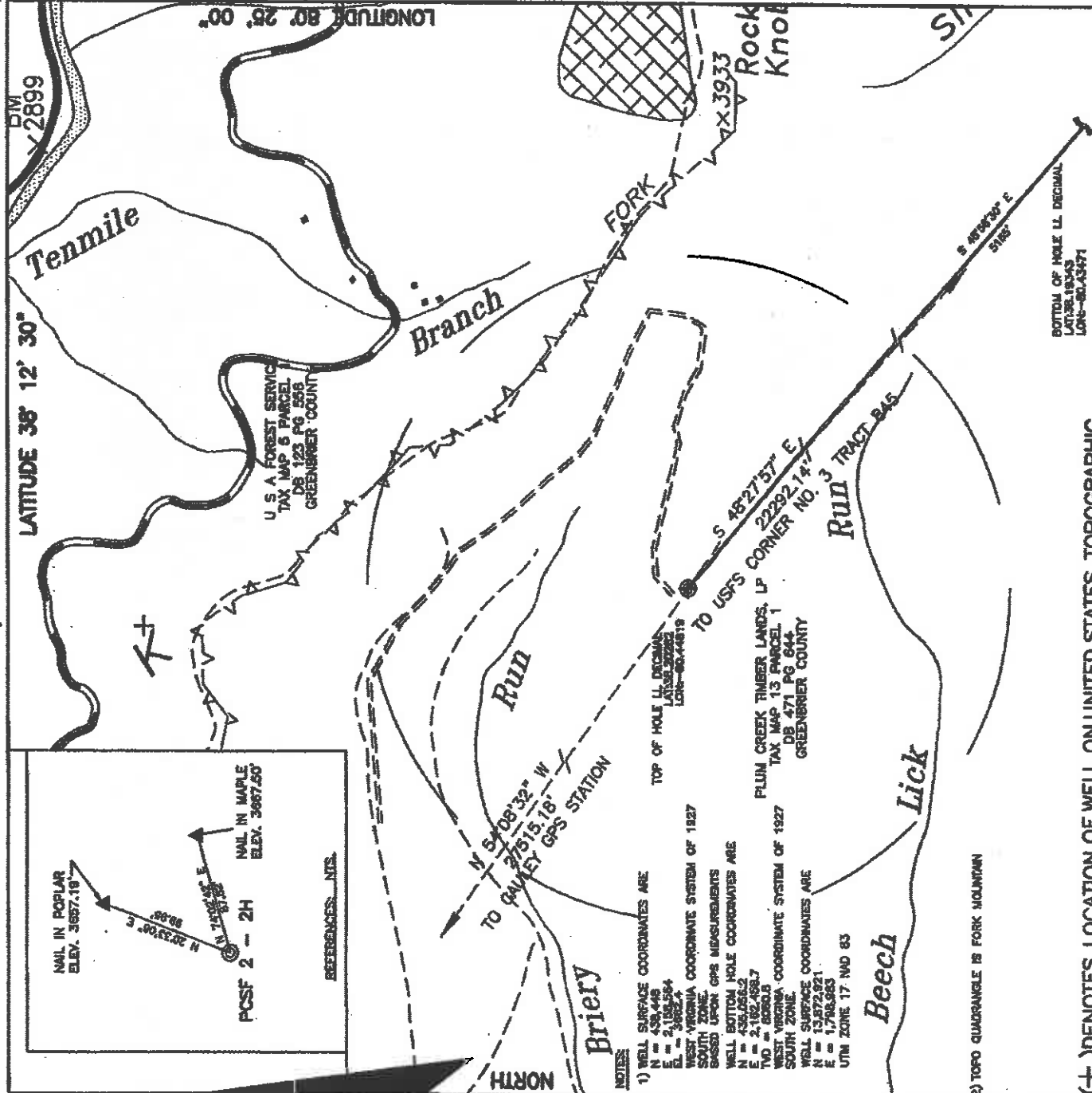
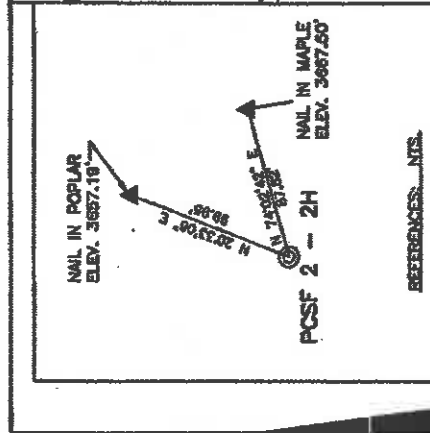


9068' DIM
 LATITUDE 38° 12' 30" W
 9058' DIM
 LATITUDE 38° 12' 30" W
 2009' DIM
 LONGITUDE 80° 25' 00" W



NOTES
 1) WELL SURFACE COORDINATES ARE
 N = 430,448
 E = 2,193,564
 WEST VIRGINIA COORDINATE SYSTEM OF 1927
 SOUTH ZONE
 BASED UPON GPS MEASUREMENTS
 WELL BOTTOM HOLE COORDINATES ARE
 N = 435,056.2
 E = 2,192,468.7
 NO. = B880J
 WEST VIRGINIA COORDINATE SYSTEM OF 1927
 SOUTH ZONE
 WELL SURFACE COORDINATES ARE
 N = 13,572,921
 E = 1,796,963
 UTM ZONE 17 NAD 83

2) TOPO QUADRANGLE IS FORK MOUNTAIN

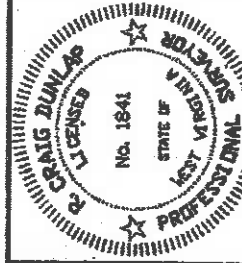
BOTTOM OF HOLE LL DECIMAL
 0.00000000
 LOG-86146971

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC

FILE NO. W10-280-1813
 DRAWING NO. W10-280-A2
 SCALE 1"=1000'
 MINIMUM DEGREE OF ACCURACY 1:2500
 PROVEN SOURCE OF ELEVATION GPS
 GLOBAL POSITIONING SYSTEM

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 DIVISION OF ENVIRONMENTAL PROTECTION.

(SIGNED) [Signature]
 PROFESSIONAL SURVEYOR No. 1841



WVDEP
 OFFICE OF OIL AND GAS
 1356 HANSFORD ST.
 CHARLESTON, WV 25301



DATE NOVEMBER 2010
 OPERATOR'S WELL NO. EGSE 2 - 2H
 API WELL NO. 47-025-00035H

STATE WV COUNTY PUTNAM PERMIT 47-025-00035H

WELL TYPE: OIL GAS CBM LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 3700 ± WATERSHED SOUTH FORK OF CHERRY RIVER
 DISTRICT FALLING SPRINGS COUNTY GREENBRIER
 QUADRANGLE FORK MOUNTAIN ACREAGE 21527
 SURFACE OWNER PLUM CREEK TIMBERLANDS, LP LEASE ACREAGE 21527
 OIL & GAS ROYALTY OWNER HIGHLAND RESOURCES INC., & BRC APPALACHIAN MINERALS I, L.L.C., & OXY USA, INC.

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE

IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Martinsburg Shale
 ESTIMATED DEPTH TVD = 8146' MD = 13555'

WELL OPERATOR BRC OPERATING COMPANY, LLC DESIGNATED AGENT MARC MONTELEONE
 ADDRESS 200 CRESCENT COURT, SUITE 200 ADDRESS 600 QUARRIER STREET
DALLAS, TX 75201 CHARLESTON, WV 25325

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 5/31/13 REV. 11/8/13
API #: 47-25-00035

Farm name: Phan Creek Timberlands, LP

Operator Well No.: PCSF 2-2H

LOCATION: Elevation: 3,866'

Quadrangle: Fork Mountain

District: Kentucky

County: Greenbrier

Latitude: 2009 Feet South of 38 Deg. 12 Min. 30 Sec.
Longitude: 8858 Feet West of 80 Deg. 25 Min. 00 Sec.

Company: BRC Operating Company, LLC

Address:	<u>200 Crescent Court, Suite 200</u>		Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	<u>Dallas, TX 75201</u>		<u>20"</u>	<u>115'</u>	<u>115'</u>	<u>207</u>
Agent:	<u>Marc A. Montevono</u>		<u>13 3/8"</u>	<u>1,610'</u>	<u>1,610'</u>	<u>1,486</u>
Inspector:	<u>Gary Kennedy</u>		<u>9 5/8"</u>	<u>6,010'</u>	<u>6,010'</u>	<u>1 757 Lead / 157 Lag</u>
Date Permit Issued:	<u>1/10/11</u>		<u>5 1/2"</u>	<u>13,056'</u>	<u>13,056'</u>	<u>2 143 Lead / 145 Lag</u>
Date Well Work Commenced:	<u>9/12/2011</u>		<u>2 3/8"</u>	<u>6,840'</u>	<u>6,840'</u>	
Date Well Work Completed:	<u>9/2/2012 REV. 5/29/13</u>					
Verbal Plugging:						
Date Permission granted on:						
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>						
Total Vertical Depth (ft.): <u>7,942'</u>						
Total Measured Depth (ft.): <u>13,056'</u>						
Fresh Water Depth (ft.): <u>1,500'</u>						
Salt Water Depth (ft.): <u>2,350'</u>						
Is coal being mined in area (N/Y)? <u>N</u>						
Coal Depths (ft.): <u>275'</u>						
Void(s) encountered (N/Y) Depth(s) <u>None</u>						

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Lower Marcellus Pay zone depth (ft) 7,942
Gas: Initial open flow 480 MCF/d Oil: Initial open flow Bbl/d
Final open flow 300 MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure 3,500 psig (surface pressure) after 36 Hours

Second producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the 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.


Signature

11/8/2013
Date

RECEIVED
Office of Oil & Gas

NOV 12 2013

WV Department of
Environmental Protection

11/15/2013

25-00035

Were core samples taken? Yes No

Were cuttings caught during drilling? Yes No

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MWD GR (6798 - 13009)

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Stages 2 thru 21 from 12,909' TMD to 8,855' TMD. 60 degree phasing, 6 SPF, total 24-36 shots/stage. Fractured utilizing slickwater fracs at average rates of 65 bpm. Total sand injected into each frac stage 250,000 lbs. Average pressures observed were approximately 7,500 psi.

Permit modified on 5/21/13: Re-enter horizontal section of existing well. Install CIBP at 8,840' TMD to isolate 8,841' thru 12,949' TMD. Perforate and fracture existing horizontal casing from 8,520' to 8,840' TMD (two zones). Utilize N2 foam fracs. 60 degree phasing, 5 SPF at 40' spacing; total 22 shots/stage. Total sand injected into each frac stage 80,000 lbs.

Plug Back Details Including Plug Type and Depth(s): Set CIBP at 8,840' TMD to isolate 13,056' TMD to 8,841' TMD.

Formations Encountered:

Geologic Age	Formation	Lithology	Top Depth	Bottom Depth
Mississippian	Ravenciff	Sandstone	1770	1833
Mississippian		Shale	1833	2107
Mississippian	Lower Maxon	Sandstone	2107	2120
Mississippian		Shale	2120	2211
Mississippian	Greenbrier	Limestone	2211	2359
Mississippian	Big Lime	Limestone	2359	2677
Mississippian		Shale	2677	2731
Mississippian	Injun	Sandstone	2731	2763
Mississippian	Squaw	Shale	2763	2783
Mississippian		Shale	2783	2929
Mississippian	Weir	Sandstone	2929	2937
Mississippian		Shale	2937	3350
Mississippian	Berea	Sandstone	3350	3370
Mississippian		Shale	3370	3436
Mississippian	Gordon	Sandstone	3436	3468
Devonian		Shale	3468	3719
Devonian	Huron	Shale	3719	6582
Devonian		Shale	6582	7533
Devonian	Rhinestreet	Organic Shale	7533	7616
Devonian		Shale	7616	7814
Devonian	Upper Marcellus	Shale	7814	7915
Devonian	Cherry Valley	Limestone	7915	7930
Devonian	Lower Marcellus	Shale	7930	7998
Devonian	Onodaga	Limestone	7998	8008
Devonian	Huntersville	Chert	8008	TD

11/15/2013



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

May 21, 2013

WELL WORK PERMIT

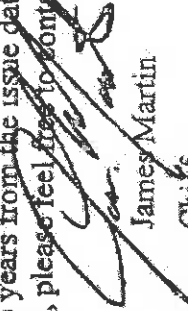
Fracture

This permit, API Well Number: 47-2500035, issued to BRC OPERATING COMPANY, LLC, 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 all 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 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.


James Martin
Chief

Operator's Well No: PLUM CREEK SOUTH FORK (PC)

Farm Name: PLUM CREEK TIMBERLANDS, L

API Well Number: 47-2500035

Permit Type: Fracture

Date Issued: 05/21/2013

Promoting a healthy environment.

05/24/2013

