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west virginia department of environmental protection

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

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

## PERMIT MODIFICATION APPROVAL

June 26, 2015

CHEVRON APPALACHIA, LLC  
POST OFFICE BOX 611  
MOON TOWN, PA 15108

Re: Permit Modification Approval for API Number 5101796, Well #: TAYLOR B 6H

Oil and Gas Operator:

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.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Gene Smith".

Gene Smith  
Assistant Chief of Permitting  
Office of Oil and Gas

Promoting a healthy environment.

06/26/2015



Kristen Brooks  
Permit Coordinator

Appalachian/Michigan  
Strategic Business Unit  
Chevron North America  
Exploration and Production  
A Division of Chevron U.S.A. Inc.  
800 Mountain View Drive  
Smithfield, PA 15478  
Tel 724-564-3700  
Fax 724-564-2365  
kristenbrooks@chevron.com

June 12, 2015

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

RE: Taylor B 2H, 3H, 4H, 5H, 6H, 7H, 8H, and 9H  
Modification Request

Dear Ms. Hankins,

Please accept this as our formal request for a modification to the landing point and bottom hole as well as the casing program for our Taylor B Drill Permits noted below.

Well Name	API Number
Taylor B 2H	47-051-01793
Taylor B 3H	47-051-01794
Taylor B 4H	47-051-01795
Taylor B 5H	47-051-01823
Taylor B 6H	47-051-01796
Taylor B 7H	47-051-01797
Taylor B 8H	47-051-01798
Taylor B 9H	47-051-01799

An updated plat, WW-6B form, WW-6A1 attachment, and schematic are enclosed. If you have any questions, please contact me at (724)564-3781 or kristenbrooks@chevron.com.

Sincerely,

Kristen Brooks  
Permit Coordinator  
Chevron Appalachia, LLC

Received  
Office of Oil & Gas  
JUN 15 2015

06/26/2015

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

1) Well Operator: Chevron Appalachia, LLC 49449935 51 Clay Glen Easton, WV  
Operator ID County District Quadrangle

2) Operator's Well Number: 6H Well Pad Name: Taylor B

3) Farm Name/Surface Owner: Williams Ohio Valley Midstream LLC Public Road Access: CR 17 Fork Ridge Road

4) Elevation, current ground: 1222' Elevation, proposed post-construction: 1222'

5) Well Type (a) Gas  Oil  Underground Storage

Other

(b) If Gas Shallow  Deep

Horizontal

*JN 6/11/15*

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 6525', 49' - 0.64 psi/ft

8) Proposed Total Vertical Depth: 6533'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 14,223'

11) Proposed Horizontal Leg Length: 7,500'

12) Approximate Fresh Water Strata Depths: 463' GL

13) Method to Determine Fresh Water Depths: 1 mi radius offset wells, freshwater wells, and freshwater base level

14) Approximate Saltwater Depths: 1855', 2345'-1820' KB: Francis 1V offset well

15) Approximate Coal Seam Depths: 765' GL

16) Approximate Depth to Possible Void (coal mine, karst, other): NA - Solid coal anticipated

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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18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	20"	New			40'	40'	141.8
Fresh Water	13-3/8"	New	J-55	54.5#	513'	513'	691.0
Intermediate	9-5/8"	New	J-55	40#	2,240'	2,240'	905.0
Production	5-1/2"	New	P-110	20#	14,223'	14,223'	2872.0
Tubing							
Liners							

*JN 6/11/15*

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
Conductor	20"	26"					
Fresh Water	13-3/8"	17-1/2"	0.380"	2,730 psi	1,911 psi	Class A	1.18
Intermediate	9-5/8"	12-1/4"	0.395"	3,950 psi	2,768 psi	Class A	1.29
Production	5-1/2"	8-1/2"	0.361"	12,640 psi	9,975 psi	Class A	1.61
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 17-1/2" hole to 513' then run and cement 13-3/8" casing to surface covering the fresh water. Drill 12.25" hole to 2,240' then run and cement to surface 9 5/8" casing, covering the Big Injun. Drill 8 1/2" hole to KOP at 5,688. Drill 8 1/2" curve and lateral to 14,223' MD and 6,533 TVD. Run 5 1/2" production casing and cement to a minimum TOC of 500' above top perms'.

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

Chevron will utilizing plug and perf method with 30 stages using 8,572 bbl of fluid and 315,000 lbm of sand per stage

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 18.3

22) Area to be disturbed for well pad only, less access road (acres): 4.3

23) Describe centralizer placement for each casing string:

There will be a bow spring centralizer every two jts on the Water string and intermediate. The production string will have two centralizer every jt in the lateral and curve, then one every jt 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% CaCl<sub>2</sub>, and flake. The intermediate will contain class A cement, 10% CaCl<sub>2</sub>, Salt, and flake. The Production cement will have a lead and tail cement. The lead will contain class A cement, KCl, dispersant, suspension agent, and retarder. The tail will contain class A cement, Calcium Carbonate, KCl, dispersant, de-foamer, suspension agent, and friction reducer.

25) Proposed borehole conditioning procedures:

Well will be circulated a minimum of 3 bottoms up once casing point has been reached on all hole sections and until uniform mud properties are achieved.

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JUN 16 2015

\*Note: Attach additional sheets as needed.

# Taylor B 6H

Marshall Co. WV  
June 10, 2015

## Casing & Cementing Details

Ground Level Elevation: 1287  
Depths are measured from KB 32 ft above GL

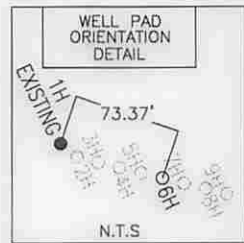
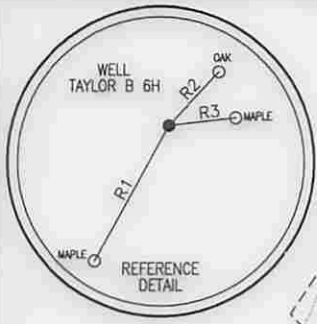
AZM	Casing Formation	DEPTH		Inclination	HOLE SIZE	CASING SPECS	CEMENT INFO	GENERAL INFO
		MD	TVD					
	30.0" Conductor	72'			36"	Conductor	grout to surface	
						Minimum 40 ft from GL or at least 10 ft into bedrock		
	Bow Spring: 1-shoe jt, 1-every 2nd jt 1 on ea 2-3 jts across previous shoe. Rigid: 2-within 100 ft of surface					<b>Fresh Water Casing</b> 13-3/8" 54.5# J-55 BTC 0.458" wall	<b>Cement to surface</b> Class A w/ 3% CaCl <sub>2</sub> Salt & Flake Yield = 1.18 cft/sk Weight = 15.6 ppg	30% excess
	Deepest Aquifer	197'				Capacity = 0.1508 bbl/ft Annulus = 0.1237 bbl/ft (* 6 bbl for shoe track) Burst = 2730 psi	125 bbl 595 sks 79 bbl capacity to shoe	
	13 3/8" Casing	513'			17 1/2"		53.341 lbs air wt with water	Minimum 50 ft past deepest known fresh water
	Pittsburgh Coal							
		Top Coal	765'					
		Deepest Coal	775'					
	REQ. EED	684' - 904'				<b>Intermediate Casing</b> 9-5/8" 40# J 55 BTC Burst = 3950 psi Collapse = 2570 psi ID = 8.835"	<b>Cement to surface</b> Class A Yield = 1.29 cft/sk Weight = 15.6 ppg	
	Bow Spring: 1-shoe jt, 1-every 2nd jt 1 on ea 2-3 jts across previous shoe. Rigid: 2-within 100 ft of surface						161.8 bbl 704 sks 166 bbl cap to shoe	30% excess
	REQ. EED	1159' - 1180'						
	1245 psi test	9 5/8" Casing	FC 2,195' 2,240'		12 1/4"		1,113 psi lift pressure	
	<u>BOPE Class for section</u> 13-5/8" 10K Class III BOPE	KOP	5,600'				<b>Class A:</b> 1) <b>LEAD SLURRY</b> 327.3 bbbls 1392.2 sacks 15.2 ppg 1.32 cft/sk <b>TOC Lead = Surface</b>	
		Burkett Sh.	6,289'			<b>Prod. Casing</b> 5-1/2", 20# P-110, VA Superior Capacity = 0.221 bbl/ft (*1 bbl for shoe track) Burst = 12,640 psi Collapse = 11,080 psi ID = 4.778" Drift = 4.653"	<b>Class A:</b> 2) <b>TAIL SLURRY</b> 308.6 bbbls 1076.0 sacks 15.2 ppg 1.61 cft/sk <b>TOC Tail = 6,695 ft MD</b>	
		Tully Lm.	6,302'					
		S5 (Hamilton Sh.)	6,339'					
		S4 (Upper Marcellus)	6,381'					
		Stafford (Cherry Valley)	6,399'					
		S2b (L. Marcellus)	6,402'					
	<b>Centralization</b> * 2 Torq glider per jt from shoe to KOP * 1 single bow per 2 jt from KOP to surface	Horizontal Landing Point	8,500'				<b>Displacement</b> 314.4 bbbls	
		S1b (Basal Marcellus)	6,460'					
		Onondaga	6,465'					
					90.0°		90.0°	
						Lateral length = 5,723'		
					8 1/2"	5 1/2" Casing		45ft Shoe Track 14,223'

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JUN 15 2015

06/26/2015

Well is located on topo map 6,612 feet south of Latitude: 39° 52' 30"

Well is located on topo map 5,953 feet west of Longitude: 80° 40' 00"

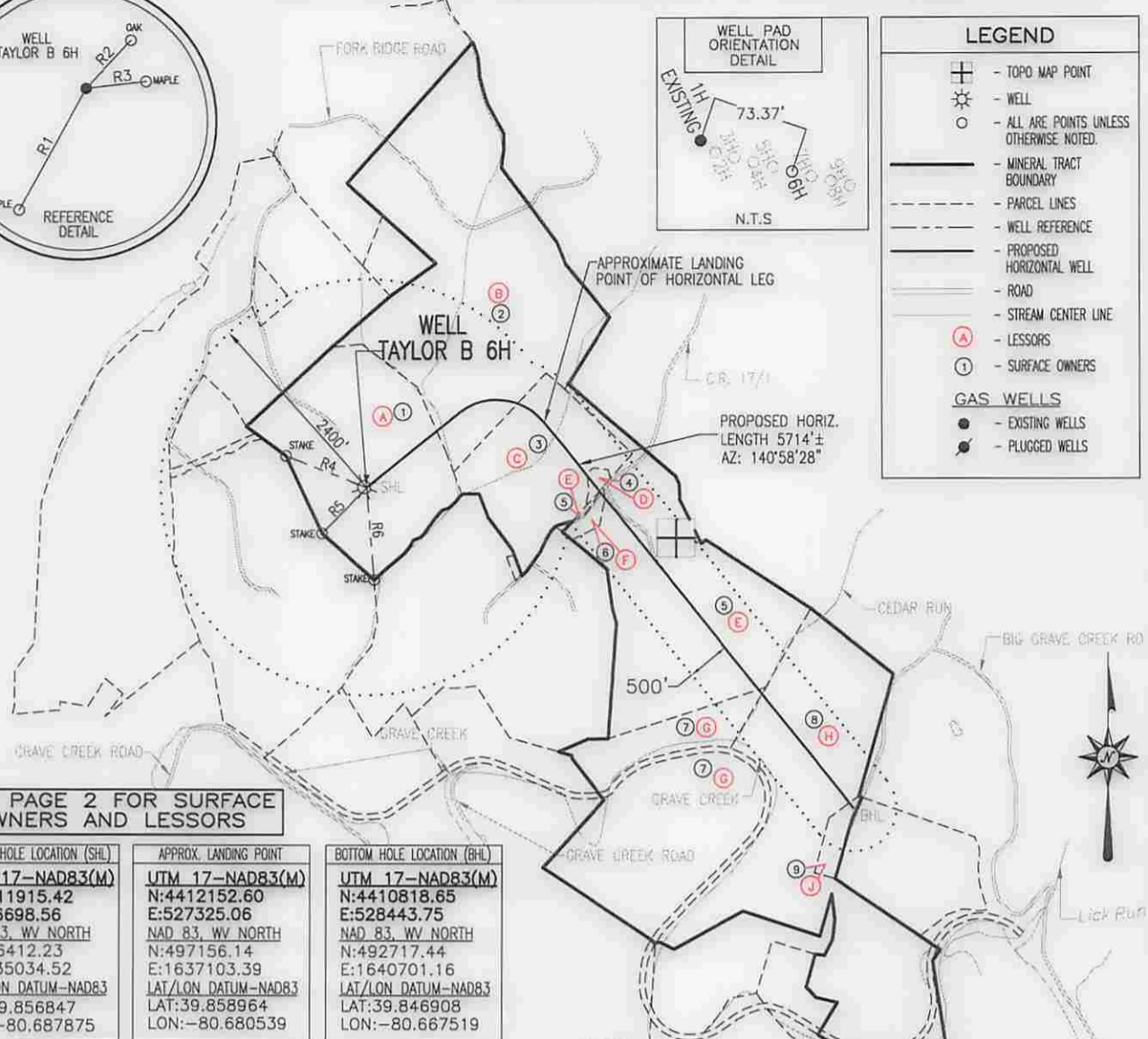


**LEGEND**

- 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 (A)
- SURFACE OWNERS (1)

**GAS WELLS**

- EXISTING WELLS
- PLUGGED WELLS



SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M) N:4411915.42 E:526698.56 NAD 83, WV NORTH N:496412.23 E:1635034.52 LAT/LON DATUM-NAD83 LAT:39.856847 LON:-80.687875	UTM 17-NAD83(M) N:4412152.60 E:527325.06 NAD 83, WV NORTH N:497156.14 E:1637103.39 LAT/LON DATUM-NAD83 LAT:39.858964 LON:-80.680539	UTM 17-NAD83(M) N:4410818.65 E:528443.75 NAD 83, WV NORTH N:492717.44 E:1640701.16 LAT/LON DATUM-NAD83 LAT:39.846908 LON:-80.667519

LINE	BEARING	DISTANCE
R1	S 29°06'18" W	267.88'
R2	N 43°33'50" E	127.44'
R3	N 83°42'50" E	117.57'
R4	N 68°46'48" W	1007.96'
R5	S 44°23'54" W	748.06'
R6	S 04°27'14" E	1075.84'

- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
  - There are no existing buildings within 625' of proposed well.
  - Proposed well pad is within 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.

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

FILE #: TAYLOR B 6H  
DRAWING #: TAYLOR B 6H  
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: JUNE 3, 2015  
OPERATOR'S WELL #: TAYLOR B 6H  
API WELL #: 47 51 01796M04  
STATE COUNTY PERMIT

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

WATERSHED: MIDDLE GRAVE CREEK - GRAVE CREEK ELEVATION: 1222.00'  
COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: GLEN EASTON, WV 7.5'  
SURFACE OWNER: WILLIAMS OHIO VALLEY MIDSTREAM LLC ACREAGE: 91.93±  
OIL & GAS ROYALTY OWNER: LEE R. & SHERRI L. TAYLOR ACREAGE: 672.505±

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: 6,533'± TMD: 14,223.66'±  
WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY  
Address 800 MOUNTAIN VIEW DRIVE Address 500 LEE STREET, EAST SUITE 1600  
City SMITHFIELD State PA Zip Code 15478 City CHARLESTON State WV Zip Code 25301-3202

06/26/2015

TAYLOR B  
6H  
PAGE 2 OF 2

	SURFACE OWNER	DIST-TM/PAR
1	WILLIAMS OHIO VALLEY MIDSTREAM LLC	4-10/20
2	JAMES D. RULONG	4-9/20
3	HUBERT & ANDREA KUHN	3-12/3
4	HOWARD KUHN	3-12/3.1
5	JOHN A. BUNGARD	3-12/4
6	ROGER DALE WELLS, ET AL	3-12/4.3
7	TRACIE L. WEST, ET AL	9-2/5
8	ROBERT W. ZIRKLE, ET AL	3-12/5
9	ROBERT W. ZIRKLE	3-12/5.1

	LESSOR
A	LEE R. & SHERRI L. TAYLOR
B	CLARENCE RULONG
C	HUBERT & ANDREA KUHN
D	HOWARD KUHN
E	JOHN A. BUNGARD
F	ROGER & SARAH WELLS
G	TRACIE J. WEST
H	ROBERT W. & SABRINA ZIRKLE
J	ROBERT W. & SABRINA ZIRKLE

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
<u>UTM 17-NAD83(M)</u> N:4411915.42 E:526698.56 NAD 83, WV NORTH N:496412.23 E:1635034.52 LAT/LON DATUM=NAD83 LAT:39.856847 LON:-80.687875	<u>UTM 17-NAD83(M)</u> N:4412152.60 E:527325.06 NAD 83, WV NORTH N:497156.14 E:1637103.39 LAT/LON DATUM=NAD83 LAT:39.858964 LON:-80.680539	<u>UTM 17-NAD83(M)</u> N:4410818.65 E:528443.75 NAD 83, WV NORTH N:492717.44 E:1640701.16 LAT/LON DATUM=NAD83 LAT:39.846908 LON:-80.667519

JUNE 3, 2015

47-051-01796  
MOD

06/26/2015



**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
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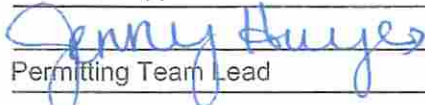
See Attached

**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

47-051-01796 MOD

Taylor B 6H							
Parcel	Lessor	Lessee	Royalty	DB/PG	ASSIGNMENT 1	ASSIGNMENT 2	ASSIGNMENT 3
A	Taylor, Lee R. & Sherri L.	TriEnergy, Inc.	12.5%	741/94	BK19/PG138-- TriEnergy, Inc. to AB Resources LLC	BK24/PG319--AB Resources LLC to Chief Exploration & Development LLC, et al.	BK25/1--Chief Exploration & Development LLC, et al. to Chevron U.S.A. Inc.
B	Rulong, Clarence	TriEnergy, Inc.	12.5%	661/450	BK20/PG252-- TriEnergy, Inc. to AB Resources LLC	BK24/PG319--AB Resources LLC to Chief Exploration & Development LLC, et al.	BK25/1--Chief Exploration & Development LLC, et al. to Chevron U.S.A. Inc.
B	Rulong, Clarence	Chevron U.S.A., INC.	14%	796/177	N/A	N/A	N/A
C	Kuhn, Hubert & Andrea	Great Lakes Energy Partners, LLC (previous name of Range Resources Appalachia, LLC -- see Certificate of Amendment in BK19/PG443)	12.5%	658/610	BK23/PG368-- Range Resources Appalachia, LLC to Chesapeake Appalachia, LLC	BK30/PG461-- Chesapeake Appalachia, L.L.C. to Chevron U.S.A. Inc.	N/A
D	Kuhn, Howard L.	Chevron U.S.A., INC.	18%	835/192	N/A	N/A	N/A
E	Bungard, John A.	Great Lakes Energy Partners, LLC (previous name of Range Resources Appalachia, LLC -- see Certificate of Amendment in BK19/PG443)	12.5%	658/179	BK23/PG368-- Range Resources Appalachia, LLC to Chesapeake Appalachia, LLC	BK30/PG461-- Chesapeake Appalachia, L.L.C. to Chevron U.S.A. Inc.	N/A
F	Wells, Roger & Sarah	TriEnergy Holdings, LLC	16%	717/506	BK24/PG430-- TriEnergy Holdings, LLC to NPAR, LLC	B756/PG332-- NPAR, LLC to Chevron U.S.A. Inc.	N/A

06/26/2015

47-051-61796 MOD

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JUN 15 2015

Parcel	Lessor	Lessee	Royalty	DB/PG	ASSIGNMENT 1	ASSIGNMENT 2	ASSIGNMENT 3
G	West, Tracie J.	Chesapeake Appalachia, LLC	12.5%	682/532	BK30/PG461-- Chesapeake Appalachia, L.L.C. to Chevron U.S.A. Inc.	N/A	N/A
H	Zirkle, Thomas & Cynthia	Great Lakes Energy Partners, LLC (previous name of Range Resources Appalachia, LLC -- see Certificate of Amendment in BK19/PG443)	12.5%	653/508	BK23/PG368-- Range Resources Appalachia, LLC to Chesapeake Appalachia, LLC	BK30/PG461-- Chesapeake Appalachia, L.L.C. to Chevron U.S.A. Inc.	N/A
H, J	Zirkle, Robert W. & Sabrina	Great Lakes Energy Partners, LLC (previous name of Range Resources Appalachia, LLC -- see Certificate of Amendment in BK19/PG443)	12.5%	653/510	BK23/PG368-- Range Resources Appalachia, LLC to Chesapeake Appalachia, LLC	BK30/PG461-- Chesapeake Appalachia, L.L.C. to Chevron U.S.A. Inc.	N/A

06/26/2015



Branden Weimer  
Permitting Team Lead

Chevron Appalachia, LLC  
800 Mountain View Drive  
Smithfield, PA 15478  
Tel 724 564 3745  
Fax 724 564 3894  
bwkb@chevron.com

January 6, 2015

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

To Whom It May Concern:

Please be advised that Chevron Appalachia, LLC and Chevron U.S.A. Inc. are affiliated entities. Unless and until revoked, and as evidenced by the signatures of authorized representatives of each entity below, Chevron Appalachia, LLC is authorized to operate assets owned by Chevron U.S.A. Inc. which are located in West Virginia, including oil and gas leases. More particularly, Chevron Appalachia, LLC is authorized to obtain well work permits for assets owned by Chevron U.S.A. Inc. I trust that this will alleviate any concerns the Department may have about Chevron Appalachia, LLC applying for well work permit applications on properties either leased or owned by Chevron U.S.A. Inc. If you have any further questions or concerns, please do not hesitate to contact me.

A handwritten signature in blue ink, appearing to read "Branden Weimer".

Branden Weimer  
Attorney-In-Fact for Chevron Appalachia, LLC

A handwritten signature in blue ink, appearing to read "Marc Tate".

Marc Tate  
Attorney-In-Fact for Chevron U.S.A. Inc.

06/26/2015

BOOK 024 PAGE 466

AB RESOURCES LLC  
6802 W SNOWVILLE RD SUITE E  
BRECKSVILLE OH 44141

## ASSIGNMENT OF OIL AND GAS LEASES

This Assignment of Oil and Gas Leases (the "Assignment") is from AB RESOURCES LLC and NPAR, LLC, both of which are Delaware limited liability companies, and whose addresses are 6802 W. Snowville Road, Suite E, Brecksville, Ohio 44141 (collectively referred to as "Assignor") to CHIEF EXPLORATION & DEVELOPMENT LLC, a Texas limited liability company, whose address is 5956 Sherry Lane, Suite 1500, Dallas, Texas, and RADLER 2000 LIMITED PARTNERSHIP, a Texas limited partnership, whose address is 3131 W. Seventh Street, Suite 400, Fort Worth, Texas 76107 (referred to jointly as "Assignee").

For adequate consideration the receipt of which is acknowledged, Assignor, subject to the terms and provisions herein contained as well as the reservations herein after set forth, does hereby grant, sell, assign and convey unto Assignee, its successors and assigns, an undivided fifty percent (50%) working interest in, to and under the Oil and Gas Leases identified on Exhibit "A" attached to and made a part hereof covering the lands described on Exhibit "A".

For purposes of this Assignment (a) the Oil and Gas Leases described on Exhibit "A" are referred to as the "Leases", (b) the lands covered by the Leases are referred to as the "Lands", and (c) the undivided fifty percent (50%) working interest in, to and under the Leases and the Lands assigned and conveyed by Assignor to Assignee pursuant to this Assignment hereinafter collectively are referred to as the "Assigned Interests".

This Assignment is made expressly subject to the following:

1. The Assigned Interests will be subject to (i) the royalty interest as provided in the Leases and any recorded assignment of the Leases to Assignor, and (ii) all of the terms, conditions and provisions set forth in the Leases and/or such assignment of the Leases to Assignor.
2. The Assigned Interests will be subject to that certain Operating Agreement (the "Agreement") that was part of and associated with that certain Participation Agreement dated November 29, 2007 between AB Resources LLC and Chief Exploration & Development LLC, the Participation Agreement having since terminated. All the terms and provisions of the Agreement are fully incorporated herein by reference.
3. Assignor warrants the title to the Assigned Interests unto Assignee, its successors and assigns, against all adverse claims arising by, through and under Assignor, but not otherwise. EXCEPT AS PROVIDED IN THE PRECEDING SENTENCE AND EXCEPT AS PROVIDED IN THE UNRECORDED AGREEMENT, THIS ASSIGNMENT IS WITHOUT WARRANTY, EXPRESS, IMPLIED, OR STATUTORY, WHATSOEVER.

Jan Pest  
MARSHALL County 12:40:32 PM  
Instrument No 1306862  
Date Recorded 06/27/2011  
Document Type ASN  
Pages Recorded 24  
Book-Page 24-466  
Recording Fee \$24.00  
Additional \$8.00

06/26/2015

BOOK 024 PAGE 467

4. The Assigned Interests herein are assigned and conveyed to and are owned by Assignees in the following undivided proportions:

Chief Exploration & Development LLC	80%
Radler 2000 Limited Partnership	20%

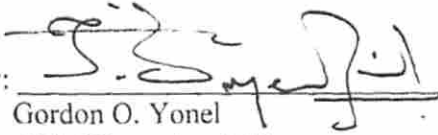
5. Save and except the Assigned Interests, all other rights, titles and interests owned by Assignor in, to and under the Leases and the Lands are expressly reserved by Assignor and are not herein conveyed or assigned to Assignee.

The terms, covenants and conditions hereof shall be binding upon and shall inure to the benefit of Assignor and Assignee and their respective successors and assigns; and such terms, covenants and conditions shall be covenants running with the Assigned Interests, and with each subsequent transfer or assignment thereof.

This Assignment is executed by Assignor on the date indicated in its acknowledgment included herewith.

AB RESOURCES LLC, ASSIGNOR

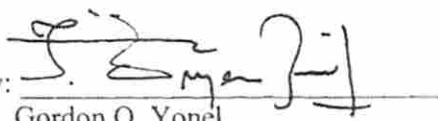
AB  
LEGAL  
CLS 6-16-11

By:   
Gordon O. Yonel  
Its: Chief Executive Officer

*WAT*

NPAR, LLC, ASSIGNOR

AB  
LEGAL  
CLS 6-16-11

By:   
Gordon O. Yonel  
Its: Chief Executive Officer

*WAT*

BOOK 024 PAGE 468

ASSIGNEES

CHIEF EXPLORATION & DEVELOPMENT LLC

RADLER 2000 LIMITED PARTNERSHIP

By: [Signature]  
Glynda Mildren  
Its: Senior Vice President - Land

By: [Signature]  
Michael G. Radler  
Its: President of Tug Hill, Inc.  
General Partner of  
Radler 2000 Limited Partnership

ACKNOWLEDGMENTS

State of Ohio                                 )  
  ) ss:  
County of Cuyahoga                         )

On this 16th day of June 2011, personally appeared Gordon O. Yonel, Chief Executive Officer of AB Resources LLC, to me personally known, who, being by me duly sworn, did say that he has executed the foregoing document for the purposes described herein for and on behalf of such limited liability company.

WITNESS MY HAND AND SEAL this 16th day of June 2011.

My Commission Expires:

11.9.13

[Signature]  
Notary Public



**PATRICIA A. GILL**  
NOTARY PUBLIC  
STATE OF OHIO  
STARK COUNTY  
My Comm. Expires  
November 9, 2013

BOOK 024 PAGE 469

State of Ohio )  
 ) ss:  
County of Cuyahoga )

On this 16th day of June 2011, personally appeared Gordon O. Yonel, Chief Executive Officer of NPAR, LLC, to me personally known, who, being by me duly sworn, did say that he has executed the foregoing document for the purposes described herein for and on behalf of such limited liability company.

WITNESS MY HAND AND SEAL this 16th day of June 2011.



**PATRICIA A. GILL**  
NOTARY PUBLIC  
STATE OF OHIO  
STARK COUNTY  
My Comm. Expires  
November 9, 2013

*Patricia A. Gill*  
\_\_\_\_\_  
Notary Public

State of Texas )  
 ) ss:  
County of Dallas )

On this 22nd day of June 2011, personally appeared Glynnne Mildren, the Sr. VP-Land of Chief Exploration & Development LLC, to me personally known, who, being by me duly sworn, did say that he has executed the foregoing document for the purposes described herein for and on behalf of such limited liability company.

WITNESS MY HAND AND SEAL this 22nd day of June 2011.



*Marie G. Veit*  
\_\_\_\_\_  
Notary Public



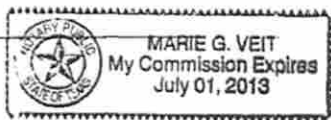
BOOK 024 PAGE 470

State of Texas )  
County of Dallas ) ss:

On this 24<sup>th</sup> day of June 2011, personally appeared Michael G. Radler the General Partner of Radler 2000 Limited Partnership, to me personally known, who, being by me duly sworn, did say that he has executed the foregoing document for the purposes described herein for and on behalf of such limited partnership.

WITNESS MY HAND AND SEAL this 24<sup>th</sup> day of June 2011.

My Commission Expires:



Marie G. Veit  
Notary Public

PREPARED BY:  
AB RESOURCES LLC

AFTER RECORDING RETURN TO:  
AB RESOURCES LLC  
6802 W. Snowville Rd., Suite E  
Brecksville, OH 44141  
PH 440.922.1250