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**west virginia** department of environmental protection

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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 11, 2013

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-2103116, issued to EQT PRODUCTION COMPANY, 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 penalties 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: 654101 CAIN 1063  
Farm Name: STATE OF WEST VIRGINIA  
**API Well Number: 47-2103116**  
**Permit Type: Plugging**  
Date Issued: 12/11/2013

## 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

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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.

CK 16891  
100<sup>60</sup>

2103116P

Date: Oct. 31, 2013  
Operator's Well \_\_\_\_\_  
Well No. 654101 Cain #1063  
API Well No.: 47 021 - 03116

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

Well Type: Oil \_\_\_\_\_ Gas X Liquid Injection \_\_\_\_\_ Waste Disposal: \_\_\_\_\_  
If Gas, Production \_\_\_\_\_ X Or Underground storage \_\_\_\_\_ Deep \_\_\_\_\_ Shallow X

Elevation: 1198 Watershed: Long Lick Run of Upper Two Run of Cedar Creek of Little Kanawha River  
Location: Center 01 County: Gilmer 21 Quadrangle: Tanner 7.5' 634  
District: \_\_\_\_\_

Well Operator EQT Production Company  
120 Professional Place  
Address: Bridgeport, WV 26330

7) Designated Agent: Rex C. Ray  
Address: 120 Professional Place  
Bridgeport, WV 26330

Oil & Gas Bryan Harris  
Name: P.O. Box 157  
Address: Volga, WV 26238

9) Plugging Contractor:  
Name: HydroCarbon Well Service  
Address: PO BOX 995  
Buckhannon, WV 26201

Work Order: The work order for the manner of plugging this well is as follows:  
**See Attachment for details and procedures.**

RECEIVED  
Office of Oil and Gas

DEC 05 2013

WV Department of  
Environmental Protection

OFFICE USE ONLY

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Bryan Harris Date 12-11-13

12/13/2013

2103116 v

PLUGGING PROGNOSIS -Weston

**Cain, A.A. # 1063 (654101)**

GILMER, COUNTY, WEST VIRGINIA

API # 47-021-03116

Center District

BY: Craig Duckworth

ELU: 1198'

DATE: 10/25/13

**CURRENT STATUS:**

10" csg	@ None Reported
8 1/4" csg	@ 710'
6 5/8" csg	@ None Reported
3" tbg	@ 2067'

**TD @ 2067'**

**Fresh Water @ None Reported**                      **Salt Water @ None reported**  
**1<sup>st</sup> Salt Sand @ 937'** (estimate from 021-03119) **Coal @ None reported**  
**Gas shows @ 1785' & 1995'** Sands unknown  
**Oil Shows @ None Reported**  
**Stimulation: None Reported**

1. Notify State Inspector, **Bryan Harris 304-553-6087**, 24 hrs. Prior to commencing operations.
2. Attempt to pull 3" tbg. If unable to pull, Free point and shoot at free point.
3. TIH w/ tbg @ 1995'; Set 260' C1A Cement Plug @ 1995' to 1735' ( Gas shows @ 1995' & 1785')
4. TOOH w/ tbg @ 1735; gel hole @ 1735' to 937'.
5. TOOH w/ tbg @ 937'; Set 100' C1A Cement Plug @ 937' to 837' (Salt Sand @ 937' )
6. TOOH w/ tbg @ 837; gel hole @ 837' to 760'.
7. TOOH w/ tbg @ 760'; Set 100' C1A Cement Plug @ 760' to 660' ( 8 1/4" csg set 731' )
8. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf. all FW, Coal, Oil and Gas shows below 8 1/4" cut. Do not omit any plugs
9. TOOH w/ tbg @ 660'; gel hole @ 660' to 200'
10. TOOH w/ tbg @ 200'; Set 200' C1A Cement Plug @ 200' to Surface
11. Top off as needed
12. Set Monument to WV-DEP Specifications
13. Reclaim Location & Road to WV-DEP Specifications

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Office of Oil and Gas

NOV 01 2013

WV Department of  
Environment **12/13/2013**



# CARNEGIE NATURAL GAS COMPANY

2103116P  
654616  
021-03116

Map Sheet No. .... RECORD OF WELL Well No. 2: 654616  
 Drilled on S.S. Miller, Farm of 130 Acres, situa 021-03116  
 Center Township Gilmer County Lease No. 519  
 Gilmer Shipping Point District Foreman  
 RIG WELL

Located Nov. 29. 1922 Commenced Drilling June. 13. 1923  
 Notified Gen'l Office Notified Gen'l Office  
 Commenced December 16, 1922 Completed Drilling July. 31. 1923  
 Completed December 24. 1922 Notified Gen'l Office  
 Contractor Jhon Craig, Contractor C.V. McCall & Co.,  
 Address Clarksburg, W. Va., Address Pittsburg, Pa.,

ROCK FORMATION	TOP	BOTTOM	REMARKS	PRESSURE AND VO
Conductor		13	ELEVATION 965'	1/2 Minute 8
Mapleton Coal				1 " 13
Pittsburgh Coal				2 " 18
Little Dunkard	355	375		3 " 23
Big Dunkard	480	512		4 " 27
Gas Sand	774	890		5 " "
1st Salt Sand	950	990		10 " "
2nd Salt Sand	1010	1155	Gas show 1025	15 " "
Maxton Sand	1488	1545		30 " "
Little Lime	1580	1620	Gas at 1526 to 1530	1 Hour
Pencil Cave	1620	1630		Rock 200
Big Lime	1630	1680		Size of { Tubing 2
Big Injun	1680	1790	oil show 1700	Size of { Casing
Gantz Sand				Vol. by Water 12/100
50 Foot Sand				" " Mercury
30 Foot Sand				" " Pressure
Gordon Stray				
Gordon Sand				
4th Sand				
5th Sand			1/19/42 - HOLE FILLED UP TO 1585'	
Bayard Sand				
Elizabeth				
Speechley				
Bradford				

CONNECTED TO MA  
 Oct 1923 -  
 Length of Line 376  
 Size of Line 2 1/2"  
 DISCONNECTED FRC

water pumped with up right boiler  
 Total Depth ~~1790~~<sup>1585</sup> Feet at \$ per Foot \$  
 Carnegie Nat Gas Co, Gas Furnished at Cents per Foot

### CASING RECORD

SIZE	CHARGED TO WELL		PUT IN WELL		PULLED		LEFT IN WELL		TRANSFERRED		LEFT AT WELL		PACKER
	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	
10	150		150		150		None				150		Kind Hook wall
8 1/2	700		637		1556		637				105		Size 8 1/2 by 5
6 3/8	1715		1656		1656		None				1715		Set at 1105
5	200		200				200						WELL SHOT
2	1400		1195				1195				205		By Marotta torpe
													With 15 Qts. at

Casing Cemented in Well..... by..... Comp

213M330

# GIE NATURAL GAS COMPANY

## REPORT ON DEFECTIVE WELL

Lease No. E-9228-19

GLENVILLE

N. ~~XXXXXXXXXX~~ W.  $\frac{1}{4}$

Center District, Gilmer Co. W. Va. Toll Gate District

Rock <b>320#</b>	Test Taken for This Report <b>Nov. 18th. 1936</b>	Rock <b>200#</b>
n 2 <sup>nd</sup> Opening	Open Flow <b>20/10</b>	Water <b>in 1<sup>st</sup></b> Opening

### CORD OF CASING AND TUBING IN THIS WELL

Inch **7 1/8** 6 3/8 Inch **None** 5 1/2 Inch **None** Tubing; **2067** of **3<sup>rd</sup>** Inch

### HISTORY OF WELL

Original Depth <b>2067</b>	Present Depth <b>2067</b>
Sands at Depth of <b>1785</b> <b>1995</b>	Condition of Rig <b>None</b>
Amount of Water <b>?</b>	Amount of Oil <b>None</b>

Result

Size of Shot Sand Result

ion. **Move Rig from Jackson #3-1416, pull tubing and Re-Pack**  
**with salt water and gas is now blowing open from several**  
**1<sup>st</sup> S. B. Casing head on this well but the 8 1/2<sup>nd</sup> casing would**

*J. M. York* Foreman

*Robert M. Miller* Division Superintendent

*As above*

**COPY**

*[Signature]* Division Superintendent

WW-4-A  
Revised 6/07

- 1) Date: Oct. 31, 2013
- 2) Operator's Well Number  
654101 Cain #1063
- 3) API Well No.: 47 021 - 03116  
State County Permit

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

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>State of West Virginia</u> ✓          Address <u>Cedar Creek State Park</u>  <u>2947 Cedar Creek Road</u>  <u>Glennville, WV 26351</u></p> <p>(b) Name <u>Larry E and Linda M Carder</u> ✓          Address <u>529 WV Hwy 5 SE</u>  <u>Glennville, WV 26351</u></p> <p>(c) Name _____          Address _____</p> <p>6) Inspector <u>Bryan Harris</u> ✓          Address <u>P.O. Box 157</u>  <u>Volga, WV 26238</u>          Telephone <u>304.553.6087</u></p>	<p>5) (a) Coal Operator:          Name <u>None</u>          Address _____</p> <p>(b) Coal Owner(s) with Declaration ✓          Name <u>Peggy Ann Cain</u>  <u>P.O. Box 394</u>          Address <u>Glennville, WV 26351</u></p> <p>(c) Coal Lessee with Declaration          Name <u>None</u>          Address _____</p>
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**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: EQT Production Company  
 Name: Victoria J. Roark *[Signature]*  
 Title: Permitting Supervisor  
 Address: PO Box 280  
Bridgeport, WV 26330  
 Telephone: (304) 848-0076

Subscribed and sworn before me this 31 day of Oct., 2013  
 \_\_\_\_\_ Notary Public  
 My Commission Expires: 8-24-22

RECEIVED  
Office of Oil and Gas

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. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).



**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS**  
**CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM**  
**GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE**

Operator Name: EQT PRODUCTION COMPANY OP ID: \_\_\_\_\_  
Watershed: Long Lick Run of Upper Two Run of Cedar Creek of Little Kanawha River Quadrangle: Tanner 7.5'  
Elevation: 1198 County: Gilmer District: Center

Description of anticipated Pit Waste: Formation Fluids  
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes \_\_\_ No X  
Will synthetic liner be used in the pit? Yes Is so, what ml.? 30 ml

Proposed Disposal Method for Treated Pit Wastes:  
 Land Application  
 Underground Injection - UIC Permit Number \_\_\_\_\_  
 Reuse (at API Number) \_\_\_\_\_  
 Offsite Disposal Permit #. \_\_\_\_\_  
 Other: Explain \_\_\_\_\_

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. \_\_\_\_\_  
If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used? \_\_\_\_\_

Will closed loop system be used? \_\_\_\_\_  
Drill Cuttings disposal method? Leave in pit, landfill, remove 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 certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Division of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any terms 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 on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Victoria Roark*  
Company Official (Typed or Printed) Victoria Roark  
Company Official Title Permitting Supervisor-WV

Subscribed and sworn before me this 31 day of Oct.  
*Pamela Sykes*  
My Commission Expires 8-24-22

RECEIVED  
Office of Oil and Gas  
2013 OFFICIAL SEAL  
STATE OF WEST VIRGINIA  
NOTARY PUBLIC  
Pamela Sykes  
EQT Production  
PO Box 288  
Bridgport, WV 26030  
My Commission Expires 8/24/2022



RECEIVED  
Office of Oil and Gas

OPERATOR'S WELL NO.:  
654101 Cain #1063

DEC 05 2013

LEGEND

Property Boundary WV Department of Environmental Protection

Road

Planned Fence

Existing Fence

Open Ditch

North

Pit with Cut Walls

Spring

Drain Pipe with size in inches

Stream

Artificial Filter Strip

Building

Water well

Pit with Compacted Walls

Diversion

Wet Spot

Water Way

Cross Drain

Rock

Drill site

Area of Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH 5.8

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20) or equivalent 1/3 ton lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre or hydroseed.

SEED MIXTURES

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

ATTACH:

Drawing(s) of road, location, pit and proposed area for land application.  
Photocopies section of involved 7.5' topographic sheet.

Plan approved by: *Debra Harris*

Comments: \_\_\_\_\_

Title: *Oil & Gas Inspector* Date: *12-4-13*  
Field Reviewed? *X* Yes      No



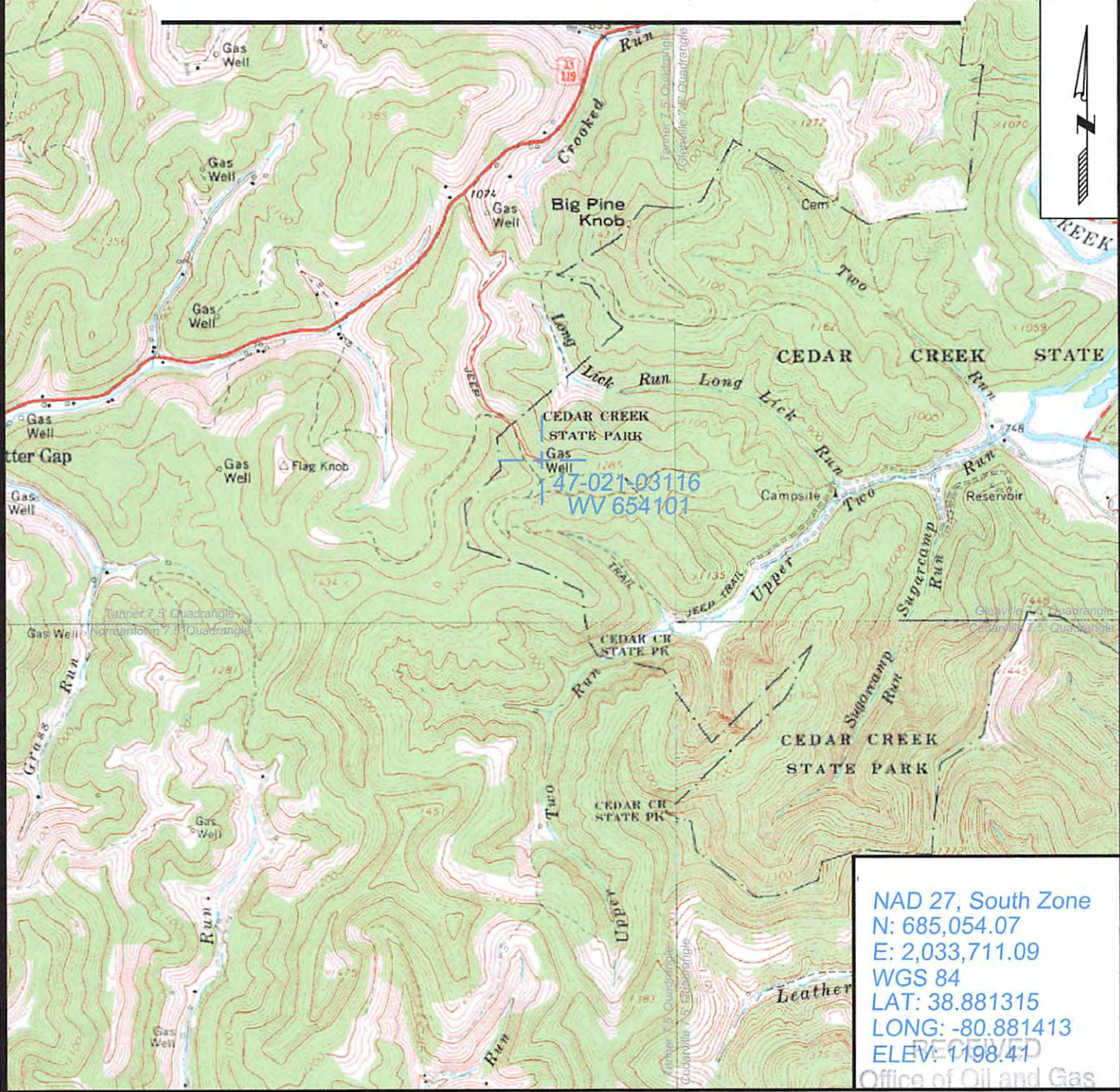
Topo Quad: Tanner 7.5' Scale: 1" = 2000'

County: Gilmer Date: September 27, 2013

District: Center Project No: 25-19-00-07

# 47-021-03116 WV 654101 (Cain #1063)

Topo



NAD 27, South Zone  
 N: 685,054.07  
 E: 2,033,711.09  
 WGS 84  
 LAT: 38.881315  
 LONG: -80.881413  
 ELEV: 1198.41



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
 1-800-482-8606  
 P.O. BOX 438  
 BIRCH RIVER, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:  
**EQT Production Company**  
 NOV 01 2013  
 P.O. Box 280  
 Bridgeport, WV 26330  
 RECEIVED  
 Office of Oil and Gas  
 Environmental 12/13/2013



WW-7  
8-30-06



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

API: 47-021-03116 WELL NO.: WV 654101 (Cain #1063)

FARM NAME: A. A. Cain

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Gilmer DISTRICT: Center

QUADRANGLE: Tanner 7.5'

SURFACE OWNER: State of West Virginia

ROYALTY OWNER: A. A. Cain Heirs, et al.

UTM GPS NORTHING: 4303613

UTM GPS EASTING: 510286 GPS ELEVATION: 365 m (1198 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.**

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.

  
Signature

PS # 2180  
Title

10/3/13  
Date

12/13/2013





## POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY INC.

LEASE NAME AND WELL No. A. A. Cain #1063 - WV 654101 - API No. 47-021-03116

### POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 654101.

RECEIVED  
Office of Oil and Gas

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

**BIRCH RIVER OFFICE**  
P.O. Box 438 • 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

Environmental Protection



Topo Quad: Tanner 7.5'

Scale: 1" = 2000'

County: Gilmer

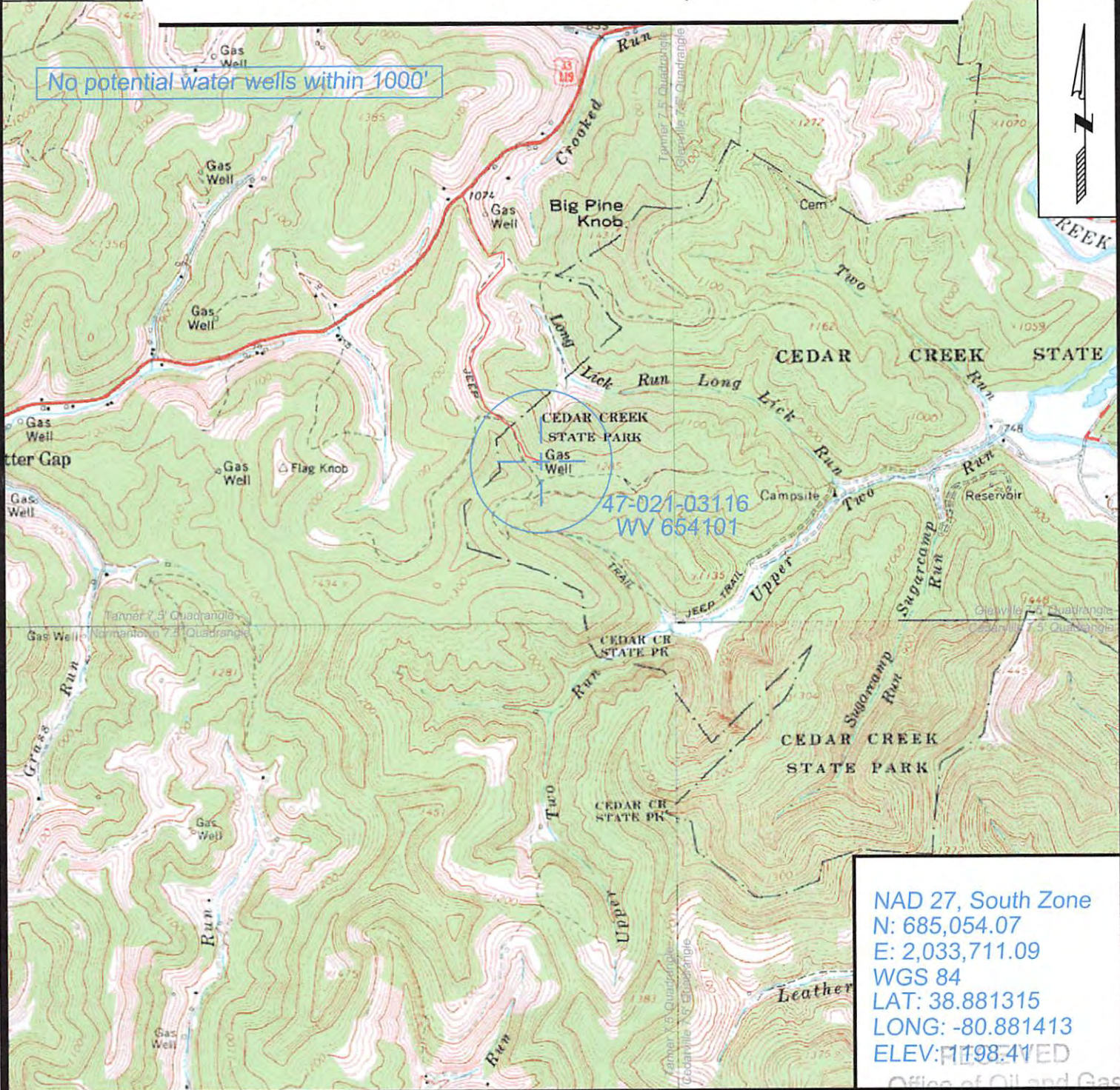
Date: September 27, 2013

District: Center

Project No: 25-19-00-07

Water

# 47-021-03116 WV 654101 (Cain #1063)



NAD 27, South Zone  
 N: 685,054.07  
 E: 2,033,711.09  
 WGS 84  
 LAT: 38.881315  
 LONG: -80.881413  
 ELEV: 1198.41' ED



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PREPARED FOR:  
**EQT Production Company**  
 NOV 01 2013  
 P.O. Box 280  
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 Department of Environment  
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