

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 Jim Justice , Governor Austin Caperton , Cabinet Secretary www.dep.wv.gov

Wednesday, July 12, 2017 WELL WORK PERMIT Vertical / Plugging

EQT PRODUCTION COMPANY 120 PROFESSIONAL PLACE BUILDING II BRIDGEPORT, WV 26330

Re:

Permit approval for A-1, GW-1988

47-081-00824-00-00

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: A-1, GW-1988

Farm Name: BROOKS, ROY A.- HEIRS U.S. WELL NUMBER: 47-081-00824-00-00

Vertical / Plugging

Date Issued: 7/12/2017

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. <u>Failure to adhere to the specified permit</u> 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 under the terms of that agreement.

Form WW-4 (B) Permit Copy (Rev 2/01)

Date: January 24, 2017 Operator's Well

Well No.

122481 (Newman A1 GW1998) API Well No.: 47 081 - 00824

CK 22315

STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION

	OFFICE OF OIL AND GAS						
	APPLICATION FOR A PERMIT TO PLUG AND ABANDON						
4))						
	Well Type: Oil GasXLiquid I If Gas, Production X Or Underground	10.00		Waste Dispo		X	
5)			-				
5)	Elevation: 1983 ft. Watershed: Mar Location: Trap Hill County:		rk eigh	Quadrangle:	Arnett 7.5		
	District:						
6)				ed Agent: Rex C			
	Well Operator 120 Professional Place Address: Bridgeport, WV 26330		Address:	120 Professional Bridgeport, WV 2			
8)		٥١	Dlugging	Contractor:	.0000		
0)	Oil & Gas Gary Kennedy	9)	Name:	HydroCarbon Well S	Service		
	Name: 252 Circle Ave.			PO BOX 995			
	Address: Rainelle, WV 25962			Buckhannon, WV 2	6201		
_	OFFICE USE	E ONLY					
	Notification must be given to the district oil and gas insp Work order approved by inspector	ector 2	24 hours t	pefore permitted work	can commend	ce.	

PLUGGING PROGNOSIS

Newman A-1, GW-1988 (12248)

Raleigh Co., West Virginia API # 47-081-00824 District: Trap Hill

BY: Craig Duckworth DATE: Updated 01/24/17

CURRENT STATUS:

9 5/8" csg @ 1002' (cts) 7" csg @ 2677' (cts) 4 1/2" csg @ 6535' (753cu.ft) 2 3/8" tbg @ 6348

TD @ 6544'

Fresh Water @ 280', 340', 343', 380' Salt Water @ none reported Salt Sand @ 1240' Coal @ none reported Gas shows @ none reported

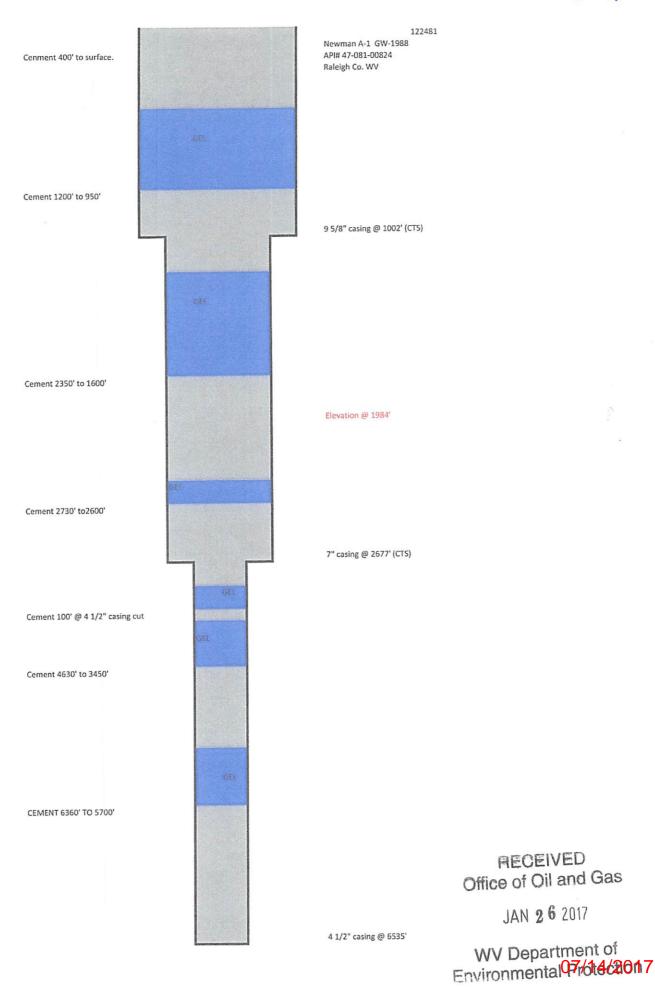
Oil Shows @ none reported

Elevation @ 1984'

Stimulation: Rhinestreet 5868'to6360', U. Devonian 3605'-4530', Maxon 1690'-2352'

Check Rock Pressure

- Notify State Inspector, Gary Kennedy 304-382-8402, and 24 hrs prior to commencing operations. 1.
- TIH w/ tbg @ 6360'; Set 660' C1A Cement Plug @ 6360' to 5700' (Perfs.6360' to 5868') WART 4 HAS, TAG PLUG, 2. ADD CIA IF NEEDER
- 3. TOOH w/ tbg @5700 '; Gel hole @ 5700' to 4630'
- TOOH w/ tbg @ 4630'; Set 1180' C1A Cement Plug @ 4630' to 3450' (4530' to 3605') 4.
- 5. TOOH w/ tbg @ 3450'; gel hole @ 3450' to 2730'
- TOOH w/tbg Freepoint 4 1/2". Cut/shoot 4 1/2"at freepoint 6.
- Set a 100' C1A Cement Plug 50' in/Out of cut. Perf all FW, Coal, Oil & Gas Shows below 4 1/2" cut. Do not omit any plugs.
- TIH w/ tbg @ 2730'; Set 130' C1A Cement Plug @ 2730' to 2600' (4 1/2"cut & 7" csg set) 8.
- 9. TOOH w/ tbg @ 2600'; gel hole @ 2600' to 2352'
- TOOH w/ tbg @ 2352'; Set 750' C1A Cement Plug @ 2350' to 1600' (Maxon 10. perfs.2352'to1690')
- TOOH w/ tbg @ 1600'; gel hole @ 1600' to 1200' 11.
- TOOH w/tbg @ 1200'; Set 250' C1A Cement Plug @ 1200' to 950' (Salt Sand 1240' & 9 5/8" @ 12. 1002')
- 13. Set a 100' C1A Cement Plug 50' in/Out of cut. Perf all FW, Coal, Oil & Gas Shows below 9 5/8" cut. Do not omit any plugs
- TOOH w/ tbg @ 950; gel hole @ 950' to 400' 14.
- TOOH w/ tbg @ 400'; Set 400' C1A Cement Plug @ 400' to 0' (FW @ 380', 343', 340', 280') 15.
- 16. Top off as needed
- 17. Set Monument to WV-DEP Specifications
- Reclaim Location & Road to WV-DEP Specifications.



15-Jun-88 AFI # 47- 81-00824

State of West Virginia DEPARTMENT OF ENERGY Division of Oil and Gas

DIVISION OF OIL & GAS

DEPARTMENT OF ENERGY Operator's Report of Well Work

Farm name: BROOKS, ROY A HEIRS	Operator Well No.: A-1, 3W-1988
LOCATION: Elevation: 1984.31 Quad	ransle: ARNETT
District: TRAP HILL Latitude: 3350 Feet Sou Londitude 4350 Feet Wes	County: RALEIGH th of 37 Deg. 48Min. 0 Sec. t of 81 Deg. 22 Min. 30 Sec.
CHARLESTON, WV Asent: DELBERT G. OLIVER Inspector: RODNEY G. DILLON	Casing Used in Left Cement
Is coal being mined in area (Y/N)?N_Coal Berths (ft):	flubing
Gas: Initial open flowMCF Final open flow_381MCF Time of open flow between i Static rock Pressure_370psi Second producing formation Gas: Initial open flowMCF Final open flow between i	Fay zone depth (ft)1690-6360. F/d Oil: Initial open flowBbl/d Final open flowBbl/d Initial and final tests48Hours Initial and final tests48Hours Fay zone depth (ft) For Oil: Initial open flowBbl/d Final open flowBbl/d Initial and final testsHours
NOTE: ON BACK OF THIS FORM PUT THE INTERVALS, FRACTURING OR STIMULATING LOG WHICH IS A SYSTEMATIC DETAILED INCLUDING COAL ENCOUNTERED BY THE WEL	G. Oliver, Appalachian Project Manager
By: _ // Date: _!	April 21, 1989

NEWMAN A-1

Details of perforated intervals, fracturing or stimulating, physical change, etc.:

FORMATION

Rhinestreet

Perforated 5868-6360' (71 holes). Frac'd w/ 50,000# sand, 96 BLW,

505 MCF N2.

Upper Devonian

Perforated 3605-4530' (71 holes). Frac'd w/ 50,000# sand, 96 BLW,

288 MCF N2.

Maxon

Perforated 1690-2352' (87 holes). Frac'd w/ 42,100 \sharp sand, 146 BLW, 538 MSCF N2.

WELL LOG:

Formation	Top (Ft)	Bottom (Ft)	
Sand	0 .	90	
Siltstone	90	368	
Sand	368	467	
Siltstone	467	592	•
Sand	592	711	
Silstone	711	881	Company Company
Sand.	881	928	
Siltstone	928	1220	IN PROPERTY OF THE REAL PROPERTY OF THE PROPER
Sand	1220	1240	000 04 3000
Siltstone	1240	1423	APR 24 1989
Sand	1423	1450	
Siltstone	1450	1515	DIVISION OF OIL & GAS
Ravencliff	1515	1603	DEPARTMENT OF ENERGY
Avis Limestone	1603	1635	
Siltatone	1635	1944	
Upper, Maxton	1944	2008	
Siltstone	2008	2158	
Middle Maxton	2158	2208	
Siltstone	2208 ·	2316	•••
Lower Maxton	2316	2352	
Siltstone	2352	2364	
Little Lime	2364	2424	
Pencil Cave	2424	2485	•
Big Lime	2485	2846	
Shale	2846	2908	
Siltstone	2908	3028	
Weir	3028	3126	
Shale	3126	3425	
Sunbury	3425	3442	
Devonian Shale	3442	3605	
Gordon	3605	3643	
Devonian Shale	3643	4556	
Lower Huron		5361	
Java		5868	
Rhinestreet		6488	
MATCETION.		6538	
Onondaga	6538		

WW-4-A	
Revised 6/07	

1)	1) Date: January 24,						
2)	Operator's Well Number						
	122481 (Newman A1 GW1998)						
3)	API Well No.:	47	081	-	00824		
		State	County		Dormit		

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS NOTICE AND APPLICATION TO PLUG AND ABANDON WELL

4)	Surface Owner(s	s) to be served:	5) (a) Coal	Operator:
	(a) Name	Larry and Anna Brooks	Name	None
	Address	P. O. Box 519	Address	
		Fairdale, WV 25839		
	(b) Name	Gary and Marilyn Brooks	(b) Coal Ow	ner(s) with Declaration
	Address	150 Brooks Drive	Name	Larry and Anna Brooks
	, , , , , , , , , , , , , , , , , , , ,	Glen Daniels, WV 25844		P. O. Box 519
			Address	Fairdale, WV 25839
	() N			
	(c) Name		Name	
	Address		Address	***************************************
3)	Inspector	Gary Kennedy	(c) Coal Les	see with Declaration
	Address	252 Circle Ave.	Name	Alpha Natural Resources
		Rainelle, WV 25962	Address	300 Running Right Road
	Telephone	(304) 382-8402		Julian, WV 25521

TO 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 Division 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 Chief.

Well Operator:
By:
Victoria J.Roark
Victoria J.Roark
Permitting Supervisor
Address:
PO Box 280
Bridgeport, WV 26330
Telephone:

Subscribed and sworn before me this

Aday of
A

My Commission Expires:

The Office of Oil & Gas processes your personal information, such as name, address and phone number, as 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, please contact DEP's Chief Privacy Officer at deportive confidence of your personal information, please contact DEP's Chief Privacy Officer at deportive confidence of your personal information, please contact DEP's Chief Privacy Officer at deportive confidence of your personal information, please contact DEP's Chief Privacy Officer at deportive confidence of your personal information, please contact DEP's Chief Privacy Officer at deportive confidence of your personal information, please contact DEP's Chief Privacy Officer at deportive confidence of your personal information in your personal info

STATE OF WEST VIRGINIA
NOTARY PUBLIC
NISty S Christie
1207 Briercliff Rd
Bridgeport, WV 26330
My Commission Expires February 20, 2018

WW-9 Revised 5/16

Page	of		
2) Operator'	s Well Num	ber	
122481 (Ne	wman A1 G	W1998	
3) API Well	No.: 47	081 -	00824

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

FLUIDS / CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name:	EQT PRODUCTION COMPANY	OP	CODE:
Watershed (HUC 10):	Marsh Fork	Quadrangle:	Arnett 7.5'
Do you anticipate using mo Will a pit be used? Yes	re than 5,000 bbls of water to comp X No	lete the proposed well work?	Yes No_X_
If so, please describe antic		Formation Flu	
Will a synthetic liner be use	ed in the pit? Yes X No	Is so, what ml.?	20 -10-ml
Proposed Disposal Method X X	Land Application (if selected p Underground Injection (UIC Pe Reuse (at API Number Var		
Will closed loop system be	Other: (Explain used ? If so, describe:		. See attachment)
If oil based, who Additives to be used in drill Drill cuttings disposal meth If left in pit and pla	for this well? (vertical and horizont at type? Synthetic, petroleum, etc. ing medium? od? Leave in pit, landfill, remove of an to solidify what medium will be used? name/permit number?	fsite, etc.	
	notice to the Office of the Oil and Gas ity. The notice shall be provided within d.		
I certify that I understand April 1, 2016, by the Office provisions of the permit are law or regulation can lead to I certify under penalty of form and all attachments the	d and agree to the terms and condition of Oil and Gas of the West Virginia enforceable by law. Violations of a	Division of Environmental Protection of the general dand am familiar with the information of those individuals immediately recomplete I am aware that there are	n. I understand that the permit and/or other applicable on submitted on this application sponsible for obtaining the
Company Official Sig	nature	WW IT	1
Company Official (Ty	ped Name) <u>Victoria J. Roark</u>		RECEIVED
Company Official Title	e Permitting Supervisor -	WV	Office of Oil and Gas
Subscribed and sworn by	S. Christie	Nota	JAN 2 6 2017
My Commission Expires	2/20/18	OFFICIA STATE OF WE NOTARY Misty S 1207 Brierc Bridgeport, W My Commission Expires	Christine stal Protection O7/14/201

				OPERATOR'S WELL NO.: 122481 (Newman A1 GW1998)
	LEGEND			
Property Boundary		_	Diversion	1///////
Road		Spring		Wet Spot
=======================================		0		-A
Planned Fence	Drain F	Pipe with size in	inches	Water Way
//_/	-			€ → € →
Existing Fence		Stream.		Cross Drain
Open Ditch		ficial Filter Strip		Rock
North	Building	W	ater well	Drill site
N —		O	W	\oplus
Pit with Cut Walls	Pit with	Compacted Wal	ls Area o	of Land Application of Pit Waste
E	<u> </u>			
Proposed Revegetation Treatment:	Acres Disturbed:	1±	Prevegetati	on pH
Lime3	Tons/acre or to correct	to pH	6.5	
Fertilizer (10-20-20) or equiv	alent	1/3 ton		lbs/acre (500 lbs minimum)
Mulch 2	Tons/acre or hydroseed	l.		
	SEED MI	XTURES		
Area I				Area II
Seed Type	lbs/acre		Seed Type	lbs/acre
Red Fescue	40	-	d Fescue	15
Alsike Clover	5	Als	ike Clover	5
Annual Rye	15		***************************************	
ATTACH: Drawing(s) of road, location, pit		I application.		
Photocopies section of involved Plan approved by:	7.5 topographic sheet.			
Comments:	your remark			_
Title: Tuspustor Field Reviewed?	Yes	No Date:	1/26/	<u> 17 </u>

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

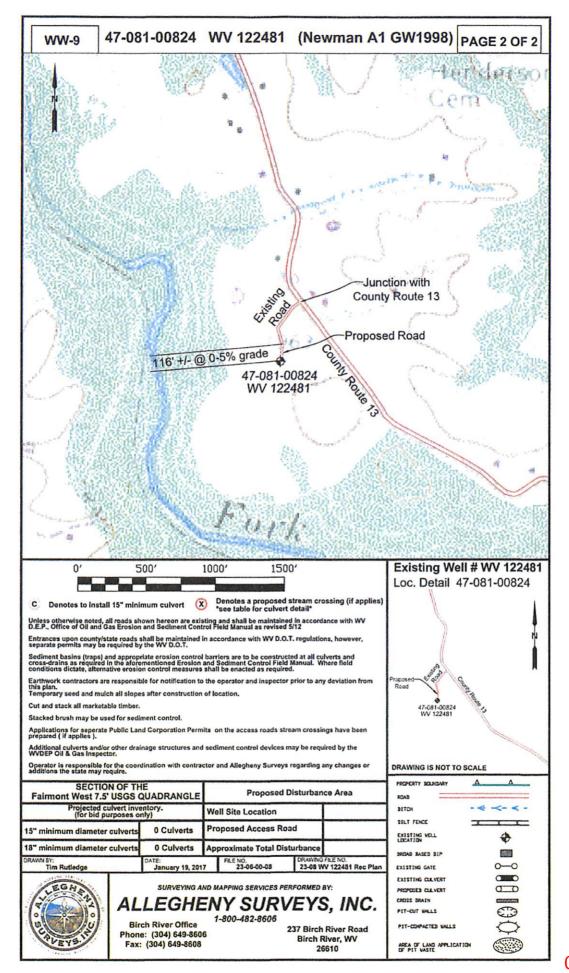
Waste Management - Northwestern Landfill

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

RECEIVED
Office of Oil and Gas

JAN 26 2017

WV Department of Environmental Protection 07/14/2017



Topo Quad: Arnett 7.5' Scale: 1 " = 200' County: Raleigh Date: _____ January 12, 2017 District: Trap Hill Project No: 23-06-00-08 47-081-00824 WV 122481 (Newman A1 GW1998) Topo Pit Location Map Driveway, Existing Access Road Proposed Access Road 47-081-00824 WV 122481 NAD 27, South Zone **LEGEND** N: 288, 133.85 E: 1,887,221.31 PIT-CUT WALLS WGS 84 PIT-COMPACTED WALLS LAT: 37.790764 LONG: -81.390102 AREA OF LAND APPLICATION OF PIT WASTE FEEE 11/202.50 NO LAND APPLICATION Office of Oil and Gas SURVEYING AND MAPPING SERVICES PERFORMED BY: 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

P.O. Box 280 Bridgeport Warzensont of Environmental Pople 4/2017

Topo Quad:	Arnett 7.5'		Scale:	1 " = 500'	
County:	Raleigh		Date:	January 12, 2017	
District:	Trap Hill	F	Project No:	23-06-00-08	
Highway	47-081-0082	4 WV 122481	(Newman	A1 GW1998)	
Mars	GEND	Existing Access Road 47-081-00824 WV 122481		NAD 27, South Zo N: 288,133.85	one
PIT-CUT WALLS				E: 1,887,221.31 WGS 84	
PIT-COMPACTED WALLS				LAT: 37.790764 LONG: -81.39010	2
AREA OF LAND APPLICA OF PIT WASTE NO LAND A				FLEV: 198250	
LEGHEN O	ALLEGHEI	MAPPING SERVICES PERFORMED BY: VY SURVEYS, 1-800-482-8606 rch River, WV 26610 PH: (304) 649-8606 AX: (304) 649-8608	INC. E	Office of Oil and Ga QT Production Compan P.O. Box 280 Bridgeport WV 26330 Environmenta Office of the Company of the Compa	y f

Topo Quad	d: Arnett 7.5'	S	Scale:	1 " = 2000'		
County:	Raleigh)ate:	January 19	, 2017	
District:	Trap Hill	F	Project No:	23-06-00-0	8	
	47-081-00824	WV 122481	(Newman	A1 GW1	998)	оро
Good (Nell)	Dan ees	durtitus.	oran .	Arnett 7.5' Quadrangle Eccles 7.5' Quadrangle		7 1
Star		wen Shiloh	Henderson Cern-			O Trum Cem
Central Centra		47-081-00824 WV 122481 Furk	1976	Covv.	E. Sidinker	
	T R A P	HII	L L	Amont 7.5' Quadrangle Eccles 7.5' Quadrangle	AD 27, South	Fairdale
Cemp.	Fairview Sch Worldy Com	umb em	Snutter Cem	N: E: W LA	288,133.85 1,887,221.3 GS 84 AT: 37.79076 THECEIVED	1 4 102
TEGHANA ON THE PROPERTY OF THE	ALLEGHEN	PING SERVICES PERFORMED BY: Y SURVEYS, 00-482-8606 irch River Road River, WV 26610 (304) 649-8606 (304) 649-8608	INC. PREPARED	QT Product	threnzessprot	any of oction 4/2017



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUC	TION COMPANY		
LEASE NAME AND WELL N	Io. Newman A1 GW 1998 WV 122481	(47-081-00824)	
	POTENTIAL SAMPLE LOCATION	IS	
Site: 1 Spacing: <u>477'+/-</u>	Owner: Lawrence Brooks		
Address: 150 Brooks Drive, Gle	ndaniel, WV 25844	Phone No	
Comments: Pond			
Site: 2 Spacing: 489' +/-	Owner: Larry Brooks		
Address: PO Box 529, Fairdale,	WV 25839	Phone No	

RECEIVED Office of Oil and Gas

BIRCH RIVER OFFICE

Comments: Pond

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 Rd

Alum Creek, WV 25003 phone: 304-756-2949 fax: 304-756-2948

MAJAN SE GREGOFFICE
25 Lights Addition Drive
Martinsburg, WV 25404
WV Departments of
Environmental Protection 07/14/2017

Topo Quad:	Arnett 7.5'	Scale:	1 " = 2000'
County:	Raleigh	Date:	January 19, 2017
District:	Trap Hill	Project No	:23-06-00-08
Water	47-081-00824 WV 12248	31 (New	man A1 GW1998)
Gas Wel D	/ VAS WEIL	rces within 1	Armelt 7.5" Quadrangle Eccles 7.5" Quadrangle
Gas Cem	Gas Well Site 1 47-081-00824 WV 122481	Site 2	Trum Eam
	TRAPHI	L L	Fairdale Feores 7.5. Quadrangle Fairdale
Company Page 1	Breckenridge Ch	Snutter Cem	NAD 27, South Zone N: 288,133.85 E: 1,887,221.31 WGS 84 LAT: 37.790764 LONG: 21,390102 Diffice of Oil and Gas
EGHENA STATE OF THE PARTY OF TH	SURVEYING AND MAPPING SERVICES PERFORMED ALLEGHENY SURVEY 1-800-482-8606 237 Birch River Road Birch River, WV 26610 PH: (304) 649-8606 FAX: (304) 649-8608	A COLUMN TO A COLU	JAN 26 2017 EQT Production Company P\Q\\Bd\@@#9artment of Bridgeport, WV 26330 DT/114/2017



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