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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

July 20, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-8101003, issued to EXCO RESOURCES (PA), 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: NEW BEAVER 26-C  
Farm Name: BEAVER COAL COMPANY  
**API Well Number: 47-8101003**  
**Permit Type: Plugging**  
Date Issued: 07/20/2016

**Promoting a healthy environment.**

**07/22/2016**

## PERMIT CONDITIONS

West Virginia Code § 22-6-11 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

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil      / Gas   X   / Liquid injection      / Waste disposal      /  
(If "Gas, Production   X   or Underground storage     ) Deep      / Shallow     

5) Location: Elevation 2713 Watershed Maple Meadow Creek  
District Trap Hill County Releigh Quadrangle Lester

6) Well Operator EXCO Resources (PA), LLC 7) Designated Agent Diana Stampler/C.T.Corp.  
Address PO Box 8. Address 5400 D Big Tyler Road  
Ravenswood, WV 26164 Charleston, WV 25301

Oil and Gas Inspector to be notified  
Name GARY KENNEDY  
Address PO Box 268, Nimitz WV 25978  
  
PHONE 304 382 8402

9) Plugging Contractor  
Name R & R WELL SERVICE  
Address 42 LYNCH RIDGE  
WALTON, WV 25286

10) Work Order: The work order for the manner of plugging this well is as follows:  
Remove all equipment used to produce well *Check for Rock Pressure*  
Run in tubing into TD @ +/-3431 *Free point 4'*  
Gel hole  
Set cement plug +/- 3431 to 2700 across all potential formations *WOC 4 HAS E CHECK CEMENT TOP, ADD CEMENT IF NEEDED.*  
Gel +/- 2700 to 2500 *gwm*  
Set cement plug +/-2500 to 2050 into bottom of 7" csg *FREE POINT, CUT & REMOVE 4 1/2 ~ 1900'*  
Gel +/-2050 to 1270  
Cement +/-1270 to 900  
Gel to +/- 900 to 600  
Cement +/-600 to 500  
Gel to +/-500 to 200,

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Cement 200' to surface, erect monument with API  
Gel between all plugs

SIGNATURE Radall D. Shultz

DATE 5/24/16

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WR-35

01-Jun-95  
API # 47-81-01003

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

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Well Operator's Report of Well Work

OCT 11 1995

Farm Name: BEAVER COAL COMPANY Operator's Well No.: #26-C  
Location: Elevation: 2,713.00 Quadrangle: LESTER WV Division of  
District: TRAP HILL County: RALEIGH Environmental Protection

Latitude: 7500 feet south of 37 Deg. 45 Min. 00 Sec.  
Longitude: 11800 feet west of 81 Deg. 20 Min. 00 Sec.

Company: PEAKE ENERGY, INC.  
P.O. BOX 8  
HAVENSWOOD, WV 26164

Agent: Thomas S. Liberatore

Inspector: RODNEY DILLON  
Permit Issued: 06/01/95  
Well Work Commenced: 07/19/95  
Well Work Completed: 07/23/95

Verbal Plugging  
Permission granted: \_\_\_\_\_  
Rotary: X Cable: \_\_\_\_\_ Rig  
Total Depth (ft.): 3421'  
Fresh Water Depths: 62'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fillup ( CBX )
12 3/4"	15	15	2
7"	2109	2109	300
4 1/2"	3317	3317	110

Salt Water Depths: \_\_\_\_\_  
Is Coal being mined? No  
Coal Depths: see log on back

OPEN FLOW DATA

Producing Formation: Middle Mixon Sand Pay Zone Depth: 2862-2941  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 70 Mcf/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock pressure 290 psig (surf. pressure) after 12 Hours

2nd Producing Form: \_\_\_\_\_ Pay Zone Depth: \_\_\_\_\_  
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 (surf. pressure) after \_\_\_\_\_ Hours

NOTE: Details of Fracturing, Perforating, & Well Log on Back.

For: PEAKE ENERGY, INC.

By: Thomas S. Liberatore, General Manager  
Date: October 6, 1995

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FORM WR-35  
(Reverse)

PERMIT #: 47-081-1003  
CO. WELL #: 26-C  
ELEVATION: 2713 GL., 2718 KB

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DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC.  
-----

7/23/95: PERFORATED THE M. MAX. FROM 2871-2941 USING 64 HOLES  
FOAM-FRAC'D H. MAX. USING 60,000# OF SAND, 255 BBL  
OF WATER, AND 554,000 SCF OF NITROGEN.  
8/14/95: PERFORATED THE MID. MAX. FROM 2877-2897 WITH 60 HOLES.  
FOAM-FRAC'D THE MID. MAX. USING 41,500# SAND,  
175 BBL OF WATER, 424,000 SCF OF NITROGEN.

WELL LOG (all depths taken from KB)

ROCK TYPE OR FORMATION	TOP	BOTTOM	REMARKS
SAND	0	50	
SHALE	50	136	
SAND	136	456	WET @ 62'
SHALE	456	590	
COAL	590	591	
SAND	591	700	
SHALE	700	958	
SAND	958	1060	
SHALE & SAND	1060	1530	
COAL	1530	1531	
SAND & SHALE	1531	2184	
PRINCETON SAND	2184	2250	
SHALE	2250	2376	
RAVENCLIFF SAND	2376	2412	
AVIS LIME	2412	2448	
SHALE	2448	2794	
MIDDLE MAXON STRAY	2794	2806	
SHALE	2806	2862	
MIDDLE MAXON SAND	2862	2942	S/GAS
SHALE	2942	2742	
SHALE & LIME	2742	3168	
LOWER MAXON SILTSTONE	3168	3275	
LITTLE LIME (REYNOLDS)	3275	3350	
SHALE (PENCIL CAVE)	3350	3378	
BIG LIME (GREENBRIER)	3378	3431*	
TOTAL DEPTH	3431		

\*NOTE: Base of Big Lime not drilled.

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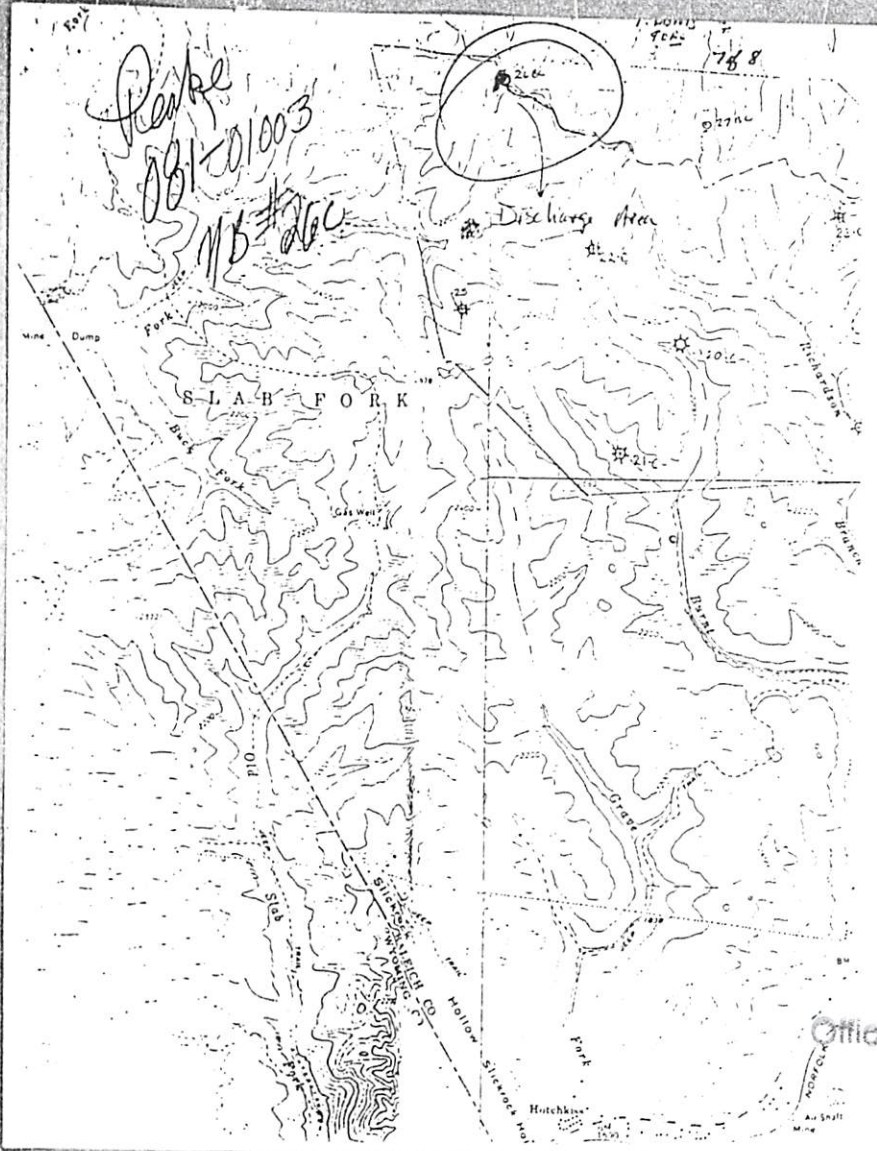
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*[Handwritten signature]*

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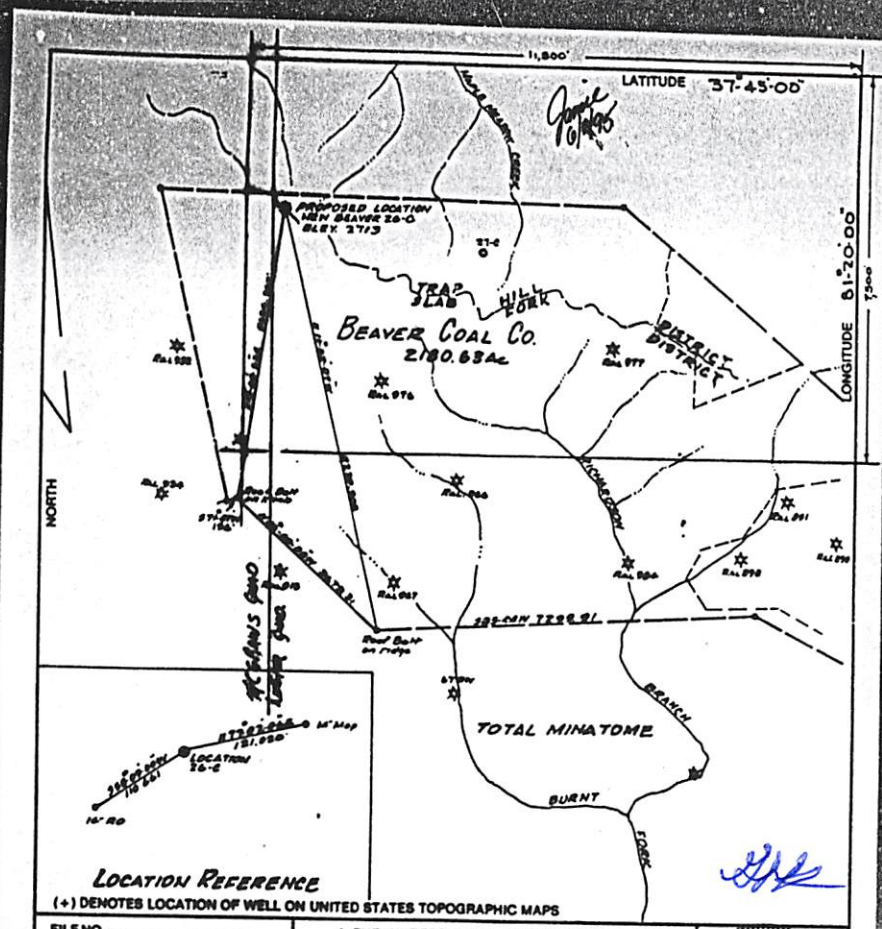
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*YK*

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LOCATION REFERENCE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1:10000  
 PROVEN SOURCE OF ELEVATION PT ON KNOWN  
 ELEVATION ELV. 2663

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 ENERGY.  
 (SIGNED) Frank H. Bark's  
 R.P.E. \_\_\_\_\_ L.L.S. 200



STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION

DATE APR 26 1993  
 OPERATOR'S WELL NO. NEW BEAVER 20-0  
 API WELL NO. 47-081-01003

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 IF "GAS" PRODUCTION STORAGE DEEP SHALLOW  
 LOCATION: ELEVATION 2713 WATERSHED MAPLE MEADOW CREEK  
 DISTRICT TRAP HILL COUNTY RALEIGH  
 QUADRANGLE LESTER

SURFACE OWNER BEAVER COAL CO. ACREAGE 2180.63  
 OIL & GAS ROYALTY OWNER BEAVER COAL CO. LEASE ACREAGE 2180.63

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 SHENANDOAH & MASTEN ESTIMATED DEPTH 3300 FT  
 WELL OPERATOR PRATE ENERGY INC. DESIGNATED AGENT TOM LIBERATORE  
 ADDRESS PO BOX 8 ADDRESS RAVENSWOOD, WY 26164

1) Date: 5/1/2016  
2) Operator's Well Number  
New Beaver 26-C  
3) API Well No.: 47 - 081-01003

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

4) Surface Owner(s) to be served: (a) Name Beaver Coal Co. Address 115 1/2 Kanawha ST., Beckley 25801  
(b) Name Address  
(c) Name Address  
5) (a) Coal Operator Name Beaver Coal Co. Address 115 1/2 Kanawha St., Beckley WV 25801  
(b) Coal Owner(s) with Declaration Name Address  
(c) Name Address  
Name Gary Kennedy Address P.O. Box 268 Nimitz, WV 25978 Telephone Ph. (304) 382 8402

**TO THE PERSONS NAMED ABOVE:** You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief

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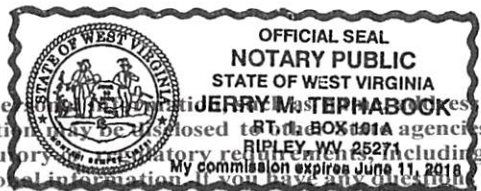
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Well Operator EXCO RESOURCES (PA), LLC  
By: Randall Sheets  
Its: Supervisor  
Address P O BOX 8 RAVENSWOOD, WV 26164  
Telephone 304-273-5371

WV Department of Environmental Protection

Subscribed and sworn before me this 24th day of May Notary Public

My Commission Expires June 11, 2018  
Oil and Gas Privacy Notice



*Jerry M. Tephabook*

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



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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EXCO Resources (PA), LLC OP Code 307860

Watershed (HUC 10) Maple Meadow Creek Quadrangle Lester

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 \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Any fluids will be collected in a tank and Hauled *ell*)

Will closed loop system be used? If so, describe: \_\_\_\_\_

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. \_\_\_\_\_

-If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. \_\_\_\_\_

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) \_\_\_\_\_

-Landfill or offsite name/permit number? \_\_\_\_\_

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.

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I certify that I understand and agree to the terms and conditions of the GENERAL WATERBURY 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 Randall D. Sheets

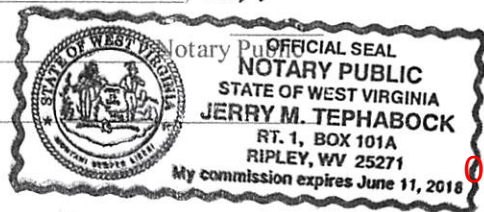
Company Official (Typed Name) RANDALL SHEETS

Company Official Title Supervisor

Subscribed and sworn before me this 24th day of MAY, 2016

Jerry M. Tephabock

My commission expires June 11, 2018



07/22/2016

Proposed Revegetation Treatment: Acres Disturbed 0.5 Prevegetation pH 6.0

Lime 2 Tons per Acre of correct to 6.5  
Fertilizer (10-20-20 or equivalent) 500lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Seed Type	Area I		Seed Type	Area II	
		lbs/acre			lbs/acre
KENTUCKY FESCUE		40	SAME AS #1		
ALSIKE CLOVER		5			
ANNUAL RYE		16			

Attach:  
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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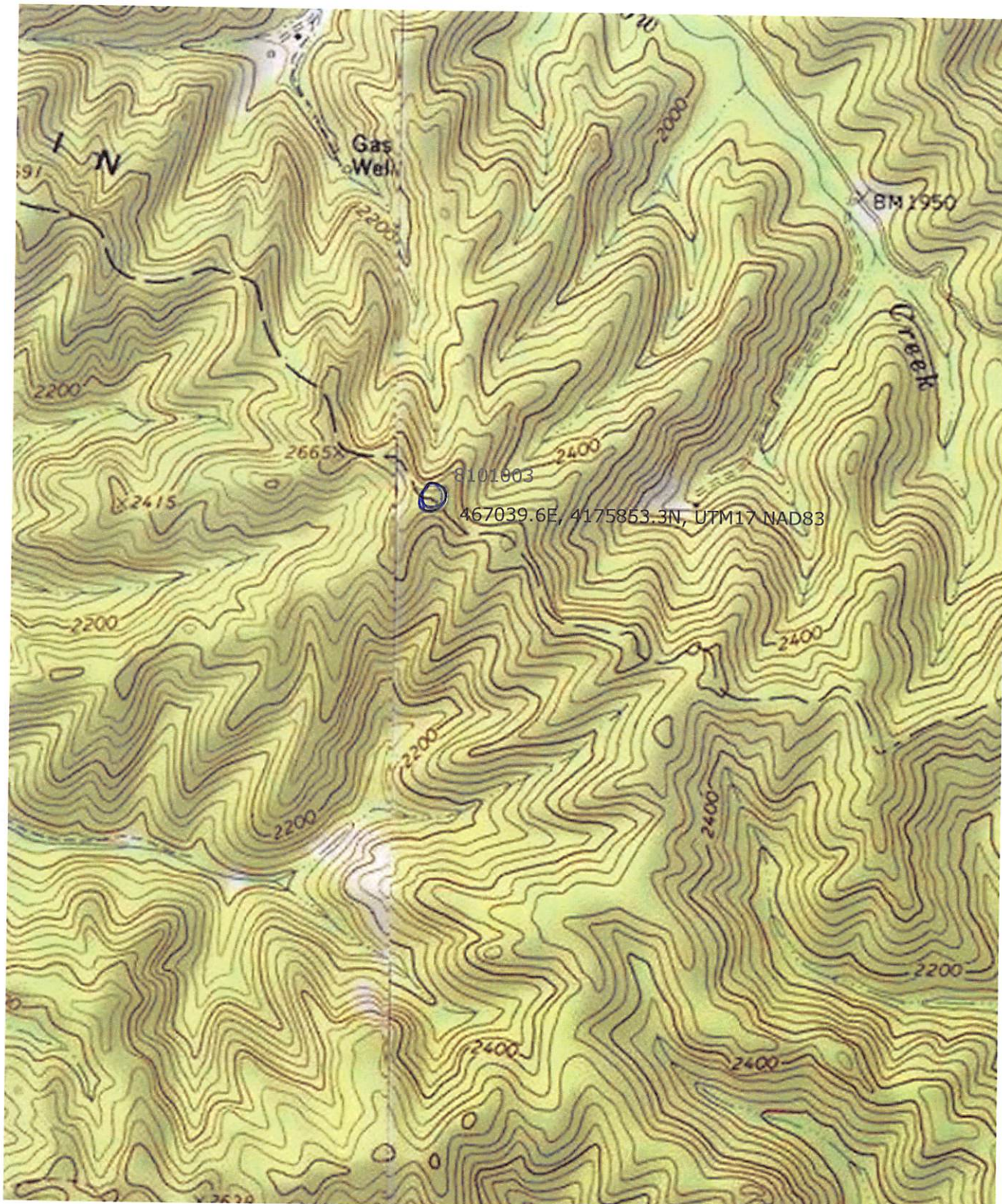
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Title: Inspector

Date: 5/25/16

Field Reviewed? (  ) Yes (  ) No

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WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas  
**WELL LOCATION FORM: GPS**

API: 47 081 01003 WELL NO.: Welchland 26C

FARM NAME: Beacer Coal

RESPONSIBLE PARTY NAME: EXCO Resources, (PA), LLC

COUNTY: Releigh DISTRICT: Trap Hill

QUADRANGLE: Lester

SURFACE OWNER: Beaver Coal Company

ROYALTY OWNER: Beaver Coal Company

UTM GPS NORTHING: ~~4196557.0~~ 4175853.3

UTM GPS EASTING: ~~457150.0~~ 467039.6 GPS ELEVATION: 2712

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:  
Survey grade GPS \_\_\_\_: Post Processed Differential \_\_\_\_  
Real-Time Differential \_\_\_\_  
Mapping Grade GPS : Post Processed Differential \_\_\_\_  
Real-Time Differential \_\_\_\_

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4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

Russell D. [Signature]  
Signature Title

5/26/16  
Date

07/22/2016