



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

August 05, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3903347, 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: (COURTLAND A-12) WV 127461

Farm Name: BAIRE, RUSSELL ., ET AL

API Well Number: 47-3903347

Permit Type: Plugging

Date Issued: 08/05/2013

Promoting a healthy environment.

08/09/2013

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

Date: July 15, 2013
Operator's Well
Well No. WV 127461 (Courtland A-12)
API Well No.: 47 039 - 03347

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

ac # 15769
\$100

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

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

5) Elevation: 1039' Watershed: Davis Creek
Location: Loudon 06 County: Kanawha 39 Quadrangle: Charleston West 4.5' 290
District:

6) 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

8) Oil & Gas Terry Urban
Name: P.O. Box 1207
Address: Clendenin, WV 25045

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

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

SEE ATTACHED
Received
Office of Oil & Gas
JUL 25

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

Date 7-19-13

PLUGGING PROGNOSIS

Courtland Land Co. #12 (127461)

Kanawha County, West Virginia
API # 47-039-03347
Chas. S.W. Quad

Received
Office of Oil & Gas

BY: Craig Duckworth
DATE: 2/18/13

CURRENT STATUS:

8 5/8" csg @ 433' (128 sks) cts
4 1/2" csg @ 1871' (325sks) cts
2" thg @ 1798'

TD @ 1880'

Fresh Water @ none reported Salt Water @ none reported

Salt Sand @ 802' Coal @ 254' 385' 452'

Gas shows @ none reported

Oil Shows @ none reported

Stimulation: Fractured Big Injun (1780'-1814') Perforated 1780' to 1796'

1. Notify State Inspector, Terry Urban 304-549-5915, and 24 hrs prior to commencing operations.
2. TOOH w/ 2" tbg and check condition.
3. TIH w/ tbg @ 1798'; Set 182' CIA Cement Plug @ 1798' to 1598' (Big Injun & Perfs. 1780'-1796')
4. TOOH w/ tbg @ 1630'; Gel hole @ 1630' to 802'
5. TOOH w/ tubing, Free point 4.5" csg, cut at Freepoint, Pull 4.5' csg.
6. Set 100' CIA Cement Plug 50' in/50' out of cut. Perf all FW, Coal, Oil, Gas and 1" Salt Sand top below 4.5" csg cut. Do not skip any plugs shown.
7. TIH w/ tbg @ 802'; Set 100' CIA Cement Plug @ 802' to 702' (Salt Sand @ 802')
8. TOOH w/ tbg @ 702'; Gel hole @ 702' to 502'
5. TOOH w/ tbg @ 502'; Set 502' CIA Cement Plug @ 502' to 0' (Bottom of 8 5/8" csg, Coal 452' (60"), 385' (36"), 254' (24")). Perf or Rip all coal shows.
6. Set Monument to WV-DEP Specifications
7. Reclaim Location & Road to WV-DEP Specifications

Some body
WEEK to READ PROS
4.5 CTS - 2 sets of
Salt Sands

Handwritten signature and notes: "A. W. [unclear] 2/19/13" with a large scribble and "1098' level" written nearby.

Will probably
change on site

DG-10
Rev. - 9-71



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division
WELL RECORDS

127461
RECEIVED
OCT 27 1978

OIL & GAS DIVISION
DEPT. OF MINES

Quadrangle Charleston West
Permit No. KAN-3347

Rotary X Oil _____
Cable _____ Gas _____
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Company Cities Service Company
Address Box 873, Charleston, WV 25323
Farm The Courtland Company Acres 5350
Location (waters) Davis Creek
Well No. "A" #12, GW-1782 Elev. 2065.46
District Loudon County Kanawha
The surface of tract is owned in fee by Louis F. Hooney
Address Br 2 Box 291A, Charleston, WV
Mineral rights are owned by The Courtland Company
Address 205 Odd Fellow Bldg. Charleston, WV 25301
Drilling Commenced 9/15/78
Drilling Completed 10/7/78
Initial open flow 0 cu. ft. 0 bbls.
Final production 219,000 cu. ft. per day 0 bbls.
Well open 80 hrs. before test _____ RP.
Well treatment details:

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Co. ft. (Skts.)
Size 20-16			
Cond. 13-10"			
9 5/8			
8 5/8 " 24#	433.86	433.86	128 sk of reg. cement = cement to surface
7			
5 1/2			
4 1/2 " 9.5#	1871'	1871'	325 sk of 50-50 Poz cement to surface
3			
2-3/8" 4#	1798'	1798'	
Liners Used			

Attach copy of cementing record.

Perforated Big Injun 1780-96' w/1 shot/ft.
Fraced with 30,000# 80-100 Sand, 30,000# 20-40 sand and 400 MCF nitrogen and 184 barrels of water.

Coal was encountered at 254', 385', 452' Feet. 60", 36", 24" Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Big Injun Depth 1780'-1814'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Sand and Rock			0	67		
Sand Rock Shale			67	214		
Rock Sand & Shale			214	254		
Coal			254	259		
Shale and Sand			259	309		
Shale and Sand			309	385		
Coal			385	388		
Shale and Sand			388	452		
Coal			452	459		
Sand and Shale			459	520		
Sand and Shale			520	690		
Sand			690	747		
Shale			747	765		
Sand			765	802		
Salt Sand			802	1005		
Salt Sand			1005	1110		
Sand			1110	1138		
Shale			1138	1203		
Sand			1203	1310		
Salt Sand			1310	1403		
Salt Sand			1403	1453		
Sand			1453	1465		
Sand and Shale			1465	1540		
Little Lime			1540	1551		

Received
Office of Oil & Gas

(over)
* Indicates Electric Log tops in the remarks section.

127461

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Lime			1551	1658		
Big Lime			1658	1768		
Lime			1768	1782		
Injun Sand			1782	1880	T.D.	

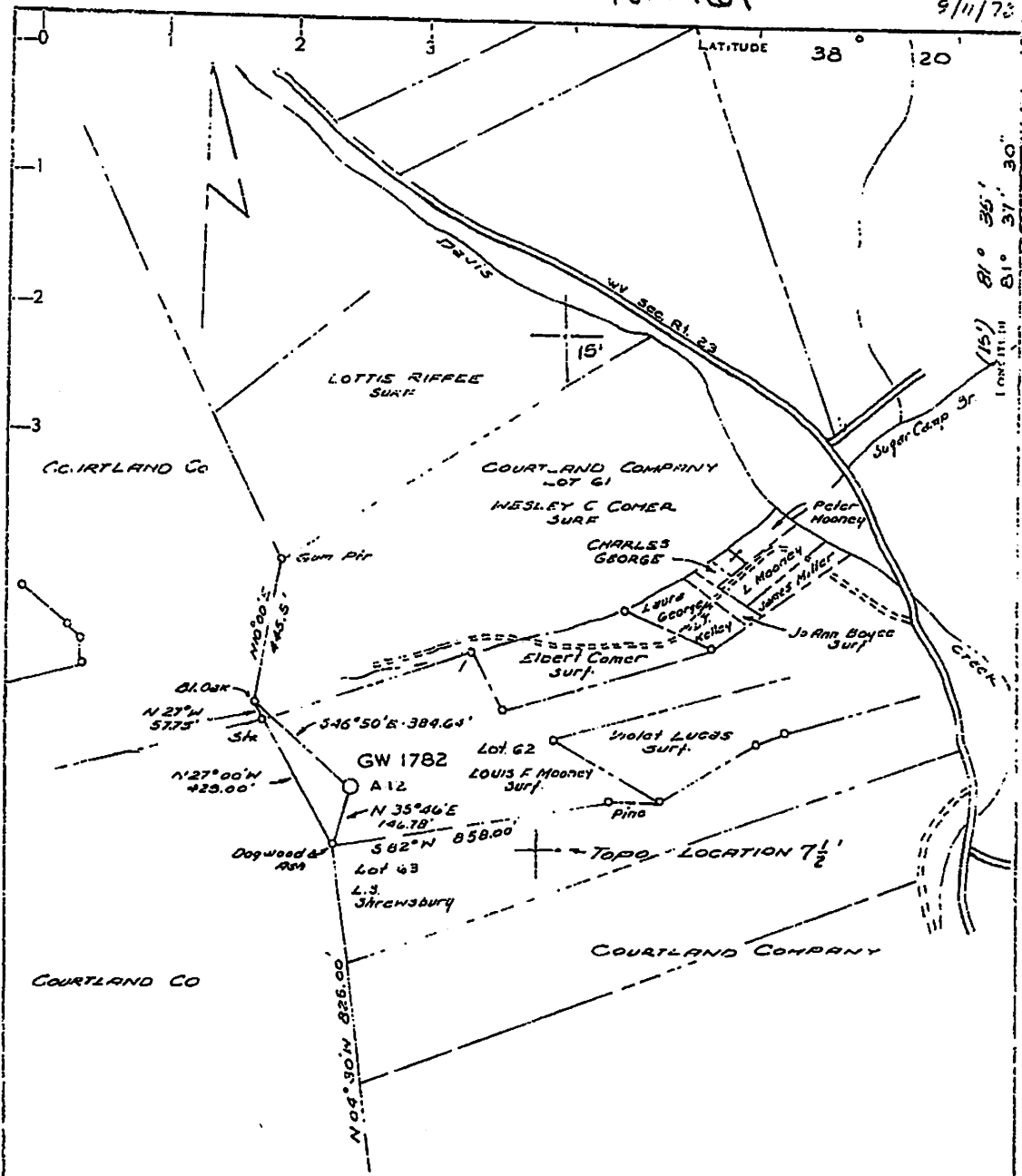
Received

19

Office of Oil and Gas
 WV Dept. of Environmental Protection
 Date October 25, 1978
 Cities Service Company
 APPROVED Sam J. Matthews Owner
 By Region Production Manager
 (Title)

127461

9/11/78



- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

CERTIFICATE

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 1 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."

Minimum degree of accuracy is one part in 200.

Signed: _____

Received

COMPAN: **CITIES SERVICE COMPANY**
 ADDRESS: **BOX 873 CHARLESTON, W.VA**
 FARM: **THE LOUIS F. MOONEY COMPANY**
 MAP: **LOT 62** A 12 3350 11400' WV 392
 WELL: **A 12** SERIAL NO. **GW-1782**
 ELEVAT. IN FEET: **1065.46**
 QUADRANT: **CHARLESTON WEST, CHARLESTON 15'**
 COUNTY: **KANAWHA** DISTRICT: **LOUDEN**
 POINT OF BEGINNING: **SE COR CONC BRIDGE OVER**
DAVIS CK ON CONC WING WITH US 575.9
 FILE NO. **10-78**
 DATE: **Aug 5, 1978**

STATE OF WEST VIRGINIA Office of Oil and Gas
 DEPARTMENT OF MINES Dept. of Environmental Protection
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. **KAN-3347**

NOTES TO APPLICANTS: THIS MAP IS A REPRODUCTION OF A MAP...
 MAPS SHALL BE TO SCALE...
 BEING REPRINTED BY ORDER...
47-039

3903347A

WW-4-A
Revised 6/07

1) Date: July 15, 2013
2) Operator's Well Number
WV 127461 (Courtland A-12)
3) API Well No.: 47 039 - 03347
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

4) Surface Owner(s) to be served:
(a) Name Russell G. Baire Jr. ✓
Address 47 Lakeview Drive
Charleston, WV 25314
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Terry Urban ✓
Address P.O. Box 1207
Clendenin, WV 25045
Telephone 304-549-5915

5) (a) Coal Operator:
Name None
Address _____
(b) Coal Owner(s) with Declaration ✓
Name The Courtland Company
114 Monongalia St.
Address Charleston, WV 25302-2312
Name _____
Address _____
(c) Coal Lessee with Declaration
Name None
Address _____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

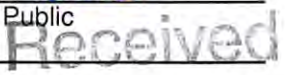
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
 - (2) The plat (surveyor's map) showing the well location on Form WW-6.
- The reason you received these documents is that you have 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:
Notary Public:
Pamela Sykes
EQT Production
PO Box 280
Bridgeport, WV 26330
My Commission Expires Aug. 24, 2022

EQT Production Company
Victoria J. Roark
Permitting Supervisor
PO Box 280
Bridgeport, WV 26330
(304) 848-0076

Subscribed and sworn before me this 15 day of July, 2013
Pamela Sykes Notary Public
My Commission Expires: 8-24-22



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 deprivacyofficer@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: Davis Creek Quadrangle: Charleston West 4.5'
Elevation: 1039' County: Kanawha District: Loudon

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? _____

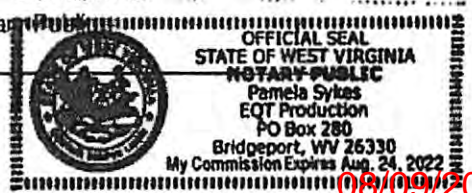
Drill Cuttings disposal method? Leave in pit, landfill, remove offsite, etc. _____
If left in pit and plan to solidify what medium will be used? Cement, Lime, sawdust _____
Landfill or offsite name/permit number? _____

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 15 day of July, 2013

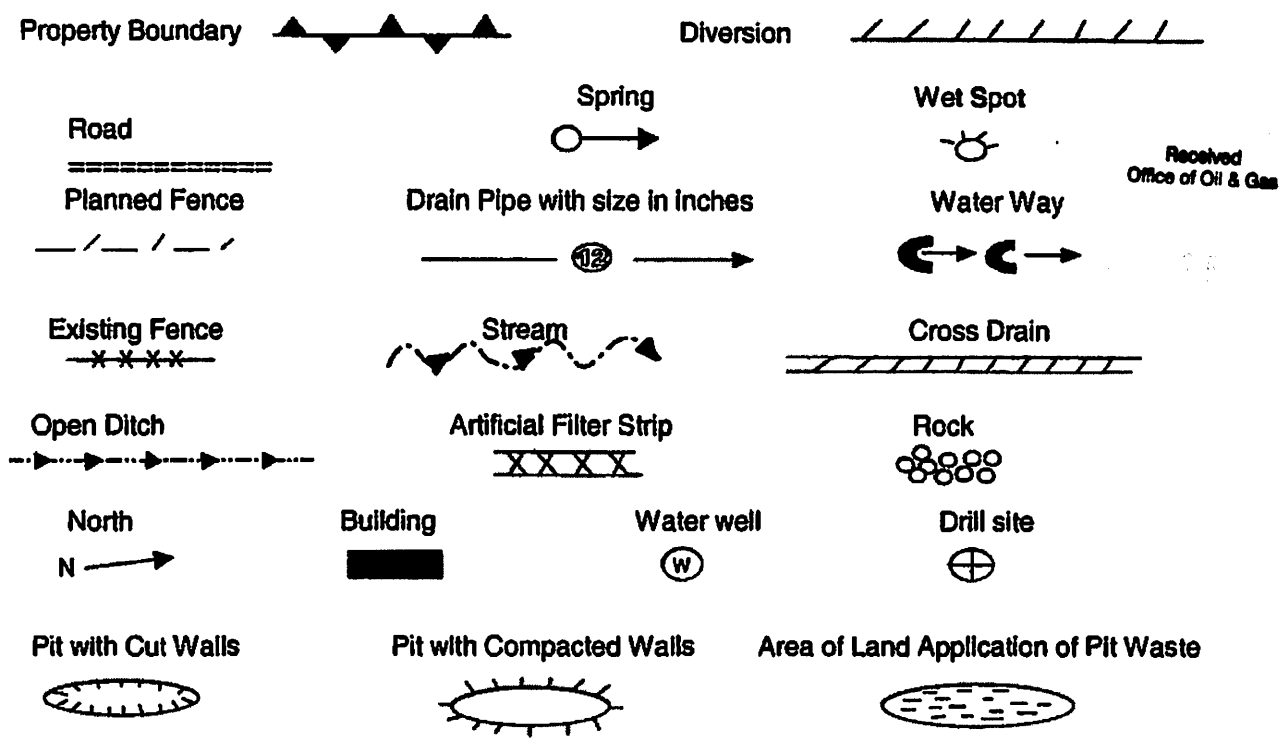
My Commission Expires 8-24-22



08/09/2013

OPERATOR'S WELL NO.:
WV 127461 (Courtland A-12)

LEGEND



Received
Office of Oil & Gas

Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH 6.5

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: [Signature]

Comments: _____

Title: [Signature] Date: 7/19/13
 Field Reviewed? Yes No

3903347A

Topo Quad: Charleston West 7.5'

Scale: 1" = 2000'

County: Kanawha

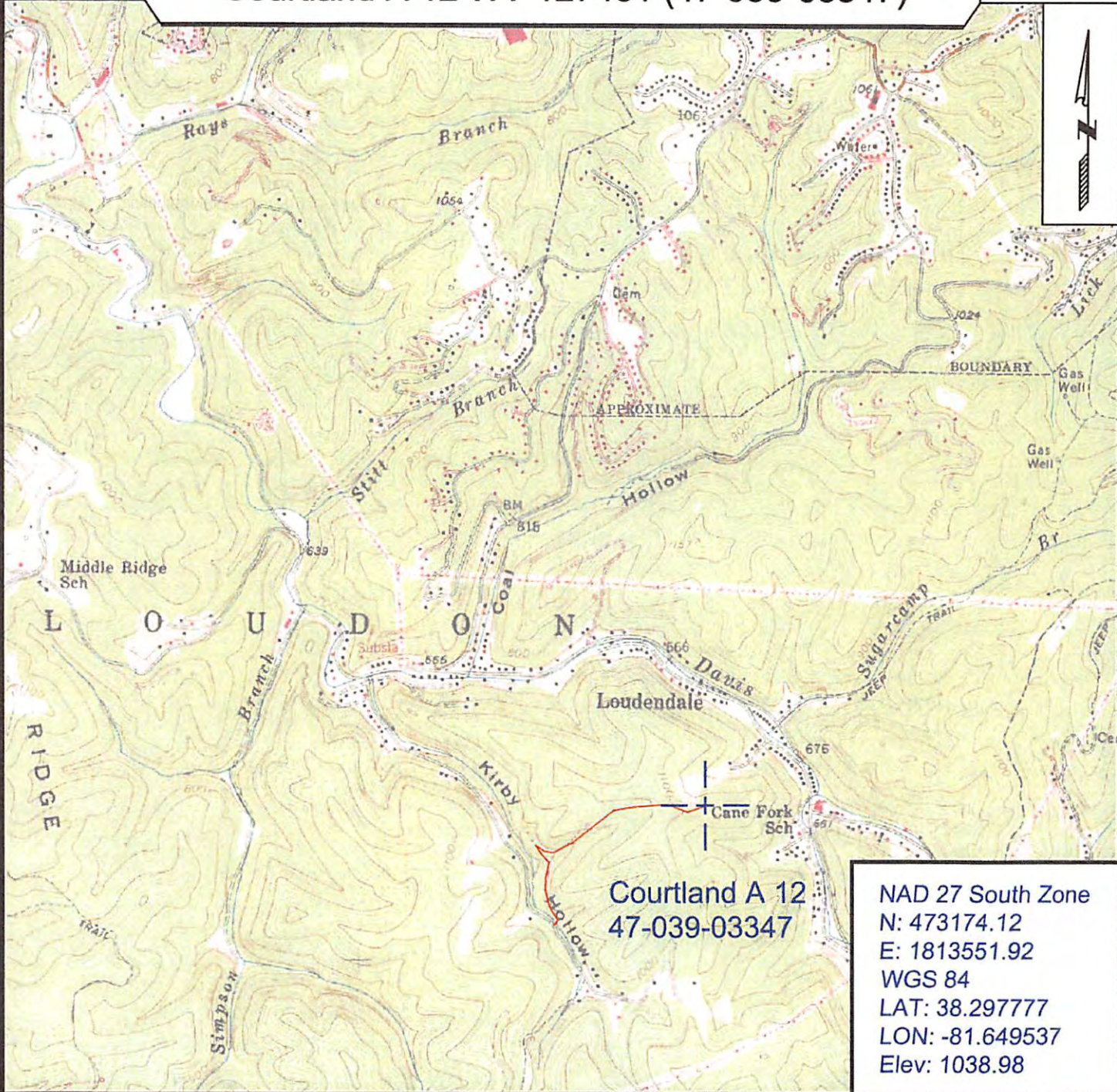
Date: May 28, 2012

District: Loudon

Project No: 52-14-00-07

Courtland A 12 WV 127461 (47-039-03347)

Topo



Courtland A 12
47-039-03347

NAD 27 South Zone
 N: 473174.12
 E: 1813551.92
 WGS 84
 LAT: 38.297777
 LON: -81.649537
 Elev: 1038.98



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
 P.O. Box 280
 Bridgeport, WV 26330

08/09/2013

WW-7
8-30-06



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

API: 47-039-03347 WELL NO.: WV 127461 (Courtland A-12)

FARM NAME: Courtland

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Kanawha DISTRICT: Loudon

QUADRANGLE: Charleston West 7.5'

SURFACE OWNER: Russell Baire, et. al.

ROYALTY OWNER: The Courtland Company, et al

UTM GPS NORTHING: 4239054

UTM GPS EASTING: 443203 GPS ELEVATION: 316 m (1039 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.

Ben R. Smolter
Signature
7-3-13
Date

P.S. 2092 **Received**
Title



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY INC.
LEASE NAME AND WELL No. Courtland A 12 47-039-03347 (WV 127461)

The initial mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 1000' of the existing well site. The following landowners will be notified of the opportunity to request a water sample.

*Please note that the following information is subject to change upon field inspection.

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 930' +/- Owner: Elbert & Dan Comer
Address: 123 S St. Marks Ave, Chattanooga, TN 37411

Phone No. _____

Comments:

Site: 2 Spacing: 700 +/- Owner: Elbert & Dan Comer
Address: 123 S St. Marks Ave, Chattanooga, TN 37411

Phone No. _____

Comments:

Site: 3 Spacing: 920 +/- Owner: Elbert & Dan Comer
Address: 123 S St. Marks Ave, Chattanooga, TN 37411

Phone No. _____

Comments:

Received

08 19 13

Office of Oil and Gas
WV Dept. of Environmental Protection

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

CALDWELL OFFICE
212 Cumberland Street
Caldwell, OH 43724
phone: 740-305-5007
fax: 740-305-5126

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