



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

June 23, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-8101211, 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 RIVER 20
Farm Name: WESTERN POCAHONTAS PROP.
API Well Number: 47-8101211
Permit Type: Plugging
Date Issued: 06/23/2016

Promoting a healthy environment.

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

WR-35

DATE:
API #: 47-081-01211

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

Reviewed ACT

Well Operator's Report of Well Work

Farm name: WESTERN POCAHONTAS PROPERTIES Operator Well No.: NEW RIVER #20-NRB3

LOCATION: Elevation: GL 2196' KB 2202' Quadrangle: Beckley

District: Town County: Raleigh
Latitude: 3590 Feet South of 37 Deg. 52 Min. 00 Sec.
Longitude 4820 Feet West of 81 Deg. 10 Min. 00 Sec.

Company: Energy Search Inc.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>217 Second St.</u>				
<u>Marietta, OH. 45750</u>				
<u>Agent: Frank Rotunda</u>				
<u>Inspector: Rodney Dillon</u>	<u>16"</u>			
<u>Date Permit Issued: 11-13-00</u>				
<u>Date Well Work Commenced: 11-28-00</u>	<u>7"</u>	<u>1126'</u>	<u>1126'</u>	<u>300sks</u> <i>to surface</i>
<u>Date Well Work Completed: 12-09-00</u>				
<u>Verbal Plugging:</u>	<u>4 1/2"</u>	<u>1900'</u>	<u>1900'</u>	<u>75 sks</u>
<u>Date Permission granted on:</u>				
<u>Rotary XX Cable Rig</u>	<u>2 3/8</u>	<u>1724</u>	<u>1724</u>	
<u>Total Depth (feet): 2300'</u>				
<u>Fresh Water Depth (ft.): 210'-1/2" stream</u>				
<u>Salt Water Depth (ft.):</u>				
<u>Is coal being mined in area (N/Y)? N</u>				
<u>Coal Depths (ft.): 596-600'</u>				

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OPEN FLOW DATA

Producing formation Ravencloiff Pay zone depth (ft) 1528-1550'
Gas: Initial open flow show 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

Second producing formation U. Maxton Pay zone depth (ft) 1726-1730/1732-1740/1743-1747
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

NOTE: ON BACK OF THIS FORM 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 ALL FORMATIONS INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: ENERGY SEARCH INC.
By: [Signature]
Date: 1-16-01

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FRAC UPPER MAXTON W?250 gals of 15% HCl 278,300 scf N2 @8500 scf/min
39,830 lbs of 20/40 sand, Breakdown @ 1836 psi
ATP 2000 psi @ 20 BPM/foam, MTP 2690 psi, ISIP 1850 psi 5 min 1415psi

Frac Ravencliff w/ 250 gals 15 % HCl, 448,400 scf N2 @ 6200 scf/min
39,676 lbs of 20/40 sand, Breakdown 1900 psi, ATP 1700psi @ 20/BPM/
Foam, MTP-2030 psi, ISIP-1850 psi, 5 min-1415psi

FORMATION TOPS: From KB 2202'

Princeton	1320-1350'
Prideshale	1455-1464'
Ravencliff	1498-1564'
Upper Maxton	1725-1750'
T.D.	2300'

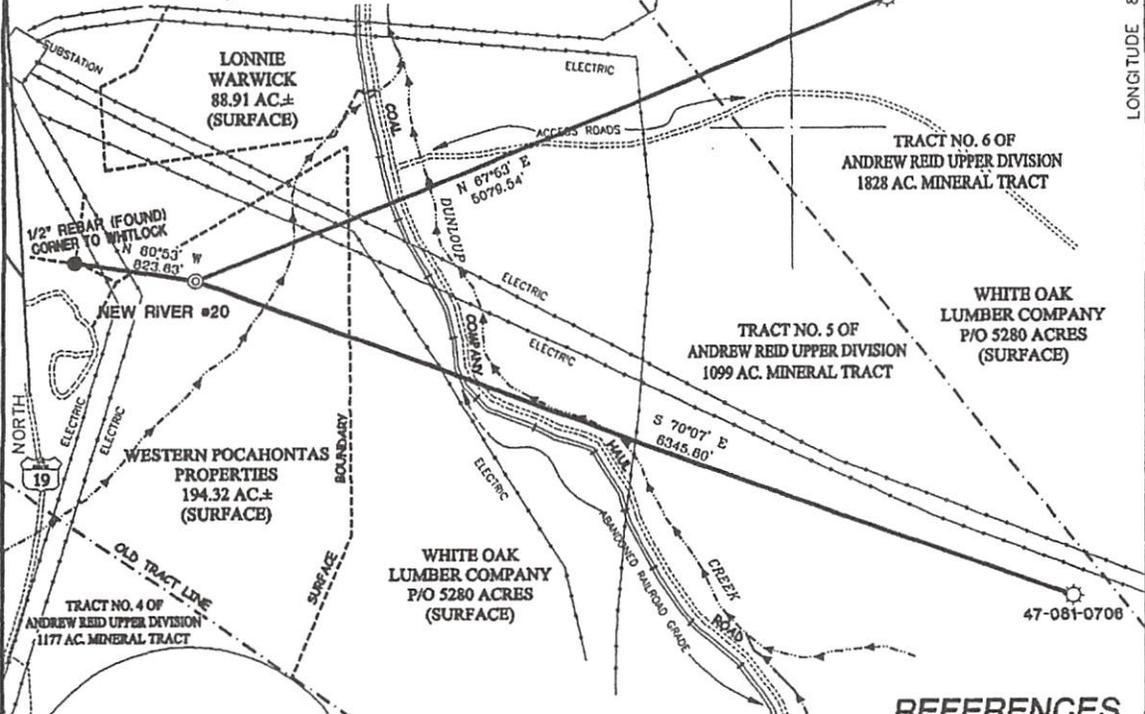
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[Handwritten signature]

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NEW RIVER COMPANY LEASE P/O 61,571.757 ACRES±

WELL NO. 20

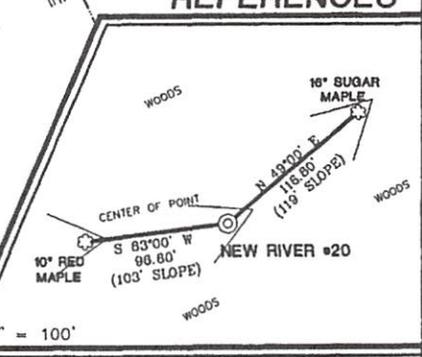


810211 P
New River
32

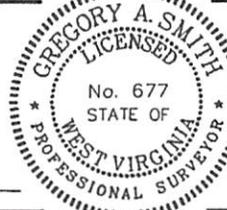
LONGITUDE 81°10'00"
3,590
LAT. 37°51'54.6"



- ### NOTES ON SURVEY
1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
 2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 10/10/00.
 3. TRACT LINES SHOWN HEREON TAKEN FROM A PLAT ENTITLED "PLAT OF PARTITION OF ANDREW REIDS UPPER LOT OF 8786 ACRE 3 RODS 6 SQ. POLES".
 4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RALEIGH COUNTY IN SEPTEMBER, 2000.
 5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).



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.



P.S. Gregory A. Smith
677

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE OCTOBER 11, 2000
OPERATORS WELL NO. NEW RIVER #20
API WELL NO. 47-081-01211
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 4143p20 (87- 42)
PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEVATION 2508' SCALE 1" = 1000

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

WELL TYPE : OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION :
ELEVATION 2196' WATERSHED TRIBUTARY OF DUNLOUP CREEK
DISTRICT TOWN COUNTY RALEIGH QUADRANGLE BECKLEY 7.5'

SURFACE OWNER WESTERN POCAHONTAS PROPERTIES ACREAGE 194.32
ROYALTY OWNER NEW RIVER COMPANY LEASE ACREAGE 1099 OF 61571.757

PROPOSED WORK :
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MAXON / RAVENCLIFF
ESTIMATED DEPTH 2300'

WELL OPERATOR ENERGY SEARCH, INC. DESIGNATED AGENT FRANK ROTUNDA
ADDRESS 280 SANDERS W. BLVD. SUITE 200 ADDRESS 1608 GREENMOUNT HILLS DR.
KNOXVILLE, TN 37922 VIENNA, WV 26105

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Department of Environmental Protection

8101211P

WW-4A
Revised 6-07

1) Date: 5/1/2016
2) Operator's Well Number
New River 20
3) API Well No.: 47 - 081-01211

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: 5) (a) Coal Operator
(a) Name Western Pocahontas Properties, LP Name Beaver Coal co.
Address 5260 Irwin Rd. Huntington, WV 25705 Address 115 1/2 Kanawha St. Beckley, WV 25801
(b) Name Frito-Lay (b) Coal Owner(s) with Declaration Beaver Coal Co LTD
Address o/o Steve Backus Name _____
PO Box 311 Address _____
Char, WV 25321 P.O. _____
(c) Name _____ Address _____
Address _____
6) Inspector (c) Coal Lessee with Declaration
Address Name _____
Telephone _____ 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



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

Subscribed and sworn before me this 7th day of June 2016
5/9/24 Kathryn Shafer Notary Public
My Commission Expires _____

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 dep@privacy.wv.gov.

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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) Dunlop Creek Quadrangle Beckley

Elevation 2196 County Releigh District Town _____

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes _____ No _____

Will a pit be used for drill cuttings? Yes _____ No X all

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)
- X _____ Other (Explain no fluids are expected in return _____)

ANY WELL EFFLUENT MUST BE CONTAINED IN TANKS & DISPOSED OF PROPERLY gwm

Will closed loop system be used? _____

Drilling medium anticipated for this well? 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? _____

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 Sheets

Company Official (Typed Name) Randall Sheets

Company Official Title Supervisor

Subscribed and sworn before me this 7th day of June, 2014

Kathryn Shafer

My commission expires 5/9/24

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Proposed Revegetation Treatment: Acres Disturbed 0.5 Prevegetation Ph 6.0

Lime _____ 2Tons/acre or to correct to pH _____

Fertilizer type _____ 10-20-20 _____

Fertilizer amount _____ 500 lbs/acre

Mulch _____ 2 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre	Seed Type	lbs/acre
KENTUCKY FESCUE	40	SAME	
ALSIKE CLOVER	5		
ANNUAL RYE	16		

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Henry Kennedy*

Comments: _____

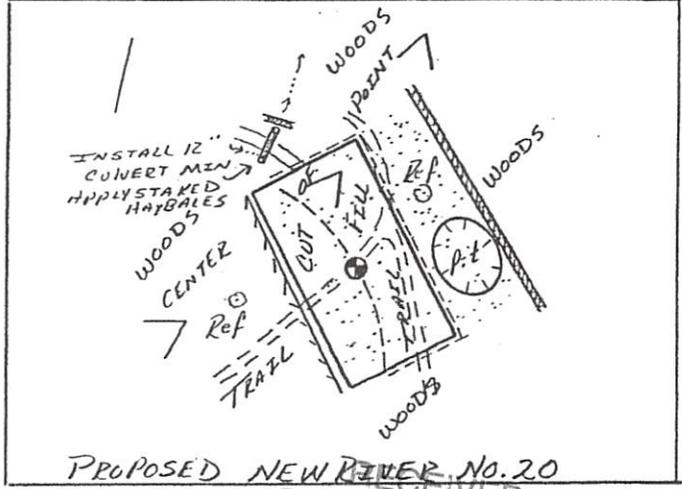
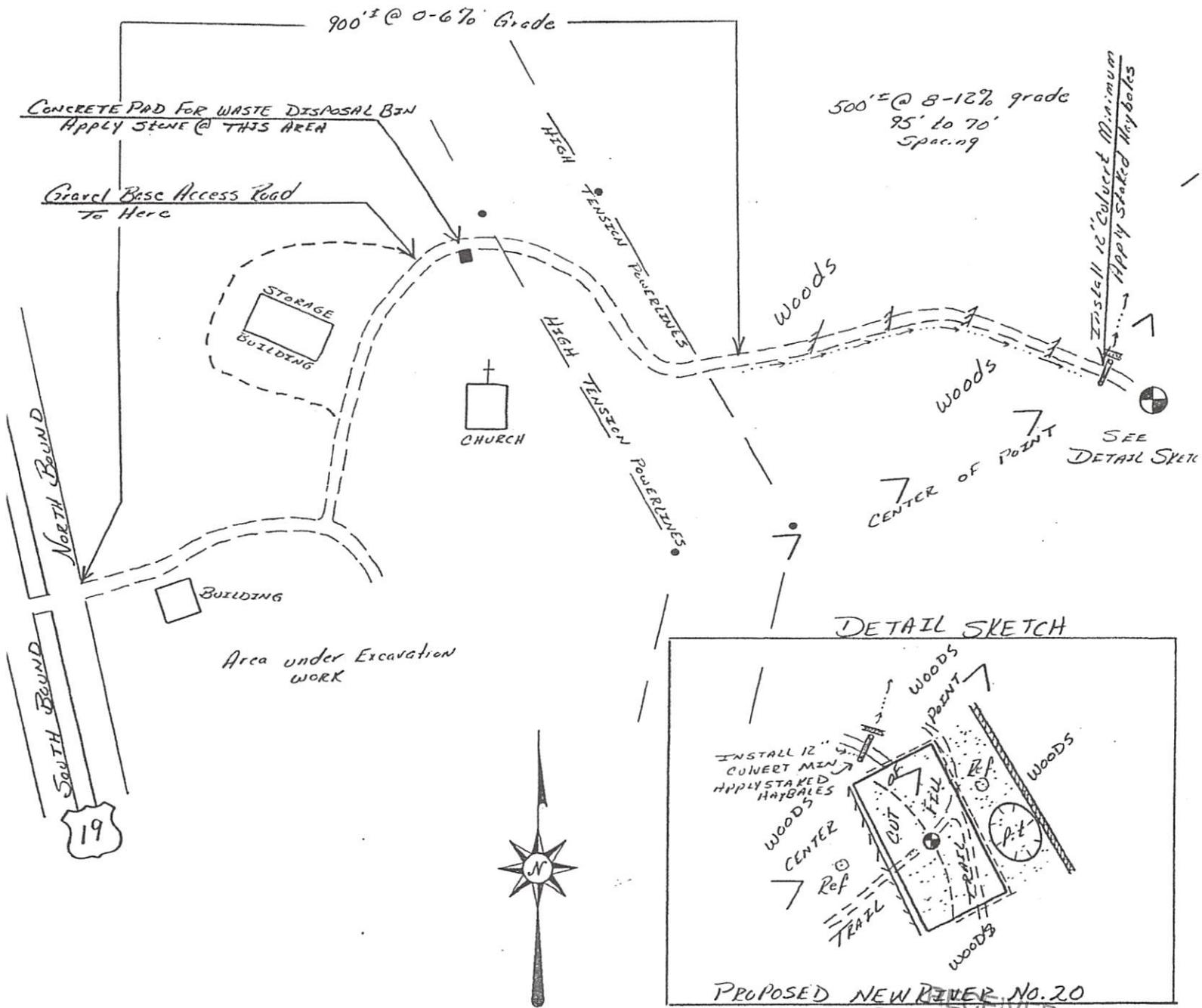
Title: *Inspector*

Date: *6/7/2016*

Field Reviewed? (*α*) Yes () No

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NEW RIVER LEASE WELL NO. 20



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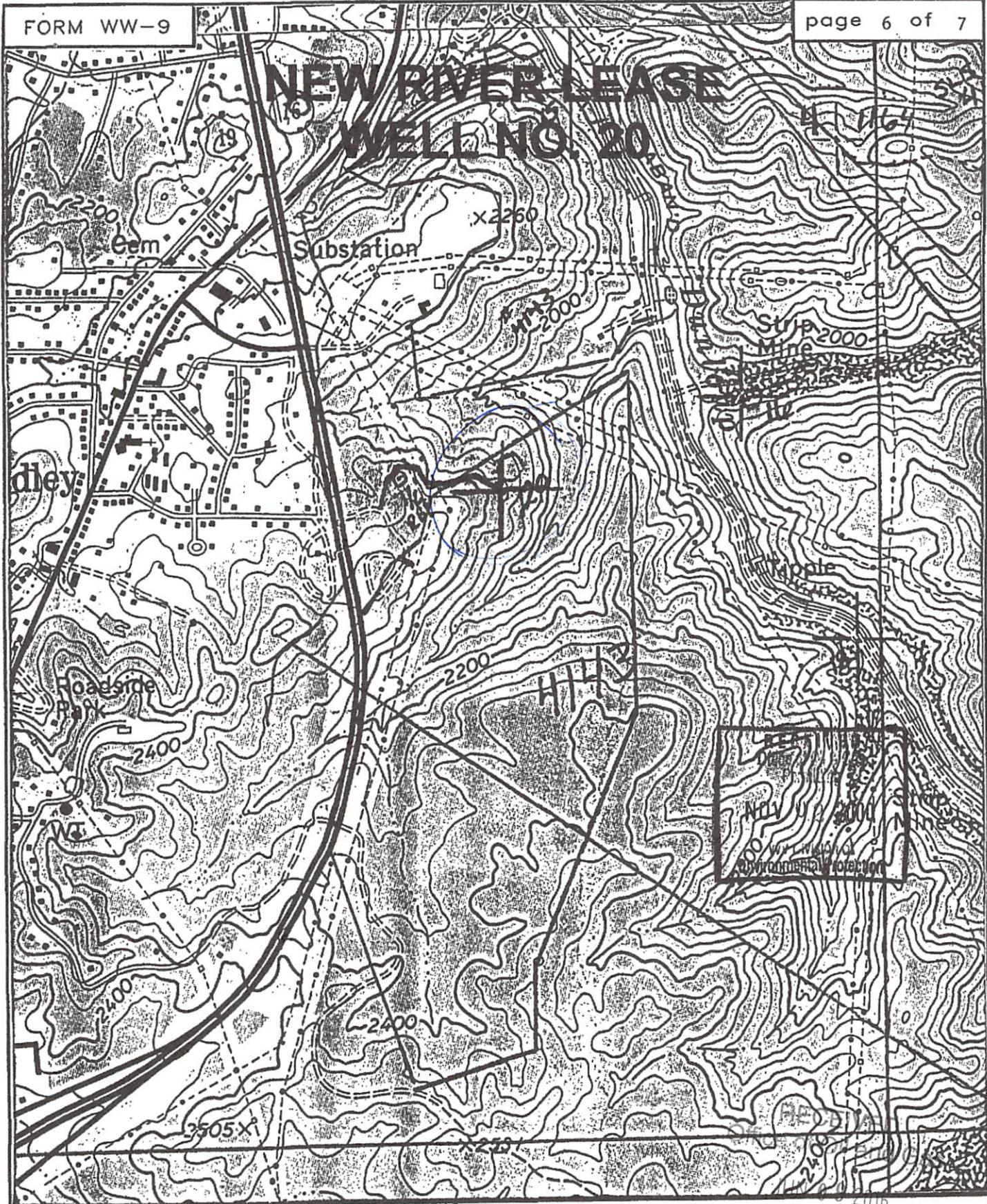
SLS SMITH LAND SURVEYING, INC.
P.O. BOX 150, GLENVILLE, WV 26351

Phone (304) 462-5656 or 462-5634
WV Department of Environmental Protection
DRAWN BY D.S.W. DATE 10/11/00 FILE NO. 4143

81-01211 P

FORM WW-9

page 6 of 7



SMITH LAND SURVEYING
 P.O. BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF

Beckley 7.5'

Department of

Environmental Protection

FILE NO. 4143

DATE 10/11/00 SCALE 1"=1000'

SK

8161211A

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47 081 01211 WELL NO.: New River 20

FARM NAME: Western Pocahontas Properties

RESPONSIBLE PARTY NAME: Exco Resources (PA), LLC

COUNTY: Releigh DISTRICT: Town

QUADRANGLE: Lester 7.5

SURFACE OWNER: White Oak Land

ROYALTY OWNER: Beaver Coal

UTM GPS NORTHING: 4190880.2

UTM GPS EASTING: 483875.3 GPS ELEVATION: 2196

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 : Post Processed Differential

Real-Time Differential

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. [Signature]
Signature

Supervisor
Title

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