	
	Operator's Well No. Long	gworth M15H
DEPARTMENT OF ENVI OFFICE O	WEST VIRGINIA IRONMENTAL PROTECTION 47 OF OIL AND GAS OSAL & RECLAMATION PLAN	05 02082
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 comple Will a pit be used? Yes No	lete the proposed well work? 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:		RECEIVED
Land Application (if selected provide	e a completed form WW-9-GPP)	Office of Oll and Gas
Underground Injection (UIC Permit		JUL 1 9 2018
Reuse (at API Number at next anticipate)
Off Site Disposal (Supply form WW Other (Explain	v-9 for disposal location)	WV Department of Environmental Protection
(inter (expansion)		
Will closed loop systembe used? If so, describe: Yes, we will b	be utilizing multiple open top tanks	/
Drilling medium anticipated for this well (vertical and horizonta		Dil Based
-If oil based, what type? Synthetic, petroleum, etc. Syr		
Additives to be used in drilling medium? Barite, fluid loss, emulsif	v	
Drill cuttings disposal method? Leave in pit, landfill, removed of	offsite, etc. Removed offsite	
-If left in pit and plan to solidify what medium will be	used? (cement, lime, sawdust)	
the term of the term of the Arden Londfill	#100172; South Hills Landfill #100592; Short Cre	eek Landfill #WV109517 🗸

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.

where it was properly disposed.

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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 Company Official (Typed Name) Jenny	Hayes Haye	0	
Company Official Title Permitting Team			
Subscribed and sworn before me this	19th day of January Davage	, 20 <u>18</u> Notary Public	~
My commission expires Commonwealth of Jennsylva	September 17, 2013	<u>×</u>	nonwealth of Pennsylvania - Notary Seal Laura Savage, Notary Public Allegheny County ommission expires September 17, 2018 Commission number 1285773
County of Allegheny		Memb	per, Pennsylvania Association of Notaries

Proposed Revegetation Trea	ment: Acres Disturbed 1	4.2	4 Preveg ctation pH	Zer soitesting report	82
	report Tons/acre or to correct				
Fertilizer type See	table C attached				
Fertilizer amount_1	,000	lbs/acre			
		Seed Mixtures			
Te	mporar y		Perman	ent	
Seed Type	lbs/acre		Seed Type	lbs/acre	
See table A attac	hed	See tab	e 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.

)Yes

Plan Approved by: Jun Unicolan	~	·	
Comments:			
			RECEIVED Office of Oil and Gas
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			W Department of Environmental Protection
al for		- 1- la	
Ville: Oi (a Cas Inspection	Date:	2/5/18	······································

_____)No

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Field Reviewed?

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)								
TYPE D* TYPE L								
	(CUT AND FILL SLOPES)	(ALL OTHER AREAS)						
VARIETY OF SEED	LBS/ ACRE	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	7	12						
LOVEGRASS MAY 15 TO AUGUST 1	/	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						
ТҮРЕ	FORMULA	RATE (LBS/ ACRE)				
MIXED GRASSES AND LEGUMES	10-10-20	1,000				
	5-20-10 (PREFERRED) OR	1,000				
LEGUME STANDS ONLY	10-20-10					
GRASS STANDS ONLY	10-10-20	1,000				

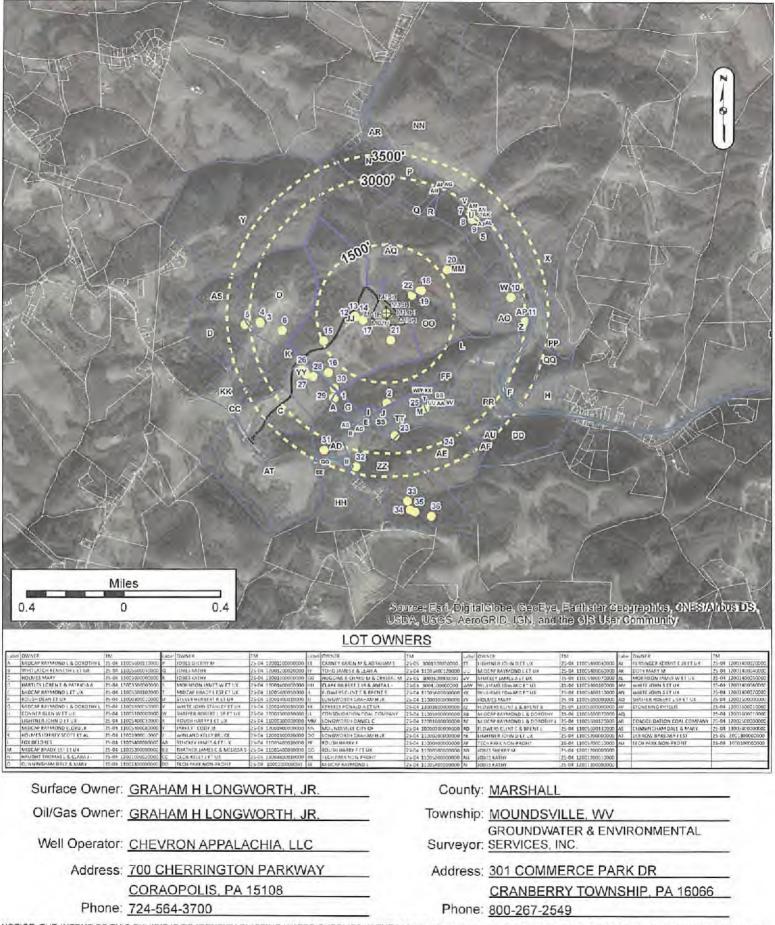
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WATER SUPPLY EXHIBIT LONGWORTH BATCH #2





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



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	Office of Oil and Gas
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	JUL 1 9 2018
10	39° 50' 54.25800"N 80° 43' 01.44840"W	2,754	2,743	2,701	2,712	2,723	2,734	W/ Department of
11	39° 50' 49 15320"N 80° 42' 57.36240"W	3,046	3,033	2,992	3,005	3,017	3,030	Environmental Protection
12	39° 50' 49.62840"N 80° 43' 44.71680"W	653	665	707	695	684	673	La cara de la composición de la composi
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



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	RECEN	(FD)
20	39° 51' 00.00360"N 80° 43' 19.33680"W	1,653	1,648	1,610	1,615	1,620	1,625	Office of Oil	and Gas
21	39° 50' 44.70720''N 80° 43' 34.83480''W	578	568	570	579	590	600	JUI 19	2018
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	Environmental	Protection
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	1.	1
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.



WATER SUPPLY EXHIBIT



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	

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JUL 1 9 2018

WV Department of Environmental Protection

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

09/21/2018

4705 102082



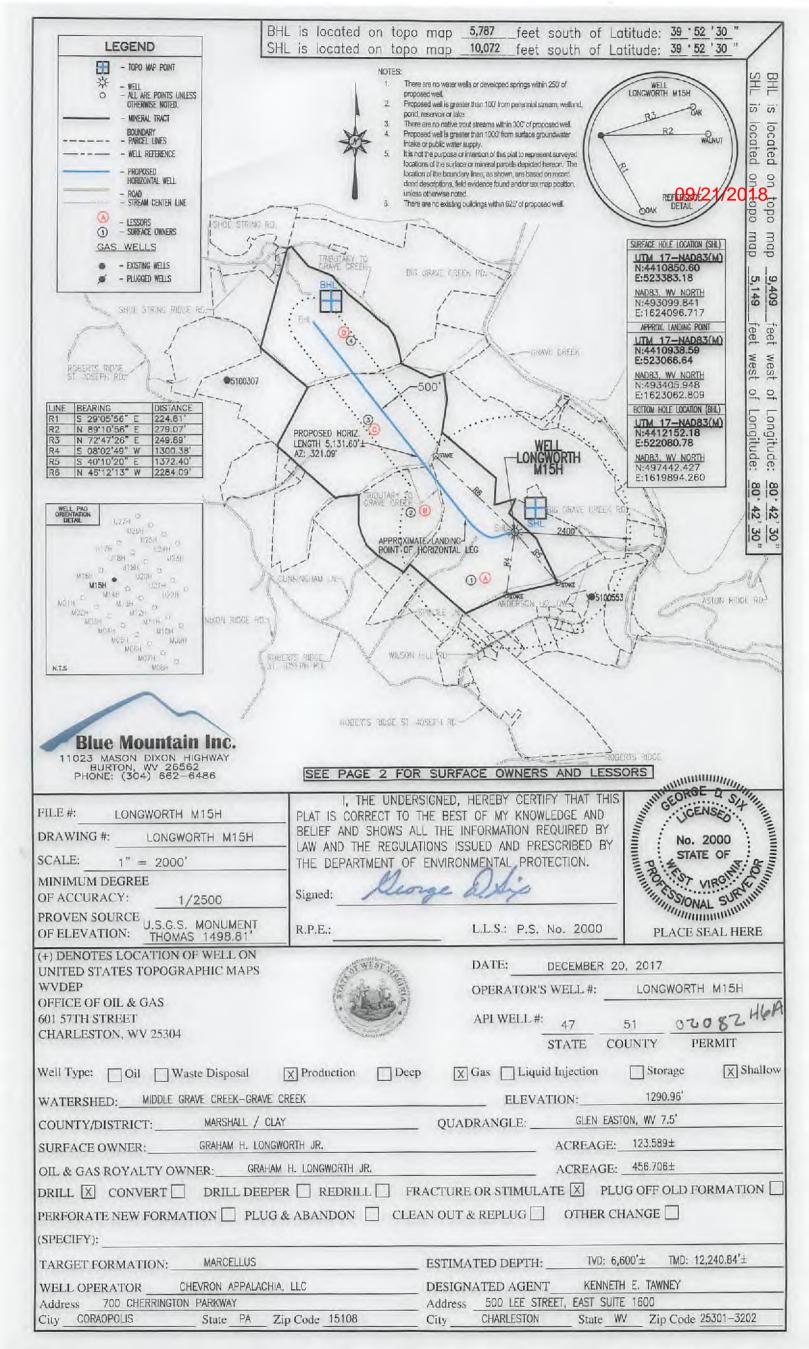
Chevron

Appalachian LLC WV Well Site Safety Plan Pad: Longworth Pad A Well # M15H 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

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JUL 1 9 2018



LONGWORTH 47 05(02082 M15H PAGE 2 OF 2

09/21/2018

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

	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

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)	UTM 17-NAD83(M)	UTM 17-NAD83(M)
N:4410850.60	N:4410938.59	N:4412152.18
E:523383.18	E:523066.64	E:522080.78
NAD83, WV NORTH	NAD83, WV NORTH	NAD83. WV NORTH
N:493099.841	N:493405.948	N:497442.427
E:1624096.717	E:1623062.809	E:1619894.260

DECEMBER 20, 2017

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

47 0 5 1 09229/2078

WW-6A1 (5/13)

Operator's Well No. Longworth M15H

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

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JUL 1 9 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	1.0
By:	Jenny Hayes Channa	Hars
lts:	Permitting Team Lead	(J

Page 1 of 2

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	Assignment #1	n/a	BK 30 - PG 392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	n/a	n/a	n/a	n/a
	Book/Page	BK 790 - PG 129	BK 681 - PG 502	BK 773 - PG 43	BK 797 - PG 336	BK 799 - PG 325	BK 794 - PG 561
	Royalty	0.14	0.15	0.15	0.16	0.16	0.16
Longworth Unit #15H	Lessee	Chevron U.S.A. Inc.	Chesapeake Appalachia, LLC	Chevron U.S.A. Inc.	Chevron U.S.A. Inc.	Chevron U.S.A. Inc.	Chevron U.S.A. Inc.
	Lessor	LONGWORTH GRAHAM H JR ET AL	CUNNINGHAM DALE ET UX	ANDREWS BRETT A ET UX	JMK IREV TRST	PURPLEBURGH VENTURES LLC	MARCELLUS TX MINERAL PRTNRS LTD
:	Plat ID	4-11-1.0	4-13-33.0	4-12-19.0	4-12-4.0		

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WV Department of Environmental Protection

JUL 1 9 2018

09/21/2018

Page Lof 2



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09/21/2018 4705 102082

Luke Slagel Land Representative

February 1, 2018

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West Virginia D.E.P. Office of Oil & Gas 601 57th 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,

Lucae A flagel

Luke Slagel Land Representative

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JUL 1 9 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 Siage@chevron.com

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE CERTIFICATION</u>

Date of Notice Certification: 01/22/2018

API No. 47-	<u>.</u>
Operator's Well	No. M15H
Well Pad Name:	Longworth

47053020

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:	West Virginia	UTM NAD 83	Easting:	523383.18	
County:	Marshail	UTMINAD 85	Northing:	4410850.60	_
District:	Clay	Public Road Acc	cess:	Roberts Ridge Road/WV-21	_
Quadrangle:	Glen Easton, WV 7.5'	Generally used f	farm name:	Longworth	_
Watershed:	Middle Grave Creek - Grave Creek				_

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 subsection ten of this article by the applicant.

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:	OOG OFFICE USE
*PLEASE CHECK ALL THAT APPLY	ONLY
□ 1. NOTICE OF SEISMIC ACTIVITY or ■ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	RECEIVED/ NOT REQUIRED
□ 2. NOTICE OF ENTRY FOR PLAT SURVEY or ■ NO PLAT SURVEY WAS CONDUCTED	
3. NOTICE OF INTENT TO DRILL or ONTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or	RECEIVED/ NOT REQUIRED
U WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	
4. NOTICE OF PLANNED OPERATION BECEIVED Office of Gil and Gas	
■ 5. PUBLIC NOTICE JUL 1 9 2018	
6. NOTICE OF APPLICATION WV Department of Environmental Protection	

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.

Certification of Notice is hereby given:

THEREFORE, 1 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 enny Heres

Chevron Appalachia, LLC	Address	: 700 Cherrington Parkway
Jenny Hayes		Coraopolis, PA 15108
Permitting Team Lead	Facsimil	e: 412-865-2403
412-865-1533	Email:	JZYK@chevron.com
NOTARY SEAL wealth of Pennsylvania - Notary Seal ura Savage, Notary Public Allegheny County ission expires September 17, 2018 mmission number 1285773	Subscribed and s	h of fennsylvania Hegheny swom before me this 7th day of <u>March</u> 2018. <u>Bura Janage</u> Notary Public Expires September 17, 2018
	Jenny Hayes Permitting Team Lead 412-865-1533 NOTARY SEAL vealth of Pennsylvania - Notary Seal ura Savage, Notary Public Allegheny County ission expires September 17, 2018	Jenny Hayes Permitting Team Lead Facsimil 412-865-1533 Email: NOTARY SEAL Vealth of Pennsylvania - Notary Seal ura Savage, Notary Public Allegheny County ission expires September 17, 2018 mmission number 1285773 My Commission

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.

> RECEIVED Office of Oil and Gas

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WW-6A (9-13)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE OF APPLICATION</u>

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

Date of Notice:	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	REGISTERED	\checkmark	METHOD OF DELIVERY THAT REQUIRES A
SERVICE	MAIL		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)	COAL OWNER OR LESSEE
Name: Graham H Longworth Jr	Name: Consolidated Coal Company
Address: 2527 Fork Ridge Road	Address: 1000 Consol Energy Drive
Moundsville, WV 26041	Canonsburg, PA 15317
Name:	COAL OPERATOR
Address:	Name: Murray Energy Corporation
	Address: 46229 National Road
☑ SURFACE OWNER(s) (Road and/or Other Disturbance)	St. Clairsville, OH 43950
Name: Mary Holmes	SURFACE OWNER OF WATER WELL
Address: 197 Spindle Lane	AND/OR WATER PURVEYOR(s)
Moundsville, WV 26041	Name: Daniel C. Longworth
Name: The Estate of Barbara J. Derrow	Address: 812 Spindle Lane
Address: 6247 Roberts Ridge Road	Moundsville, WV 26041
Moundsville, WV 26041	OPERATOR OF ANY NATURAL GAS STORAGE FIELD
□ SURFACE OWNER(s) (Impoundments or Pits)	Name:
Name:	Address:
Address:	
	*Please attach additional forms if necessary

Office of Oil and Gas

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JUL 1 9 2018

API NO. 47-____ OPERATOR WELL NO. M1649/21/2018 Well Pad Name: Longworth

Notice is hereby given:

WV Department of Environmental Protection

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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <u>www.dep.wv.gov/oil-and-gas/pages/default.aspx</u>.

Well Location Restrictions

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

WW-6A (8-13)

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 57th St. SE Charleston, WV 25304 (304) 926-0450

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

RECEIVED Office of Oil and Gas

JUL 1 9 2018

WW-6A (8-13)

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 <u>http://www.dep.wv.gov/oil-and-gas/Horizontal-</u> <u>Permits/Pages/default.aspx</u> 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 192018

WW-6A	
(8-13)	

Notice is hereby given by:

Well Operator: Chevron Appalachia, LLC	Address: 700 Cherrington Parkway					
Telephone: 412-865-1533	Coraopolis, PA 15108	47	051	020	0	0
Email: jzyk@chevron.com	Facsimile: 412-865-2403		00	020	0	4
	0					

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.

aith of Pennsylvania - Notary Sea
ora Savage, Notary Public
Allegheny County
in som expires September 17, 2018
commission number 1285773

Commonwealth of P. Country & Allegheny Subscribed and sworn before		v of J	anyury	201
Laural	savage			ry Public
My Commission Expires	September	17,	2018	

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

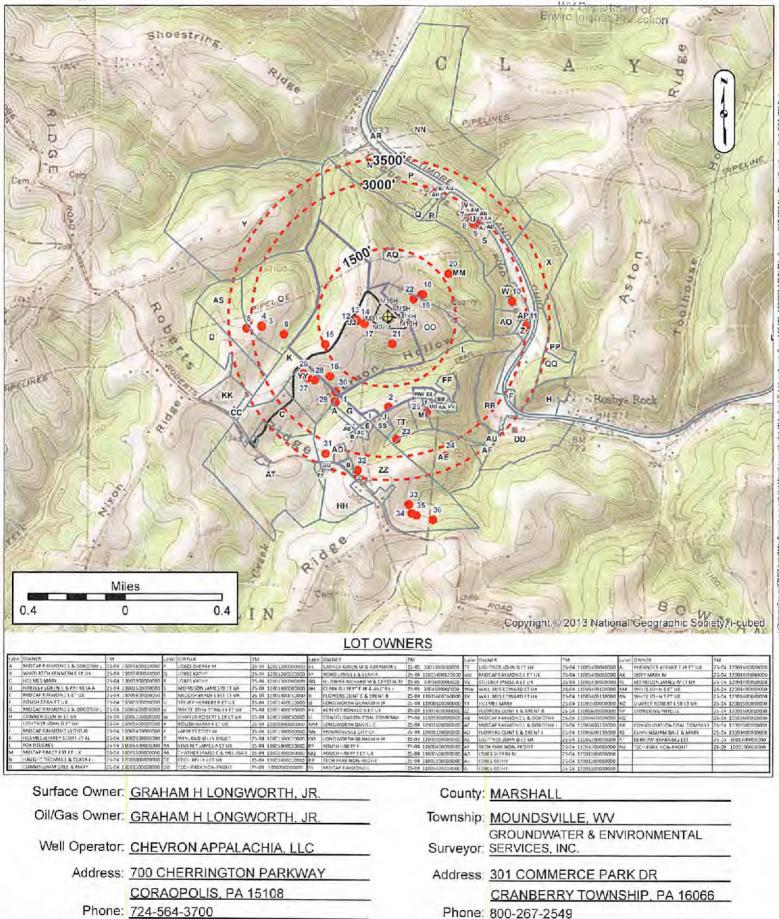
RECEIVED Office of Oil and Gas

JUL 1 9 2018



WATER SUPPLY EXHIBIT LONGWORTH BATCH #2

Office of Oil and Gas 09/21/2018 JUL 1 9 2018



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.

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:
 1/8/18

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

HAND	CERTIFIED MAIL
DELIVERY	RETURN RECEIPT REQUESTED

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	Name:		
Address: 2527 Fork Ridge Road	Address:		
Moundsville, WV 26041			

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 NIAD 02	Easting:	523383.18	
County:	Marshall	UTM NAD 83	Northing:	4410850.60	
District:	Clay	Public Road Acc	ess:	Roberts Ridge Road/WV-21	
Quadrangle:	Glen Easton, WV 7.5'	Generally used fa	arm 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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <u>www.dep.wv.gov/oil-and-gas/pages/default.aspx</u>.

Notice is hereby given by:

Well Operator:	Chevron Appalachia, LLC	Authorized Representative:	
Address:	700 Cherrington Parkway	Address:	
Coraopolis, WV 15	108		
Telephone:	412-865-1533	Telephone:	
Email:	JZYK@chevron.com	Email:	
Facsimile:	412-865-2403	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 <u>depprivacyofficer@wv.gov</u>.

RECEIVED Office of Oil and Gas



Operator Well No. M15H 2072048th

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.

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

HAND ECERTIFIED MAIL DELIVERY RETURN RECEIPT REQUESTED

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

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	LETMANAD an East	sting:	523383.18	
County:	Marshall	UTM NAD 83 No	orthing:	4410850.60	
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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <u>www.dep.wv.gov/oil-and-gas/pages/default.aspx</u>.

Notice is hereby given by:

Well Operator:	Chevron Appalachia, LLC	Authorized Representative:	
Address:	700 Cherrington Parkway	Address:	
Coraopolis, WV 151	108		
Telephone:	412-865-1533	Telephone:	
Email:	JZYK@chevron.com	Email:	
Facsimile:	412-865-2403	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 <u>depprivacyofficer@wv.gov</u>.

RECEIVED Office of Oil and Gas

JUL 1 9 2018

Operator Well No. M15H 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.

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

HAND	 CERTIFIED MAIL
DELIVERY	RETURN RECEIPT REQUESTED

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. Derrow	Name:
Address: 6247 Roberts Ridge Road	Address:
Moundsville, WV 26041	

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	LITMANAD 82	Easting:	523383.18	
County:	Marshall	UTM NAD 83	Northing:	4410850.60	
District:	Clay	Public Road Acc	ess:	Roberts Ridge Road/WV-21	
Quadrangle:	Glen Easton, WV 7.5'	Generally used fa	arm 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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <u>www.dep.wv.gov/oil-and-gas/pages/default.aspx</u>.

Notice is hereby given by:

Well Operator:	Chevron Appalachia, LLC	Authorized Representative:	
Address:	700 Cherrington Parkway	Address:	
Coraopolis, WV 15	108		
Telephone:	412-865-1533	Telephone:	
Email:	JZYK@chevron.com	Email:	
Facsimile:	412-865-2403	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.

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JUL 1 9 2018

WW-6A5 (1/12)

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

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

器	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	Name:
Address: 2527 Fork Ridge Road	Address:
Moundsville, WV 26041	

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:	523383.18	
County:	Marshall	Northing:	4410850.60	
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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

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

Oil and Gas Privacy Notice:

RECEIVED Office of Oil and Gas JUL 1 9 2018 WV Department of Environmental Protestion

WW-6A5 (1/12) 09/21/2018

Operator Well No. Longworth M15H

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE OF PLANNED OPERATION</u>

Not Dat	ice Time Requirement: notice shall e of Notice: 1/22/18D	be provided no ate Permit A _l	b later than the filing date of permit application. Description of the provident $\frac{1}{18}$	RECEIVED Office of Oil and Gas
Deli	very method pursuant to West Virg	ginia Code § 2	22-6A-16(c)	JUL 1 9 2018
	CERTIFIED MAIL RETURN RECEIPT REQUESTEE		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	Name:
Address: 197 Spindle Road	Address:
Moundsville, WV 26041	

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		Easting:	523383.18	
County:	Marshall	UTM NAD 83	Northing:	4410850.60	
District:	Clay	Public Road Acc	cess:	Roberts Ridge Road/WV 21	
Quadrangle:	Glen Easton 7 5'	Generally used f	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 57th Street, SE. Charleston, WV 25304 (304-926-0450) or by visiting <u>www.dep.wv.gov/oil-and-gas/pages/default.aspx</u>.

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

Oil and Gas Privacy Notice:

Operator Well No. Longworth M15H

WW-6A5 (1/12)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS <u>NOTICE OF PLANNED OPERATION</u>

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

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

ш	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 O	WNER(s)	Office of Oil and Gas
(at the address listed in the records of the sheriff a Name: The Estate of Barbara J. Denow	at the time of notice): Name:	JUL 1 9 2018
Address: 6247 Roberts Ridge Road	Address:	
Moundsville, WV 26041		WV Department of Environmental Protection

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:	523383.18	
County:	Marshall	UTMINAD 83	Northing:	4410850.60	
District:	Clay	Public Road Acc	cess:	Roberts Ridge Road/WV 21	1
Quadrangle:	Glen Easton 7.5'	Generally used f	farm name:	Longwarth	
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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting <u>www.dep.wv.gov/oil-and-gas/pages/default.aspx</u>.

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

Oil and Gas Privacy Notice:

API NO. 47				
OPERATOR W	LINO.	M09/	21/2	018
OPERATOR WH Well Pad Name	Lowwoul	TU T	20	82

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.

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VOLUNTARY STATEMENT OF NO OBJECTION

I, <u>M: charl</u> <u>Wupercorr</u>, 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:	West Virginia	UTM NAD 83	Easting:	523383.18			
County:	Marshall	UTMINAD 83	Northing:	4410850.60			
District:	Clay	Public Road Ac	cess:	Roberts Ridge Road / WV 21			
Quadrangle:	Gien Easton, WV 7.5	Generally used	farm name:	Longworth			
Watershed:	Middle Grave Creek - Grave Creek						

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	FOR EXECUTION BY A NATURAL PERSON
🛛 SURFACE OWNER	Signature: Michael Um. Dercon Print Name: Michael WM. Derrow
□ SURFACE OWNER (Road and/or Other Disturbance)	Print Name: Michael Wy. Derrow Date: (-26.20/8
□ SURFACE OWNER (Impoundments/Pits)	FOR EXECUTION BY A CORPORATION, ETC.
□ COAL OWNER OR LESSEE	Company:
COAL OPERATOR	By: Its:
□ WATER PURVEYOR	Signature:
□ OPERATOR OF ANY NATURAL GAS STORAGE FIELD	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 <u>depprivacyofficer@wv.gov</u>.

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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

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VOLUNTARY STATEMENT OF NO OBJECTION

1, Marilys Rectley _____, 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 15 (?) _____, 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:	West Virginia	LITAA MAAN 92	Easting:	523363 18	
County:	Marshall	UTM NAD 83	Northing:	4410850.60	
District:	Clay	Public Road Access: Generally used farm name:		Roberts Ridge Road / WV 21	
Quadrangle:	Glen Easton, WV 7.5'			Longworth	
Watershed:	Middle Grave Creek - Grave Creek				

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	FOR EXECUTION BY A NATURAL PERSON
□ SURFACE OWNER	Signature: Marilyn Reilley
X SURFACE OWNER (Road and/or Other Disturbance)	Signature: Marilyn Reilley Print Name: <u>Marilyn Reilley</u> Date: 2-10 2018
□ SURFACE OWNER (Impoundments/Pits)	FOR EXECUTION BY A CORPORATION, ETC.
□ COAL OWNER OR LESSEE	Company:
□ COAL OPERATOR	By: Its:
□ WATER PURVEYOR	Signature:
\Box operator of any natural gas storage field	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 <u>depprivacyofficer@wv.gov</u>.

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JUL 1 9 2018

API NO. 44	70-5	10	20	82
OPERATOR	WELL N	О. М15н	9/21/	2018
Well Pad Nar				

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

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Comment and Waiver Provisions

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VOLUNTARY STATEMENT OF NO OBJECTION

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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 fo	lows.

	me were pres, an ree prepered were we			
State:	West Virginia	UTM NAD 83 Easting:	523383.18	
County:	Marshall	Northing:	4410850.60	
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			

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	FOR EXECUTION BY A NATURAL PERSON
□ SURFACE OWNER	Signature:
□ SURFACE OWNER (Road and/or Other Disturbance)	Print Name: Date:
SURFACE OWNER (Impoundments/Pits)	FOR EXECUTION BY A CORPORATION, ETC.
COAL OWNER OR LESSEE	Company: Consol Energy
COAL OPERATOR	By: Caser V. Saures Its: Manager Coal/Gas Coordination
□ WATER PURVEYOR	Signature: wer V. Saumfun
□ OPERATOR OF ANY NATURAL GAS STORAGE FIELD	Date: _02/194/146

Oil and Gas Privacy Notice:

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WW-6AW (1-12) RECEIVED Office of Oil and Gas

JUL 1 9 2018

API NO. 47470510/21002

WV Department of Environmental ProtectionSTATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS VOLUNTARY STATEMENT OF NO OBJECTION

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VOLUNTARY STATEMENT OF NO OBJECTION

I, <u>Mason Smith</u>, 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:

- quinte and inter preside in the proposed when work on the fact of failed as follows.					
State:	West Virginia		Easting:	523383.182	
County:	Marshall	UTM NAD 83	Northing:	4410850.598	en
District:	Clay	Public Road Ac	cess:	Roberts Ridge Road	
Quadrangle:	Glen Easton 7.5'	Generally used f	farm name:	Longworth	· · · · · · · · · · · · · · · · · · ·
Watershed:	Upper Ohio-Beaver	•		·······	

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	FOR EXECUTION BY A NATURAL PERSON
□ SURFACE OWNER	Signature:
SURFACE OWNER (Road and/or Other Disturbance)	Print Name: Date:
SURFACE OWNER (Impoundments/Pits)	
COAL OWNER OR LESSEE	FOR EXECUTION BY A CORPORATION, ETC. Company: Consolidation Coal Company
COAL OPERATOR	By: Mason Smith Its: Coal, Oil and Gas Relations Manager
WATER PURVEYOR	Signature: Magon Suns
OPERATOR OF ANY NATURAL GAS STORAGE FIELD	Date: 07/18/2018

Oil and Gas Privacy Notice:





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 57th Street, SE Charleston, WV 25304

Subject: DOH Permit for the Longworth A Well Pad, Marshall County

Longworth M15H

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,

Dary K. Clayton

Gary K. Clayton, P.E. Regional Maintenance Engineer Central Office Oil &Gas Coordinator

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



09/21/2018 4705 102082

Hydraulic Fracturing Fluid Additives

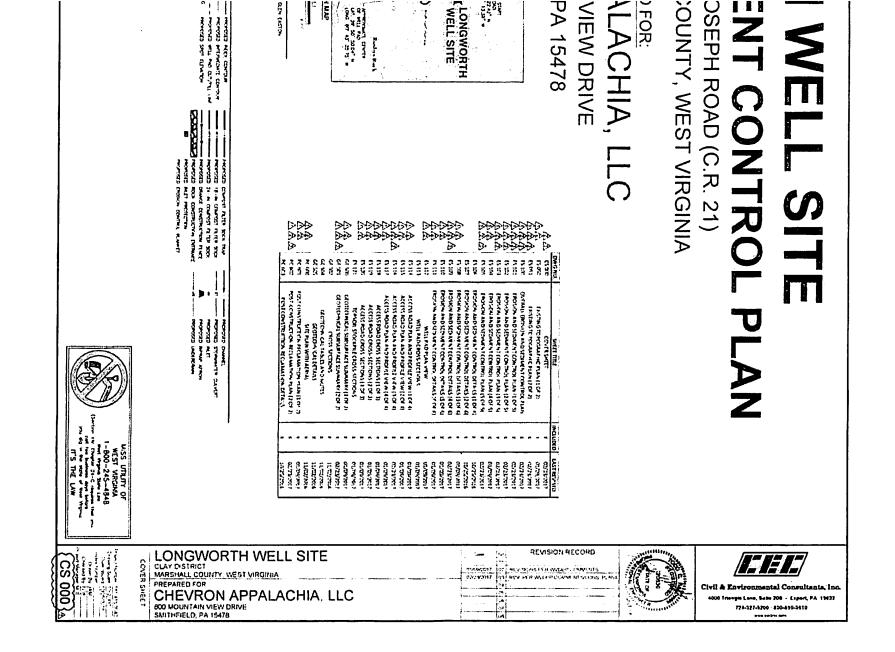
Supplier	Name	Purpose	
Universal	7.5% HCl Acid	Acid - To open perforations	
Universal	Unislick ST50	Friction Reducer for Water and Brine (Anionic)	
Universal	Scale Inhibitor A	Scale Inhibitor	
Universal	Iron Control A	Iron Control	
Universal	Unihib G	Corrosion Inhibitor for Acid	
Universal	K-Bac 1020	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	

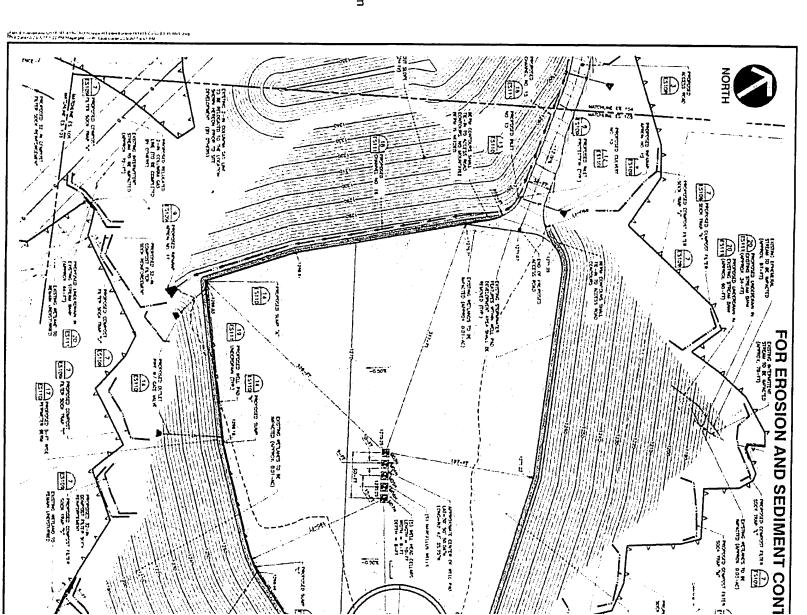
Office of OI and Gas JUL 19 2018 Environmental Protection



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WAY Department of Environmental Protection

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