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

September 19, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-8100573, 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 penalities 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: 4-AR
Farm Name: NEW RIVER LAND
API Well Number: 47-8100573
Permit Type: Plugging
Date Issued: 09/19/2014

Promoting a healthy environment.

8100573 P

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

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.

8100573P

WW-4B
Rev. 2/01

1) Date _____, 20____
2) Operator's
Well No. New River AR-4
3) API Well No. 47- 081 - 0573

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 ____ or Underground storage ____) Deep ____/ Shallow X

5) Location: Elevation 2322 Watershed Cramberry Creek
District Town 6 County Raleigh 81 Quadrangle Beckley 7.5 234

6) Well Operator Exco Resources (PA), LLC
Address PO Box 8
Ravenswood, WV 26164

7) Designated Agent Diana Stampler
Address CT Corporation Systems
5400 D Big Tyler Rd, Chas, WV 25301

8) Oil and Gas Inspector to be notified
Name Gary Kennedy
Address PO BOX 268
Nimitz, WV 25978
304 382 8402

9) Plugging Contractor
Name R&R Well Service
Address 4026 Clay Rd.
Spencer, WV 25276

10) Work Order: The work order for the manner of plugging this well is as follows:

RIH check TD to +or- ~~1390~~ 1440' rig up tubing to TD and load hole with 6% gel. TD WAS 1440'

Rig up and pump 35 sks Class A cement from 1390'to 960', WOC for 8hrs.

RIH tag top of cement at 960', add and additional class A cement to achieve 960' TOC

RIH log show TOC at 964' and cut 4 1/2 csg at +or - 950' and pull 41/2 casing

RIH with tubing to +or- 950'and pump 35 sks of class A cement 950'to 788", pull tubing to 500'

Rig up and pump ~~35~~ ? sks class A cement 500'to ~~332'~~ 250', pull tubing to 168'and pump 35 sks class A cement 168'to surface.

Keep gel between all cement plugs. Erect monument with API #, reclaim road and location.

COVER COAL @ 261' WITH CLASS A CEMENT.
GEL BETWEEN ALL PLUGS

RECEIVED
Office of Oil and Gas
AUG 18 2014
WV Department of
Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Gary Kennedy Date 8/11/14

8100573P

IV-35
(Rev 8-81)

State of West Virginia
Department of Mines
Oil and Gas Division

Date February 23, 1982
Operator's
Well No. 4-AR
Farm New River
API No. 47 - 081 - 0573

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production X / Underground Storage ___ / Deep ___ / Shallow X /)

LOCATION: Elevation: 2328' Watershed Cranberry Creek
District: Town County Raleigh Quadrangle Beckley 7.5'

COMPANY Peake Operating Company
ADDRESS 201 Dunbar Office Park, Dunbar, WV
DESIGNATED AGENT Floyd B. Wilcox
ADDRESS 201 Dunbar Office Park, Dunbar, WV
SURFACE OWNER New River Company
ADDRESS Box 711, Mt.Hope, WV
MINERAL RIGHTS OWNER New River Company
ADDRESS Box 711, Mt. Hope, WV
OIL AND GAS INSPECTOR FOR THIS WORK D. Craig Duckworth ADDRESS Box 454, MtLookout, WV
PERMIT ISSUED August 18, 1981
DRILLING COMMENCED November 11, 1981
DRILLING COMPLETED December 3, 1981
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13 3/8" 13-10"	30'	30'	
9 5/8	905'	905'	300 sks.
8 5/8			
7			
5 1/2			
4 1/2	1414'	1414'	50 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Ravencliff Depth 1320 feet
Depth of completed well 1440 feet Rotary X / Cable Tools ___
Water strata depth: Fresh N/A feet; Salt N/A feet
Coal seam depths: Beckley 261' Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Ravencliff Pay zone depth 1313'-1357' feet
Gas: Initial open flow 207 Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow 452 Mcf/d Final open flow ___ Bbl/d
Time of open flow ~~between initial and final~~ tests 4 hours
Static rock pressure 170 psig (surface measurement) after 72 hours shut in
(If applicable due to multiple completion--)
Second producing formation ___ Pay zone depth ___ feet
Gas: Initial open flow ___ Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow ___ Mcf/d Oil: Final open flow ___ Bbl/d
Time of open flow between initial and final tests ___ hours
Static rock pressure ___ psig (surface measurement) after ___ hours shut in

AUG 13 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

(Continue on reverse side)

FORM IV-35
(REVERSE)

8100573P

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated Ravencliff 1313'-1321' (24 holes); 1334'-1342' (22 holes); 1351'-1357' (16 holes).
Waterfrac with 1000 gals. 15% acid; 75,000# 20/40 sand; 15,000# 80/100; 800# J-266; 44# J-218. Used 75 perf balls; 55 gals. L-53; 50 gals. F-75; 100# L-41. Breakdown pressure 950 lbs. Average treating pressure 1,324 lbs. ISIP 1000 lbs; 909 hydraulic hp. Average rate BTM - 28.

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand and shale	0	184	
Sandy shlae	184	272	
Shale	272	306	
Sandy shale	306	354	
Shale	354	432	
Sand	432	474	
Sandy shale	474	920	
Shale	920	984	
Sand	984	1012	
Shale	1012	1061	
Princeton Sand	1061	1131	
Shale	1131	1261	
Ravencliff sand	1261	1360	
Red shale	1360	1440	Gas check 1440' - 207 MCF
T.D.	1440		

(Attach separate sheets as necessary)

Peake Operating Company
Well Operator

By: Floyd B Wilson

Date: Feb 26, 1982

Received

AUG 13 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

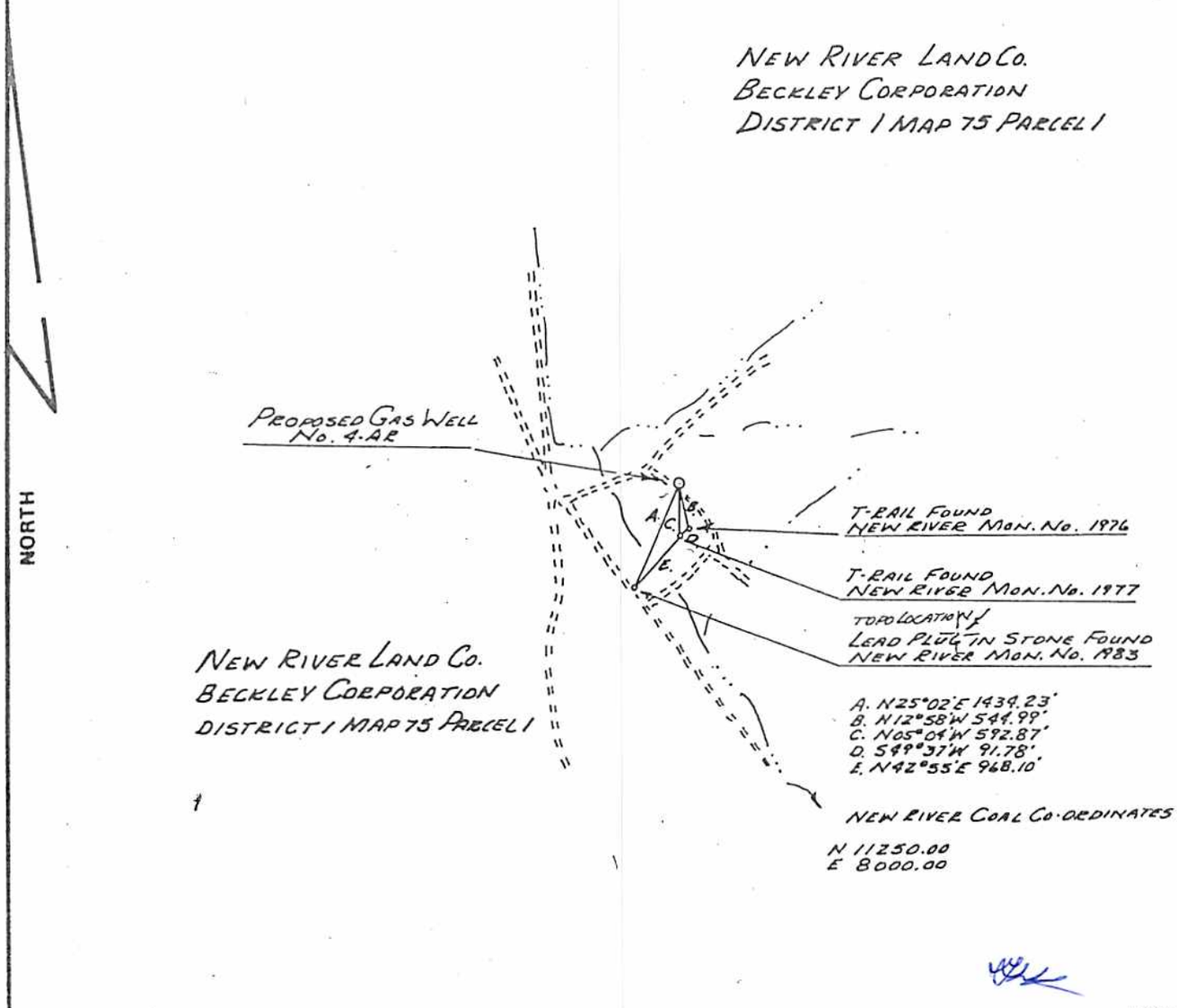
Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

81 00 573P

LATITUDE 37°50'

LONGITUDE 81°10'

NORTH



FILE NO.
DRAWING NO.
SCALE 1-2000
MINIMUM DEGREE OF ACCURACY 1-2500
PROVEN SOURCE OF ELEVATION B.M. 2363 EAST OF LOCATION

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 MINES.

(SIGNED) Bryant W. Bowman
R.P.E. _____ L.L.S. 736

BRYANT W. BOWMAN LICENSED NO. 736 STATE OF WEST VIRGINIA LAND SURVEYOR

PLACE SEAL HERE

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

FORM IV-6
(8-78)

DATE Sept 12, 19 81
OPERATOR'S WELL NO. 4-AR
API WELL NO.
47 ____ — ____
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS ✓ LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
LOCATION: ELEVATION 2322' WATER SHED CRANBERRY CREEK
DISTRICT BECKLEY COUNTY RALEIGH
QUADRANGLE BECKLEY 7½'
SURFACE OWNER NEW RIVER LAND ACREAGE 300 ±
OIL & GAS ROYALTY OWNER NEW RIVER LAND LEASE ACREAGE 61,571.759
LEASE NO. 31143
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 RAVENCLIFF ESTIMATED DEPTH 2000
WELL OPERATOR PERKE OPERATING CO. DESIGNATED AGENT FLOYD WILCOX
ADDRESS 201 DUNBAR OFFICE PARK ADDRESS 201 DUNBAR OFFICE PARK
DUNBAR, W.VA. DUNBAR, W.VA.

Received
AUG 13 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

KELLER PHOTOPRINT SERVICE

8100573 P

WW-4A
Revised 6-07

1) Date:
2) Operator's Well Number
NEW RIVER AR-4

3) API Well No.: 47 - 081 - 0573

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name Walmart
Address 2001 Southeast 10th. street
Brentonville, Arkansas, 72716
(b) Name LTG INC.
Address PO Box 854
Beckley WV 25802
(c) Name
Address

5) (a) Coal Operator
Name
Address

(b) Coal Owner(s) with Declaration
Name Boone East Develolpement Co
Address Po Box 261
Julian Wv 25529
Name
Address

6) Inspector Gary Kennedy
Address PO Box 268
Nimiyz, WV 25978
Telephone 304 382 8402

(c) Coal Lessee with Declaration
Name
Address

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.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
SHELLY WELLING
RR 1, Box 120
Given, West Virginia 25245
My Commission Expires Nov. 19, 2018

Well Operator Exco Resources (PA), LLC
By: Randall B. Slater
Its: Production Superintendent
Address PO, Box 8
Ravenswood WV 26164
Telephone 304 273 5371

Received
AUG 13 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

Subscribed and sworn before me this 7 day of Aug 2014
Shelly Welling Notary Public
My Commission Expires 11/19/18

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory 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 depprivacyoffier@wv.gov.

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 6.90

MILLWOOD, WV 25262 Postmark Here AUG - 7 2014 USPS

Sent To: LTG, Inc. AR4
Street, Apt. No.; or PO Box No.: PO Box 856
City, State, ZIP+4: Beckley WV 25802

PS Form 3800, August 2006 See Reverse for Instructions

7006 2760 0005 3354 4202

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 8.45

MILLWOOD, WV 25262 Postmark Here AUG - 7 2014 USPS

Sent To: Booth East Development Co AR8
Street, Apt. No.; or PO Box No.: PO Box 261 AR4
City, State, ZIP+4: Julian WV 25529 AR22

PS Form 3800, August 2006 See Reverse for Instructions

7006 2760 0005 3354 4561

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Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 6.90

MILLWOOD, WV 25262 Postmark Here AUG - 7 2014 USPS

Sent To: Walmart AA4
Street, Apt. No.; or PO Box No.: 2001 Southeast 10th St.
City, State, ZIP+4: Bentonville, Arkansas 72716

PS Form 3800, August 2006 See Reverse for Instructions

Received
AUG 13 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

8100573P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 081 - 0573
Operator's Well No. New River AR-4

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

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

Watershed Cranberry Creek Quadrangle Beckley 7 1/2

Elevation 2322' County Raleigh District Town

Description of anticipated Pit Waste: Cement, Gel, H2O

Will a synthetic liner be used in the pit? Steel Pit. N/A

Proposed Disposal Method For Treated Pit Wastes:

_____ Land Application
_____ Underground Injection (UIC Permit Number _____)
_____ Reuse (at API Number _____)
_____ Off Site Dispposal (Supply form WW-9 for disposal location)
X Other (Explain Haul by EPC to Marietta, OH Steel pit

Proposed Work For Which Pit Will Be Used:

_____ Drilling _____ Swabbing
_____ Workover X Plugging
_____ Other (Explain _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION 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 Production Superintendent

Subscribed and sworn before me this 7 day of Aug, 20 14

Received
AUG 13 2014
Office of Oil and Gas
WV Department of Environmental Protection

Shelly Welling Notory Public

My commission expires 11/19/18

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
SHELLY WELLING
RR 1, Box 120
Given, West Virginia 25245
My Commission Expires Nov. 19, 2018

8100573P

Form WW-9

Operator's Well No. New River AR-4

LEGEND

Property Boundary
Road
Existing Fence
Planned Fence
Stream
Open Ditch
Rock
North N
Buildings
Water wells W
Drill site

Diversion
Spring
Wet Spot
Drain Pipe with size in inches
Waterway
Cross Drain
Artificial Filter Strip
Pit: cut walls
Pit: compacted fill walls
Area for Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed 1 Prevegetation pH _____

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Area I Seed Type	lbs/acre	Area II Seed Type	lbs/acre
KY 31 fescue	40	Same as area one	
Alsike Clover	5		
Annual Ryed	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: Jerry Kennedy

Comments: _____

Title: Inspector Date: 8/11/14

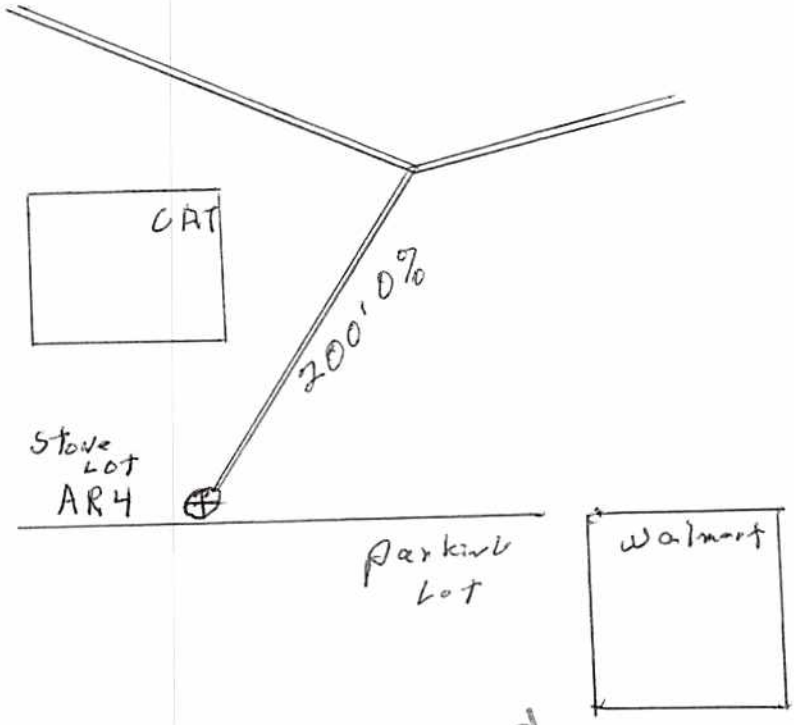
Field Reviewed? (X) Yes ( ) No

Received
AUG 13 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

8100573P

WW 9

New River AR 4



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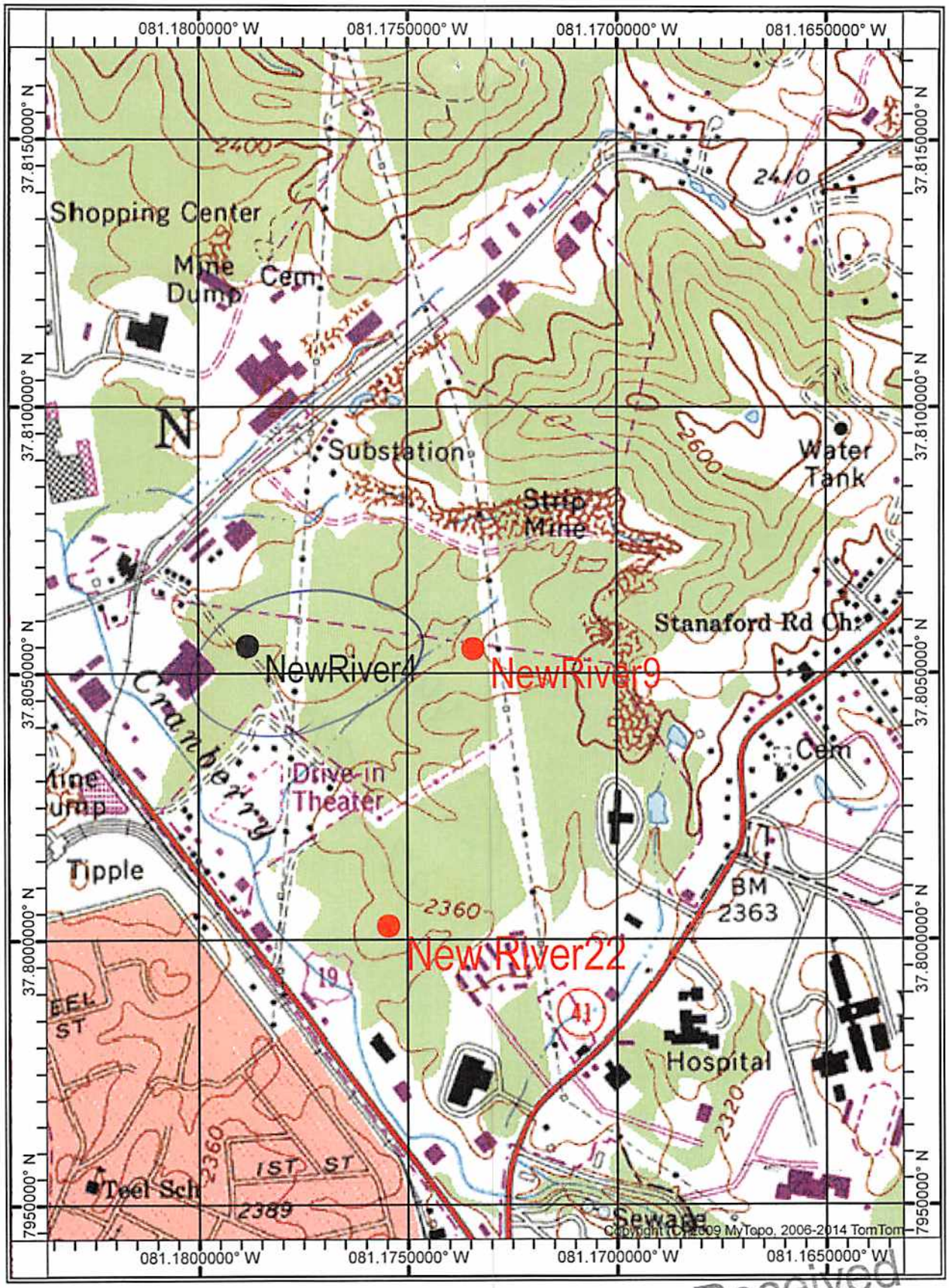

SCALE 1:12000

0 1000 2000 3000

FEET

Received
AUG 13 2014
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WV Dept. of Environmental Protection

8100573 P

WW-7
8-30-06

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

API: 47-081-0573 WELL NO.: AR-4

FARM NAME: New River

RESPONSIBLE PARTY NAME: Exco Resources

COUNTY: Raleigh DISTRICT: Town

QUADRANGLE: Beckley

SURFACE OWNER: Walmart

ROYALTY OWNER: _____

UTM GPS NORTHING 4184252.7

UTM GPS EASTING: 484260.7 GPS ELEVATION: 2322'

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:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS X : Post Processed Differential ____

Real-Time Differential X

Mapping Grade GPS ____: Post Processed Differential ____

Real-Time Differential ____

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.

Randall D Stutz — Production Superintendent — 8/7/14

Signature — Title — Date

Received

SEP 18

Office of Oil and Gas
WV Dept. of Environmental Protection