west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Earl Ray Tomblin , Governor
Randy C. Huffman , Cabinet Secretary
www.dep.wv.gov

Monday, August 15, 2016
WELL WORK PERMIT
Vertical / Plugging - 2

EXCO RESOURCES (PA), LLC
260 EXECUTIVE DRIVE

CRANBERRY TOWNSHIP, PA 16066

Re: Permit approval for 33 (B-8)
47-019-00952-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.

James A. Martin
Chief

Operator's Well Number: 33 (B-8)
Farm Name: WHITE OAK LUMBER COMPANY
U.S. WELL NUMBER: 47-019-00952-00-00
Vertical / Plugging - 2
Date Issued: 8/15/2016

1900952P

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 within two years of the date of issuance of this permit.

1900952P

WW-4B
Rev. 2/01

1) Date 7/10, 2016
2) Operator's
Well No. New River 33
API Well No. 47- 019-00952
-

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 x

5) Location: Elevation ~~1891~~ 1829 Watershed Dunloup Creek
District Plateau County Fayette Quadrangle Oak Hill 7.5

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

7) Designated Agent Diana Stampler/C.T.Corp.
Address 5400 D Big Tyler Road
Charleston, WV 25301

Oil and Gas Inspector to be notified
Name Terry Urban, PO Box 1207
Address PO Box Clendenin WV 25045

PHONE

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:

Check Rock pressure
Remove all equipment used to produce well
Gel hole TD 1705 as per WR-35
CEMENT 1705 TO 1605 across TD and Elevation
Gel to 1206
Cement 1256 to 1156 across 41/2 seat
Freepoint, cut and pull 41/2csg
Cement 100'across cut
Gel to 979 to 887
Cement 887 to 787 over 7"csg seat
Gel to 450'
Cement 450 to 200'over coal
Gel to 100'
Cement 100'to surface
set monument with proper API

- WELL WAS NEVER FRACKED. IF IT WAS NEVER PERFORATED THEN TIH W/ 2 3/8" TUBING & SET 200' CIA PLUG FROM PBTD.
- GEL HOLE TO 800'.
- FREEPOINT, CUT & TOOH WITH 4 1/2" CASING.
- SET 100' CIA PLUG ACROSS CASING CUT @ ± 1000'.
- SET 100' CIA PLUG ACROSS 7" CASING SEAT FROM 887'- 787'.
- SPOT GEL IF NECESSARY & SET CIA PLUG FROM 420' TO 220'. (COVER COAL)
- SET CIA PLUG FROM 100' TO SURFACE.
- SET MONUMENT.

JW/M

Signature _____ Date 7-18-16

notification must be given to the district oil and gas inspector 24 hours before
work is to begin.

19 00952P

WR-35
Rev (5-01)

DATE: 11/30/2004
API # : 47-1900952

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: **White Oak Lumber Co (New River)**
LOCATION: Elevation: **GL 1801 KB 1808**

Operator Well No. **New River #33**
Quadrangle: **Oak Hill**

District: **Plateau** County: **Fayette**

Latitude:	**7720**	Feet South of	**37**	Deg.	**55**	Min.	**00**	Sec.
Longitude:	**9110**	Feet West of	**81**	Deg.	**07**	Min.	**30**	Sec.

Company: Energy Search Inc. **88 Products Lane, Marietta, Ohio 45750**	**Casing & Tubing**	**Used in drilling**	**Left in well**	**Cement fill up Cu. Ft.**
Address:	13 3/8"	27'	27'	
Agent: Mike McCown	7"	837'	837'	160 sks
Inspector: Rick Campbell				
Date Permit Issued: 4/8/2002	4 ½"	1206'	1206'	90 sks
Date Well Work Commenced: 6/3/2002				
Date Well Work Completed: 6/5/2002				
Verbal Plugging:				
Date Permission granted on:				
Rotary xx Cable Rig				
Total Depth (feet):				
Fresh Water Depth (ft.): 90' 1" stream				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 246-249; 321-323; 397-399				

OPEN FLOW DATA

Producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow **trace** Bbl/d
Final open flow MCF/d Final open flow **trace** Bbl/d
Time of open flow between initial and final tests_____Hours
Static rock Pressure psig (surface pressure) after 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

Formations:-KB 1808
Base Pride Sh 1054
Ravencliff 1083-1121
Avis Lime 1121-1149
TD 1705
Well has not been frac't
Well is to be plugged

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: [signature]
By: Geologist
Date: 11 · 30 · 2004

CAPACITY OF 6¼" HOLE

.2131 CFT / LIN FT OF 6¼" HOLE

1900952P

dep

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

Joe Manchin III, Governor
Stephanie R. Timmermeyer, Cabinet Secretary
www.wvdep.org

August 23, 2005

FINAL INSPECTION REPORT

WELL PERMIT RELEASED

ENERGY SEARCH INC.,

The FINAL INSPECTION REPORT for the permit, API Well Number: 47-1900952, issued to ENERGY SEARCH INC., and listed below has been received in this office, and reclamation requirements approved. The well designated by the permit number below has been released under reclamation and will remain under your bond.

JAMES MARTIN
Chief,
Office of Oil and Gas

Operator: ENERGY SEARCH INC.
Operator's Well No: 33 (B-8)
Farm Name: WHITE OAK LUMBER COMPANY
API Well Number: 47-1900952
Date Issued: 04/08/2002
Date Released: 08/23/2005

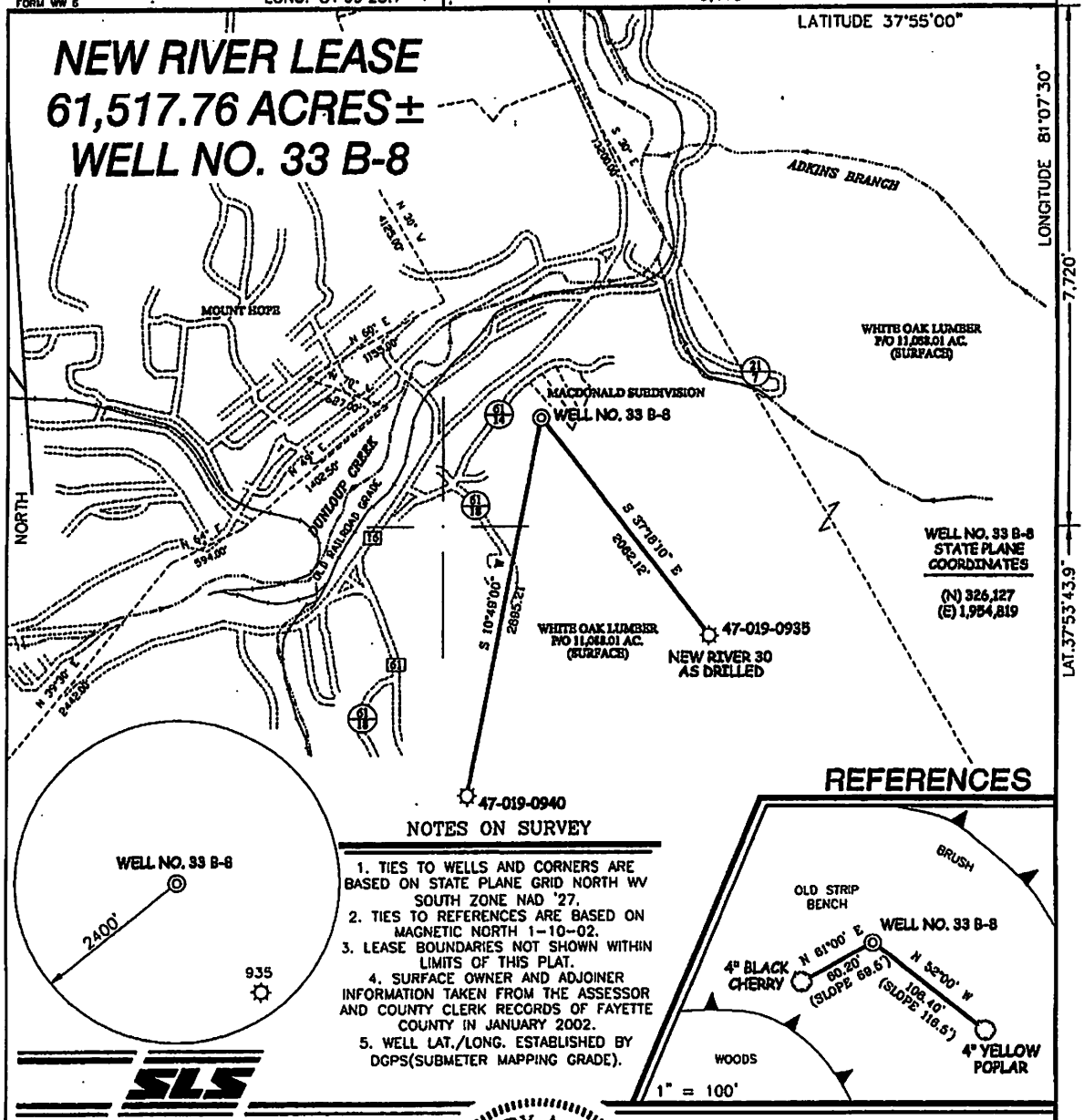
Promoting a healthy environment.

FORM WW 6

LONG. 81°09'23.7" — 9,110'

LATITUDE 37°55'00"

NEW RIVER LEASE
61,517.76 ACRES±
WELL NO. 33 B-8



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 1-10-02.
3. LEASE BOUNDARIES NOT SHOWN WITHIN LIMITS OF THIS PLAT.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF FAYETTE COUNTY IN JANUARY 2002.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

REFERENCES

SLS

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.

P.S. 677 Gregory A. Smith

GREGORY A. SMITH LICENSED No. 677 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

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

DATE JANUARY 15, 20 02

OPERATORS WELL NO. 33 (B-8)

API WELL NO. 47 (STATE) — 19 (COUNTY) — 00952 (PERMIT)

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 4143P33(114-45)

SCALE 1" = 1000'

PROVEN SOURCE OF ELEVATION BENCH MARK ELEVATION 1,717'

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

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

LOCATION :

ELEVATION 1,801' WATERSHED DUNLOUP CREEK

DISTRICT PLATEAU COUNTY FAYETTE QUADRANGLE OAK HILL 7.5'

SURFACE OWNER WHITE OAK LUMBER ACREAGE 11,088.01±

ROYALTY OWNER NEW RIVER COMPANY LEASE ACREAGE 61,517.76±

PROPOSED WORK : LEASE NO. ___

DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X 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 2,500'

COUNTY NAME

PERMIT

WELL OPERATOR ENERGY SEARCH, INC. DESIGNATED AGENT FRANK ROTUNDA

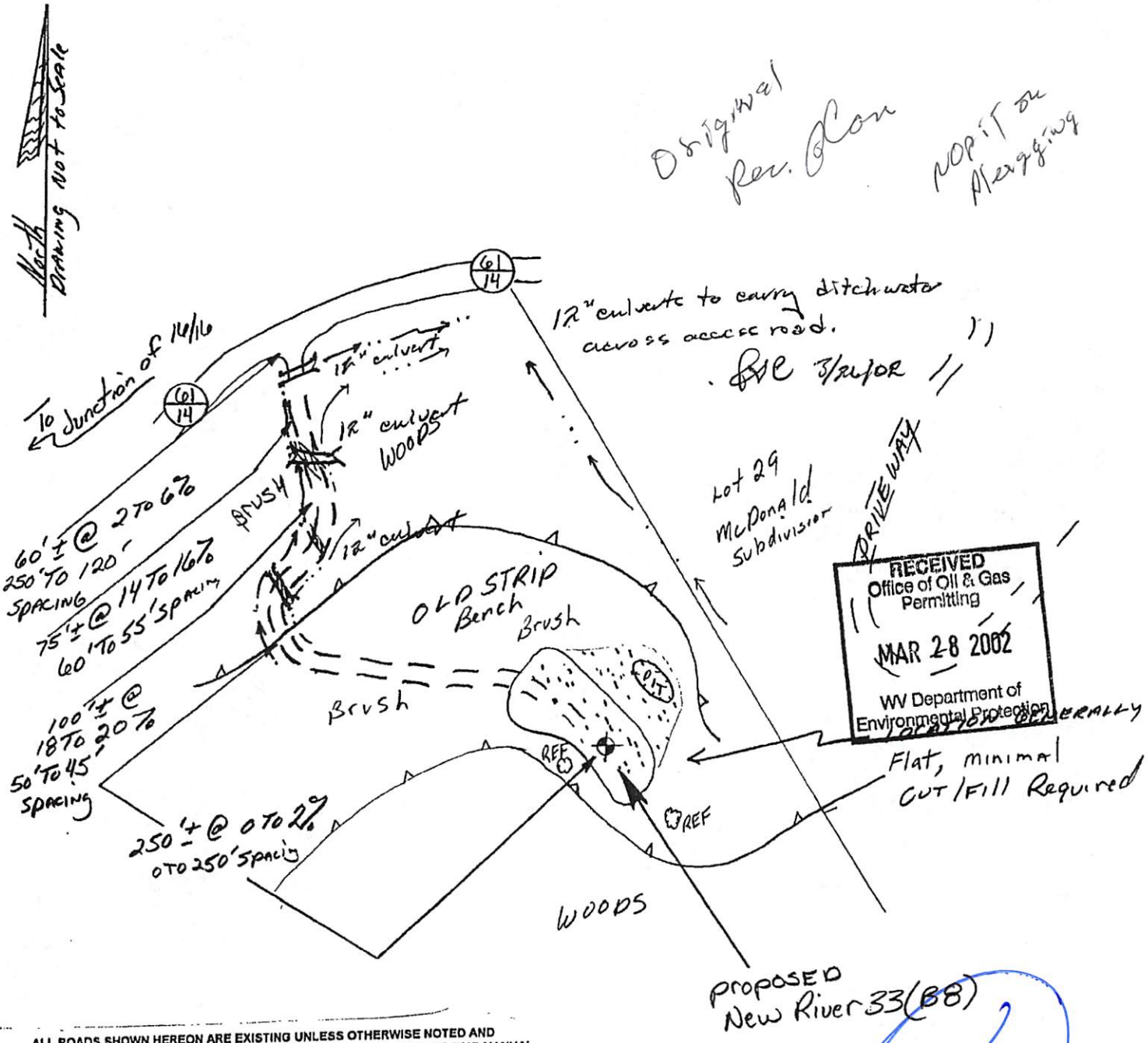
ADDRESS 280 SANDERS W. BLVD. SUITE 200, KNOXVILLE, TN 37922

ADDRESS 1608 GREENMONT DRIVE, VIENNA, WV 26105

Form WW-9

NEW RIVER LEASE
WELL NO. 33 B-8

19-00952-P
page 5 of 7



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL. ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

SEDIMENT BASINS(TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS(ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.
ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL TIMBER 6" AND ABOVE.

STACK BRUSH BELOW LOCATION FOR SEDIMENT CONTROL.

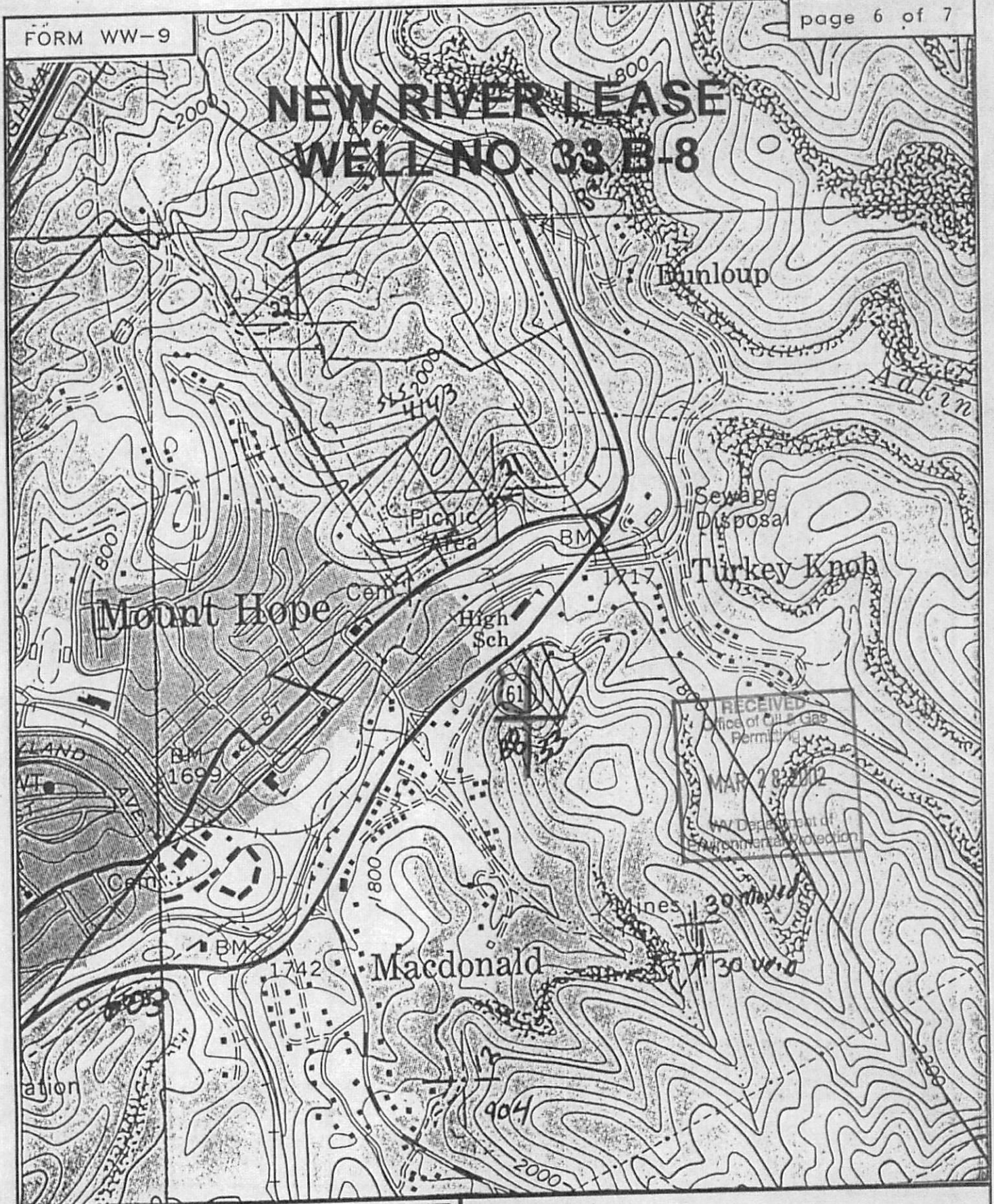
SLS SMITH LAND SURVEYING, INC.
P.O. BOX 150, GLENVILLE, WV 26351
Phone (304) 462-5656 or 462-5634

DRAWN BY JS DATE 1-11-02 FILE NO. 4143

19-00952

FORM WW-9

NEW RIVER LEASE
WELL NO. 33,B-8



SLS

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

TOPO SECTION OF Oak Hill 7.5'

FILE NO. 4143 DATE 1/11/02 SCALE 1"=1000'

1900952P

WW-4A
Revised 6-07

1) Date: 7/14 2016
2) Operator's Well Number
New River 33

3) API Well No.: 47 - 019-00952 -

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 Arrow WV, INC>
Address %Boy Scouts of America
1325 West Walnut Hill Lane, Suite S406, Irving TX 75038
(b) Name
Address Meadow Creek Coal Corp
263 White Oak Dr.
Beckley WV 25801
(c) Name
Address

5) (a) Coal Operator
Meadow Creek Coal Corp., 263 White Oak Dr. Beckley WV 25801
(b) Coal Owner(s) with Declaration
(c) Coal Lessee with Declaration

6) Inspector Terry Urban
Address
PO Box 1207, Clendenin WV 25045
Telephone
~~304 549 5915~~

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 Chie

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
JERRY M. TEPHABOCK
RT. 1, BOX 101A
RIPLEY, WV 25271
My commission expires June 11, 2018

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

Subscribed and sworn before me this 18th day of July
Jerry M Tephabock Notary Public
My Commission Expires 6/11/18

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.

1900952P

WW-9
(5/13)

Page _____ of _____

API Number 47 - 019 - 00952

Operator's Well No. New River 33

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) Sugar Creek Quadrangle Oak Hill 7.5

Elevation ~~1921~~ 1879 ft County Fayette District Plateau

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 ✓

ANY WELL EFFLUENT WILL BE CONTAINED IN TANKS & DISPOSED OF PROPERLY.

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 flluids are expected in return To be collected and Disposed (OFF SITE)

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 R Sheets

Company Official (Typed Name) Randall Sheets

Company Official Title Production Supervisor

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF W. ST VIRGINIA
JERRY M. TEPHABOCK
RT. 1, BOX 101A
RIPLEY, WV 25271
My commission expires

Subscribed and sworn before me this 18th day of July, 20 14

Jerry M. Tephabock Notary Public

My commission expires 6/11/18

1900952P

Form WW-9

Operator's Well New River 33

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.

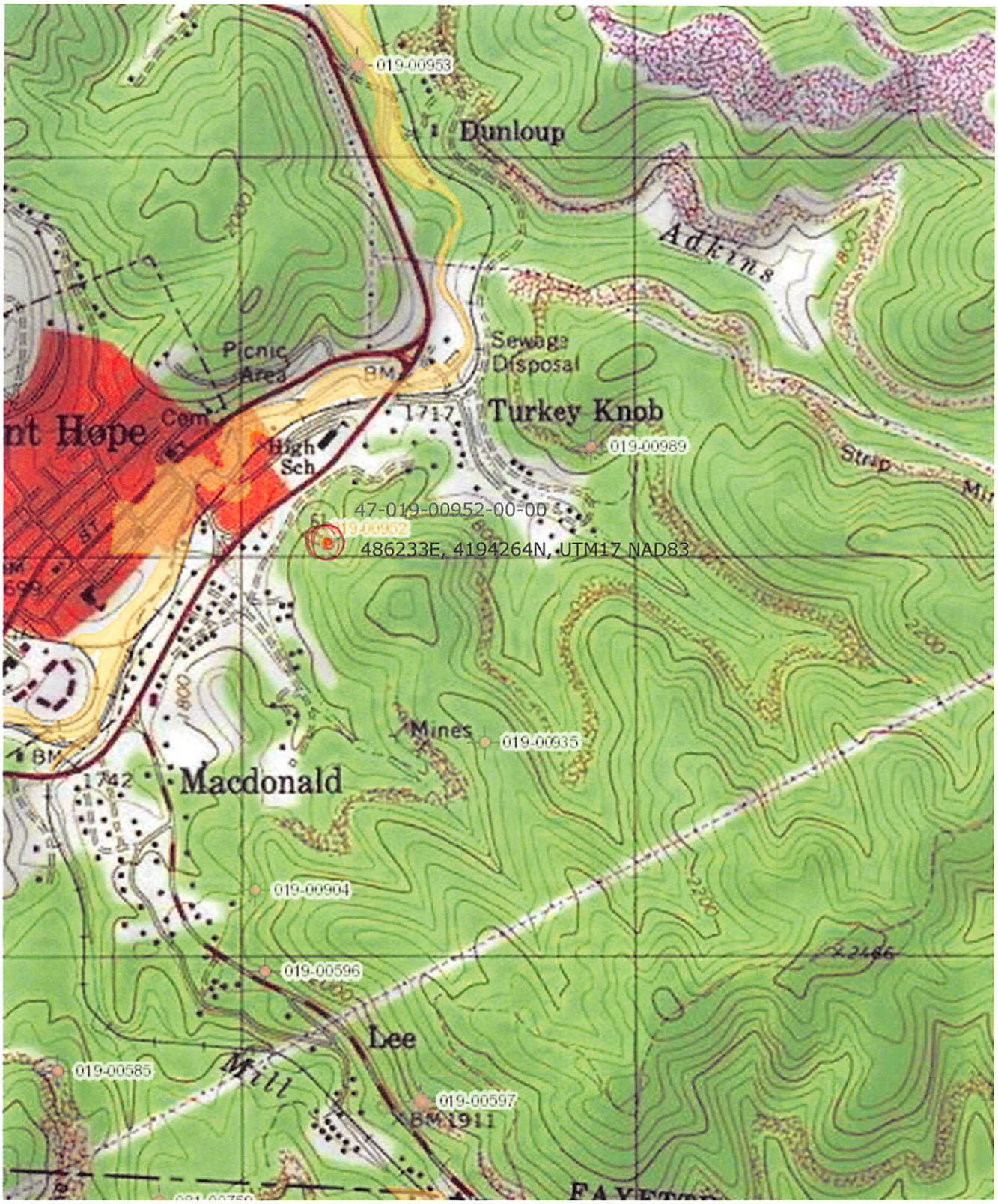
Plan Approved by: _____

Comments: _____

Title: Inspector Oil & Gas Date: 7-18-16

Field Reviewed? (✓) Yes ( ) No

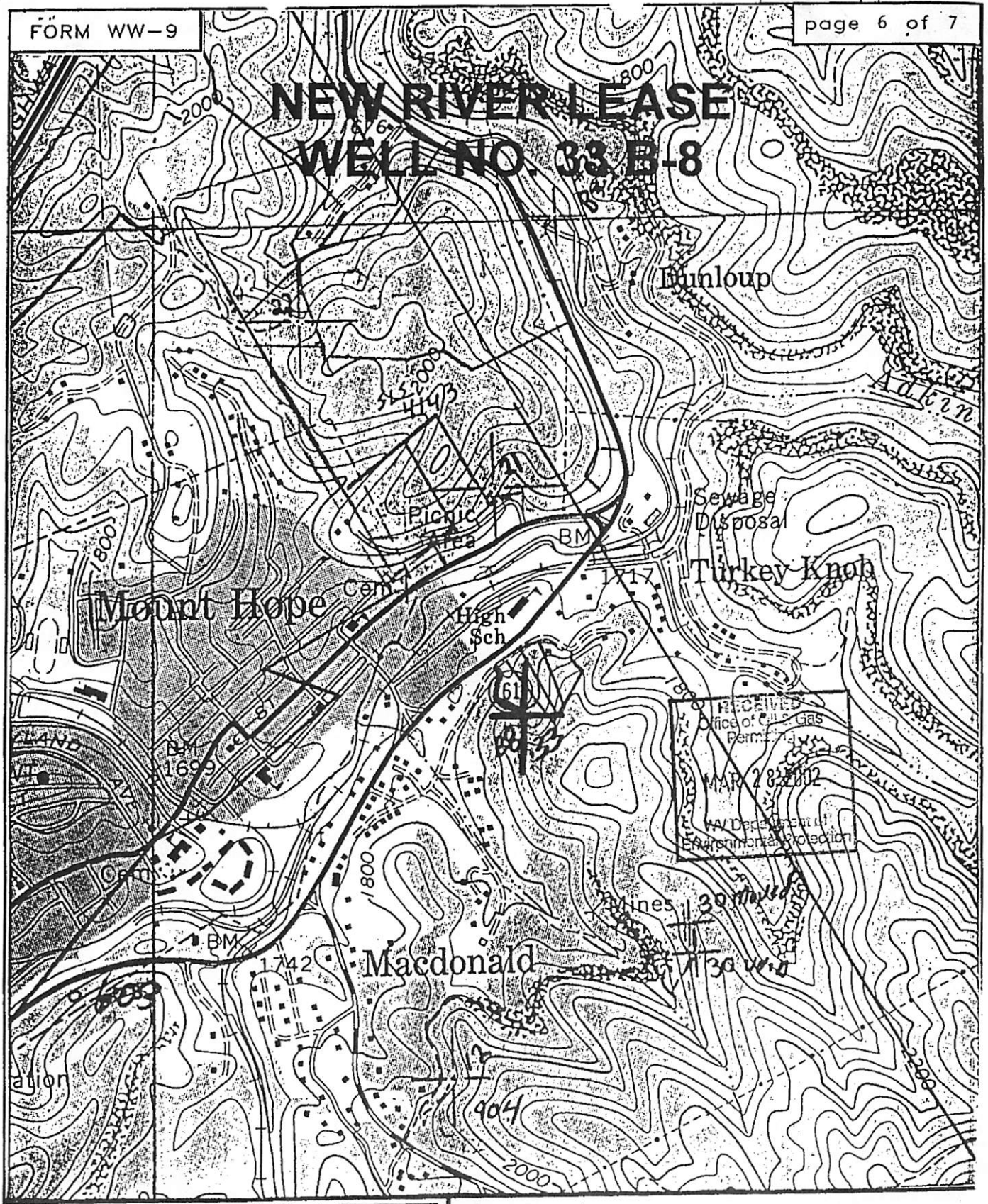
1900952 P


019-00953
Dunloup
Adkins
Picnic Area
Sewage Disposal
Turkey Knob
1717
019-00989
High Sch
47-019-00952-00-00
019-00952
486233E, 4194264N, UTM17 NAD83
Strip
Mines
019-00935
1742
Macdonald
019-00904
019-00596
Lee
019-00585
Mill
019-00597
BM 1911

1900952P

1900952

FORM WW-9



SLS

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

TOPO SECTION OF Oak Hill 7.5'

FILE NO. 4143 DATE 1/11/02 SCALE 1"=1000'

Plateau
53/58

19 00952 P

WW-7
8-30-06

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

API: 47 019 00952 **WELL NO.:** New River 33

FARM NAME: White Oak Lumber

RESPONSIBLE PARTY NAME: EXCO Resources (PA), LLC

COUNTY: Fayette **DISTRICT:** Plateau

QUADRANGLE: Oak Hill 7.5

SURFACE OWNER: Arrow WV. INC.

ROYALTY OWNER: Meadow Creek Coal

UTM GPS NORTHING: 4194264

UTM GPS EASTING: 0486233 (GPS) **GPS ELEVATION:** 1829

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 X: 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 Harris Production Supervisor 7/18/16

Signature Title Date