



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

January 29, 2018
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

CHEVRON APPALACHIA, LLC
700 CHERRINGTON PARKWAY

CORAOPOLIS, PA 15108

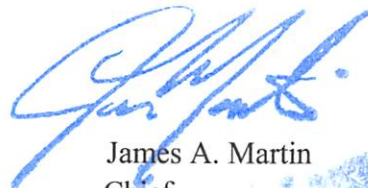
Re: Permit Modification Approval for M07H
47-051-01917-00-00

Modified Permit to Extend Lateral into Additional Leases

CHEVRON APPALACHIA, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before 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: M07H
Farm Name: LONGWORTH, GRAHAM H. JR
U.S. WELL NUMBER: 47-051-01917-00-00
Horizontal 6A / New Drill
Date Issued: January 29, 2018

Promoting a healthy environment.

02/02/2018

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: M07H 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: 1295' 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

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6531, 61' thick, 0.64 psi/ft gradient

8) Proposed Total Vertical Depth: 6,535

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15,925

11) Proposed Horizontal Leg Length: 8,822

12) Approximate Fresh Water Strata Depths: 568'

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

14) Approximate Saltwater Depths: 1279', 1883', 2281'

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

16) Approximate Depth to Possible Void (coal mine, karst, other): N/A

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

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

18) CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20	New			42	42	CTS
Fresh Water	13.375	New	J-55	54.5	618	618	CTS
Coal							
Intermediate	9.625	New	L-80	40	2206	2206	CTS
Production	5.50	New	P-110	20	15925	15925	2706
Tubing							
Liners							

JW 10/3/17

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20	26					
Fresh Water	13.375	17.5	0.38	2730	1911	Class A	1.2
Coal							
Intermediate	9.625	12.375 & 12.25	0.395	5750	2768	Class A	1.19
Production	5.5	8.75 & 8.5	0.361	14360	9975	Class A, G or H	1.25
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

Drill vertical depth to the Marcellus at an estimated total vertical depth of approximately 6,535 feet. Drill horizontal leg.

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

18,762 bbl fluid - 1,000,000 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: bow spring - (1) on shoe track w/stop collar & (1) per joint over coupling to surface;
Intermediate: bow spring - (1) on shoe track with stop collar & (1) per 3 joints over coupling; Vertical
Production: bow spring - (1) per every other joint over coupling; Curve and Lateral: solid composite (1) per joint of casing to KOP.

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

For the Water String the blend will contain class A cement 3% CaC12, and flake. The intermediate will contain class a cement 3% CaC12, 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 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.

*Note: Attach additional sheets as needed.

Longworth Cement Additives

The Water String the blend will contain Class A cement, 3% CaC12, and flake.

The intermediate will contain Class A cement, 3% CaC12, 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.

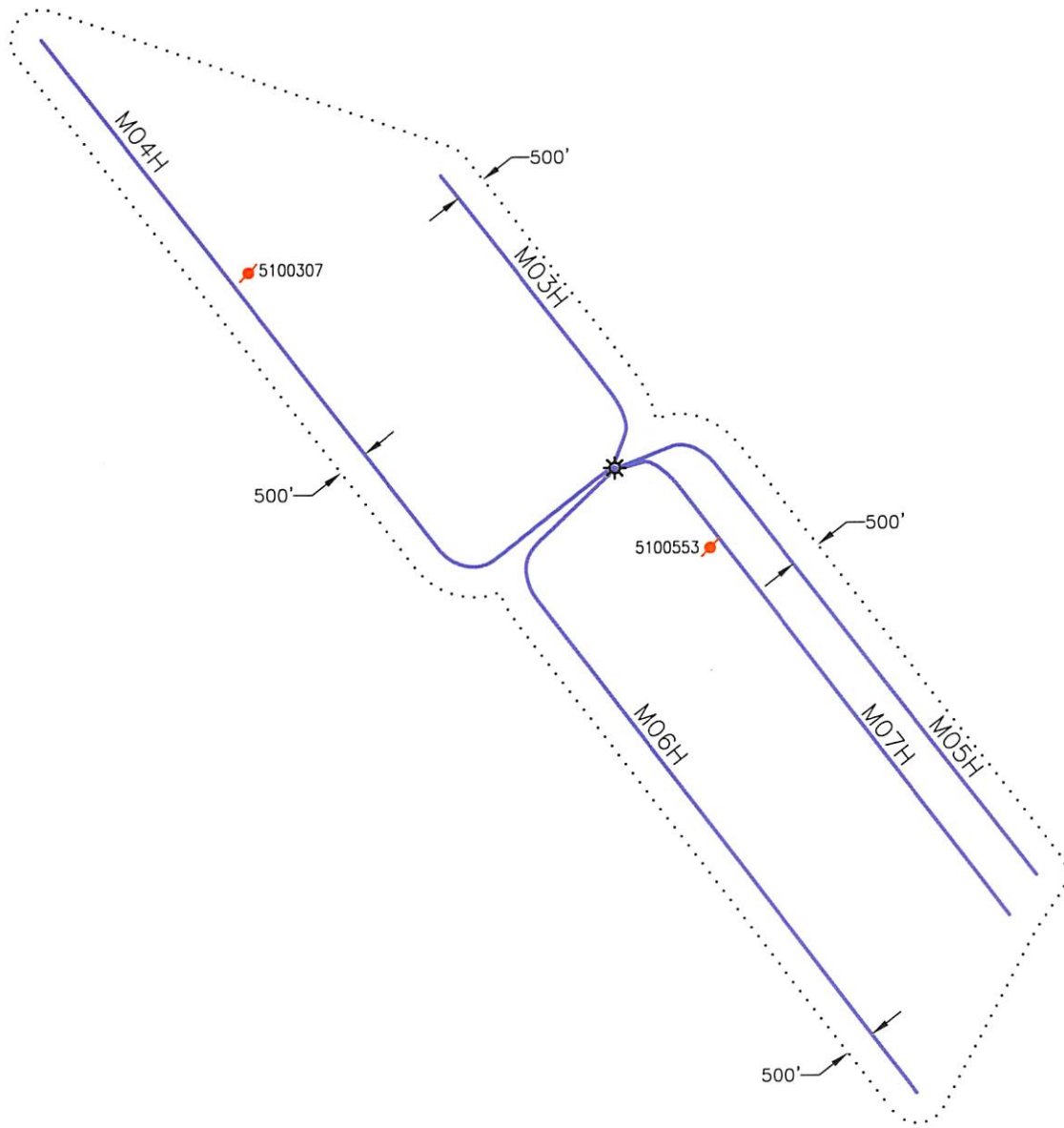
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Longworth M07H					Ground Level Elev. (ft above SL):		1270		
Clay Twp. Marshall Co, WV									
DRLING FLUID / BIT TYPE / TFA	CENTRALIZER PROGRAM	CASING SIZE / FORMATION	DEPTH		WELLHEAD DESIGN		HOLE SIZE (IN)	CASING SPECS	CEMENT PROGRAM
			MD (FT)	TVD (FT)	INC	AZM			
Core Barrel / Auger	3 Downspring per ft	20" Conductor	42	42			30	20" 78.67# X-52 Minimum 40 ft from GL or at least 10 ft into bedrock	Grout to Surface
	Row Spring: (1) on shoe track w/ stop collar & (1) per ft over coupling to surface	15-3/8" 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 Drill ID (in) 12.459 Burst (psi) 2710 Collapse (psi) 1,130 Yield (ft Strength 1,000 lbs) 853	Surface Blend (Class A) Cement to Surface
	Row Spring: (1) on shoe track w/ stop collar & (1) per 3 ft 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 Drill 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
	Vertical Row Spring: (1) per every other ft over coupling Casing and Lateral Solid Composite (1) per ft of csg to TOP							Production Casing 5-1/2" 20# P-110 EC, 0.361" Wall Coupling OD (in) 6.300 ID (in) 4.778 Drill ID (in) 4.653 Burst (psi) 14260 Collapse (psi) 12090 Yield (ft Strength 1,000 lbs) 729	Production Lead Slurry Cement to Surface
		Middesex		6,293					
		Burkett Shale		6,369					
		Tully Limestone		6,389					
		Hamilton shale		6,423					
		Upper Marcellus		6,491					Production Tail Slurry TOC minimum 200' above Marcellus
		Lower Marcellus		6,522					
		Basal Marcellus		6,547					
Non-Conservation	Float Equip. (2) As of Ctg	5-1/2" Casing	15,925	6,515			8.5 - 8.75		

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

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

LEGEND
 ☀ - WELL LOCATION
 ■ - PLUGGED WELL

LONGWORTH
 AREA OF REVIEW MAP
 MARSHALL COUNTY
 CLAY DISTRICT
 WEST VIRGINIA

TOPO QUAD: GLEN EASTON, WV
 SCALE: 1" = 3000'

DATE: SEPTEMBER 26, 2017

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Producing Formation	Producing Zones NOT Perforated
Fourth	None
Salt Sands	None

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**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:

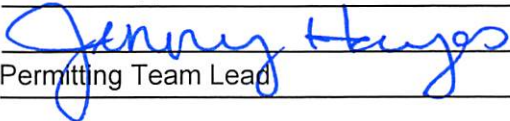
Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
See Attached				

**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: 
 Its: Permitting Team Lead

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Longworth Unit #7H

Plat ID	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
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	
4-11-2.0	LONGWORTH GRAHAM H JR ET AL	Chevron U.S.A. Inc.	0.14	BK 790 - PG 129	n/a	n/a	
	NICEWARNER LISA	TriEnergy Holdings, LLC	0.14	BK 751 - PG 260	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	RODGERS JULIA	TriEnergy Holdings, LLC	0.14	BK 751 - PG 262	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	FRIESE KEITH	TriEnergy Holdings, LLC	0.14	BK 751 - PG 264	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	FREISE MARK	TriEnergy Holdings, LLC	0.14	Bk 751 - PG 250	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	FREISE ANTHONY	TriEnergy Holdings, LLC	0.14	BK 753 - PG 580	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	FRIESE JAMES	TriEnergy Holdings, LLC	0.14	BK 751 - PG 254	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	FREISE HENRY	TriEnergy Holdings, LLC	0.14	BK 752 - PG 382	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	FRIESE STEVEN	TriEnergy Holdings, LLC	0.14	BK 751 - PG 252	BK 21 - PG 288 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
4-11-54.0	FOX DELORES J	Central Michigan Exploration LLC	0.125	BK 670 - PG 572	Central Michigan Exploration LLC to Stone Energy Corporation	BK 33 - PG 276 Stone Energy Corporation to Chevron U.S.A. Inc.	
4-11-52.0	CNX GAS COMPANY LLC	Chevron U.S.A. Inc.	0.2	BK 818 - PG 553	n/a	n/a	
4-11-59.0	CNX GAS COMPANY LLC	Chevron U.S.A. Inc.	0.2	BK 818 - PG 553	n/a	n/a	
9-1-2.0	WELLMAN JOE PAUL	TriEnergy Holdings, LLC	0.17	BK 745 - PG 469	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a	
	LEFEBVREUR WILLIAM R JR	Chevron U.S.A. Inc.	0.16	BK 880 - PG 373	n/a	n/a	

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	KROL FRANCIS THOMAS JR	Chevron U.S.A. Inc.	0.16	BK 880 - PG 394	n/a	n/a
	BOARDWINE CHRISTINA L	Chevron U.S.A. Inc.	0.16	BK 880 - PG 379	n/a	n/a
	WELLMAN DIANA L	TriEnergy Holdings, LLC	0.17	BK 753 - PG 557	BK 28 - PG 348 TriEnergy Holdings, LLC to Chevron U.S.A. Inc. BK 28 - PG 348	n/a
	BONNETT MARGARET ANN	TriEnergy Holdings, LLC	0.17	BK 748 - PG 115	TriEnergy Holdings, LLC to Chevron U.S.A. Inc.	n/a
	SEDOSKY DOROTHY	Chevron U.S.A. Inc.	0.14	BK 811 - PG 630	n/a	n/a
	DAKAN MARGARET E	Chevron U.S.A. Inc.	0.14	BK 813 - PG 586	n/a	n/a
	GUZEK DOLLYE	Chevron U.S.A. Inc.	0.14	BK 814 - PG 439	n/a	n/a
	FOSTER LINDSEY R	Chevron U.S.A. Inc.	0.14	BK 818 - PG 066	n/a	n/a
	RACKLEY NANCY DAKAN ET VIR	Chevron U.S.A. Inc.	0.14	BK 820 - PG 234	n/a	n/a
	CNX GAS COMPANY LLC	Chevron U.S.A. Inc.	0.2	BK 818 - PG 553	n/a	n/a
	DAKAN RONALD W	Chevron U.S.A. Inc.	0.16	BK 837 - PG 154	n/a	n/a
	DAKAN DAVID H	Chevron U.S.A. Inc.	0.16	BK 837 - PG 145	n/a	n/a
	SWIFT SUZANNE	Chevron U.S.A. Inc.	0.16	BK 839 - PG 373	n/a	n/a
	FURFARI BARBARA D	Chevron U.S.A. Inc.	0.16	BK 847 - PG 364	n/a	n/a
	WILLIS DIANE CLARE ET VIR	Chevron U.S.A. Inc.	0.18	BK 849 - PG 636	n/a	n/a
	BUTTS LESLIE MARIE	Chevron U.S.A. Inc.	0.18	BK 849 - PG 630	n/a	n/a
	DAKAN JOSEPH G	Chevron U.S.A. Inc.	0.16	BK 885 - PG 464	n/a	n/a
	FONTES ELAINE A	Chevron U.S.A. Inc.	0.18	BK 882 - PG 293	n/a	n/a
	COSLICK DIANA K	Chevron U.S.A. Inc.	0.18	BK 882 - PG 290	n/a	n/a
	BALLA LESLEY D	Chevron U.S.A. Inc.	0.18	BK 882 - PG 287	n/a	n/a
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
9-1-16.0	DOBBS DANIEL L ET UX	AB Resources LLC	0.185	BK 730 - PG 270	BK 756 - PG 397 AB Resources LLC to Chevron U.S.A. Inc. BK 024 - PG 180	n/a
9-1-24.1	MASON VICKIE J	TriEnergy Holdings, LLC	0.16	BK 706 - PG 309	TriEnergy Holdings, LLC to NPAR, LLC	BK 756 - PG 332 NPAR, LLC to Chevron U.S.A. Inc. BK 036 - PG 588
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 040 - PG 267 American Petroleum Partners Operating LLC to Chevron U.S.A. Inc.

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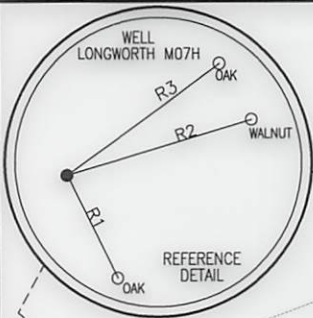
BHL is located on topo map 2,178 feet south of Latitude: 39° 50' 00"
 SHL is located on topo map 10,166 feet south of Latitude: 39° 52' 30"

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

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

LINE	BEARING	DISTANCE
R1	S 26°26'08" E	144.46'
R2	N 73°06'39" E	244.58'
R3	N 53°56'44" E	239.58'
R4	S 75°15'28" W	2317.79'
R5	N 69°44'49" W	1616.56'
R6	N 37°16'10" W	794.99'



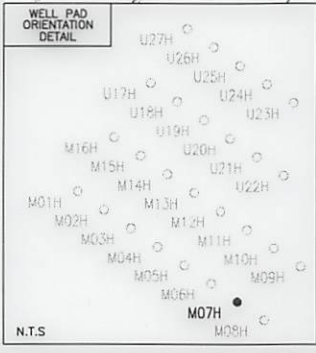
SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4410830.391
 E:523397.263
 NAD83, WV NORTH
 N:493032.767
 E:1624141.728
 LAT/LON-NAD83
 LAT:39°50'49.806"
 LON:80°43'35.426"

APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:441074.35
 E:523721.22
 NAD83, WV NORTH
 N:492729.406
 E:1625200.158
 LAT/LON-NAD83
 LAT:39°50'46.95"
 LON:80°43'21.80"

BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4408646.06
 E:525402.53
 NAD83, WV NORTH
 N:485754.937
 E:1630602.307
 LAT/LON-NAD83
 LAT:39°49'38.75"
 LON:80°42'11.35"

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

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



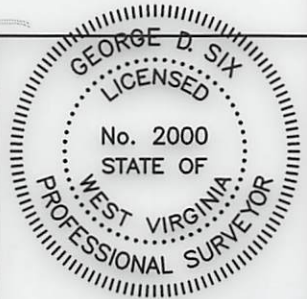
BHL is located on topo map 10,301 feet west of Longitude: 80° 40' 00"
 SHL is located on topo map 5,157 feet west of Longitude: 80° 42' 30"

FILE #: LONGWORTH M07H-REV1.1
 DRAWING #: LONGWORTH M07H-REV1.1
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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

Signed: George D. Six

R.P.E.: _____ L.L.S.: P.S. No. 2000



PLACE SEAL HERE

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



DATE: SEPTEMBER 26, 2017
 OPERATOR'S WELL #: LONGWORTH M07H
 API WELL #: 47 51 01917 MOD
 STATE COUNTY PERMIT H&A

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

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1290.96'

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: 615.367± **02/02/2018**

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE

(SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,600'± TMD: 15,925.24'±

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

LONGWORTH

M07H

PAGE 2 OF 2

	LESSOR	DIST-TM/PAR
A	GRAHAM H. LONGWORTH JR. ET AL	4-11/1
B	GRAHAM H. LONGWORTH JR. ET AL	4-11/2
	LISA NICEWARNER	
	JULIA RODGERS	
	KEITH FRIESE	
	MARK FRIESE	
	ANTHONY FRIESE	
	JAMES FRIESE	
	HENRY FRIESE	
C	DELORES J. FOX	4-11/54
D	CNX GAS COMPANY LLC	4-11/52
E	CNX GAS COMPANY LLC	4-11/59
F	JOE PAUL WELLMAN	9-1/2
	WILLIAM R. LEVASSEUR, JR.	
	FRANCIS THOMAS KROL, JR.	
	CHRISTINA L. BOARDWINE	
	DIANA L. WELLMAN	
	MARGARET ANN BONNETT	
	DOROTHY SEDOSKY	
	MARGARET E. DAKAN	
	DOLLYE GUZEK	
	LINDSEY R. FOSTER	
	NANCY DAKAN RACKLEY ET VIR	
	CNX GAS COMPANY LLC	
	RONALD W. DAKAN	
	DAVID H. DAKAN	
	SUZANNE SWIFT	
	BARBARA D. FURFARI	
	DIANE CLARE WILLIS ET VIR	
	LESLIE MARIE BUTTS	
JOSEPH G. DAKAN		
ELAINE A. FONTES		
DIANA K. COSLICK		
LESLEY D. BALLA		
G	HOWARD E. YOUNG BY AIF SUSAN YOUNG	9-1/18
H	DANIEL L. DOBBS ET UX	9-1/16
J	*VICKIE J. MASON	9-1/24.1
K	PETER MILLER	9-1/24

	SURFACE OWNER	DIST-TM/PAR
1	GRAHAM H. LONGWORTH JR.	4-11/1
2	GRAHAM H. LONGWORTH JR.	4-11/2
3	DUNCAN OR SUSAN ARNETT	4-11/54
4	HARRY & DONNA ROUSH	4-11/52
5	CONSOLIDATION COAL COMPANY/MURRAY ENERGY C/O LAND DEPT	4-11/59
6	HARRY & DONNA ROUSH	9-1/2
7	CNX LAND RESOURCES INC.	9-1/18
8	CNX LAND RESOURCES INC.	9-1/16
9	MACK A. CROW ET UX.	9-1/17
10	MACK A. CROW ET UX.	9-1/16.1
11	*VICKIE CROW	9-1/24.1
12	PETER A. MILLER	9-1/24

* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M) N:4410830.391 E:523397.263
NAD83, WV NORTH N:493032.767 E:1624141.728
LAT/LON-NAD83 LAT:39°50'49.806" LON:80°43'35.426"

APPROX. LANDING POINT
UTM 17-NAD83(M) N:441074.35 E:523721.22
NAD83, WV NORTH N:492729.406 E:1625200.158
LAT/LON-NAD83 LAT:39°50'46.95" LON:80°43'21.80"

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M) N:4408646.06 E:525402.53
NAD83, WV NORTH N:485754.937 E:1630602.307
LAT/LON-NAD83 LAT:39°49'38.75" LON:80°42'11.35"

02/02/2018

SEPTEMBER 26, 2017

51-01917 MOD
H6A



Regina Logue
Permitting Coordinator

October 6, 2017

WV DEP Office of Oil & Gas
60-1 57th Street, SE
Charleston, WV 25304

Dear Mr. Brewer:

On behalf of Chevron Appalachia, LLC, enclosed please find the information requested for the Modification Permits for Longworth M05H, M06H and M07H. Chevron has obtained additional lease holders and wish to extend the horizontal lateral lengths, from previously issued well permits.

If you have any questions or need additional information, please do not hesitate to contact Regina Logue at 412-865-1462 or via email rele@chevron.com.

Sincerely,

Jenny Hayes
Permitting Team Lead

JH/rl

enclosures

Appalachian Mountain Business Unit
Chevron North America Exploration and Production Company
700 Cherrington Parkway
Coraopolis, PA 15108
Tel 412-865-1462
rele@chevron.com

02/02/2018

Adkins, Laura L

From: Adkins, Laura L
Sent: Friday, January 19, 2018 10:16 AM
To: 'Laird, Susan'
Cc: Hayes, Jenny
Subject: Longworth Mods

Susan,

I have reviewed the Longworth modifications requesting lateral extensions due to additional lease acquisition and have the following comments to be addressed so that the modifications may be granted:

6B Horizontal lengths do not match the horizontal lengths on plats. We request to have the horizontal length from landing point to TD on the 6B as well as the plat.

6B Centralizer placement- The centralizer placement on the intermediate string of casing doesn't make sense.

Once these are corrected you can just email them to me and I can issue.

Thanks and have a wonderful weekend!

p.s.

The Taylor C mods should issue today

Laura L. Adkins

Environmental Resource Specialist III
Permit Review
WVDEP Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
304-926-0499 ext. 1495

THE ITEMS REQUESTED IN THIS EMAIL WILL NEED TO BE RECEIVED BY THE OFFICE OF OIL AND GAS WITHIN **20 DAYS** TO AVOID THE PERMIT APPLICATION BEING RETURNED. IF AN OPERATOR WISHES TO RESUBMIT AN APPLICATION THAT HAS BEEN RETURNED, THE OPERATOR IS REQUIRED TO COMPLETE AND SUBMIT NEW FORMS, MYLAR PLAT AND ASSOCIATED FEES.

Chevron
Longworth

MO7H

SI-01917

LB Horizontal 9100'
Plot 8822

Centralizer Placement Intermediate
doesn't make sense

Change Coordinates