

#### 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

Friday, August 12, 2016 WELL WORK PERMIT Vertical / Plugging - 2

EXCO RESOURCES (PA), LLC 260 EXECUTIVE DRIVE

CRANBERRY TOWNSHIP, PA 16066

Permit approval for NEW RIVER 17 Re:

47-019-00914-00-00

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

Operator's Well Number: NEW RIVER 17

Farm Name: WHITE OAK LMBR, GA PAC COR U.S. WELL NUMBER: 47-019-00914-00-00

Vertical / Plugging - 2

Date Issued: 8/12/2016

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

WW-4B Rev. 2/01 RECEIVED

Office of Oil and Gas

JUL 1 9 2016

STATE OF WEST VIRGINIA DEPARTMENT OF

1) Date 7/13

2) Operator's

	WV	Departi	ment of
En	viror	nmental	Protection

	V Department of AND	GAS
Envir	onmental Protection Application for a peri	MIT TO PLUG AND ABANDON
4)	Well Type: Oil / Gas X _/ Liqui	id injection/ Waste disposal/
		derground storage) Deep/ Shallow_x
	- 630	
5)		Watershed Sugar Creek
	District Plateau '	County Fayette Quadrangle Oak Hill 7.5
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	9) Plugging Contractor
	Name Terry Urban	Name R & R WELL SERVICE
	Address PO Box 1207	Address 42 LYNCH RIDGE
	Clendenin, WV 25045 PHONE 304 549 5915	WALTON, WV 25286
CEM GEL Free Ceme Gel Ceme		CUT ≈ 1300' 7 1 portion
set m	onument with proper API	
Signa	ature	Date
perm	order approved by http://www.dulum.	oil and gas inspector 24 hours before $\frac{7 - 18 - 16}{}$ Date
		00/40/0040

	- INDICATES ENOUGH CEMENT WAS ON
	IF DRILLED THROUGH A COME PILLAR.
1	PERMIT INSPECTION AND RELEASE FORM
	GECEIVE
Ε	STARMED/LOCATION: 5-18-00 Unice of Oland C API: 47- 019 - 09/4
1	THE COMMENCED: 6/5/00 IAN 05 2001 WELL NO.: 1/en (week)# 1-7
1	
'E	ER DEPUHS
	[H. C. C. H. L. H.
1	THE OPERATOR KEEPING DETAILED DRILLING AND CEMENT RECORDS: YES IT NO [ ] (6 Pts)
1	1000 set of 7 pipe on 600 cemented with 300 sacks (Circulated) YES [ ] NO [ ]
,	Troisest of 4/2 pipe on 6-10 cemented with sacks (Circulated) YES [ ] NO [ ]
1	#88t Of " pipe on cemented with: Backs (Circulated) YES [ ] NO [ ]
	ES DISCHARGED PIT VOLUME PIT ADDITIVES
EL	D ANALYSIS: pH mg/1 cl mg/1 D.O mg/1 TOC mg/1
35	stions for this report are in accordance of WV Code 228-1-28, 228-1-30, 228-1-6, 228-1-7, a -1-27 and Regulation 38csx 18-9.2.3, 38csx 18-12.1, 38csx 18-16.5, 38csx 18-16.6.
FA	L POINTS AVAILABLE FOR QUESTION 2: 2. (10 pts) 8
	Did operator give proper notice to inspector before the following:
	Construction Yes ( No [ ] (2 pts) B. Drilling Yes [ ] No [ ] (2 pts)
	Pit Treatments Yes [.] No [ ] (2 pts) D. Pit Discharge Yes [ No [ ] (2 pts)
•	Reclamation Yes [ No [ ] (2 pts)
	Did the operator have permit on site? Yes [ No. [ ] . 3. (4 pts) 4
	Was the timber cut, stacked, and brush used for sudiment barriers before
	dirt work started? Yes [ No [ ] 4. (4 pts) 4
۱.	Are all location and/or road banks being sloped? Yes [ No [ ] . 5. (4 pts) 4
TA	L POINTS AVAILABLE FOR QUESTION 6: (21 pts) 18
i.	Were the following sediment control structures properly installed/maintained?
1.	Road Ditches Yes [ No [ ] (3 pts) B. Cross Drains Yes   No [ ] (3 pts)
3.	Culverts Yes / No [ 1 (3 pts) D. Creek Crossings Yes ( No [ 1 (3 pts)
	Diversion Ditches Yes [ No [ ] (3 pts) F. Barriers Yes [ No [ ] (3 pts)
	Temporary seeding Yes [ ]. No ( ) (3 pts)
7.	Has top soil (if any) been stocked piled? Yes [ No [ ] 7. (2 pts) 2
	Is the well stake in the proper spot in accordance with 38csR 18-9.2.3
	after construction? Yes No [] 8. (3 pts) 3
9.	Is the pit properly installed? Yes [ No [ ]
A.	Walls Compacted Yes [] No [], cut Yes [] No [] Free of Debris before lining Yes [] No []
c.	Lined Yes [ No [ ]
	Lined Yes [ No [ ] : Fluid: Contained Yes [ No [ ]
	Free of Non Exempt/Restricted Materials Yes [ 1 . No [ ]
F	Properly Treated Yes ( No [ ] 9. (6 pts)
۶	Did inspector approve all modifications Yes [ No [ ]
1.	Was inspector on site during the following:
A.	Construction Yes [] No []  B. Drilling Yes [] No []  Pit Treatment Yes [] No []  D. Reclamation Yes [] No []
٠.	D. Reclamation Yes [ ] No [ ]

DATE: SEPTEMBER 29, 2000 API#: 47-19-00914

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

Hoviewed And

Farm name: NEW RIVER	0	- 117 m 117 - 11 37 -	.17	
raim name: Alten	Ope	rator Well No.	1/	<del></del>
LOCATION: Elevation: 1921	Qua	drangle:0AK	HILL 7.5	
District: PLATEAU	Cou	inty: FAYETT	E	
Latitude: 6080' Feet South of 3/	Deg. 55	Min. 00	Sec.	
Longitude 8000 Feet West of 81	Deg. 10	Min00	Sec.	
Company: ENERGY SEARCH INCORPORATED				
Company:	Casing &	Used in	Left in well	Cement fill
	Tubing	drilling	Zeit in tren	up Cu. Ft.
Address: 217 SECOND STREET	13 3/8	40'	40'	1 1 2 1 2 2 2
- MARIETTA OH 45750-2109	7"	10291	10291	50 SKS €
Agent: FRANK R. ROTUNDA	4 1/2"	10291	1764'	65 SKS
Inspector: RODNEY DILLON				
Date Permit Issued: JANUARY 28, 2000				
Date Well Work Commenced: JUNE 06, 2000		Marie 197		
Date Well Work Completed: JUNE 09, 2000				
Verbal Plugging:				7517ED
Date Permission granted on:		1	011	115 Ct D12 Gas
Rotary XX Cable Rig		-		Fermitting
Total Depth (feet): 2240'		-	- NO	13 2000
Fresh Water Depth (ft.): 60' 1/2"STREAM		<del></del>		
Salt Water Depth (ft.):		<u> </u>	Foving	Division of hitental Protection
Dan traite Depin (11.);			Lilladi	intellal Protection
Is coal being mined in area (Y)?		<b></b>	+	
Coal Depths (ft.):50'-53', 150'-160'.		-	1	
410'-415'		•	1460'-1462'	9
OPEN FLOW DATA			1468'-1470!	
D DAVENCI IEE			1468' -1462' 1468' -1470' 1474' -1478'	
Producing formation RAVENCL IFF		zone depth (fi	)	
Gas: Initial open flow show MCF/d Oil:			BbVd BbVd	Gas
Final open flow 60 MCF/d F	inal open flor			
Final open flow 60 MCF/d Final open flow between initial and f	inal tests	Ho	urs	
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DUMP 500 GALLONS 15% HC1 ACID
75 Q FOAM FRAC RAVENCLIFF
WITH 43,278 LBS 20/40 SAND 274,000 ScF/N2
7,800 ScF/MINUTE N2 BREAKDOWN AT 1002 PSI

ISIP 500 psi ATP 1432 psi 19 BMP

GL 1921 KB 1924 PRIDE SHALE 1440'-1447' RAVEYCL\_FF 1447'-1510' MAXTON-NO SAND DUMP 500 GALLONS 15% HC1 ACID 75 Q FOAM FRAC RAVENCLIFF WITH 43,278 LBS 20/40 SAND 274,000 SCF/N2 7,800 SCF/MINUTE N2 BREAKDOWN AT 1002 PSI<sup>2</sup>

ISIP 500 psi ATP: 1432 psi 19 BMP:

GL 1921 KB 1924 PRIDE SHALE 1440'-1447' RAVEYCL\_FF 1447'-1510' MAXTON-NO SAND

nvironmental Protection WV Department of

/12/2016

WW-4A Revised 6-07

## RECEIVED Office of Oil and Gas

JUL 19 20'3

1) Date: <u>7/14 2016</u>

2) Operator's Well Number

New River 17

3) API Well No.: 47 -

019-00914

WV Department of STATE OF WEST VIRGINIA

Environmental Protection OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface O	wner(s) to be served: / 5)	(a) Coal Operator
(a) Name	Arrow WV, INC>	Meadow Creek Coal Corp., 263 White Oak Dr. Beckley WV 25801_
Address	%Boy Scouts of America	
	1325 West Walnut Hill Lane, Suite	S406, Irving TX 75038
(b) Name		(b) Coal Owner(s) with Declaration
Address	Meadow Creek Coal Corp. V	The state of the s
	263 White Oak Dr.	
	Beckley WV 25801	
(c) Name		
Address	Georgia Pacific Corp. Wood Products	
	P.O. Box 105681, Atlants Ga 30348	
6) Inspector	Terry Urban	(c) Coal Lessee with Declaration
Address	reny croan	(4)
	PO Box 1207, Clendenin WV 25045	
Telephone		
	3 <del>04 549 5915</del>	

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

- (1) The application to Plug and Abandona 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
- 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 Well Operator NOTARY PUBLIC BY: STATE OF W. ST VIRGINIA Its: JERRY M. TEPHABOCK RT. 1, BOX 101A RIPLEY, WV 25271	EXCO RESOURCES (PA), LLC Randall Sheets Xan ball PASS P O BOX 8 RAVENSWOOD, WV 26164	6
My commission expires June 11, 2018 Belephone	304-273-5371	RECEIVED
Subscribed and sworn before me this 1874 de	ay of July	Office or Oil and Gas
My Commission Expires - (- / 1/2)	no Torhobeh Notary Public	JUL 1 5 2018
Oil and Gas Privacy Notice		WV Department of

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our office of 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@wy.gov.

1900914P

JUL 19 2016

019 - 00914 API Number 47 -Operator's Well No.New River 17\_

STATE OF WEST VIRGINIA DEPARTMENT OF WV Department of ENVIRONMENTAL PROTECTION OFFICE OF OIL Environmental Protection AND GAS

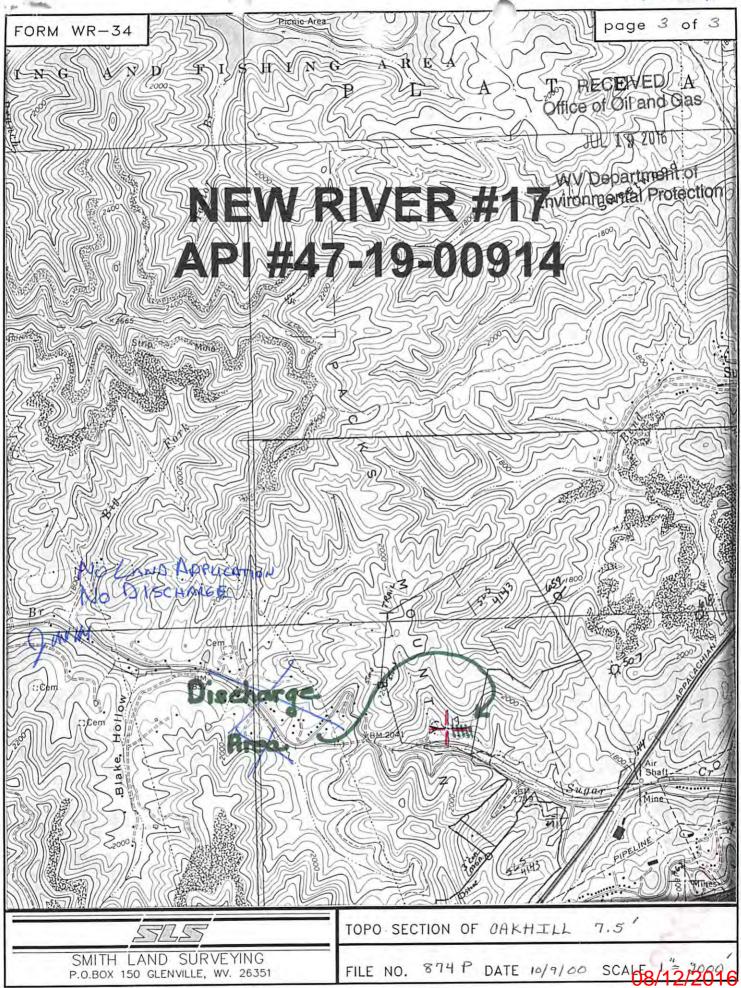
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Land Application  Underground Injection (UIC Permit Number  Reuse (at API Number  Off Site Disposal (Supply form WW-9 for disposal location)  Other (Explain no filluids are expected in return  To be collected and  Disposed  Off 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 cutify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERM on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand are or regulation can lead to enforcement action.  I certify under penalty of law that I have personally examined and am familiar with the information submitte application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsably of the penalty of t	Watershed (HUC	10)Sugar Cr	eekQuadr	rangle Oak Hill 7.5
Vill a pit be used for drill cuttings? 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:  Underground Injection (UIC Permit Number Underground Injection (UIC Permit Number Off Site Disposal (Supply form WW-9 for disposal location)  Will closed loop system be used?  Orilling 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?  Cuttify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERM on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand law or regulation can lead to enforcement the law or regulation can lead to enforcement the law or regulation can lead to enforcement the law or regulation form and all attachments thereto and that, based on my inquiry of those individuals immediately responsed to the permit are enforcement that application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsed to the permit are enforcement that application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsed to the permit are enforcement that application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsed to the permit are enforcement that application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsed to the permit are enforcement that application form and all attachments thereto and that, application form and all attachments thereto and that, application form and all attachments th	Elevation <u>1921</u>	2039 gut	_ County_Fayette	District Plateau
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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 no flluids are expected in return To be collected and Disposed of Off-Site Disposal (Supply form WW-9 for disposal location)  To be collected and Disposed of 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 cetify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERM on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understan law or regulation can lead to enforcement estimated to enforcement estimated to enforcement estimated and an amount of Environmental Protection of the permit are enforced to the terms and conditions of the GENERAL WATER POLLUTION PERM on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understan provisions of the permit are enforced to the vertice of the west Virginia Department of Environmental Protection. I understan provisions of the permit are enforced to the vertice of the west Virginia Department of Environmental Protection. I understan provisions of the permit are enforced to the vertice of th	If so, ple	ase describe anticipated	pit waste:No	If so, what ml?
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-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?  -Landfill or offsit				
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-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)  -Landfill or offsite name/permit number?  I confify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERM on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understan provisions of the permit are enforced by law Virginia Department of Environmental Protection. I understan I certify under penalty of law that I have personally examined and am familiar with the information submitted application form and all attachments thereto and that, based on my inquiry of those individuals immediately response penalties for submitting false information, including the possibility of fine or imprisonment.  Company Official Signature  Company Official Title  Randall Sheets  OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGHM.  JERRY M. TEPHABOG.  RT. 1, BOX 101A  RIPLEY, W. 28271  My commission expires June 11,  Subscribed and sworn before me this  // 874day of July  Subscribed and sworn before me this  // 874day of July  Subscribed and sworn before me this  // 874day of July  Subscribed and sworn before me this  // 874day of July  Subscribed and sworn before me this  // 874day of July  Subscribed and sworn before me this  // 874day of July  Subscribed and sworn before me this				
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Company Official Signature  Company Official Signature  Company Official (Typed Name)  Company Official Title  Randall Sheets  Company Official Title  Rockets  Company Official Title  Rockets  Subscribed and sworn before me this  1874day of July  2076	on August 1, 200 provisions of the law or regulation I certify application form	os, by the Office of Oil of permit are enforceable of can lead to enforcement of under penalty of law and all attachments	that I have personally examine thereto and that, based on my	d and am familiar with the information submitted inquiry of those individuals immediately response
Company Official Signature Randall Sheets  Company Official (Typed Name) Randall Sheets  Company Official Title Rockoth Se Cruss My commission expires June 11,  Subscribed and sworn before me this /87/day of July , 20/6	penalties for sub	mitting false informatio	n, including the possibility of fine	or imprisonment.
Company Official (Typed Name) Randall Sheets  Company Official Title Rocketh Section My commission expires June 11,  Subscribed and sworn before me this /87/day of July , 20/6	Company Offici	al Signature Xan	dall & Slows	NOTARY PUBLIC
Subscribed and sworn before me this		1 1 11 0		JERRY M. TEPHABOC
Subscribed and sworn before the this	Company Offici	ai Title 1 . Court	No. 1	My commission expires June 11, 2
Aryan & Taskalich Notary Public	Subscribed and		. 7	
The state of the s		Juny 7	shalish.	Notary Public
		expires 6/11/18		08/12

Operator's Well New River 17\_\_\_\_\_

1.5	ment: Acres Disturbed		Prevegetation P	
Lime	2Tons/acre or to correct to p	H_ 6,5		
Fertilizer type	10-20-20			
Fertilizer amount_	5	00 lbs/acre		
Mulch_	2 Ton	s/acre		
	See	d Mixtures		
To	emporary		Perm	anent
Seed Type	lbs/acre		Seed Type	lbs/acre
ENTUCKY FESCUE	40		SAME	
LSIKE CLOVER	5			
NNUAL RYE	16			
Drawing(s) of road, location provided)	, pit and proposed area for land ap	plication (unless	engineered plans i	ncluding this info have been
provided) Photocopied section of invo	l, pit and proposed area for land ap lved 7.5' topographic sheet.	plication (unless		ncluding this info have been
Orawing(s) of road, location or ovided) Photocopied section of invo		plication (unless		
Orawing(s) of road, location or ovided) Photocopied section of invo		plication (unless		
Drawing(s) of road, location provided)		plication (unless		
Orawing(s) of road, location provided) Photocopied section of invo	lved 7.5' topographic sheet.			
Orawing(s) of road, location or ovided) Photocopied section of invo	lved 7.5' topographic sheet.	plication (unless		

WV Department of Environment | 17/10/10/10





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

### WELL LOCATION FORM: GPS

WELL LOCAT	TON FORMI. GIS
<sub>API:</sub> 47 019 00914	WELL NO.: New River 17
FARM NAME: White Oak Lur	mber
RESPONSIBLE PARTY NAME: EXC	
	DISTRICT: Plateau
QUADRANGLE: Oak HIII 7.5	
SURFACE OWNER: Arrow WV.	INC.
ROYALTY OWNER: Meadow C	
. [1] [1] · [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	osen to submit GPS coordinates in lieu of gging permit or assigned API number on the
the following requirements:	rs
Real-Time Di	fferential
Mapping Grade GPS X: Post Proces	sed Differential
	Differential
4. Letter size copy of the topogra I the undersigned, hereby certify this data is belief and shows all the information require prescribed by the Office of Oil and Gas.	
N/L	