west virginia department of environmental protection

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

PERMIT MODIFICATION APPROVAL

June 26, 2015

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

Re: Permit Modification Approval for API Number 5101797, Well #: TAYLOR B 7H

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,

for Gene Smith

Gene Smith
Assistant Chief of Permitting
Office of Oil and Gas

Chevron

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 57th 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.

Received
Office of Oil & Gas
JUN 15 2015

Sincerely,

Kristen Brooks

Kristen Brooks
Permit Coordinator
Chevron Appalachia, LLC

WW-6B
(04/15)

API NO. 47- 051 - 01797 MOD
OPERATOR WELL NO. 7H
Well Pad Name: Taylor B

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

1) Well Operator: Chevron Appalachia, LLC

Operator ID	County	District	Quadrangle
49449935	51	Clay	Glen Easton, WV

2) Operator's Well Number: 7H Well Pad Name: Taylor B

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

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

5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow X Deep _____
Horizontal X

6) Existing Pad: Yes or No Yes

JW 6/11/15

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: 15,905'

11) Proposed Horizontal Leg Length: 8,528'

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 X

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

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API NO. 47- 051 - 01797 MOD
OPERATOR WELL NO. 7H
Well Pad Name: Taylor B

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New			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#	15,905'	15,905'	3584.0
Tubing							
Liners							

JN 6/11/15

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	13-3/8"	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:				

WW-6B
(10/14)

API NO. 47- 051 - 01797 M00
OPERATOR WELL NO. 7H
Well Pad Name: Taylor B

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 15,905' MD and 6,533 TVD. Run 5 1/2" production casing and cement to a minimum TOC of 500' above top perfs'.

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

Chevron will utilizing plug and perf method with 45 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% 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 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.

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Office of Oil & Gas
JUN 15 2015

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

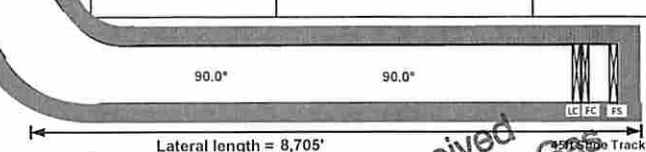
Taylor B 7H

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 MD	DEPTH TVD	Inclination	HOLE SIZE	CASING SPECS	CEMENT INFO	GENERAL INFO
							Conductor	grout to surface	
		30.0" Conductor	72'			36"	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	Deepest Aquifer	197'				Fresh Water Casing 13-3/8" 54.5# J-55 BTC 0.458" wall Capacity = 0.1508 bbl/ft Annulus = 0.1237 bbl/ft (+ 6 bbl for shoe track) Burst = 2730 psi	Cement to surface Class A w/ 3% CaCl2, Salt & Flake Yield = 1.18 cf/sk Weight = 15.6 ppg 125 bbl 595 sks 79 bbl capacity to shoe	30% excess
		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 RED BED 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 RED BED	Top Coal Deepest Coal 884' - 984' 1160' - 1180'	765' 775'				Intermediate Casing 9-5/8" 40# J 55 BTC Burst = 3950 psi Collapse = 2570 psi ID = 8.835"	Cement to surface Class A Yield = 1.29 cf/sk Weight = 15.6 ppg 161.8 bbl 704 sks 166 bbl cap to shoe	30% excess
1245	psi test	9 5/8" Casing	FC 2,195' 2,240'			12 1/4"	1,113 psi lift pressure		
BOPE Class for section 13-5/8" 10K Class III BOPE		KOP	5,500'				Prod. Casing 5-1/2", 20# P-110, VA Superior Capacity = 0221 bbl/ft (+1 bbl for shoe track) Burst = 12,640 psi Collapse = 11,080 psi ID = 4.778" Drift = 4.653"	Class A: 1) LEAD SLURRY 327.3 bbls 1392.2 sacks 15.2 ppg 1.32 cf/sx TOC Lead = Surface Class A: 2) TAIL SLURRY 377.2 bbls 1315.3 sacks 15.2 ppg 1.61 cf/sx TOC Tail = 6,685 ft MD Displacement 351.7 bbls	
		Burkett Sh. Tully Lm. S5 (Hamilton Sh.) S4 (Upper Marcellus) Stafford (Cherry Valley) S2b (L. Marcellus)	6,289' 6,302' 6,339' 6,381' 6,399' 6,402'						
Centralization * 2 Torq glider per jt from shoe to KOP * 1 single bow per 2 jt from KOP to surface	Horizontal Landing Point		7,200'				90.0° 90.0°		
		S1b (Basal Marcellus) Onondaga		6,460' 6,466'					
						8 1/2"	5 1/2" Casing	Lateral length = 8,705'	15,905'

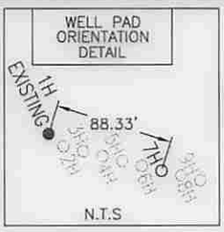


Received
Office of Oil & Gas
JUN 15 2015

Well is located on topo map 6,616 feet south of Latitude: 39° 52' 30"

Well is located on topo map 5,939 feet west of Longitude: 80° 40' 00"

WELL PAD ORIENTATION DETAIL

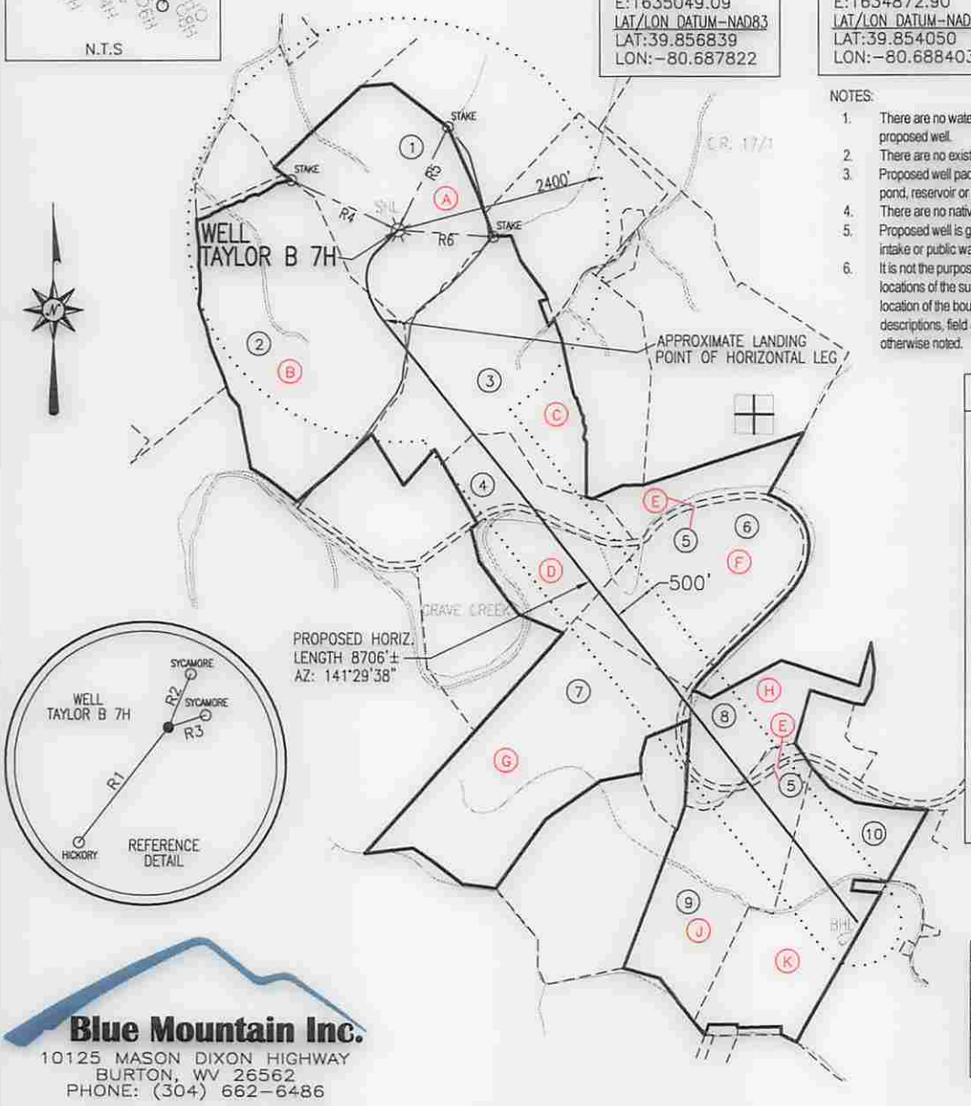


SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)	UTM 17-NAD83(M)	UTM 17-NAD83(M)
N:4411914.41	N:4411604.90	N:4409556.99
E:526703.02	E:526654.50	E:528340.53
NAD 83, WV NORTH	NAD 83, WV NORTH	NAD 83, WV NORTH
N:496408.66	N:495395.65	N:488583.01
E:1635049.09	E:1634872.90	E:1640293.25
LAT/LON DATUM-NAD83	LAT/LON DATUM-NAD83	LAT/LON DATUM-NAD83
LAT:39.856839	LAT:39.854050	LAT:39.835544
LON:-80.687822	LON:-80.688403	LON:-80.668781

NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well pad is within 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. 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.



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 32°08'58" W	272.53'
R2	N 37°23'19" E	120.40'
R3	N 80°59'38" E	103.42'
R4	N 65°09'14" W	1343.09'
R5	N 26°24'34" E	1298.84'
R6	S 85°55'13" E	1092.22'

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

FILE #: TAYLOR B 7H

DRAWING #: TAYLOR B 7H

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: _____

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: JUNE 3, 2015

OPERATOR'S WELL #: TAYLOR B 7H

API WELL #: 47 (STATE) 51 (COUNTY) 01797 MOD (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: 771.517±

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: 15,905.86'±

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

TAYLOR B
7H
PAGE 2 OF 2

	SURFACE OWNER	DIST-TM/PAR
1	WILLIAMS OHIO VALLEY MIDSTREAM LLC	4-10/20
2	BRANDAN J. MCCARTHY & JOSEPH E. BOJALAD III	4-10/19
3	PHILIP L. KUHN EST. - LIFE	3-12/2
4	LAWRENCE & SHIRLEY CONKLE ESTATES	9-2/4
5	CONSOLIDATION COAL COMPANY	3-12/28
6	TRACIE L. WEST ET AL	9-2/5
7	GEORGE B. & MARY L. CROW	9-2/6
8	SHARON L. GRUBE, ET AL	3-12/6
9	JAMES POMPEO	9-2/8
10	WILLIAM E. & AMANDA N. TOLAND	9-2/9

	LESSOR
A	LEE R. & SHERRI L. TAYLOR
B	ROBERT S. & BETTY J. BIRD
C	HOWARD LEE KUHN ET AL
D	LAURA ANN CASEY
E	CNX GAS COMPANY LLC
F	TRACIE J. WEST
G	CHARLES R. KERNAN ET UX
H	CHARLES A. & LINDA J. RILEY
J	FREDDIE C. & VIOLET L. WHITE
K	HAYHURST COMPANY (50% INT)
K	FREDDIE C. & VIOLET L. WHITE
K	BONNIE WHITE
K	BRENDA WEST
K	CHAROLETTE A. WHITE
K	LORETTA CHAMBERS
K	COREY WHITE
K	SHAWN AYERS
K	TIMOTHY POGUE
K	POLLY FAYE GRIFFIN
K	RUTH ANN WHIPKEY

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)	UTM 17-NAD83(M)	UTM 17-NAD83(M)
N:4411914.41	N:4411604.90	N:4409556.99
E:526703.02	E:526654.50	E:528340.53
NAD 83, WV NORTH	NAD 83, WV NORTH	NAD 83, WV NORTH
N:496408.66	N:495395.65	N:488583.01
E:1635049.09	E:1634872.90	E:1640293.25
LAT/LON DATUM-NAD83	LAT/LON DATUM-NAD83	LAT/LON DATUM-NAD83
LAT:39.856839	LAT:39.854050	LAT:39.835544
LON:-80.687822	LON:-80.688403	LON:-80.668781

47-051-01797 MOD

JUNE 3, 2015

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

WW-6A1
(5/13)

Operator's Well No. 7H

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 Hayes
Its: Permitting Team Lead

47-051-01797 MOA

Received
Office of Oil & Gas
JUN 15 2015

Taylor B 7H							
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	Bird, Robert S. & Betty J.	TriEnergy, Inc.	12.5%	748/107	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.
C	Kuhn, Howard Lee, et al	TriEnergy, Inc.	12.5%	687/299; 741/30	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.
D	Casey, Laura Ann	Chevron U.S.A., INC.	16%	813/571	N/A	N/A	N/A
E	CNX Gas Company LLC	Chevron U.S.A., INC.	25%	818/553	N/A	N/A	N/A
F	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
G	Kernan, Charles R., et ux	Central Michigan Exploration, LLC	16%	668/151	BK21/PG288--Central Michigan Exploration, LLC to Stone Energy Corporation	BK33/PG276--Stone Energy Corporation to Chevron U.S.A. Inc.	N/A

47-051-01797 MOD

Parcel	Lessor	Lessee	Royalty	DB/PG	ASSIGNMENT 1	ASSIGNMENT 2	ASSIGNMENT 3
H	Riley, Charles A. & Linda J.	Great Lakes Energy Partners, LLC (previous name of Range Resources Appalachia, LLC -- see Certificate of Amendment in BK19/PG443)	12.5%	652/36	BK23/PG368--Range Resources Appalachia, LLC to Chesapeake Appalachia, LLC	BK32/PG226--Chesapeake Appalachia, L.L.C. to Chevron U.S.A. Inc.	N/A
J	White, Freddie C. & Violet L.	TriEnergy, Inc.	12.50%	655/554	BK19/PG623--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.
K	Hayhurst Company (50% int)	Chesapeake Appalachia, LLC	17%	708/65	BK30/PG461--Chesapeake Appalachia, L.L.C. to Chevron U.S.A. Inc.	N/A	N/A
K	White, Freddie C. & Violet L.	Chevron U.S.A., INC.	18%	848/299	N/A	N/A	N/A
K	White, Bonnie	Chevron U.S.A., INC.	18%	848/295	N/A	N/A	N/A
K	West, Brenda	Chevron U.S.A., INC.	18%	848/391	N/A	N/A	N/A
K	White, Charolette A.	Chevron U.S.A., INC.	18%	849/626	N/A	N/A	N/A
K	Chambers, Loretta	Chevron U.S.A., INC.	18%	848/407	N/A	N/A	N/A
K	White, Corey	Chevron U.S.A., INC.	18%	848/291	N/A	N/A	N/A
K	Ayers, Shawn	Chevron U.S.A., INC.	18%	848/286	N/A	N/A	N/A
K	Pogue, Timothy	Chevron U.S.A., INC.	18%	848/369	N/A	N/A	N/A
K	Griffin, Polly Faye	Chevron U.S.A., INC.	18%	848/304	N/A	N/A	N/A
K	Whipkey, Ruth Ann	Chevron U.S.A., INC.	18%	848/400	N/A	N/A	N/A

Received
Office of Oil & Gas
JUL 31 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 57th 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.

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

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

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

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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

NPAR, LLC, ASSIGNOR

AB LEGAL CLS 6-16-11

By: _____
Gordon O. Yonel
Its: Chief Executive Officer

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ASSIGNEES

CHIEF EXPLORATION & DEVELOPMENT LLC

By: Glynda Mildren

Its: Senior Vice President - Land

RADLER 2000 LIMITED PARTNERSHIP

By: 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

Patricia A. Gill
Notary Public

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

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.

My Commission Expires:
11-9-

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 Glynne 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.

My Commission Expires:

MARIE G. VEIT
My Commission Expires
July 01, 2013

Marie G. Veit
Notary Public

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State of Texas)
) ss:
County of Dallas)

On this 24th 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 24th day of June 2011.

My Commission Expires:

MARIE G. VEIT
My Commission Expires
July 01, 2013

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