



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 14, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-2103946, 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: 1A-W220
Farm Name: CUNNINGHAM, A.
API Well Number: 47-2103946
Permit Type: Plugging
Date Issued: 08/14/2015

Promoting a healthy environment.

08//14/2015

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.
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: July 21, 2015
Operator's Well
Well No. 155351 (Cunningham #1A-W220)
API Well No.: 47 021 - 03946

ck #
19558
3100**

**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 Gas X Liquid Injection Waste Disposal:
If Gas, Production X Or Underground storage Deep Shallow X
- 5) Elevation: 832 ft. Watershed: Bull Fork
Location: De Kalb County: Gilmer Quadrangle: Burnt House
District:
- 6) Well Operator EQT Production Company 7) Designated Agent: Rex C. Ray
Address: 120 Professional Place Address: 120 Professional Place
Bridgeport, WV 26330 Bridgeport, WV 26330
- 8) Oil & Gas Danny Mullins 9) Plugging Contractor:
Name: 124 Big Trace Fork Road 220 TALKACIES Name: HydroCarbon Well Service
Address: Harts, WV 25524 Buckhannon WV 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.

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 Danny Mullins Date 8-4-15

PLUGGING PROGNOSIS

Cunningham, A. #A-1 (155351)
 Gilmer Co. WV
 District, DeKalb
 API # 47-021-03946
 BY: R.Green
 DATE: 02/18/15

CURRENT STATUS:

8 5/8" @ 715' (cts)
 4 1/2" @ 4523' (cement w/ 600 sks)
 TD @ 4569'
 Elevation @ 833'

Fresh Water @ 80'

Salt Water @ None reported

Coal @ 670'

Gas Shows @ 675', 1673', 1774', 1861', 2042', 2172', 2394', 3068', 3158', 4202', 4475', 4486'

Perforations from 2546' to 4494' (co-mingled, Speechly, Shale, Riley, & Benson)

Oil Shows @ None reported

DM

- ★ 1. Notify State Inspector, Danny Mullins, 304-932-6844, 24 hrs. Prior to commencing operations.
2. TIH tbg to 4486' set 386' C1A cement plug, 4486' to 4100'. (Riley, Benson)
3. TOOH tbg to 4100', gel hole 4100' to 3158'.
4. TOOH tbg to 3158', set 712' C1A cement plug 3158' to 2446' (Speechly, Shale).
5. TOOH tbg to 2446', gel hole 2446' to 1400'. TOOH tbg
6. Free point 4 1/2" casing, cut casing @ free point (est @ 1350'), TOOH casing.
7. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
8. TOOH tbg to 1300', gel hole 1300' to 880'.
9. TOOH tbg to 880', set 300' C1A cement plug, 880' to 580'. (8 5/8" csg seat, gas @ 675, coal @ 670', elevation.)
10. TOOH tbg to 580', gel hole 580' to 200'.
11. TOOH tbg to 200', set 200' C1A cement plug 200' to surface.
12. Erect monument with API#.
13. Reclaim location, road to WV-DEP specifications.

★ SPOT GEL FROM TD TO 4400'. BEFORE FIRST PLUG.



RECEIVED

IV-35 (Rev 8-81)

Date November 16, 1982

NOV 18 State of West Virginia

Operator's

Well No. Cunningham #1A

OIL AND GAS DIVISION WV DEPARTMENT OF MINES and REFORMATION
Department of Mines
Oil and Gas Division

Farm A. Cunningham

API No. 47 - 021 - 3946

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal /
(If "Gas," Production X / Underground Storage / Deep / Shallow X /)

LOCATION: Elevation: 833' Watershed Bull Fork
District: DeKalb County Gilmer Quadrangle Burnt House 7.5'

COMPANY WACO Oil & Gas Company, Inc.
ADDRESS Glenville, WV 26351
DESIGNATED AGENT Kenneth Greenleaf
ADDRESS Glenville, WV 26351
SURFACE OWNER Audrey Cunningham
ADDRESS Tanner, WV 26179
MINERAL RIGHTS OWNER Audrey Cunningham
ADDRESS Tanner, WV 26179
OIL AND GAS INSPECTOR FOR THIS WORK Deo Mace
ADDRESS Sandridge, WV 25274
PERMIT ISSUED October 5, 1982
DRILLING COMMENCED October 11, 1982
DRILLING COMPLETED October 15, 1982
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
13-10"			
9 5/8			
8 5/8	715'	715'	210 sks.
7			
5 1/2			
4 1/2		4523'	600 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Benson-Elk Depth 5050 feet
Depth of completed well 4569 feet Rotary X / Cable Tools
Water strata depth: Fresh 80 feet; Salt n/a feet
Coal seam depths: 670-675 Is coal being mined in the area? No

OPEN FLOW DATA Co-Mingled Spechly-Shale
Producing formation Riley-Benson Pay zone depth 2546-4494 feet
Gas: Initial open flow 200 Mcf/d Oil: Initial open flow -0- Ebl/d
Final open flow 800 Mcf/d Final open flow Show Ebl/d
Time of open flow between initial and final tests 4 hours

Static rock pressure 1000 psig (surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)

Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Ebl/d
Final open flow Mcf/d Oil: Final open flow Ebl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

(Continue on reverse side)

08/14/2015

Oil - 3946

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Nitrogen Frac
 2546-4494
 1.2 Million Nitrogen
 1000 Gallon Acid
 Dowel Cemented

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Clay			0	5	
Sand & Shale			5	118	Water @ 80'
Redrock			118	133	
Sand & Shale			133	279	
Shale & Redrock			279	285	
Sand & Shale			285	340	
Shale & Redrock			340	348	
Sand & Shale			348	670	
Coal			670	675	
Sand & Shale			675	1673	Show Gas
Lime			1673	1694	Show Gas
Lime & Shale			1694	1713	
Big Lime			1713	1774	
Injun			1774	1861	Show Gas
Gantz			1861	1970	Show Gas
Berea			1970	2042	
Sand & Shale			2042	2127	Show Gas
Shale			2127	2172	
Sand & Shale			2172	2382	Show Gas
Fifth Sand			2382	2394	
Sand & Shale			2394	3068	Show Gas
Speechly			3068	3158	Show Gas
Sand & Shale			3158	4193	Show Gas
Riley			4193	4202	
Sand & Shale			4202	4475	Show Gas
Benson			4475	4486	Show Gas
Sand & Shale			4486	4569	Show Gas
TD				4569	

(Attach separate sheets as necessary)

WACO OIL & Gas Company, Inc.

Well Operator

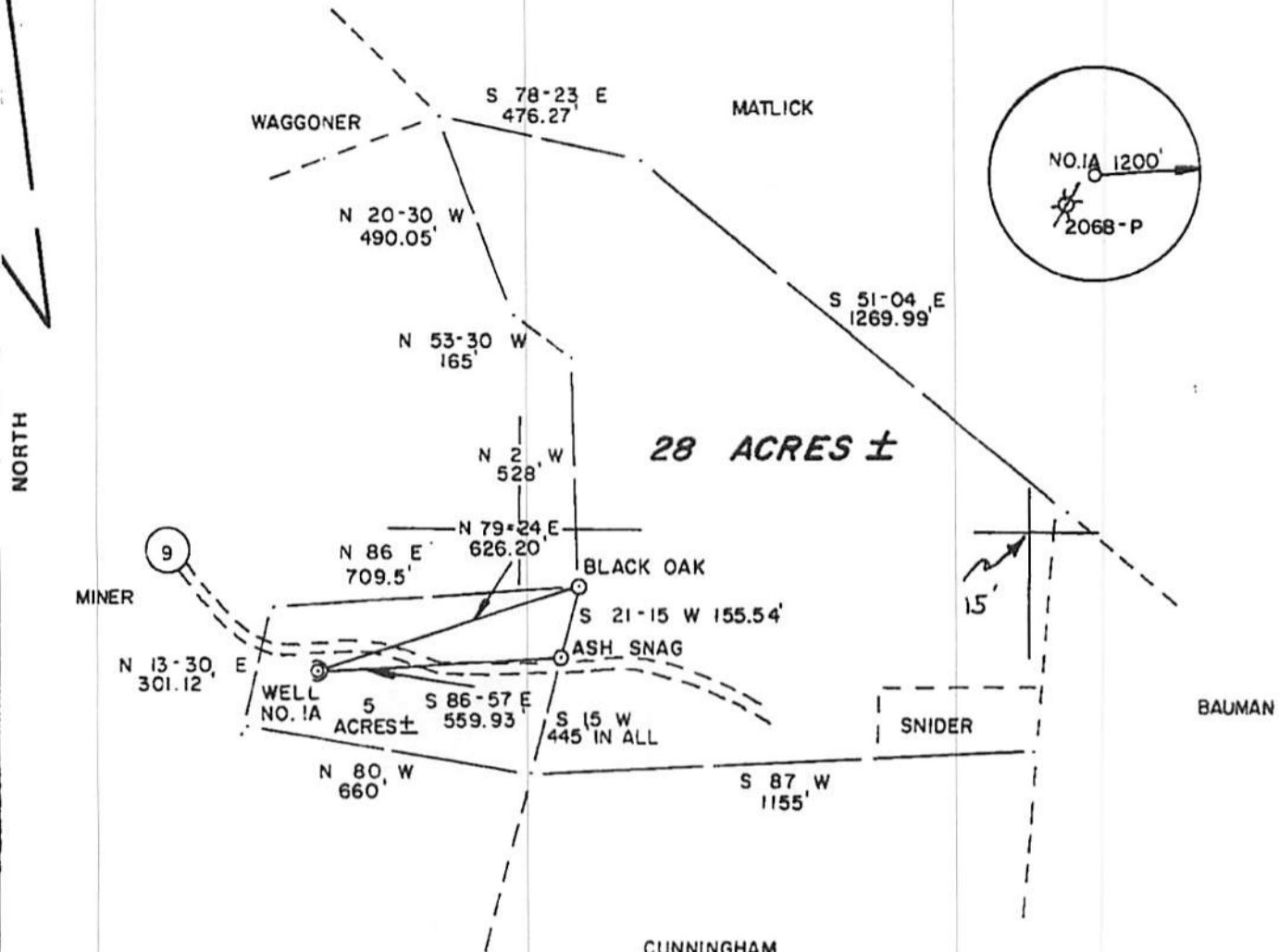
By: *Kenneth Green*

Kenneth Green 08/14/2015

Date: November 16, 1982

Note: Regulation 2.02(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

CUNNINGHAM LEASE WELL NO. 1A



33 ACRES ± TOTAL

FILE NO. 8-46
 DRAWING NO. _____
 SCALE 1" = 400'
 MINIMUM DEGREE OF ACCURACY 1 / 200
 PROVEN SOURCE OF ELEVATION JUNCTION OF ROADS
 ELEV. 827'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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 DEPARTMENT OF MINES.
 (SIGNED) Gregory A. Smith
 R.P.E. _____ L.L.S. 677



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE SEPT. 11, 1982
 OPERATOR'S WELL NO. 1A
 API WELL NO. _____
47 - 021 - 3946
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 833.13' WATER SHED BULL FORK
 DISTRICT DEKALB COUNTY GILMER
 QUADRANGLE BURNT HOUSE 7.5'

SURFACE OWNER AUDREY CUNNINGHAM ACREAGE 5
 OIL & GAS ROYALTY OWNER AUDREY CUNNINGHAM LEASE ACREAGE 33
 LEASE NO. _____

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION BENSON ESTIMATED DEPTH 5050'
 WELL OPERATOR WACO OIL & GAS CO. DESIGNATED AGENT KENNY GREENLIEF
 ADDRESS P.O. BOX 4 ADDRESS P.O. BOX 4
GLENVILLE, W.V. 26351 GLENVILLE, W.V. 26351

08/14/2015

GIL. 3946

2103946P

WW-4-A
Revised 6/07

1) Date: July 21, 2015
2) Operator's Well Number
155351 (Cunningham #1A-W220)
3) API Well No.: 47 021 - 03946
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 Leroy G. and Lena J. Miner
Address 2089 Bull Fork Road
Tanner, WV 26137

(b) Name _____
Address _____

(c) Name _____
Address _____

6) Inspector Danny Mullins
Address 124 Big Trace Fork Road
Harts, WV 25524
Telephone (304) 932-6844

5) (a) Coal Operator:
Name None
Address _____

(b) Coal Owner(s) with Declaration
Name Waco Oil & Gas Co., Inc.
P. O. Box 397
Address Glennville, WV 26351

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:

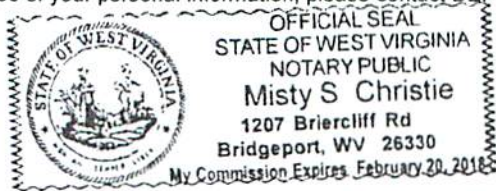
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
 - (2) The plat (surveyor's map) showing the well location on Form WW-6.
- The reason you received these documents is that you have 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: EQT Production Company
By: Victoria J. Roark
Its: Permitting Supervisor
Address: PO Box 280
Bridgeport, WV 26330
Telephone: (304) 848-0076

Subscribed and sworn before me this 21st day of July, 2015
Misty S. Christie Notary Public
My Commission Expires: 2/20/18

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.



RECEIVED
Office of Oil and Gas
JUL 24 2015
WV Department of Environmental Protection
08/14/2015

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: Bull Fork Quadrangle: Burnt House
Elevation: 832 ft. County: Gilmer District: De Kalb

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.? 10 ml

Proposed Disposal Method for Treated Pit Wastes:
X 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? _____

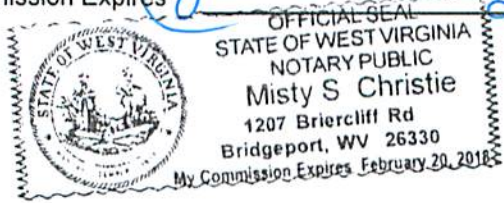
Will closed loop system be used? _____
Drill Cuttings disposal method? Leave in pit, landfill, remove offsite, etc. _____
If left in pit and plan to solidify what medium will be used? Cement, Lime, sawdust _____
Landfill or offsite name/permit number? _____

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 21st day of July, 2015
Misty S. Christie Notary Public

My Commission Expires 2/20/18

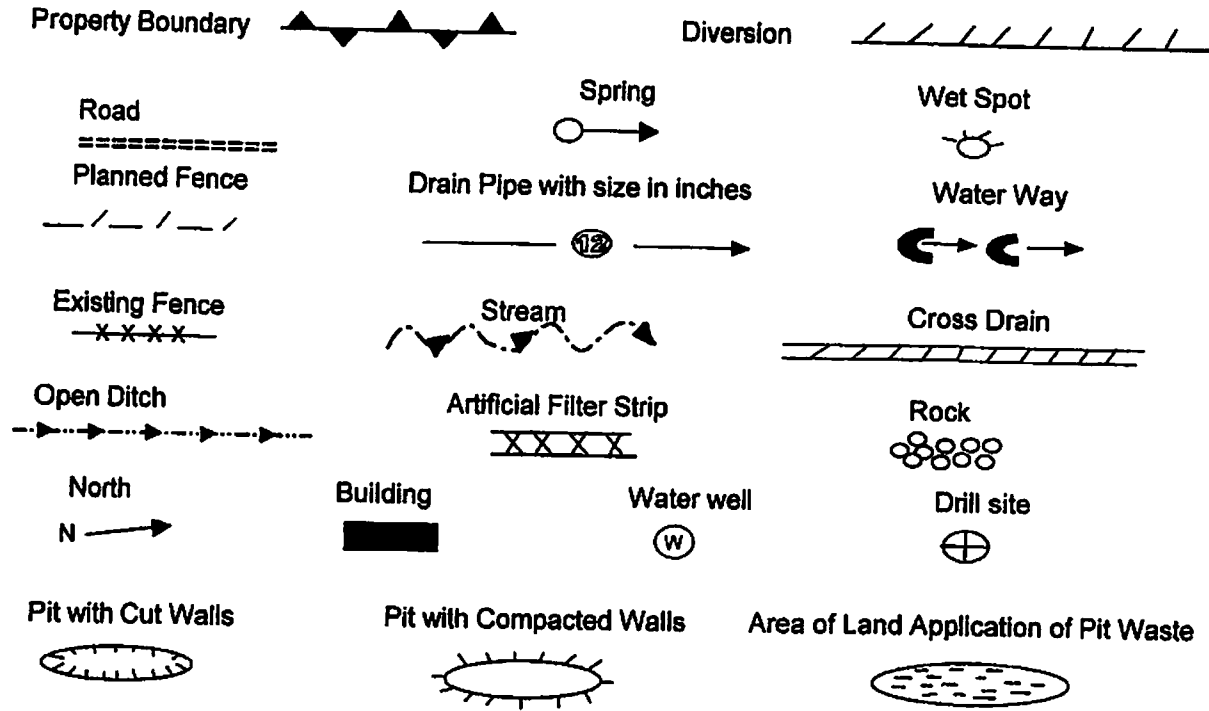


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WV Department of Environmental Protection
08/14/2015

OPERATOR'S WELL NO.:
155351 (Cunningham #1A-W220)

LEGEND



Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH _____
 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
Red Fescue	40	Red Fescue	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: _____

Comments: _____

Title: _____ Date: _____

Field Reviewed? Yes No

2103946P

Topo Quad: Burnt House 7.5'

Scale: 1" = 2000'

County: Gilmer

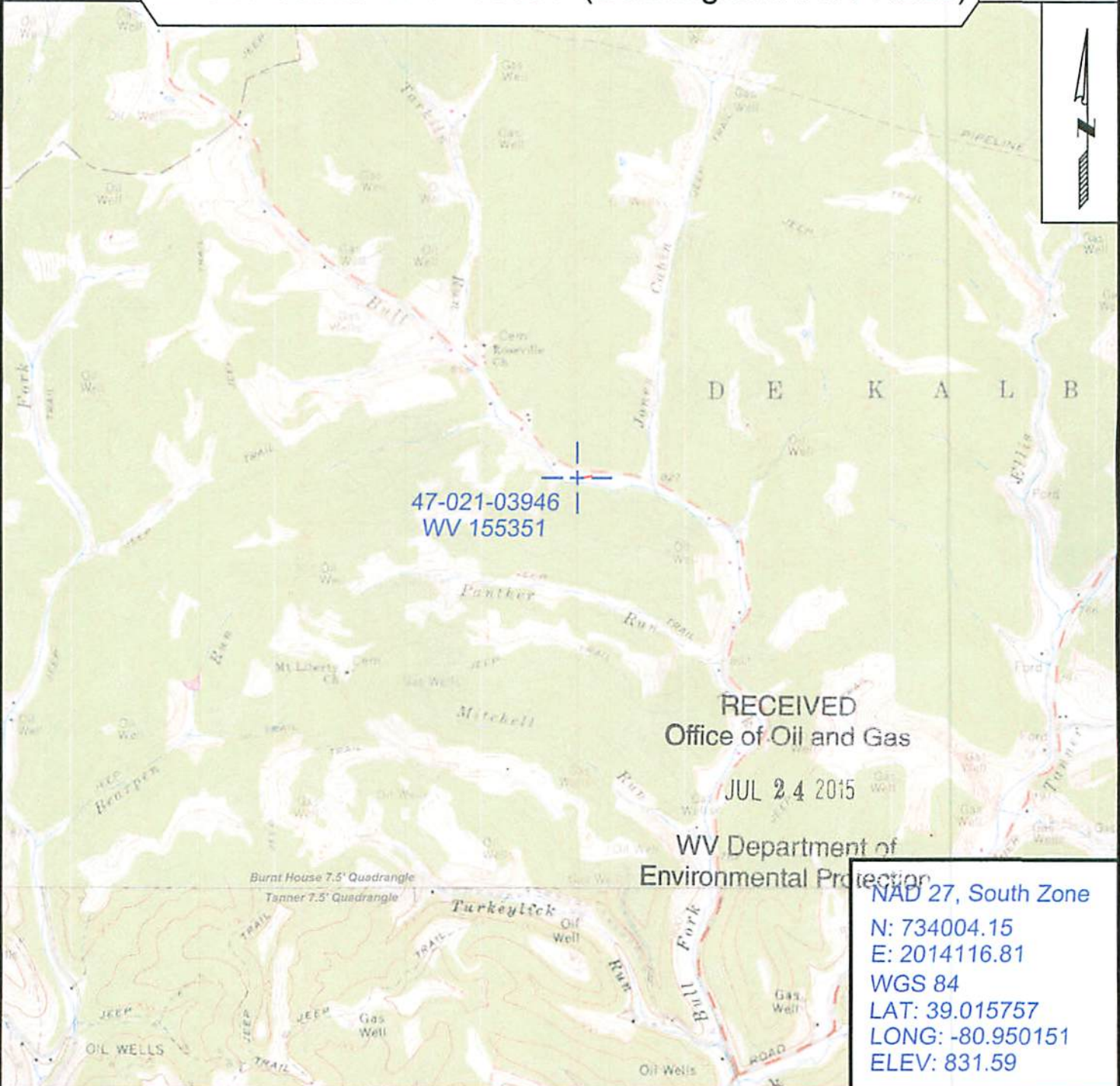
Date: July 8, 2015

District: De Kalb

Project No: 25-19-00-07

47-021-03946 WV 155351 (Cunningham #1A-W220)

Topo



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
 P.O. Box 280
 Bridgeport, WV 26330

08//14/2015

2103946A

WW-7
8-30-06



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

API: 47-021-03946 WELL NO.: WV 155351 (Cunningham #1A-W220)
FARM NAME: A. Cunningham
RESPONSIBLE PARTY NAME: EQT Production Company
COUNTY: Gilmer DISTRICT: De Kalb
QUADRANGLE: Burnt House 7.5'
SURFACE OWNER: Leroy G. & Lena J. Miner
ROYALTY OWNER: WACO Oil and Gas Co., Inc.
UTM GPS NORTHING: 4318526
UTM GPS EASTING: 504316 GPS ELEVATION: 253 m (832 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:

- Datum: NAD 1983, Zone: 17 South, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:
Survey grade GPS : Post Processed Differential
Real-Time Differential
Mapping Grade GPS X : Post Processed Differential X
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 # 2100
Title

7/9/15
Date

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Office of Oil and Gas

JUL 24 2015

WV Department of
Environmental Protection

08/14/2015



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY
 LEASE NAME AND WELL No. Cunningham #1A-W220 - WV 155351 - API No. 47-021-03946

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 360' +/- Owner: Leroy G. and Lena J. Miner
 Address: 2089 Bull Fork Road., Tanner, WV 26137 Phone No. _____
 Comments: _____

Site: 2 Spacing: 240' +/- Owner: Leroy G. and Lena J. Miner
 Address: 2089 Bull Fork Road., Tanner, WV 26137 Phone No. _____
 Comments: _____

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Office of Oil and Gas

JUL 24 2015

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

RANSON OFFICE
401 South Fairfax Blvd, Suite 3
Ranson, WV 25438
phone: 304-724-5008
fax: 304-724-5010

Topo Quad: Burnt House 7.5'

Scale: 1" = 2000'

County: Gilmer

Date: July 8, 2015

District: De Kalb

Project No: 25-19-00-07

Water

47-021-03946 WV 155351 (Cunningham #1A-W220)

2 Potential Water Samples within 1000'



RECEIVED
 Office of Oil and Gas
 JUL 24 2015
 WV Department of
 Environmental Protection

NAD 27, South Zone
 N: 734004.15
 E: 2014116.81
 WGS 84
 LAT: 39.015757
 LONG: -80.950151
 ELEV: 831.59



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
 P.O. Box 280
 Bridgeport, WV 26330