

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

Austin Caperton, Cabinet Secretary www.dep.wv.gov

Wednesday, June 13, 2018
WELL WORK PLUGGING PERMIT
Vertical Plugging

EQT PRODUCTION COMPANY 625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for A-689 47-017-02308-00-00

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.

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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, 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: A-689

Farm Name: MAXWELL, W. B.

U.S. WELL NUMBER: 47-017-02308-00-00

Vertical Plugging
Date Issued: 6/13/2018

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 May 21	l ,	20 18
2)Operator'	5	
Well No. 1	50811 Maxwell A-689	
3)API Well	No. 47-017	- 02308

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

APPLICATION FOR A PER	MIT TO PLUG AND ABANDON
4) Well Type: Oil/ Gas X / Liqui	d injection/ Waste disposal/
(If "Gas, Production or Un	derground storage) Deep/ ShallowX
	January Sharrow Market Sharrow Marke
5) Location: Elevation 1021	Watershed South Fork
District Southwest	County Braxton Quadrangle Oxford
	Doddridge
6) Well Operator EQT Production Company	7) Designated Agent Jason Ranson
Address 2400 Ansys Drive- Suite 200	Address 120 Professional Place
Canonsburg PA 15317	Bridgeport WV 26330
Oil and Gas Inspector to be notified	9)Plugging Contractor
Name Daniel Flack	Name HydroCarbon Well Service
Address 58 Rive Road	Address PO Box 995
Buckhannon WV 26201	Buckhannon WV 26201
See Attachment for details and proceed	
Notification must be given to the district of work can commence. Work order approved by inspector	il and gas inspector 24 hours before permitted

PLUGGING PROGNOS

150811 Maxwell A-689 API# 47-017-02308 District, Southwest Doddridge County, WV

BY: R Green DATE: 01/09/18

CURRENT STATUS:

TD @ 2200' Elevation @ 992'

8 5/8" casing @ 294' (CTS)

4 1/2" casing @ 2163'

Perforations @ 1732'-1766' (18 Holes)

- " @ 1939'-1951' (6 Holes)
- " @ 1957'-1965' (4 Holes)
- " @ 1997 2005' (10 Holes)

Fresh Water @ None Reported Saltwater@ None Reported Oil Show @ None Reported Gas shows @ None Reported Coal @ None Reported

- 1. Notify inspector Daniel Flack @ 304-545-0109, 24 hrs. prior to commencing operations.
- 2. Check TD @ or below 2025'.
- 3. Spot 30 bbl, of 6% gelled water followed by a 400' C1A cement plug. 2025' to 1625' (Injun & Weir perfs). WOC 8 hrs. Tag TOC, add additional C1A cement if necessary.
- 4. Free point 4 ½" casing, cut casing @ free point. TOOH 4 ½" casing.
- 5. Set a 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
- 6. TOOH to 1100' set a 200' C1A cement plug 1100' to 900' (Elevation).
- 7. TOOH to 350' set a 350' C1A cement plug 350' to surface. (8 5/8" casing seat).
- 8. Erect monument with API#, date plugged, & company name.
- 9. Reclaim location and road to WV-DEP specifications.

Office of Oil and Gas

JUN 0 5 2018

WV Department of Environmental Protection



STATE OF WEST VIRGINIA DEPARTMENT OF MINES

JAN 1 : 1979

Oil and Gas Division

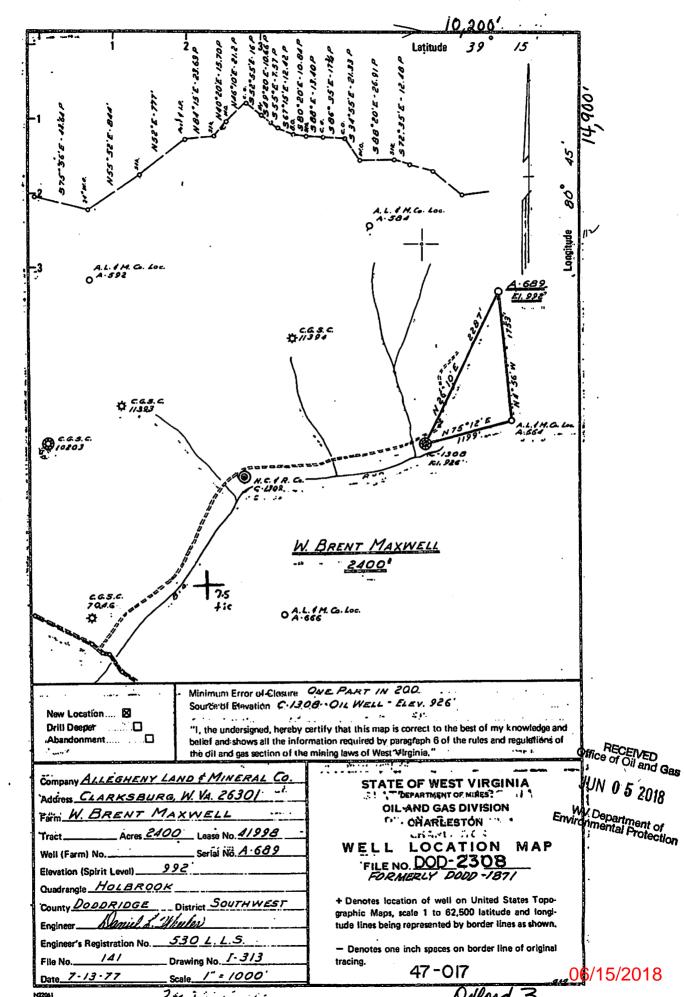
OIL & GAS CIVISION PEFT. OF MINES

		AAEFF	KELUKD		-	△ Oil	
Quadrangle HOLBROOK					Cable	Gas	-
_					Recycling_ Water Floo	Comb	_
Permit No. <u>DOD-2308</u>	_				Disposal	od Storage	-
47-017					D 13POSEIL	(Kind)	-
Company Allegheny	Land & Mine	eral Co.		3.774			
Address Box 1740,	Clarksburg	WV 2630	1 Casing and	Used in	Left	Cement fill up	
Farm W. B. Maxi	Well Ad	7021Sap	Tubing	Drilling	in Well	Cu. ft. (Sks.)	
Location (waters) Bouth			Size			1 .	
Well No. A-689		v. 9921	20-10				
District Southwest	County Dode	dridge	Cond.				
The surface of tract is ow	ned in fee by A81	coti	13-10"	i		1	
Schwartzman, M.D.			· • • 9 5/8			1	
Address Washingto	on. D.C. 200	020	\$ 5/8	2941	294	Cement to	surface
Mineral rights are owned I	W.B. Marwell	Bank, At	ty,)		1	
Address	Clarksburg,	WV 2630	1 5 1/2]	
Drilling Commenced	December 8.	1978	4 1/2	21631	2163	. 12 11	14031
Drilling Completed	December 1	<u>. 1978</u>	3				- -
Initial open flow			2]	
Final production	_cu. ft. per day _	bbls.	Liners Used				
Well open	_hrs. before test_	RP.					5
Well treatment details:			Attach copy of	ementing reco	rd.		
	Vell was fre	ctured 1	2-29-78 by				
	Final test:		ON - 559 MC		277 M	CF - Weir	-
			essure - 97				18 hrs.

						···	_
							_
Coal was encountered at_		Fc	:1	Inches	 B		_
Fresh water	Fee	et	Salt V	Water		_ Feet	_
Producing Sand In Jur	2 & Weir		Depti	1726-17	72'; 1	930-20061	
					-		m-s
Formation Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or	Water	Remarks	
		Top Total	portoiti 1 cest	Ou, Gas or	MRICI	Remarks	
Shale		C	, T				_
Sand & Shale Red Rock		1,00		[
Sand & Shale		1470 50.1		i			
Red Rock		950		•			
Slate & Shale	l	957	1106		Perfor	ations:	
Salt Sand		1106					
Sand & Shale	ļ	1144	,	1722-1	7661	19 5-1	Oca RECEN
Sand	ì	1402	. 1		951' -	18 holes	Office of Oil and Ga
Sand & Shale	ł	1416			965' -	4 "	, and Ga
Big Lime		1610			005' -		JUN n = <
Keener Sand	1	1642		1 - / 7 / 32		10	JUN 0 5 2018
Shale		1700				~	WV Department of vironmental Protection
Injun Sand		1726				En	Vironmonartment
Sand & Shale	}	1772		!			""ental Proto
Weir Sand	Ì	1930		!			- rection
Sand & Shale							
Beres Sand							
Delea Saud		2006	2130				
Shale		2006 2130	2130 2138				
	tota	2006 2130 2133	2130 2138 2200	/ Dw411 am)			
	tota	2006 2130	2130 2138 2200	(Driller)	•		

(over)

[•] Indicates Electric Log tops in the remarks section.



WW-4A Revised 6-07

4) Surface Owner(s) to be served:

1) Date: May 21, 201	8		
2) Operator's Well Num 150811 Maxwell A-689	ber		
3) API Well No.: 47 -	017	02308	

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

5) (a) Coal Operator

(a) Name	See Attached		Name	
Address			Address	
(h) N	-		(h) C1 O(-)	Destauration
(b) Name	-		(b) Coal Owner(s) with	
Address			Name See Attached	
	-	 -	Address	
(c) Name			Name	
Address	-		Address	
6) Inspector	Daniel Flack	 .	(c) Coal Lessee with De	eclaration
Address	58 Rive Road		Name	
	Buckhannon WV 26201		Address	
Telephone	304-545-0109			
The reason However, Take notic accompany Protection, the Applic	you are not required to take any active that under Chapter 22-6 of the Waying documents for a permit to plug with respect to the well at the local	hat you have rights regard on at all. est Virginia Code, the u and abandon a well wit tion described on the atted by registered or cert	arding the application which are ndersigned well operator propose h the Chief of the Office of Oil a tached Application and depicted ified mail or delivered by hand	es to file or has filed this Notice and Application and and Gas, West Virginia Department of Environmental on the attached Form WW-6. Copies of this Notice, to the person(s) named above (or by publication in
	1			
	EFICIAL SEAL		Production Company	
NO NO	TARY PUBLIC By:			
	A L. WANSTREET Its:		onal Land Supervisor	Dra
BRIDG	PO BOX 280 ACI		Ansys Drive, Suite 200	Office of Oil and
My commis	sion expires April 07, 2020		nsburg PA 15317	IIIA O
	Tel	ephone (304)	848-0035	Office of Oil and Ga
Subscribed and			To be the second	Environmental Protection

Oil and Gas Privacy Notice

My Commission Expires

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.

WW-9 (5/16)

API Number 47 - 017 _ 02308 Operator's Well No. 150811 Maxwell A-689

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code
Watershed (HUC 10) South Fork Quadrangle Oxford
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No
Will a pit be used? Yes ✓ No
If so, please describe anticipated pit waste: Formation Fluids
Will a synthetic liner be used in the pit? Yes ✓ No ☐ If so, what ml.? 20 ml
Proposed Disposal Method For Treated Pit Wastes:
Land Application (if selected provide a completed form WW-9-GPP)
Underground Injection (UIC Permit Number) Reuse (at API Number)
Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain
Will closed loop systembe used? If so, describe:
Drilling medium anticipated for this well (vertical and horizontal)? 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?
Permittee shall provide written notice to the Office of Oil and Cas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, 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 application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining and the information, I believe that the information is true, accurate, and complete. I am aware that there are significant published for submitting false information, including the possibility of fine or imprisonment. Company Official Signature Company Official Title Regional Land Supervisor
Subscribed and sworn before me this 29 day of May , 20 18 Notary Public STATE OF WEST VIRGINIA STATE OF WEST VIRG

EQT Production Water plan Offsite disposals

Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive Bridgeport, WV 26330 304-326-6027 Permit #SWF-1032-98 Approval #100785WV

Waste Management - Northwestern Landfill

512 E. Dry Road Parkersburg, WV 26104 304-428-0602 Permit #SWF-1025 WV-0109400 Approval #100833WV



Operator's Well No. 150811 Maxwell A-689

	itment: Acres Disturbed 1	Preveg etation p	[]
Lime 3	Tons/acre or to corre	ect to pI-l 6.5	
Fertilizer type (10	0-20-20) or equivalent		
Fertilizer amount	/3 ton	lbs/acre	
Mulch_2		Tons/acre	
		Seed Mixtures	
Te	emporary	Perma	nent
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Aslike Clover	5	Aslike Clover	5
Annual Rye	15		
Maps(s) of road, location, piprovided). If water from the (L, W), and area in acres, of	pit will be land applied, pri the land application area.	d application (unless engineered plans includ ovide water volume, include dimensions (L,	ling this info hav W. D) of the pit,
Attach: Maps(s) of road, location, pi provided). If water from the (L, W), and area in acres, of Photocopied section of invol Plan Approved by: Comments: ZVYY CG5: 99	pit will be land applied, prother land application area. Ived 7.5' topographic sheet	ovide water volume, include dimensions (L,	ling this info hav W.D) of the pit,
Maps(s) of road, location, piprovided). If water from the (L, W), and area in acres, of Photocopied section of involved by: Plan Approved by: Comments:	pit will be land applied, prother land application area. Ived 7.5' topographic sheet	ovide water volume, include dimensions (L,	W. D) of the pit,
Maps(s) of road, location, piprovided). If water from the (L, W), and area in acres, of Photocopied section of involved by: Plan Approved by: Comments:	pit will be land applied, prother land application area. Ived 7.5' topographic sheet	ovide water volume, include dimensions (L,	W. D) of the pit,
Maps(s) of road, location, piprovided). If water from the (L, W), and area in acres, of Photocopied section of involved by: Plan Approved by: Comments:	pit will be land applied, prother land application area. Ived 7.5' topographic sheet	ovide water volume, include dimensions (L,	W. D) of the pit,
Maps(s) of road, location, piprovided). If water from the (L, W), and area in acres, of Photocopied section of involved by: Plan Approved by: Comments:	pit will be land applied, prothe land application area. ved 7.5' topographic sheet from France	ovide water volume. include dimensions (L,	W. D) of the pit,

Topo Quad: Oxford 7.5' 1" = 1000" Scale: Doddridge April 25, 2018 County: Date: Southwest District: 67-30-00-08 Project No: Highway 47-017-02308 WV 150811 (Maxwell A-689) Pit Location Map 47-017-02308 WV 150811 **Existing Well** Access Road Run Run NAD 27, North Zone N:2609 10. E:1635465.19 Office of Oil and Gas N:260910.02 WGS 84 LAT:39.209279 5 2018 **LEGEND** LONGE NUMBER STATE OF ELEV:1021.39 Proposed Pit Location SURVEYING AND MAPPING SERVICES PERFORMED BY: PREPARED FOR: **EQT Production Company** ALLEGHENY SURVEYS, INC.

1-800-482-8606

237 Birch River Road Birch River, WV 26610 PH: (304) 649-8606 FAX: (304) 649-8608

06/15/2018

2400 Ansys Drive Canonsburg, PA 15317

17-02308P Topo Quad: Oxford 7.5' 1" = 2000' Scale: County: Doddridge April 25, 2018 Date: Southwest District: 67-30-00-08 Project No: Topo 47-017-02308 WV 150811 (Maxwell A-689) Maxwell Cem D 47-017-02308 WV 150811 Office of Oil and Gas JUN 0 5 2018 Environmental Protection FORK OF HUGHES RIVER NAD 27, North Zone N:260910.02 E:1635465.19 WGS 84 LAT:39.209271 LONG:-80.786316 ELEV:1021.39



SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606 237 Birch River Road Birch River, WV 26610 PH: (304) 649-8606 FAX: (304) 649-8608 PREPARED FOR:

EQT Production Company

2400 Ansys Drive Canonsburg, PA 15317



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

API: 47-017-02308 WELL NO.: WV 150811 (Maxwell A-689)	_
FARM NAME: W. Brent Maxwell	-
RESPONSIBLE PARTY NAME: EQT Production Company	- .
COUNTY: Doddridge DISTRICT: Southwest	-
QUADRANGLE: Oxford 7.5'	-
SURFACE OWNER: 1. L. (Ike) Morris	_
ROYALTY OWNER: W. B. Maxwell Heirs	_
UTM GPS NORTHING: 4340022	
UTM GPS EASTING: 518449 GPS ELEVATION: 311 m (1021 ft)	_
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. If 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.	Office of Oil and Gas JUN 0.5 2018 WV Department of Environmental Protection
Ota 1	



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY
LEASE NAME AND WELL No. Maxwell A-689 - WV 150811 - API No. 47-017-02308

POTENTIAL SAMPLE LOCATIONS

There appears to be no potential water sources within the required 1000 feet of the existing well WV 150811.

Office of Oil and Gas
JUN 0 5 2018

WW Department of Environmental Protection

BIRCH RIVER OFFICE 237 Birch River Road Birch River, WV 26610 phone: 304-649-8606 fax: 304-649-8608 BRIDGEPORT OFFICE 172 Thompson Drive Bridgeport, WV 26330 phone: 304-848-5035 fax: 304-848-5037 ALUM CREEK OFFICE
P.O. Box 108 • 1413 Childress Road
Alum Creek, WV 25003
phone: 304-756-2949 fax: 304-756-2948

17-023088 Topo Quad: Oxford 7.5' 1" = 2000' Scale: County: Doddridge April 25, 2018 Date: District: Southwest Project No: 67-30-00-08 Water 47-017-02308 WV 150811 (Maxwell A-689) No Potential Water Sources within 1000' Maxwell Cem 47-017-02308 WV 150811 Office of Oil and Gas JUN 0 5 2018 NAD 27, North Center FORK OF NUCHES RIVER N:260910.02 E:1635465.19 WGS 84 LAT:39.209271 LONG:-80.786316 ELEV:1021.39 SURVEYING AND MAPPING SERVICES PERFORMED BY: PREPARED FOR:



ALLEGHENY SURVEYS, INC.

1-800-482-8606 237 Birch River Road Birch River, WV 26610 PH: (304) 649-8606 FAX: (304) 649-8608

EQT Production Company

2400 Ansys Drive Canonsburg, PA 15317



Miss Utility of West Virginia (WV811) (Exhibit A) Directions to Gas Well No. WV 150811 API No. 47-017-02308

- Beginning at the intersection of US Interstate 79 Exit 79 (Burnsville/Glenville) and WV State Route 5 in Braxton County, WV.
- Proceed Northwest on WV State Route 5, for approximately 9.6 miles, to WV County Route 13, on the right.
- Turn right onto WV County Route 13 and proceed Northeast, for approximately 3.1 miles, to WV County Route 26, on the left.
- Turn left onto WV County Route 26 and proceed Northwest, for approximately 4.5 miles, to the junction of US Routes 33 & 119.
- Turn right onto US Routes 33 & 119 and proceed Northeast, for approximately 1.8 miles, to WV County Route 47, on the left.
- Turn left onto WV County Route 47 and proceed Northwest, for approximately 3.6 miles, to the intersection with WV State Route 18.
- Bear right onto WV State Route 18 and proceed Northeast, for approximately 9.4 miles, to

 Office of Oil a

 WV County Route 19, on the left.
- Turn left onto WV County Route 19 and proceed Northwest, for approximately 0.7 mile, to mental Protection
 WV County Route 40, on the right.

BIRCH RIVER OFFICE
237 Birch River Road
Birch River, WV 26610
phone: 304-649-8606 fax: 304-649-8608

BRIDGEPORT OFFICE 172 Thompson Drive

Bridgeport, WV 26330 phone: 304-848-5035 fax: 304-848-5037 ALUM CREEK OFFICE
P.O. Box 108 • 1413 Childress Road
Alum Creek, WV 25003
phone: 304-756-2949 fax: 304-756-2948

- Turn right onto WV County Route 40 and proceed Northwest, for approximately 3.2 miles, to the junction of WV County Route 54/1.
- Turn left onto WV County Route 54/1 and proceed Northwest, for approximately 0.3 mile, to the junction of WV County Route 19/11.
- Continue straight and Northwest onto WV County Route 19/11, for approximately 2.9 miles, to WV County Route 23/2, on the right. (*Point No. 1*)
- Turn right onto WV County Route 23/2 and proceed Northeast, for approximately 1.1 miles, to the Well Access Road, on the left. (Point No. 2)
- Turn left onto the Well Access Road and proceed Northeast, for approximately 0.47 mile, arriving at Gas Well WV 150811. (Point No. 3)





