



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

Friday, January 25, 2019
WELL WORK PERMIT
Horizontal 6A / New Drill

CHEVRON APPALACHIA, LLC
700 CHERRINGTON PARKWAY

CORAOPOLIS, PA 15108


Re: Permit approval for M08H
47-051-02128-00-00

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: M08H
Farm Name: GRAHAM H. LONGWORTH 
U.S. WELL NUMBER: 47-051-02128-00-00
Horizontal 6A New Drill
Date Issued: 1/25/2019

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.

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.

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

1) Well Operator: Chevron Appalachia, LLC 49449935 Marshall Clay Glen Easton, WV
Operator ID County District Quadrangle

2) Operator's Well Number: M08H 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: 1270' Elevation, proposed post-construction: 1270'

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

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No Yes *JN 10/10/18*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6,511 ft below GL, 50 ft thick with pore pressure gradient 0.64 psi/ft

8) Proposed Total Vertical Depth: 6,511

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 16,819

11) Proposed Horizontal Leg Length: 9,786

12) Approximate Fresh Water Strata Depths: 568' below GL

13) Method to Determine Fresh Water Depths: based on deepest water well within 1 mi radius

14) Approximate Saltwater Depths: 1269 ft, 1880 ft, 2134 ft below GL

15) Approximate Coal Seam Depths: Pittsburgh #8 coal seam top 835 ft below GL

16) Approximate Depth to Possible Void (coal mine, karst, other): No void expected

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: _____

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CASING AND TUBING PROGRAM

JN 10/10/18

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	2,184	2,184	CTS
Production	5.5	New	P110	20	16,819	16,819	2,684 (500' below 9.625" shoe)
Tubing							
Liners							

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:				

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10/19/18

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:

9525 bbl fluid - 400,000 lbm 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: (1) on shoe track w/ stop collar & (1) per jt over coupling to surface; Intermediate: (1) on shoe track w/ stop collar & (1) per 3 jts over coupling; Production String: (1) centralizer every jt in the lateral and curve & (1) every other joint from KOP to surface.

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.

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, KCl, dispersant, de-foamer, suspension agent, and friction reducer.

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Longworth M08H

Clay Twp, Marshall Co, WV							Ground Level Elev. (ft above SL): 1270		
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 Bow Spring per jt	20" Conductor	42	42			30	Conductor 20" 78.678 X-52 Minimum 40 ft from GL or at least 10 ft into bedrock	Grout to Surface
	Bow Spring: (1) on shoe track w/ stop collar & (1) per jt over coupling to surface	13-3/8" Casing	618	618			17.5	Surface Casing 13-3/8" S4.5# 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	Surface Blend (Class A) Cement to Surface
	Bow Spring: (1) on shoe track w/ stop collar & (1) per 3 jts over coupling	9-5/8" Casing	2,184	2,184			12.375 - 12.25	Intermediate Casing 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	Intermediate II Blend (Class A) Cement to Surface
Non-Conservation	Vertical Bow Spring: (1) per every other jt over coupling Curves and Lateral Solid Composite (1) per jt of csg to KOP Float Equip. (2) its of Csg Float Equip.	Middlesex Burkett Shale Tully Limestone Hamilton shale Upper Marcellus Lower Marcellus Basal Marcellus	5,293	5,293			8.5 - 8.75	Production Casing 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	Production Lead Slurry Cement to Surface

Production Test Slurry
 TOC minimum 0.1%
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 WV Department of Environmental Protection
 JW 10/11/18

WW-9
(4/16)

API Number 47 - _____ - _____

Operator's Well No. M08H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Chevron Appalachia, LLC OP Code 49449935

Watershed (HUC 10) Middle Grave Creek - Grave Creek Quadrangle 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
- 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 to KOP, Oil Based KOP to TMD

-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 #WW109517

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

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

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

Company Official Signature Jenny Butchko

Company Official (Typed Name) Jenny Butchko

Company Official Title Permitting Team Lead

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Subscribed and sworn before me this 17th day of October, 2018 Commonwealth of Pennsylvania
County of Allegheny

Laura Savage

Notary Public

My commission expires September 17, 2022

Commonwealth of Pennsylvania - Notary Seal
Laura Savage, Notary Public
Allegheny County
My commission expires September 17, 2022
Commission number 1285773
Member, Pennsylvania Association of Notaries

Chevron Appalachia, LLC

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

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, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Jim Unholzer*

Comments: _____

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Title: Oil & Gas Inspector

Date: 10/9/18

Field Reviewed? () Yes () No

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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
CROWN VETCH	20	
HARD FESCUE MIXTURE **		53
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



Chevron

**Appalachian LLC
WV Well Site Safety Plan
Pad: Longworth Pad A
Well # M08H**

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

JK
10/9/18

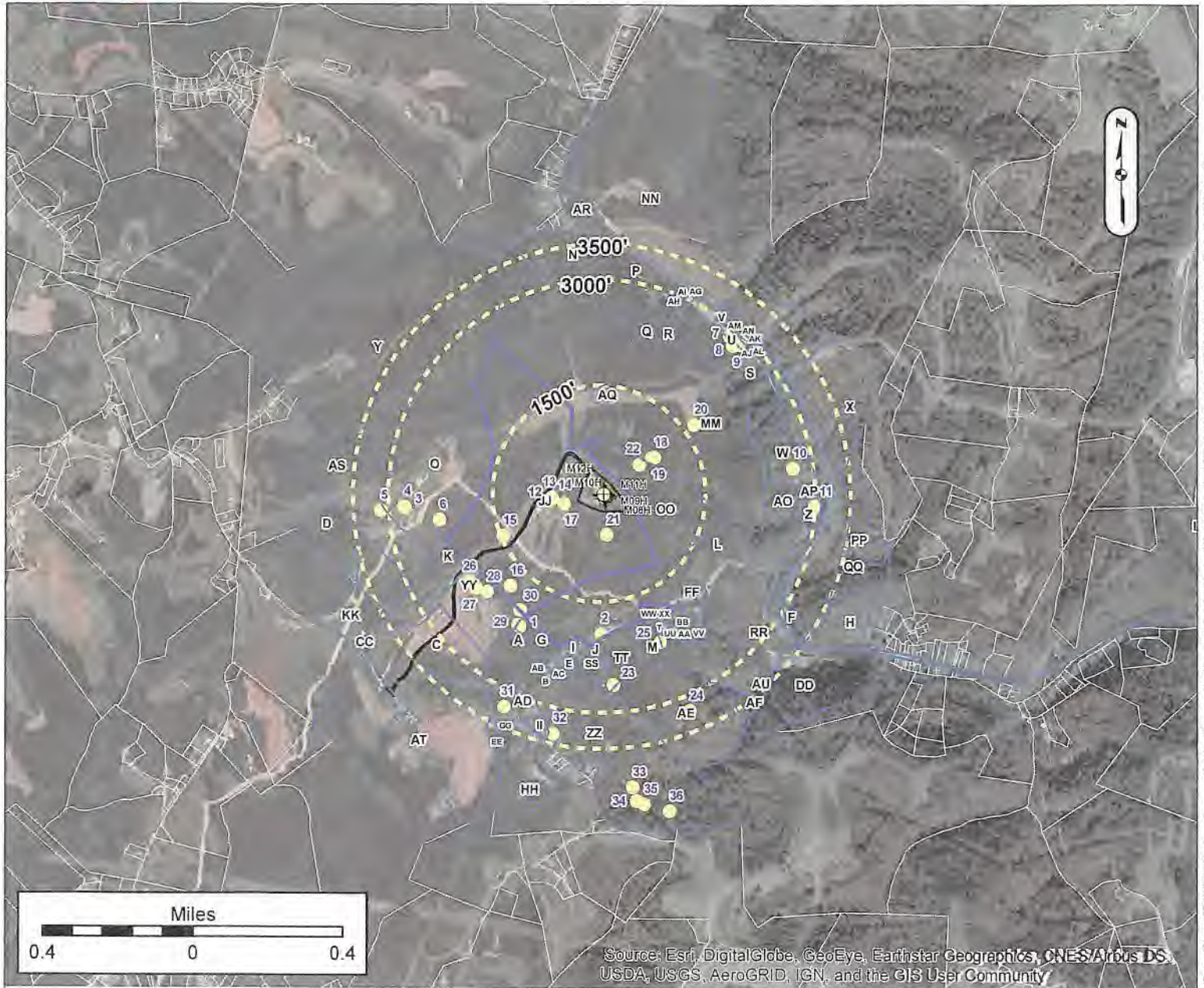
**Access Point – [39.839575°N, 80.737044°W]
Well Site – [39.847350°N, 80.726939°W]
Marshall County, West Virginia**

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WATER SUPPLY EXHIBIT LONGWORTH BATCH #3

4705102128



LOT OWNERS

Label	OWNER	TM	Label	OWNER	TM	Label	OWNER	TM	Label	OWNER	TM
A	MIDCAP RAYMOND L & BORDITH L	25-04 11005600110000	F	JOHNS SHERRY M	25-04 12001200000000	ES	CARNEY KAREN M & ABRAHAM S	25-05 80013000100000	AI	LIGHTNER JOHN D ET UX	25-04 11005400002000
B	WHITLATCH KENNETH E ET UX	25-04 1100540000400000	G	JOHNS KATHY	25-04 12001200020000	FF	YOHIO JAMES E & LEAH A	25-04 1100540001200000	AJ	PERSINGER KERMIT E JR ET UX	25-04 1200140000200000
C	HOLMES MARY	25-04 1100540000000000	H	JOHNS KATHY	25-04 1200120000000000	GG	HUGGINS RICHARD M & CRYSTAL M	25-05 3003600000000000	AK	DOTY MARY M	25-04 120014000040000000
D	HARTLEY LOREN E & PATRICIA A	25-04 1100540000000000	I	MORRISON JAMES W ET UX	25-04 1200140000000000	HH	CLARK GILBERT E JR & ANITA L	25-05 3004100000000000	AL	MORRISON JAMES W ET UX	25-04 120014000050000000
E	MIDCAP RAYMOND L ET UX	25-04 1100540000100000	J	MIDCAP BRADY L ET UX	25-04 1100540000500000	II	FLOWERS CLINT E & BRENT B	25-04 1100540000500000	AM	WHITE JOHN S ET UX	25-04 120014000060000000
F	ROUSH DEAN ET UX	25-04 1100540000100000	K	STEVEY HERBERT R ET UX	25-04 1200120002000000	KK	KIRKES RONALD A ET UX	25-04 1100540000000000	AN	WHITE JOHN S ET UX	25-04 120014000070000000
G	MIDCAP RAYMOND L & BORDITH L	25-04 1100540000200000	L	WHITE JOHN STANLEY ET UX	25-04 1200120001000000	LL	CONSOLIDATION COAL COMPANY	25-04 1200120001000000	AO	SHAFER ROBERT L SR ET UX	25-04 1200150000000000
H	CORNER GLEN W ET UX	25-04 1100540000000000	M	SHAFER ROBERT L SR ET UX	25-04 1200120001000000	MM	LONGWORTH DANIEL C	25-04 1200120001000000	AP	STONKING PHYLLIS	25-04 1200150000100000
I	LIGHTNER JOHN D ET UX	25-04 1100540000100000	N	ROUSH HARRY F ET UX	25-04 1100540000000000	NN	LONGWORTH GRAHAM H JR	25-04 1100540000000000	AA	CONSOLIDATION COAL COMPANY	25-04 1200150000100000
J	MIDCAP RAYMOND L LOYD JR	25-04 1100540000100000	O	JARRETT CODY M	25-04 1200120001000000	OO	MOUNDSVILLE CITY OF	25-04 1200120001000000	AV	WHITE JOHN S ET UX	25-04 120014000070000000
K	HOLMES JEFFREY SCOTT ET AL	25-04 1100540000100000	P	WINLAND KELLY BRUCE L	25-04 1200120001000000	PP	LONGWORTH GRAHAM H JR	25-04 1100540000000000	AW	SHAFER ROBERT L SR ET UX	25-04 1200150000000000
L	KOX DELORES	25-04 1100540000000000	Q	STUCKEY JAMES A ET UX	25-04 1100540000100000	QQ	ROUSH HARRY F	25-04 1100540000000000	AX	SHAFER ROBERT L SR ET UX	25-04 1200150000000000
M	MIDCAP BRADY L ET UX	25-04 1100540000100000	R	THATHUR JAMES C & MELISSA S	25-04 1100540000100000	RR	ROUSH HARRY F ET UX	25-04 1100540000000000	AY	TECH PARK NON-PROFIT	25-09 1006100000000000
N	HAUGHT THOMAS L & CLARA J	25-04 1200120001000000	S	CECIL KELLY J ET UX	25-04 1200120001000000	SS	TECH PARK NON-PROFIT	25-04 1100540000000000	AZ	TECH PARK NON-PROFIT	25-09 1006100000000000
O	CUNNINGHAM DALL & MARY	25-04 1200120001000000	T	TECH PARK NON-PROFIT	25-09 1006100000000000	TT	MIDCAP RAYMOND L	25-04 1100540000100000	BA	TECH PARK NON-PROFIT	25-09 1006100000000000

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

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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 #3

47 03 .02128

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	8H	9H	10H	11H	12H				
1	39° 50' 31.99920"N 80° 43' 50.45880"W	2,148	2,178	2,178	2,178	2,178				
2	39° 50' 31.13880"N 80° 43' 35.65200"W	1,878	1,903	1,911	1,919	1,928				
3	39° 50' 47.99400"N 80° 44' 11.34600"W	2,820	2,839	2,827	2,815	2,803				
4	39° 50' 48.12000"N 80° 44' 11.46480"W	2,829	2,847	2,835	2,823	2,811				
5	39° 50' 47.55840"N 80° 44' 15.60840"W	3,155	3,173	3,161	3,150	3,138				
6	39° 50' 46.43880"N 80° 44' 05.11440"W	2,352	2,372	2,361	2,350	2,339				
7	39° 51' 12.27240"N 80° 43' 13.22040"W	2,859	2,829	2,829	2,831	2,832				
8	39° 51' 10.91160"N 80° 43' 12.61560"W	2,779	2,750	2,751	2,753	2,755				
9	39° 51' 10.99080"N 80° 43' 11.43120"W	2,845	2,815	2,817	2,819	2,821				
10	39° 50' 54.25800"N 80° 43' 01.44840"W	2,677	2,656	2,667	2,678	2,689				
11	39° 50' 49.15320"N 80° 42' 57.36240"W	2,956	2,940	2,952	2,965	2,978				
12	39° 50' 49.62840"N 80° 43' 44.71680"W	738	755	743	731	719				
13	39° 50' 49.76160"N 80° 43' 44.91480"W	754	770	758	746	734				
14	39° 50' 49.67160"N 80° 43' 44.91480"W	754	771	759	746	734				
15	39° 50' 44.37960"N 80° 43' 53.60520"W	1,529	1,554	1,545	1,536	1,528				

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



WATER SUPPLY EXHIBIT
LONGWORTH BATCH #3



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	8H	9H	10H	11H	12H				
16	39° 50' 37.55040"N 80° 43' 52.09320"W	1,799	1,828	1,825	1,821	1,818				
17	39° 50' 48.94440"N 80° 43' 42.63240"W	581	601	590	579	569				
18	39° 50' 55.43520"N 80° 43' 26.41440"W	901	873	877	882	887				
19	39° 50' 55.37400"N 80° 43' 26.90760"W	868	839	843	848	852				
20	39° 51' 00.00360"N 80° 43' 19.33680"W	1,621	1,593	1,597	1,601	1,606				
21	39° 50' 44.70720"N 80° 43' 34.83480"W	506	530	539	548	557				
22	39° 50' 54.42000"N 80° 43' 29.10720"W	677	648	651	655	658				
23	39° 50' 24.18360"N 80° 43' 33.22560"W	2,586	2,610	2,619	2,628	2,637				
24	39° 50' 20.94000"N 80° 43' 19.41960"W	3,161	3,177	3,190	3,202	3,215				
25	39° 50' 30.21000"N 80° 43' 24.89880"W	2,130	2,147	2,160	2,172	2,185				
26	39° 50' 38.04720"N 80° 43' 59.52000"W	2,230	2,257	2,251	2,245	2,239				
27	39° 50' 37.13640"N 80° 43' 58.28520"W	2,200	2,228	2,223	2,218	2,213				
28	39° 50' 36.69360"N 80° 43' 56.34840"W	2,107	2,135	2,131	2,126	2,122				
29	39° 50' 32.17560"N 80° 43' 50.67840"W	2,142	2,172	2,172	2,172	2,172				
30	39° 50' 34.24200"N 80° 43' 50.41200"W	1,960	1,990	1,989	1,989	1,988				

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WATER SUPPLY EXHIBIT
LONGWORTH BATCH #3



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	8H	9H	10H	11H	12H				
31	39° 50' 20.94360"N 80° 43' 53.01120"W	3,222	3,252	3,254	3,256	3,258				
32	39° 50' 17.44080"N 80° 43' 44.02560"W	3,335	3,362	3,368	3,374	3,379				
33	39° 50' 10.26600"N 80° 43' 29.49960"W	4,015	4,038	4,047	4,057	4,067				
34	39° 50' 08.39400"N 80° 43' 28.77240"W	4,209	4,232	4,242	4,252	4,262				
35	39° 50' 07.99800"N 80° 43' 27.40080"W	4,263	4,286	4,296	4,306	4,316				
36	39° 50' 07.10880"N 80° 43' 22.72800"W	4,418	4,439	4,450	4,461	4,472				

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BHL is located on topo map 3,816 feet south of Latitude: 39° 50' 00"
 SHL is located on topo map 10,147 feet south of Latitude: 39° 52' 30"

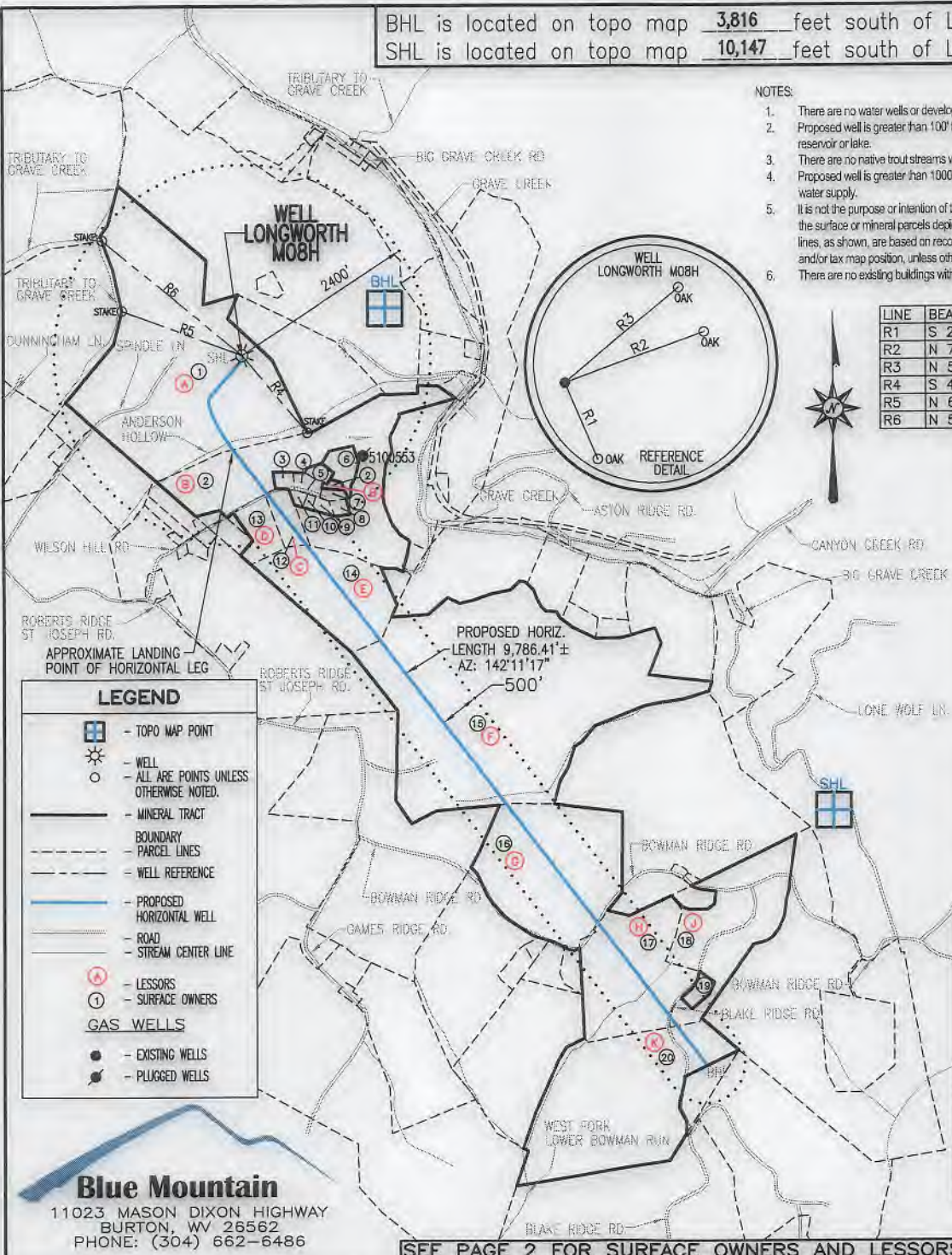
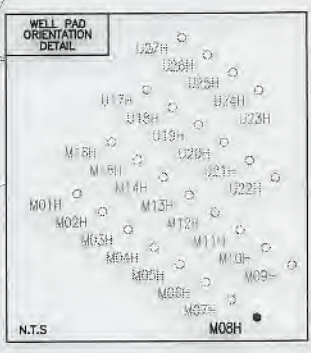
- NOTES:
1. There are no water wells or developed springs within 250' of proposed well.
 2. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 3. There are no native trout streams within 300' of proposed well.
 4. Proposed well is greater than 1000' from surface groundwater intake or public water supply.
 5. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.
 6. There are no existing buildings within 625' of proposed well.

LINE	BEARING	DISTANCE
R1	S 23°14'48" E	131.58'
R2	N 70°15'53" E	235.48'
R3	N 50°29'57" E	234.98'
R4	S 40°23'26" E	1277.67'
R5	N 69°37'07" W	1631.11'
R6	N 50°43'40" W	2302.91'

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
 N:4410827.88
 E:523401.05
 NAD83, WV NORTH
 N:493024.310
 E:1624154.110

APPROX. LANDING POINT
UTM 17-NAD83(M)
 N:4410462.92
 E:523371.27
 NAD83, WV NORTH
 N:491828.340
 E:1624036.370

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
 N:4408138.06
 E:525238.50
 NAD83, WV NORTH
 N:484096.940
 E:1630036.160



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

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

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

FILE #: LONGWORTH M08H
 DRAWING #: LONGWORTH M08H
 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: SEPTEMBER 5, 2018
 OPERATOR'S WELL #: LONGWORTH M08H
 API WELL #: 47 51 02128
 STATE COUNTY PERMIT

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

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1270'

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: 630.126±

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: 6,511'± TMD: 16,819.47'±

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

BHL is located on topo map 10,791 feet west of Longitude: 80° 40' 00"
 SHL is located on topo map 5,090 feet west of Longitude: 80° 42' 30"

LONGWORTH

M08H

PAGE 2 OF 2

	LESSOR	DIST-TM/PAR
A	GRAHAM H. LONGWORTH JR. ET AL	4-11/1
B	DELORES J. FOX	4-11/54
C	NELLI J. MIDCAP	4-11/53
D	*JOHN D. LIGHTNER	4-11/54.4
E	JOHN D. LIGHTNER	4-11/57
F	HOWARD E. & SUSAN C. YOUNG	9-1/18
G	DEAN B. COLVIN	9-1/22
	MARGARET KINNEY	
	PATRICIA COLVIN GRANDSTAFF	
	MARILYN PYLES SNYDER	
	JAMES E. PYLES	
	SUSAN ASTON	
	CAROL HULL	
	DAVID GEORGE MOORE	
	BETTY LOU DELLGET KERNS	
	MARILYN SOUTH	
	HOWARD GUMP ET UX	
	JUDY REILLEY FEIERSTEIN	
	RICHARD O'HARA	
	CATHY J. COLVIN	
	ALICE FAYE VAN DINE	
	LORA FORNSHELL	
	KEITH PYLES	
	WANDA L. PYLES	
	SHERLEY M. WHITE FKA SHERLEY M. VAN DINE	
	VERENDA STOKES	
	DOMINAE VESICO-RAMIREZ	
	KRISTA L. VAN DINE	
	ROBERT P. COLVIN	
	RONALD PYLES	
	DONALD COOK POA CAROL HULL	
	KEVIN O'HARA	
	CATHY LUDWIG GARRETT	
	ROBERT R. D'ERAMO JR., ET AL	
	DEBRA FORDYCE	
	KEITH JOEL VAN DINE	
	GLADYS PETRELLE BY AIF SHIRLEY BUFFONE	
	RODNEY COLVIN	
	PAULA REILLEY	
	VICKIE EISENHAEUER	
	KIM YOHO	
	JASON COLVIN	
	BRENDA WILLINGHAM	
	DONALD COLVIN	
	MICHAEL COLVIN	
	STACY PANYKO	
	HAROLD E. VAN DINE	
	JOHN E. VAN DINE	
H	JOHN K. MASON JR.	9-1/23
J	PETER MILLER	9-1/24
K	THOMAS B. CLARK ET UX	9-5/2

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4410827.88
E:523401.05
NAD83, WV NORTH
N:493024.310
E:1624154.110

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UTM 17-NAD83(M)
N:4408138.06
E:525238.50
NAD83, WV NORTH
N:484096.940
E:1630036.160

	SURFACE OWNER	DIST-TM/PAR
1	GRAHAM H. LONGWORTH JR.	4-11/1
2	DUNCAN OR SUSAN ARNETT	4-11/54
3	DUNCAN R. OR SUSAN M. ARNETT	4-11/54.10
4	EDWARD WILLIAMS ET UX	4-11/54.11
5	JEFFREY STUCKEY	4-11/54.13
6	JAMES E. & LEAH A. YOHO	4-11/54.12
7	JAMES C. & MELISSA S. THATCHER	4-11/54.9
8	MARY STUCKEY	4-11/54.7
9	MARY STUCKEY	4-11/54.2
10	RAYMOND L. MIDCAP ET UX	4-11/54.6
11	NELLIE MIDCAP EST	4-11/54.5
12	NELLIE MIDCAP EST	4-11/53
13	*JOHN D. LIGHTNER ET UX	4-11/54.4
14	JOHN D. LIGHTNER ET UX	4-11/57
15	CNX LAND RESOURCES INC	9-1/18
16	CNX LAND RESOURCES INC	9-1/22
17	JOHN K. MASON JR.	9-1/23
18	PETER A. MILLER	9-1/24
19	KAREN LOUISE BELL AND ROGER L. DUNHAM	9-1/24.2
20	THOMAS B. & ANETTE K. CLARK	9-5/2

* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

**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				

**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 Butchko *Jenny Butchko*
Its: Permitting Team Lead

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Longworth Unit #08H

Plat ID	Parcel Number	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
1	4-11-1.0	LONGWORTH GRAHAM H JR ET AL	Chevron U.S.A. Inc.	0.14	BK 790 - PG 129	n/a	n/a	n/a
2	4-11-54.0	FOX DELORES J	Central Michigan Exploration LLC	0.125	BK 670 - PG 572	BK 21 - PG 288 Central Michigan Exploration LLC to Stone Energy Corporation	BK 33 - PG 276 Stone Energy Corporation to Chevron U.S.A. Inc.	n/a
12	4-11-53.0	MIDCAP NELLIE JEAN	Chevron U.S.A. Inc.	0.14	BK 817 - PG 575	n/a	n/a	n/a
13	4-11-54.4	LIGHTNER JOHN D	Chesapeake Appalachia, LLC	0.15	BK 683 - PG 492	BK 30 - PG 392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	n/a	n/a
14	4-11-57.0	LIGHTNER JOHN D	Chesapeake Appalachia, LLC	0.15	BK 683 - PG 492	BK 30 - PG 392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	n/a	n/a
15	9-1-18.0	YOUNG HOWARD E BY AIF SUSAN YOUNG	Chevron U.S.A. Inc.	0.16	BK 797 - PG 272	n/a	n/a	n/a
16	9-1-22.0	COLVIN DEAN B	TriEnergy Holdings, LLC	0.18	BK 726 - PG 593	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		KINNEY MARGARET	TriEnergy Holdings, LLC	0.18	BK 726 - PG 598	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		GRANDSTAFF PATRICIA COLVIN	TriEnergy Holdings, LLC	0.18	BK 726 - PG 612	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a

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Plat ID	Parcel Number	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
		SNYDER MARILYN PYLES	TriEnergy Holdings, LLC	0.18	BK 726 - PG 607	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		PYLES JAMES E	TriEnergy Holdings, LLC	0.18	BK 726 - PG 601	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		ASTON SUSAN	TriEnergy Holdings, LLC	0.18	BK 727 - PG 215	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		HULL CAROL	TriEnergy Holdings, LLC	0.18	BK 727 - PG 220	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		MOORE DAVID GEORGE	TriEnergy Holdings, LLC	0.18	BK 727 - PG 223	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		KERNS BETTY LOU DELLGET	TriEnergy Holdings, LLC	0.18	BK 728 - PG 393	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		SOUTH MARILYN	TriEnergy Holdings, LLC	0.18	BK 728 - PG 398	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a

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Plat ID	Parcel Number	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
		GUMP HOWARD ET UX	TriEnergy Holdings, LLC	0.18	BK 729 - PG 338	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		FEIERSTEIN JUDY REILLEY	TriEnergy Holdings, LLC	0.18	BK 728 - PG 414	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 307 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		O'HARA RICHARD	TriEnergy Holdings, LLC	0.18	BK 730 - PG 615	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		COLVIN CATHY J	TriEnergy Holdings, LLC	0.18	BK 730 - PG 613	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		VAN DINE ALICE FAYE	TriEnergy Holdings, LLC	0.18	BK 734 - PG 179	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		FORNSHELL LORA	TriEnergy Holdings, LLC	0.18	BK 735 - PG 208	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		PYLES KEITH	TriEnergy Holdings, LLC	0.18	BK 735 - PG 211	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a

Longworth Unit #08H

Plat ID	Parcel Number	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
		PYLES WANDA L	TriEnergy Holdings, LLC	0.18	BK 735 - PG 205	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		WHITE SHERLEY M FKA VAN DINE SHERLEY M	TriEnergy Holdings, LLC	0.18	BK 735 - PG 411	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		STOKES VERENDA	TriEnergy Holdings, LLC	0.18	BK 735 - PG 414	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		VESICO-RAMIREZ DOMINAE	TriEnergy Holdings, LLC	0.18	BK 735 - PG 421	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		VAN DINE KRISTA L	TriEnergy Holdings, LLC	0.18	BK 738 - PG 532	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 26 - PG 201 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		COLVIN ROBERT P	TriEnergy Holdings, LLC	0.18	BK 726 - PG 595	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		PYLES RONALD	TriEnergy Holdings, LLC	0.18	BK 726 - PG 604	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a

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Longworth Unit #08H

Plat ID	Parcel Number	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
		COOK DONALD POA CAROL HULL	TriEnergy Holdings, LLC	0.18	BK 727 - PG 217	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 026 - PG 269 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		O'HARA KEVIN	TriEnergy Holdings, LLC	0.18	BK 730 - PG 618	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		GARRETT CATHY LUDWIG	TriEnergy Holdings, LLC	0.18	BK 730 - PG 637	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		D'ERAMO ROBERT R JR ET AL	TriEnergy Holdings, LLC	0.18	BK 734 - PG 166	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		FORDYCE DEBRA	TriEnergy Holdings, LLC	0.18	BK 734 - PG 317	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		VAN DINE KEITH JOEL	TriEnergy Holdings, LLC	0.18	BK 738 - PG 529	BK 25 - 463 TriEnergy Holdings, LLC to NPAR, LLC BK 28 - PG 348	BK 26 - PG 201 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		PETRELLE GLADYS BY AIF BUFFONE SHIRLEY	TriEnergy Holdings, LLC	0.16	BK 767 - PG 610	TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	n/a
		COLVIN RODNEY	Chevron U.S.A. Inc.	0.15	BK 885 - PG 632	n/a	n/a	n/a
		REILLEY PAULA	Chevron U.S.A. Inc.	0.16	BK 885 - PG 629	n/a	n/a	n/a

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Longworth Unit #08H

Plat ID	Parcel Number	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
		EISENHAUER VICKIE	Chevron U.S.A. Inc.	0.15	BK 885 - PG 470	n/a	n/a	n/a
		YOHO KIM	Chevron U.S.A. Inc.	0.15	BK 885 - PG 467	n/a	n/a	n/a
		COLVIN JASON	Chevron U.S.A. Inc.	0.15	BK 885 - PG 515	n/a	n/a	n/a
		WILLINGHAM BRENDA	Chevron U.S.A. Inc.	0.15	BK 885 - PG 512	n/a	n/a	n/a
		COLVIN DONALD	Chevron U.S.A. Inc.	0.15	BK 885 - PG 509	n/a	n/a	n/a
		COLVIN MICHAEL	Chevron U.S.A. Inc.	0.15	BK 885 - PG 506	n/a	n/a	n/a
		PANYKO STACY	Chevron U.S.A. Inc.	0.18	BK 885 - PG 620	n/a	n/a	n/a
		VAN DINE HAROLD E	Chevron U.S.A. Inc.	0.18	BK 885 - PG 623	n/a	n/a	n/a
		VAN DINE JOHN E	Chevron U.S.A. Inc.	0.18	BK 885 - PG 626	n/a	n/a	n/a
		TUCKER DAVID W - SFX	TriEnergy Holdings, LLC	0.18	BK 720 - PG 198	BK 756 - PG 302 NPAR, LLC to Chevron U.S.A. Inc.	n/a	n/a
17	9-1-23.0	MASON JOHN K JR	Chevron U.S.A. Inc.	0.18	BK 914 - PG 44	n/a	n/a	n/a
18	9-1-24.0	MILLER PETER A ET UX	Fossil Creek Ohio, LLC	0.20	BK 838 - PG 523	BK 33 - PG 09 Fossil Creek Ohio LLC to Gulfport Energy Corp.	BK 036 - PG 588 Fossil Creek Ohio LLC & Gulfport Energy Corp. to American Petroleum Partners Operating LLC	BK 040 - PG 267 American Petroleum Partners Operating LLC to Chevron U.S.A. Inc.
20	9-5-2.0	CLARK THOMAS B ET UX	Fossil Creek Ohio, LLC	0.20	BK 838 - PG 521	BK 33 - PG 09 Fossil Creek Ohio LLC to Gulfport Energy Corp.	BK 036 - PG 588 Fossil Creek Ohio LLC & Gulfport Energy Corp. to American Petroleum Partners Operating LLC	BK 040 - PG 267 American Petroleum Partners Operating LLC to Chevron U.S.A. Inc.

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Luke Slagel
Land Representative

September 10, 2018

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

RE: Longworth 08H, 09H, 10H, 11H, 12H

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

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Appalachian Mountain Business Unit
Chevron North America Exploration and Production Company
A Division of Chevron U.S.A. Inc.
700 Cherrington 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**

Date of Notice Certification: 10/25/18

API No. 47- _____ - _____
Operator's Well No. M08H
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>523401.05</u>
County: <u>Marshall</u>	UTM NAD 83 Northing: <u>4410827.88</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.

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:

*PLEASE CHECK ALL THAT APPLY

- 1. NOTICE OF SEISMIC ACTIVITY or NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED
- 2. NOTICE OF ENTRY FOR PLAT SURVEY or NO PLAT SURVEY WAS CONDUCTED
- 3. NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)
- 4. NOTICE OF PLANNED OPERATION
- 5. PUBLIC NOTICE
- 6. NOTICE OF APPLICATION

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RECEIVED

RECEIVED/ NOT REQUIRED

RECEIVED

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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.

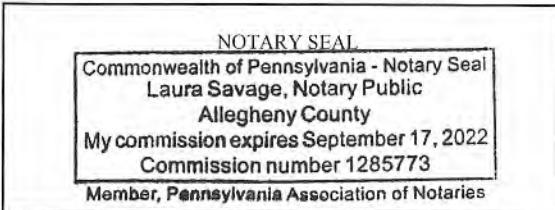
Certification of Notice is hereby given:

THEREFORE, I Jenny Butchko, 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 Butchko

Well Operator: Chevron Appalachia, LLC
By: Jenny Butchko
Its: Permitting Team Lead
Telephone: 412-865-1533

Address: 700 Cherrington Parkway
Coraopolis, PA 15108
Facsimile: 412-865-2403
Email: JZYK@chevron.com



Commonwealth of Pennsylvania
County of Allegheny
Subscribed and sworn before me this 17th day of October 2018.
Laura Savage Notary Public
My Commission Expires September 17, 2022

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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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: 10/4/18 **Date Permit Application Filed:** 10/25/18

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: _____

COAL OWNER OR LESSEE
 Name: Consolidated Coal Company
 Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

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

SURFACE OWNER(s) (Road and/or Other Disturbance)
 Name: Mary Holmes
 Address: 107 Spindle Lane
Moundsville, WV 26041
 Name: The Estate of Barbara J. Darrow
 Address: 6247 Roberts Ridge Road
Moundsville, WV 26041

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 Name: Daniel C. Longworth
 Address: 812 Spindle Lane
Moundsville, WV 26041

SURFACE OWNER(s) (Impoundments or Pits)
 Name: _____
 Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: _____
 Address: _____

*Please attach additional forms if necessary

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

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Well Location Restrictions

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

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.**

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Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WW-6A
(8-13)

4705102128
API NO. 47-
OPERATOR WELL NO. M08H
Well Pad Name: Longworth

Notice is hereby given by:

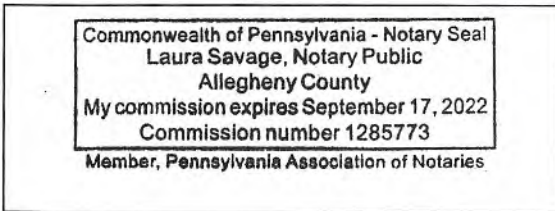
Well Operator: Chevron Appalachia, LLC
Telephone: 412-865-1533
Email: JZYK@chevron.com

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

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.

Jenny Dutton



*Commonwealth of Pennsylvania
County of Allegheny*

Subscribed and sworn before me this 3rd day of October, 2018.

Laura Savage Notary Public

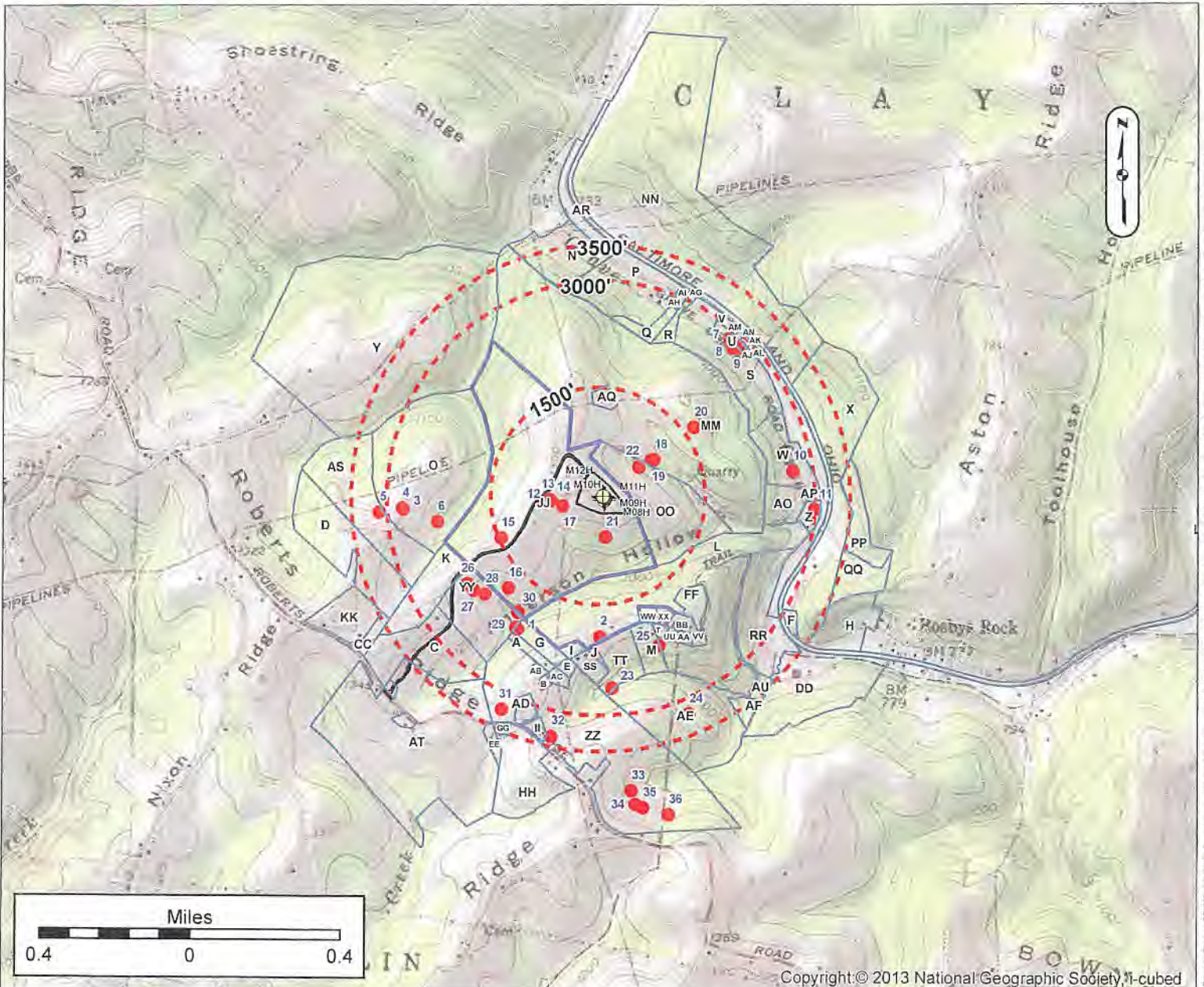
My Commission Expires September 17, 2022

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Office of Oil and Gas
OCT 26 2018
WV Department of
Environmental Protection



WATER SUPPLY EXHIBIT LONGWORTH BATCH #3

47 05 102128



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LOT OWNERS

Label	OWNER	TM	Label	OWNER	TM	Label	OWNER	TM	Label	OWNER	TM
A	MIDCAP RAYMOND L & DOROTHY L	25-04 11005600100000	P	JOHES SHERRY M	25-04 12001200000000	EE	CARNEY KAREN M & ABRAHAM S	25-05 30013000300000	TT	LIGHTNER JOHN D ET UX	25-04 11005400040000
B	WHITLATCH KENNETH E ET UX	25-04 11005600040000	Q	JOHES KATHY	25-04 12001300000000	FF	YHOH JAMES E & LEAH A	25-04 11005400120000	UU	MIDCAP RAYMOND L ET UX	25-04 11005400050000
C	HOLMES MARY	25-04 13002900000000	R	JOHES KATHY	25-04 12001300000000	GG	HUGGINS RICHARD M & CRYSTAL M	25-05 30035000000000	VV	STUCKEY JAMES A ET UX	25-04 11005400070000
D	HARTLEY LOREN E & PATRICIA A	25-04 13005300000000	S	MORRISON JAMES W ET UX	25-04 12001400000000	HH	CLARK GILBERT E JR & ANITA L	25-05 30041000000000	WW	WILLIAMS EDWARD ET UX	25-04 11005400030000
E	MIDCAP RAYMOND L ET UX	25-04 11005600100000	T	MIDCAP BRADY L EST ET UX	25-04 11005400050000	II	LONGWORTH GRAHAM H JR	25-04 11000400000000	XX	WILLIAMS EDWARD ET UX	25-04 11005400030000
F	ROUSH DEAN ET UX	25-04 11005600000000	U	STEVEY HERBERT II ET UX	25-04 12001400010000	JJ	KFERES RONALD A ET UX	25-04 13003800000000	YY	HOLMES MARY	25-04 11005400030000
G	MIDCAP RAYMOND L & DOROTHY L	25-04 11005600000000	V	WHITE JOHN STANLEY ET UX	25-04 12001300000000	KK	LONGWORTH DANIEL C	25-04 11005400000000	ZZ	FLOWERS CLINT E & BRENT B	25-04 11005400000000
H	CONNOR GLEN N ET UX	25-04 11005400000000	W	SHAFER ROBERT L SR ET UX	25-04 11005400000000	LL	LONGWORTH DANIEL C	25-04 11005400000000	AA	MIDCAP RAYMOND L & DOROTHY L	25-04 11005600100000
I	LIGHTNER JOHN D ET UX	25-04 11005400030000	X	ROUSH HARRY F ET UX	25-04 11005400000000	MM	MOUNDSVILLE CITY OF	25-04 11005400000000	BB	STUCKEY JAMES A ET UX	25-04 11005400050000
J	MIDCAP RAYMOND LLOYD JR	25-04 11005400000000	Y	JARRETT CODY M	25-04 12001300000000	NN	MOUNDSVILLE CITY OF	25-04 11005400000000	CC	THATCHER JAMES C & MELISSA S	25-04 11005400000000
K	HOLMES JEFFREY SCOTT ET AL	25-04 13003900010000	Z	WINLAND KELLY BRUCE	25-04 12001300000000	OO	LONGWORTH GRAHAM H JR	25-04 11005400000000	DD	CECIL KELLY J ET UX	25-04 12001300000000
L	FOX DELORES	25-04 11005400000000	AA	STUCKEY JAMES A ET UX	25-04 11005400050000	PP	ROUSH HARRY F	25-04 11005400000000	EE	TECH PARK NON-PROFIT	25-09 10001000000000
M	MIDCAP BRADY EST ET UX	25-04 11005400000000	BB	THATCHER JAMES C & MELISSA S	25-04 11005400000000	QQ	ROUSH HARRY F ET UX	25-04 11005400000000	FF	TECH PARK NON-PROFIT	25-09 10001000000000
N	HAUGHT THOMAS L & CLARA J	25-04 12001000020000	CC	CECIL KELLY J ET UX	25-04 12001300000000	RR	TECH PARK NON-PROFIT	25-04 11005400000000	GG	JOHES SHERRY M	25-04 12001200000000
O	CUNNINGHAM DALE & MARY	25-04 13003300000000	DD	TECH PARK NON-PROFIT	25-09 10001000000000	SS	MIDCAP RAYMOND L	25-04 11005400030000	HH	JOHES KATHY	25-04 12001300000000

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 Department of Environmental Protection
 Surveyor: SERVICES, INC.
 Address: 301 COMMERCE PARK DR
CRANBERRY TOWNSHIP, PA 16066
 Phone: 800-267-2549

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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: 10/4/18 **Date Permit Application Filed:** 10/25/18

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

- HAND DELIVERY CERTIFIED MAIL 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.
Address: 2527 Fork Ridge Road
Moundsville, WV 26041

Name: Mary Holmes
Address: 197 Spindle Lane
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: <u>West Virginia</u>	UTM NAD 83 Easting: <u>523401.05</u>
County: <u>Marshall</u>	Northing: <u>4410827.88</u>
District: <u>Clay</u>	Public Road Access: <u>Roberts Ridge Road/WV 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>	

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 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, PA 15108
Telephone: 412-865-1533
Email: JZYK@chevron.com
Facsimile: 412-865-2403

Authorized Representative: _____
Address: _____
Telephone: _____
Email: _____
Facsimile: _____

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Oil and Gas Privacy Notice:

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

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

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

Name: The Estate of Barbara J. Darrow
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: 523401.05
County: Marshall Northing: 4410827.88
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 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: _____

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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: 10/4/18 **Date Permit Application Filed:** 10/25/18

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

- CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

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

Name: Mary Holmes
Address: 197 Spindle Lane
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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>523401.05</u>
County:	<u>Marshall</u>		Northing:	<u>4410827.88</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>			

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.

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Telephone: 412-865-1533
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Facsimile: 412-865-2403

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
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Delivery method pursuant to West Virginia Code § 22-6A-16(c)

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(at the address listed in the records of the sheriff at the time of notice):

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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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>523401.05</u>
County:	<u>Marshall</u>		Northing:	<u>4410827.88</u>
District:	<u>Clay</u>	Public Road Access:	<u>Roberts Ridge Road/WV 21</u>	
Quadrangle:	<u>Glen Easton 7.5'</u>	Generally used farm name:	<u>Longworth</u>	
Watershed:	<u>Middle Grave Creek - Grave Creek</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 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
Telephone: 412-865-1533
Email: JZYK@chevron.com

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

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~~OCT 26 2018~~

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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>523401.052</u>
County:	<u>Marshall</u>		Northing:	<u>4410827.876</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>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: <u>Consolidation Coal CO</u></p> <p>By: <u>Mason Smith</u></p> <p>Its: <u>Coal, oil and gas relations</u> RECEIVED Office of Oil and Gas</p> <p>Signature: <u>Mason Smith</u> OCT 26 2018</p> <p>Date: <u>8-9-18</u></p>

WV Department of
Environmental Protection

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

October 10, 2018

Jill M. Newman
 Deputy Commissioner

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 M08H

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: Christopher Rerko
 Chevron Appalachia, LLC
 CH, OM, D-6

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WV Department of
 Environmental Protection

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

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WV Department of
Environmental Protection

REVISION RECORD	
NO	DATE
Δ	
Δ	
Δ	

LONGWORTH WELL SITE AS-BUILT SURVEY

ROBERTS RIDGE SAINT JOSEPH ROAD
CLAY DISTRICT, MARSHALL COUNTY, WEST VIRGINIA

PREPARED FOR:
CHEVRON APPALACHIA, LLC
700 CHERRINGTON PARKWAY
CORAOPOLIS, PA 15108

**WVDEP OOG
ACCEPTED AS-BUILT**

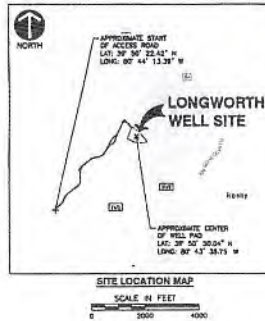
Vaj 1/25/2019

EXISTING API NUMBERS

- 47-051-01903
- 47-051-01904
- 47-051-01914
- 47-051-01916
- 47-051-01917
- 47-051-02078
- 47-051-02079
- 47-051-02080
- 47-051-02081
- 47-051-02082
- 47-051-02083

CONSULTANTS
CIVIL & ENVIRONMENTAL CONSULTANTS, P.C.
4000 TRIMBLE LANE, SUITE 200
EXPORT, PA 15637
PHONE: 724-327-5200
EMAIL ADDRESS: jbruggeman@cecinc.com
CIVIL/SITE ENGINEER CONTACT: JOSHUA A. MAGARIEZ
EMAIL ADDRESS: jmagariez@cecinc.com
GEO TECHNICAL ENGINEER CONTACT: MICHEL J. SHELEHEDA, P.E.
EMAIL ADDRESS: mshelehed@cecinc.com
SURVEY CONTACT: JAMES R. BRUGGEMAN, P.L.S.
EMAIL ADDRESS: jbruggeman@cecinc.com

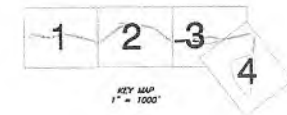
SITE COORDINATES AND WATERSHIP
START OF ACCESS ROAD
LATITUDE: 39° 50' 22.42" N, LONGITUDE: 80° 44' 13.38" W
END OF ACCESS ROAD
LATITUDE: 39° 50' 53.12" N, LONGITUDE: 80° 43' 38.11" W
WELL HEAD MOUH
LATITUDE: 39° 50' 50.13" N, LONGITUDE: 80° 43' 38.07" W
APPROXIMATE CENTER OF WELL PAD
LATITUDE: 39° 50' 50.04" N, LONGITUDE: 80° 43' 35.75" W
*BASED ON NAD 83, WEST VIRGINIA NORTH ZONE
WATERSHIP NAME: UPPER OHIO SOUTH
RECEIVING STREAM: UNNAMED TRIBUTARIES TO GRAVE CREEK



LIST OF DRAWINGS

DRAWING NUMBER	SHEET TITLE
ASB-C	COVER SHEET
ASB-1 TO ASB-4	AS-BUILT SURVEY
ASB-5 TO ASB-8	AS-BUILT ROAD PROFILE

see 1/24/19

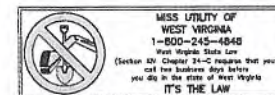


CERTIFICATION
THIS PROJECT WAS CONSTRUCTED IN GENERAL ACCORDANCE WITH THE PERMIT DIAGRAMS UNDER AUTHORITY OF THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION. I, THE UNDERSIGNED, AS A REGISTERED PROFESSIONAL ENGINEER, CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



LEGEND

---	EXISTING CONTOUR	□	CATCH BASIN
- - -	FENCE	⊙	WATER MANHOLE
- - -	STONE BENCH LINE	⊙	WATER BOX (WB)
- - -	GAS LINE	⊙	WATER LINE W/VALVE
- - -	WATER LINE	⊙	PIPE W/VALVE
- - -	TELEPHONE LINE	⊙	GAS BOX (GB)
- - -	UNDERGROUND ELEC. LINE	⊙	GAS LINE W/VALVE
- - -	OVERHEAD ELECTRIC	⊙	POWER POLE
- - -	GRASS	⊙	OUT WRE
- - -	ROCK	⊙	TELEPHONE PEDIESTAL
- - -	ROADWAY	⊙	ELECTRIC PULL BOX
- - -	ROADWAY	⊙	LIMIT OF DISTURBANCE



CEC
Civil & Environmental Consultants, Inc.
333 Baldwin Road - Pittsburgh, PA 15208
PH: 412-428-2264 - 412-428-2264 - FAX: 412-428-2114
www.cecinc.com

AS-BUILT SURVEY
LONGWORTH WELL SITE
SHEET 4
CLAY DISTRICT
MARSHALL COUNTY, WEST VIRGINIA
CHEVRON U.S.A. INC.

DATE: 01/23/2019 SCALE: AS SHOWN DRAWING NO: 181-418
DRAWN BY: EKB CHECKED BY: JAM PROJECT NO: 181-418 APPROVED BY: MJS SHEET: 1 OF 7

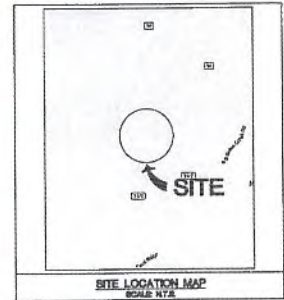
ASB-0



REVISION RECORD		
NO.	DATE	DESCRIPTION
1	11/2/2012	ISSUE ORIGINAL SURVEY LOCATION
2	11/2/2012	ISSUE ORIGINAL SURVEY LOCATION
3	11/2/2012	ISSUE ORIGINAL SURVEY LOCATION

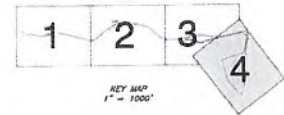
**WVDEP OOG
ACCEPTED AS-BUILT**

WJD 1 / 25 / 2019



LEGEND:

---	1:500	DISTRICT BOUNDARY
---	---	FENCE
---	---	STORM SEWER LINE
---	---	GAS LINE
---	---	WATER LINE
---	---	OVERHEAD ELECTRIC
---	---	GRADE PALE
+		MARKER
+		SIGN
+		CATCH BASIN
+		CLEAN OUT (CO)
+		WATER BOX (WB)
+		GAS BOX (GB)
+		GAS LINE MARKER
+		POWER POLE
+		GUY WIRE
+		GUY POLE
+		ELECTRIC HAND HOLE
+		WELT



KEY MAP
1" = 1000'

SCALE IN FEET
0 50 100

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AS-BUILT SURVEY
LONGWORTH WELL SITE
Sited in
CLAY DISTRICT
MARSHALL COUNTY, WEST VIRGINIA
Sheet No.
CHEVRON U.S.A. INC.

DATE	11-2-2012	SCALE	1"=50'	DRAWN BY	
DRAWN BY	RWC	CHECKED BY	DGG	ASB-4	
PROJECT NO	161-416	APPROVED BY	JBB		

- NOTES:**
1. PLAN NORTH IS BASED UPON WEST VIRGINIA STATE PLANE MODEL NORTH ZONE AS DETERMINED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. USING SURVEY GRADE GPS MEASUREMENTS AND GNSS POST-PROCESSING.
 2. VERTICAL CURVES ARE ALSO UPON HORIZAL AS DETERMINED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. USING SURVEY GRADE GPS MEASUREMENTS AND GNSS POST-PROCESSING.
 3. FIELD SURVEY BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 12-29-2012.

161-416-001-01.dwg (11/2/2012) 11:58:00 AM