

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

December 28, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-1303369, issued to RESERVE OIL & GAS, INC., 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.

Operator's Well No: 1

Farm Name: GROVES, AMMA

API Well Number: 47-1303369 Permit Type: Plugging

Date Issued: 12/28/2015

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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

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.

WW-4B Rev. 2/01

Work order approved by inspector _

1) Date	е			,	20
2) Ope.	rator	's			
Wel	l No.	Amma (Groves #1		
3)API	Well	No.	47-\$3		- @33 6

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

	APPLICATION FOR A PERI	MIT TO PLUG AND ABANDON
4)	Well Type: Oil/ Gas x/ Liquid	d injection/ Waste disposal/
	(If "Gas, Production X or Unc	derground storage) Deep/ Shallow_X
		Mark Fords Little Managed a Divers
5)	Location: Elevation 760	Watershed West Fork Little Kanawha River
	District Washington	County Calhoun Quadrangle Chloe
C1	Well Operator Reserve Oil & Gas, Inc.	Doug Douglass
6)	Address 929 Charleston Road	7) Designated Agent Doug Douglass Address 929 Charleston Road
	Spencer, WV 25276	Spencer, WV 25276
	<u> </u>	3,50,000,100,000
8)	Oil and Gas Inspector to be notified	9) Plugging Contractor
	Name Joe Taylor	Name Contractor Services Inc. of WV
	Address 1478 Clay Lick Road	Address 929 Charleston Road
	Ripley, WV 25271	Spencer, WV 25276
10)	Work Order: The work order for the man	ner of plugging this well is as follows:
_		ner of prugging this well is as forlows.
ı	Prep Location; Move in; Rig up	
ŀ	Pull Rods, estimate 1860' of 1 1/2"	
	Trip in Hole, cement string; set botton	n hole plug. SET CLASS A CEMENT PLUC ABOVE 1700
I	dentify cement top; estimated top of	cement on 3" is 1,000 feet.
(Cut and recover 3".	
5	Set cement plug. Across 3" cor	CMINIAUM 100' CLASS A COMP Received Office of Oil & Gas
- 1	dentify cement top of 5 1/2"; cut and	recover 5 1/2" OF LOO'CLASS ACCOUNTY 1 9 2015
5	Set cement plug 200' to surface; 6% g	gel between plugs.
	PLACE MONUMENT PER UN CODE	-
	9	as he
		il and gas inspector 24 hours before permitted
work	can commence.	
Work	order approved by inspector	Date 11-17-15

01/01/2016



WR-35

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY



Sinde of Mesi Wirginia

DEPARTMENT OF ENERGY Gil und Cas Zivision

Date_ Opera	Sept	ember	22,	198	37
bpera	tor's	3			
Well	No	1			
Farm	A. D	. Gro	ves		•
API N	b. 47	-	013		3369
					FRAC

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE						
WEIL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal / (If "Gas," Production X / Underground Storage / Deep / Shallow /)						
IOCATION: Elevation: 760 Watershed h	lest Fork	of Little K	anawha			
District: Washington County Calhou	ın	Quadrangle	Chloe	7.5		
•	•					
			· · · · · · · · · · · · · · · · · · ·			
COMPANY Keith Crihfield		1		Cement		
ADDRESS P. O. Box 987, Spencer, WV	Caşing	Used in	Leit	fill up		
DESIGNATED AGENT Keith. Crihfield	Tubing	Drilling	in Well	Cu. ft.		
ADDRESS P. O. Box 987, Spencer, WV	Size					
SURFACE OWNER Oliver Zwoll	20-16 Cond.					
ADDRESS Orma, WV	13-10"		Receive			
MINERAL RIGHTS OWNER Oliver Zwoll	9 5/8	Oil	ice of Oil			
ADDRESS Orma, WV	8 5/8		NOV 19 2	15		
OIL AND GAS INSPECTOR FOR THIS WORK Deo	7					
Mace ADDRESS Sand Ridge, WV	5 1/2	•				
PERMIT ISSUED November 1981 2/9/87	4 1/2					
DRILLING COMMENCED NA 2/0/82	3		1870	50SKS		
DRILLING COMPLETED NA 2/10/82	2	 	10/0	30383		
IF APPLICABLE: PLUGGING OF DRY HOLE ON	2	-		 		
CONTINUOUS PROGRESSION FROM DRILLING OR	Liners					
REWORKING. VERBAL PERMISSION OBTAINED ON	used					
				50 Sant		
GEOLOGICAL TARGET FORMATION Big Injun						
Depth of completed well 1,892 feet 1						
Water strata depth: Freshfeet;						
Coal seam depths:	Is coal	being min	ed in the	area?		
OPEN FLOW DATA						
Producing formation Big Injun	Pa	y zone dep	th 1840	- 50 feet		
Gas: Initial open flow Mcf/d	Oil: In	itial open	flow	NA Bbl/d		
Final open flow 80 Mcf/d Final open flow NA Bbl/d Time of open flow between initial and final tests 8 hours 04/01/2016						
Static rock pressure 110 psig(surface	noacure	ment) afte	r 12 hou	1172016 urs shut in		
		iency are	1	To orde m.		
(If applicable due to multiple completion			. L	foot		
Second producing formation						
Gas: 'Initial open flowMcf/d						
Final open flow Mcf/d						
Time of open flow between init	1.7					
Charie mok presente Daid (surface	meadiren	entl after	: hou	urs shut in		

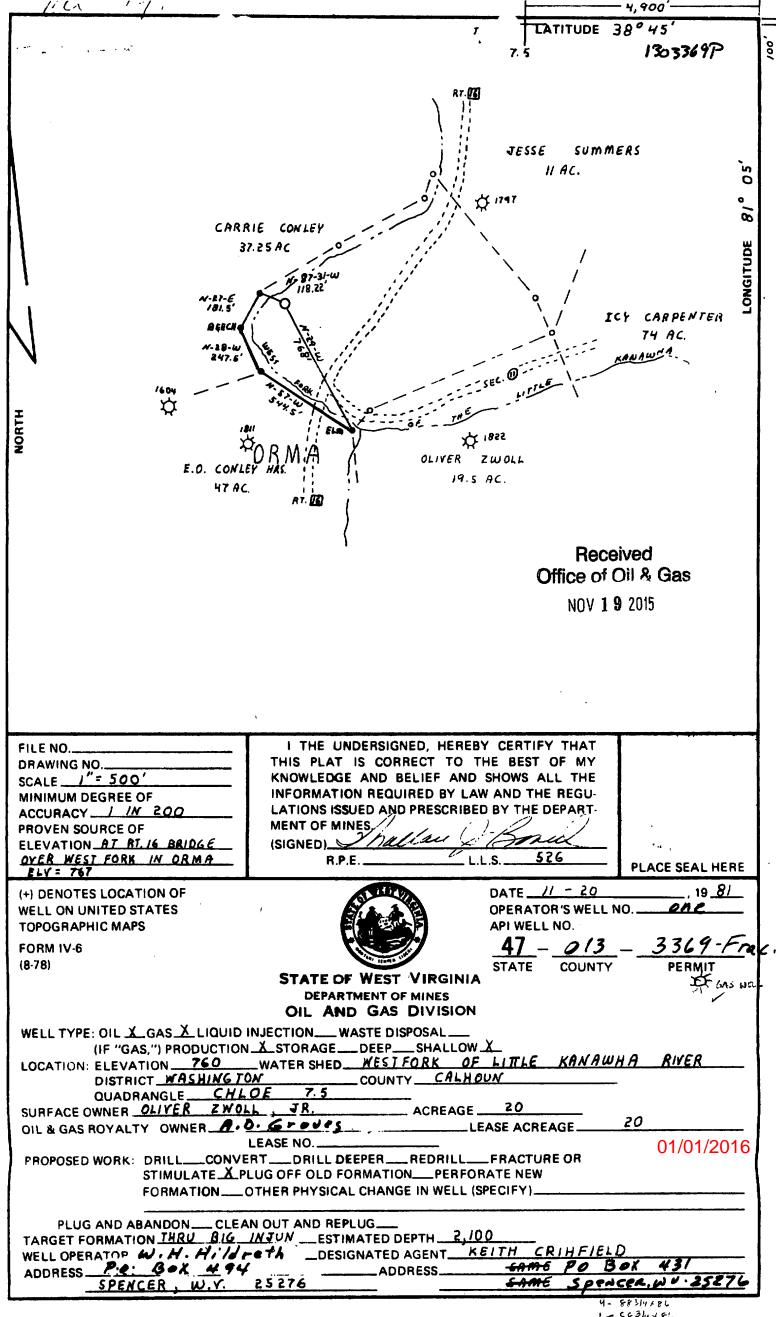


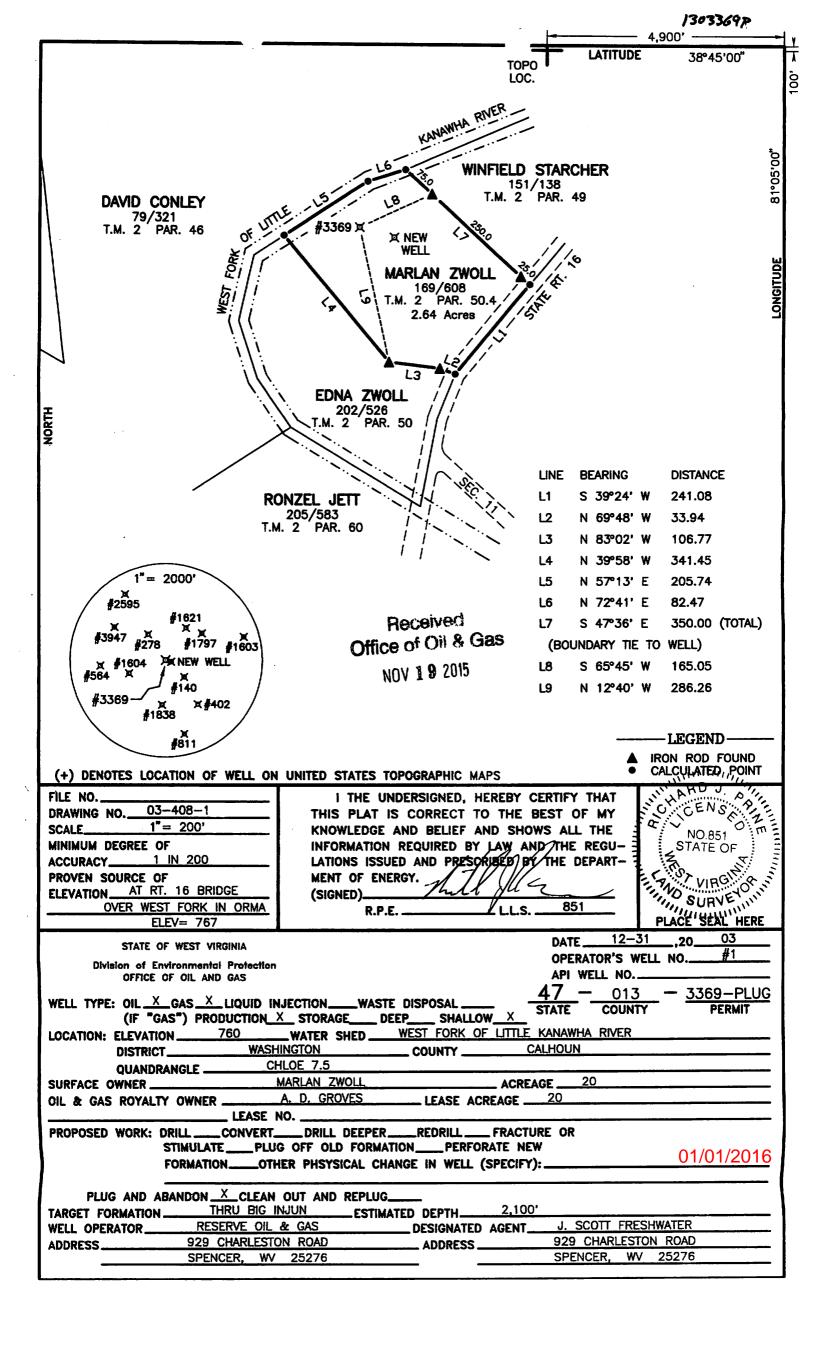
. STATE OF WEST VIRGINIA DEPARTMENT OF MINES

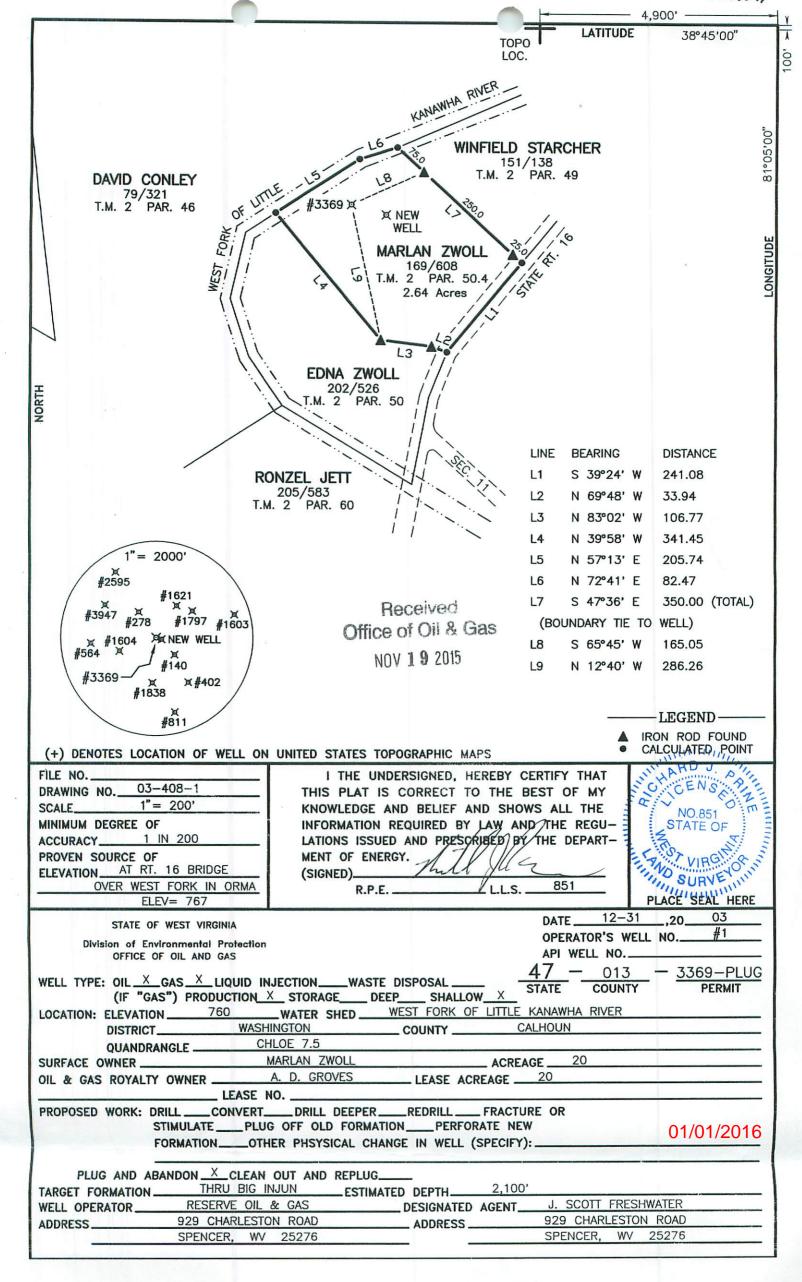
Oil and Gas Division

		WELL I	RECORD	•	Rotary CableX	Oil CzsX
Juxdrangle_Chloe_7.5			•	•	Recycling_	
'umit No. 47-013-336	S9 FRAC				Water Floor	d Storage_
'timit //o. +/015-550	, inno				Disposal	(Kin
loinjeny A. D. G	iroves #1	•	Casing and	Used in	لدار .	Ceinent fill
. dd (ss. Box 431	, Spencer, WV	20	Tubing	Drilling	in Well	Cu. It. (Sks.
um		7cs 20				
Action (waters) Left	FI FI		Size 20-16			•
	County_Ca	_	Cond	<u> </u>		
The surface of tract is or	-		13-10"			
Oliver Zwoll, Jr.			9 5/8			•
dars Orma.			8 5/8			
fineral rights are owned	by <u>Oliver Zwo</u>	11. Jr	7		1	•
Addicss	Orma, WV -		5 1/2	1869	1869	None
hilling Commenced	1933		4 1/2			•.
alling Completed	1933		2	-		• •
sitial of an How	cu. II	bbis.	Liners Used			
inal production						
'ell trestment details:			Attach copy of	comenting reco	or đ. .	• •
Well was dr	<u>illed in 1933 b</u> om 1796-1808 and	v Grant Fowle	n Initially	wall was st	not immbia	•
injun sand fr	om 1796-1808 and	d 1912-24.		- MC1-1MC221	Off Hece	ived
					Office of C	il & Gas
					NOV 19	2015
	N (8					
oil was encountered at_						.
oducing Sand				Water		
neuring Sand)		
Formation Color	Hard or Soft	Top Fœt	Bottom Feet	Oil, Ges or	Water . •	Remarks
Not available		-0-	1,600			
Maxton	•	1,600	1,616	1	,	
Sand Little Lime	•	1,616	1,640	ľ	· ;•	
Pencil Cave	•	1,640 1,680	1,680 1,698		•	
Big Lime		- 1,698	1,760			
Keener Break .	•	1,760	1,798	l		
Big Injun		1,798 1,802	- 1,802 1,857	Gas		•
Shale .		1,857	1,869	TD.		
•				•	•	•
		•	:			•
•		:		•		
•		•			01	/01/2016
		•		•		•
•						
		•				
					-	•
	•					

ENTERED JAN DA 1988 .







WW-4A Revised 6-07

1) Date:			
	2) Operator's Well Number		
Amm n 40. Groves #1			
3) API Well No.: 47 -	13	- 03369	

Notary Public

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

4) Surface Ow (a) Name	ner(s) to be served	5) ((a) Coal Operator Name			
Address	17708 South Calhoun I		Address			
	Orma, WV 25268					
(b) Name			(b) Coal Owner(s)	with Declara	ation	
Address			Name			
			Address			
(c) Name			Name			
Address			Address			
6) Inspector	Joe Taylor		(c) Coal Lessee with	th Declaratio	on	
Address	1478 Claylick Road	1,	Name			
	Ripley, WV 25271		Address			
Telephone	304-380-7469	1/				
The reason However, y Take notice accompany Protection, the Applic	you are not required to take e that under Chapter 22-6 ying documents for a permi with respect to the well at	nents is that you have rig any action at all. of the West Virginia Cod t to plug and abandon a v the location described or the mailed by registered	this regarding the application while, the undersigned well operator part well with the Chief of the Office on the attached Application and defor certified mail or delivered by	proposes to file or of Oil and Gas, We picted on the attac	has filed this Noticest Virginia Depart	ce and Application and ment of Environmental Copies of this Notice,
		Well Operator By: Its:	Reserve Oil & Gas, Inc. Vice President		Rec Office of	eived Oil & Gas
	OFFICIAL SEAL TE OF WEST VIRGINIA	Address	929 Charleston Road		NOV 1	9 2015
	David N. Brannon HC 75 Box 410	Telephone	Spencer, WV 25276 304-927-5228			v. 2013
My Commi	Ssion Expires December 10, 2017	de				
Subscribed and	sworn before me th	18 18 th	av of Novembe	1 2015		

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 depprivacyoffier@wv.gov.

SURFACE OWNER WAIVER

Operator's Well Number Amma
Groves #1

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

<u>Time Limits and methods for filing comments</u>. The law requires these materials to be served on or before the date the operator files his Application. You have FIVE (5) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

<u>Comments must be in writing.</u> Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on commence following grounds:

Office of Oil & Gas

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;

NOV 1 9 2015

3) Damage would occur to publicly owned lands or resources;

4) The proposed well work fails to protect fresh water sources or supplies;

The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the plan	nned work described in these materials, and I have no
objection to a permit being issued on those materials. FOR EXECUTION BY A NATURAL PERSON	FOR EXECUTION BY A CORPORATION,
Date 11/04/15	Name
Signature	By Date

Signature

Date 01/01/2016

W	W	-41	3
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API No.	47-13-03369	
Farm Name	Groves	
Well No.A™	₩Đ. Groves #1	

INSTRUCTIONS TO COAL OPERATORS OWNERS AND LESSEE

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less then five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

XXI A TX/IETO

	WAIVER	
has examined this proposed plugging work ord done at this location, provided, the well opera-	er. The undersigned	
Virginia Code and the governing regulations. Date:		Received Office of Oil & Gas
Date.	By:	NOV 1 9 2015
	Its	

No known operator, owner, or lessee of workable coalbed/seam on this tract.

WW-9 (2/15)

API Number 47 - 13 - 03369

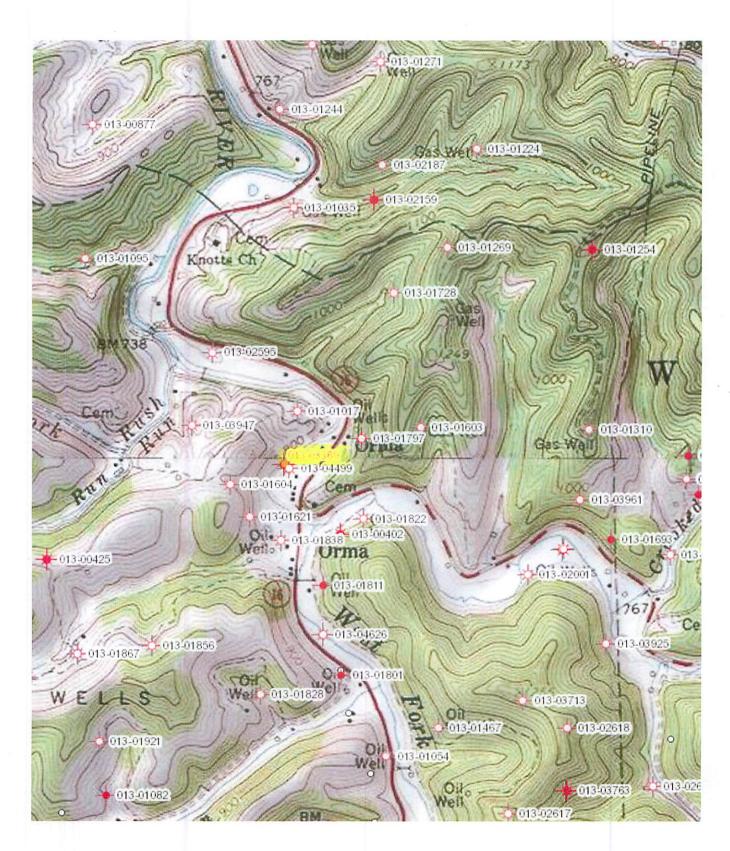
Operator's Well No. A. Groves #1

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

TEODS/ COTTINGS DISTOS/	AL & RECLAMATION LEAN
Operator Name_Reserve Oil & Gas, Inc.	OP Code
Watershed (HUC 10) West Fork Little Kanawha River	Quadrangle Chloe
Do you anticipate using more than 5,000 bbls of water to complete Will a pit be used? Yes No Steel Q Will a pit be used? Yes salt water	the proposed well work? Yes No V
Will a synthetic liner be used in the pit? Yes No	If no substant 9
	it so, what mi. 7-20
Proposed Disposal Method For Treated Pit Wastes:	
Land Application Underground Injection (UIC Permit Nu	mber)
Reuse (at API Number)
Off Site Disposal (Supply form WW-9 f	
Other (Explain	
Will closed loop system be used? If so, describe: N/A	
Drilling medium anticipated for this well (vertical and horizontal)?	Air, freshwater, oil based, etc. N/A Received
-If oil based, what type? Synthetic, petroleum, etc	Office of Oil & Gas
Additives to be used in drilling medium?	NOV 1 9 2015
Drill cuttings disposal method? Leave in pit, landfill, removed offs	
	1? (cement, lime, sawdust)
Permittee shall provide written notice to the Office of Oil and Gas of West Virginia solid waste facility. The notice shall be provided with where it was properly disposed.	
on August 1, 2005, by the Office of Oil and Gas of the West Virgin provisions of the permit are enforceable by law. Violations of any law or regulation can lead to enforcement action. I certify under penalty of law that I have personally exa application form and all attachments thereto and that, based on obtaining the information, I believe that the information is true, penalties for submitting false information, including the possibility Company Official Signature Company Official Title Vice President	we term or condition of the general permit and/or other applicable amined and am familiar with the information submitted on this a my inquiry of those individuals immediately responsible for accurate, and complete. I am aware that there are significant of fine or imprisonment.
Subscribed and sworn before me this 18 day of No	vember , 2015
David M. Sonnen	Notary Public
My commission expires December 10, 201	7 OFFICIAL SEAL STATE OF WEST VIRGINIA NOTARY PUBLIC David N. Brannon

Proposed Revegetation Treats	ment: Acres Disturb	ed 1.5 Prevegetation	Prevegetation pH 5.5	
Lime 3	Tons/acre or to	correct to pH 6.5		
Fertilizer type				
Fertilizer amount 0.25		lbs/acre		
Mulch_ Hay	2	Tons/acre		
		Seed Mixtures		
Temporary		Permanent		
Seed Type	lbs/acre	Seed Type	lbs/acre	
Orchard Grass	25	Ladino Clover	5	
Red Top Clover	15	KY 31	40	
Attach: Drawing(s) of road, location, provided) Photocopied section of involv		a for land application (unless engineered plans is	including this info have bee	
Orawing(s) of road, location, provided)			including this info have bee	
Orawing(s) of road, location, provided) Photocopied section of involv				
Orawing(s) of road, location, provided) Photocopied section of involv Plan Approved by:			Received	
Orawing(s) of road, location, provided) Photocopied section of involv Plan Approved by:			Office of Chine	
Orawing(s) of road, location, provided) Photocopied section of involv Plan Approved by:			Office of Chine	
Orawing(s) of road, location, provided) Photocopied section of involv Plan Approved by:			Office of Chine	
Orawing(s) of road, location, provided) Photocopied section of involv Plan Approved by:			Office of Chine	



WW-7 8-30-06



West Virginia Department of Environmental Protection Office of Oil and Gas

WELL LOCATION	N FORM: GPS
_{API:} 47-013-3369	WELL NO.: A.D. Groves #1
FARM NAME: Amma Groves	
RESPONSIBLE PARTY NAME: Reserv	e Oil & Gas, Inc.
COUNTY: Calhoun	_ _{DISTRICT:} Washington
QUADRANGLE: Chloe	
SURFACE OWNER: Marlan Zwoll	
ROYALTY OWNER: Marlan Zwoll	
UTM GPS NORTHING: 428901 7.0	
UTM GPS EASTING: 491277	GPS ELEVATION: 760
above well. The Office of Off and Gas will not ac	permit or assigned API number on the Celved coept GPS coordinates that do not the Oil & Gas Coordinate Units: meters, Altitude: NOV 19 2015 meters.
Real-Time Differen	tial
Mapping Grade GPS: Post Processed I	Differential
Real-Time Diffe	rential
4. Letter size copy of the topography of the undersigned, hereby certify this data is corresponded and shows all the information required by prescribed by the Office of Oil and Gas.	ect to the best of my knowledge and
Long Orghans Land	Manager 10/27/15
Signature *	Title Date