

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 24, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-2700046, issued to CARRIZO (MARCELLUS), 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: J. TIMBROOK 1

Farm Name: TIMBROOK, JERRY & DIXIE

API Well Number: 47-2700046 Permit Type: Plugging

Date Issued: 06/24/2015

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.

WW-4B Rev. 2/01

1)Date	1904	, 20
2) OF	itor's	, \ \itt
Well	No. J.	Timbrook #1
3)API	Well No.	47-027-00076P

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

	APPLICATION	FOR A PERMIT TO PLUG AND ABAND	ON
4)	Well Type: Oil/ Gas	/ Liquid injection/ Wa	ste disposal/
	(If "Gas, Production)	\times or Underground storage	_) Deep/ Shallow
	- jî	county flamp shire	madrangle Handing Rock
6)		ellus)LLC7)Designated Agent Street Suite 1500 Address 6, 77002	707 Vinginia Street
8)	Oil and Gas Inspector to be no Name Bill Hatfield Address P.O. Box 522 Buchannon W.	Name	
	4		
10)	Work Order: The work order fo	r the manner of plugging this	well is as follows:
	(Note) 1378" and 95	gasings cemented	to surface.
(1) }	repare road and location	and move in and Rida	h service rid.
	flow back any well pro		p scropecing.
	Load 52" Casing	with 6% 60%.	-1 -7
(3) 4	Run work string to		ent plud aven 6550'-63
(4)	vell perforations a	nd null work sta	TAG PLUC
151	Run tree-point on 5%	Ja jan work sind	192
16)6	and the told Han	Casing and Car Casin	ag at cement top,
1611	all approximately 400	er sa casing an	d run work
.4	string and set 150's	cement plug at cas	ind out and
/ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	pull work stringe		
(7)	tinish pulling 53"	casing and check	flyid level.
(B) A	up work string in w	ell to 1650 and set	100 plus at
_	1-3" casing seat of	1650-1550	7 3
(9)R	Ill work string to 500 and	set 100 plud at 1380	easing seat 500-400
(10)R	Ill work string to 100 and ce	ement to surface and er	ect monument_
	fication must be given to the d	istrict oil and gas inspector	24 hours before permitted
	c can commence.	institut off and gas inspector	RECEIVED
	#	RECEIVED	Office of Oil and Gas
) bu dunantan	Office of Oil and Gas	Date APR 20 2015
	c order approved by inspector		MIN # 0 2013
OK	D BILL HATFIELD	MAR 1 0 2015	WV Department of
R	PHONE	W/V Donard	Environmental Protection
0	3/11/2015	WV Department of Environmental Protection	06/26/2015

WR-35 Rev (8-10)

State of West Virginia Department of Environmental Protection

DATE: 10/20/2010

name:TIMBROOK, JERRY	Operator Wel	I No.:_1		
ATION: Elevation: 1,201'	Quadrangle:	HANGING RO	СК	
District: GORE	County: HAM	PSHIRE		
Latitude: 8.110' Feet South of 39 Deg.	18 Min	30.3 St		
D09.	37Min	12.8Sc	o.	
Pany: CARRIZO (MARCELLUS) LLC			- SV	
Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1000 LOUISIANA, SUITE 1500, HOUSTON, TX 77002	13-3/8"	410'	410'	665
Agent:	9-5/8'	1,605'	1,605'	732
Inspector: BILL HATFIELD	5-1/2"	6,660'	6,660'	1038
Date Permit Issued: 10/02/2009				
Date Well Work Commenced: 11/19/2009				
Date Well Work Completed: 7/12/2009	·			
Verbal Plugging:			1	
Date Permission granted on:				
Rotary Cable Rig			 	
Total Vertical Depth (ft): 6,660'			-	
Total Measured Depth (ft): 6,660'			 	
Fresh Water Depth (ft.): 140' - 350'		ļ	 	-
Salt Water Depth (ft.): 1,800' - 3,000'			 	ļ
Is coal being mined in area (N/Y)? N			 	
Coal Depths (ft.):			 	
Void(s) encountered (N/Y) Depth(s)	m T =			
N FLOW DATA (If more than two producing formation orducing formation ORISKINY Pay 20	one depth (ft)	e additional da 6,548'	ta on separate sh	leet)
Gas: Initial open flow 850 MCF/d Oil: Initial open flow 1830 MCF/d Final open flow	w_0Bb			
Final open flow 1830 MCF/d Final open flow Time of open flow between initial and final tests 63	0 Bbl	/d		REC
Static rock Pressure psig (surface pressure) after			Offic	ce of Cit
	3	-		(a)
Second producing formation Pay zone Gas: Initial open flow MCF/d Oil: Initial open flo	e depth (ft)			MADTE
Final open flow MCF/d Final open flow		2.7		MAR 1 U
Time of open flow between initial and final tests	Hours	· ·	WV	Dela
static rock Pressurepsig (surface pressure) after	rHour	S	Enviror	nmer
/ Under penalty of law that I have percanally evening a	d am &11!			
under penalty of law that I have personally examined an chments and that, based on my inquiry of those individua	ls immediately	responsible %	ation submitted of	on this docume
rmation is true, accurate, and complete.		D. Michigan	. votaming mis in	
: (♥ •) A			1	REC
			0120110	Office of (

Signature ___ **ED KRONENBURGER** Date

APR 20 2015

WV Department of Environmental Protection 06/26/2015

FAX NO. 7133586473

27.00046 TIMBROOK +1 PS 2

Were core samples taken? Yes	_No V	Vere cuttings caught du	ring drilling? YesNo
Were Electrical, Mechan	ical, or Geophysical log	s recorded on this well	7
FRACTURING OR STIMULATING	G, PHYSICAL CHANGE, E RD OF THE TOPS AND BO	TC. 2). THE WELL OTTOMS OF ALL FO	DF PERFORATED INTERVALS, LOG WHICH IS A SYSTEMATIC DRMATIONS, INCLUDING COAL
Perforated Intervals, Fracturing, or Stin		N 0 5501 541	
6,578'-79'; 6,580'-81'; 6,564'-6			EQUI CAND.
FRAC ORISKINY: 6,578' - 6,55	51' W/ 1,520 BBLS FLUI	D & 5,9/1# 100 M	ESH SAND +
22,927# 20/40 SAND			
,			
			
Formations Encountered: Surface:	Top Depth		Bottom Depth
	l may a		_
		Alle age	
			A
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		*	
		TOWN TOWN	
			
			A .

RECEIVED Office of Oil and Gas

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Office of Oil and Gas

APR 20 2015

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WV Department of WV Department of Environmental Protection Environmental Protection

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WW-4A Revised 6-07

APR 2.0 2015

1)	Date:			
2)	Operator's	Well Number	#/	
	J. 7	imbrook		

WV Department of

3) API Well No.: 47 -

027-00046-P

Environmental Protection 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: (a) Name Address S89 Mar	XIE Timbrook	oal Operator Name Adaress		
(b) Name Address	17301	(b) Coal Ow Name Address	Jerry Dixie	Timbrook,
(c) Name Address		Name Address	Champerspur	<u></u>
6) Inspector Address		(c) Coal Les Name Address	see with Declaration	
TO THE PERSONS NAME	D ABOVE: You sho	uld have rece	ived this Form and the follow	ving documents:
(1) The application to Plug and a well its and the plugging worl (2) The plat (surveyor's map) sho The reason you received these docume However, you are not required to take a Take notice that under Chapter 22-6 of accompanying documents for a permit Protection, with respect to the well at the Application, and the plat have bee certain circumstances) on or before the	k order; and wing the well location on F ants is that you have rights reg- my action at all. The West Virginia Code, the u to plug and abandon a well wit the location described on the at m mailed by registered or cert	Form WW-6. arding the application of the state of the st	cation which are summarized in the in operator proposes to file or has filed to Office of Oil and Gas, West Virgini on and depicted on the attached Form	nstructions on the reverses side. this Notice and Application and in Department of Environmental in WW-6. Copies of this Notice,
Office of On Cing Ten	Well Operator Co	prizo	Marcellus	(1) (1) (2) (3) (3) (4) (4) (5)
MAR 1 0 125	Its:	23 P	tant Ridge	Rdi
Environment	Telephone	304)	965-6069	
Subscribed and sworn before me thi	s 91t day of	-2	Notary Public	
My Commission Expires	aug 2	7.2016		OFFICIAL SEAL NOTARY PUBLIC
Oil and Gas Privacy Notice	0			STATE OF WEST VIRGINIA LITA G. SAMPLES 2052 Camp Creek Road
The Office of Oil and Gas processes you regulatory duties. Your personal infor	r personal information, nation may be disclosed	such as nam I to other Sta	e, address and phone number te agencies of third parties in	Dasa part of our 25030

 Complete items 1, 2, and 3. A item 4 if Restricted Delivery is Print your name and address 	desired. on the reverse	A. Signature	☐ Agent ☐ Addressee
so that we can return the card Attach this card to the back of or on the front if space permit Article Addressed to:	f the mailpiece,	B. Received by (Printed Name) D. Is delivery address different from its If YES, enter delivery address below	
589 Warm Spri	Improofings Rd	3. Service Type	
	17201	☐ Insured Mail ☐ Collect on	ceipt for Merchandise
		4. Restricted Delivery? (Extra Fee)	☐ Yes

PH 5 P	U.S. Postal S CERTIFIED Domestic Mail On	MAI Iy	L" HEC	The Control of the Co
	For delivery informa	TOD VE	IAL	USE
465	Postage	ş	\$2,22	1297.1
IJ	Certified Fee		43.3/	Postmärk
4000	Return Receipt Fee (Endorsement Required)		\$2,0	Here
	Restricted Delivery Fee (Endorsement Required)		30.8V	03705/2015
777	Total Postage & Fees	\$	93.,12	887.053.201.7
	Sent To			
7034	Street & Apt. No., or PO Box No. City, State, ZIP4-4			RECEIVED Office of Oil and Gas
	PS Form 3800, July 2	na RE	CEIVED Of Oil and	see Reverse for Instructions Gas MAR 1 0 2015

APR 20 2015

WV Department of Environmental Protection

WV Department of Environmental Protection

WW-9 Rev. 5/08

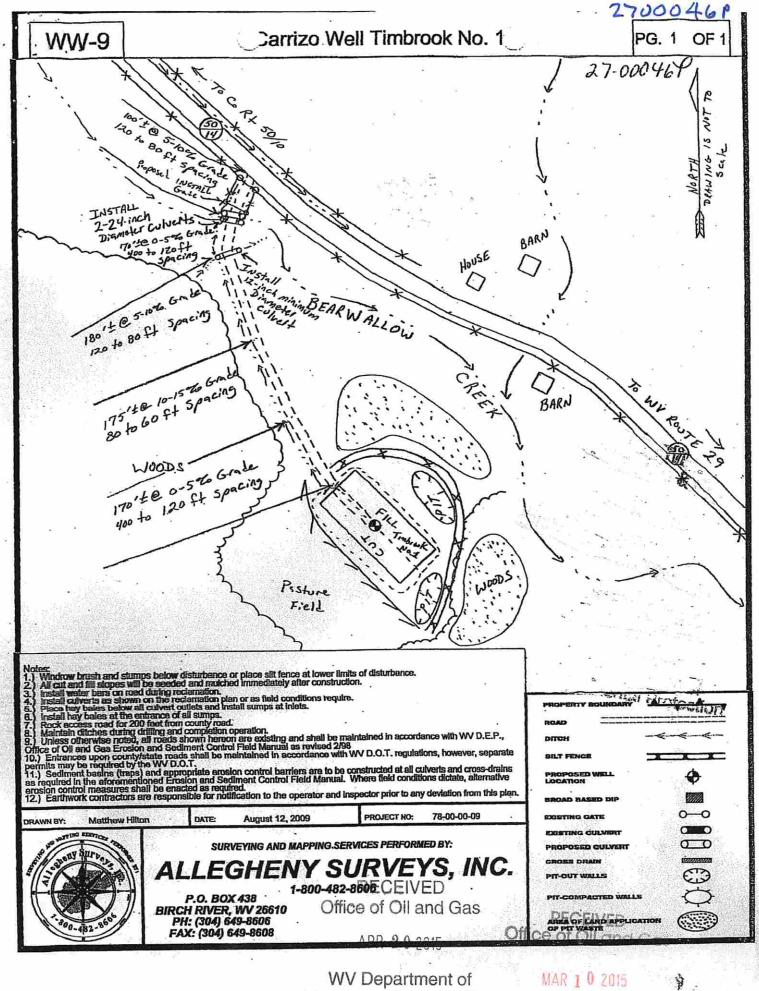
	Page	of	
API Number 47	-027	- 000	46-1
Operator's Well	No.J. Ti	mbroc	K#/

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRA GENERAL PERMIT FOR OIL AND GAS PIT WASTE		ION FORM
Operator Name Carrizo Marcely ShihiCiOP	Code	
Watershed Bear Wallow Creek Quadrangle Ha	. /	Pock
	ngivig n	00/
Elevation 1201 County Hampshire D	District <u>60 k</u>	e_
Description of anticipated Pit Waste: 6el, Water and Ce	ement	
Will a synthetic liner be used in the pit? Ve.5. 20 MIL		
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		
Other (Explain		
Proposed Work For Which Pit Will Be Used:		
Drilling Swabbing		
Workover Plugging		
Other (Explain		
I certify that I understand and agree to the terms and conditions of the GENER on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Env provisions of the permit are enforceable by law. Violations of any term or condition of law or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am fami application form and all attachments thereto and that, based on my inquiry of the obtaining the information, I believe that the information is true, accurate, and comp penalties for submitting false information, including the possibility of fine or imprisonment Company Official Signature Company Official Title Company Official Title Company Official Title	vironmental Protection of the general permi	on. I understand that the t and/or other applicable nation submitted on this aediately responsible for
Subscribed and sworn before me this 9th day of march	, 2015	ironment de l'ellon
Lta I Sampler	Notory Public	RECEIVED Office of Oil and Gas
My C	OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIR LITA G. SAMPLE 2052 Camp Creek Ro Bomont, West Virginia 2 ommission Expires Aug.	GIND Department of Invironmental Protection 06/26/2015

WV Department of Environmental 466666015

L	EGEND
Property Boundary	Diversion (2:21/11:11/11/11/11/11/11/11/11/11/11/11/11
Rond = = = = = = = = =	Spring
Existing Fence — X — X — X —	Wet Spot
Planned Fence / / /	Drain Pipe with size in inches
Stream	Waterway C+ C+ C+
Open Ditch	Cross Drain 7/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1
Rock ESSE	Artificial Filter Strip
North N	Pit: cut walls
Buildings	Pit: compacted fill walls
Water wells	Area for Land Application of Pit Waste
Drill site	
	2
Proposed Revegetation Treatment: Acres Disturbed	Prevegetation pH
Lime Tons/acre or to correct to pH	6,5
Fertilizer (10-20-20 or equivalent) 500 lbs/a	
Mulch Hay Straw - 2 Tons/ac	ic .
Seed	Mixtures
Area I	Area II
Seed Type lbs/acre	Seed Type lbs/acre
Red top 15	<u>Same</u>
Onchand GNASS 25	Same
Drenard Crass as	Same
Perennial Rye 25	Same
Attach:	
Drawing(s) of road, location,pit and proposed area for land appli	cation.
Photocopied section of involved 7.5' topographic sheet.	
Photocopied section of involved 7.5 topographic sheet.	RECEIVED
	Office of Oil and Gas
Plan Approved by:	
	MAR 1 0 2015
Comments:	WV Donest
	WV Department of Environmental Prefection
	HECEIAERU
Title:	Date: Office of Oil and Gas
Field Reviewed? () Yes (→ No APR 20 2015



Topo Quad:	Hanging Ruuk 7.5')	Scale:	1 " = 2000'	
County:	Hampshire		Date:	June 23, 2009	>·
District:	Gore		Project No:	78-00-00-09	<u>.</u>
74700	Propo	sed Tim	brook No. 1		Торо
		Section 1		A DESTRUCTION	
	September 1				
Com				55/0/10/	
		A KI			
SIL	Well		10/1/0//	N: 295621 E: 2248863	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Lat: 39-18-3 Long: 78-37	
73 ILM					
/Gas Well		1	PROPOSEI		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
			J. Timbrook	NO NG	6.53
					STANCE.
			12.15	Pino VIII	
6 CM				Tearlead	
K. G.	визор)	12/15			
	Augusta	15/1			
					337
			Receive		
dieny Spries and	SURVEYING AND MAPPING SE	RVICES PERFORMED	office of The	GORRISO OIL and	Gas
	ALLEGHENY S P.O. BOX 438 BIRCH RIVER, WV 26610	UKVEY.	5, IN ⊕ £R D 9 20	15 Corrizo Oil and 1000 Louisiana Street, St Houston, TX 7700	uite 1500
900-482-860°	PH: (304) 649-8606 FAX: (304) 649-8608		/		6/26/2015

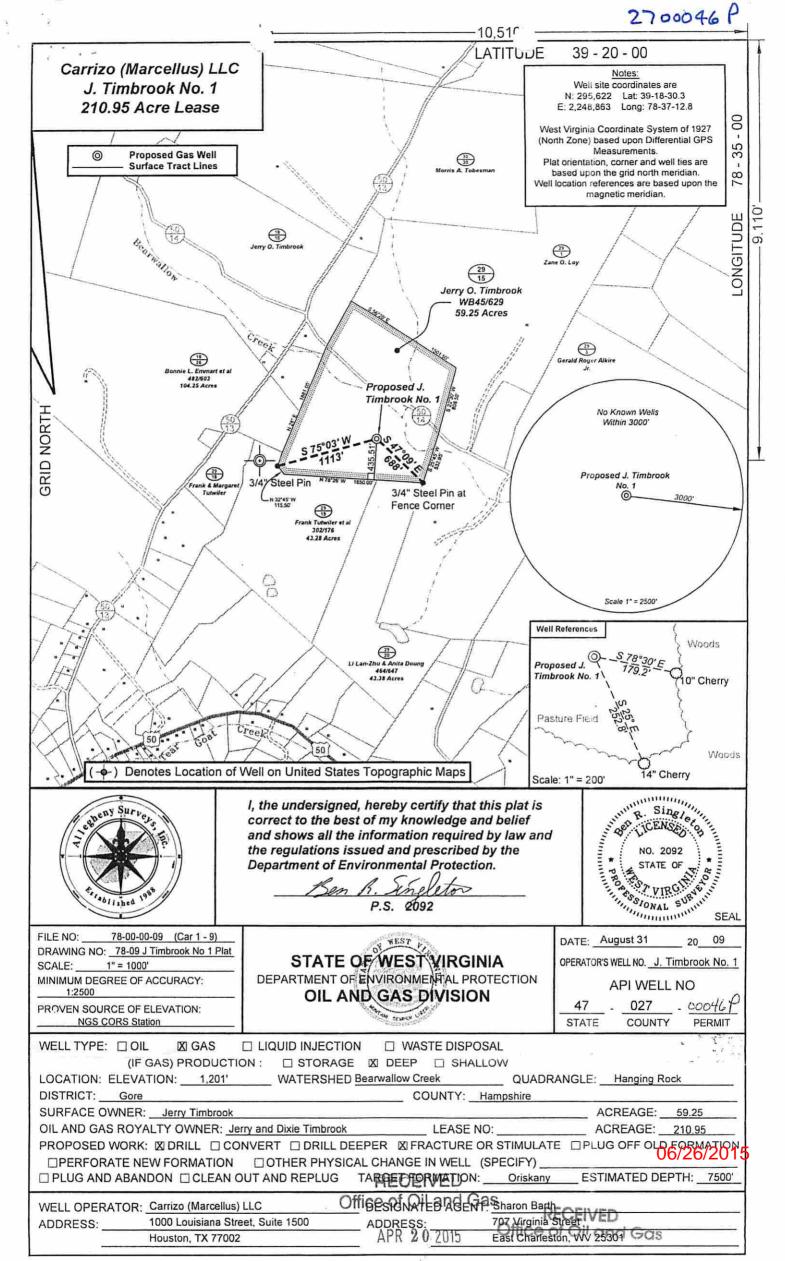




West Virginia Department of Environmental Protection Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-027-00046 WELL NO.: 1					
FARM NAME: J. Timbrook					
RESPONSIBLE PARTY NAME: CARRIZO (MARCELLUS), LLC.					
COUNTY: Hampshire DISTRICT: Gore					
COUNTY: Hampshire DISTRICT: Gore QUADRANGLE: Hanging Rock					
SURFACE OWNER: Jerry & Dixie Timbrook					
ROYALTY OWNER: Jerry & Dixie Timbrook					
UTM GPS NORTHING: 4353788.07					
UTM GPS EASTING: 705/09.42 GPS ELEVATION: 1201'					
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 X Received Office of Oil & Gas					
Real-Time Differential APR 0 9 2015					
Mapping Grade GPS: Post Processed 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.					
Agent O4/08/15 Signature Title Date					



WV Department of Environmental Protection

MAR 1 0 2015



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

WELL WORK PLUGGING PERMIT

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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.

REGEIVED Office of Oil and Gas

James Martin Chief

APR 20 2015

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WV Department of Environmental Protection Operator's Well No. J. TIMBROOK 1

MAR 1 0 2015

WV Department of Farm Name: TIMBROOK, JERRY & DIKIE ironmental Protection

API Well Number: 47-2700046

Permit Type: Plugging

Date Issued: 1

Promoting a healthy environment.

I	Operator:	CARRIZO (MARCELLUS), LLC
MOW	API:	2700046
	WELL No:	J . TIMBROOK 1
	Reviewed by:	9 NM Date: 6/17/15
	45 Day End o	Comment: 04/27/2015

CHECKLIST FOR FILING A PERMIT

Plugging	CK# 20977
WW-4B	£10000
Inspector signature on WW-4B (By Phone 63) 11/15)	
Completion / Well Records of Previous Work 6735	
WW-4A (Notarized)	
Certified Mail Receipts, Waivers, or Affidavits of Personal Service	
Surface Owner Waiver	
Coal Owner / Lessee /Operator Waiver	
WW-9 (Page 1) (Notarized)	
Inspector Signature on WW-9 (Optional)	
Topographic Map of location of well	
WW-7	
OR	
Mylar Plat (Surface owner on plat matches WW-4A)	
Bond	
Company is Registered with the SOS	
Worker's Compensation / Unemployment Insurance account is OK	
\$100.00 check (\$0.00 if no pit)	